



LONG LIFE

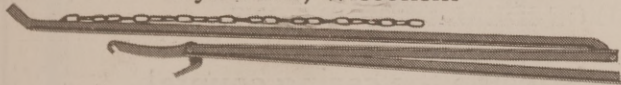
Use
ALL STEEL Scaffold Bracket
And Save Time

Built for Service
Absolutely Safe

Mr. Contractor
Turn Expense Into Profit

For Prices See Your Dealer
or
Write Direct to Manufacturers

Plymouth Metal Products Co.
Plymouth, Wisconsin



FOLDS UP WHEN NOT IN USE

PARKER'S Art in Shingle Stains

FREE FROM OBJECTIONABLE ODOR
Free from Creosote—Dries Overnight

Parker's Art in Shingle Stains insures greatest possible protection to the life of the shingles.

COLORS OF EXTREME RICHNESS
AND ABSOLUTE PURITY

They insure highest artistic effect.
EXTREME DURABILITY
Colors will not fade.

PARKER'S (original) ASBESTOS
SHINGLE COATING

A fast color treatment for asbestos shingles that produce rich, artistic color schemes in Copper Green, English Tile Red, Rich Wine, Rich Red, Velvet Light and Dark Green, Velvet Moss Green, Rich Brown and Slate.

Color Folders sent upon request.

Manufactured by

PARKER, PRESTON & CO., Inc.
NORWICH, CONN.



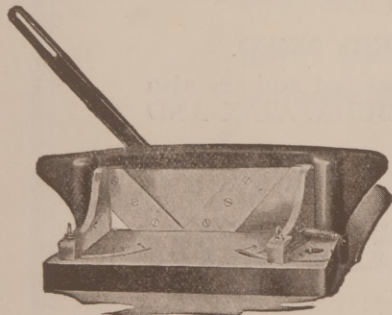
SASH CHAIN



CABLE CHAIN

"Giant Metal," "Red Metal," and Steel Sash Chain manufactured by us have been on the market for forty years. They have established a reputation for their strength and durability, and have become known as the "Chain of Quality."

Cable Chains can be supplied in either copper or steel, and are especially adapted for fire doors, elevator doors, etc.



WOOD TRIMMER.

We also manufacture a high-grade Wood Trimmer which has proven itself to be a labor saver, and has been highly endorsed by many of the leading contractors and builders. Further particulars on request.

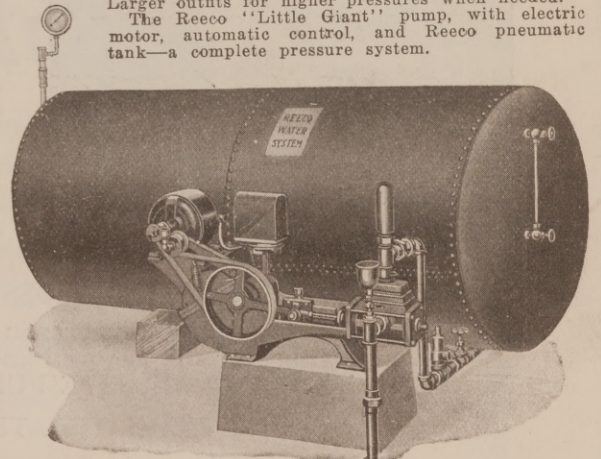
The Smith & Egge Mfg. Company
"ORIGINATORS OF SASH CHAIN"
Bridgeport, Conn., U. S. A.

MAKING WATER RUN UP HILL

is easy when an up-to-date automatic
REECO WATER SUPPLY SYSTEM

is installed. With a pressure of 50 pounds in the Reeco pneumatic tank, the water will "run up hill" to an elevation of about 117 feet.

Larger outfits for higher pressures when needed.
The Reeco "Little Giant" pump, with electric motor, automatic control, and Reeco pneumatic tank—a complete pressure system.



Send for Bulletin B-1.

REECO Electric, Gasoline and Kerosene Pumps,
Deep Well and Suction Pumps,
Hot Air Pumping Engines,
Complete Pneumatic Tank Systems.

RIDER-ERICSSON ENGINE CO.

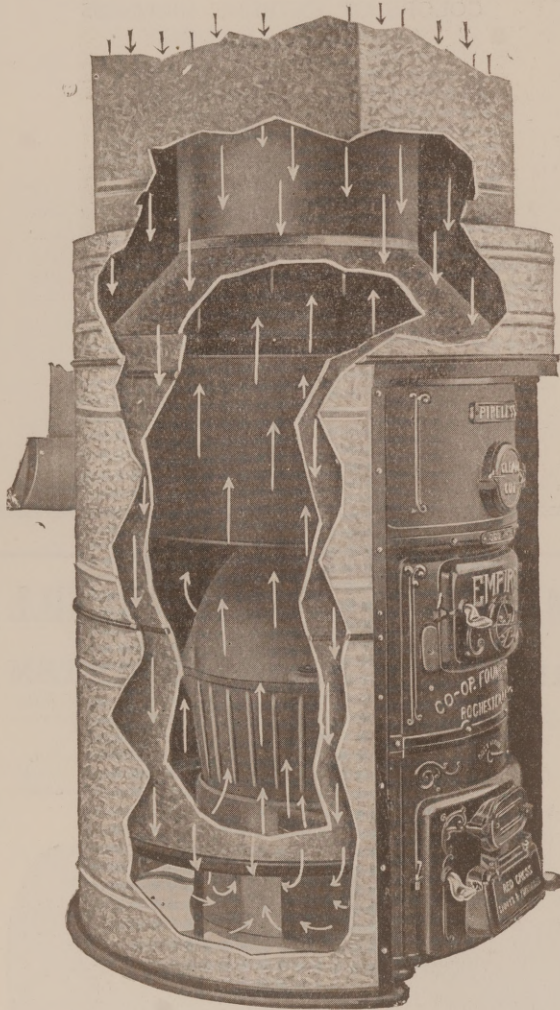
WALDEN, N. Y.

—Established 80 Years—

Active responsible sales representatives are desired.

Red Cross Empire Pipeless FURNACES

Dominate the Pipeless Field!



Because:

The Empire Pipeless is the acknowledged standard of Pipeless Furnace construction.

EVERY PART OR SECTION IS JUST EXACTLY THE PROPER SIZE AND WEIGHT, MAKING A PERFECTLY BALANCED FURNACE OF IDEAL PROPORTIONS.

What's inside the casing counts!

That is the vitally important part of the heater. Investigate for yourself and be convinced!

We invite comparison on the Red Cross Empire.

Increase your

SALES
SATISFACTION
and **SERVICE**

by installing

The Red Cross Empire Pipeless.

THERE IS A RED CROSS FURNACE FOR EVERY NEED.

We make the Empire Pipeless in sizes up to 33-inch fire pot and are also the manufacturers of the well known Red Cross BERMUDA, AJAX AND EMPIRE WARM AIR PIPE FURNACES.

WRITE FOR LITERATURE AND OPEN TERRITORY.

Co-Operative Foundry Co.

ROCHESTER, NEW YORK.

Western Branch, 505 South Clinton Street, Chicago, Ill.

Makers of the Celebrated line of Red Cross Stoves, Ranges and Furnaces.





*The Frost National Bank,
San Antonio, Texas.
Sanguinett & Staats,
Architects,
Ft. Worth, Texas*

Kaestner & Hecht Elevators

IN selecting elevators good buyers are guided by some incentive other than price. The recent award to us of the elevator contract for the Frost National Bank Building, San Antonio, is testimony of this.

K&H Elevators are built to secure with greater permanence the highest quality in elevator service.

Ask Your Architect

Kaestner & Hecht Co.

Founded 1863 • Chicago

Consultation Un-necessary

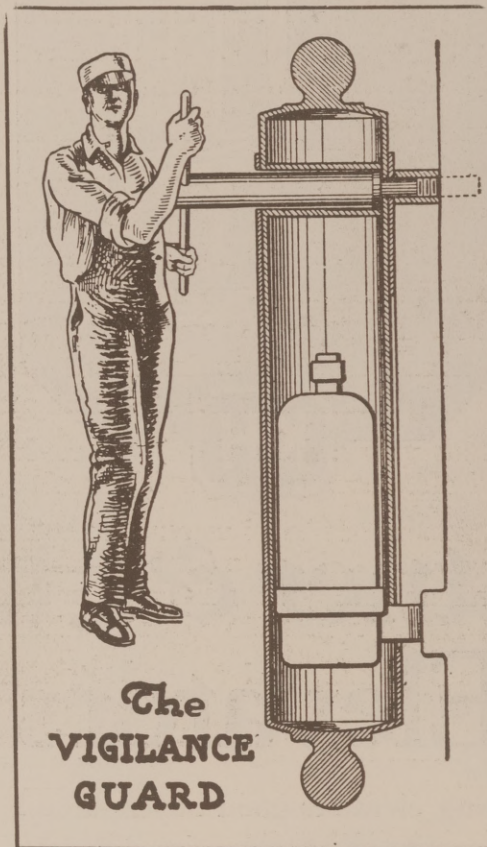
in order to determine the merits of the Rudy-Way method of eliminating radiator air valve troubles, because every Architect and Builder knows from experience, what expensive damage a defective air valve can cause if not guarded closely, and exactly what amount of time and labor is involved to constantly keep them in working condition, after the steam is turned on.

HOW MANY PEOPLE

really know the mechanical construction and principle of the radiator air valve? We dare say, that everyone is more or less mechanically inclined—it's the most natural thing for people to tamper or monkey with that, which they know, so little about—realizing only too late that they have either destroyed or injured the object beyond redemption.

THE RUDY-WAY PROTECTOR

by telescoping over any modern type air valve and locking both securely to the radiator with a key (which is withdrawn after installation), entirely eliminates the many evils—tampering and removals cause—and permits the air valve to wear out through natural duty performance and depreciation.



Patented

DEPENDABILITY

The Engineer who is responsible for the maintenance and the Owner who pays the bills, both know the value of the dependability of mechanical equipment that they can depend on, and that does not depend on them for replacements, adjustments and repairs. If the air valve plays such a vital part in the efficient operation of the heating system—then the Rudy-Way air valve PROTECTOR plays a doubly vital part for the protection and insurance it gives for making possible a dependable safety service without uncertainty.

We invite your inquiries and can assure you that your interests will have the same attention as though you came to us in person.

Manufactured by

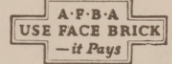
RUDY-WAY MFG. CO., Inc.

220-222 WEST 49th STREET

NEW YORK CITY

COST

is exceptionally reasonable for the service rendered and as the Protector lasts a lifetime and is never replaced the cost per season can hardly be computed. You need not hesitate in recommending the Protector or making it a part and parcel of the specifications for it is sold on a money back guarantee to give satisfaction and to do the things we claim for it. Constructed of solid brass, beautifully nickel-plated, ornamental as well as useful, key accompanies each ten in a carton, with full instructions how to install in ten minutes.



Entrance of Residence, Evanston, Ill. Perkin, Fellows & Hamilton, Architects

One of many exquisite effects the architect may secure by using just standard sized brick in his wall designs. The three rows of headers at the side of the door, separated by a Flemish course laid vertically, are especially worthy of notice.

Architectural Details in Face Brick

SERIES II AND III

WE have now ready for distribution Series II and III in the Portfolio of Architectural Details in Face Brick. The collection now embraces over a hundred de luxe half-tone plates. Each series is assembled in an enclosed folder, with printed tab, ready for filing.

Many architects who received Series I, have ex-

pressed themselves as delighted with the beauty of the plates and their richness in suggesting the artistic possibilities of brickwork.

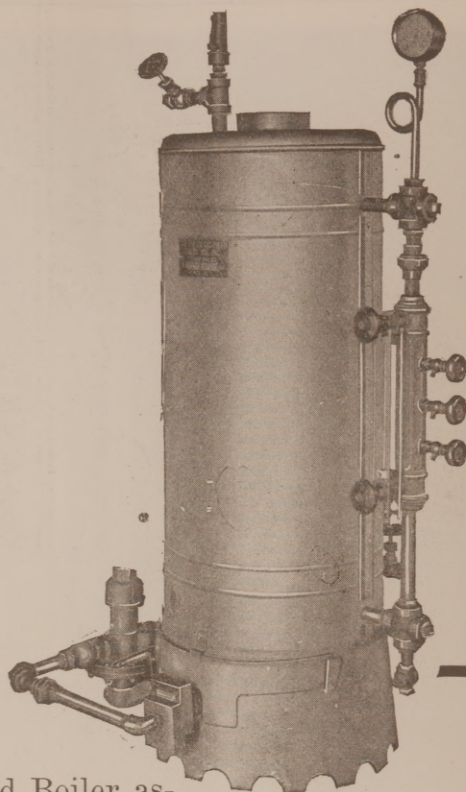
A set of these folders will be sent to any architect requesting them on his office stationery, and his name will be placed on the list for future mailings.

AMERICAN FACE BRICK ASSOCIATION

1158 WESTMINSTER BUILDING · CHICAGO, ILLINOIS

The New OFELDT CAST IRON HOUSE HEATING BOILER

Built in Three Different Styles for Steam, Vapor or Vacuum Systems—for Hot Water Systems and for Industrial Hot Water Service.



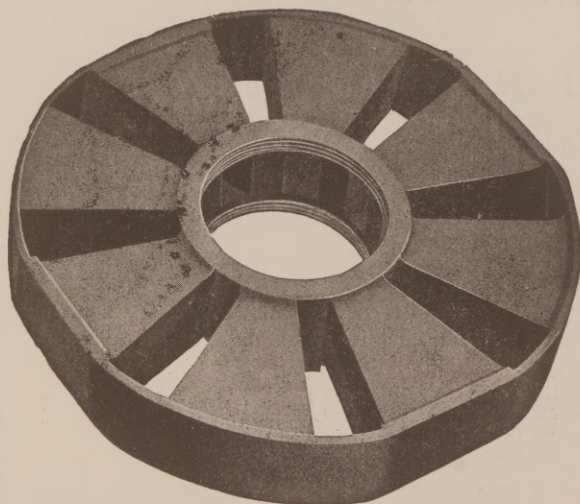
THE design of the OFELDT Gas-Fired Boiler assures perfect circulation of water from bottom to top of boiler. Water passes through ALL the water ways, becoming exposed to the maximum heating surface in the shortest possible time, producing **steam in ten minutes.**

Keystone-shaped flues overlap in such a way that the heat must travel in a staggered path, thus utilizing every available heat unit.

The new OFELDT Gas Burner is of the most improved type. Impossible to back-fire, smoke or soot up. Made of bronze and iron—cannot rust. Perfect operation assured under all conditions. Lowest in gas consumption, highest in heating efficiency.

The OFELDT is the **only** cast iron boiler that may be thoroughly cleaned.

No Dirt, No Ashes, No Coal Dust, No Coal Bins. Evenly Heated Home, Automatic Regulation.



Brass plugs in outer end make each water way of bottom section easily accessible.

Our new catalog describes the complete line of OFELDT Gas-Fired Steam Boilers, House Heating Boilers for steam and hot water, Hot Water Heaters and Water Regulators. A copy is yours for the asking.

The Ofeldt Gas Fired Boiler Co.

Incorporated

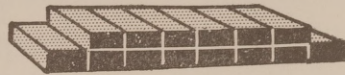
Nyack, N. Y.

Makers of Water Tube Boilers for 25 Years

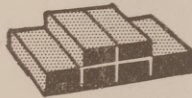
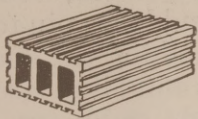
GEO. W. BEAN, Southern Sales Agent,
303 Albee Building, Washington, D. C.
for Georgia, North and South Carolina, Alabama, Florida and Eastern Tenn., and District of Columbia.



Design No. 1174



An 8 x 12 x 12 Tile — equals — Fourteen Brick



An 8 x 5 x 12 Tile — equals — Six Brick

Take Advantage of This Plan Service

We have had noted architects draw up a number of cozy house, garage and farm building plans which are enjoying a big demand. They can be obtained through any building material dealer or direct from the association,

The price for residence plans is \$10, garages \$2, and farm buildings \$5. Write today for free catalogs.

Saves on Labor

A workman can make a hollow tile wall grow before your eyes.

The large pieces can be laid quickly.

And this speedy work saves time—takes less labor. This is important when you remember that half the expense of building is for labor. One-third less mortar is needed.

Hollow Tile is fireproof, needs no painting, and is warmer in winter and cooler in summer.

Its cost is only 5% more than frame, and it is the cheapest fireproof material on the market. A tile building is permanent, too.

You'll be using it ten years hence—why not now?

The Hollow Building Tile Association
Dept. 574 Conway Building, Chicago, Illinois

Free Manual

Do you know that there is a Manual on Hollow Tile Construction—yours, free for the asking.

HOLLOW BUILDING TILE

The Most Economical Form of Permanent Construction

The Brasscrafters WHITE

One-Piece Steel Medicine Cabinets

Are found in the Bathrooms of the best Homes, Apartments and Hotels in four Continents.

Some of the reasons why more and more architects are specifying **WHITE** cabinets:

The cabinets are made entirely of steel secured from corrosion by application of a process approved by U. S. Government.

The durable finish is the **WHITE**

The shelf rests are securely fixed, but instantly adjustable.

The two shelves are pure white Vitrolite glass, impervious to acids and chemicals.

The mirror door is plain French plate glass in seamless metal frame, with moisture pad, flush-fitting metal back, china knob in combination with spring catch, concealed hinge flanges, and loose pin for convenience in detaching the door.

The body and moulding are integral, or are made so by oxy acetylene welding, thus securing a cabinet without joints, seams or cracks. The cabinets require no finishing, either inside or outside, at the building. They are delivered ready for immediate installation, which is completed by using two wood screws in holes provided in the middle of the vertical sides.

Guaranteed satisfaction.

The makers of these cabinets are the makers of the well-known line

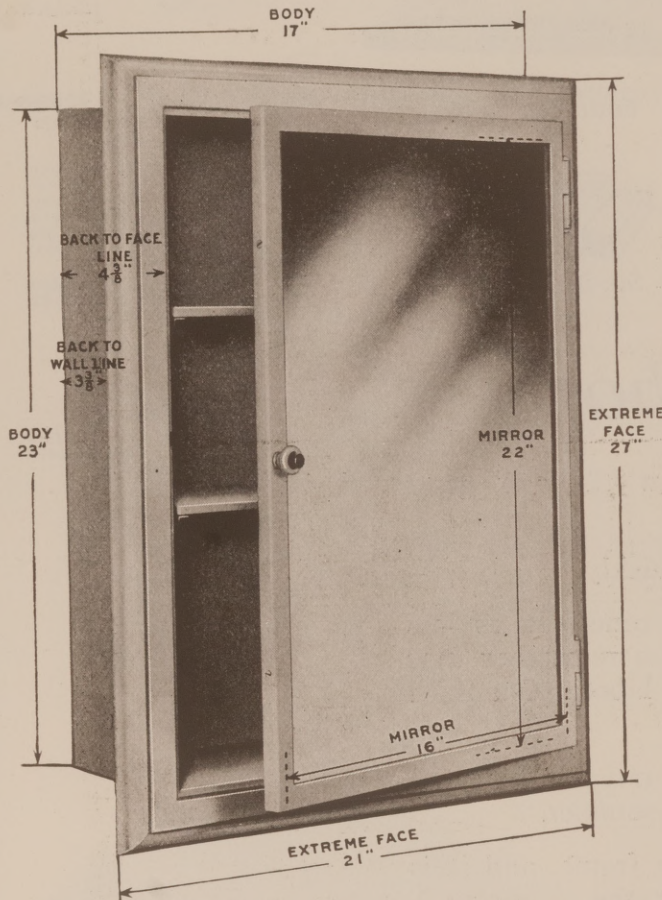
of **WHITE** Bathroom and

Lavatory Accessories, with **CONCHA-HEAD** Screws (Pat. Aug.

9, 1921), and guaranteed finish.

If your dealer or contractor is not informed, send us his name and address, and we will see that he has full particulars.

Send for our catalogue of mirrors, medicine cabinets, paper holders, towel rails, soap dishes, etc., in great variety.



GRAPHIC ILLUSTRATION

Dimensions and roughing measurements.

Extreme of Moulded Edges	21 in. x 27 in.
Body	17 in. x 23 in.
Mirror, without Bevel	16 in. x 22 in.
Wall Line to Face	1 in.
Wall Line to Back	3 3/8 in.
Opening Required for Installation	17 1/4 in. x 23 1/4 in. x 3 3/8 in.

J. P. EUSTIS MANUFACTURING COMPANY

DEPT "C"

12 Ames Street

TRADE MARK
The Brasscrafters

Cambridge 39, Mass.

IF WE FILLED SIXTEEN pages with type and asked for sixty minutes of your time to read a list of PELLE Door users, we would be demanding too much.

As a means of emphasizing the superiority of our doors to you, we modestly and honestly state that thousands of the largest and most progressive concerns in the world have PELLE Truckable, Counterbalanced Freight Elevator Doors installed in their buildings.

PELLE

COUNTERBALANCED - TRUCKABLE

Freight ELEVATOR DOORS

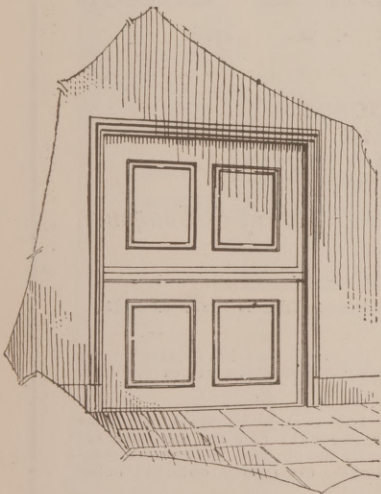
The PELLE Counterbalanced Door Construction is one of the advantages thoroughly explained in "Elevator Door Efficiency," our new catalog. A copy awaits your request.

THE PELLE COMPANY
BROOKLYN NEW YORK

Branch Offices:

Boston Cleveland Chicago Philadelphia

Agencies in Twelve Cities in United States and Canada



K-1 PELLE Kalamein Paneled Door, two solid panels in each half. (Labeled by Underwriters' or Factory Mutual Companies as specified.)

SLATES OF QUALITY



Why Are Church Roofs Slated?

Because churches are constructed to last—the materials are permanent. The Slate Roof will outlast the church.

And so it will on the home, school, factory, garage, barn: Use Slate. Slate is durable, fireproof, beautiful. Slate comes in colors of Black, Green, Gray or Purple—A style size color and application to harmonize with the rest of your building.

Consult our Architectural Service Dept. and let us submit you samples, prices and suggestions to beautify your building by beautifying the roof.

SLATE IS THE NATURAL ROOFING MATERIAL TO USE

A good slate roof, once on, stays on and will outlast the life of the building itself. A slate roof embodies, first, safety; second, service; third, economy; fourth, beauty: Use Slate.

THE AULD & CONGER COMPANY, Cleveland, Ohio

Producers of Slates of Quality, Roofing Slate, Blackboards, Structural Slate
Our book "Above All" should be in the hands of every architect.

Western Glass Company

STREATOR, ILLINOIS

Manufacturers of Wire and Rolled Glass

In All Patterns and Thicknesses for
Fire Preventive and Fire Retardant Purposes

OUR SOLITE PATTERN

*The Following is a letter from Robert W. Hunt & Company,
Engineers*

ROBERT W. HUNT & COMPANY, ENGINEERS

Chicago, Illinois, Jan. 7, 1921.

Gentlemen.

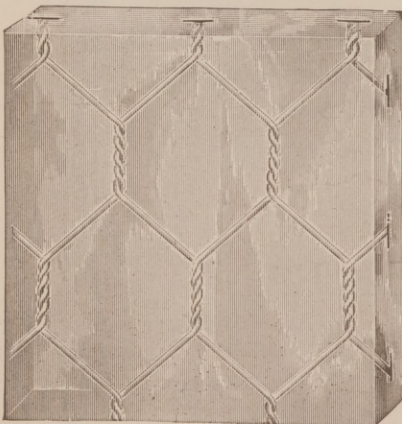
Complying with your instructions of December 28, 1920, we have tested three samples of glass for the purpose of determining their comparative values for light transmission.

The samples were tested by exactly balancing two carbon lights to the same candle power and then placing a specimen between one light and the sight box of the photo-meter. Eight readings were taken for each sample and the results averaged. These tests were repeated, using tungsten lights, the results obtained being practically the same.

The relative efficiency of light transmission referred to the Solite sample has been calculated from the combined averages from the two sets of readings with the following results:

		Per cent	Relative Efficiency
Solite	$\frac{1}{8}$ " thick	9.2	100.
Hammered	$\frac{1}{8}$ " thick	16.1	92.4
Factrolite	$\frac{1}{8}$ " thick	26.9	80.5

Respectfully submitted,
ROBERT W. HUNT & COMPANY.



Where Ambler Linabestos Wallboard Meets the need

It has the qualities of permanence and fire-safeness along with attractiveness and convenient use.

Made entirely of the two most indestructible materials—long fibre asbestos and high grade Portland cement—rolled out, with pressure of 3,000 lbs. to the square foot, into a hard, non-warping, non-cracking wallboard of permanent buff color that can be cut with ordinary tools. Made 48 x 48 and 48 x 96 to fit standard joists.

Investigate Ambler Linabestos Wallboard for every interior lining use—partitions, wainscoting, hallways, libraries, game rooms, attics, bathrooms, kitchens, etc.

For exterior use—half-timbering, paneling, fire doors, trim, and for interior use where unusual strength is needed, call for Ambler Asbestos Building Lumber.

For a snug-fitting, attractive, thoroughly fireproof roof, use Ambler Asbestos Shingles in the American, French or Honeycomb style.

You may have full information and specimens without obligating yourself.

Asbestos Shingle, Slate & Sheathing Company

Dept. J, Ambler

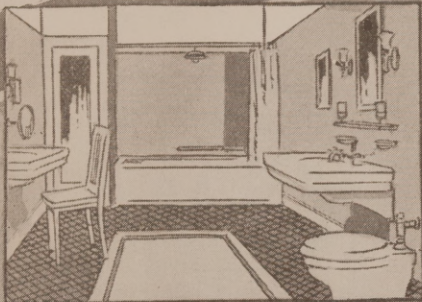
Pennsylvania

Branch Offices: Atlanta, Baltimore, Boston, Buffalo, Chicago, Cincinnati, Cleveland, Minneapolis, New York, Philadelphia, Pittsburgh, Washington, Wilkes-Barre, Montreal, Canada;

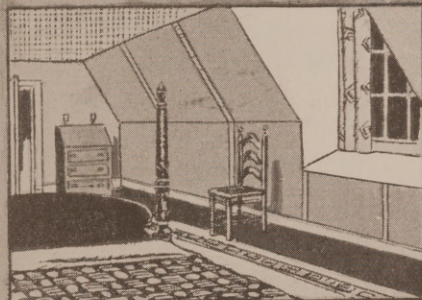
Toronto, Canada.

Southwestern Distributor: R. V. Aycock Company,
Kansas City, St. Louis, Tulsa, Houston.

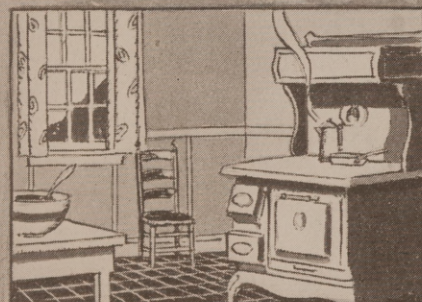
Other distributors throughout the country.



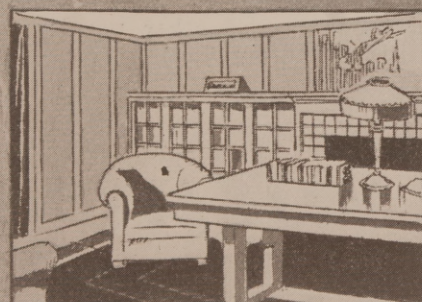
BATHROOMS



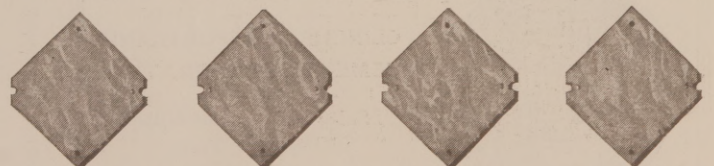
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Exterior and Interior Trim and Hardwood Doors, Sash Mouldings, Bank, Office and Store Fixtures.

Lumber, Shingles, Lath, Roofing, Paints, Oil, Glass.

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Thomasville Variety Works
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ESTABLISHED 1910

F. GRAHAM WILLIAMS BRICK CO.

INCORPORATED

CANDLER BUILDING IVY 1733 ATLANTA
HOLLOW TILE FACE BRICK "FISKLOCK" BRICK

You Who Are About to Build

For Permanent Constructton
To Eliminate Maintenance

Use Clinchfield Portland Cement



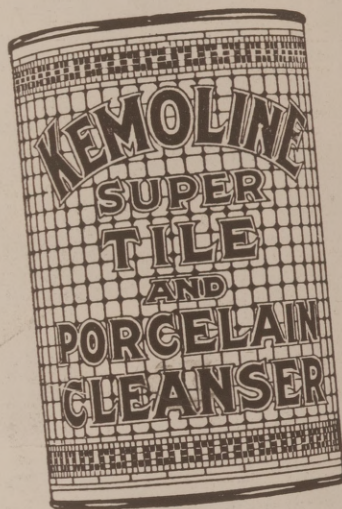
CLINCHFIELD PORTLAND
CEMENT CORPORATION

Sales Offices and Mills,
Kingsport, Tenn.

On Every Job

where you install Bath Room Fittings or make repairs, you have a customer for

KEMOLINE Tile and Porcelain Cleanser



IT removes all stains from Bath Tubs and Closets, no matter how long standing. Contains no acid. Guaranteed not to scratch or injure finest tile or porcelain work. Cuts all grease and dirt and will not harm the hands.

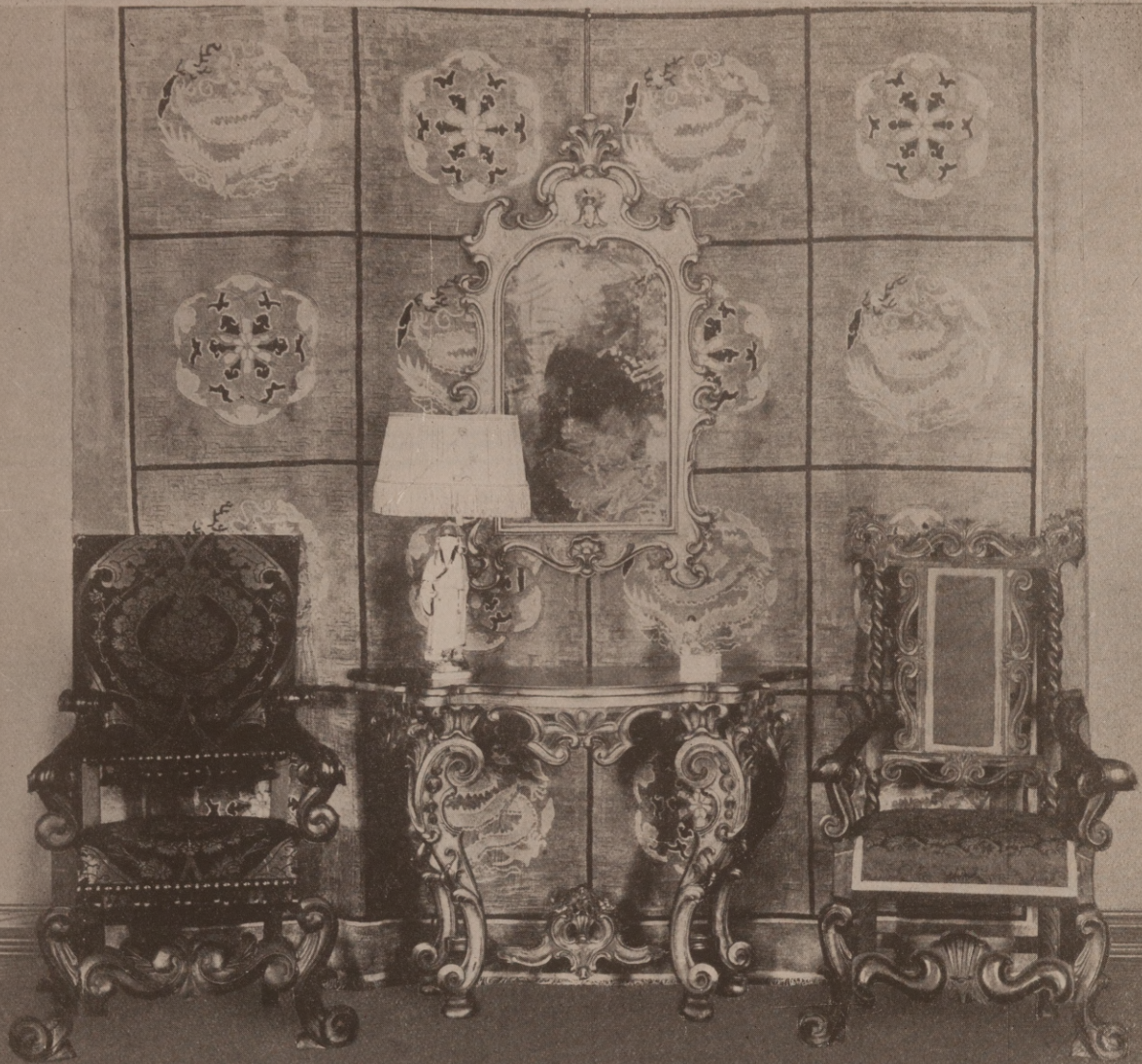
KEMOLINE makes a strong appeal to the housewife, as it cleans and polishes all household fittings and utensils.

A single demonstration sells it and brings repeat orders. Simply wet an article, sprinkle on it a small portion of KEMOLINE, rub with cloth or brush and the work is done. It is pure white, fine and soft—floats away instead of settling in trap and eventually stopping the pipes, as other powders do. KEMOLINE is put up in 1 lb. cans—convenient size.

Our Selling Plan allows the plumber a good profit. Write for details.

KEMOSHYNE PRODUCTS INC.

Manufacturing Chemists
CAMDEN, NEW JERSEY



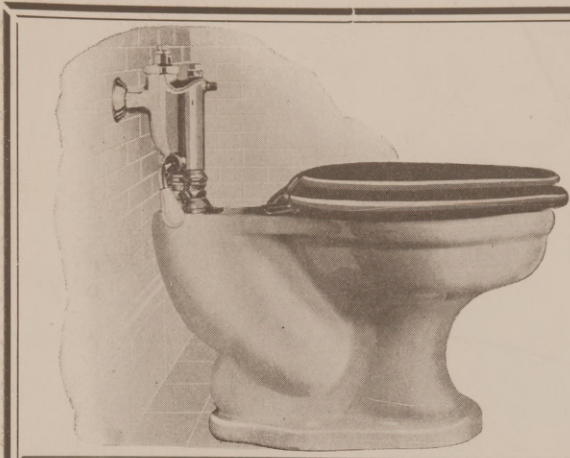
At the Notman Showrooms
the architect and decorator will
find a collection of fine furniture
which should prove of inspirational
value for the treatment of interiors.

A. H. NOTMAN & COMPANY

Adaptations and Replicas of Historic Furniture

121-127 W. 27th Street, New York

Selling Agents for John Miller & Co.



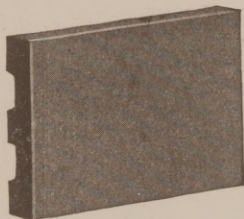
RELIABLE FLUSHING EQUIPMENT

Why not specify the latest and best, especially when it costs no more than inferior equipment? If you KNEW there is a direct pressure flushing valve far superior to any other valve on the market—a real, modern successor to the unsanitary closet tank—you would give your clients the benefit of your knowledge, wouldn't you? Well, let us show you that the

WHITE FLUSHING VALVE

is the best flushing equipment that money can buy. Can be installed in cottages as well as in hotels, apartment houses and office buildings. Can be set for any quantity of flush; wastes no water; positive action; practically noiseless; always ready for operation; requires no extra space for installation; an ornament to any bathroom. Send for circular.

The White Flushing Valve Mfg. Co.
4023 Walnut St., Denver, Colorado.

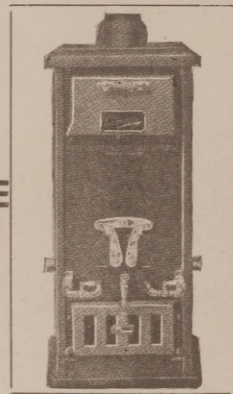


**QUARRY
TILES
For Floors**

of Porches, Terraces, Corridors, Kitchens, Laundries, Hospitals, Power Houses, Waiting Rooms, Etc.

Ask for Illustrated Catalog No. 7.

THE UNITED STATES ROOFING TILE CO.
PARKERSBURG, W. VA.



Every Rule of Health and Convenience calls for

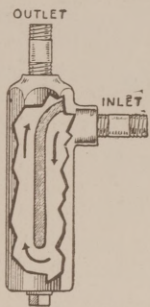
The Incinerite
IT SOLVES THE PROBLEM

The ill-smelling, germ-breeding garbage container is a constant affront to Domestic Economy as well as to Medical Science. Every rule of health and comfortable living calls for its banishment. The Incinerite is the only efficient method of sanitary, economical refuse disposal. We shall be glad to co-operate with you in your needs.

Detailed information on this line may be obtained by reference to Page 1907 of the latest edition of Sweet's Catalogue.

E. C. STEARNS & COMPANY
Manufacturers and Distributors
118 Oneida St.,
SYRACUSE, N. Y.

CAST IRON OR BRASS



No More Pipe Coils

in the fire box to deaden the fire. The

QUICK CIRCULATION

**C R E S C E N T
W A T E R H E A T E R**

will furnish hot water for a 30 or 60 gal. boiler. No. 2 heats from 60 to 180 gal. Can be used in any steam or hot water boiler or furnace.

Write for Prices.

Charles Dargent

360 Crescent Street,
BROOKLYN, NEW YORK

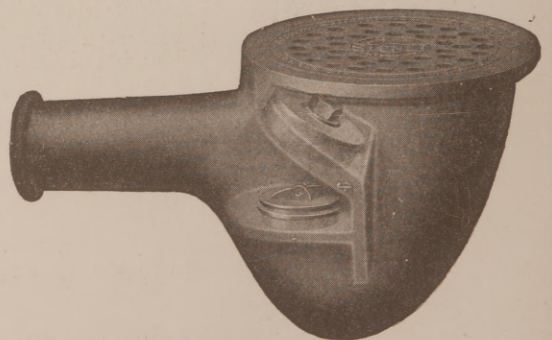
U. S. Pat. Sept. 16, 1919. Can. Pat. Aug. 24, 1920. 8 in long, 3 in. wide. Wt. 6 lbs. Tapped 3/4 in.

**SIGNET
FLOOR DRAIN**

The quality of material, the superiority of design, the absolute safety and reliability of operation, recommends the Signet for all high-class work where permanent satisfaction is sought.

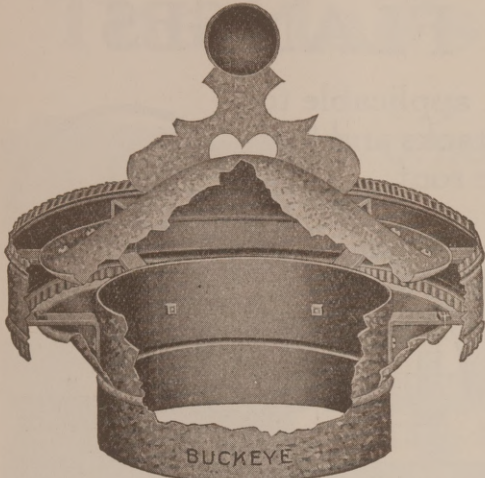
Write for circular

CRAMPTON-FARLEY BRASS CO.
KANSAS CITY, MO.



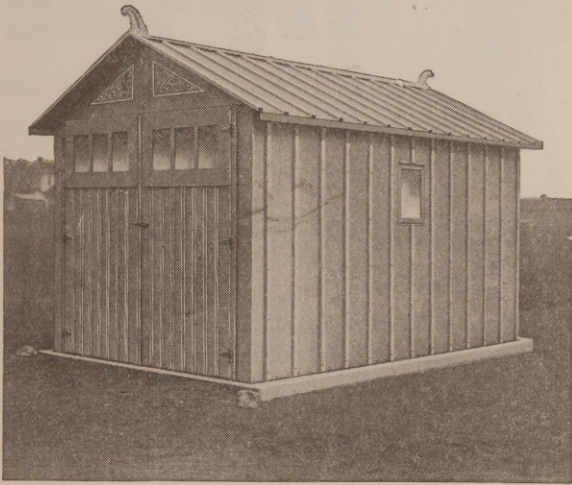
THE BACK WATER TRAP DRAIN OF QUALITY

BUCKEYE Metal Specialties



Buckeye Ventilators for factories, schools, churches, barns, etc., are known everywhere. Scientifically constructed, practical and in big demand.

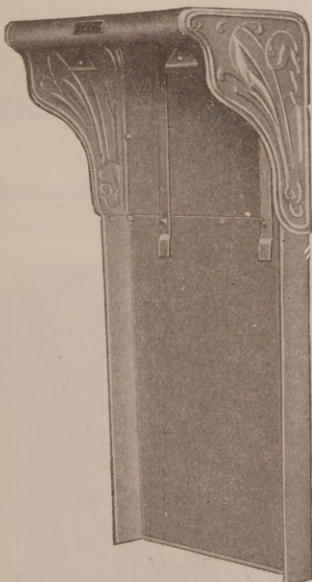
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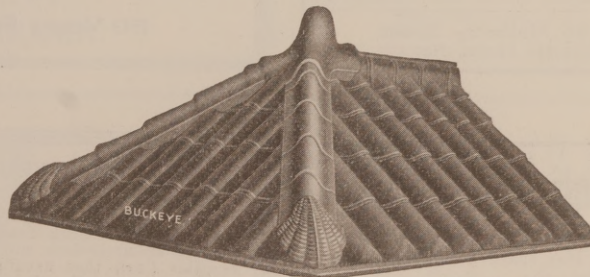
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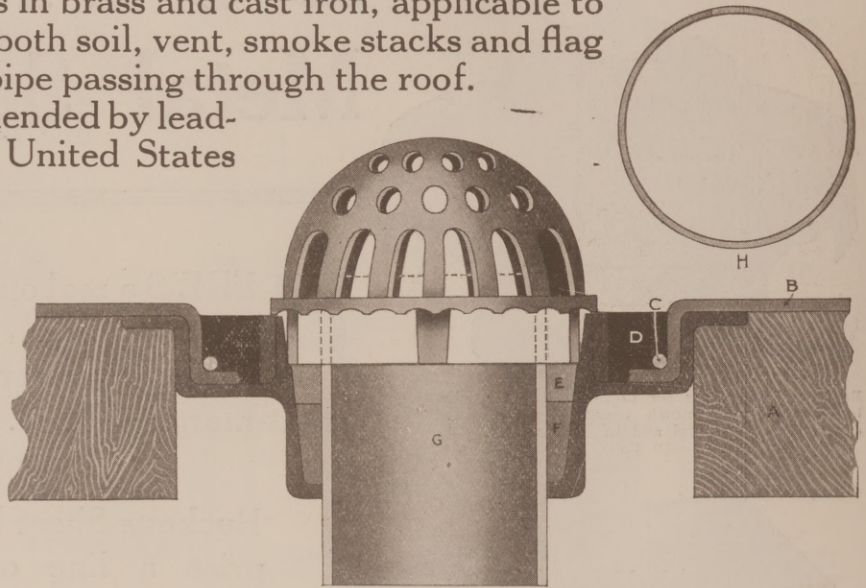
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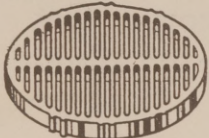


Write for Bulletin 29-A, descriptive of the full line, to the manufacturers

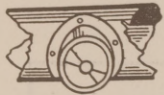
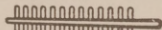
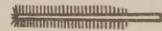
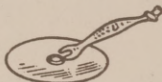
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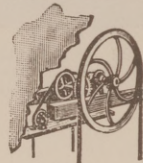


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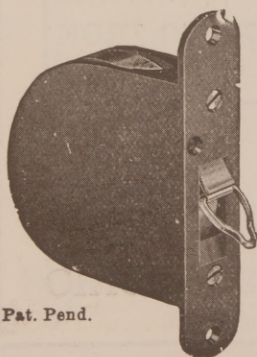
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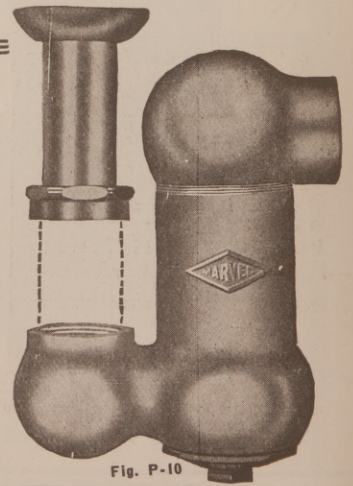
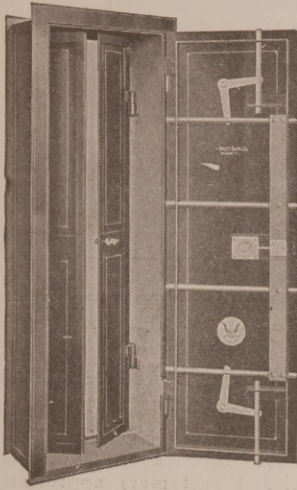


Fig. P-10

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 79 High
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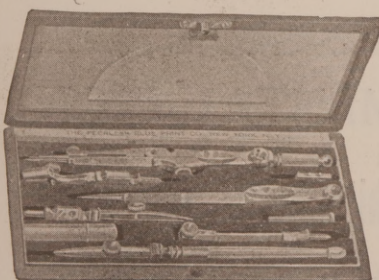
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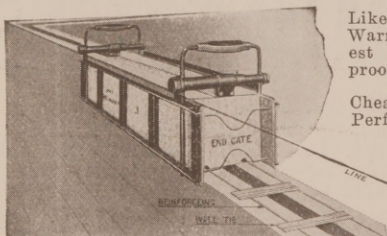
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Like a thermos bottle—Warmest in winter, Coolest in summer, Fire-proof, Everlasting.

Cheapest, best and most Perfect way known to the Building World.

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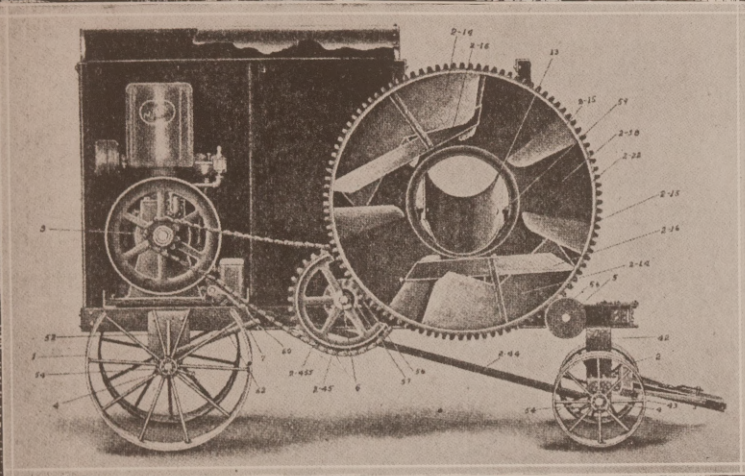
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The New Way comes equipped with all accessories. There are no extras to buy. Write for catalog and prices.

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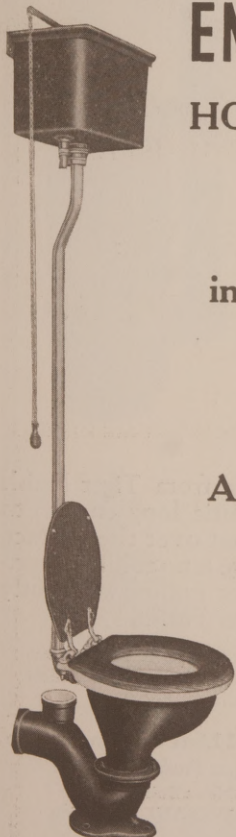
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An Outfit for every
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"Southern Queen"

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In buildings equipped with the Cutler Mail Chute, mail can be dispatched as it is ready and collected before the late afternoon rush. Delays are lessened and the efficiency of the postal service increased.

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PUTTY made from Tiger Finish remains plastic long enough to trowel and float over the surface perfectly. There is no rolling up under the trowel or pulling with putty made with Tiger Finish.

See Sweet's for full particulars about using Tiger Finish — the lime which "Spreads like warm butter."

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"Spreads like warm butter"



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SOUTHERN SHOPPE PERFECT VALVE FLUSH

Has been tested thoroughly and found perfect by the trade and by experts.

It is guaranteed unconditionally, and in an article in which you are interested, that is what is desired.

That is what you receive in our Valve.

These points of merit you will acknowledge from your own experience.

It Cannot Leak—which fact shows that it saves Water and Money. Business for many a customer has leaked away, never to come back, on account of defective valves.

The simple construction of this Valve prevents its getting out of order.

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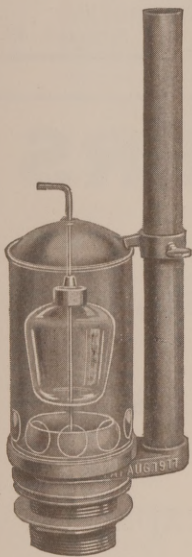
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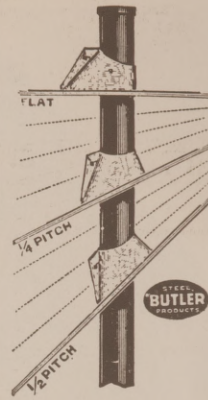


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Adjustable Roof Flashing is in a class all its own.

A special feature of the "V" which forms a metal spring. This assures a perfect weather-tight joint.

Hugs any pipe—water tight—fits any angle. Adjusts itself without turning, twisting or calking.

Galvanized, iron or copper.

Write for descriptive literature.

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THE Mastic Floor

The Ideal Floor for Hospitals

Safe—Seamless—Sanitary

The Michael Reese Hospital and the Grant Hospital of Chicago—have it in corridors, wards and private rooms

Write for THEIR opinions

THE FINEST FLOORING FOR PUBLIC BUILDINGS, BANKS, SCHOOLS, LABORATORIES, ETC. WILL NOT SHRINK, EXPAND, LOOSEN, BULGE OR CRACK.

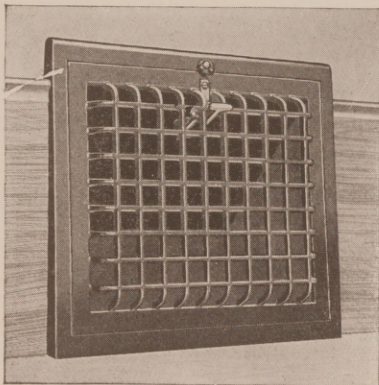
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THOS. MOULDING BRICK CO.

Manufacturers and Distributors of
BRICK AND BUILDING MATERIALS
133 W. Washington St., Chicago, Ill.

WALWORTH REGISTERS MADE OF CAST IRON

MORE DURABLE! WILL NOT RUST OUT! MORE SUBSTANTIAL!



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Walworth Registers will last a lifetime—will not rust or warp out of shape. Maximum capacity for a given size. A Register which will appeal to all who use it.

The Walworth Run Foundry Co.
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LOUISVILLE, KY.

Self-Confidence

SELF-CONFIDENCE is a gift to be desired by all men both young and old. It is a virtue found in the lives of many but one that is sadly lacking in others.

If we were called upon to give a reason why so many young men fall by the wayside in the struggle for existence in the business world, we would not hesitate in stating that in a large majority of cases, failure comes through a lack of self-confidence. Many young men although ambitious, hard workers, and with strong personalities have gone down in defeat before the problems that the business world naturally imposed upon them.

It is a pity that every young man starting out in business could not be slowly and gently broken-in to the disappointments and ever discouraging outcomes of business trials.

Unfortunately a great many men have inherited a weakness, which prevents them from overcoming disappointments. While others through one cause or another have unconsciously acquired this weakness.

From a study of psychology, and a close observance of the personalities of the men we come in contact with daily, we learn that unless a man has confidence in himself and in his ability, that no one else will have confidence in him.

While we believe that self-confidence is the keynote to success, we also believe that too much self-confidence is equally as harmful, and disastrous as too little self-confidence.

A man with too much self-confidence often jumps at conclusions too quickly. He is so confident that his ideas and his judgment are correct that he does not weight carefully the problems before him

that must be solved. It is very easy for him to over-estimate or in some cases to under-estimate the value of a proposition in a business transaction.

If you have advanced rapidly in your chosen work, and your judgment has always proved sound, you are to be congratulated but let us warn you to guard yourself against becoming too confident of your own good judgment, that too much self-confidence might not creep in and destroy all the success of the past.

In these times when both men and business are being put to the acid test in the struggle for existence we need more self-confidence in our own selves as well as more business confidence in our business, and in the business world as a whole.

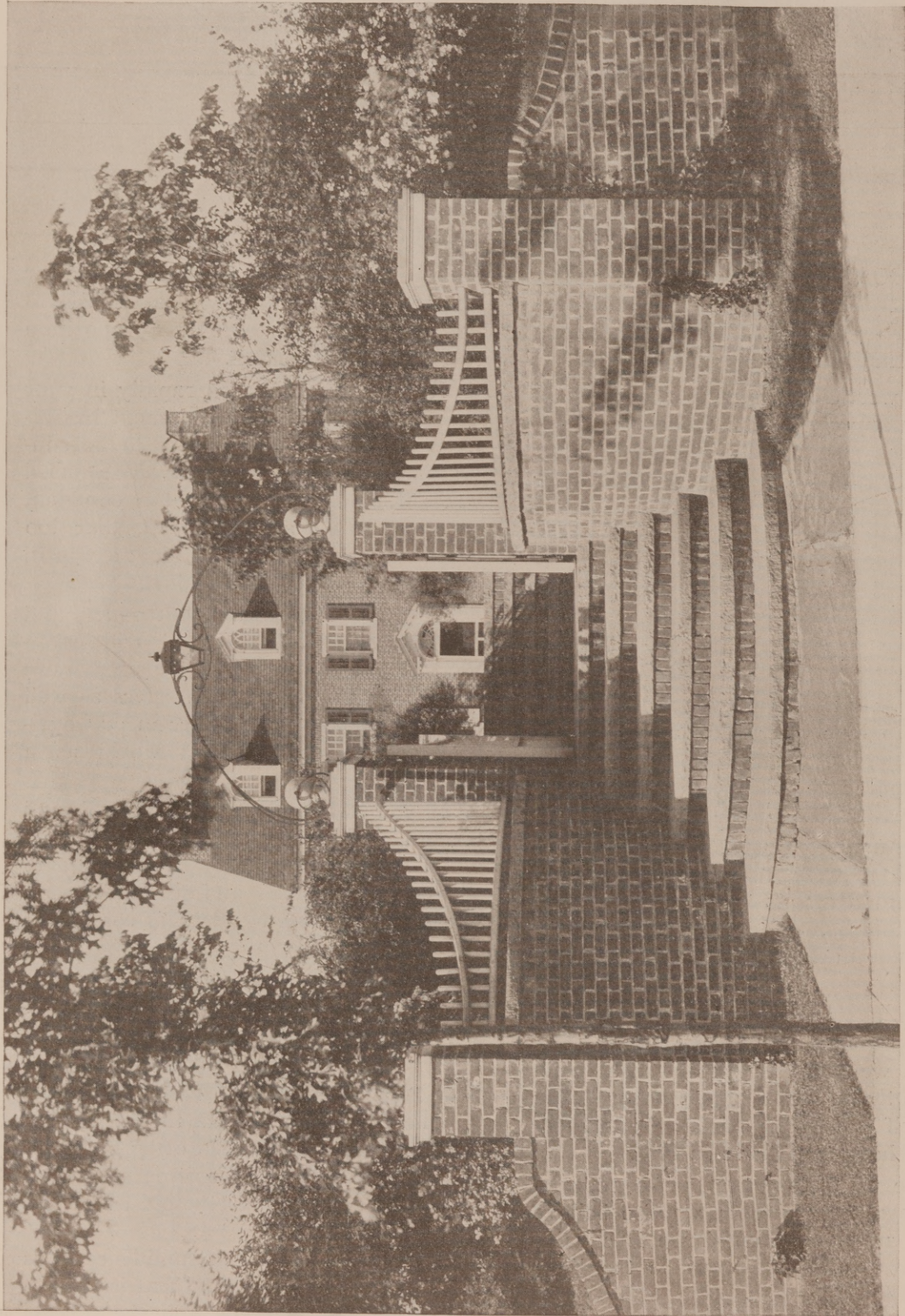
If you have become discouraged, and disappointed with your inability as it would seem to progress as other men, then search yourself and see if you cannot trace the cause to a lack of confidence in your ownself.

Your business is or should be a part of you. Although you might have all the self-confidence in the world, unless you have that some confidence in your business you cannot hope to succeed.

The hands that guide the destiny of business is no respecter of professions trades or persons. The same trials and hard problems come to the old as well as the young alike.

Remember, that self-confidence plus hard work, and good judgment is sure to determine your success, and the success of your business.

E. R. Denmark
EDITOR.

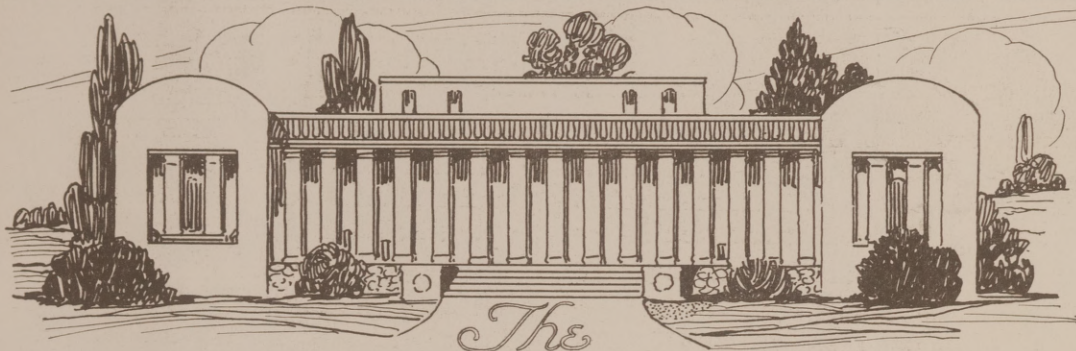


Residence, St. Martins, Pa. Duhring, Okie & Ziegler, Architects

A charming vista through the brick gateway to the fine old colonial type of brick house beyond. There is a distinct feeling of welcome here and at the same time a sense of seclusion, suggested by the protecting brick wall and gateway.

ARCHITECTURE

ENGINEERING



The
SOUTHERN ARCHITECT AND BUILDING NEWS

Construction

Landscape

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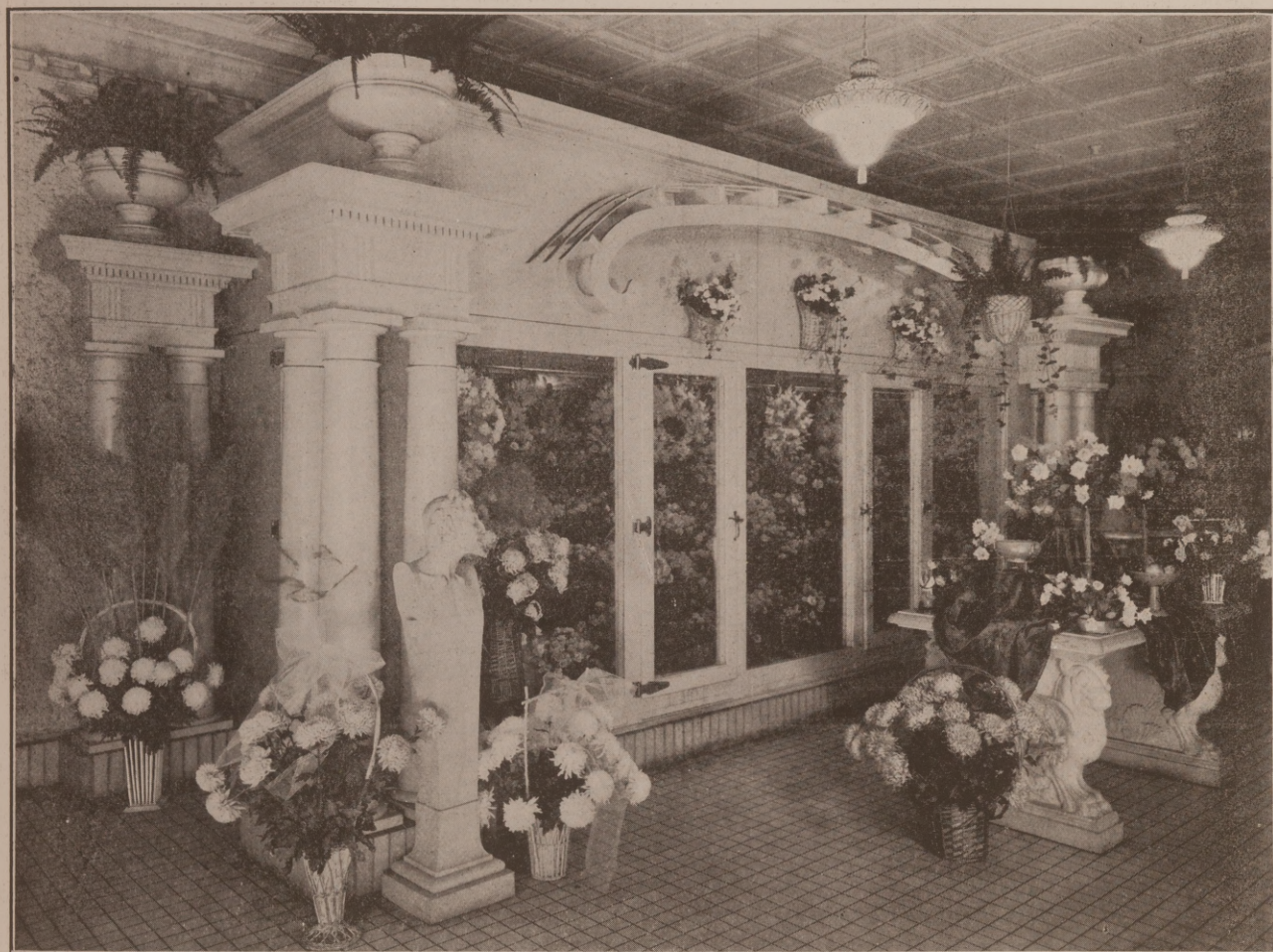
H. E. HARMAN,
President.

E. R. DENMARK,
Editor.





SOUTHERN ARCHITECT & BUILDING NEWS



A Unique Floral Shop Design

"Dahl's, Atlanta's Leading Florist."

Designed by C. A. Dahl

Photos by Fishbaugh & Lee

You will note from the photographs of the windows, that they have spared no expense in procuring the handsomest to be had. The curved, plate-glass windows are outlined with Antique Copper moulding, with a massive base of Verde Antique marble. The doors are a very unique design, of French pattern, all the hardware being of the handsomest brass. These windows are trimmed at the top with an edging of green Velour, trimmed in gold braid, with a lattice effect, with green Velour curtains in the background. They are floored in French Grey Tile, with drainage in the center, and water spicket

in the back, to be used for watering plants, and for fountains, woodland scenes, Lily ponds, etc.

As you enter the store the appearance is as though you were going into a garden. There is a balustrade on either side, and at the end of each balustrade is an urn, which can be used for ferns or palms, or for large cut flowers, such as Easter Lilies or Chrysanthemums. Back of this balustrade, on either side of the store, are outdoor garden sets, consisting of chairs and seats, with velvet thrown across them, so as to give them a comfortable, cozy, and inviting appearance. This yellow glow, against the delicate blue



often like to rest, or have appointments to meet their friends here.

Up and down the store on either side, against the walls, are placed brackets or shelves. These have marble tops, and on the end of each shelf is a lamp of unique design. These are lined with yellow silk, which gives a most pleasing light effect. This yellow glow, against the delicate blue shading in the walls, the walls being of a very rough stucco, (using a large pebble and heavy sand, to get this effect), is most pleasing to the eye, and when yellow or pink flowers are used against this background, the effect is wonderful, throwing out every tint in the blossom.

Between each of the shelves are double columns, surmounted by an urn, this breaking the shelving, and giving the whole store a garden effect. Between the columns, and over the shelves, is a lattice effect, further carrying out the garden idea. At the top of the stucco work, about 18 inches from the ceiling, is a small pergola effect, used as a moulding for the entire store, breaking the decorative effect of the wall, from the ceiling.

The same idea is carried out in the ice box; the corners are flanked with the columns, surmounted by urns. Opposite the ice box is a mirror, bordered by a beautiful design in lattice work, which harmonizes with the rest of the garden effect, and this same design frames the

doorway in the back, which has garden gates, as though you were entering a garden, as you come in and out. The ice box is one of the handsomest the McCray Company claims they have ever made for a flower store. The inside dimensions are 18 ft. long, 6 ft. high, and 4½ ft. wide. It has a glass mirror background; is equipped with invisible lights; is tiled with French Grey tile; it has a galvanized container in the rear, 3 ft. high, divided in compartments for holding flowers; it also has three steps, each one being 1 ft. higher than the other, for elevating the flowers, thus enabling them to show every individual vase separately. It also has brass rods attached to the ceiling of the box, which enables them to hang up tumbler baskets and made-up designs or bouquets.

All the lighting effect in the store, is shaded, and you have no direct glare to meet your eye, which gives the flowers the appearance of being in daylight rather than artificial light. The windows are lighted with the same idea.

The fixtures used in the store, while very few, are most handsome. As stated before, the two sets of garden furniture used at the front of the store, is the only wooden furniture used in the store, the other furniture being one large, square, grey limestone table, of Greek design, with the lion-head supports. On this table is usually kept a drapery of velvet, with handsome pottery in

(Continued on page 62)

Equitable Contracts, General Conditions and Specifications*

A FEW years ago when I had the honor to serve the American Institute of Architects as its President the opportunity was frequently given me to address conventions of the leading spirits in the world of building, but it was always in and on account of the official position.

When I was invited to speak to this distinguished body as an individual, I felt highly complimented because it indicated at least a friendly spirit and a bond of sympathetic understanding having its foundations in the official relationship of the past.

In spite of the compliment and in spite of the friendliest feeling, I fear that inertia, or rather the resistance to jarring out of the daily round of a happily, well-filled life, would have caused me to decline your invitation had I not felt that in this moment of reconstruction of the whole social fabric the component parts are going through a process very similar to that of crystallization in a supersaturated solution. As you all know, this action may be induced by casting into the solution some particle of solid matter and my acceptance was based on the hope that some one of the things I have to say to you might prove to be that minute particle starting to crystallize your policies, purposes and ideals.

The Co-Fraternity of Construction.

To my mind, this is a crucial moment in the history of the co-fraternity that creates all great construction—the Architects and Engineers, the Contractor and Labor.

Take for example, the professional body of architects—the American Institute—today it stands at the parting of the ways, the one pointing down a pleasant path of contentment with the high character of the work it is performing for the betterment of the body politic in the narrow confines imposed by the limitations of income derived from a comparatively small number—the other, a broad highway leading to the accomplishment of its altruistic aims through the launching of activities which of necessity are based on a larger and more truly representative membership.

This was the issue put squarely up to the Directors at the last meeting in St. Louis in November, and without hesitation the bigger field of endeavor and responsibility was selected. And right here I want to impress upon your minds the true meaning of that oft misused and somewhat despised word “altruistic”: the dictionary says it “denotes benevolent instincts and emotions in general and actions prompted by them. The opposite of egoism.”

It is, after all, the “thought of others,” and might well form the motive behind the axiom “one gets out of life just what one puts into it.”

And, like the American Institution of Architects, this Association of General Contractors stand at the parting of the ways, or, may I not say well beyond the left-hand road of selfish interest, and forging strongly ahead toward altruism, securely safeguarded with worthy principles and high ideals of its duty toward mankind, which only incidentally includes its individual members.

And third comes labor, bruised with the conflict in its own ranks between the radical smooth tongue “leader” and the real men in the trades who think straight but who have suffered with the rest in the crushing defeats which have befallen the rank and file under selfish leadership. It is for labor at this moment to make its choice—shall it proceed, and, based on real principles of equity and respect for the dignity of craftsmanship, endeavor to make membership in a union a matter of pride rather than blind fealty to the union, or does it intend to attempt to dominate by the same methods of force and coercion which they have decried in others.

Permit me to read to you portions of an admirable article entitled “Union Labor and the effort at Self-Destruction” which at present the weak link in Labor’s chain from a new angle. It was written by Paul Brown of St. Louis in “America at Work,” and it is unlikely that many of you have read it.

Union Labor and the Effort at Self-Destruction.

Leaders of union labor often express surprise that the movement does not call forth more sympathy and practical aid from that part of the general community which has no direct interest in labor troubles, but is supposed to sympathize instinctively with the efforts of groups of men to better themselves economically and socially. We should like to suggest to our friends, the labor leaders, that one possible reason is that the labor union fails to meet the chief test of such organizations: It is not working to make itself unnecessary.

Look, for example, at schools and teachers. They are all laboring to make themselves unnecessary, as far as possible. The true teacher and the real school are striving in every way to make culture common property—a thing as free as the air, whose influence the man in the street can no more escape than he can cease breathing. Instead of declaring that schools and teachers are absolutely necessary to culture, that the person without a diploma is in the outer darkness.

Teachers write books, deliver lectures, and hold themselves free to advise with anyone at any time who desire to get the reality of culture without submission to the discipline of the school. Not only this: the greatest institutions of the modern world have organized tremendous extension departments, and hundreds of men are employed by them in the work of taking the stored treasure of the culture of the school and scattering it broadcast in the highways. Nothing could be more unprofessional—in the straight and narrow sense—than all this effort. The true teacher is working, planning, and dreaming to make learning common as the dust of the street, to make it impossible for the child to grow up in the home, the girl "clerk" in the store, the boy to become an apprentice in the shop without somehow, along with domestic and commercial and industrial activities, absorbing an education.

The same thing may be seen in the church. This is the age of laymen's movements, of all sort of non-professional church activities. Street preaching, far from pulpits, altars and rituals, has been assisted by the Church Federation in St. Louis for years. From the churchman's point of view, there is high authority for all this, for he remembers reading in a certain old Book about the Celestial City: "And I saw no temple therein."

Non-union made doors, no matter how well-seasoned the lumber, how perfect the joints, how handsome the mouldings and how high the finish, may not be hung in a building which is being built by union workmen. In schools, the emphasis is on learning; the school itself is felt by the teachers to be a secondary thing. Among physicians, emphasis is on health, the giving of medicine and the collecting of fees is secondary. But in union labor the emphasis is not on labor but on "union;" the union comes first.

The history of human society proves that an organization which comes to consider itself of greater importance than its object does one of two things: It either gets dry rot, unobtrusively powders to dust, blows away, and is comfortably forgotten; or it comes to surround the growing, pulsing life of its time, like an iron chain which eats into the living flesh, stunting growth, creating sores, and finally either killing the organization that it shackles or being broken up and torn away. The autocracy of England was an example of the first class; England is now a democracy, and people formerly dependent, like the Canadians and Australians, are free and self-governing nations. The autocracy of Russia was an example of the second class; it hooped and shackled the lives of the Russian people and today we are trying to find out whether it has been

shaken off, or only changed to a new and more terrible form.

Nothing is to be feared more in its ultimate effect on humanity than organization in the hands of men who have forgotten that the only justification of a machine is its product, and that the ultimate destiny of all machines is to be scrapped. All this is not a matter of opinion. It is not a question of prejudice or sympathy. It is not a question of "friendliness to labor" or the reverse. It is a mere matter of history—and the evidence runs all one way. No great movement ever amounted to anything that had not as its object the making of itself unnecessary.

America at work would be the last to deny that the history of union labor shows to us men, and women, too, who have been ready to give the last full measure of devotion for the cause in which they believe. Their devotion, however, has been to an organization—to a patent remedy with the name blown in the bottle, so that instead of rejoicing in peace which reigns over unorganized plants where wages and working conditions are both of the best and deep personal loyalty unites workmen and employer, they see in such an organization "a menace to the cause." The cause, in short, is not industrial peace, heightened production, and human happiness; it is a particular form of organized control. The emphasis is on the machine, and not on the product; the test is devotion to the machine, and not to the happiness and well-being of men.

There are in the world many millions of men and women who passionately believe that the life conditions of industrial workers must be made better—that the citizenship of this great world of ours must become a wider, a more intelligent and more satisfying thing; yet they look askance at union labor, which is professionally working for the uplift of the working class. Perhaps they do not analyze their fear; but at bottom there is the instinctive recognition of the fact that no institution is professedly working for the uplift of the agony of sacrifice which does not labor to do away with itself.

Support Board for Jurisdictional Awards.

My friends, the day of force, of selfish greed, of entrenched privilege is swiftly passing and co-operation and mutual confidence in the motives and honest purpose of others is creating a new order out of the old chaos. And right here I want to make an earnest plea for your whole hearted support of the unselfish efforts of the National Board for Jurisdictional Awards. You and I, and, incidently, Labor, know the aggravating, costly and totally unnecessary delays caused by jurisdictional disputes. No one had the necessary authority to order the resumption of work and the owner's money was wasted pending

A Study in the Use of Brick for Entrance Detail



Detail of Residence, Westbury, L. I. Peabody, Wilson & Brown, Architects

How well the fine brick wall, laid in a Flemish Bond, represents and expresses the simple dignity of this splendid house. The wing, the noble chimneys, the high-pitched roof with its dormers, and the gabled entrance, make an ensemble of great charm.

Courtesy American Face Brick Association.



Entrance Detail, Residence, Oak Park, Ill. John L. Davies, Contractor

A thoroughly satisfactory brick treatment, showing the bright, clean, substantial nature of the material. Brick walk, steps, terrace, pilasters, and walls find in brick a medium that exactly suits the purpose, structural and artistic. It is interesting to note that the bond is secured every eighth course by the headers of a Flemish course.



Detail of Residence, Huntington, L. I. Wilson Eyre, Architect

A charming brick composition in which the plastic nature of brick construction is evident. The projecting brick coping of the gable, resting on corbeled shoulders, the round window, and the chimney tops, show how easily brick fit into the architect's design.



Entrance of Residence, Chicago, Ill. Paul F. Olsen, Architect

A very inviting entrance to a fine Dutch Colonial face brick house. Solid substantially without, and welcome and comfort within, are easily suggested. The light and shadow effects in the beautifully blended, vari-colored brick, are not brought out in the half tone, but are always seen by the observer of the house.



Detail of Residence, Huntington, L. I. Wilson Eyre, Architect
Around the corner is this intimate and covered entrance into the main wing of the house.
The arched opening lights the vestibule, which is lined with brick.



Detail of Residence, Newtonville, Mass. Frank Chouteau Brown, Architect

A charming angle with canopied entrance. The rich tone of the brick, the wide, flush-cut joints, the soldier belt course, and the rowlock and soldier sills and lintels are all simple elements, but form together a most attractive whole.

the settlement of the family row.

No new agency is perfected at birth, and criticism has been leveled at the machinery of the National Board, by Labor, by Architects, and is indicated by the passive resistance of some of your own members, but all or most of the criticism could, I believe, be effectively answered if those possessed of the facts could meet their critics face to face. Until this is possible, I urge you to give this great stride in advance the encouragement of your loyal support because we must accept the protection of the best that now offers in the spirit of Bairnsfather's unanswerable—"If you know a better 'ole—go to it."

Your are probably wondering what all this has to do with the Program caption of my paper—"Equitable Contracts, General Conditions and Specifications." That serve as a text quite as well as many Scripture quotations serve the moral of the Sermon they suggest, for what I am going to say to you is the outgrowth of the mutual respect and confidence which has grown up between us in just the same frank, open intercourse which replaced the old one-sided contract with the standard documents as the outgrowth of the joint labors of the Architects, the Builders, and the Trades.

The Architect's First General Contract.

I don't know how many of you recollect the first step that was taken by the American Institute of Architects looking toward a general form of contract to which all members of my profession would subscribe. I must say that the result was hardly a thing to boast of. It was drawn up by an architect, or a committee of architects; it was submitted at the first convention which occurred after the appointment of the committee and everyone present thought it sounded very nicely and almost every other paragraph ended up with, "and what is not sufficiently drawn, delineated in the drawings, or mentioned in the specifications, shall nevertheless be done as fully drawn and mentioned in the specifications and to the satisfaction of the architect." And nobody could see why that was not perfectly all right.

Well, gentlemen, it was all right from the viewpoint of the particular men who drew up that document. They were in the habit of dealing with men whose confidence they enjoyed, and, the reverse being true, there never was any friction. They were in the habit of saying, "No, I don't think that it is quite right, I'd like to have that changed," and it was changed unhesitatingly. The builder knew that the architect was right.

But when that was applied to all architects and all builders, it was a thorn in the flesh, it was unfair that anyone who was spending his money should be asked to make good some captious request of an unreasonable architect, and so the

criticism began to come in hot and heavy. In fact, some of it was so offensive that it was the attitude of the members of the original committee that they'd have nothing to do with the builders who spoke so roughly about it.

But some of us had quite a different view of it. They said, "Where there is so much smoke there must be some fire. Now, let's get together with those men and sit in and talk it over."

"Why," the other men said, "you can't talk to fellows that will write articles like that. It's impossible! You couldn't deal with a man that is so unreasonable."

Well, the then President of the Institute, Mr. Sturgis, said, "Let's try it."

And the most offensive of the detractors was invaded to head the contractors' delegation to sit in with the architects to talk over the standard document, and then the miracle happened! Both sides found that the other fellow was a damned decent fellow. They liked each other, they got along beautifully and out of that first conference has grown the standard documents of the American Institute of Architects which are endorsed—I don't know whether by your body as yet, but—by several bodies of contractual nature, by a great many of the sub-contractors and material men.

I think today they are eminently fair and have none of the faults which existed in the original ones. That doesn't mean that they can't be bettered and the work that you are doing, the work that your committees are doing, sitting in with the American Institute of Architects committee and with the committee from the Engineering Council—that is what is going to bring us together on the same platform for the purpose of rearing the buildings of the future.

The Architect's Scope.

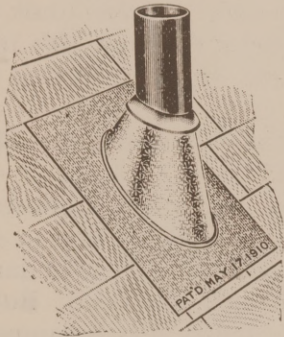
There are some Architects today who advise clients that a General Contractor is an unnecessary "middleman," and they undertake for the owner those functions which they conceive are all that the General Contractor has to offer in exchange for a very substantial profit. My own belief is that these men are wrong—that their viewpoint is narrow and warped, possibly by unfortunate experiences with individual contractors, whose aim was obviously the extraction of the maximum profit while the service rendered was that of a broker. I believe that every cobbler should stick to his last, and so I can no more see the advantage to the owner of such a method than I can see the propriety, in these days of highly specialized effort under competent guidance, of the course of an architect I know who prides himself on doing personally every branch of the work, foundations, design, structural engineer-

(Continued on page 48)

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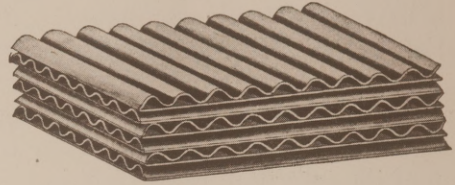
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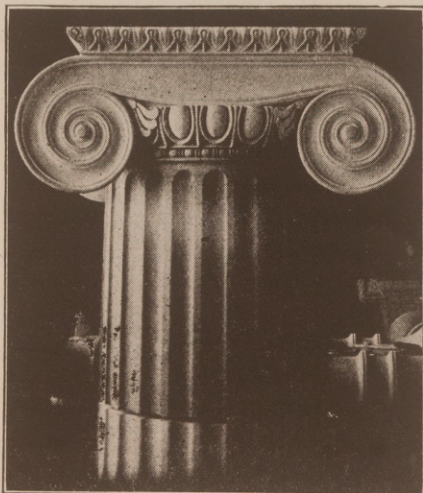


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Editorial Comment

The Southern Architect And Building News

Southern Architect and Contractor, Atlanta, Ga., and Southern Building News, Memphis, Tenn., and Southern Building Record, Nashville, Tenn., Consolidated.


Entered as second-class matter May 27th, 1911, at the Post Office at Dalton, Ga., under the act of March 3d, 1879.

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An Agreement Worthwhile.

AT the recent meeting of the Associated General Contractors of America, held at Cleveland, Ohio, a most important agreement was reached among themselves. This agreement will no doubt exercise a far-reaching and beneficial effect upon building and construction cost in the United States during the future.

The agreement in substance was as follows:

1. That before undertaking work in other than home territory a contractor must ascertain the rates of wages paid labor in the locality where the work is to be performed.
2. That the contractor must not pay more than prevailing wages.
3. That, if he cannot then get the men he needs, the contractor will appeal for assistance to the local contractors who shall consider his case, and that he must be governed by their action.
4. That he may appeal from adverse decisions of local contractors to the contractors' national trade association for relief.

By the adoption of this agreement the contractors hope to exercise a far-reaching and beneficial affect upon building and other construction cost in the United States during the future.

The agreement however, it is stated, was not reached in anticipation of the imminent building boom, reckoned as greater than any the country has ever seen, but to check and eliminate an evil that had long been under consideration.

Heretofore, a contractor, say, with headquarters in Chicago, might undertake work in another city—say, Indianapolis, and because of the magnitude of the work and the owner's desire to have it completed quickly upset and disrupt the entire building trades labor situation by off-scale inducements to labor to come to work for him. The recently adopted agreement is aimed at this practice and depended to prevent it.

As a penalty, the agreement provides that any contractor failing to observe its terms may be disciplined by the National Contractors' association by suspension; or that he may be expelled from the organization.

The text of the agreement states the following understanding:

First, Whenever a member of the Associated General Contractors' assumes any contractual operations in territory within the jurisdiction of a local chapter other than the one in which he holds membership, it shall be the duty of such member before employing labor in the various crafts, to first ascertain from the local chapter the prevailing wage scale.

Second, That it shall be the duty of such member to offer employment to the various crafts at a rate of remuneration not more than the prevailing local wage scale as ascertained from the local chapter.

Third, That in case of difficulty in securing a sufficient force of men due either to the magnitude of the work undertaken, or to a prevailing scarcity of skilled men the member conducting such operation shall request a special meeting of the members of the local chapter having jurisdiction, and upon such meeting being called, shall lay the matter before it.

Fourth, That it shall be the duty of the local chapter to immediately investigate the difficulties complained of, and to attempt in good faith to relieve such difficulties by whatever methods seem best under the circumstances.

Fifth, That it shall be the duty of the contractor from outside the territory to conform to the suggestions of the local chapter in attempting to relieve the conditions complained of, without interrupting the prevailing wage scale.

Sixth, That, should the method suggested by the local chapter fail to relieve the situation, the outside member and the local chapter, or either of them, shall place the entire matter before the executive board of the Associated General Contractors for its ruling, such ruling to be final.

Seventh. That any member who shall refuse to abide by any such ruling of the board, after due notice, in writing, shall be subject to discipline as provided by section seven of article two of the rules procedure.

What Retards Building Construction?

HERE is one basis on which there is likely to be a general revival of building, and that is one of costs," editorially states the **Journal of Commerce** of New York. And it counsels legislatures, would-be reformers and the building material industries in general to learn this elementary truth. It is as significant in this instance as in almost every other, where the retardance of building is discussed, that in considering costs, that of the most essential item of all, money is seldom, if ever, referred to.

It is the high cost of money more than anything else that is responsible for present conditions.

Let us take, for example, the present situation in Philadelphia, as ably summed up by the **North American** of that city.

Building projects in Philadelphia involving an expenditure of at least \$100,000,000, are now held up, awaiting the adjustment of present building uncertainties. These uncertainties, state the **North American**, are not due so much to the high cost of labor and materials, as to the present excessively high cost of money.

With easier money conditions, these vast operations would be at once started on the way towards early completion, and the stagnation of building would be replaced by activities that would give employment to thousands now out of work.

The general public have been fed to the point of repletion on various theories by self-constituted authorities as to the reason for building depression. Whether it is that they do not reason clearly, or because the herring has been so successful drawn across the trail as to throw them off the scent, is debatable. But, with an easier, freer and cheaper loaning market, it is certain that the present loudly discussed factors of building depression would sink to significance.

To Let Yourself Get Discouraged is Demoralizing

REMEMBER this: When Abraham Lincoln was a young man he ran for the legislature in Illinois and was badly swamped.

He next entered business, failed, and spent seventeen years of his life paying up the debts of a worthless partner.

He was in love with a beautiful young woman to whom he became engaged—then she died.

He became a candidate for the U. S. senate, and was badly defeated.

He then tried to get an appointment to the U. S. land office but failed.

In 1856 he became a candidate for the vice presidency and was again defeated.

In 1858 he was defeated by Douglas.

One failure after another—bad failures—great setbacks. In face of all this he eventually became one of the country's greatest men, if not the greatest.

When you think of a series of setbacks like this, doesn't it make you feel kind of small to become discouraged just because you think you are having a hard time in life?

The Construction Industry.

IN a special report issued recently by the Committee on Statistics and Standards of the United States Chamber of Commerce, of which A. W. Douglas of St. Louis is chairman, the total national wealth of the United States is estimated at \$288,464,000,000, of which \$77,321,000,000, or 26.8 per cent., is represented by the construction industry.

The report shows that in 1914 one quarter of the 276,000 manufacturing concerns employing 10,658,000 workers with an annual payroll of \$5,368,294,000 and an annual output worth \$25,000,000,000, was devoted to construction products.

In 1920, ninety per cent. of all iron ore, copper and zinc, and ninety-five per cent. of all lead mined was consumed by construction. Twenty per cent. of the bituminous coal and five per cent. of the anthracite coal mined was used by manufacturers of construction materials, by the railroads in transporting these products, and by traction lines and public service corporations in service to construction workers. A rough estimate of the value of these minerals is \$4,400,000,000 engaging more than 1,000,000 workers at an annual wage of approximately \$1,000,000,000.

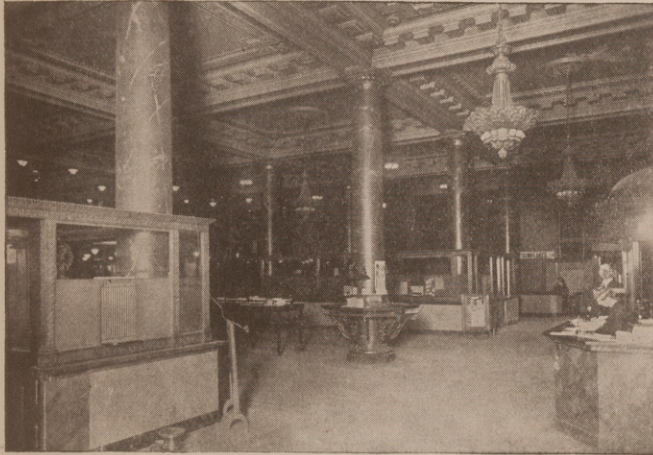
Twenty-five per cent. of the freight transportation by the railroads is construction materials.

11,000,000 persons, either as workers or as members of workers' families are estimated to derive their living from Construction, either directly or through manufacturing and mining products used in the Construction Industry. The support given to agriculture and to trade by the annual expenditures of this great number of persons is estimated at more than \$5,545,000,000 for

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New capital issues during 1920 so far as reported, totaled \$4,545,000,000, consisting of state, municipal, railroad and industrial securities, of which it is estimated fifty per cent. were issued for Construction in one form or another. A considerable portion of the new capitalization went to pay off maturing obligations, which were reflected, however, in past construction to a large extent.

Even this estimate does not cover the whole field. It is short a huge amount of expenditure for new construction because a great amount of expenditure for additions to plant, structures, etc., is paid out of earnings at hand it appears that twenty-four per cent. of the year's capital accumulations, and probably fifty per cent. of the national savings annually go to Construction.

Based on this analysis, the report concludes that the Construction Industry is a unique barometer of the state of business in all industry and as such deserves a separate classification among the basic industries of the Nation on a par with agriculture, mining, manufacturing, transportation and communication, commerce and finance.

A Source of Information Worth Cultivating.

THE average salesman who calls on a builder is frequently regarded as a nuisance. Sometimes he is, but if rightly used, he can be made one of the most valuable sources of information at the disposal of any contractor.

Have you ever stopped to think that these men do nothing else but travel around talking to builders and architects? That as a class they are wide-awake, observing men who come in contact with countless good ideas that they are ready to pass on to those who draw them out? That ten minutes' talk with one of these men may well give an idea about construction methods or equipment that will be worth hundreds, even thousands of dollars to the contractor lucky enough to take the time to learn.

Try cultivating these men for a month or two. Regard them as sources of information which are

mighty valuable if rightly used. With the man who is selling equipment, ask him what other builders use and what results they are getting. Ask his advice on routing equipment so as to keep it always busy. Let him tell you all about his product and draw him out on other lines on which he may contribute ideas of value. See if he knows of business building methods used by other contractors. Tell him you are always glad to see any salesman who can come and teach you something or give you an idea worth having.

Ideas are priceless. The traveling salesman is generally one of the very best sources of information if given half a chance. Among salesmen, it is an established fact that the bigger the man, the easier he is to talk with, for the really big man is always anxious for, and ready to receive information. He knows through experience the value of the ideas that the salesman may be able to give.

If the big men feel this way about the traveling salesman, and they certainly do, then no builder however small can afford to overlook one of the same sources of information that have helped to make the big men bigger.—(Building Age).

The Ancient Cliff Dwellers in Utah.

A CORRESPONDENT to the Times of New York describing the work of an expedition sent out by the Museum of Natural History to Grand Gulch, Utah, says in part:

N. C. Nelson, American curator of the museum, conducted the expedition and brought back, besides extra specimens and determinate data, some new light on the relative ages and time of settlement of the cliff dwellers of the Southwest. These Indians, who built many-roomed apartment houses in caves and at inaccessible points on the sides of overhanging cliffs, constitute an archaeological phenomenon whose importance is not appreciated in this country.

Pueblo culture is 4,000 years old and manifested itself in 2000 B. C., as now, in communal villages, each being one large house of many rooms,

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like a hotel. The building was of stone inlaid with clay; or if stone and clay could not be obtained, mud and sun-dried brick were utilized. The earliest building was done with liquid clay, which was poured in construction as we pour concrete, and left to harden. Women helped in the building, for fingerprints of women have been found on building remains in the Gulch. The age of the marks is estimated at 3,000 years.

Some form of decoration was given to each room of the cave dwellers' hotel. The Indians either carved or painted pictures of birds, animals or human beings on the walls. These, with the pottery and basketry for which the cliff dwellers have long been famed, undoubtedly comprised their sole furnishing and interior decorating. Near the entrance to a room there is often the imprint of a human hand on the wall. The Indian who lived there put his hand in red paint and then pressed it, palmward, against the wall. Whether this, too, was decoration or a symbol for identification, the owner's "mark" is speculation for archaeologists.

Work, Save and Prosper.

THERE is a period of vast wide rebuilding before us that will turn the world and more particularly this country into a beehive of activity, and upon this constructive boom there can be erected a generous and substantial prosperity for all, is the inspiring substance of conclusions arrived at by the recent comprehensive investigation by Dave H. Morris, president of the St. Louis & Southwestern Railroad. Mr. Morris sends his views upon the present situation to the New York Commercial while on a visit to the Far East. He says:

"On one of my arrivals into the port of New York, I was standing by the side of Sir William van Horne with whom I was associated in the Cuba Railroad, and it was during a greatly depressed business year, and I well remember something he told me. It was: "Anyone who is a bear in America is sure to go broke; all he needs is time."

"It seems to me that all of us should feel the truth of that statement and that we should have the courage of all its implications. There never has been a time in history when so much capital has been destroyed and when, therefore, there

exists the necessity to rebuild. And this rebuilding, when once the circle can get started, will make a beehive of the earth.

"We need confidence to go ahead and surely this is an American quality. In my own railroad, we showed this confidence to a degree that has met with a splendid reward, for we refused the Government guaranty, went it alone, and came out ahead. I think we were about the only company who was fortunate and brave enough to achieve this record, and I show it to indicate that all is not lost.

"I am traveling with a vice-president of a San Francisco national bank, and he feels that Russia must soon come into her own again, and that means international trade again as heretofore, and that we must get ready for it.

"In going from New York to the West I was struck with the very large number of people traveling for pleasure and getting vacation for the wife and whole family. Trains were crowded and additional equipment that had been taken off put on again. Thousands of automobiles were lining the highways and at the Yosemite notice had been sent out that no more could be accommodated. What does all this mean? It is true that freight was low, almost gone, yet all these crowds had the money and courage to spend money in the most extravagant way.

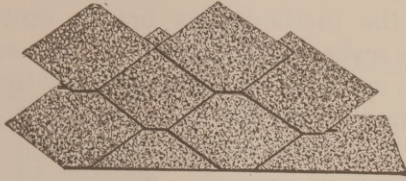
"The population of the world has never been so large; it has been educated to a higher standard of living than ever before; machinery is more efficient than at any time in history; trade must result. The country that makes the best and cheapest goods is going to win out. It is within our grasp to dominate the situation; if we have the intelligence and the faith to do it. We must work; we must save; we must take what we can get, and we must not live in a land of wrong economic ideas."—Building Age.

\$2,000,000 Warehouse Terminal.

The California State Harbor Commission has called for bids for the construction of the new China Basin terminal at an estimated cost of \$2,000,000. The terminal will include the largest warehouse on the Pacific Coast and in point of equipment will exceed anything now existing in the United States.

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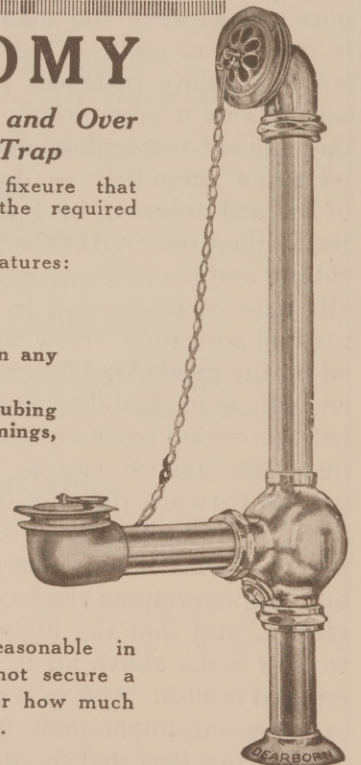
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All cast brass trimmings,
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This fixture is reasonable in price and you cannot secure a better one no matter how much more you pay for it.

DEARBORN BRASS CO.

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(Continued from page 39)

ing, plumbing and all the engineering of every description. The result is not happy, as a whole, nor, I understand from competent critics, in many of its parts.

My views are well known to many of you and they need but little elaboration. It was over twenty years ago that an emergency—the desirability of wrecking a burned building, preparing the steel requirements for fabrication, etc., in advance of completing the drawings—led me to take up the lantern of Diogenes and search for that common product of today, but which at that time was supposed to be non-existent, a contractor who would act for us in a purely professional capacity. I may say that the somewhat incredulous client never had cause for anything but satisfaction, and that justification of our judgement as to the right relationship between you, the owner, and ourselves, has led us to follow the same procedure many years and many times before the cost-plus contract became an every day affair and one which I regret to say is today not altogether in good odor.

Owners Fear Cost-Plus.

The reason why many owners say when cost-plus is suggested, "no thank you, not for mine," is not far to seek. First of all war exigencies were in many instances transformed into war scandals by a press which knows as little of the magnificent accomplishments which such a method alone permitted, as does the average client of the real nature of his building problem. Again the method suffered at the hands of some of your calling and some of my own profession who lost all sense of proportion in the new freedom the method permitted. Now when we were confronted by the market conditions of a year ago, coupled with sheer inability to secure figures in competition which represented anything but excessive insurance against loss to the successful bidder, we put forward the solution which carries with it no claim to novelty except that it is based on the profound belief that an expert director of building operations renders a highly professional service, and that the highest type of such a co-worker seeks above all to justify the confidence reposed in him. And so it only remained to eradicate the one unpalatable feature to the owner—the lurking fear that in such a skyrocket market the contractor could but rejoice as his percentage formed part of the pyrotechnics. We frankly advocated the "cost-plus a fixed fee" for the contractor, and, that we too might escape the thought even of profiting by the owner's misfortunes, we

offered to perform our entire service for a fixed fee.

Fixed Fee as a Measure of Equity.

In all of our work for over a year, we have pursued the method thus briefly outlined and there are several correlative features of interest related in an article I contributed to the November number of the Journal of the American Institute of Architects under the title "The fixed fee as a measure of equity."

But the message that I want to bring to you is indicated in what I have touched on in the experiences of my relationship with your co-fraternity over a period of many years, and it can be summed up in my beliefs which I hope and trust you may make your own.

Out of the very considerable number of competent, honest—and if I may venture to say so—altruistic general contractors we select the one whose experience on the particular class of work commends him, provided his office conditions guarantee the essential personal service, or, all things being equal, suggest two or more for the owner's selection, and then agree in conference on a fixed fee in lieu of overhead and profit. The element of gain from other sources being eliminated, the contractor's service at once becomes semi-professional and a new opportunity is presented for added prestige—added opportunities for just this selection through the character of the service he is able to render and the proofs he can offer in the final accounting of his faithful stewardship.

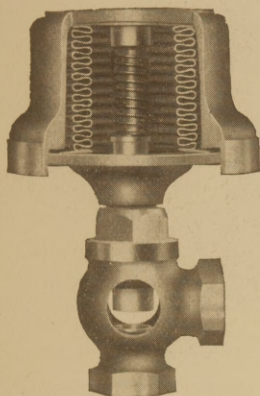
With the banishment of the old order of expensive, unremunerative bidding in competition it appears to me that a new era is approaching, an era of friendly conference for the benefit of the owner and the public—altruism again—between the best minds in construction on an equal footing, the expert builder and the expert architect, and the rendering by both for a fee that ensures remuneration and satisfaction to all concerned of a truly professional service.

Uplifting Construction.

If what I have outlined strikes a sympathetic note in your conception of the purpose of this great organization of yours it is hardly necessary for me to add, in closing, that your sole hope of delivering the maximum of potential power is based on an unswerving devotion to high ideals, a sincere desire to cooperate with each and every element comprising the building industry, the temporary advantage to a group or an individual and the uplifting of the worthy craft of construction to the high calling it should stand for in the minds and hearts of all of God's creatures, every one of whom labors and lives in the products of that field of endeavor to which you and we have dedicated our lives.

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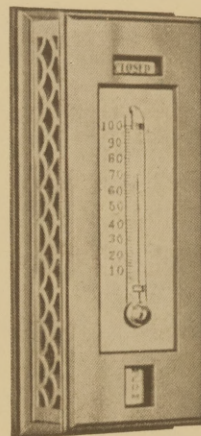
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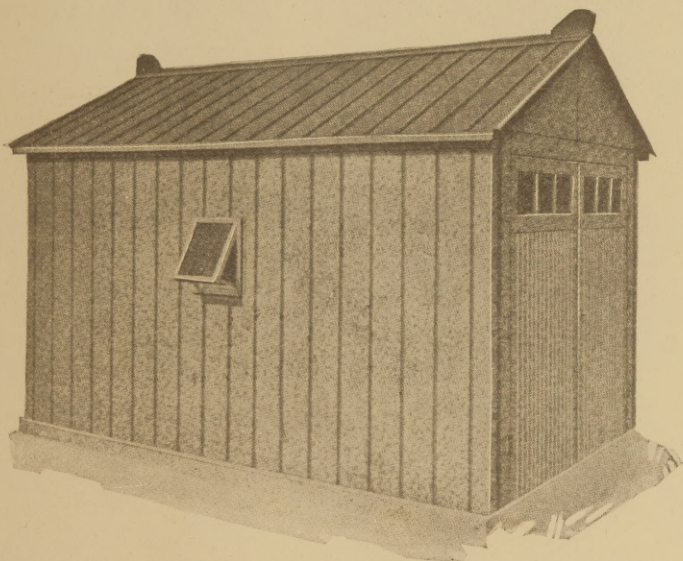
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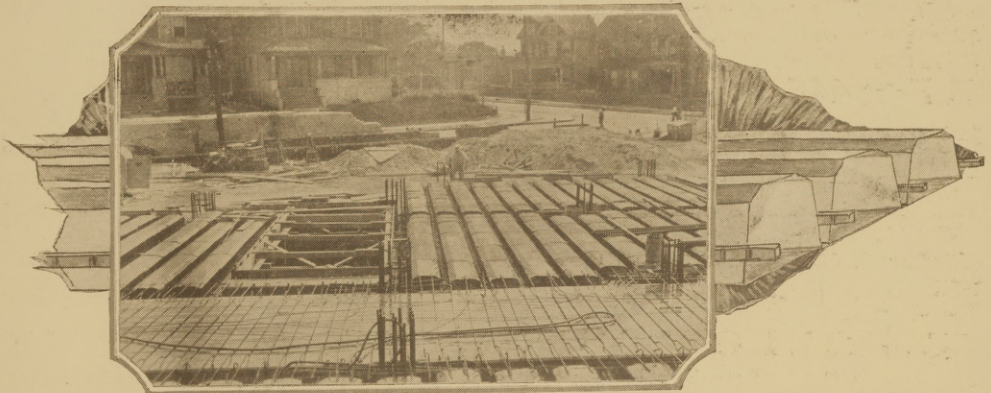
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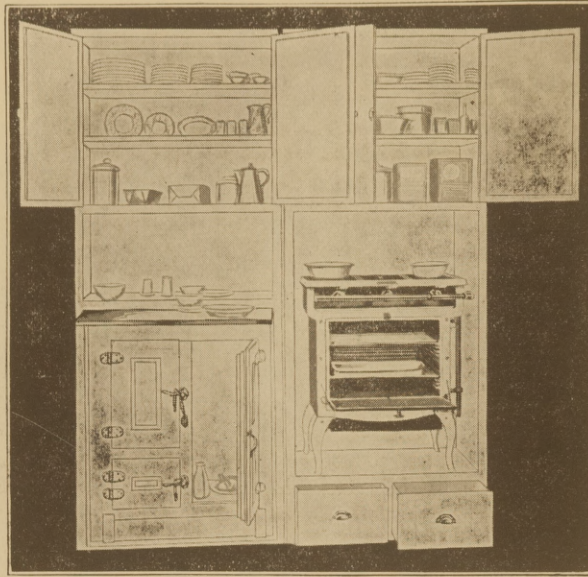


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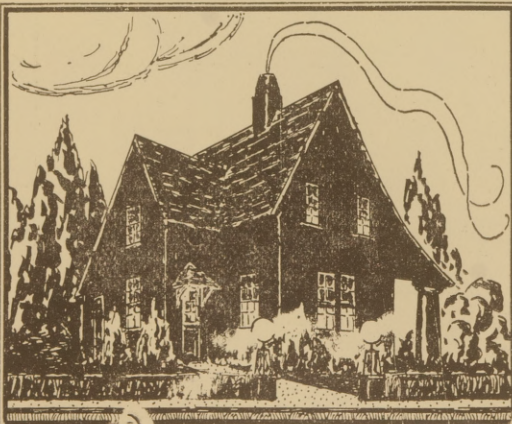
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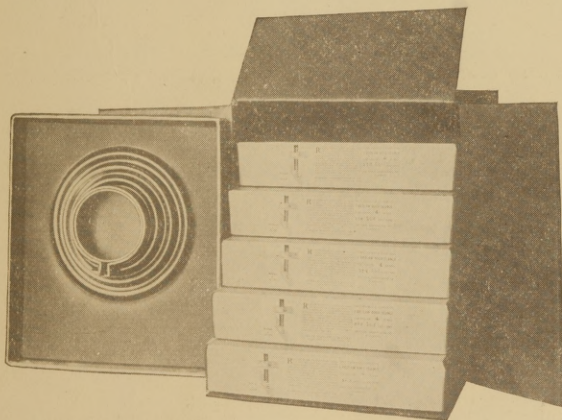
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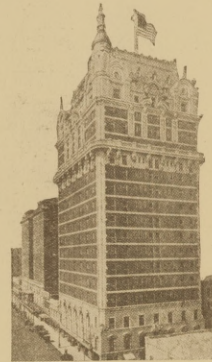
Architects—See Page 879 Sweet's Catalogue.

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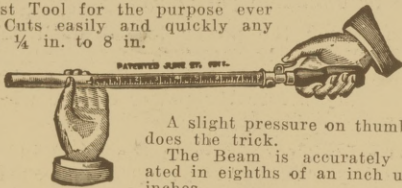
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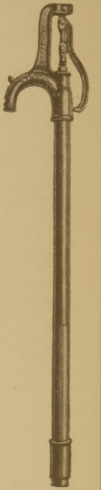
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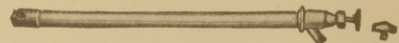
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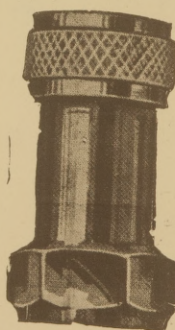
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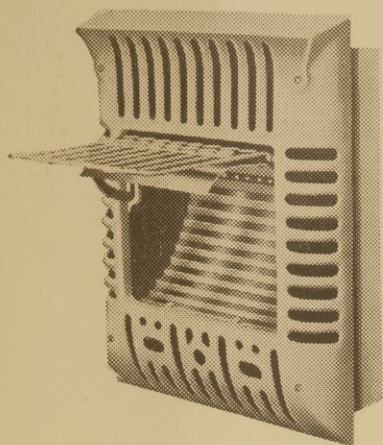
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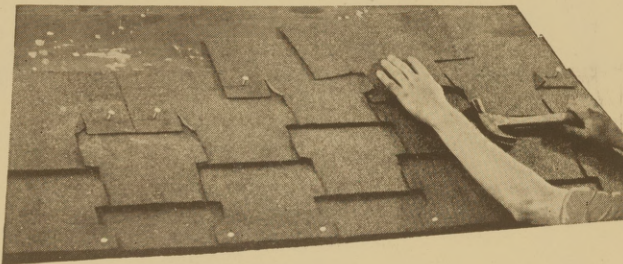
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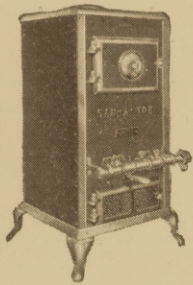
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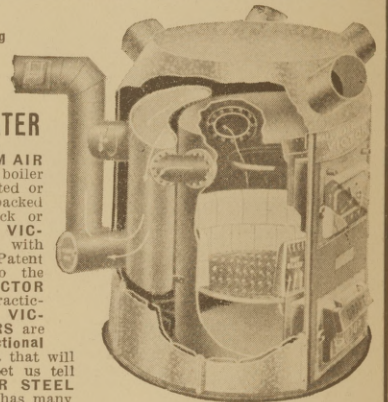
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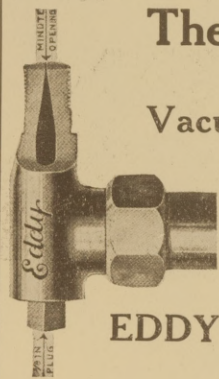
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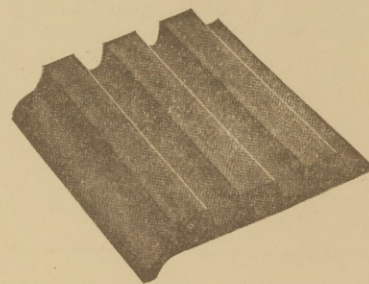
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Trost "Outside-Inside" Bed Means Revolution in Hotel Construction

A UNIQUE as well as one of the most remarkable and important achievements has been invented and patented by Henry C. Trost of the firm of Trost & Trost, architects, El Paso.

It promises in the near future to solve a difficult problem that confronts many hotels, apartment houses and Y. M. C. A. buildings, and promises, moreover to revolutionize ideas relative to the planning of hospitals, sanatoriums and other such institutions.

The invention of Mr. Trost consists of a novel arrangement, by which one can go to bed, making the necessary preparations in the usual homey fashion, steam heat—when and after, one is snugly ensconced in a bed which promises sweet dreams, by a simple operation, you are outdoors in open, with the "watchers of the heavens" blinking at you. You are literally sleeping out doors. The bed has not been moved. You are in the same bed, same room, and yet the bed is either out doors, or in, at the option of the occupant.

The whole thing is so wonderful in its scope and simplicity, and so remarkable that it almost defies a comprehensive description. Naturally the question arises, "How can one be in the same bed, which does not move, the same room, and yet at the option of the occupant outside?"

All of which, nevertheless, is true.

Closes Over Bed.

A window extending the length of the bed closes over the bed at an angle of say, 45 degrees. After the occupant of the bed has retired, he simply raises the window, if he desires to sleep out, then pushes the lower part of the window in and again closes the window, this time on the inside of the bed, leaving himself and his bed in the open. When the window is closed on the outside, the bed and the room occupied by it is a part of the house. When the window is closed on the inside, the space occupied by the bed is practically outdoors. The window being closed between the inner portion of the house keeps the cold air out and consequently, the heat is, by the same operation, kept in the house.

Mr. Trost's invention consists in the adjustments necessary to lift and shift the window from the outside of the bed, up, and by a simple, well balanced arrangement, over the bed and then closes down on the inside.

When the occupant of the bed desires to get up, he simply reverses the operation, raises the window and by a gentle pressure pushes the lower part of the sash outward, then downward,

and he is inside, greeted by the warmth of the room.

The increasing popularity of outdoor sleeping is neither fad nor fancy. It is based on the soundest principles of hygiene.

The Trost compartment can be included in the plan of any home or can be added at but small expense to any house, either as a separate unit or as a part of the general plan of the house.

While this is true, yet the larger scope of this compartment will answer the need of hotels, where additional rooms are required and where it is desirable to avoid any considerable outlay of money.

There is not the slightest doubt that in the manufacture the Trost compartment will revolutionize the ideas that now obtain relative to hospital and sanatorium construction.

The matter of economy is one big consideration.

The matter of utility or feasibility is such a departure its appeal will be instantaneous.

Many builders and others who have been interested in the erection of such institutions have sought for a solution of this same problem. Small cottages have been tried—one room cottages. There the expense has mounted into vast proportions, as it required a cottage and equipment for each individual patient.

With the Trost compartment there could be the larger ward room, surrounded with compartments, which would be a part of the whole, or, by a simple operation not requiring more than a moment, any single compartment could be segregated from the rest.

Like Pullman Idea.

It is the Pullman idea with a different application. But as the Pullman idea answered the demand for sleeping comforts in travel, the Trost compartment will answer a need that is even greater than the demand for sleeping comforts for the traveling public.

Millions have been given freely for hospital buildings and sanatoriums. The Trost compartment offers all that has already been offered and more, as a patient is free to sleep either in or out, as the individual case might require.

For additional rooms, for Y. M. C. A.'s, hotels, etc., another story can be added minus the cost of another story and without an extra strain on the walls, especially where such a strain has not been provided for in the original plans and where, say 30 rooms could be had by building

an additional story. By the use of the Trost compartment twice as many rooms can be secured and at a cost which is by comparison insignificant.

Already a number of hotels and other public institutions are planning to use the Trost compartments.

These "rooms," undoubtedly, will be in greater demand by the public than an ordinary room. to the roof, of being greeted by cool breezes, while others in regular rooms are tossing through the night, unable to sleep. It much reminds one of the sectional bookcase idea—units can be used singly or other units can be added, as required, from time to time.

As an illustration, any hotel or similar building with a flat roof can have the Trost compartment added without remodeling, tearing off the roof, etc. The sections are simply taken to the roof and then, without loss of time or expense, are assembled. Additional units can be added from time to time as required.

J. H. M.

Building Continues Active Throughout South.

Construction activity in the South is being maintained at near the December level, and in some instances is even exceeding the record for that month. New enterprises are starting and established plants are going ahead with orders that will keep many of them busy until spring buying in volume is resumed.

Building permits issued during the week ended January 14 in Houston had a valuation of \$497,812, the largest being for a \$107,000 wharf; the remainder were all small projects. The total for the first two weeks is \$687,117.

During the past year Charleston, W. Va., added 514 dwelling houses, 332 new apartments and three office buildings containing 72 offices according to a survey just completed.

Building operations will commence in the near future on a \$300,000 market building in Atlanta, according to an announcement by the Market Engineering & Development Co., of that city. Robert & Co., are the architects.

The Tennessee Coal, Iron and Railroad Co., and the Chickasaw Shipbuilding and Car Co., announced recently that two of the Birmingham district's outstanding industries would operate steadily at normal capacity during the first half of 1922. They will be the rail mill at Ensley and the pressed steel car works at Fairfield. The rail orders include 45,000 tons for Louisville & Nashville, 45,000 tons for Southern Pacific, 14,100 tons for Japan, 15,000 tons for Texas and Pacific and other Southern roads. The normal production of the mill is 6000 tons. The car works began the year making 300 cars for the Steel Corpora-

tion, besides doing a large amount of repair work for the Central of Georgia. The Seaboard Air Line order is for 200 steel phosphate cars, 1000 ventilated box cars, and repairs on 500 cars.

Alabama was making 75 per cent more iron January 1 than on July 1. At the beginning of the new year 13 furnaces were active compared with 5 on July 1.

Last week 2000 tons of sulphur from Texas left Galveston for Mobile in ocean-going barges for the Steel Cities Chemical Co., at Fairfield and other acid manufacturers in the district. These barges will come up the Warrior to Birmingham and thence to the plants by railroad. This is the initial cargo in what is intended to be a permanent and steady movement from Galveston to Birmingham via Mobile and the Warrior, and the yearly tonnage will probably exceed 50,000. The sulphur comes as a return cargo, coal having been taken to Galveston on the down trip.

Building activity which promises to exceed early expectations is under way in the Port Neches near Beaumont. Texas, since work started on the refinery of the Humphreys Pure Oil Co., Permits for 200 houses have been issued, in addition to business houses and small industrial plants. Huge docks and wharves are to be built along a large part of the waterfront. Many millions of feet of lumber have been shipped from Beaumont this month and other vessels are now loading and additional ships coming for cargoes. A cargo of 57000 sacks of rice recently departed and during the week of January 14 there were six vessels loading miscellaneous cargoes. Work on a \$2,000,000 system of concrete sewers is expected to commence shortly.

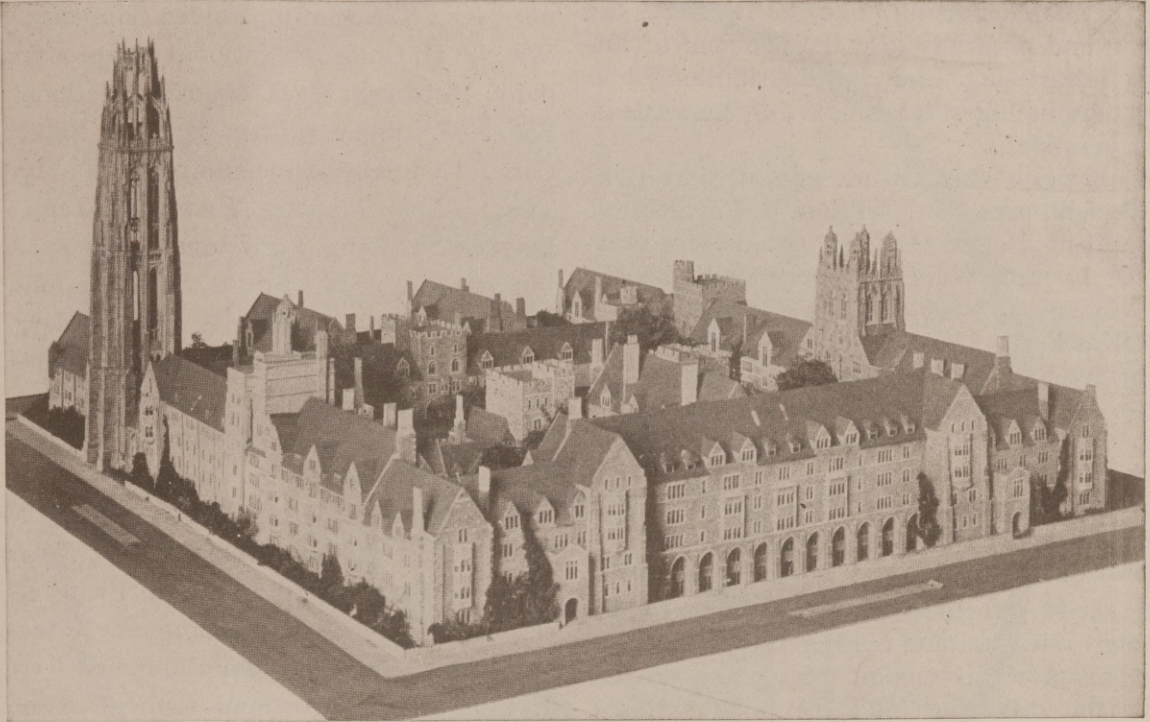
R. B. Chance, chairman of the Board of County Commissioners, Reidsville, N. C., reports the sale of \$400,000 Rockingham County 5½ per cent bridge and road Bonds at a premium of \$4410.

During the first two weeks of this month permits for 94 dwellings were issued in Kansas City, Mo. This exceeds any previous number issued in that city during the first month of the year. While the permits include a number of apartments, office buildings and business structures, Matt S. Shinnick, superintendent of buildings, reports that many other projects are being planned and that permits for these will be issued in the near future.—(Manufacturers Record.)

ARCHITECTS AND PRODUCERS CONFER ON MERCHANDISING POLICY.

Improvement of Advertising and Its Distribution Discussed in Conference Held in Indianapolis.

Pursuant to an invitation by the American Institute of Architects a number of producers of materials used in construction met with officials of the Institute at the Hotel Lincoln, Indianapo-



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lis, November 10 and 11, for a conference on the subject of Merchandising policy as it affects the architect, and naturally also the problem of improving advertising and its distribution, and thereby eliminating at least a part of the waste of current practices.

The officers of the Institute present were Hendy H. Kendall, president; William B. Faville, first vice president; Robert D. Kohn, second vice president; D. Everett Waid, treasurer; Sullivan W. Jones, chairman, Structural Service Committee, and D. Knickerbocker Boyd, of that committee. Also former President Thomas R. Kimball.

As to the two main classes of printed matter sent to architects it was the sentiment that in that which is aimed to attract quick attention and make a lasting impression the purpose is best achieved with a minimum of superlatives and rhetorical adornment.

The really informative matter, designed for permanent retention and ready reference was the subject of more discussion. However perfect may be the catalogues and the filing systems, the human element necessary to the system is either unduly costly or generally unreliable.

Chairman Jones, in his opening speech, illustrated this situation by a story of a beautiful elaborate system which was abandoned when a protracted search for fly screen catalogue revealed that it had been filed under Aviation.

The policies and methods of manufacturers of materials and of contractors and subcontractors and their relations with the architect were considered at length, some instances of unsatisfactory performance adduced and reforms suggested.

After four animated sessions the subject was referred to a committee of thirty, appointed by President Kendall. Of this committee Sullivan W. Jones is chairman, with the following executive committee: O. C. Harn, National Lead Company, New York; A. J. McComb, Otis Elevator Company, New York; L. D. Powell, Bostwick Steel Lath Company, Cleveland; Lyman Clark, General Electric Company, Schenectady, N. Y.; D. Knickerbocker Boyd, Architect, Philadelphia.

Among the representatives of manufacturers present were Dr. G. C. Mars, American Face Brick Association; S. L. Barnes, Armstrong Cork Company, Pittsburg; R. B. Rhoades, Central Supply Company, Indianapolis; Augustus Whetfield, Civic Engineering Company, Omaha; John A. Westman, Dahlstrom Metallic Door Company, Jamestown, N. Y.; A. J. Prentice, C. A. Dunham Company, Chicago; Fred B. Adams, Frank Adam Electric Company, St. Louis; J. H. Libberton, General Chemical Company, New York; Lyman Clark, General Electric Company, Schenectady,

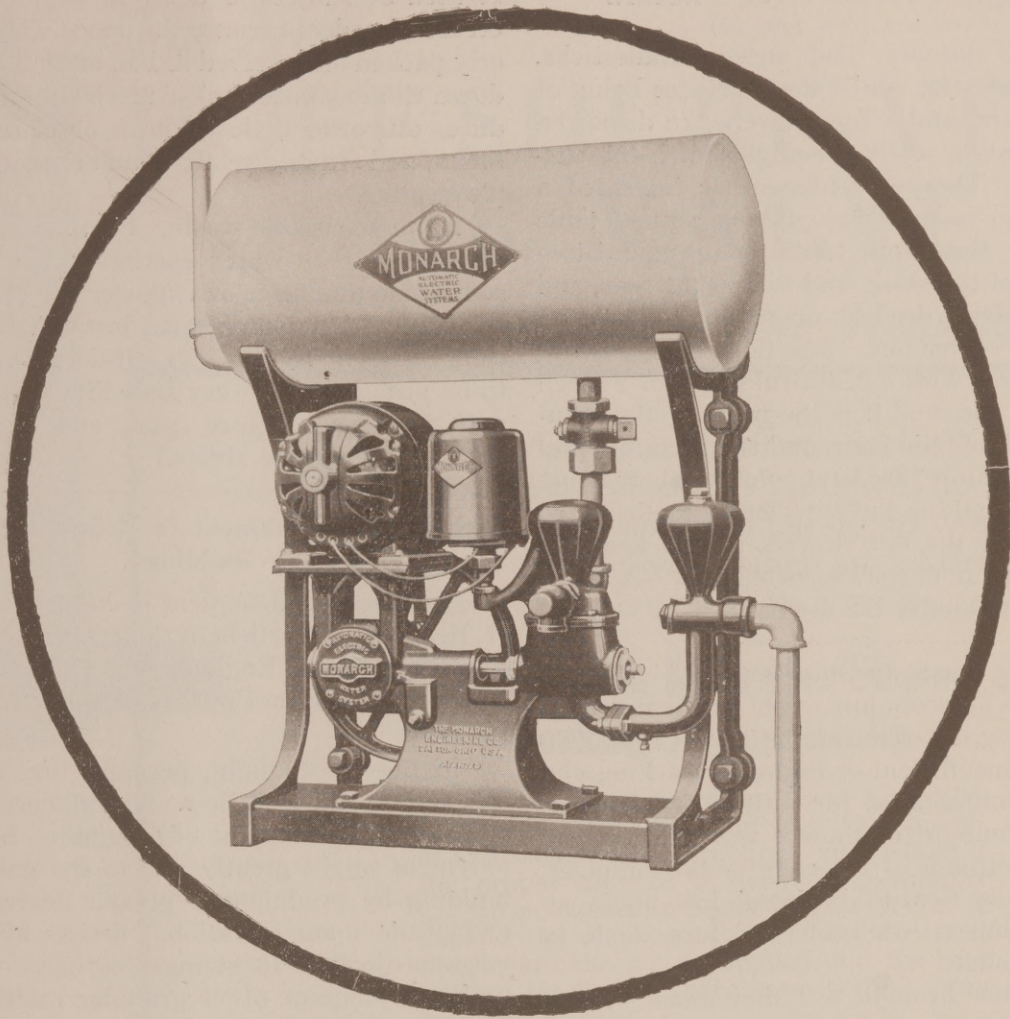
N. Y.; A. K. Reeves, Higgins Mfg. Company, Newport, Ky.; L. L. Smith, Kohler Company, Kohler, Wis.; J. H. Cullison, National Fireproofing Company, Pittsburg; C. E. Johnson, National X-Ray Reflector Company, Chicago; O. A. Bigler, Philip Carey Company, Cincinnati; C. N. Myjnderse, The Fulton Company, Knoxville, Tenn.; H. S. Brightly, Indiana Limestone Quarries Association, Bedford, Ind.; Roy C. Shealler, John Lucas Company, Philadelphia; R. H. Bradley, Kelsey Heating Company, Syracuse, N. Y.; Paul E. Kendall, Long-Bell Lumber Company, Kansas City, Mo.; Alfred M. Laen, H. Mueller Mfg. Company, Decatur, Ill.; Martin A. Johnson, Murphy Door Bed Company, Chicago; O. C. Harm, National Lead Company, New York; H. W. Nelson, Moline Heat, Moline, Ill.; Miss E. Browne, Northwestern Expanded Metal Company, Chicago; A. J. McComb; Otis Elevator Company, New York; J. E. Freeman, Portland Cement Association, Chicago; W. R. Robinson, The Peelle Company, Brooklyn, N. Y.; Arthur C. Newberry, Sandusky Cement Company, Cleveland, O.; King H. Pullen, Southern Pine Association, New Orleans, La.; R. H. Young, Stanley Works, New Britain, Conn.; C. J. Prinzler, Vonnegut Hardware Company, Indianapolis; W. D. Sargent, L. Wolff Mfg. Company, Chicago; Edwin L. Downe, U. S. Radiator Corp., Detroit; L. D. Powell, Bostwick Steel Lath Company, Cleveland.

Among publishers present were F. S. Sly, vice president American Architect, New York; C. L. Williams, Architectural Record and Sweet's Architectural Catalogue, Cleveland; C. H. Whitaker, editor, Journal of the American Institute of Architects, Washington; T. S. Morgan, president, F. W. Dodge Company, New York.

The executive committee of five will meet next week and the committee of thirty upon call by Chairman Jones. The work will be pushed as rapidly as possible in order that a second general conference may be arranged at an early date.

School Building Contracts Awarded.

Wilson, N. C.—Contracts for erecting and equipping the new school building in West Wilson have been awarded as follows:—general contract to W. P. Rose, of Goldsboro, for \$180,202; heating and plumbing to J. L. Powers, of Bennettsville, S. C., for \$25,463; electric equipment, Peoples Electric Co., for \$5,327; total \$210,992. The money for the work is provided by the recent bond issue. Other work will get under way in the section in the near future.



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Made in three sizes: 100, 200 and 400 gallons per hour capacity

HERE is the latest addition to the Monarch Line of Water Supply Systems—a Unit which has been designed to meet the demand for a compact, efficient and low-priced outfit for domestic service where the storage capacity of water is of minor importance.

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The overall dimensions are 24 inches long by 31 inches high by 13 inches deep.

Note that the tank is placed above the pump. No "air pockets" can develop between the pump and the tank. Galvanized tank, 10 by 22 inches. All mechanism accessible. All bearings are brass against steel. Many other features completely described in Bulletin No. 110.

The Monarch Line is a complete line of shallow well and deep well water supply systems for home or farm, both electrically operated and engine driven. Sold by the leading plumbing supply jobbers and dealers throughout the United States and Canada. Write for catalog.

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A UNIQUE FLORAL SHOP DESIGN.

(Continued from page 30)

vases, bowls, statuary, bud vases, candlesticks, fruit compotes, etc., all of these articles being of the finest ware, and a few flowers are displayed in different ones, so that it might catch the customer's eye. There are four other tables of a similar design to the large, oblong, square table in the center, these four tables being placed two in the front of the store, and two in the rear, and they are similarly dressed, or goods displayed on them, as the center one. The floor of the entire store, is covered with a beautiful shade of French Grey, square tile, and it is the pride of the management that this tile floor, and the furniture and fixtures in the store, are kept spotless, there being no need for anything but sales being made in the store, as all of the box flowers are packed, the orders gotten out. flowers assorted, etc., in a room in the rear, adjoining the main store.

Waste In Shipment.

There was an economic waste on the railroads of this country last year amounting to \$104,398,-930 through insufficient or improper packing and loading of commodities for railroad transportation. That amount of money was paid out by the class I railroads of the country for damages.

The Illinois Central Railroad has made an appeal to shippers to eliminate future waste in so far as possible.

It is further brought out that much of this loss is unnecessary and due simply to carelessness or inefficiency which is shown by comparison with the figures of 1916, when the total of such damages amounted to \$23,346,965, or more than \$80,000,000 less than last year.

There is in the figures and the appeal a suggestion not only for manufacturers and shippers but for railroad employes. This sum of more than \$100,000,000 annually is a dead loss to the railroads and to the public through the destruction or damaging of property. It cuts down the net revenue of the carriers and indirectly results in higher freight rates and lower wages. That, in turn, depresses every line of business.

If shipping clerks would remember these facts every time they pack a shipment of goods; if truckers would remember it every time they take such goods to a freight car for shipment; if freight handlers would remember it every time they load a car, and if switchmen, breakmen, and engineers would remember it in the handling of trains, that vast sum might go eventually into their pay envelopes.

It is the inefficiency as well as the wage per hour of workmen which helps to keep up the price of products. In the matter of packing alone, it is understood large consignments of American goods sent to South America have been

refused or subject to delay in payment and decrease of orders because the goods were not properly packed and arrived in bad order. That keeps down the expansion of American business, reduces our orders, slows down or closes our factories, and reacts directly upon employer and employe alike.

It is inexcusable waste. Payment of damages by railroads or water carriers cannot compensate a manufacturer or exporter for the loss of a customer. It is cumulative loss. Care and efficiency will eliminate it. In self-defense they ought to be practiced by every individual having to do with the manufacture, sale, and shipment of goods.—(Operative Miller.)

Architectural Ornament in Reinforced Concrete Buildings.

Architectural ornament is discussed by Frank H. Heaven in an article in *Concrete and Construction Engineering, England*, on "The Effect of Reinforced Concrete Upon Architectural Design." He says:

"It may be thought, perhaps, that reinforced concrete can have little or no influence upon the architectural ornament of a building, but its employment might greatly add to the grace of our building by producing a greater degree of light and shade upon elevational design by giving a large projection to strings, cornices, etc. The limits of stone or other granular material when in projection are well known, but ornamental reinforced concrete work could be employed to advantage where other materials fail. The Greek temples of old owe a great deal of their charm to the effects of light and shade cast by their projections. The sun, however, does not treat all lands alike. In Southern Italy the proportioned cornice of the Orders produced the desired effect by reason of the high altitude of the sun, but the use of the same projection in England has an altogether different effect, due to the lower angle at which the light from the sun can produce shadows. Many of our monumental buildings, for that very reason, are almost shadowless. The architects of the Renaissance in Northern Italy recognized this fact and crowned their Palazzi with great overhanging cornices. The Americans, too, have seen the necessity for a deep shadow to give repose to their large scale buildings and obtain the same by the use of zinc or iron cornices of great projection, painted to imitate the material in which they are working. The use of reinforced concrete in decorative cornices would be legitimate construction if we recognize the material and give the members its true value in relation to the whole design, and the deeper shadow cast by greater projections on our building would be appreciated.

The New

DOLE-SHURE-VENT AIR VALVE

Guaranteed for the Life of the Heating System



ANY Air Valve to vent automatically has one big job on its hands. Valves will flood. Dirt, rust and corrosion will persist in working under the seat of the valve and when any of these things happen, Mr. Air Valve goes on a strike.

This Is How We Keep Mr. Shure-Vent Working Automatically

FIRST: The Dole Shure-Vent Air Valve works automatically on the positive principle of expansion and contraction. In the float is the proper amount of what is commonly known as expansion liquid so tempered as to expand the diaphragm and close the valve the instant the air is expelled and the heat reaches the float. There is no getting away from it.

SECOND: The float rises and closes the valve in case of flood.

THIRD: The liquid contracts as soon as the valve cools, thus releasing the pressure on the diaphragm and the valve opens automatically.

WHY the Hand Vent on the Valve ?

There is one obstinate thing about Air Valves; they will become water-logged. When the partial vacuum forms on the top of the valve the water is held in and it is impossible to vent. In that event, touch the button on the hand vent, the vacuum is broken and the water drains back instantly into the radiator carrying the dirt and flake back and preventing the valve from becoming clogged up.

Study the working principles of this valve and you will see many other important features.

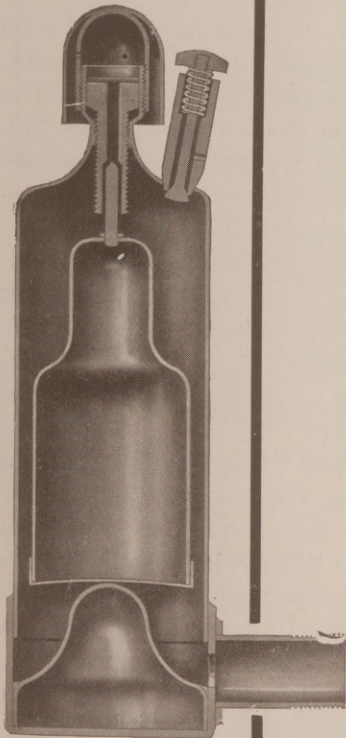
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Tribune Building First Skyscraper

The skyscraper was undreamed of— until Whitelaw Reid laid the corner stone of the Tribune building in 1874. The Florentine companile that he then lifted into the air gave his contemporaries what was, for them, a greater sensation than their descendants have received from Manhattan's tallest towers. Voyagers coming up the bay hailed it with astonishment, little imagining the formidable structures it foreshadowed.

The skyline it broke was that of an essentially flat, low-lying city. In Reid's eye New York was not then precisely beautiful. So we may judge from the instructions he sent to Clarence Cook in 1870, with a request for a series of architectural articles. "What I want," he wrote, "is first a crisp editorial on the prevailing lack of architectural taste in New York, the dreary miles of brownstone fronts, the worthlessness of brownstone as a material for building, the monstrosities given us by our wealthiest men."

Then article after article was to be written, discussing the question of architecture in our cities generally, but particularly in New York. The "frightful example" was to be fearlessly pilloried, and suggestions for a rational architectural reform were to be made.—The Life of Whitelaw Reid, by Royal Cortissoz.

Columbia, S. C., To Wage Campaign For Home Building.

The Chamber of Commerce recently held a meeting to discuss plans for a home building campaign. A committee was appointed to investigate the housing situation, and to make recommendations. At a later meeting the committee made the following report which was accepted:

Report of Committee.

"We, the committee of the Columbia chamber of commerce, appointed to investigate the housing situation in Columbia, beg to submit the following report:

"Inasmuch as there is a shortage of homes in the city of Columbia and a corresponding shortage of money for the financing of homes, and also a probability of much unemployment of our mechanics and skilled labor this fall and winter, this committee, after due consideration, makes the following recommendations:

"That for the purpose of providing immediately sufficient money to lend those who have already applied for loans, a campaign will be put on and vigorously pushed to a conclusion, to secure for the use through the local building and loan associations, a sum not less than \$100,000 payable on each \$1,000 subscription, as follows:

"\$200 September 1, 1921, \$300 December 1, 1921; \$300 March 1, 1922; \$100 June 1, 1922.

"In addition to the campaign for this special

fund, we recommend also that a campaign be conducted to procure subscriptions of not less than \$500,000 of regular building and loan stock payable weekly or monthly, and that every Columbian who earns money be urged to invest in this stock for the purpose of carrying out the ends above described and for the further purpose of inculcating habits of thrift, economy and home owning.

"We also recommend that the fund raised by this campaign and all turnovers of it, be used in building new homes in Columbia, and that special preference be given to a man who desires to build a home of his own.

Building Zone Law Held Invalid by the Court at Jacksonville, Duvall County, Fla.

Under the decision handed down by Judge Daniel A. Simmons, of the Circuit Court, city ordinance P-31, preventing the erection of business houses in parts of the city known as residential section, is invalid. The decision was reached in the case of Otto Ziebe, against John Fowler, City Building Commissioner, who declined to issue a permit for the erection of a store in Riverside.

According to City Odom, the city cannot hope to adopt an ordinance that will stand the test until it follows the plan worked out in New England cities to establish zones. A law of this kind was recently upheld, he told the City Commissioners Thursday night.

Councilman Barrs recently introduced a bill in the Council to designate the Tenth Ward as a residential section. The bill is being held up for amendments, and it is probable, since Simmons' decision, that it will be revised to establish the zone system throughout the city.

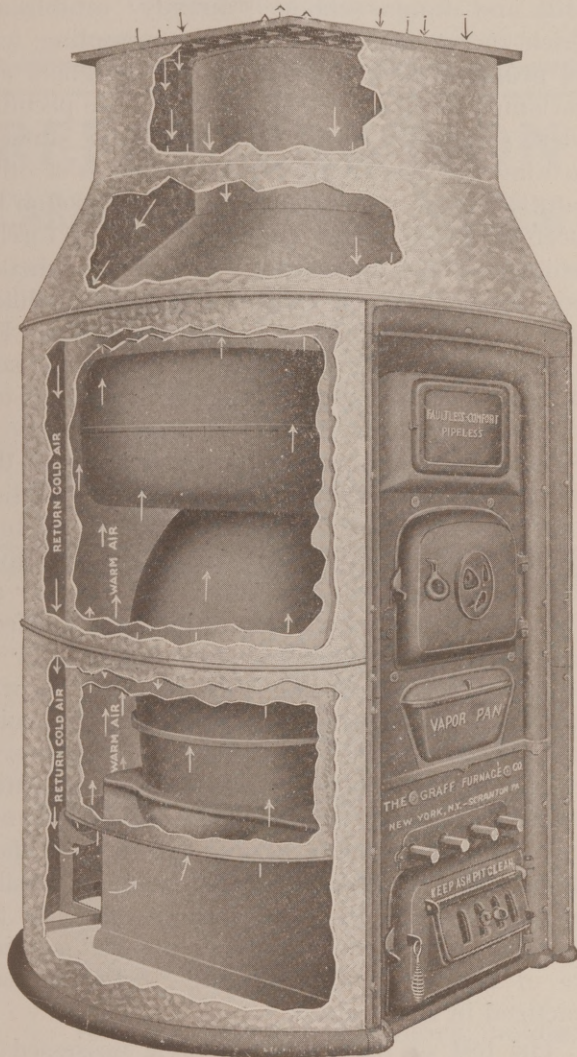
The Housing Shortage.

According to figures furnished the National Lumber Manufacturers' Association by the Department of Commerce in a special report, the housing shortage in America is approximately 1,000,000 homes. The bureau of census gives the normal residential construction as 310,000 structures. However, the report of the select committee on Reconstruction and Production, United States Senate, last March, assumed the higher figure of 400,000 structures. One-fifth of the normal yearly construction must be used to take the place of losses through fire, obsolescence, or alterations for other than residential purposes. Hence, taking the larger estimate of 400,000 houses per year as the normal construction, but 320,000 structures remain in ordinary times to house increased population due to immigration, birth and marriages.

BIG RESULTS AT SMALL EXPENSE

THE FAULTLESS-COMFORT GRAVITY SYSTEM

Heating the entire house with only one register.
No hot air pipes, and no alterations in your house.
Everywhere used and everywhere successful.



THIS VERY POPULAR FAULTLESS - COMFORT PIPELESS-HEATER

is constructed by experienced furnace manufacturers; in business over half a century.

All parts of the heater are properly and liberally proportioned.

We therefore guarantee:

Durability, Economy, Efficiency.
This system of heating costs less than any other, and secures better results with less fuel.

It operates automatically, like gravity. Warm air rises, cooled air falls. Therefore, all the air in the house keeps in constant circulation, and this purifies the air.

Costly steam and hot water systems do not provide any circulation of the air, take up much room, and use more fuel.

A properly installed Faultless-Comfort Pipeless Heater is the simplest and most popular heating system obtainable.

In successful use with anthracite coal, bituminous coal or wood.

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This Furnace is also widely used for regular Pipe system.

THE GRAFF FURNACE CO., Manufacturers

61 and 63 Wooster Street, New York

ART IN LABOR*

By HENRY W. KENT,
Secretary, Metropolitan Museum of Art.

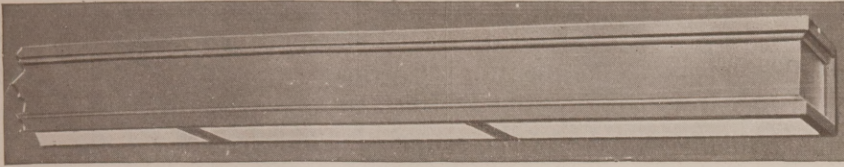
HERE is a certain element of the humorous in our discussing the possibility of introducing art into labor, when the colleges and universities, ever regardful of young America, have kicked the oldest of the humanities out of doors. If, however, we believe that matters are ordered for the best in this world, we may nibble as on a crumb of comfort, the thought that while art is one of the humanities, it is a commodity as well. On that score, perhaps, the college and universities will admit it to their crowded schedules of study, along with journalism, automobile repairing, and other things. Some of us are prepared to argue the matter, but here, among those who stand for art in all of its relationships, I may be permitted to assume the premises in the case, and to devote my time to a consideration of some of the factors responsible for art in labor.

Let us admit that art is a commodity when properly admixed with manufacturers. The French have proved it. They have made it essential to their products. Indeed, they have achieved through it a national style. Greece did the same, so did Rome, so did Italy once. It is not too much to hope that with time we may attain to a general recognition of the value of style, and even achieve a national one. In what is called a melting pot, perhaps our many racial qualifications will get smelted into something resembling style. Heaven knows what it will be like, but it is safe to say that it will be something more than a Beaux Arts facade to a building, or a Louis XV room in household decoration. The responsibility for a national style lies upon no one pair of shoulders, but rests upon us all. No great nation has been without it. A manufacturing nation without it would not be above the machines that make her good. National taste, then, is a national responsibility. Recognition of this fact would result in training. It is an axiom that to train a people requires that they should be taken in hand when young. This is just as true of training in a feeling for style, or art in manufacturers, or whatever name you choose to give it, as in a feeling for economy or patriotism. There are sporadic attempts to teach this thing in the schools of some cities through what in their schedules of studies is called drawing and Art, and through school room decoration, and in some colleges through what is called the History of Art, but these are not general and are not very seriously recognized or encouraged by the educational authorities or the government. There can not be a general sense of style as a necessity

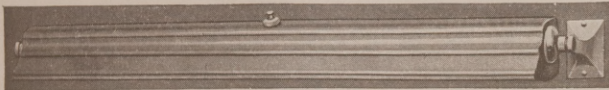
until the need for sound and conscientious teaching of the people when young is understood, and especially until the government takes a part in the matter, requiring such teaching in all public schools and the establishment of art, trade and design schools maintained by the state.

Associated with this movement are the art, trade and design schools, already established, which independently have been grappling with the problem of supplying trained designers and craftsmen to labor. Their problems are peculiar, chiefly owing to the competition their students encounter in the products of the schools of other countries, especially those of France, through the purchase by American manufacturers of foreign designs. Their opportunity to show whether their training was as thorough and the qualifications of their students as competent as their European rivals' came with the war, when the supply from abroad in large measure was shut off. It may be questioned whether what I believe to be the general practice of design schools in this country of teaching designing without practical rendering and of the trade schools of teaching practical rendering without design are wise ones. But this is their responsibility, and we may assume that it will receive attention since it affects their existence. Much has been made clear by the war which before was seen darkly. Theories may now be measured by more definite rules, such as will hereafter be laid down by those who are competent to express opinions, the manufacturers. Technical schools have an opportunity to play a part in manufactures and through them in the national life never imagined as possible before. Perhaps the time may come when the professional designer will be recognized, a measure of honest generosity and justice seldom practiced in this country.

The test of the degree of style possessed by a people lies in what it makes and what it buys. The art sense in purchasing does not lie in what its few sophisticated collectors or its superfluously rich buy. The average home of the man with an average income tells the story. In that home today is found a greater degree of physical comfort—bath tubs, furnices, electric lights—than ever obtained in the history of the world before, and a degree of aspiration after pleasant things, a striving indeed for "effect," "color schemes," "harmonies," and other things in phases of the interior decorator and art schools. There is found, also, a seeking to put into practice the triturations taken from certain monthly publications with pages devoted to art in the home, and



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It is the only concrete block molding machine in the world that has rotating mold members with stationary core bars.

Hand labor is reduced to the minimum.

Keep the material hopper full and the finished 8 x 8 x 16" blocks flow from the machine on an endless belt in an endless stream at the rate of 12 every minute, 720 an hour, 5,760 a day.

The product includes standard 8x8x16" back-up, corner and end blocks, in a wide variety of faces.

See it in the movies!

You can see the machine operating in a plant at Springdale, Pa., or we will show moving pictures of its operation in any community where interest is manifested in the proposition.

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more pages of advertisements devoted to art in the shop. I am not meaning to underrate the value of these agencies. They are good. They have done much to encourage a desire for taste in the house, and they have reached many people. Following the old rule for the giving of advice, "First find out what is wanted, and then give it" they have sought to give what they believe would be liked. But they can do better. A liking for pretty things does not constitute taste. Let them set a higher standard on the part of their contributions, especially with regard to the teaching of good and bad styles. A real responsibility is laid upon editor and contributor of such magazines, especially those who serve two masters, advertiser and reader.

I count the responsibility for art of the trade journals, those that serve the trades entire, as one of the greatest in the country today. They exercise a power behind the throne of labor, and upon them depends to a degree unimagined by most laymen, the opportunity for the preaching of the theories of art in trade. Let them add to their staffs people trained in this subject and competent to deal with it.

The present-day interest in objects of decorative art, dyes, and all the things that enter into personal and household furnishings, does not necessarily indicate a growing intelligence in style or manufacturers on the part of the large number of people whom we hear talking about them, but rather a personal interest in their own pocketbook. European products having been shut off suddenly, people are wondering if the home made substitutes will be as good as the foreign made. There has been magic in the familiar patter of the shopkeeper and the advertiser about "Parisian styles," "London fashions," "French this and that," and "English the other." Such talk is as old as our grandfathers and their colonial importations, reasonable enough then, when "shipments just arrived from London" meant a real supply of what could not be obtained at home, but it is doubtful if statistics would not show we are producing as much and as durable goods, in quantities sufficient to supply all our people, as any that ever came out of France or England. Part of our belief in the supremacy of overseas goods is due to a tradition one hundred and fifty years old, part to the thoughtful intention of manufacturers and shop-keepers alike to keep the tradition alive, and part to a real excellence in a small percentage of our imports. A responsibility rests upon the buyer, you and me, to acquaint himself with the market, to learn what an enormous manufacturing people we are, to be intelligent in his demands, and justly critical in his estimates.

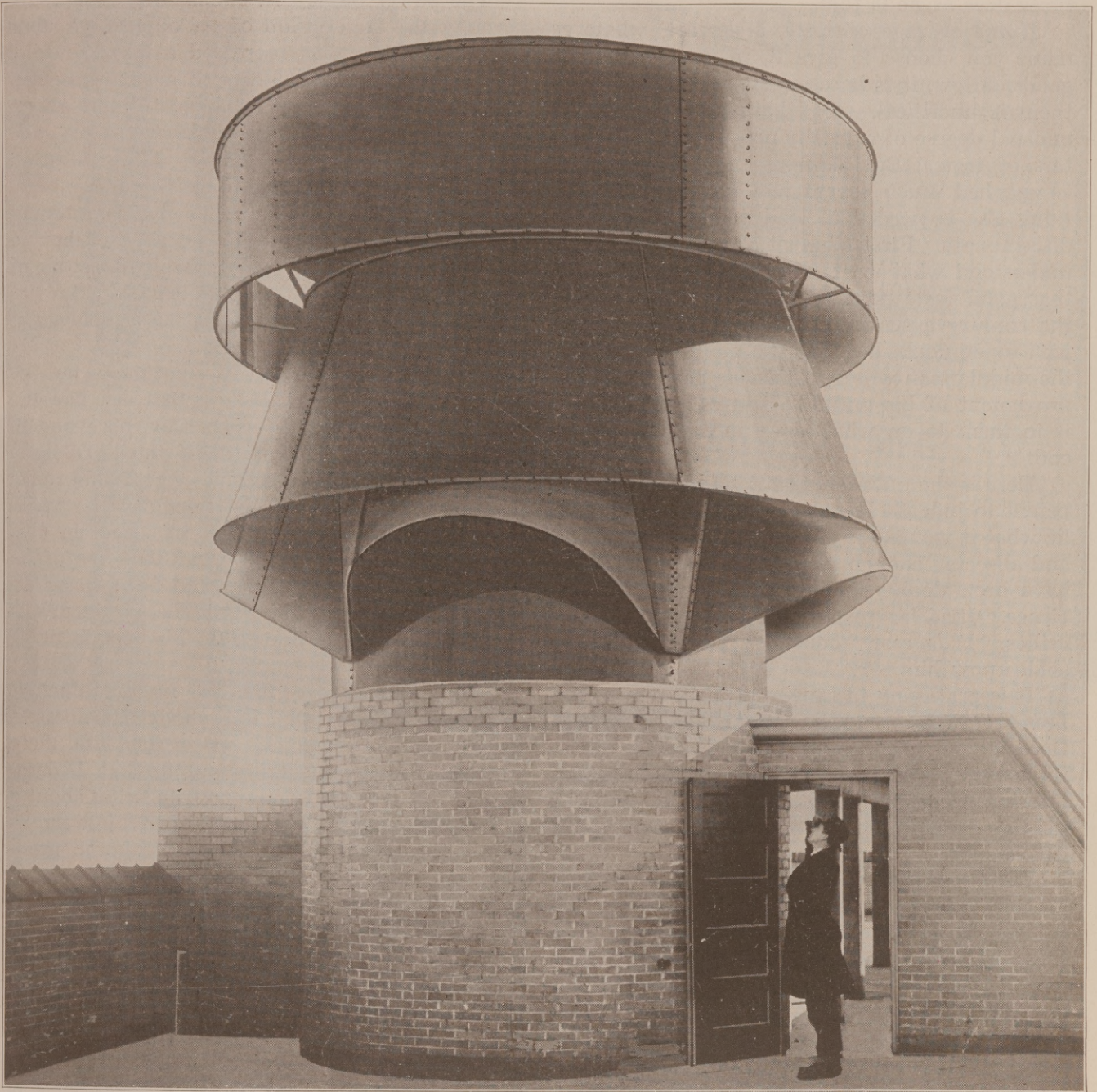
It is a fact not to be gainsaid that whatever

has been in the past, the preponderance of what is to be bought in this country in the future will be home made by American machinery.

Little bands of well-meaning people have been telling us ever since the advent of the machine in trade that only handmade goods could be really excellent, that they alone had the divine afflatus. The monks told us this about printing when Gutenberg invaded their monasteries and took away the occupation of the scribes; we have been told the same thing with the invention of almost every new machine. Doubtless there is a value in honest craftsmanship, perhaps even it surpasses the machine, but there is no reason why with the same amount of brains it should. "Other days, other fashions." We are dealing with fashions for millions of people.

A few rich people furnish their houses with hand-made furniture, rugs, tapestries, drinking and eating vessels, made in Europe before the machine was thought of. Their treasures, following the rule laid down by Time himself, will eventually be bandied back and forth through the auction rooms, serving a useful purpose as they go in public education in style, until, eventually, they find a place in the museums of the future as examples of by-gone arts and industries, models of the taste of their times. To these collectors this country owes a boundless debt of gratitude. Their possessions of documents of such value and such incalculable potentiality in the formation of taste and the modelling of style in our manufacturers is among the foundation stones in the fabric we are rearing.

It is a good thing to collect admirable things, but it is a far greater thing to make them. This is the era of the machine. It is with machine-made things that the American of today, certainly of tomorrow, must content himself. The matter with which we are concerned is: Are the products of the machine to be good or bad? It is often debated as to whether improvement in the quality of art in American manufacturers is to be the best and most quickly effected by the manufacturer himself or by the people. On the principle that a government is just as good as the deserts of the people governed, so taste in manufacturers is just as good as the taste of the people for whom the objects are made. The manufacturer makes his goods to sell. If their quality is such that they do sell, he is justified in believing that he gives what is wanted. As a matter of fact, the responsibility, however, for the artistic quality in most of our manufactures lies not with the maker, but with the middleman who buys the goods from the factory and sells to the retailer. He, it is who tells the maker of this and that what the people want. It is his business to gauge the taste of the community



The Largest Ventilator in the World

Its Dimensions are:

Neck—144 inches or 12 feet in Diameter Height—216 inches or 18 feet high
 Weight—6 tons or 12,000 pounds

THIS enormous Arex ventilates the entire **6-story St. Francis Hospital of Peoria, Illinois**, where it works 24 hours every day, silently and efficiently doing its work to the entire satisfaction of all the hospital authorities, patients, nurses and employees. Then stop to think—all this without the cost of a cent for operating or maintaining this monster. Isn't that a real recommendation? Nothing but an Arex could accomplish this great feat.

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A. J. Moratz, Bloomington, Illinois
 V. Jobst & Son, Peoria, Illinois
 Rudolph J. Jobst, Peoria, Illinois

Arex Company, Conway Building, Chicago, Illinois

Luke Seawell, Representative, 422 Austell Building, Atlanta, Ga.

and it is his risk that is involved. The manufacturer does as he is told.

If the average of taste, style, art, whatever name you choose to give it, in American-made goods, is low, it is because the average buyer of them is uncritical. As I have said there is an unusual degree of curiosity nowadays about matters of taste. But curiosity alone never accomplished much except bad manners. Something else is needed to lead people to learn to discriminate. First of all it should be generally understood what art is, that art is worth while, that good taste pays. If there be awakened in the country a sentiment in favor of this, there isn't much doubt but that the manufacturer and the middle man will try to do his part in the improvement of his output. You can safely leave it to them to do whatever is necessary to that end.

Here is the question, is the middle man competent to judge? His slogan of "giving the public what it wants," is all right if he is beneficent and allseeing enough really to know. But there have been doubts expressed as to this omniscience. It is his responsibility to refute his critics. It is easily done, for by his goods ye shall know him.

It is gratifying to learn that a movement has been set on foot by the National Association of Decorative Arts and Industries to Federate manufacturers, wholesalers, and retailers, designers, interior decorators and publishers to improve public demand and appreciation for home furnishings.

Doubtless they will accomplish much. Their greatest field for accomplishment, however, lies in their power to awaken the government to a sense of the importance of art in trade, as a national asset. It lies with them to persuade our government to sponsor such a movement as that recently undertaken by Great Britain: The University of Reconstruction in connection with the establishment of the British Institute of Industrial Art outlines provision for a permanent exhibition of British work, plans for bringing designers, manufacturers, and distributors together; a bureau of information to give foreign buyers knowledge of English industries and in general to push art in British industries.

There is another element in the education of the people in art which should be mentioned, which is not the least in its responsibility—the public museum. The history of this institution shows it in the past to have been in a formative state to this end. For years its chief aim was the pleasure of the people and the convenience of privileged classes, then it espied its opportunity to help in the education of the people, and now it is coming to recognize the part it has to

play in the labor of the people.

The power of its collections to give pleasure through the transfusion of its objects by labor into other objects is increased a hundred fold. The old theory that objects of art in museums were to be seen and not touched is rapidly giving place to one of us. Visual instruction is good but tactile instruction is better. Demonstration is needed and the museum has been the need. No single agency today except the government has the power materially to aid art in labor to the extent that the museum has. Collectors of styles, storehouse of design, demonstrator of taste, association of schools, it has a field great indeed.

Some may say—so do say—that this is not the province of art. Such believe that art, like the Lord, "moves in a mysterious way, his wonders to perform." It is doubtful if the Lord does. It is certain that art does not. Art should move in every way it can to help transform the world into a pleasant place to live in. And in this twentieth century it seems clear that one of its most important activities should be a closer alliance with labor. He would be an incurious man who would decline to do his part to bring about this end.

The responsibility for art in manufacture then, lies upon us all. Everybody's business is usually nobody's business, but in this case, there is a peculiar responsibility put upon a Federation of the arts. It is ours to help bring about a national style, to help to set standards in a public system of education, to encourage home products, and to adopt a broader understanding of them. It may be ours to see art a real power in the manufactures of the country. Who knows?

*An address at the Tenth Annual Convention of the American Federation of Arts.

San Francisco Architectural Club Educational Work.

The San Francisco architectural club, 77 O'Farrell Street, announces an educational course for its members for the fall and winter of 1921-22. Similar classes have been conducted by the club for several years past and their value is attested by the high standard maintained by the draughtsmen of San Francisco and vicinity. The courses are run at cost and all organized work is done gratis by members of the club. Large classes are anticipated, particularly those in "Building Construction" and "Reinforced Concrete." Mr. R. S. Chew, C. E., has been engaged to conduct the structural classes. He has directed similar courses for the past six years with splendid results. There will also be courses in "History of Architectural Modeling."

Conform to Fire Ordinances

The six styles of Floor Sleeves, illustrated, cover every requirement in fireproof construction where sleeves are desired for any and all purposes.

Made of galvanized iron in all grades and sizes, from the adjustable, telescopic sleeve for depth of floor from 14" to 24" to most inexpensive sleeve of plain No. 30 gauge with rolled seam and top edge snipped and turned over to form top flange.

Any of our perfection plates can be attached to these sleeves.



We are in a position to make shipments promptly on regular sizes.

Send us your specifications for special sleeves of extra length or heavy metal and we will quote you interesting prices.

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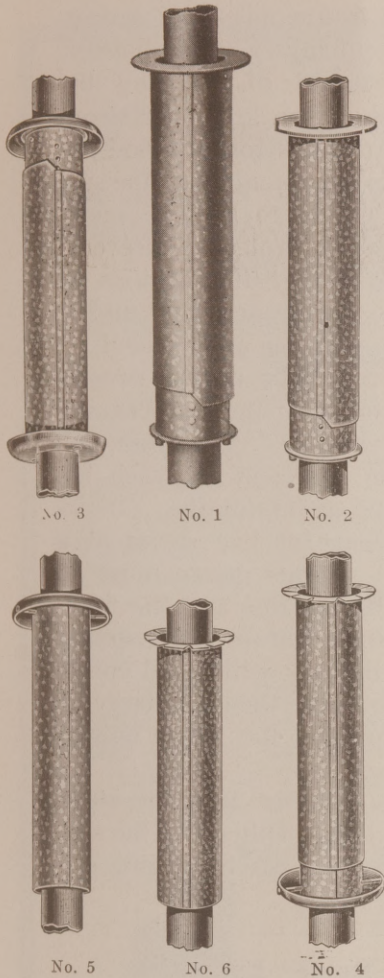
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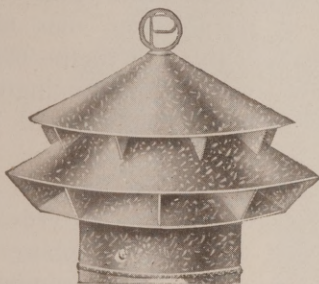
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THE ROOF VENTILATOR WITHOUT A STORM-BAND—

thereby having greater exhaust efficiency—and it's guaranteed storm proof.

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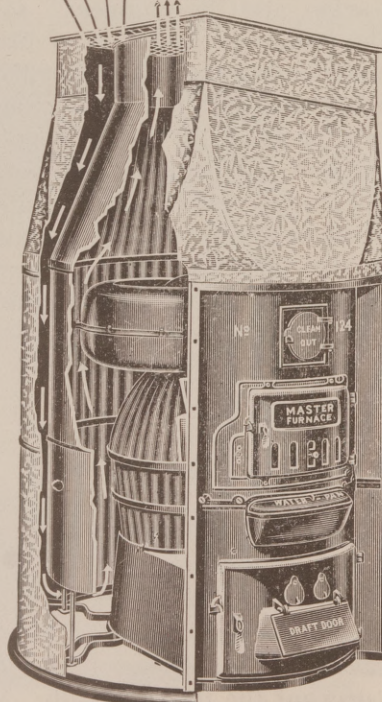
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MASTER WARM AIR FURNACES

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COLD AIR WARM AIR



Time Saved means MONEY Saved

The simple construction of the MASTER Furnace enables making installation quickly and easily. You can land more furnace business because you can figure a minimum for installation cost.

Every MASTER Furnace is guaranteed to fit perfectly.

You know that Quality, Durability and Heating Efficiency are the items looked for by the purchaser of a furnace. The MASTER excels in these qualities. All Cast. Uniform, Heavy fire pots and Combustion Chamber. Exceptionally large radiation surface. Large feed and ash doors. Sets low.

Write today for attractive prices and detailed catalog.

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Cost of Accident Insurance in Construction.

Forty-two of the forty-eight states in the Union have passed employers' liability or workmen's compensation acts which hold the employer liable for accident incurred by workmen in his employ. The compensation acts provide for the payments to be made to the workmen, the safeguards with which the employer is to surround his operations and, though the state insurance commissioner, the rates which are to be charged by the insurance and indemnity companies for carrying the employers' liability or workmen's compensation insurance. The amount of such insurance which the contractor must carry ranges from about 3 to 10 per cent of the payroll. The rates vary quite decidedly for different states. In an article, "The Elimination of Construction Wastes in Chemical and Metallurgical Engineering," Mr. George W. Burpee, vice-president, Dwight P. Robinson & Co., Inc., gives the following comparison of the rates for New Jersey, a low-rate state, and those for New York, a high-rate state, for some of the commoner building trades:

	Rates per \$100 of Payroll	
	New Jersey	New York
Masonry	\$3.36	\$8.30
Concrete work on buildings	2.94	7.49
Carpentry work outside	3.51	11.564
Carpentry work inside	0.70	2.102
Structural steel workers	9.07	27.569
Grading	0.98	2.397
Cellar excavation less than 12 ft. deep, no subaqueous work or blasting	1.15	2.76
Blasting	13.83	22.80
Millwright work	1.72	3.833
Miscellaneous labor	1.72	3.833
Supervision, including superintendents and engineers	1.19	1.560

Artist and Engineer.

"There is no reason why there cannot be collaboration of the artist and the engineer," said Mr. Ferruccio Vitale, landscape architect of New York, addressing members of the Milwaukee City club on The Landscape and the City. "City Planning is principally a problem of engineering in the broad sense," he said. "It includes economic, physical and social engineering. Though cities are eternal and the plans are the same, we must be impressed with the fact that structures are only temporary, and may be superseded by more beautiful ones. The masses should be educated to see the utilitarian and artistic side of life in bigger channels than ever before."

Killing Molds on Lumber by Steaming.

Molds thrive on the surface of wood when it is moist and warm. In a dry kiln molds often develop on the surface of the lumber to such an extent that they seriously obstruct the circulation of air through the pile. This is such a decided hindrance to successful kiln drying that steps must be taken to prevent the mold growth. Various experiments have been made by the Forest

Products Laboratory to find a means of accomplishing this result without injury to the lumber.

The safest method found of stopping the growth of mold on lumber in a kiln is to steam the stock at 170 or 180 degrees for a period not exceeding an hour. This treatment heats the surface of the stock sufficiently to kill the mold, and at the same time the saturated air prevents too rapid surface drying, so that the injurious effects which otherwise would be produced on the wood by such high temperatures are avoided.

Unless it is desired to relieve drying stresses at the same time, the interior of the stock should be heated as little as possible. Therefore, the steam supply should be sufficient to reach the desired temperature in 25 or 30 minutes. To accomplish this result, plenty of live steam at a pressure of at least 70 pounds gauge must be available. The size of supply line and the number and size of perforations that may be required in the steam jet line will vary with local conditions; it is impossible to make them too large or too numerous, as the quicker the steam is supplied the better the effect.

Care should be taken to see that the stock cools in nearly saturated air. Otherwise the surface will dry too rapidly, and casehardening difficulties will set in.

1922 "Own Your Home" Exposition.

The Executive Committee of the Fourth Annual "Own Your Home Exposition" has announced that the show will be held in the 69th Regiment Armory, New York City, Lexington avenue and Twenty-fifth street, from April 22 to 30, 1922.

It is believed that the downtown location of the Show this year will draw even greater crowds than attended uptown last year. Every phase of home planning, financing, building, equipping, furnishing and landscaping will be shown on the Exposition floor in an effort to encourage thousands of harrassed rent payers of New York and its vicinity to either start building at once or join a savings and loan society and start putting the necessary money aside.

Architectural Work in France is Begun.

Work has been begun by the fifty American students of architecture who recently went to France to assist in the construction of buildings in the devastated zone. Under the direction of Prof. B. Beuhen of Princeton University, fifteen are engaged at Soissons, and with Prof. Donald Tarpley of the Massachusetts Institute of Technology in charge, eighteen are at Rheims. Seventeen are at Verdun, under the supervision of Prof. Henry Moreau of Columbia University.

THE Continental Filter

The standard for high-class residence installation for the past quarter century

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it combines these important features:

1. **DOUBLE FILTRATION** — First through sand, then through bone-charcoal.
2. **SLOW FILTRATION**—Obtained by a large filtering area.
3. **THOROUGH FILTRATION** — Filtering material in each cylinder being 3 ft. in depth, making an aggregate depth of 6 ft.
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5. **AUTOMATIC AERATING DEVICE**—By means of which the filter beds are thoroughly agitated and aerated each time they are cleaned and the material is thus kept clean and fresh.



The New York Continental Jewell Filtration Co.

General Offices: NUTLEY, N. J.
Member Associated Manufacturers of Water Purifying Equipment.

A Comparison of Drinking Fountain Streams



Vertical Stream Bubbler
Condemned Everywhere

Camouflaged Vertical Stream.

Rainbow Stream, Hose like; difficult to drink from.

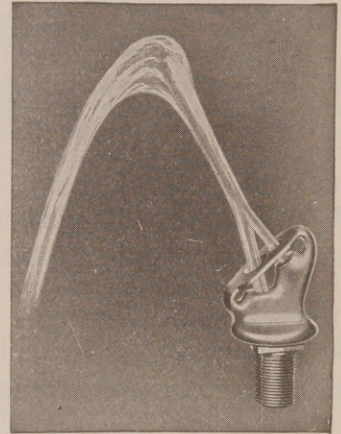
No. 1 shows the vertical stream which permits saliva and waste water from the drinker's mouth to fall back to the source of supply. No longer considered sanitary.

No. 2 is a slight modification of vertical stream type. This slight angle is little if any improvement over No. 1.

No. 3 is more sanitary if properly used. But stream is hose-like with no definite drinking point. Drinker places mouth as near water outlet as possible. Unsanitary like Nos. 1 and 2

The Puritan Cantonment "Mound Building" Stream

Practical drinking mound is formed by mechanical means. Interference is set up in stream which retards water movement at the apex of arc. This stream



makes it impractical to drink from any other point. Approved by U. S. Government.

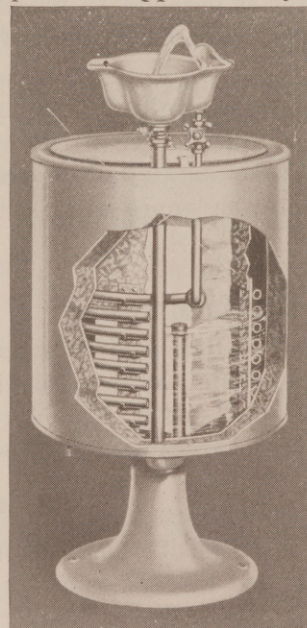
Recognized by largest interests and schools in the country. Definite Drinking Point. Sanitary and Practical.

Puritan CANTONMENT DRINKING FOUNTAINS

Puritan "Cantonment" Coolers are designed to connect to pressure lines and are so constructed that the drinking water does not come in direct contact with either the ice or ice water, but is circulated through brass coil which is tinned both inside and outside.

With 2-stream "Mound Building" Projector this cooler is the most efficient and sanitary of its kind on the market.

WRITE FOR ILLUSTRATED LITERATURE NOW.



HALSEY W. TAYLOR COMPANY
WARREN, :: :: :: OHIO

Help of Builders Urged in Fight on Unemployment.

At the request of Secretary Hoover, of the department of commerce, Charles William Bernhardt, president of the National Association of Builders Exchanges, with headquarters in Atlanta, has sent out a telegram to seventy-five organizations in the leading cities of the United States urging them to take active steps to aid in putting into effect at once the recommendations of the recent conference on unemployment.

In the telegram President Bernhardt urges the members of his association to take the initiative. He outlined some of the plans recommended by the conference for the relief of the unemployment situation.

Following is his telegram:

"To All Affiliated Interests of the National Association of Builders Exchanges: At the request of Secretary Hoover all organizations of the affiliated national association are strongly urged to take active steps to see that their respective cities are immediately organized and that the recommendations of the unemployment conference are at once put into effect.

"It is urged that you take initiative or support the public works proposals. It is recommended that your manufacturers, wholesalers and retailers fully readjust prices to induce resumption of buying. Emphasize the suggested division of available jobs and part-time rotation methods in both public and private work. Persuade your local authorities to form a representative community emergency committee. Spare no effort to revive the construction industry by every means possible, reducing building costs, particularly labor and some materials. Urge your manufacturers, as far as possible, to manufacture for stock and do all possible plant repairs at once."

"There is now splendid opportunity for organized industry to perform constructive work by cooperating with the government. Have your mayor wire Secretary Hoover approval of his program."

Lead Too Pure For Cathedral Roofing.

There is such a thing as too pure lead for roofing purposes. The ancient Gothic cathedrals of Europe were topped with this grey metal that blended well with the stone work and the style of architecture.

Lead was the metal that was specified for the roof of the Episcopal Cathedral of Washington which is now being built, but after it had been applied for some time, it was found that sheet lead on the steep roof slopes had a tendency to flow downward under its own weight and the

heat of the sun. The nail holes enlarged and allowed the metal to slip partially off.

Metallurgists of the Bureau of Standards of the Department of Commerce were called upon and they found that the grade of commercial lead used was 99.9 per cent pure, far too pure for satisfactory roofing. They recommend the use of what is technically called "hard lead," which contains approximately six per cent antimony.

Lead roofs on European cathedrals have lasted for 300 to 500 years, and the metallurgists are of the opinion that lead as manufactured in those days had impurities sufficient to harden it for roofing use.

Milburn, Heister & Co. Reports.

Sillsboro, N. C.

School—The School Board invited bids for the erection of a new \$100,000 school building agreeable to plans prepared by Milburn, Heister & Co., Washington, D. C., and Durham, N. C. The contract will be awarded at once.

Bethesda, Md.

The Bank of Bethesda and the Masonic Temple Association will erect a new building after plans and specifications prepared by Milburn, Heister & Company, architects, Washington, D. C. Mr. Thomas Hampton, Chairman of the Committee.

Washington, D. C.

Knights of Columbus have engaged Milburn, Heister & Co., architects to prepare plans and specifications for additions and alternations to their building.

Washington, D. C.

Residence. H. D. Wats Co., Baltimore, was awarded the contract for the erection of a new residence for Mr. J. S. Tyree, at 16th and Columbia Road. Plans were prepared by Milburn, Heister & Co.

Washington, D. C.

Church. The Building Committee for the M. E. Church have invited contractors to submit bids for the erection of a new church building plans and specifications by Milburn, Heister & Company, Architects.

Cairo, Ga.—The Board of School Trustees here plans the construction of a \$70,000 school building to replace the one recently destroyed by fire. The structure as contemplated will contain twenty-six class rooms and an auditorium to seat 750 people.

POTTRY TILE AND BRICK

Made from fragments of old jugs and shale
80 STOCK SHAPES IN THREE DIFFERENT TEXTURES.
Write for sample and cuts of artistic fireplaces.

B. MIFFLIN HOOD BRICK COMPANY

ATLANTA, GA.

Construction Activities in Southern Cities

\$500,000 Dairy Plant for New Orleans—\$1,500,000 in New Schools.

A \$500,000 plant for the Cloverlands Dairy Company and \$1,500,000 in new schools are among the principal items in the building program of New Orleans for the near future.

The land on which the dairy will build its plant reflects the growing value in realty in New Orleans. This square of ground in Carrollton was purchased some time ago by the Ford Motor Company for \$45,000. It was sold to the Cloverland people for \$52,000; and a few hours after the sale was announced, the Cloverlands people received an offer to sell at a profit equally as large.

The new plant, according to present plans, will be four and perhaps five stories and will cover the entire square. It represents a remarkable expansion of this enterprise.

The building program announced by the school board calls for five new school houses, four of brick, three stories high and each containing 16 rooms. These new schools are made necessary by the increase in enrollment this year of \$4,000 pupils.

House Building Program of Baltimore Builder Involves \$400,000.

Frank Novak, builder and developer, Baltimore, has announced that shortly work will commence upon 105 dwellings, costing approximately \$400,000. They will be built in various sections of the city and in several distinct styles. Brick will be used to a large extent in constructing the houses, which will have concrete foundations. Plans were prepared by the owner, who will also undertake construction with his own forces. Building materials are now being accumulated.

Stabilization of construction cost and the belief that the low point in building material prices has been reached are given by Mr. Novak as the governing factors in the decision to begin work at this time.

New Masonic Temple.

Atlanta, Ga.—Plans have been completed for the dedication of the new Masonic temple, erected at a cost of \$10,000 by Inman lodge, No. 637, F. & A. M., and for the unveiling and laying of the corner stone.

The new building is considered one of the handsomest of its kind in the city.

\$750,000 Office Building for Dallas.

Dallas, Tex.—Plans have been completed for a 12-story office building to be erected here by

John T. and Jesse H. Jones at a cost of \$750,000. The building was designed by Alfred C. Finn of Houston. The exterior will be of buff brick with Bedford stone and terra cotta trimmings. The interior will have tile floors, and marble halls. Tentative plan call for utilizing most of the office space for physicians.

\$1,000,000 Masonic Temple Contract Awarded.

Oklahoma City, Okla.—Contract for the erection of a \$1,000,000 Masonic temple building has been awarded Campbell & Price. Ample room for accommodating practically all of the lodges in the city will be provided. There will be a main auditorium with a seating capacity of 1000 persons, and another with a capacity of 700. A roof garden, dancing floor, dining room and other accommodations will be features of the new structure.

New Buildings for Vanderbilt University.

Nashville, Tenn.—Vanderbilt University will soon advertise for bids on the extensive developments planned here with the \$3,500,000 received from the Rockefeller Foundation. The main construction will be a large and handsome Medical and Dental Building and a 200-bed hospital. In addition the city of Nashville has raised \$75,000 which is a gift to the University and will be added to present funds of their Athletic Association for building a modern Stadium with a capacity of 15,000, with a football and two baseball fields, and a track.

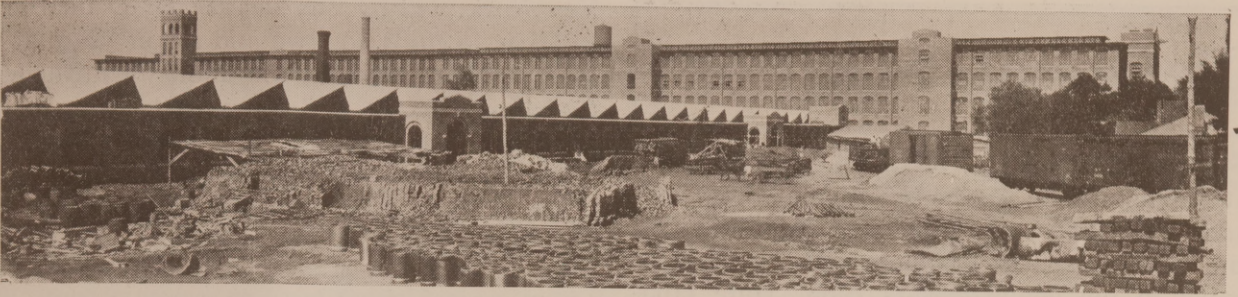
A \$250,000 Memorial Hall will also be built, dedicated solely to Vanderbilt boys in the World war. This will be used as a community and recreation hall, and for Y. M. C. A. activities.

Washington, D. C., Hotel to Cost \$2,500,000.

Reports come from the capital city of the construction of one of the finest and most up-to-date hotels in the United States. The structure will be 11 stories high containing 310 rooms each with bath. The entire structure together with the furniture, furnishings and equipment will cost it is estimated \$2,500,000.

Y. M. C. A. Cost \$630,000.

Y. M. C. A., Trenton, N. J., cost \$630,000, 5 stories and basement, 194x150 feet, concrete frame complete brick work being erected, General contractors, Karno Smith Co., Trenton, N. J. Contracts yet to be let, lighting fixtures, laundry equipment, restaurant equipment, vault, safe, etc.



Immense mill extension and weave shed of reinforced SLAG concrete built during 1919-20 for the Bibb Mfg. Co. of Columbus, Ga. Roberts & Co. (Atlanta), architects; T. C. Thompson Bros. & Co. (Charlotte, N. C.), Contractors.

Slag Concrete



Attractive 8-story and basement home of George Muse Clothing Company in Atlanta. Reinforced Slag Concrete throughout. Hentz, Reid & Adler, architects; Builders, A. J. Krebs Co.; Contractors in charge, Barge-Thompson Co.

Your architect will verify these statements about reinforced slag concrete buildings

1. They are fire resisting
2. They are almost repair free
3. They require no painting
4. They grow stronger as they grow older.

"ENSLEY" & "ALA CITY"
BASIC SLAG
 CRUSHED & SCREENED

The best concrete is reinforced Slag concrete. For our Basic Slag is a scientifically prepared product greater in tensile and compression strength than stone, granite or gravel. It is crushed, screened and sized to meet the contractor's most exacting requirements.



Birmingham Slag Company

Slag Headquarters for the South

Atlanta BIRMINGHAM Thomasville

Impressively beautiful reinforced Slag concrete home of the Jemison Co., Birmingham. Built by Smallman-Brice Construction Co. from designs by Warren & Knight, architects, Birmingham.

Personal Mention.

Moise H. Goldstein, architect, and his associates, Thomas M. Harlee, Nathaniel Cortlandt Curtis, Fredrick D. Parham and Nelvil C. Settoon, have moved their offices and will now be located in the new Hibernia Bldg., suite 1105-1108, New Orleans, La.

George A. Griebel has resumed active practice of architecture and engineering with office at 402 Ninth Garage Bldg., St. Clair and East Sixth streets, Cleveland, O.

R. A. Swartz, architect, has purchased the office of F. W. Hunt & Co., architects and engineers. Mr. Swartz is located at 513 Mining Exchange Bldg., Miami, Okla. He desires manufacturers' catalogs and samples.

Otto D. Mock, architect has opened an office for the practice of his profession at 604 Marion E. Taylor Bldg., Louisville, Ky. Mr. Mock desires samples and catalogs.

G. Herbert French, architect, has opened an office for the practice of architecture at 513 Times-Dispatch Bldg., Richmond, Va. Mr. French was formerly with Benton & Benton, Richmond, Va.

Philip B. Moser, architect, has moved his office from the Law Bldg., Norfolk, Va., and will be associated under the firm name of Philip B. Moser and Charles P. Breese at 329 Dickson Bldg., that city.

Lloyd Morgan Awarded Architectural Prize.

Lloyd Morgan, 333 West Twenty-third street, New York City, has been awarded the fourteenth Paris Prize of the Society of Beaux-Arts Architects, which was donated this year by Mrs. Lewis B. Preston, and the most sought after architectural prize in America. Mr. Morgan, who started as an office boy and later was a student in the office of Dennison & Hixon, architects,

New York, will by this success, be enabled to go to Paris to study for two and a half years at the Ecol des Beaux Arts. The money equivalent of the prize is \$3,000 and provides the winner with \$300 quarterly for two years and a half, dating from his arrival in Europe.

In addition to Mr. Morgan, the winners were:

Second award, J. G. Schuhmann, Jr., Columbia University, Atelier; third award, A. E. Westover, Jr.; fourth award, H. S. Atkinson and R. A. Fischer, all of the "T" Square Club Atelier, Philadelphia, Pa.

V. H. Kriegshaber Named Builders' Supply Director.

Miami, Fla.—Complete confidence in the business outlook with regard to building in the southeastern section of the United States was generally expressed by speakers at the annual convention of the Southeastern Builders' Supply association.

The annual election of officers resulted as follows:

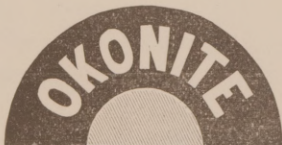
President, M. G. Ross, Macon, Ga.; vice president, John D. Baker, Jacksonville, Fla.; treasurer, H. P. Burum, Augusta, Ga.; Secretary, R. M. Hawkins, Birmingham, Ala.

A member from each of the states included in the association was elected a member of the board of directors, as follows:

Florida, I. E. Schilling, Miami; Tennessee, T. L. Hubbard, Nashville; Louisiana, Walter Jahncke, New Orleans; Mississippi, J. R. Perry, Vicksburg; Alabama, M. Sugarman, Birmingham; Georgia, V. H. Kriegshaber, Atlanta.

The Art Centre.

The designs for the Art Concrete in New York prepared by J. Munro Hewlett, president of the Architectural League of New York, have finally been perfected and approved and the actual work of construction is begun. The first groups of works of art by the best industrial designers in the United States will be shown at the Art Centre in the month of October. The new building will then be formally dedicated to the service of art, as applied to the everyday affairs of the people.



TRADE MARK.

Novelty Electric Co., Philadelphia, Pa.

A GOOD SPLICE is as strong and long lived as the insulated wire itself.

OKONITE and MANSON Tapes are the recognized Standard for splicing tapes.

Send for Booklet

The Okonite Company, Passaic, N. J. Incorporated 1884

CENTRAL ELECTRIC CO., Chicago, Ill. General Western Agents.

Pettengell-Andrews Co., Boston, Mass.

F. D. Lawrence Electric Co., Cincinnati, O.

A concrete products plant complete in one large swift-running machine

In these days of high labor costs, the products manufacturer who picks up his raw material and lets go of it before he has placed his finished product on board freight cars or trucks, is operating at a disadvantage.

The Mogul is a complete plant equipment assembled in one unit for the continuous manufacture of brick, block, fence posts and roofing tile.

It feeds itself from material pits below grade. Concrete materials are automatically measured and fed in exact proportion in a 15' trough and mixed dry, discharged from a 25' trough and mixed dry *again*, discharged onto an inclined plane, flow in a thin layer under a warm mist spray into the moulding machine which discharges onto a traveling belt a core of well mixed and consolidated concrete 2" square, or 2"x24" or 12"x24" and this core is cut into brick, block, posts or tile and laid automatically on trolley carriers. The product travels to steam room, hesitates 12 hours and then travels to cars or trucks.

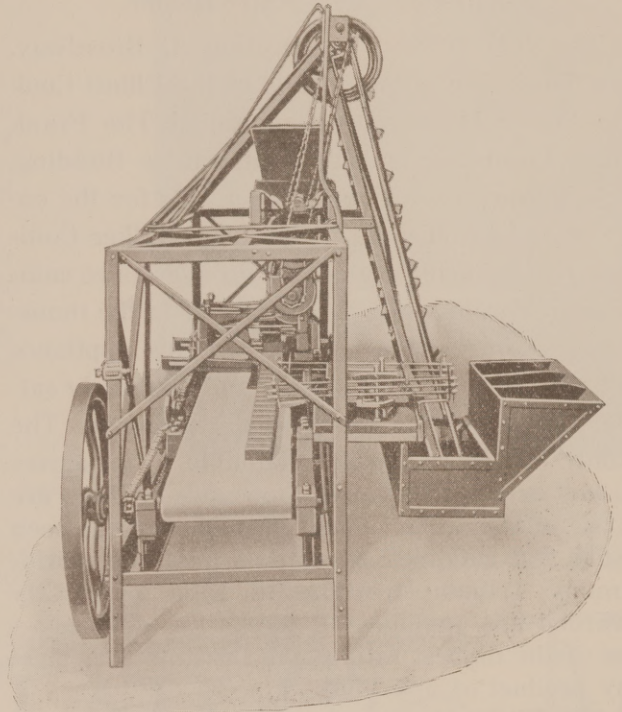
100,000 Brick a Day

Equipment, assembled in a structural steel frame, is 10' wide, 22' high and 30' long. Its capacity is 100,000 brick a day. The concrete core may be split into sills, coping, posts, dimension stone block, roofing tile or brick of any size.

Mogul plants are established where local companies with sufficient working capital, suitable materials and good market are available. Write for our complete proposition.

Mogul Concrete Machinery and Equipment Company

Dorsey, Md.

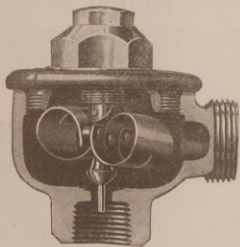


Dependability

The engineer who is responsible for the maintenance of building equipment, and the owner who pays the maintenance costs, both know the dollars and cents value of dependability,—of mechanical equipment that they can depend on, and that does not depend on them for replacements, adjustments and repairs.

Radiator traps play a vital and important part in the efficient operation of the heating system. They must be dependable.

Permanent *all-metal* construction insures that the proven operation of Trane Thermetal Traps will continue for years and years, and architects and engineers who have investigated both the metal and the traps have unhesitatingly adopted them.



May we send you some interesting and valuable data on radiator trap performance?

Ask for Bulletins No. 6 and No. 6A.

THE TRANE COMPANY, 210 Cameron Ave., LaCrosse, Wis.
Chicago Boston New York Philadelphia Washington Salt Lake City Portland, Ore.

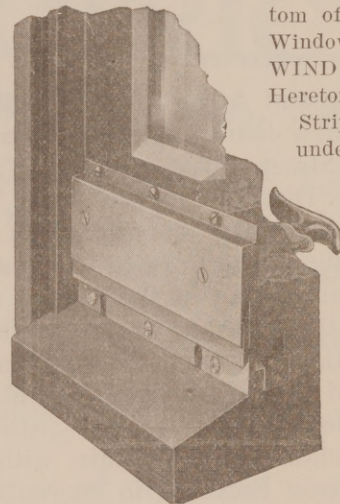
Trane Thermetal Traps

WE HAVE IT

A Weather Strip for the bottom of Inswinging Casement Windows that will stop the WIND and RAIN.

Heretofore, Casement Bottom Strips have been located under the sash. The Strip illustrated here, is put on at the outside where a Casement Strip must be to be most efficient.

A quarter turn of the handle lowers a strip so that it overlaps a sill strip the entire width of the sash, making an excellent bottom fastening—no bolts or other fastenings being required at the bottom.



The OVERLAPPING FEATURE causes the Strip to shed water much the same as does the side of a house. Ask for literature regarding this Casement Strip and the best Door Bottom Strip.

Manufactured by

Eveleth Manufacturing Co.

(Not Inc.)

12 Ashland Avenue

River Forest, Ill.

Trade Notes.

Frank Zilker Company, Louisiana, Agents for Elliott Cook Top Water Heater.

The Vola Trading Corporation, 42 Broadway, New York, sole selling agents of the Elliott Cook Top Water Heater, have appointed The Frank Zilker Company, 602 Title Guarantee Building, New Orleans, executive selling agents for the entire State of Louisiana. The Frank Zilker Company will immediately launch an aggressive campaign to introduce the Elliott Heater to the thousands of Louisiana homes where this appliance will prove a very economical and extremely satisfactory solution to the hot-water problem. The Elliott Heater is equally adaptable to oil stoves as well as gas ranges and thousands of them are in use in the North. The Elliott Heater has been tested and endorsed by experts, and the world-famous Tribune Institute in New York City awarded this appliance 91 points for efficiency—one of the highest ratings the Institute ever gave any product of any kind.

The Elliott Heater was exhibited at the recent Convention of Master Plumbers in New Orleans where representatives of the Frank Zilker Co., saw it, and recognizing its value and possibilities immediately began laying plans to secure the exclusive agency for their state.

Announcement.

The Portland Cement Association announces the opening of two new district offices as follows: 10 North High Street, Boston, with I. T. C. Loring in charge as District Engineer.

Mr. Loring has had large experience as engineer and construction superintendent in charge of public and private works in the Boston district. For the past two years he has been a fieldman for the Portland Cement Association in charge of diversified promotion in eastern Massachusetts and Rhode Island.

1001 Finance Building, Philadelphia, with D. S. MacBride as District Engineer in charge.

Mr. MacBride entered the employ of the Portland Cement Association three years ago and has been conducting Association educational-promotional work in eastern Pennsylvania. Previous to this connection he served as testing, designing and construction engineer on large private and public works. One of his connections was that of Construction Engineer, Department of Wharves, Docks and Ferries, Philadelphia.

Portland Cement Association.

Birmingham Slag Co.'s New Plant.

The Birmingham Slag Co. has completed at Ensley the erection of a factory for the production of brick and tile composed of five-sixths furnace slag and one-sixth cement. The product is already on the market, more than 60,000 of the brick having been produced. It is called Slag-Tex and an exhibit of the product at the Chamber of Commerce's "Own Your Own Home" exposition is one of the most interesting there. The exhibit consists of a beautiful mantle built of the brick and tile manufactured under this process.

The brick are made by hand process. Ten steel machines have been installed. Each contains 10 compartments and ten bricks are molded at the same time by the operative. The plant's present capacity is 30,000 brick per day.

The tile are about six inches square and three quarters of an inch thick. Both the brick and the tile take any color desired. The color is partly infused, as the cement and slag are being mixed in the molds, but the finishing color and texture is superimposed on the face.

About \$50,000 was invested in the new plant at Ensley, where the large slag plant of the company is located adjacent to the Ensley blast furnaces, from which the raw material is secured.

The product takes every hue and surface of the clay product, and is of unusual hardness and impenetrability by moisture.

Monarch Automatic Water System.

You are one of those substantial Americans who takes pride in your home. You have it furnished with good furniture and equipped with modern conveniences.

And yet it may lack one of the requisites that would probably give you more real pleasure and satisfaction than any other one thing—the soft-water bath, which keeps you fit!

Think what it would mean to you and your family to be able to get warm, soft water into the bathtub at the simple turn of the faucet.

Thing of the refreshing feeling of exhilaration and cleanliness which only a soft water bath can give you!

And that is not all!

The same automatic system that supplies the soft water for the bath, also gives it to you for the kitchen and laundry.

The pump and the bucket for drawing and carrying water have no place in the modern city home. The Monarch Automatic Water System does away with all this.

You want and need rain water for your bath, kitchen and laundry, but you will never realize the joy of having it until the quiet, faithful Monarch is made a part of your home.

Sold by Monarch Engineering Co.

The VENDOR SLATE CO.

COLOR IN PENNSYLVANIA SLATE

ANOTHER Vendor contribution is the making available of dark bodied Pennsylvania slates in textures which, through interest, play of shadow, and depth, bring out atmospheric color to a subtle and satisfying degree, especially for formal architecture where the gay feeling of colored slate is out of character.

Some Pennsylvania slates also acquire surface weathering and duplicate, in studies we have made, the age appearance of early Colonial imported slate. We execute commissions complete or collaborate to any desired extent; from the making of a mere layout to the undertaking of the entire roof work, sketches to material in place.

On receipt of blueprints we will promptly describe an appropriate slate roofing (including its cost) based on our knowledge of available slates and how to work them. Such service is under professional direction. Have we also your address for our occasional literature on roofing slate?

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AT EASTON, PA. SALES BRANCHES IN PRINCIPAL CITIES.



The roof work detailed in this series represents selections from representative architects, executed in collaboration with Vendor Slate Company's executives and using material obtainable from Vendor quarries. This example is from the office of Mr. Raphael Hume.

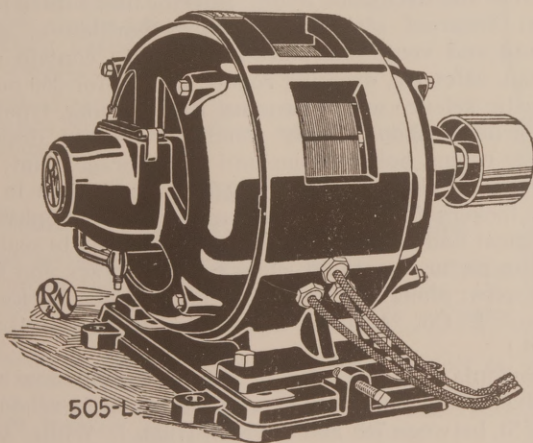


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Electric Light, Power, Telephone and
Bell Wiring for Residence, Stores
and Factories.

Estimates Furnished

Rewinding For Motors, Generators

All kinds of new and used Electrical
Machinery bought, sold and
exchanged.

ALL KINDS of ELECTRICAL WORK

MOTORS RENTED

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TELEPHONE YOUR WANTS

LOCAL AND LONG DISTANCE

Building and Construction News

Birmingham, Ala.—Mrs. Elizabeth M. Cabaniss will erect \$10,000 brick residence at Cliff Rd. and Essex St.

Washington, D. C.—G. S. Seek will erect four 2-story frame dwellings at 1201-07 Floral St., N. W.; cost \$20,000.

Washington, D. C.—H. R. Howenstein Co. will erect 2-story brick dwelling at 608-20 Otis Pl., N. W.; cost \$28,000.

Washington, D. C.—I. Stamler will erect \$10,000 residence at 5500 Conduit Rd., N. W.; 2 stories; brick.

Washington, D. C.—Mrs. A. B. Herndon will erect \$12,000 residence at 1407 Hamilton St., N. W.; 2 stories; frame.

Washington, D. C.—M. J. Keane will erect \$15,000 residence at 1416 Longfellow St., N. W.; 2 stories; brick.

Washington, D. C.—W. C. & A. N. Miller will erect \$20,000 residence at 2404 Massachusetts Ave.; 3 stories; brick.

Daytona Beach, Fla.—J. W. Camac will erect \$15,000 residence at Main St. and Grandview Ave.; brick and stucco.

Atlanta, Ga.—B. C. Cochran will erect 1-story brick veneer dwelling at 108 Park Dr.; cost \$10,000.

Atlanta, Ga.—T. A. Sandifer will erect 2-story brick veneer dwelling at 30 Penn Ave.; cost \$11,800.

Frankfort, Ky.—Bullitt McCoun will erect number of cottages in connection with development near Big Eddy.

Hazard, Ky.—Blue Diamond Coal Co. will erect 50 miners' dwellings in First Creek Field, nr. Hazard.

New Orleans, La.—R. E. Fisher will erect duplex residence, S. Pierce St., nr. D'Hemecourt St.; cost \$14,000.

New Orleans, La.—L. Aronson will erect 2 dwellings at Plum, Adam, Burdette and Poplar Sts.; cost, \$22,000.

Baltimore, Md.—Broring & Powell Co., 29th St., nr. the Alameda, will erect 10 two-story dwellings at 3001-19 Alameda; cost \$35,000.

Baltimore, Md.—Frank O. Singer, Jr., Equitable Bldg., will erect 12 dwellings at 2100-10 and 2101-11 Rupp St.; cost \$20,000.

Oklahoma City, Okla.—G. A. Nichols will erect 6 frame and brick dwellings; cost, \$29,000.

Oklahoma City, Okla.—G. T. Matthews will erect 2 frame dwellings; cost, \$10,000.

Oklahoma City, Okla.—E. C. Ross will erect 4 frame dwellings; cost \$18,500.

Oklahoma City, Okla.—V. H. Noe will erect brick dwelling at 714 E. 13th St.; cost \$10,000.

High Point, N. C.—S. H. Tomlinson is Chrmn. of Comm. to promote campaign for erection of dwellings; following are considering erecting: J. H. Adams and associates, 30; Pickett Cotton Mills, 30; Tomlinson Chair Co., 30; R. R. Ragan and associates, 15; Continental Furniture Co., 12; A. E. Tate, 10; H. Harris and brother, 10; Fred G. Barbee, 9 apartments; Moffit Underware Co., 6; J. E. Cecil, 6; R. B. Terry, 5; Harry Raymond, 5; Southern Chair Co., 5; Kearns Furniture Co., 5; G. H. Kearns, 5; High Point Insurance & Realty Co., 5; Marsh Furniture Co., 5; Southern Mirror Co., 5; Hill Veneer Co., 5; Slane Hosiery Mills, 5; C. E. Hayworth and associates, 5; Geo. E. Wilson, 5; J. C. Bouldin, 5; Arthur Lyon, 4; J. Schwartz, 3; Globe Parlor Furniture Co., 3; Union Furniture Co., 3; J. A. Clinard, 3; Dr. J. T. Burrus, 3; P. A. Thomas, 2; Rankin Coffin and Casket Co., 2; C. S. Grayson, 2; Knok Upholstering Co., 2; Siceloff Hardware Co., 1; Ideal Table Co., 1; Dr. D. A. Stanton, 1; Quality Shoe Store, 1.

Mt. Airy, N. C.—Mt. Airy District, Rev. J. H. West, presiding elder, will erect \$10,000 district parsonage.

Oklahoma City, Okla.—Ross T. Thomas will erect 2 dwellings at 1500-04 N. Pennsylvania Ave.; cost \$10,000; brick.

Greenville, S. C.—F. M. Burnett will erect 100 dwellings in connection with negro development of tract between Green Ave. and Anderson St.; cost about \$1—50,000.

Memphis, Tenn.—Ben E. Berry will erect 17 dwellings in connection with development at N. Parkway and N. Watkins St.; various styles; brick veneer, frame and stucco.

Dallas, Tex.—John W. McLauren will erect \$10,000 residence at 4710 Munger St.; 9 rooms; frame.

Dallas, Tex.—W. S. Moser will erect \$15,000 residence at 2402 S. Boulevard; 2 stories; brick veneer.

Dallas, Tex.—Albert Wilkinson will erect \$10,000 residence at 523 Ewing St.; 8 rooms; brick veneer.

Houston, Tex.—H. V. Neuhaus will erect \$50,000 residence in Shadyside addition; 2 stories; hollow tile and stucco.

Norfolk, Va.—W. P. Conard will erect 2 dwellings at 4910-12 Colonial Ave.; cost \$15,600; brick; construction by owner.

Richmond, Va.—C. G. Morris will erect 4 brick dwellings at Maplewood Ave. and Powhatan St.; cost \$24,000.

Richmond, Va.—R. A. Ricks will erect 4 brick dwellings at 3110-16 W. Main St.; cost \$18,000.

Hotels.

Elkin, N. C.—Merchants Association is promoting erection of \$75,000 hotel.

Charleston, S. C.—Francis Marion Hotel Co., T. T. Hyde, Prest., will erect 12-story hotel at King and Calhoun Sts.; 312 rooms with bath; convention hall and private dining rooms on top floor; reinforced concrete; Wm. L. Stoddart, Archt., 9 E. 40th St., New York, will receive bids about middle of January for foundation piling and concrete. (Previously noted.)

Charlotte, N. C.—Board of School Commissioners, H. P. Harding, Secy., will erect Central High School at Cecil St. and Elizabeth Ave.; bids opened Jan. 5; cost about \$200,000; 27x215 ft.; 3 stories; fireproof; concrete frame; terra cotta tile walls; tar, gravel and felt roof; concrete and hardwood floors; interior tile; rolling partitions; fireproof stairways; vaults; ventilators; steam heating and ventilating; ground floor to contain gymnasium, cafeteria, dressing rooms, lockers for 350 pupils, domestic science and art rooms, Bookkeeping, typewriting, general shop, supply room, mechanical drawing, storage rooms, boiler rooms and cold storage plant; first floor for 14 class rooms, study hall, auditorium to seat 1200, lockers for 280 pupils; second floor for physical, biological and chemical laboratories, balcony to seat 250, moving picture booth, 16 class rooms, library and reading rooms; plans and specifications at office Lockwood, Greene & Co., Archts., 422 Piedmont Bldg. (Lately noted.)

Gastonia, N. C.—Board of School Commissioners, A. G. Myers, Chrmn., will erect \$500,000 high school on York St. between 7th and 8th Sts.; Hugh E. White, Archt. (Previously noted.)

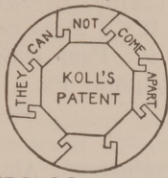
Clinton, S. C.—Presbyterian College, Dr. D. M. Douglas, Prest., will erect gymnasium; cost \$100,000; A. D. Gilchrist, Archt., Rock Hill.

Algood, Tenn.—Putnam County Board of Education, Cookeville, will erect school; 8 or 10 rooms; brick; cost

Note the Lock-Joint

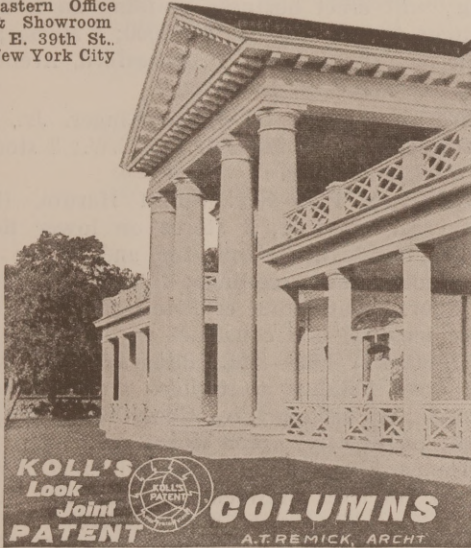
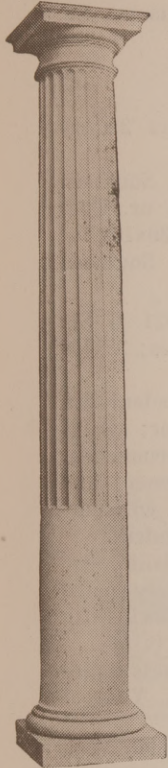
—We are the originators of the INTERLOCKING JOINT WOOD STAVE COLUMNS—they are the products of experience and an organization which has studied the most exacting requirements.
—Their specification gives assurance that the striking feature of colonial architecture will insure permanent satisfaction.

For EXTERIOR and INTERIOR COLUMNS very useful information will be found about them in our Catalogue for Columns. When writing enclose 15c and ask for No "S"-47.



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Look for the
Cross and Circle
Printed in Red

THIS symbol appears on every genuine package of Alabastine. It guarantees you beautiful, durable, sanitary walls, modern and delicately tinted in soft, pleasing colors which harmonize perfectly with your rugs and draperies.

Alabastine

TO DEALERS EVERYWHERE.

The word Alabastine, through the merits of the goods and the familiarizing of the consumers with our package and trade mark, represents to this consuming public a standard of quality. There is only one Alabastine. There is only one standard of quality. If a package of Alabastine in your town is good, it is no better than a package of the same goods in Shanghai, China, Tokio, Japan, or San Francisco, California. If it is not good then the packages in the above named locations are equally inferior.

The general consensus of opinion is that Alabastine is a good material. It has demonstrated its superiority by the test of time and by the wonderful demand existing for it.

The merits of Alabastine are recognized. It is standardized by advertising, makes an attractive display for shelf or window, occupies small space, packed compactly, yields a very satisfactory margin of profit and gives universal satisfaction to the trade. Write for full particulars and names of our nearest distributors.

ALABASTINE COMPANY

GRAND RAPIDS, MICHIGAN.

Your local Dealer is Entitled to Your Trade

Here is a Glazing Composition that will—



Adhere tightly to iron, steel, wood, glass, stone or concrete, Make an elastic joint—tight yet indefinitely flexible, preventing glass from cracking.

Guaranteed to withstand heat, cold, rain or extreme climate conditions, without chipping or peeling.

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\$27,500; bids opened in February. Address C. H. Rickman, Algood.

Rogersville, Tenn.—City plans to issue \$75,000 bonds to supplement \$25,000 already available to erect 2 schools. Address School Board.

Texine, Tex.—Board of Education will erect high school; cost \$100,000; 2 stories and basement; brick; stone trim; bids opened; Eads & McClure, Archts., Chickasha, Okla. (Lately noted.)

Schools.

Charlotte, N. C.—Board of Education, B. S. Drane, Chrmn., Commercial Bldg., will erect colored grade school; cost \$125,000; 2 stories and basement; fireproof; brick; stone trim; L. L. Hunter, Archt., Kinney Bldg.

Franklin, N. C.—Fraklin Graded School Dist. voted \$50,000 building bonds. Address Dist. School Trustees.

Misenheimer, N. C.—Mitchell Mission Home will erect school; cost \$150,000; 2 stories; 90x122 ft.; brick and stone; L. H. Sturges, Archt., 527 Board of Trade Bldg., Indianapolis, Ind.

Apache, Okla.—School Board will receive bids until March 1 at office J. T. Wells, Clk., Apache, and office Butler-Huseman, Archts., Chickasha, to erect 2-story addition to brick school; plans and specifications obtainable at office architects; on file with Mr. Wells.

Loyston, Tenn.—School Board will erect building.

Claude, Tex.—Claude Independent School Dist., R. S. Bagwell, Prest., will erect high school; cost \$40,000; brick; wood floors; metal ceilings, vacuum steam heat; \$60,000 bonds voted. (Lately noted.)

El Paso, Tex.—School Board, Chas. S. Ward, Prest., will erect 24-room grade school at Five Points; Trost & Trost, Archts., First Natl. Bank Bldg.; also erect 4 ward schools; cost \$200,000; J. S. Patten, Supervising Archt. (Lately noted.)

Graham, Tex.—Graham Independent School Dist. will erect school; cost \$50,000; 63x98 ft. brick; gravel roof; wood floors; furnace heat, \$4000; electric lights; T. J. Galbraith and J. P. Hubbell, Asso. Archts., Slaughter Bldg., Dallas. Address M. K. Graham, Graham. (Lately noted.)

Greenville, Tex.—School Board plans to erect ward and high school building; considering election on \$150,000 bonds.

Stamford, Tex.—Board of Education, N. S. Holland, Supt., will erect high school; election Feb. 16 on \$80,000 bonds. (Lately noted.)

Mexia, Tex.—School Board will erect building; cost \$160,000; accommodate 600 pupils; Dewitt & Lemmon, Archts., Dallas.

Slaton, Tex.—Slaton Independent School Dist. Trustees are considering calling election on \$50,000 bonds to erect ward school.

Waco, Tex.—City Commrs. ordered election March 14 on \$40,000 bonds to erect schools and additions to present structures; B. B. Cobb, Supt. of Schools. (Lately noted.)

Blackstone, Va.—Blackstone College Trustees will erect \$300,000 fireproof building to replace structure lately noted burned.

Dublin, Va.—Pulaski County Board of Supervisors, Pulaski, is considering election on bonds to erect schools as follows: Dublin, \$20,000; Belspring, \$16,000; Rockford, \$18,000; New River Depot, \$28,000.

Leesburg, Va.—School Board, L. G. Caviness, Clk., will receive bids until March 8 to erect high school; 16 rooms; brick; steam heat; electric lights; G. R. Ragan, Archt., Roanoke.

Portsmouth, Va.—School Board, Nellie J. Simmons, Clk., will receive bids until Feb. 3 to erect school at

Pinner's Point; 68x69 ft. with ell 42x20 ft.; 1 story; 4 rooms; brick and frame; gravel roof; maple floors, jacketed stoves; Chas. M. Robinson, Archt., Richmond. (Lately noted.)

Morgantown, W. Va.—State Board of Control, Jas. S. Lakin, Charleston, will erect gymnasium at West Virginia University; 3 stories and basement; main building, 115x195 ft.; 23,000 ft. floor space; reception hall, 60x80 ft.; 2 glass covered swimming pools, 25x85 and 25x60 ft.; Paul Davis, 3rd., Archt., 1713 Sansome St., Philadelphia, Pa.

Stores.

Birmingham, Ala.—W. B. White will erect 2-story tile building; cost \$15,000.

Washington, D. C.—Allen E. Walker Co., Southern Bldg., will erect business building on L St. nr. Connecticut Ave., N.W.; cost \$100,000; 4 stories; 30x100 ft.; brick and concrete; R. F. Beresford, Archt., Southern Bldg.; construction by owner.

Washington, D. C.—H. A. Linger, Jr., 921 G St., will erect store at 925½ H St., N.W.; 3 stories; 25x108 ft.; brick and stone.

Lakeland, Fla.—Rev. Smith Hardin, Bradentown, will erect building; 4 stores on lower floor; rooms above; 70x80 ft.; hollow tile and brick; ornamental terra cotta; metal ceilings; interior tile; cement and tile floors; ventilators; electric lights; owner will purchase material and construct with superintendent.

Tallahassee, Fla.—Mrs. Julius Diamind, Atlanta, Ga., will erect building to replace structure lately noted burned and occupied by Chas. Williams; 30x100 ft.; brick; metal roof; wood floors.

Tampa, Fla.—Jos. Weisman will erect business building on 7th Ave., between 19th and 20th Sts., Ybor; 1 story; 35x95 ft.; brick; cost \$15,000.

Tampa, Fla.—G. C. Spicolo & Son will erect store on 7th St., Ybor; 1 story; 35x95 ft.; brick; cost \$15,000.

Tampa, Fla.—Victor Licata will erect business building at 1717-21 7th Ave.; 70x70 ft.; 1 story; cost \$12,000; L. A. Fort, Archt.

Atlanta, Ga.—J. W. Fuller will erect building and redecorate interior of 5-story building at W. Hunter and Forsyth Sts.

Louisville, Ky.—Bensinger Outfitting Co., 315 W. Market St., will remodel building for addition to store; brick; Joseph & Joseph, Archts, Francis Bldg.

Shreveport, La.—J. B. Slattery will expend \$10,000 to alter and repair store for F. W. Woolworth Co.

Charlotte, N. C.—Mrs. Gaston G. Galloway will erect business building on S. Poplar St.; cost \$30,000 to \$40,000; pressed brick; 2 stories.

Hickory, N. C.—C. H. Geitner and C. C. Bost will erect 2-story brick building on 10th St., east of 12th St.; 50x100 ft.

Hickory, N. C.—Jno. W. Ballew and H. C. Cline will erect 2-story and basement brick business building on south side of 10th St.

Kinston, N. C.—Alder Bros. will erect business building; cost \$50,000; 65x135 ft.; 4 stories; brick, steel and hollow fireproof tile; tin roof; hardwood floors; metal ceilings; ornamental terra cotta; wire glass; steam heat; electric lights; Otis elevator; bids opened about Feb. 10; Willard G. Rogers, Archt., Charlotte. (Lately noted.)

Lexington, N. C.—Jule C. Smith will erect 2 store buildings; 47x110 ft. and 36x71 ft.; Brick; tin roofs; hardwood floors; metal ceilings; steam heat; Harry Barton, Archt., Greensboro.

Wilson, N. C.—R. E. Hagan will erect building for grocery store and manufacturing plant; cost \$25,000 to

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\$30,000; 60x135 ft.; 2 stories; brick; tin roof; metal ceilings; cement and hardwood floors; wire glass; electric lights.

Grove, Okla.—W. E. Jones will erect building to replace structure lately noted burned, occupied by Oyler & Mount.

Florence, S. C.—M. Rosenfeld will erect store and residence; 54½x80 ft.; brick; composition roof; cement and wood floors; wire glass; metal ceilings; ventilators; construction by owner.

Dallas, Tex.—Chas. B. Cohen will erect brick mercantile building, 1918-26 Greenville St.; cost \$10,000.

Mexia, Tex.—C. J. Alexander will erect 2-story brick building at Main and McKinney Sts.; cost \$40,000.

Tuscaloosa, Ala.—Pelham Brown and Frank M. Moody will erect building on Broad St., opposite postoffice for stores and filling station; site 60x120 ft.

Washington, D. C.—M. De Sibour will expend \$10,000 to repair building at 1539 29th St.

Washington, D. C.—M. Stokes will erect building at 2520 Massachusetts Ave., N. W.; cost \$75,000.

Washington, D. C.—O. R. Pedersen will erect building at 3511-13 Porter St.; cost \$16,500.

Washington, D. C.—W. C. Miller will erect \$18,000 building at 3505 Woodley Rd.

Jacksonville, Fla.—R. Bliflow will erect 2-story addition to building; cost \$25,000.

Atlanta, Ga.—Adair and Senter will erect block of 1-story brick stores at 276 Peachtree St.; cost \$50,000.

Greenville, S. C.—W. A. Hudson will erect store and apartment building at Buncombe and Rutherford Sts.; 3 stories; store on first floor; 8 apartments above; cost \$30,000.

Nashville, Tenn.—Swords & Co., will expend \$20,000 to improve department store at 308 Union St.

San Angelo, Tex.—Martin-Glover Co., will erect building to replace burned structure lately noted; 100x200 ft.

Theatres.

Daytona, Fla.—H. T. Titus will remodel interior of Malby Bldg. for theatre; will expend about \$100,000 for equipment.

Somerset, Ky.—T. J. Jasper will erect building for theatre, stores and lodge purposes; cost \$20,000; 1 story and basement; 57x118 ft.; brick; stone trim; Geo. L. Elliott, Archt.

Baltimore, Md.—Ambassador Theatre Co., Theophilus White and others, will erect theatre at 1803-09 N. Charles St.; cost \$150,000; 1 story; 85x125.6 ft.; fireproof; brick; slag roof; hardwood and concrete floors; interior tile; metal doors; wire glass; safes, ventilators; steam heat; electric lights; bids opened about March 1; E. G. Blanke, Archt., 532 N. Calvert Bldg. (Lately noted.)

St. Louis, Mo.—Opportunity Realty & Investment Co. will erect moving picture theatre and office building on McCausland Ave., south of Clayton Ave.; cost \$40,000.

Southern Pines, N. C.—L. Penday will erect moving picture theatre and store building; cost \$30,000; 1 story; 100x180 ft.; hollow tile and brick; Aymar Embury, Archt., 132 Madison Ave., New York.

Eufaula, Okla.—M. G. Lee, Cuthbert, will erect building to replace Vaudette Theatre lately noted burned.

Dallas, Tex.—Dallas Opera House Assn. will rebuild Capitol Theatre lately noted burned.

Dallas, Tex.—E. B. Thomas and others will expend

\$15,000 to remodel brick building at 212-14 N. Akard St. for theatre.

Clinton, Okla.—C. G. Welch will erect theater; cost \$32,000; 50x130 ft.; brick; composition roof; concrete and wood floors; metal ceilings; plaster board; ornamental terra cotta; wire glass; ventilators; steel sash and trim; Hawk & Parr, Architects., Oklahoma City; construction under supervision of Mr. Welch, who may be addressed. (Lately noted.)

Warehouses.

Orrville, Ala.—J. E. Dunaway Mercantile Co. will erect warehouse; cost \$10,000; 160x80 ft.; brick; composition roof; concrete floors; wire glass; steel sash and trim; ventilators; electric lights.

Washington, D. C.—Fries, Beall & Sharp Co., 734 10th St., N.W., will erect warehouse at 5th and T Sts., N. E.; cost \$20,000; 1 story; 101x175 ft.; brick and concrete; plans and construction by owner.

St. Petersburg, Fla.—F. J. Mason will erect warehouse at 17th St. and 2nd Ave.; 100x120 ft.; 2 or 3 stories; fireproof; also plans to erect commercial building at 18th St. and 2nd Ave.

Tifton, Ga.—Tifton Investment Co., C. W. Goodman, Secy., will erect tobacco warehouse; 100x300 ft.; concrete and brick; cost \$40,000.

Knoxville, Tenn.—Knoxville Lumber & Mfg. Co., Eugene Galyon, Prest., Depot Ave. and Randolph St., will erect warehouse and office building; cost \$10,000; 82x110 ft.; 2 stories; brick; gravel roof; hardwood floors; plans and construction by owner; all material purchased. (Lately noted.)

Dallas, Tex.—St. Louis capitalists, Louis J. Haenni, St. Louis, representative, are reported to erect 6-story warehouse on 3-acre tract west of Akard St. and south of Young St.; cost about \$1,000,000.

Waco, Tex.—Waco Fireproof Storage Co. chartered with \$150,000 capital; C. W. Meadows, Prest.; W. L. Greer, Vi-Prest.; J. W. Davis, Secy.-Treas.; will erect 3-story fireproof brick warehouse; 87x165 ft.; sprinkler system; 2 elevators; enclosed stairway and fire escapes; 28 separate compartments.

Huntington, W. Va.—Huntington Transfer & Storage Co., C. J. Bailey, Prest., will erect storage building; cost \$60,000; 5 stories and basement; 100x100 ft.; brick; R. L. Day, Archt., First Natl. Bank Bldg.

Association and Fraternal.

El Dorado, Ark.—Young Women's Christian Assn. will erect \$25,000 building; J. Rice Scott & Co., Inc., Archt.

Atlanta, Ga.—Nathan B. Forrest Klan, Knights of Ku Klux Klan, W. J. Simmons, Imperial Wizard, will erect \$100,000 office building at Central Ave. and Garnett St.

Nashville, Tenn.—Young Men's Hebrew Assn., Lee J. Loventhal, Gen. Chrmn., plans to erect \$250,000 building; 4 stories.

San Antonio, Tex.—Board of Odd Fellows is considering expenditure of \$200,000 to erect 6-story annex to Crockett Hotel of 60 rooms and 3-story lodge building adjoining on Nacogdoches St.; brick and reinforced concrete; W. R. Thruilkill, Chrmn. Bldg. Comm.; L. Harrington & Co., Archts.

Clifton Forge, Va.—Young Men's Christian Assn., will erect \$100,000 building; reinforced concrete; Jallade, Lindsay & Warren, Archts., 129 Lexington Ave., New York.



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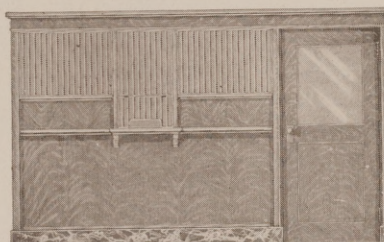
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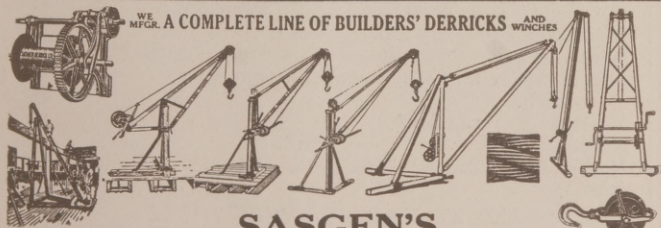
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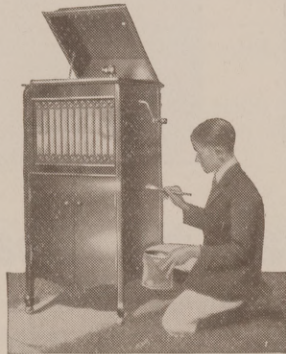
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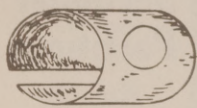
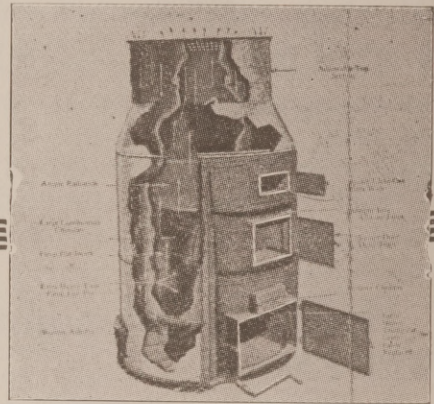
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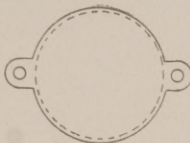
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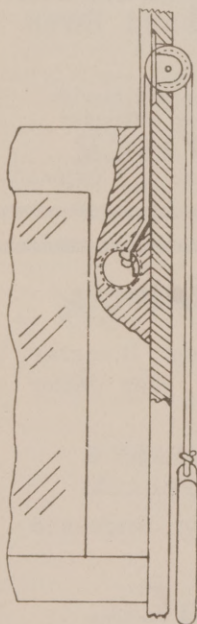
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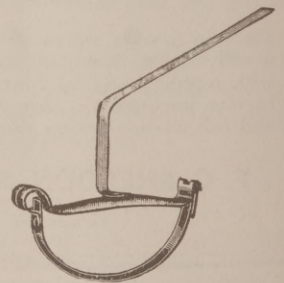
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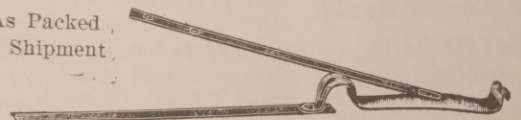
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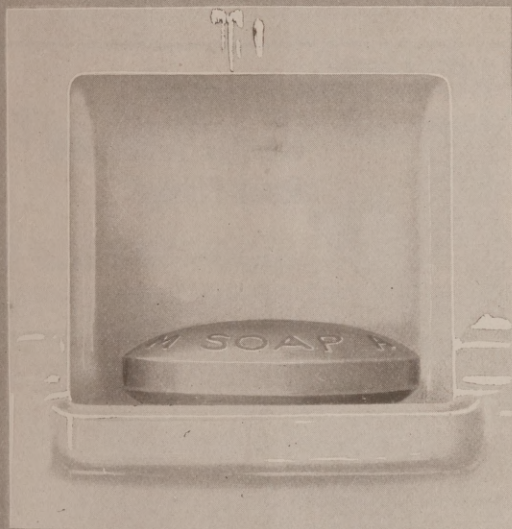
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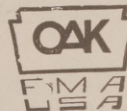
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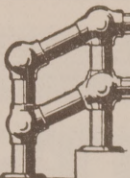
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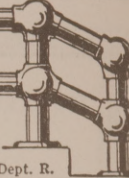
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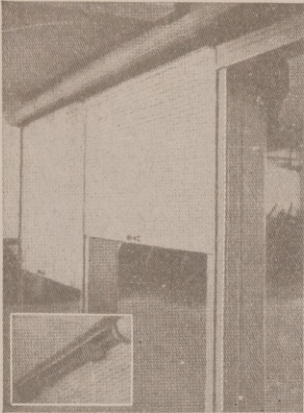
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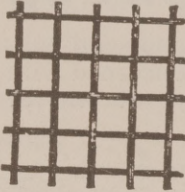
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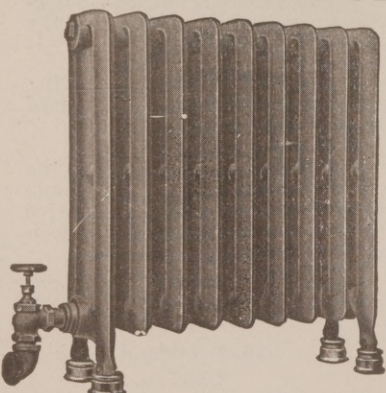
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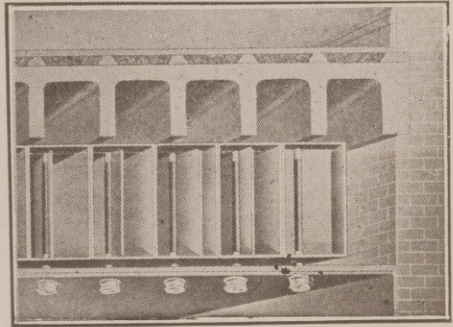
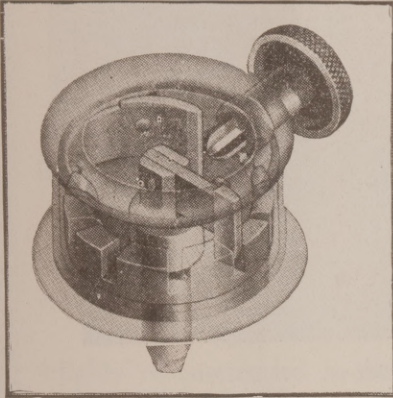
Washed and Screened Gravel and Sand for all purposes. Concrete Gravel, Roofing Gravel, Reinforced Concrete Gravel (thoroughly tested and proved superior to granite in fire resisting qualities). Pea Gravel, Screened Sand, Concrete Sand, Marble Sand (finest for sawing marble). Used throughout Georgia and Alabama. Gravel Pit, Cook's, Ala.

9½ Madison Avenue, Montgomery, Ala.

This Illustration Shows How the Perfecto Damper Regulator and Indicator

when placed on a battery of ducts in the collecting chamber near the machinery room not only affords an easy and convenient means of regulating the flow of

air, but also serves as a positive means of indicating the room to which each duct leads, by means of the numbered or lettered cover windows.



Send today for Descriptive Circular

The Sixth City Sheet Metal Works Co., Cleveland, Ohio

Galvanized Iron Work for Heating and Ventilating Systems



A Greenhouse-Garage Book Ready

A book of plans and elevations of greenhouse link-ups, some of which have been built. Others are suggestions for your consideration. A practical book with a helpful intent. Send for it.

Hitchings and Company

Home Office and Factory: Elizabeth, N. J.
New York: 101 Park Ave. Boston-9: 294 Washington St.



W. L. Stoddart, 9 East 40 St., New York City, Architect.

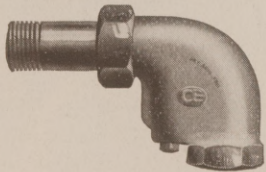
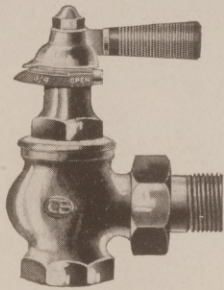
GEORGIAN TERRACE HOTEL and PONCE DE LEON APARTMENTS, ATLANTA, GA.

These are plastered throughout with Cherokee Cement Plaster. Sold by Agents everywhere in Georgia and throughout the Southern States.

SCIPLE SONS, Exclusive Agents for Atlanta.

Manufactured by

Southern Gypsum Co., Inc., North Holston, Va.



The "O-E" Perfect Air Exhauster and Vacuum Valve remains open as long as there is any air in the system, but port closes the minute any heat comes in contact with it. Always works. Cannot stick or buckle. Fool-proof.

Write for Booklet "A."

Simplicity and Economy

are two leading features of the

O-E PERFECT SYSTEM

Thre systems—Vapor, Vacuum and Pressure—and simplified and clearly combined in one. Operates under vacuum most of the time, vapor part of the time, and can be instantly put under pressure when desired to obtain quick results. Most flexible system made. Better than straight vapor or water service, costs no more, and is easier to install.

The O-E System has many advantages—Temperature easil yregulated in each room as desired. Noiseless in operation. Rapid circulation. Requires smalltr pipes, fittings and valves than the ordinary system, removes danger of leaks or flooded buildings, eliminates air valves, has no complicated or trouble-making parts, such as floats, traps or pumps.

Let us tell you how to convert unsatisfactory steam and hot water jobs into O-E "3-in-1" Systems. The expense is nominal as compared with results. Will be pleased to forward detail blue print on application.

Booklets "A" and "B" will tell you all about it.

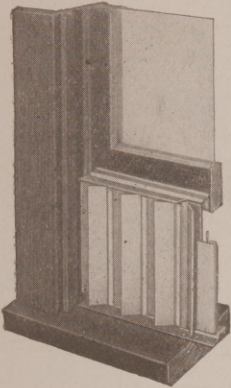
O-E Specialty Mfg. Company

882 Third Street

Milwaukee, Wis., U. S. A.

V-W VENTILATORS

(Something New)



For Buildings of all kinds, Cars and Moving Vehicles

V-W's remain in window independently of usual operation of the sash—Extension ends for varying widths.

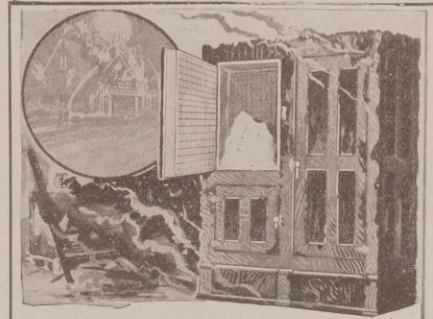
Special types for doors, sash, transoms, store fronts, etc.

Highly recommended by architects for doors in Hotels, Hospitals and Business Blocks.

Territory open for live-wire representatives.

THE V-W VENTILATOR CO.,

101 N. High St.,
COLUMBUS, OHIO



The Ice That Went Through Fire

An Iowa building recently burned to the ground. Two days later a charred Herrick Refrigerator was dug out of the ruins. It still contained ice, and the food contents were in perfect condition—Saved by Herrick 5-Point Mineral Wool Insulation.

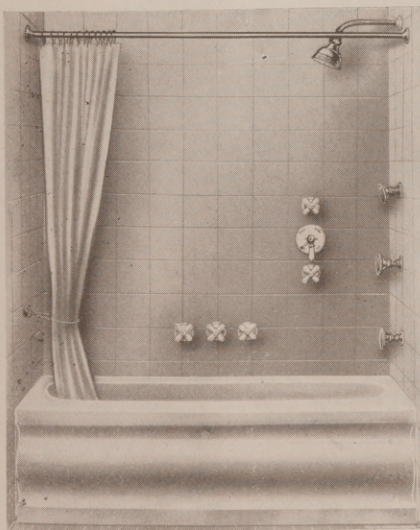
HERRICK DRY AIR SYSTEM REFRIGERATOR

A refrigerator that can defy a raging fire can protect ice and food against any weather conditions. Ask for full details about Herrick insulation and 26 other extra-value features. Name of dealer and booklet free.

The Herrick Refrigerator Company
River St., Waterloo, Iowa
Outside Icing Refrigerators in Many Styles

HUDSON BRASS WORKS

MANUFACTURERS



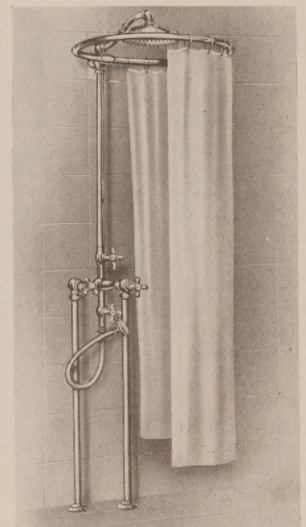
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HUDSON CONCEALED COMBINATION
NEEDLE SHOWER AND BATH
FIXTURE

Showers,
Bath Fixtures

and

Plumbing
Specialties



No. 156

HUDSON EXPOSED FOUR
VALVE SHOWER

SEND FOR

CATALOGUE No. 21

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HUDSON BRASS WORKS

Brooklyn, N. Y.



INSTALL THE LATTNER NOW

and be prepared for the cold spell when it comes. The LATTNER Automatic Hot Water Generator keeps your garage at an even temperature for a very reasonable cost during the winter months.

The LATTNER is easy to install, requires very little attention, no ashes to haul and nothing

to get out of order. Generator equipped to burn natural or artificial gas. Complete information and prices will be sent to you upon application.

Write us today for Bulletin No. 103.

P. M. LATTNER MANUFACTURING CO.

CEDAR RAPIDS, IOWA, U. S. A.

Same Flame Heats Water and Cooks Food

The ELLIOTT COOK-TOP WATER HEATER is a *Stove Top AND Water Heater* which heats water from the *same flame* used for cooking; making gas or oil do double service; effects substantial savings in fuel bills. Fits any standard gas range or oil stove. Universal need, reasonably priced, easily installed, will outlast stove. Read these specifications.

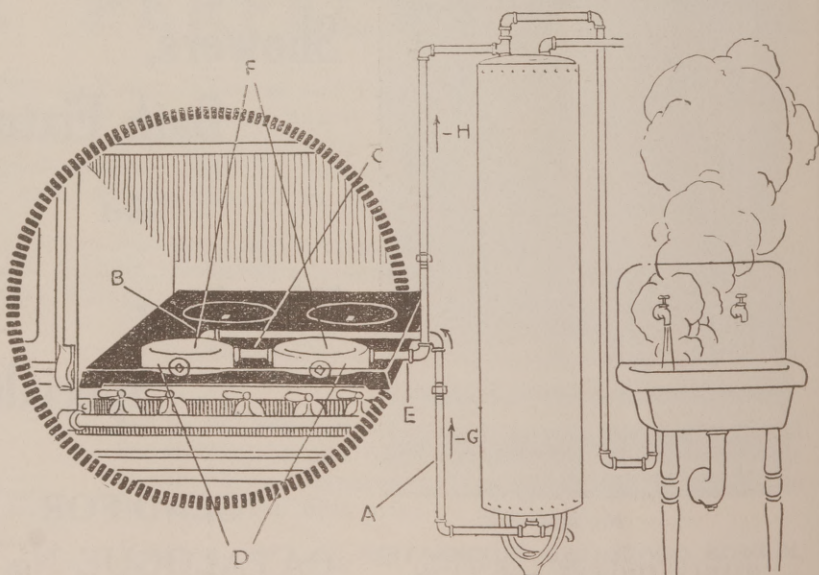
"Phantom" View of Elliott "Cook-Top" Water Heater Showing Complete Installation

- A—Cold water pipe.
- B—Cold water inlet from pipe to heater.
- C—Pipe connection between two circular water-backs. (Note that when water reaches this point it has been partially heated by passage waterback at left.)
- D—Waterbacks as they would appear if "Cook-Top" were transparent. Elliott "Cook-Top" Water Heaters are built in 2, 4 and 6 waterback designs.
- E—Hot water outlet from heater to boiler.
- F—Position of flame at center of waterbacks.
- G—Arrow indicating direction of cold water flow. (It is not necessary that boiler be close to range as piping can be carried around walls without interference with circulation.)

DOUBLE PROFITS

With the ELLIOTT the Plumber makes a DOUBLE PROFIT—one on the HEATER and one on the INSTALLATION. Some Territory Still Open.

SEND FOR DETAILS TODAY



VOLA TRADING CORPORATION

(Room 2138)

42 Broadway, New York

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Let us treat or work your own bushings you are now using of any material such as babbitt, bronze, brass, aluminum alloys, cast iron, etc., for any service anywhere.

After our doctoring you absolutely get no hot boxes with big loss in valuable babbitt metals and incalculable time lost by shut-downs and rebabbiting. You will save over 80% in lubricating oils. 300% increase in the life of your own bearings. 50% to the life and service of your belting. Reducing friction in your bearings with great economy in power. Reduces the fire risk to a minimum caused by hot boxes in dusty places such as woodworking establishments, fans, motors, etc. Overcomes the saturation of machinery and workmen with an increase in output for both. By the elimination of a greater portion of your liquid oils which we need not mention are very injurious to belting.

INVESTIGATE

DESIGNS—SPECIFICATIONS—LAY-OUTS
—for—

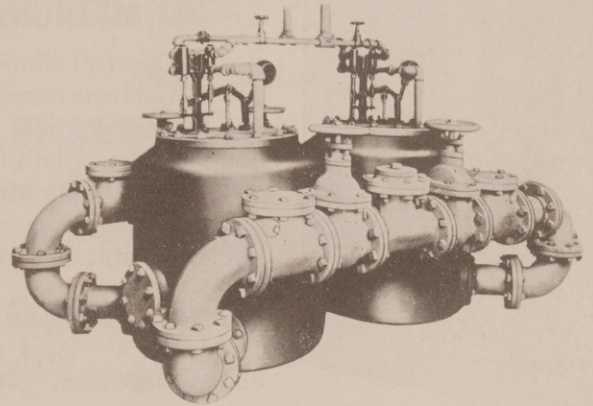
Oil or gas engines to operate on any fuel from crude oil to gasoline—two-cycle or four-cycle for any purpose from a farm engine to airplane engines. Two-cycle work is our hobby—Are you having any trouble with your engine?

Millwrighting—Patterns—Tanks for Any Purpose of Steel or Concrete—Piping—Lighting—Heating—Factory and Shop Buildings—Towers—Water Power—Water Supply Systems.

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EJECTORS that never fail to eject. Solid BRONZE, positive action, valves.

Send for free sample ink remover for your tracings.

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EJECTORS and INCINERATORS

Ansonia Sanitary Mfg. Co.

New York City



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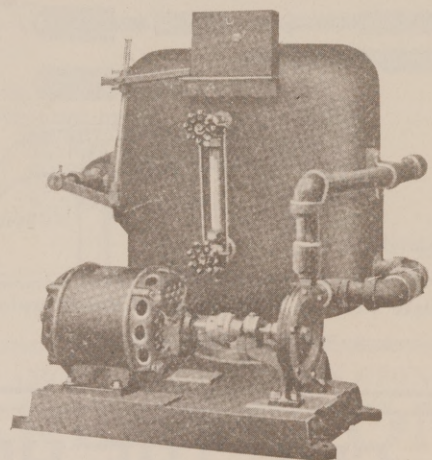
FIREPROOF—DAMP-PROOF—WEATHER-PROOF—NON-CRACKING. LOW COST APPLICATION at any season of the year and in any climate, by any competent plasterer. Material is all one standard quality throughout, no inferior scratch coat is used. FIBERCOTE Stucco offers a variety of rarely beautiful finishes and is superior, in economy and durability, to any stucco on the market.

Immediate Deliveries Assured
Samples and price list upon request.

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RELIABLE

SIMPLE

A single stage pump suitable for high or low pressure ranging from 10 lbs. to 100 lbs.

The unit is very compact, mounted on cast iron base, only two pipe connections necessary when installing. The receiver is made in two sizes, of heavy cast iron. An enclosed butt contact switch is used on all pumps.

Write for Bulletin No. 220

WESTERN ENGINEERING CO.

DAVENPORT, IOWA



HOEGGER

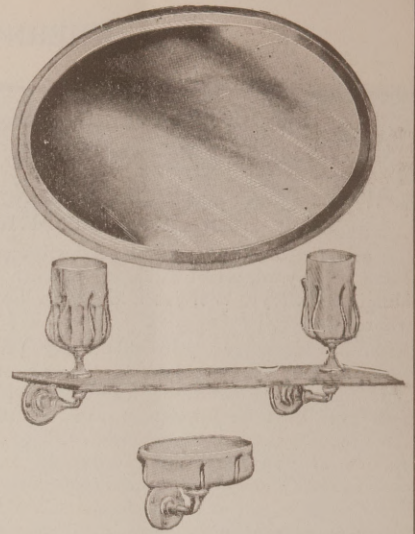
BAKED WHITE ENAMEL ON STEEL, MEDICINE CABINETS

Proof against all ailments of other white goods. Cabinets have adjustable shelves. All doors swing right or left. Packed one in a box. Bath Room Accessories are "Wyco" on brass or Nickle Plate on brass, also white metal. Complete line. Prompt deliveries.

J. A. HOEGGER, Inc.

Dept. B

351 Palisade Ave., JERSEY CITY, N.J.



"SHELBY"

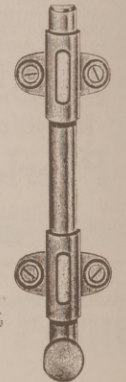
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Designed especially for French Doors and Windows, are made in sizes ranging from three to eighteen inches, furnished with both universal and angle strikes in finishes to match all builders' hardware.

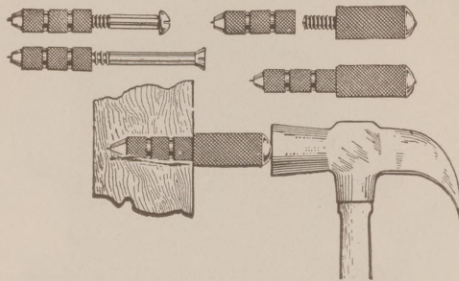
MADE BY

The Shelby Spring Hinge Co.,

Shelby, O.



THE ONLY SCREW HOLES IN THE WORLD



No.	Wood Screw Holes	Length	No.	Machine Screw Holes	Length
4	"	1/2"	4-36	"	1/2"
6	"	13/16"	6-32	"	11/32"
7	"	13/16"	6-32	"	11/32"
8	"	13/16"	7-32	"	13/16"
9	"	13/16"	8-32	"	13/16"
10	"	13/16"	9-30	"	13/16"
11	"	1"	10-24	"	13/16"
11	"	13/16"	10-32	"	13/16"
12	"	1"	11-24	"	1"
12	"	13/16"	11-24	"	13/16"
14	"	17/16"	11-24	"	1 1/2"
16	"	17/16"	12-24	"	1"
18	"	17/16"	12-24	"	13/16"
20	"	17/16"	14-24	"	17/16"
			16-22	"	17/16"
			18-20	"	17/16"
			20-20	"	17/16"
			1/4"-18	"	17/16"
			5/16"-18	"	17/16"

Immediate Delivery from stock on the following sizes

I. S. STINE SCREW HOLES CO.
Waterbury, Conn.

Each size packed 100 Screw Holes and one Driving Head in a Box.

CUT THE HIGH COST OF FUEL

USE THE

Ray Rotary Crude Oil Burners

FOR STEAM AND HOT WATER BOILERS

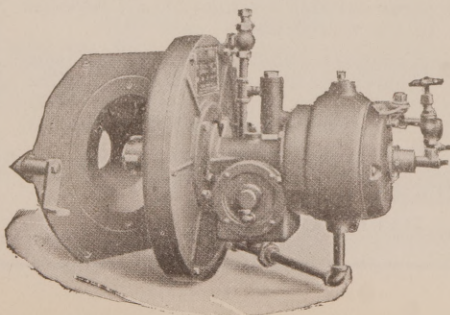
Adapted to Any Type of Boiler or Furnace

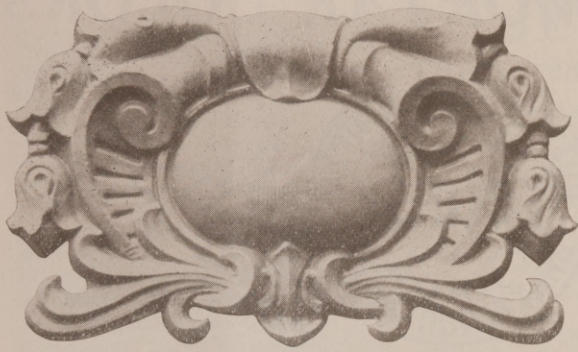
High or Low Pressure, 10 to 300 H. P.

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W. S. RAY MFG. CO., 29 Spear St., San Francisco, Cal.

Manufacturers of Ray Crude Oil Burners, Ray Oil, Gas, Coal or Wood Heavy Steel Ranges





Catalogue No. 4591

Architectural Sheet Metal Ornaments

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Art-Metal Ceilings and Side Walls

We would like an opportunity
to figure with you.

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733-37 S. Halsted St.

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Murray Roofing Tile Co's. "Rough Velvet"

Shingle Tile made with rough textured face in distinctive shades variations from Red to Dark Brown with Flashed edges producing BEAUTIFUL MOTTLED EFFECT.

Estimates and Samples cheerfully furnished.

Factory: Cloverport, Ky.

Agency: Roper & Strauss Co., Forsyth Bldg.,
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MR. TAX-PAYER—YOU!



Do you want your county to spend YOUR good money on roads that will wear out before your bonded indebtedness is liquidated? I SAY YOU DON'T.

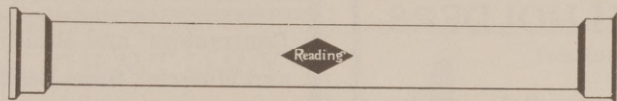
What you want is a hard surfaced road, with little cost for maintenance—a road that can be traveled in rain or snow, summer and winter. You want a PERMANENT road—that means CONCRETE!

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The Soil Pipe with Five



SOIL PIPE

Guaranteed Features

1. Only the very best of raw materials used in its manufacture.
2. Every length fully tested and guaranteed before leaving foundry.
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4. Easy cutting and free from sandholes.
5. Made in an up-to-date foundry with every facility for turning out high grade products.

WE MANUFACTURE A COMPLETE LINE OF
CAST IRON SINK TRAPS DRINKING FOUNTAINS
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VENT BOXES—WATER BOXES CESSPOOLS
HYDRANTS—BOILER STANDS WATER HEATERS

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Sewage Disposal Without Sewers
is now available anywhere

OVER 5,000 IN USE.

Manufactured in 27 cities from Maine to California.

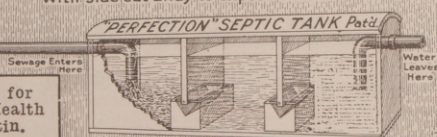
Endorsed by leading health experts and sanitary engineers.

United Cement Products Co.

Sole Manufacturers
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With side cut away to expose interior



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Free Health
Bulletin.

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TRITSCHLER & SONS, Inc., Sales Representatives
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We are prepared to furnish

FIRE DOORS & WINDOWS OF ALL TYPES
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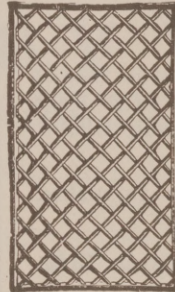
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Manufacturers of Folding Gates

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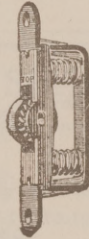
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Economical, Durable Practical



Invisible when installed. Do away with Pulleys, Sash Weights, Cords, etc. Eliminate Pocket Frames, Rattling and Attendant Nuisances. Save Labor, Time and Material.



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Capacity for 300 hands.

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Rich tones of Red; delicate shadings of Green and Purple-clear and mottled effects. Write for our Brochure "Old European Roofs."

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ROOFING SLATE—STRUCTURAL SLATE
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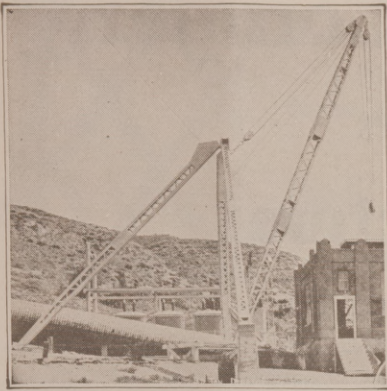
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Southern Architect and Building News



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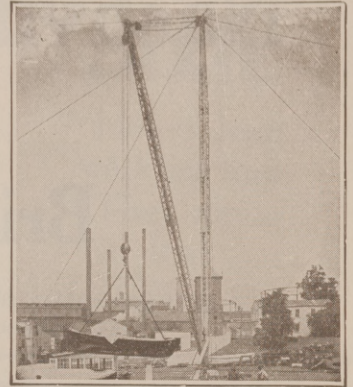
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Successors to the Manufacturing Department of
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Angular corrugations over-lap one another, forming semi-tubular ridges, which increase in strength with every wall strain.

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FLAT NON-STRETCH CENTER

Insures a wall against future bulging.

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T. M. BRYAN, Architect

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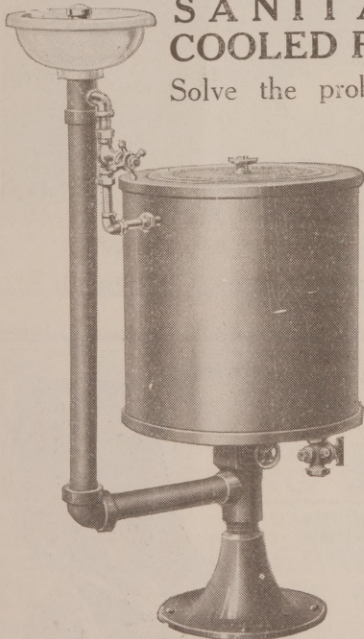
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I. C. F. No. 100

Solve the problems of supplying Ice Cooled Drinking Water in the most economical and satisfactory manner in Factories, Shops and all Industrial plants.

I. C. F. No. 100 is furnished in Blue, White or Gray Enamel, also Brown Painted Finish. Supplies 75 persons daily.

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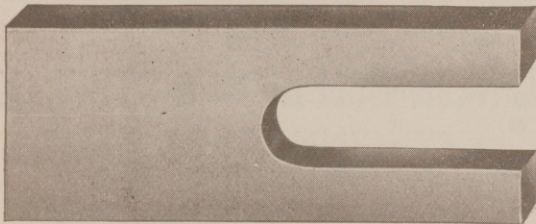
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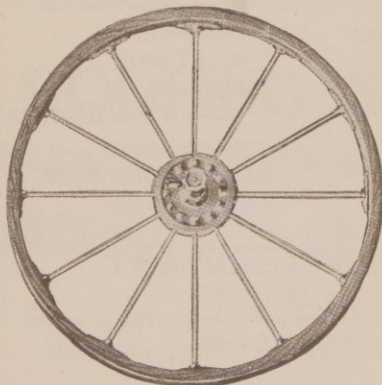
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All Kinds of Moulding Knives Made to Pattern.



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Write for our latest Catalogue No. 20



IT IS IMPORTANT to keep your band saw wheels trued up. This will help to eliminate the breaking of band saw blades.

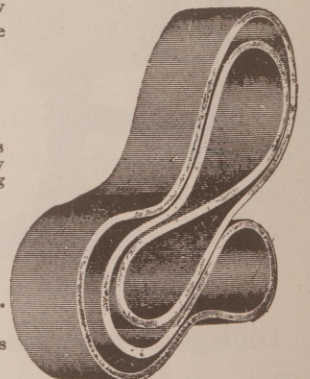
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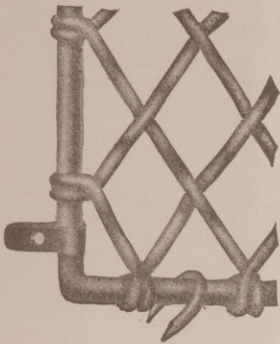
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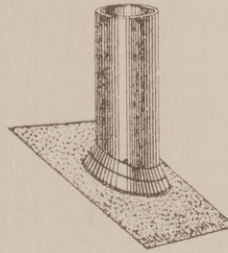


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