

Southern Architect and Building News

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Address All Letters to Business Office, Atlanta, Ga.

ENSURE ARCHITECTURAL
STRENGTH, BEAUTY AND
SALES SERVICE.

Kawneer STORE FRONTS

INSTALLED IN MORE THAN
70,000 SUCCESSFUL
STORES IN U.S.

WRITE FOR NEW CATALOG -K-
KAWNEER MANUFACTURING COMPANY, FRONTS, NILES, MICH.

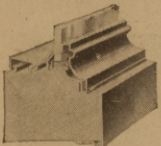
GURNEY BOILERS RADIATORS
FOR STEAM AND HOT WATER
GIVE COMPLETE SATISFACTION
GURNEY HEATER MFG COMPANY
NEW YORK, PHILADELPHIA, WASHINGTON
HOME OFFICE 188-200 FRANKLIN ST. BOSTON

SAMSON SPOT SASH CORD



SAMSON CORDAGE WORKS, BOSTON, MASS.

HESTER
Best of its type.



Will Last as Long as
the Building

A Better Store Front
for Less Money

Brasco

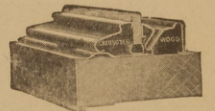
COPPER STORE FRONTS

BRASCO MFG. CO., 5025-35 Wabash Avenue, Chicago

Southern Office
Care of R. L. DAVIES
622 Candler Building
Atlanta, Ga.

Send for Catalog and
Detail Portfolio

BRASCO-COPPER
and
CREOSOTED WOOD
absolutely imperish-
able.



WATER STORAGE TANKS
OIL STORAGE TANKS
HYDRO-PNEUMATIC TANKS
HOT WATER TANKS
GASOLINE STORAGE TANKS

TANKS

FOR EVERY PURPOSE

WATER FILTERS
RANGE BOILERS
SMOKE STACKS
EXPANSION TANKS
AIR RECEIVERS

WHEN SENDING FOR CATALOGUE, SPECIFY KIND OF TANK DESIRED.

NEW YORK 26 CORTLANDT ST. WM B. SCAIFE & SONS CO. HOME OFFICE PITTSBURG PA.

ROOFING SLATE

MINERS, MAKERS AND SHIPPERS OF ALL STYLES AND
COLORS ROOF SLATE SINCE 1869.
Write for prices.

Rising & Nelson Slate Co.

Main Office, West Pawlet, Vermont.

Branch Offices:—101 Park Ave., New York City; 4 Post Office Square,
Boston, Mass. Office and Yard. 2554 W. Harrison St., Chicago, Ill.

THE WINKLE TERRA COTTA COMPANY

Manufacturers of

Architectural Terra Cotta

ALL COLORS

502-3 Century Bldg.,

ST. LOUIS, MO.

AMERICAN ELEVATORS

Built by

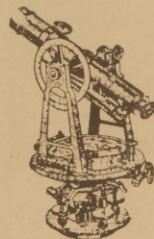
AMERICAN ELEVATOR and MACHINE CO. INCORPORATED LOUISVILLE, KY.

The Hawley Down Draft Furnace Co.

Builders of the Original Down-Draft Smokeless Furnace
and the Hawley-Schwartz Metal Melting Furnaces.
Formerly of Chicago. **Easton, Pa.**

Atlanta Architectural Terra Cotta
Made in Atlanta by

ATLANTA TERRA COTTA COMPANY
514 Third National Bank Building
Factory at EAST POINT, GA.



218 E. 10th St.

O. GRINER ENGINEERING
Instrument Maker

Architects', Engineers' and Contractor's
Supplies.

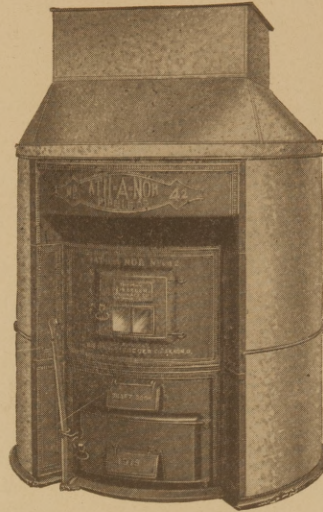
"EVERYTHING FOR THE DRAFTING
ROOM"
TRANSITS and LEVELS Repaired, Rented,
Bought and Sold.
BLUE PRINTING
Both Phones Main 4083.
KANSAS CITY, MO.

Perforated Radial Brick **CHIMNEYS**

BERGEN & LINDEMAN, Inc.

120 Liberty St., **NEW YORK**

Branch Offices: Philadelphia and Boston.



One
Quarter
of
Century
of
Service

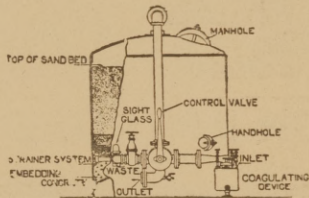
The Ath-A-Nor Furnace has been giving service for 25 years and now we present the latest in Warm Air Heating, The Ath-A-Nor Pipeless. We have made extensive tests on this furnace and have been successful in overcoming the faults of most pipeless furnaces.

We are also manufacturers of The Akron Air Blast, Ath-A-Nor and Solid Comfort Pipe furnaces.

Write today for catalogue and prices.

MAY-FIEBEGER FURNACE CO.
NEWARK, OHIO

Newest



Best

WHEELWRIGHT WATER FILTER

For Residences, Hotels, Office Buildings, Swimming Pools, Ice Plants, Laundries, Breweries, Hospitals, Schools, Factories and the like.

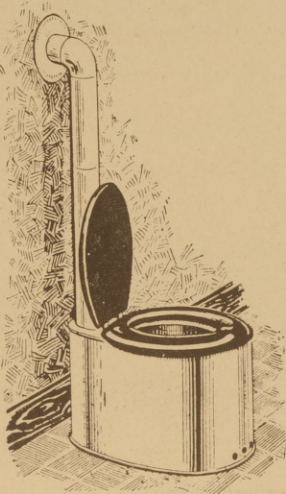
LOUIS WHEELWRIGHT

507 Flatiron Bldg. **New York**



Chemical Closets

Carpenters and Contractors



sell and install our Magic Chemical Closets And Make Some Real Money. Put one in every house you build or remodel. The Magic is sanitary, odorless, and requires no water or sewer. Our money back guarantee protects you. Magic Chemical keeps the closet sterilized at all times.

DOWN WITH THE OLD PRIVY—ENJOY CITY PRIVILEGES

Put it in any bedroom or clothes-closet.

Write us at once for full information and agents' price lists.

Chemical Closet Supply Company
MANISTEE, MICHIGAN.

THREE IN ONE LIGHTNING RODS

for the **Burkett System** make are backed by a half century of successful business and a guarantee, **ASSURING ABSOLUTE PROTECTION** on EVERY INSTALLATION.

The illustration shows you definitely the construction of **BURKETT RODS**.

Around the tape are closely woven a series of soft copper strands. Each strand is a surface conductor and in contact with the spiral tape core. This method of construction forms a



PERFECT Tube.

Convince your prospective customer that **BURKETT RODS** are the **BEST** he can buy.

We still have some exceptional openings in Big Paying territory for good live Builders.

IT WILL PAY YOU TO WRITE US TODAY.

BURKETT LIGHTNING ROD CO.
FREMONT, OHIO

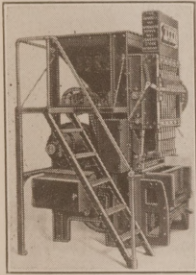
TETTENBORN

Safe, 100% Sanitary
Solid Porcelain
Refrigerators

Beaver Refrigerator Mfg. Co.
New Brighton, Pa.

Brandell

All-Automatic
Power
Concrete Stone
Machine



1600 to 2000 concrete stone building units per day, the equal of 20,000 brick. Entirely automatic. This equipment will secure you a large Builders' Supply business. For details write

The Brandell Co.
Union Central Tower, Cincinnati, O.

The Federal Clay Product Co.

MANUFACTURERS

SALT GLAZED BRICK

of the Finest Quality.

The "Sparta" acknowledged and admitted to be the most perfect and most satisfactory Glazed Brick on the market. Uniform in size, never craze nor chip off. Permanent in color and finish. "SPARTA" Brick are also made in Lemon, Orange, Old Gold and many other shades both glazed and unglazed. The most profitable line on the market for live agents to handle. High class goods with character in them that build high class reputation for the dealer and Agent.

The Federal Clay Product Co.

MINERAL CITY, OHIO.

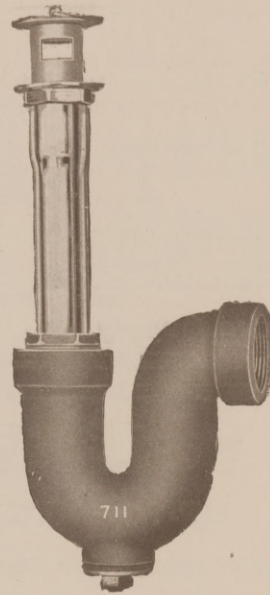


Fig. A

FOR BASINS, SINKS, TRAYS AND BATHS.

Write for prices.

ESSEX FOUNDRY

Newark, N. J.

"711"

That's the Name of the Trap shown in the cut and merely asking for

"711"

is a brief but sufficient way of

**BUILDING
BIGGER
BUSINESS**

San Francisco

Chicago

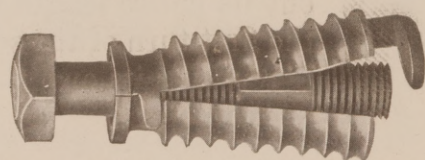
Toronto

The
U. S. Expansion Bolt Co.

Manufactures the Complete Line of
**Lag and Machine Expansion
Bolts, Lead Anchors and
Toggles**

Our Malleable Iron Machine Expansion Bolts have been adopted and standardized by many of the largest engineering organizations in the country.

SEND FOR CATALOG



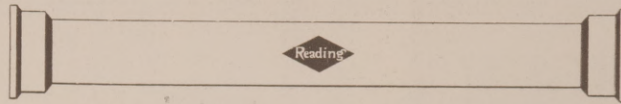
Pat. open Back Machine Expansion Bolt.

U. S. Expansion Bolt Co.

General Offices: New York Edison Building.

Duane and Elm Sts., New York

Foundry at Columbia, Pa.

READING BRAND*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.
3. Angles all made the same, insuring a ground joint connection—thus reducing the amount of lead used to a minimum.
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
 CAST IRON DRUM TRAPS GARAGE TRAPS
 CAST IRON GREASE TRAPS FLOOR DRAINS
 VENT BOXES—WATER BOXES CESSPOOLS
 HYDRANTS—BOILER STANDS WATER HEATERS

WRITE TODAY FOR CATALOGUE.

Reading Foundry and Supply Co.,**Reading, Pa.****DID YOU EVER GET ANY?****UP-TO-DATE ARCHITECTS DO.****They want Guaranteed for Strength, Comfort, Beauty and Economy**

When specifying seats for a job get our Catalogue and name of nearest jobber who handles our line.

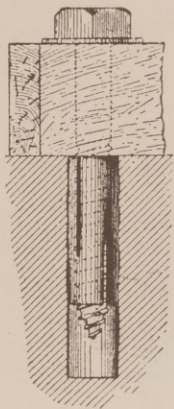
A Satisfied Client is Your Best Ad—You Are always talked of: Good or Bad

Satisfaction Guaranteed By Us.

KNOTT MANUFACTURING CO., Main Office and Factory, TELL CITY, IND.

SAVES MONEY

Because of its simplicity the Little Giant Expansion Screw Sleeve can be manufactured and sold at a low price. However quality has not been sacrificed to price. The



**LITTLE
GIANT**
Expansion
Screw Sleeve

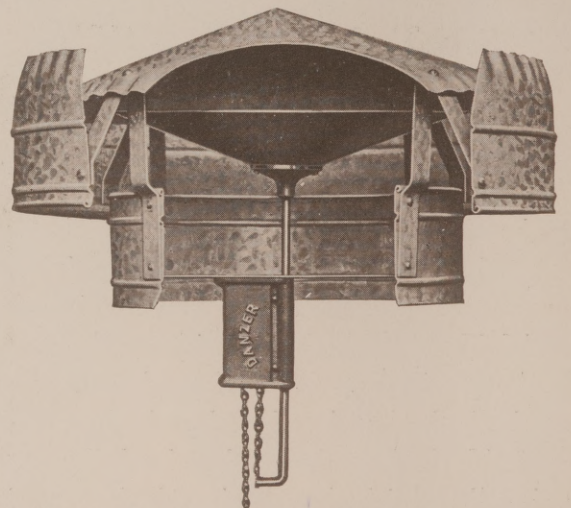
expands evenly throughout its entire length from the first turn of the screw. Screw cuts its own thread as it enters.

Write for Prices

STANNARD MFG. CO.

Springfield, Mass.

HOT AIR
Rapidly Exhausted by
ROSE TOP VENTILATORS



Absolutely Stormproof, constructed to exhaust maximum amount of air without danger of leakage. Can be equipped with Single Chain Lift Damper as illustrated. Six thousand furnished U. S. Government last year. Price reasonable.

Danzer Metal Works

HAGERSTOWN, MD.
Dept. S.

Pressweld For Permanence

Pressweld Radiation does endure. In this splendid home—one of the first Pressweld installations—complete satisfaction is still the good word. Pressweld, today, with its new pipe-bottom, self-drainage feature, is assured an even longer lease of successful service. Find out why. Address Dept. "C."

Specify Pressweld Always

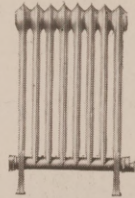
**American Pressweld
Radiator Corporation**

Detroit, Michigan

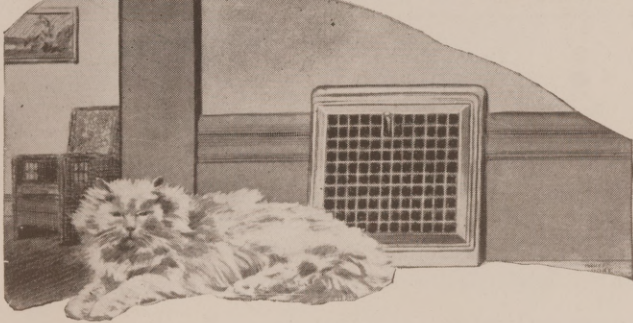
Residence of Wilson D. Lyon
Glenridge, N. J.

Architect
Ed. Washburn, New York.

Heating Contractor
Ernest A. Marsh,
Bloomfield, N. J.



COLUMBIAN All-Steel Warm Air REGISTERS



The Finishing Touch of a Good Job

AS Michael Angelo said to the man who asked him why he spent so much time on a trifling detail: "Trifles, my dear sir, make perfection and perfection is no trifle."

In Columbian Registers the lattices are strong without looking clumsy, the shutters, or deflectors, operate smoothly and quietly and close tightly. The finish is always perfect whether it is plain black or white japan, or electro-plated with copper, brass or nickel.

A good furnace, good flues and Columbian Registers make a combination of which the heating contractor can be proud.

Have you the latest Catalog?

The Columbian Hardware Co
Cleveland, Ohio

INDIANA LIMESTONE

FOR ALL BUILDING PURPOSES.

Sawed, Planed, Turned, Cut and Block

See that you have a price from our Company before placing order. Plans will be returned promptly if sent for estimate.

J. Hoadley & Sons Company, Inc.

P. O. Box 83.

Bloomington, Ind.

Bowling Green & Green River Quarries Co.

Dealers in the Celebrated

**Bowling Green & Green River
Bleaching Limestone**

Blocks Sawed—Planed—Turned—and Cut
BOWLING GREEN, KY.

Dark Hollow Gray

MR. ARCHITECT: Before making the selection for your client consider DARK HOLLOW GRAY. There is a decided beauty in the soft, delicate gray shade of this material. This stone is possessed of great density, runs more uniform in color and texture and is of a fine, close grain.

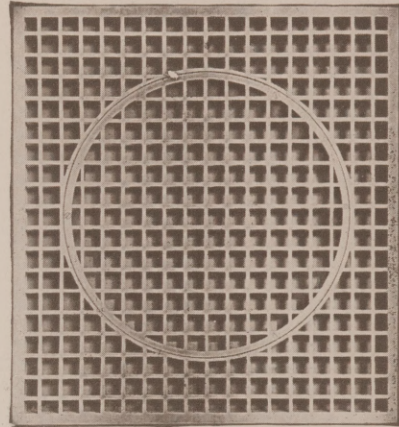
Write for samples of this material. Compare DARK HOLLOW GRAY with other Indiana Limestone.

We have in our stacks at the quarry several hundred thousand cubic feet of this material thoroughly seasoned and ready for shipment.

To assure yourself of getting this material, your specifications and contracts should stipulate the use of DARK HOLLOW GRAY BEDFORD STONE.

THE CONSOLIDATED STONE CO.
BEDFORD, INDIANA.

DUPLEX GRATINGS for Pipeless Furnaces



We carry the following Gratings in stock for immediate delivery:

| Size Grating | Size Collar | Size Grating | Size Collar |
|--------------|-------------|--------------|-------------|
| 20 x 22 | 14 | 30 x 36 | 24 |
| 22 x 24 | 16 | 35 x 35 | 26 |
| 24 x 27 | 18 | 36 x 36 | 28 |
| 30 x 30 | 22 | 40 x 40 | 30 |
| | 45 x 45 | 36 | |

Prices on Application

TUTTLE & BAILEY MFG. CO.
NEW YORK

Chicago Boston Cleveland Bridgeburg, Ont.

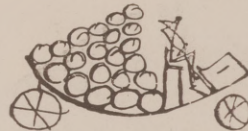
Get the Idea of the Martin Method



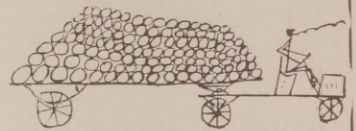
A horse cannot carry more than 1/4 ton



But can easily pull a ton.



A runabout will soon break down under a ton strain

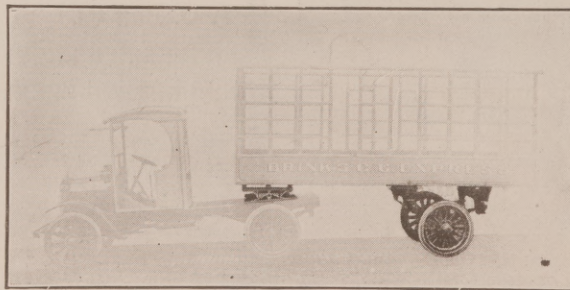


But the same runabout can easily pull 2 to 3 times its carrying capacity.

THE MARTIN METHOD multiplies the load-carrying capacity of the automobile three fold.

THE MARTIN METHOD is based on the famous Martin Rocking Fifth Wheel, which makes the connection between the motor chassis and the Semi-Trailer.

THE MARTIN METHOD combines perfect steadiness with the necessary amount of flexibility.

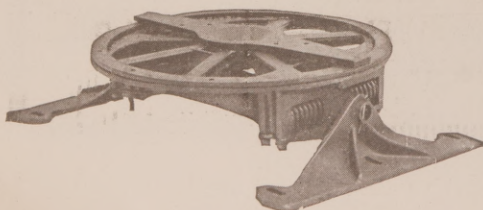


Martin Fifth Wheel and Rear End Assembly shown in relief.

THE MARTIN METHOD makes a very small investment bring your motor truck up to date, and with increased load-carrying capacity.

THE MARTIN METHOD is immediately available. We supply parts or Semi-Trailer complete.

Write for our interesting and fully priced catalog showing Fifth Wheels, Rear End Assemblies, and Semi-Trailers, 1 to 10-ton capacity.



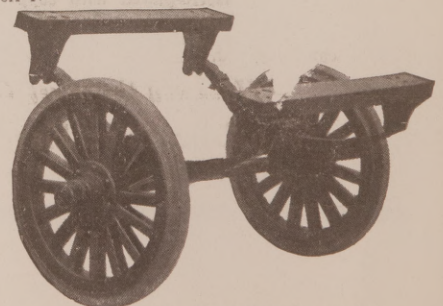
Martin Patent Rocking Fifth Wheel.

Martin Rocking Fifth Wheel Co.,

P. O. BOX 1244-R

Springfield, Mass.

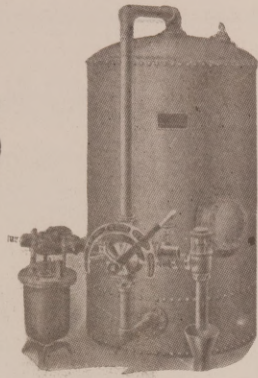
Manufacturers of Martin Rocking Fifth Wheels, Semi-Trailers, Semi-Trailer Parts, Rear End Assemblies, Floating Bearing Axles, Castor Jacks.



Martin Rear End Assembly

There is a
**ROBERTS
FILTER**

For Every Need



*Style "G"
Roberts Filter.*

Catalog on Request.

Made in varying sizes to meet requirements for capacities. One valve controls all functions. Complete list of filters shown in Sweet's Catalog.

Roberts Filter Mfg. Co.

Main Office, DARBY, PA.

1707 Flat Iron Bldg. New York
 FACTORIES—Darby and Frankford.
 (Suburbs of Philadelphia, Pa.)

**Wright
Coal
Chutes**

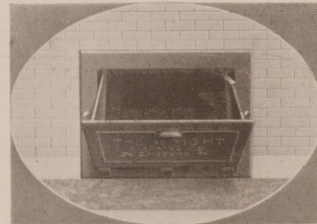


Are Mechanically Right

The design and construction of Wright Coal Chutes speak for them long and useful lives. They are constructed throughout of extra heavy cast iron, weigh practically three times as much as any other chute of the same dimensions. They will never lose their shape nor ease of operation.

They are easily installed. Will stand on flat surfaces which eliminates the necessity of staking and tying while being installed. They plumb themselves. Architects and contractors should always specify the Wright Chute.

*Write for Discounts
They are Liberal.*



**Wright
Machine
Company**

321 E. 2nd Street
OWENSBORO, KY.



**CRUMB'S
Patent Chain-Hanging
STANCHIONS**

Make cows comfortable, keep them clean, and increase the flow of milk. Used with either concrete or wood base.

Liberal Discount to Contractors or Dealers.

Manufactured by

Wallace B. Crumb

Box S, Forestville, Conn.

Dependable Showers

Easily set for desired temperature

The Milwaukee Mixer

precludes all danger of scalding.

Made in a variety of designs.

Valve either exposed or concealed.

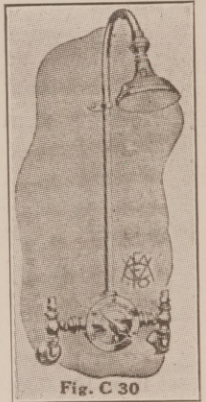
China or metal handle.

Order from you jobber.

The Milwaukee Flush Valve Co.

Valve Specialist

MILWAUKEE, WIS.



**CRUSHED GRANITE
GRANITE SAND
RIP-RAP
JETTY STONE**

ALL SIZES SHIPPED PROMPTLY

A. T. Small Quarries Company

OFFICES: 353½ THIRD ST., MACON, GA.

QUARRIES: HOLTON, GA.

SANDS KEROSENE HEATER

Heats 30 gallons of Hot Water in one hour.

No wicks—no odor—
makes its own gas.

Double copper coil construction.

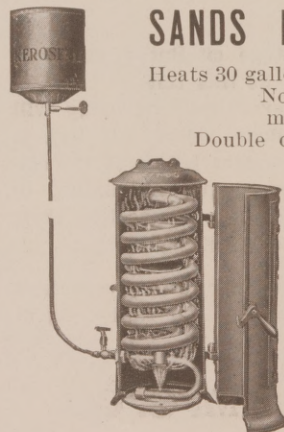
Economical—

Burns eight solid hours
on one gallon Kerosene.

*Circular and prices on
request.*

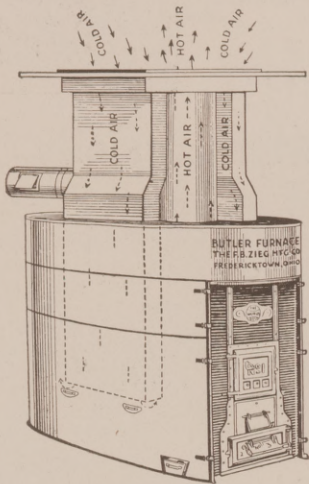
THE AUGMORE MFG. CO.

5300 Sweeney Ave.,
Cleveland, Ohio



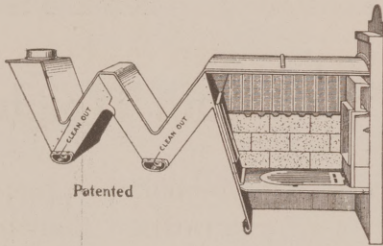
A Complete Line

Butler
Furnaces
Made in
3 Sizes
and
2 Types



Adapted for
Residences,
Apartments,
Storerooms,
School Houses
and
Public Halls

**Completely Assembled
When You Knock
Off the Crate**



WHEN you knock the shipping crate from a Butler Furnace you find the heating unit completely assembled with everything in place and all joints tightly caulked.

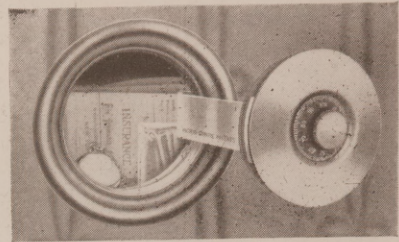
You and your helper carry it into the basement—set it on the floor—place the wrought iron base around it and proceed with the assembly. This will be found most simple as the furnace will have been previously assembled at the factory and all parts will go readily into place.

Another important advantage of Butler construction particularly interesting at this time is the fact that all parts that might ever need replacing will pass readily thru the fire door. More attention is being given at this time than ever before to the efficiency of furnaces and many people are finding, to their sorrow, that new parts can't be put into their furnace without completely dismantling it.

To be able to point out this feature to prospects is just another of many advantages the Butler Agent has over competitors.

THE F. B. ZIEG MFG. CO.
Fredericktown, O.

VICTOR-LOWRIE



WALL SAFE

A
PRESENT
DAY
NECESSITY

ADAPTED
FOR
APARTMENT
HOUSES

WE WILL BE GLAD TO SUBMIT DETAILS

MANUFACTURED EXCLUSIVELY BY
The Victor Safe & Lock Co.
CINCINNATI, OHIO

Also Manufacturers of Safes, Light and Heavy Vault
Doors, Deposit Boxes and Bank Work of all Character

Notice to Architects

For that cool, non fading Bluegray
side walk or stucco, ask your dealer
for

**THE L. MARTIN COMPANY'S
EAGLE BRAND LAMPBLACK**

Special Blacks for Pointing Brick and
Stone.

The L. Martin Co.,
81 Fulton St. New York

Heating Apparatus

For Schools, Churches, Dwellings and other
buildings.

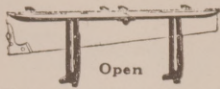
Wonderful "Bilt-Rite" Furnaces

THE HAMMOND HEATING CO.,

130 E. Pearl St.,

Cincinnati, Ohio

Unbreakable Steel Folding Saw Vises



Open

No shift saw vise. 28 in. jaw, wgt. 4 lbs.



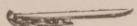
Open

14 in. jaw, wgt. 2 lbs.



Folded

\$2.25 Prepaid



Folded

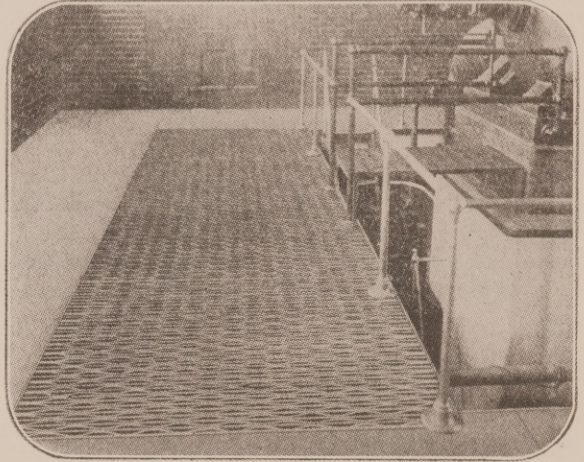
\$1.25 Prepaid

The 28 in. vise takes the full length of saw. The 14 in. vise required only on shift of saw.

Buckeye Manufacturing & Foundry Co.
 Successors to Buckeye Saw Vise Co.
 9491 Lake Avenue, Cleveland, Ohio

IRVING SUBWAY

TRADE MARK
 (PATENTED)
 THE FIREPROOF VENTILATING FLOORING



Maximum Strength
Maximum Lighting
Maximum Ventilation
Maximum Safety
Minimum Weight

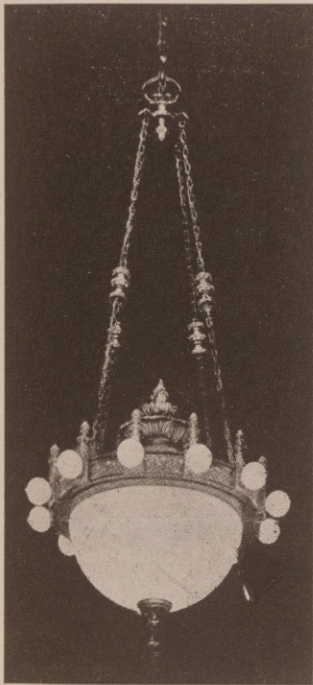
What more can you ask, in a metallic flooring or grating - flooring? And you get all these advantages combined, in Irving Subway, the ideal metallic flooring. Built in panels of convenient size, easily handled, its light weight means not only a saving in dead weight, but also in weight and cost of the supporting framework. Its surface is absolutely non-slipping — and wheeled trucks can be rolled over it in any direction.

If you have a place where you need the advantages of the best grating with all the good features of the best flooring, write for Catalog 1A9.

Irving Iron Works Co.
 Long Island City, N. Y., U. S. A.

Ornamental Lantern

**Equitable
Trust
Building
New York**

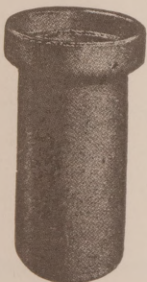


Made By

Bullock Mfg. Company
LIGHTING FIXTURES
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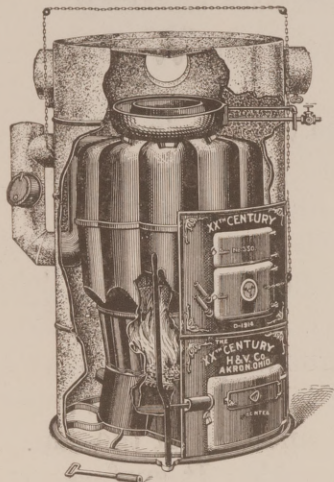
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Southern Architect and Building News

WITH WHICH IS CONSOLIDATED "SOUTHERN BUILDING RECORD"

VOL. XLIII.

DALTON and ATLANTA, GA., OCTOBER, 1919.

No. 6

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.

This paper is issued and mailed from our printing house at Dalton, Ga. Business office, Atlanta, Ga. All letters should be addressed to the Atlanta office. Editorial office, Dalton, Ga.

Price \$2.00 Per Year.

TO OUR ADVERTISERS

Our advertisers are requested to have copy and cuts for changes for advertisements in this office not later than the 5th, preceding the month of publication.

We cannot be responsible for changes not made, when copy and cuts are received later, or submit proof.

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Building Comfort Stations.

Almost any town of any size in the country just now are considering, even planning, the erection of public comfort stations and it is well that they should, for it is money well spent and will for years bring ample returns.

One of the Pacific Coast cities that is growing yearly in popularity as a place for conventions, has been authorized by popular vote to bond itself for the building of a sufficient number of comfort stations.

This is an example for other cities, large and

small, and The Southern Architect & Building News wishes that all county sites, at least, would get in line for at least one. It would surely pay big dividends. Comfort Stations, as we have observed on several occasions, ought to be as much a part of municipal policy as the building of sewers or water works. They are as essential to the health and comfort as any popular undertaking can be. They are for the use of the inhabitants and visitors and they should be provided for liberally with public funds. If funds are not available, bonds will bring them. But by all odds have the comfort stations, and plenty of them.

The Housing Problem.

Several southern towns are tackling the problem of housing the increasing number of people, and when it is solved many other communities will be quick to follow. Business men in these towns have held meetings not only to discuss the situation, but to put up money to remedy it if a way can be found that money can do anything.

There is the trouble. As The Southern Architect and Building News sees it, every growing town in the United States has lagged behind in its building work, and today this country is short houses enough to provide for several million people. But what is worse, the material to build those houses and the men to build them are shy also.

It would not be so bad if houses were the only thing in which the country has gone behind. But it is so with practically everything. Several thousand miles of railroad construction, millions of dollars worth of railroad repairs and reconstruction, terminals, yards and everything connected with operation tell what is the situation there. Shipping is far behind the needs of the world. Suggest most any staple line and the situation is the same.

These towns who are putting up the money will get action quicker than those who merely meet to discuss the situation, pass resolutions and adjourn.

Concerning Lax Building Laws.

Here is a situation reported over in our neighboring state, Tennessee, which finds its counterpart in most every state, which The Southern Architect & Building News would urge the wrong be righted, and if better building laws are needed, pass them. The Chattanooga Times is of the opinion it is pure

neglect and we think that to be the root of the trouble with a great many fires. The Times says:

The fire losses for Tennessee during the past year approximately reached ten millions of dollars. Every dollar of that was waste and the records of it remind us that something is wrong in the application of our building laws—such as we have. The vast bulk of these losses come from neglect, from failure to observe the simplest rules of prevention and are, therefore, a reflection upon our intelligent regard for our own security and the safety of our property. The upshot of the situation is that the authorities must be more determined in their demands for a strict observance of the laws and regulations established for protection against fire.

Georgia's New Law.

A new law in Georgia requires that all public school buildings must be constructed in accordance with plans provided by the state or local boards of education. This will prevent the old shoe-box structure put up in so many communities without reference to light or breathing space, and also the architectural monstrosities, which stand in so many places as monuments to the ignorance of some man, or set of men, who believed a school could be a shanty.

To meet this law, the Georgia department of education has already arranged to provide plans and blue prints for all rural schools of from one to four rooms and these are by the unit or latest modern type. Architects must be provided by local boards to erect buildings larger than four rooms.

Will He?

Will the future architect have to consider the advisability of blimp-proof office buildings? inquires an exchange.

If You Are Going to Build.

A great American architect was in the habit of using this expression to his clients and students: "The inharmonious distribution of expenditure!"

When asked for his meaning, he explained that he once stopped in a hotel with a white marble "grand" stairway, the posts and ballusters of which were elaborately carved. At one side of this stairway was the cheapest type of passenger elevator that most of the time did not run by reason of its being out of order.

The architect went on to explain that it would have been a more harmonious distribution of expenditure to have spent less on elaborate marble carving and more on the elevator.

There is going to be a lot of home building within the next few years, and this principle of the inharmonious distribution of expenditure will apply to

the frame dwelling quite as well as to the commercial structure.

In our home building of the past we have sacrificed much in the way of comfort and convenience for mere bigness and useless elaboration.

But we are learning, for instance, that a chicken will cook just as well with the kitchen table or sink alongside and next to the range as on the other side of a 16-foot room.

The modern kitchen is small, very much in the nature of a laboratory, and is being designed to save steps and motions as in the case of the modern factory.

We are learning that it is better to expend the cost of towers, dormers, elaborate gable fronts and beveled glass windows in more and better plumbing, heating and the general utilities of a dwelling, that it is the more harmonious distribution of expenditure.

Always With Us.

Nearly a century ago Daniel Webster said this:

"There are persons who constantly clamor. They complain of oppression, speculation and the pernicious influence of accumulated wealth. They cry out loudly against all banks and corporations and all means by which small capitals become united in order to produce important and beneficial results. They carry on mad hostility against all established institutions. In a country of unbounded liberty they clamor against oppression. In a country of perfect equality they would move heaven and earth against privilege and monopoly. In a country where the wages of labor are high beyond parallel they would teach the laborer that he is but an oppressed slave."

This is as applicable to conditions in 1919 as it was to conditions in 1828. Since the day when Cain envied the apparent greater success of his brother Abel until now we always have had with us the man who envies the success of others and spends the time he should be working in agitating for an unearned share of the things acquired by the industrious and the thrifty.

Publisher's Statement

Of the ownership, management, etc., of the Southern Architect & Building News, published monthly at Dalton, Ga., Editorial office at Dalton, Ga., and Business offices at Atlanta, Ga., required by the Act of August 24, 1912.

B. H. Watts, Editor and Managing Editor, Dalton, Ga.

H. E. Harman, Business Manager, Publisher and Owner, Atlanta, Ga.

No bondholders or other security holders.

(Signed) H. E. HARMAN, Owner.

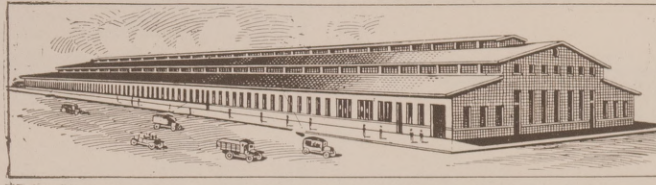
Sworn to and subscribed before me this 30th day of September, 1919.

FRED McSWAIN.

Notary Public, Georgia, State at Large
(My commission expires Feby. 1, 1922.)

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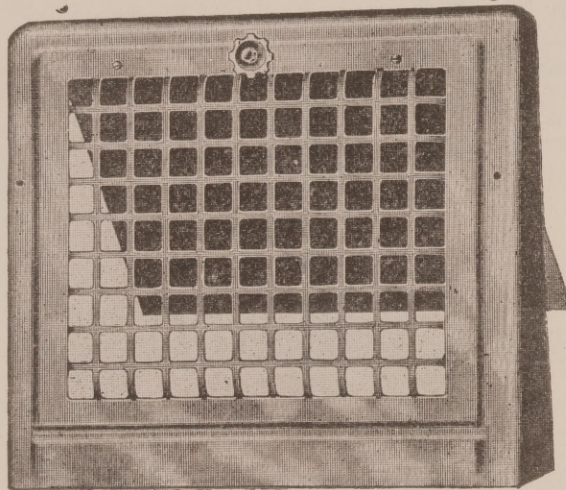
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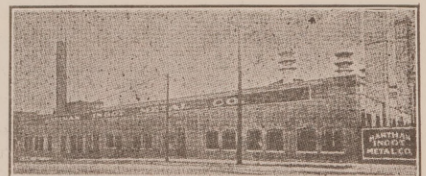
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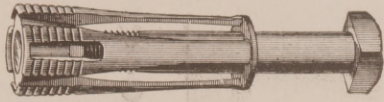
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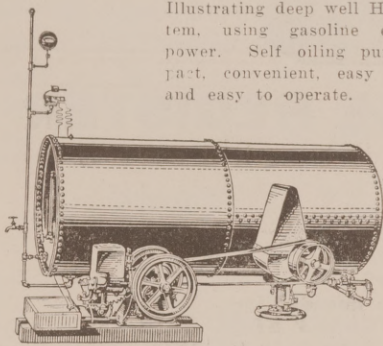
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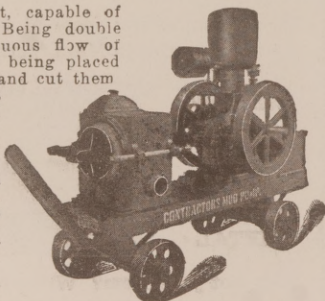
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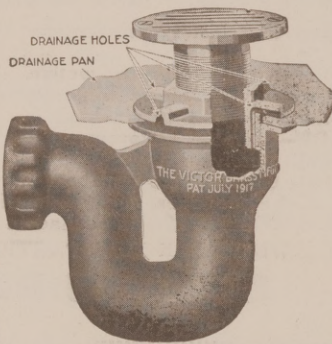
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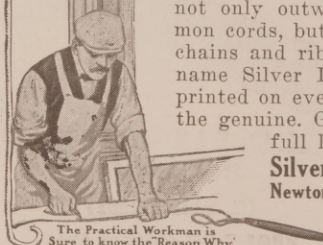
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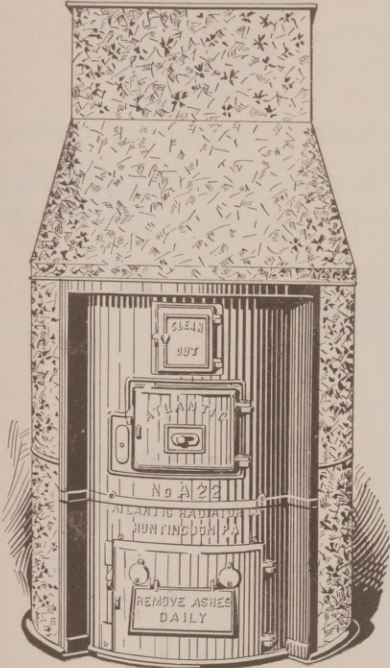
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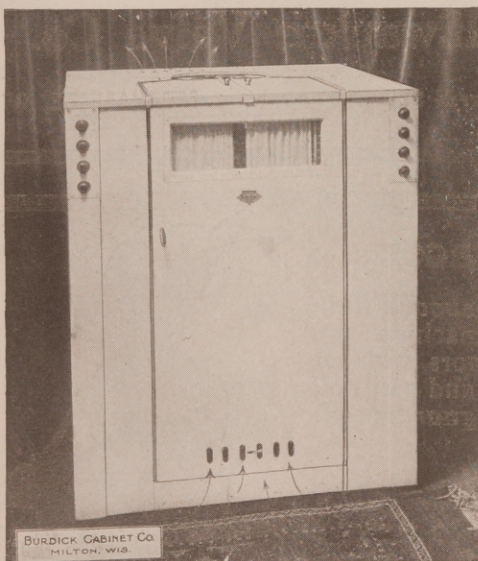
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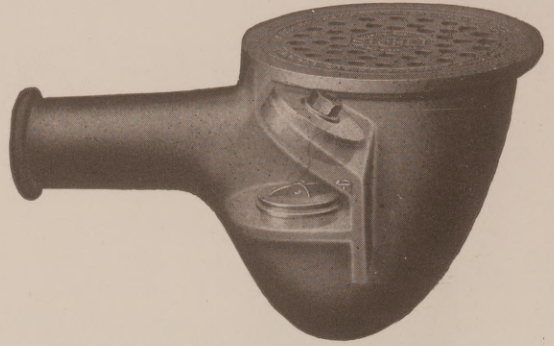
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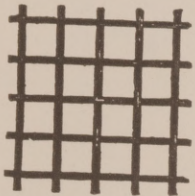
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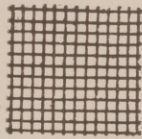
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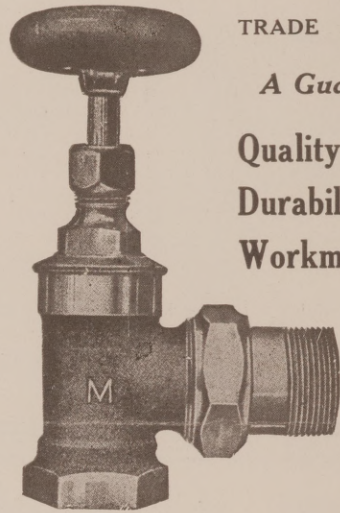
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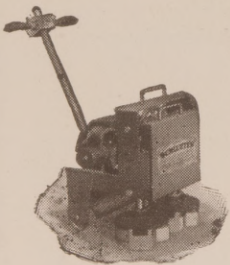
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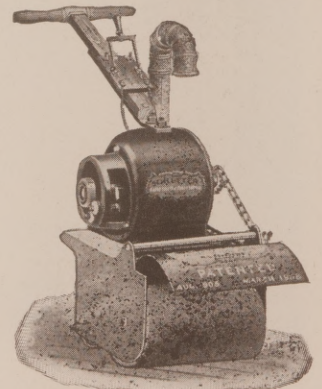
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Rise in Lumber Prices Checked.

The current issue of the Lumber Export Bulletin of Washington, D. C., reviewing the export lumber situation throughout the world says:

The sensational advance in price of all American woods during the past ninety days has been arrested and the market is now in a state of equilibrium, with a tendency toward a softening of prices.

The production of both hardwoods and softwoods, which was scarcely more than fifty per cent of normal during the first half of the year, by reason of the labor shortage and unfavorable weather conditions, has been improving steadily since late June, and is now but little short of normal. The domestic demand, on the other hand, has receded somewhat as the result of the unfavorable effect of high prices upon the building and woodworking industries.

While production during the next thirty days will probably exceed the demand, and prices will ease off, there is no prospect of any radical decline, because the very high cost of production, marks a limit beyond which prices cannot recede for any length of time. If prices should recede below the cost of production, a sufficient number of mills will close down to bring production into proper relation with demand at something near existing price levels.

While the European need for lumber is practically unlimited, there are numerous factors which prevent the full conversion of this need into an actual demand. The continued fall in the exchange value of the pound, the franc and the lira, which increases the already high prices of our lumber to the British importer 15 per cent, to the French and Belgian importer 55 per cent, and to the Italian importer 80 per cent. Another factor is the continued congestion of the European ports, due to strikes among the dock workers and impaired railway facilities for inland distribution. Another deterrent influence is the belief abroad that *c. i. f.* prices will recede.

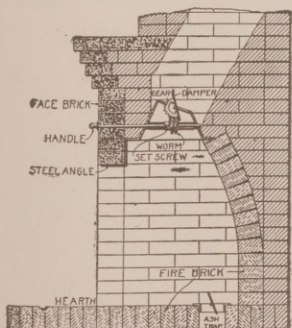
In consequence of these conditions, the export

demand has slowed down and prices have receded even more than have domestic prices. Prices asked for wood goods from the north of Europe are holding firm, and practically nothing is coming forward from the White sea district, which before the war supplied the larger part of Europe's needs.

The ocean freight situation, as was anticipated, is showing signs of improvement, and it may be said that a balance has been established between the demand for and the supply of ocean space. A decrease of about a pound per standard in the timber rates from the Baltic to the United Kingdom is noted, and the parcel rates on lumber from North Atlantic ports to the United Kingdom as established by the transatlantic conference are now upon the minimum basis instead of the maximum basis, which prevailed until recently, which means a reduction of approximately 33 1-3 per cent.

It is encouraging to note from the recent issue of Lloyd's Register of Ocean Shipping that the world's supply of tonnage has been restored to a point more than five per cent in excess of the pre-war total. With the large deliveries of tonnage now being made in all the shipbuilding countries of the world, it seems probable that the freight situation will continue to show a declining tendency; but here again it cannot be hoped that any radical decline in freights will take place, on account of the very high costs of operation, which mark a limit.

The chief obstacle to a sound and substantial reduction in ocean rates is the well-nigh universal labor unrest which is holding back production the world over and preventing a balanced freight movement. The shortage in the production of British coal is the chief factor in maintaining high ocean rates, because not only does this effect the price of coal and the cost of steamship operations, but also because it limits severely the cargo offering in Great Britain for return movement.



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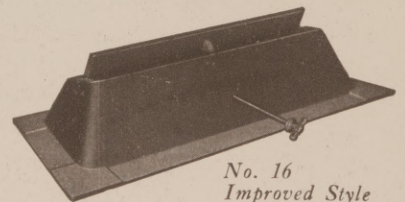
Don't try to reduce the cost by leaving out a good damper. It results in an expensive fireplace to operate and allows rain, wind, birds, and other objectionable things to enter the room when the fireplace is not in use.

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Safety in Building Operations.

The Federal Board for Vocational Education, Washington, in its Bulletin No. 31, has outlined training courses in safety and hygiene in the building trades. The bulletin is prepared with the intention of forming the basis of definite instruction for use primarily in vocational schools, but which may be of use to employers who wish to promote safety methods and practices among their employers. It cites the fact that accidents are assuming an important bearing on cost of production, as the States are enforcing workmen's compensation laws, also that the cost of labor turnover is being realized, and this is materially affected by safety and hygiene for the worker. It deals with preventive measures to be used in the demolition of buildings, excavations, blasting, hoisting, storing materials, scaffolding, etc., and the correct use of proper tools in such work.

Home Building More Active.

New construction for which permits were granted during July, 1919, total \$142,831,424, a gain of 224 per cent as compared with the July, 1918, total of \$44,161,331, states Building Age. Out of 174 cities reporting, only seven show losses as against 167 showing gains. This large gain is in itself of little significance, for during this period last year government requirements were curtailing building opera-

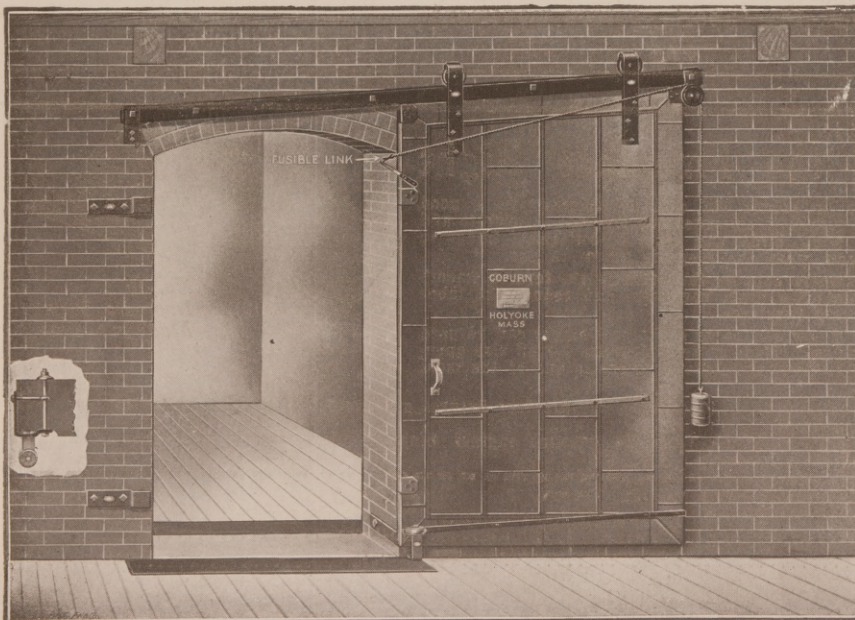
tions very considerably. The total for July, 1917, however, was about \$57,500,000, which is nearly a third less than the corresponding period of 1919.

Eastern cities report a gain of 291 per cent middle state cities 169 per cent, Southern cities 340 per cent, and Western cities 108 per cent.

The really remarkable thing about construction activities is that the demand is growing in spite of price increases practically all along the line. Even labor troubles have not curtailed construction as much as one would imagine, especially in country house work, where people in many localities are practically being driven to build homes owing to the shortage of desirable apartments and dwellings. In large commercial work there is a tendency to hold off until labor troubles are settled, as many owners are not desirous of running the risk of having a large amount of capital tied up in a half-finished building.

There is more than a possibility that wage increases will be granted, raising the cost of building 25 or even 40 per cent. In order to secure this increase strikes may occur similar to the recent ones in Chicago and New York. This unrest is merely a reflection of that prevailing in other lines, and will likely smooth out when the labor question in general becomes more settled.

Loans are being made more freely and the financial situation in general is more encouraging.



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Made single and double, incline slide, level slide, single and double swing and vertical slide.

Are inspected, labeled and tagged under the supervision of the Underwriters' Laboratories, Inc.

Send for our catalog and price list covering these standard doors.

Also makers of barn door hangers, parlor door hangers and rolling store ladders.

**Coburn Trolley Truck Mfg.
Company
HOLYOKE, MASS.**

Something New

Water heated without additional cost while cooking on gas range, by use of the

ELLIOTT Combination Water Heater and Gas Stove Top

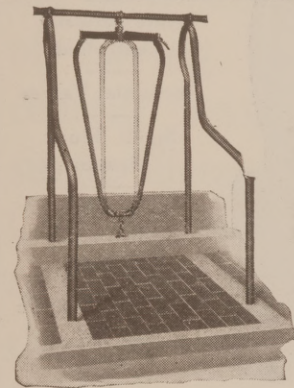
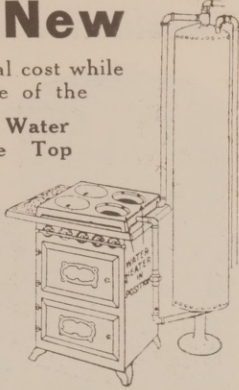
Soon pays for itself in gas-saving. Sizes to fit any gas range.

Not necessary for boiler to be close to range. Can also be attached to oil stoves.

State Rights Offered to Reliable Men. Write Today.

Elliott Water Heater Co., Inc.

1246 Myrtle Ave., Brooklyn, N. Y.



SPECIFY



Steel Barn Equipment

and make a good profit and better satisfied customers.

There are just two units to the CLAY Stall—the partition and top rail. It is erected quickly and easily. The CLAY 2-WAY Stanchion eliminates rigid posts and cow stops. CLAY Equipment is more comfortable for the cow and convenient for the farmer.

Send for large, free catalog, Address Dept. 7.

IOWA GATE COMPANY,

Cedar Falls, Iowa

National Mosaic Tile Co.

MOBILE, ALABAMA.

Manufacturers of Adamantile, a high grade Spanish Cement floor tile, has been used in Europe for centuries, introduced in America by us about ten years ago.

Write us for booklet of information regarding this product.

The Mark of Quality



Protects the User

Economize

with

ECONOMY

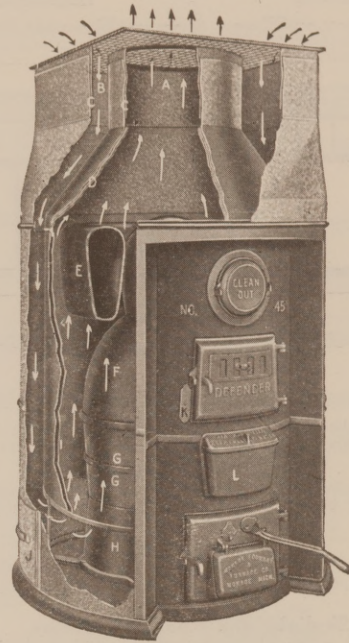
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In Wood and Steel Write for illustrated Catalog Today

Economy Drawing Table Co. Adrian, Mich.



Six Drawer Sections, 26"x38"x22"



The Defender Pipeless Furnace

A high grade all cast heater with single piece cast radiator and of best workmanship. Will burn any kind of fuel, has properly fitting and proportioned casings which are made adjustable to the height of the cellar. Everything from the factory except the smoke pipe.

No heater is better adapted for use throughout the Southern States. Effective, low in cost, can be installed by any carpenter or handy man without the use of tinner's tools.

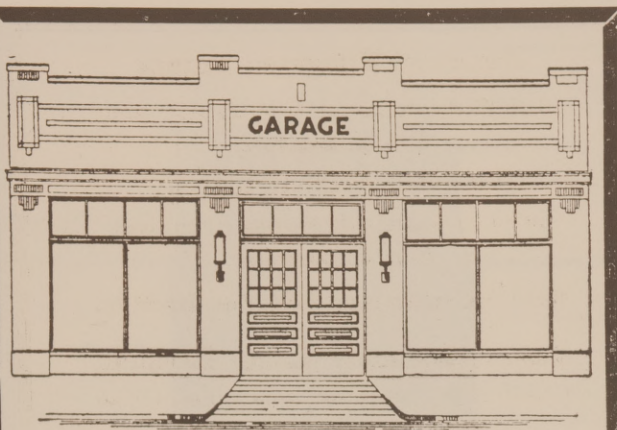
Thousands of Southern homes would be more comfortable with one of these heaters in the cellar and out of the way but ready for instant use at any time.

Directions and full information on request.

Write for pamphlet and prices.

The Monroe Foundry & Furnace Co.

MONROE, MICHIGAN.



PUBLIC GARAGES

Do not let the construction of the modern garage worry you. Our garage department will relieve you of these cares.

Steel Roof Trusses.

We will submit designs and prices free of charge. Give dimensions of building, style and pitch of roof and kind of roofing.

Steel Sash.

Fireproof and giving plenty of light and ventilation are especially adapted for use in garages. We can ship promptly from stock.

Skylight and Roof Ventilators

Non-leaking metal skylight frames and standard types of roof ventilators can be supplied promptly.

Show Windows and Doors

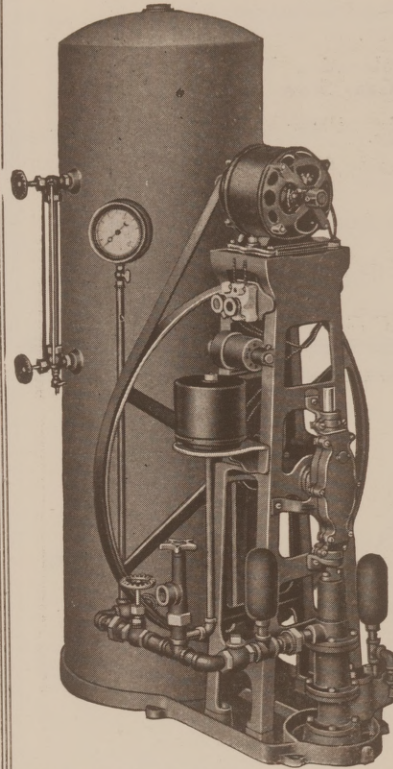
Our specialty is the construction of attractive store fronts. Our garage fronts are standard everywhere.

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George L. Mesker & Company

Complete Store Fronts EVANSVILLE, INDIANA

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For
Cisterns and
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Automatically
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Hyatt Roller
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Noiseless
Small Current
Consumption
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180 Gallons
Per Hour.
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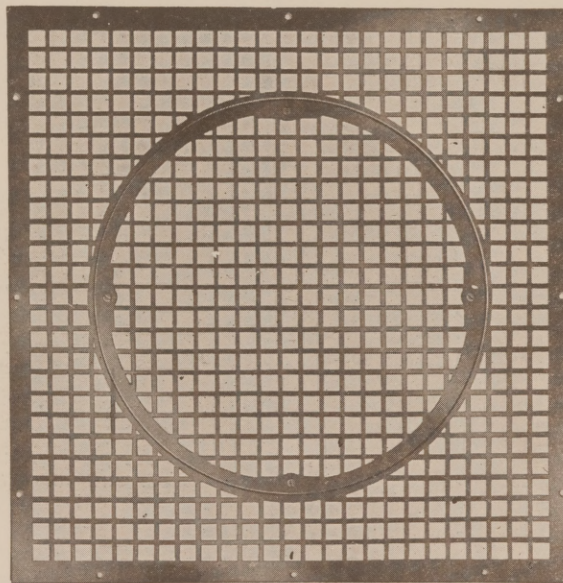
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Double Register Gratings for Pipeless Warm Air Heaters

Plain Lattice Design

WALWORTH DOUBLE REGISTER GRATINGS

are made substanti-
ally, with round
center for warm air
supply and square
cold air intake.



WALWORTH DOUBLE REGISTER GRATINGS

are made in five
sizes. We carry a
complete stock for
immediate ship-
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*Write us today for infor-
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THE WALWORTH RUN FOUNDRY COMPANY

Manufacturers

**WEST 27th STREET
CLEVELAND**

SPECIFY THIS TRADE



MARK: DEMAND IT

OAK FLOORS

(For Everlasting Economy)

Really, a handsome floor adds as much of the feeling of welcome, the sense of having arrived in a restful haven, as any single element in a room. OAK FLOORS rest much of their high repute upon their peculiar effectiveness in this regard.

Since, in addition, OAK FLOORS are most durable, are easily cleaned and are certainly not costly, why not specify OAK FLOORS in your churches? Where is their charm more desirable?

May we assist you in selecting the proper grade and finish? It will be a pleasure.

OAK FLOORING
MANUFACTURERS' ASSOCIATION
1020 ASHLAND BLOCK: CHICAGO:

Renewed Tungsten Lamps

10-15-25-40 watts—110 volts, 17c each
f. c. b. Danvers.

Renewed Carbon Lamps

20-30-60 watts—110 volts, 12c each
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Send orders to local dealer or direct to

Boston-Economy Lamp Division

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The Best Permanent Substitute for Tracing Cloth.
1—Very transparent. 2—Exceptionally strong. 3—Being rolled on a large core it will lay flat on drawing board to the last yard. Others to follow.

In rolls of full 20 yards; 30, 36 and 42 in. wide.

Sample from your dealer—or from the maker.

GEORGE VINCENT, 422 E. 53rd St., NEW YORK

MILES CONCRETE MACHINERY

Continuous Mixers

Batch Mixers

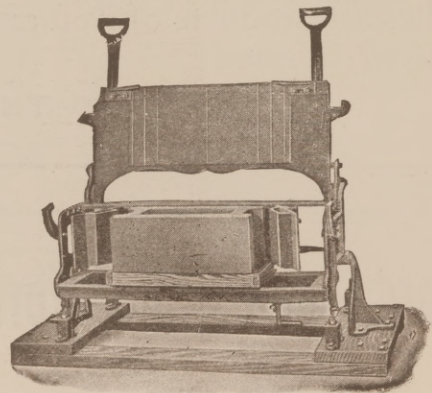
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No. 4 Singer Block Machines

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No. 4 Automatic Tampers

Universal Adjustable Sill Cap and Step Molds.

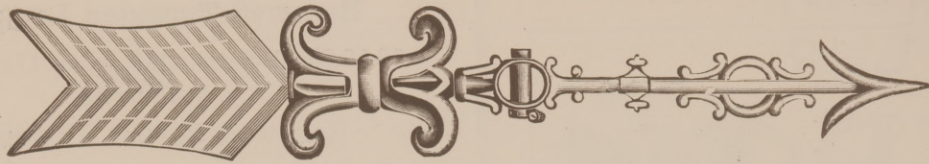


We have devoted the past 24 years to the manufacture and perfection of our concrete machinery and fully guarantee same.

Write or wire for our catalogues and dealers proposition. It will be worth your consideration.

DEPT. 28.

The Miles Manufacturing Co.
JACKSON, MICH., U. S. A.



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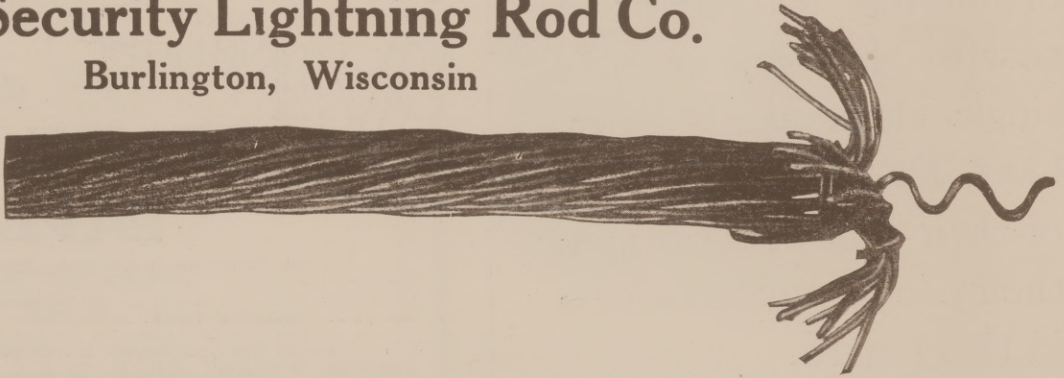
A building isn't complete unless it's protected from lightning. SECURITY LIGHTNING RODS can be installed as the building is erected. They not only secure the permanency of your work but provide you with a handsome additional profit. Practically no extra time required for installation as building is being put up. Write for agency proposition and prices.

We carry a full line of COPPER CABLE and TUBE LIGHTNING RODS and Fixtures, also pure GOLD LEAF WEATHER VANES, "The Kind That Last."

Sole manufacturers of the SECURITY PATENTED AUTOMATIC WATER GROUND CONNECTION.

The Security Lightning Rod Co.

Burlington, Wisconsin



Dept. 5A.

A SUCCESSFUL BUILDER

Buys today for future needs; he does not wait.

You know what you are going to need in the near future. We know we can supply you with those needs. The

CINCINNATI IRON & STEEL COMPANY, CINCINNATI, U. S. A. handles all products of iron and steel. They want to supply you; to give you Cisco Service.

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Bedford Steam Stone Works

INCORPORATED 1888

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INDIANA LIMESTONE

SAWED, PLANED, TURNED OR CUT

Estimates promptly furnished

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Moss Downer Lumber Co.

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LONG LEAF YELLOW PINE
Timbers and Factory Flooring.

VALDOSTA, GEORGIA

Others Discuss Some Timely Topics

Building At High Cost.

The crest of the building wave that is sweeping the entire United States has reached its highest point in the territory north of the Ohio and east of the Missouri rivers, where building activity during August showed an increase of 63 per cent over the average for the same month during the five years previous to 1919.

The awards for the month give industrial construction first place as the largest single item, with residential and mercantile construction ranking second. Public works ranked third, and school, church and theater building took fourth place.

The total amount involved in contracts awarded during the first eight months of the year have mounted to \$1,565,498,000, which is greater than any sum recorded for the same period of any year, being 40 per cent in excess of the average figures for the first eight months of the five years previous, basing the estimate on the cost of building for the current year.

Due to labor troubles, shortage of materials and other causes, construction operations have been delayed, but it is probable the building season will be prolonged as far toward the close of the year as weather conditions will permit.

Building Shows Need of Thrift.

Commenting on conditions in the building industry, S. W. Straus of S. W. Straus & Co., says:

"The present building situation represents a concrete example of the great need of national thrift and increased production. While current construction figures show an apparent increase in new buildings as compared with 1916, the last prewar season, it is doubtful if the deficit in actual housing accommodations is growing less. Increased costs of building and the larger needs induced by greatly increased population in our larger cities, are factors which make it appear certain that the gains as shown in dollars and cents are not equal to the growth of normal requirements. Thus, with the end of the active building season now in sight and with a housing shortage equal to the needs of 4,000,000 people, there cannot fail to be great inconvenience and suffering this winter, with higher rents and their accompanying unwholesome effects.

"While there have been times this year when the building industry swung ahead in encouraging fashion, the periods have never been of long and steady duration and the building shortage, the country over, appears to be as intensive now as it was at the end of the war period.

"Meanwhile much misdirected and expensive

legislative energy has been expended, which has not improved the general situation. These same efforts, directed to the end of teaching the necessity of a continuation of our wartime thrift, of encouraging great production and of making general an understanding of the facts that prices were bound to go higher and that it was therefore good business to start construction work at once, would have accomplished much good. The attitude of the more radical elements of labor, who in many instances have gone over the heads of their leaders and caused strikes and walkouts at the peak of the building season, has also greatly retarded the industry. In short, there has been a general disposition ever since the end of the war to forget the need of thrift.

"What is necessary today is a virile thrift campaign, inaugurated by the Government on patriotic lines and pushed with the same vigor that our wartime thrift campaigns were prosecuted. The war is over, so far as military operations are concerned, but economically we are still far from the end. A man does not own his home until it has been entire-

Ventilighter

SYSTEM

LIGHT—AIR NO GLARE STEEL FRAME CLOTH VANES

Keeps Out Heat—For Skylights, Windows and Sleeping Porches—
No Light Lost.

FACTS ABOUT VENTILIGHTERS



Warren & Wetmore, Architects.

Skylight VENTILIGHTERS in one of the class rooms of the Nautical College, Seaman's Church Institute of New York. They increase and diffuse daylight without glare from window or skylight; temper the solar rays or eliminate them; concentrate the light or reflect it to any desired point. The naturally lighter parts of the room are left well illuminated and hitherto useless space is made valuable. They insure perfect ventilation and promote sanitation.

They fit anywhere and are made in any size for skylights, windows, porches, etc. They are made in any shape for any opening, round, semi-circular, square, etc. Burglar or fire alarm wires, sprinkler pipes, other pipes or parts of building construction, even columns passing through them, do not interfere with VENTILIGHTER efficiency and VENTILIGHTERS will not interfere with them.

Send for our new catalog F.
LIGHTS VENTILATES SHADES PROTECTS

SIMON VENTILIGHTER Co., Inc.

101 Park Avenue New York City

THE H. B. IVES CO.

New Haven, Conn., U. S. A.

ESTABLISHED 1876

INCORPORATED 1900

Manufacturers of

BUILDERS' HARDWARE

HIGH GRADE WINDOW AND DOOR SPECIALTIES

Write for Illustrated Folder.



WORKS OF THE H. B. IVES CO., NEW HAVEN, CONN., U. S. A.

ly paid for, and the American people should realize that there is still an economic mortgage on the victory we have won. This mortgage can be liquidated only through the processes of intensive thrift.

"All elements must work together, just as we did during the war, until through greater production and less consumption our material wealth is increased to a condition where supply more nearly equals demand. Then, and not till then, will be the rightful time to take up questions of shorter working hours, fewer working days and kindred questions.

"The national slogan should be 'Increased Production Through Thrift.'

"An important point to consider, moreover, is that we are developing higher standards of living. We have better homes, better clothes, more wholesome surroundings and superior advantages of all kinds. This means that prices must be higher than they were under former conditions, and, through the process of mental stabilization, we must adjust ourselves to these conditions. In this process of adjustment, thrift will play the most important part, and it will only be through these practices alone that general commodity prices can be kept from going higher than present levels.

"The Government should, therefore, resume the national thrift campaign where it left off at the end of the war. Let us have again the flaming posters, the brilliant billboards, the great displays of newspapers and magazine advertising, public meetings and the dissemination of thrift literature. The American people, with patriotic loyalty, will respond to the voice of the Government in these matters, and, by these means, production can be quickly stimulated and waste eliminated with sufficient thoroughness to allay the present unrest in the country."

Lumber Growing Scarcer.

Charles L. Peck, president of the American Forestry association, urges that building programs not be postponed. He sees little indication that lumber prices will show much decline in the near future. In fact, unless the United States adopts a constructive forestry policy to protect the present wooded areas, and to replace those which have been too freely cut, Mr. Peck expects that in a few years America will be in hard straits to produce enough lumber for domestic uses to say nothing of export trade. Mr.

Peck asserts that the center of the lumber industry is moving to the Pacific coast, which will mean long hauls and large freight rates added to the cost of production.

Mr. Peck declared in a recent address that "we have reached the peak in the lumber-producing business in this country."

Solving The Building Problem.

One of the cities that has been foremost in beginning to solve after-the-war problems is Portland, Ore., which is cooperating in the building campaign of the United States Department of Labor. According to plans the city will construct not less than 2,000 houses this year. Oregon is the source of an immense lumber supply and there is an abundance of skilled labor. For that reason the outlook is reported to be most encouraging for building activities that will absorb at least a part of the surplus labor.—Scientific American.

To Builders and Contractors

The Herrick Outside Icing Refrigerator is one of the most popular refrigerators for modern residence use. It gets the ice in the house and keeps the iceman out.

The



Herrick Refrig. Co.
Waterloo, Iowa

Your Biggest Wishes
Answered!

Herrick Outside Icing Refrigerator

is winning praise everywhere. Hundreds of builders, contractors and architects are availing themselves of the Herrick Free Plan Service. Planning and making the outside icing openings right is important. Let us guide you.

Specify 'Herrick' Refrigerators. They are sanitary, clean and economical. Perfect air circulation. Provide an even temperature and abundant pure dry air necessary to keep food sweet. Best for homes, apartments, stores, clubs, etc.

Write for Catalog SA. 918 with free blue prints of construction.

Herrick Refrigerator Co.

Waterloo, Iowa.

The three requisites of successful road making—

Permanency—Quick Construction—Economy

are combined in

WHITTAKER HILL NOVACULITE



Permanency

The illustration shows a road laid 18 years ago and still in excellent condition.

Quick Construction

Whittaker Hill Novaculite is put on the road, leveled to

the desired thickness, rolled with a steam roller, and is ready for use.

Economy

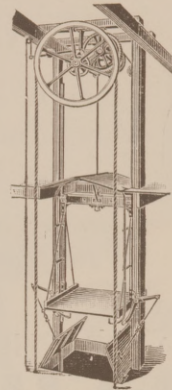
Note the simplicity of construction. Then note that not one cent of repairs has been spent on this 18-year-old road.

Write for our new booklet.

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ELEVATORS

FOR ALL PURPOSES

DUMBWAITERS

SIMPLEX CHAIN HOISTS

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Chain for All Industrial Purposes

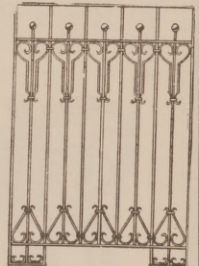
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Brass Rails

OF EVERY DESCRIPTION FOR THEATRES, BANKS, CHURCHES, OFFICES, Etc.



Let us bid on all BRASS AND BRONZE WORK. Inducing Prices, High Class Workmanship. Send us List of Requirements. Write for Catalog.

Bank Fixtures, Hand Rails, Signs and Tablets and Building Directories, Kick Plates, Etc., Brass Grilles, Brass Frames, Thresholds, Electro Plated Work, Bronze Work.

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“OTELLO” PAINTS

An excellent and inexpensive substitute for red lead on new steel

Acid Proof

Prevents wood from expanding and contracting through absorption of moisture

Half the cost of oil paints

Sole Manufacturers

The William Cail Bitmo Co.

18 Broadway
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Trade
“Acmetyle”
Mark

Sanitary Floors

A flooring of superior merit, to be applied over wood, concrete, cement, or asphalt. Dries quickly and makes a sanitary, elastic, jointless flooring of unusual wearing qualities; guaranteed. Supplied in various colors; unequalled for alterations. Agents wanted. Your men can lay at good profit to you. Write today for samples and catalog. Also EVERYTHING in ASBESTOS.

Acme Asbestos Covering & Supply Co.

1349 W. Kinzie St., Chicago.

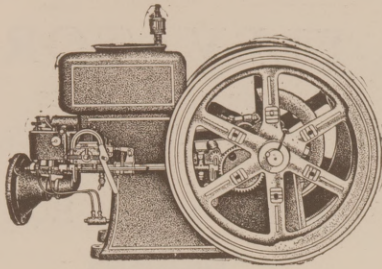
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FOUNDRY AND MACHINE SHOPS

GRAINGER & CO., Inc.

Established 1833

Tenth St., Louisville, Ky.

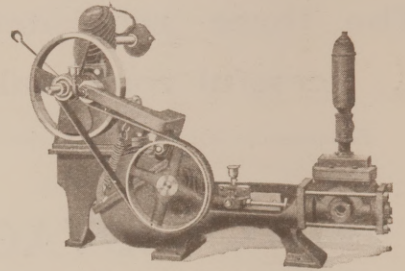


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REECO SYSTEMS

Are Specified by
Architects and Used
by the Trade.

wherever a good, high grade
Water Supply or Power Outfit
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Reeco 40G Pump and Engine

IF YOU HAVE A JOB WHERE WATER IS TO BE PUMPED USE A REECO SYSTEM

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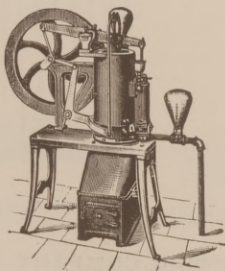
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IN THE SOUTH

Get better acquainted—Send for Bulletin B-4.

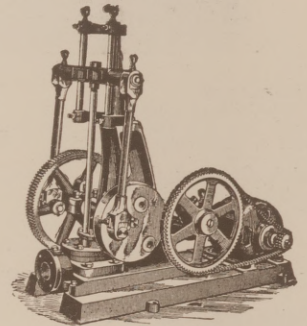
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WALDEN, N. Y.

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Reeco Ericsson Engine.



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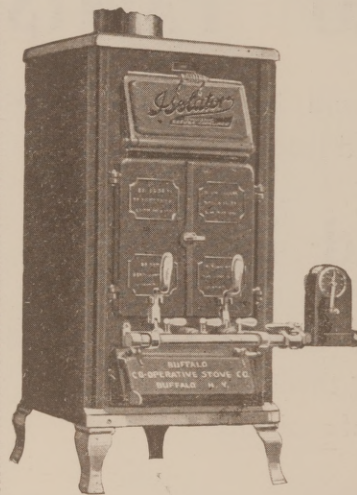


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Suggested settings for the newest designs of andirons may be had upon request. Write for Catalogue No. 32.

Chattanooga Roofing & Foundry Co.
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The Coziest Homes Today



have no garbage cans at the back door step.

Incineration at the source of origin is the modern method of waste disposal. In justice to your client and yourself you should familiarize yourself with the merits of the

ISOLATOR GARBAGE CONSUMER

It is installed in the kitchen or basment and operates with natural or artificial gas. Investigate the possibilities of this new sanitary necessity now.

Special proposition to Builders
ADDRESS

Buffalo Co-Operative Stove Co.
BUFFALO, N. Y.

FLOORS

The Wood Mosaic Kind

For every home—Old or new. Can be installed by our mechanics. Our 5-16" flooring can be laid in old or new houses. We make all kinds and thicknesses; Wood-Carpet, strips, Plain and Ornamental Parquetry, Tongue and Groove Flooring.

Send accurate measurements of rooms for colored sketch with exact estimate of cost of the flooring required. Instructions for laying and finishing accompany all orders shipped.

Send for free catalog in natural wood colors.

Wood-Mosaic Company
New Albany, Indiana



The Handwriting on the Floor

Not the most satisfactory, the most beautiful, biggest value—because we say so, but all these qualities because—

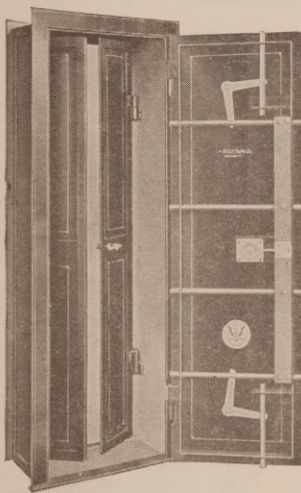
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Let us send you a beautiful booklet illustrating and describing our flooring, borders, parquetry, wood carpets, etc.

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"The Sudden Shippers."
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No. 1AA Fireproof Vault Door.

Wall Opening
79 High
32 Wide
20 Deep

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Prices and estimates will be promptly furnished on application.

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Plumbing—is it worth
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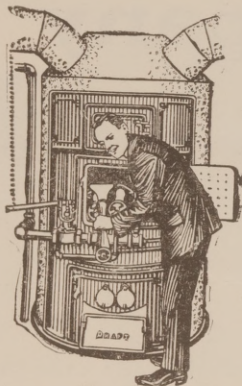
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Quick Removable Gas Burner System

will pay for itself in one season in gas saving alone.

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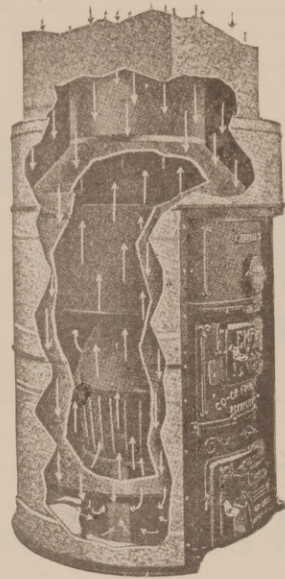
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Build a Bigger and Better Business on Furnaces of Quality

We call particular attention to the

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This furnace will appeal to the house owner as it does away with the tearing up of floors, partitions, and walls, and the many pipes required on the ordinary heater. The one right furnace for the farm house. Easily installed. No heat in cellar. It is built on the latest and most scientific principles applicable to the installation of a one-pipe system of house warming.

We invite inspection and comparison.

We have a furnace to fill every requirement in modern buildings, large and small, and prices to suit the pocketbook.

Write for complete literature.

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Your Roof is not Finished Unless it has a Wearing Surface—

When planning to cover any flat-roofed building, remember this—

No matter how good the roofing is, unless it has a wearing top surface, such as gravel, slag or tile, it is like a book without a cover—it isn't finished.

That is why, when The Barrett Specification was worked out years ago, the engineers insisted not only that it should be built up of the two most serviceable roofing materials in the world—pitch and felt in alternate layers—but that it should have a top-wearing surface of gravel, slag or tile.

It is imperative that every flat roof have such a wearing surface—

To protect the roofing materials from the direct destructive action of rain, snow, ice and sun.

To form a wearing-surface to protect the roofing materials from scuffing feet and the dragging of heavy objects over the roof.

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Guaranteed for 20 Years

It is because Barrett Specification Roofs are built up thus carefully, with a foundation of Specification Felt and Pitch in five alternate layers protected by a substantial wearing-surface of

gravel, slag or tile, that we offer to guarantee them for 20 years.


The guarantee is in the form of a Surety Bond, which we offer on all roofs of fifty squares or more in towns of 25,000 population or over, and in smaller places where our Inspection Service is available. Our only requirement is that the roofing contractor shall be approved by us.

How to make sure of the Right Kind of Roof

To make certain that your roof will be built according to the best scientific roofing principles, with 20 years of service guaranteed, you have only to insert in your building specifications this paragraph:

"The roof shall be laid according to The Barrett Specification, dated May 1, 1916, and the roofing contractor shall secure for me (or us) the 20-Year Guaranty Bond therein mentioned."

Copies of The Barrett Specification, with roofing diagrams, will be mailed free upon request.

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New York Chicago Philadelphia Boston St. Louis Cleveland Cincinnati
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Barrett Specification Roof on Pierce-Arrow Motor Car Company's Building, Elmwood Ave., Buffalo, N. Y. This building was constructed from plans drawn by the Pierce-Arrow Motor Car Co., General Contractors: Aberthaw Construction Company, Boston, Mass. Roofers: Jameson Roofing Company, Buffalo, N. Y. The area of this roof is 24,100 sq. ft. over concrete roof deck.

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No. 6

A MODERN CHURCH BUILDING

By J. A. Baylor, in Sunday School Magazine

A VERY different conception exists today concerning the work of the Church from that which obtained in the comparatively recent past. Formerly the work of the Church in the average community was of a simple type. Worship and preaching were the things with which it was largely concerned. The Sunday morning and evening services and midweek prayer meeting covered the ground of its activities supplemented by the annual protracted meeting in winter or summer, according to climate and religious habits of the people.

But a great change has taken place in recent years. The work of the Church in these modern times has become very complex. A many-sided ministry is called for. Not only the distinctly spiritual interests, but the social and intellectual life of the community makes claims upon its ministry. The present-day pastor must not only be a man of prayer and a student of the Bible, but keenly alive to community interests, to the business and social life of his people, and well informed as to current events. Various organizations exist to give expression to the different grades of life in the membership of the Church—women, men, young people, boys and girls, and children.

This changed conception as to what the Church is set to do is reflected in the modern church building. Formerly the church building consisted almost wholly of an auditorium for preaching, with perhaps a lecture room for prayer meeting and lesser gatherings, but as other activities and interests have grown it has been necessary to provide for them. So to-day the church building calls for parlors, club rooms, reading rooms, social hall, etc. Not a few of the largest church plants of the present day are equipped with gymnasium, swimming pool, and recreation rooms in addition to all the needed equipment for distinctly religious work and for worship.

This development has been most marked with reference to the modern Sunday school. Perhaps the recognition of the importance of youth and childhood by the Church has been largely responsible for this enlargement of vision in modern times. The Sunday school in its early stages was the beginning of an effort on the part of the Church at popular teaching of the Word of God. Once this work was undertaken, the demand soon came for better teaching

facilities, for adapted buildings, class rooms, etc. Later still, scientific ideas were brought to bear. Principles tested in the public schools were applied to religious education. Of course, this development in the life of the Church calls for corresponding changes in the church building, for departmental rooms, with class rooms attached for the various grades.

These changes have come so rapidly that many have failed to keep step with them. Not all of our pastors are fully informed as to what is the best arrangement and equipment for the modern church and Sunday school. Many Sunday school superintendents are behind, and great numbers of Church people. Especially is it to be noted that very many architects, upon whose skill and intelligence so much depends in the adjustment of equipment to the new needs, have not as yet grasped the situation at all. A few, comparatively, have been earnestly studying the problem and are doing useful and constructive work. One has but to travel around with eyes and ears open to be convinced that many are still traveling in the beaten paths of the past. The excellency of a plan is rated by the number that can be seated in the auditorium, or by the number of "class rooms" attached, with no reference to departments or grades.

The floor plans show a building designed with strict economy and intended to provide Sunday school equipment for a congregation of 600 or 700, together with facilities for the ordinary activities of the Church in a large town or city suburb. The exterior design, which is not shown, is an attractive type of Gothic architecture. The building, exclusive of furniture and organ, can be erected of brick, with stone trim, for \$50,000. The entrance level is about midway between the ground floor and auditorium floor, thus providing easy access to either of these departments from the front. In order to economize seating space, the pulpit is located between the two front entrances. Convenient entrances at the rear render it unnecessary for late comers to disturb the preacher or the congregation by coming in at the front.

The basement story is almost entirely above ground, thus providing ample light and ventilation. On this floor are located the Adult Department, 26 x 47 feet, with six good size class rooms; the Young

People's Department, 35 x 47 feet, with six class rooms; and the Senior Department, 36 x 40 feet, with seven class rooms. The two last named departments can be thrown together, in order to provide a large social room, capable of accommodating several hundred people. The kitchen is conveniently located for serving on social occasions.

On the main floor is the auditorium, which with the balcony and the use of chairs where there is ample space for them, will accommodate 750 or 800 persons. The choir balcony, which is on a higher level than pulpit platform, is built above the main entrance, and ample space is provided for pipe organ. At the rear of the auditorium, but separated from it by permanent walls, are the Primary Department, 23 x 36 feet, and the Beginners' Department, 16 x 36 feet. The ladies' parlor opens directly from the Beginners' room and can be used for a mothers' class and Cradle Roll. A large well-lighted pastor's study is on this floor.

On the balcony floor are the Intermediate Department, 23 x 36 feet, and the Junior Department, 36 x 36 feet. Each department is equipped with at least six class rooms, large enough to accommodate from ten to twelve pupils with a teacher. The teachers' training class room, 16 x 23 feet, is also on this floor.

Cabinets for supplies, toilets, lavatories, and other conveniences are features of the plan.

Atlanta License Scale.

A new license scale affecting contractors at Atlanta, Ga., will soon be in operation. Contractors whose annual business does not exceed \$10,000 will be required to pay \$25; those whose business is between \$10,000 and \$20,000 will pay \$50, and more than \$20,000 will pay \$75.

Personal Mention

Now Have Two Offices.

W. J. Wilkins & Co., architects, 9 and 10 Masonic Temple, Wilmington, N. C., have also established an office at Florence, S. C.

Builders' Secretary Breaks Arm.

Mr. John N. Davis, secretary of the Savannah Builders' Exchange, Savannah, Ga., sustained a broken right arm when his automobile back fired as he was cranking it.

Employs Atlanta Engineer.

The board of county commissioners of Murray county Georgia have employed E. V. Camp, consulting engineer, of Atlanta, to supervise the road building program in Murray. The work will come as a result of the \$100,000 bond issue recently passed. It is probable that a big part of the fund will be spent on the old Federal road, a main highway of the county.

Athens Contractor Suicide.

In a period of despondency, John Alex Saye committed suicide at Athens, Ga., by shooting himself through the heart with a shot gun. Mr. Saye was a prominent contractor in Athens. He was 60 years of age and had been ill for ten weeks with a serious nervous trouble. His act has caused much grievance among the friends of his family.



Charity Hospital, Shreveport, La. One of the most beautiful buildings in that section.—Cut courtesy of Higgin Mfg. Co., Newport, Ky.

News of Street and Road Building Activity in the South Briefly Told

NEVER before in the history of the country has the South seen such active preparations being made and now underway in some parts for permanent road building of all sorts. For years the South has lagged in this respect, but the people are now speaking in no unmistakable terms, through the ballot, that they must have bond issues to carry on the good work.

This magazine is giving as briefly as it can the news of this activity, strictly confining itself to the South, though all states in all parts of the country are waking up.

ROAD AND STREET CONSTRUCTION.

Tuscumbia, Ala.—City, O. B. Clark, Mayor; 22,353 sq. yds. macadam paving; 13,317 lin. ft. concrete curb and gutter; 8650 cu. yds. grading; 18,997 sq. ft. concrete walk; 11,194 sq. yds. concrete, asphalt, asphaltic concrete, bituminous macadam or brick paving; bids opened Sept. 15; J. E. Ferguson, Engr.

Bentonville, Ark.—Benton County Comms.; 45 mi. road in Dist. No. 3; \$175,000; Bumham & Zink, Contrs., Oklahoma City.

Bentonville, Ark.—Benton County Road Improvement Dist. No. 2, R. H. Whitlow, Rogers; 100 mi. hard-surfaced road; \$650,000; R. D. Alexander, Engr., Eureka Springs, Ark.; Adamson & Hayes, Contrs., Rogers, Ark.

Forrest City, Ark.—St. Francis County Road Improvement Dist. No. 5, B. C. Friar, Commr.; 18 mi. road in Garland township; sold \$200,000 bonds.

Fort Smith, Ark.—City; paving in Dist. No. 15; sold \$75,000 bonds. Address The Mayor.

Helena, Ark.—Phillips County Comms., Helena and Old Town Road Improvement Dist., 15 mi. road from Helena to Old Town; \$450,000; awarded contract; J. M. Quarles, Engr.

Hot Springs, Ark.—City; pave Central Ave. Address The Mayor.

Little Rock, Ark.—North Arkansas Road Improvement Dist. Comms.; awarded road and bridge contracts; Miller-Butterworth Co., \$1,144,931.24, 33 mi. warrenite; Gregory & Wilson, \$414,279, 40 mi. gravel; Carter & Kroch, Engrs.

Marion, Ark.—Crittenden County Comms., Road Improvement Dist. No. 8; 9 mi. roads Nos. 10 and 11; \$29,695; Newell Construction Co., Contr., Birmingham.

Mineral Springs, Ark.—Howard-Sevier County Road Improvement Dist.; 16 mi. road; \$293,836.71; J. A. Burt, Contr., Gunnison, Miss.

Morillon, Ark.—Conway County Comms., Road Improvement Dist. No. 2, J. N. Harris, Secy., Plum-

merville, Ark.; road improvement; 125,000 sq. yds. bituminous macadam surface course, steel bridge over Point Remove Creek; bids until Oct. 1; Harrington, Howard & Ash, Conslt. Engrs., Kansas City.

Newport, Ark.—Jackson County Comms.; 70 mi. gravel road in Dists. No. 4 and No. 2; No. 4, \$480,000; Bowman Engineering Co., Engr., Gregory & Wilson, Contrs.

Newport, Ark.—Jackson County Comms.; 70 mi. gravel road in Dists. No. 2 and No. 4; No. 2, \$38,000; A. L. Madding, Engr.; Gregory & Wilson, Contrs.

Star City, Ark.—Lincoln County Comms., Road Dist. No. 3; road from Star City to Drew county line; sold \$150,000 bonds.

Fort Pierce, Fla.—Lucie County Commissioners; roads; vote Oct. 7 on \$700,000 bonds.

Leesburg, Fla.—City, W. H. Porter, Clerk; 50,000 sq. yds. asphaltic concrete paving; curb and gutter; Southern Road Building Co., Contr., Tampa, Fla.

Live Oak, Fla.—Suwannee County Comms.; highways and lateral roads; vote Oct. 14 on \$700,000 bonds.

Tavares, Fla.—City; street paving vote on bonds. Address The Mayor.

Brunswick, Ga.—Glynn County Comms., roads and Revenues; pave 6 mi. road on Dixie Highway; \$108,980; Atlantic Bitulithic Co., Contr., Richmond, Va.

Calhoun, Ga.—City; improve streets and extend water system; voted \$35,000 bonds. Address The Mayor.

Elberton, Ga.—City; street improvements; vote on \$50,000 bonds. Address The Mayor.

Franklin, Ga.—Heard County Comms., D. B. Whitaker, Clk.; grade and topsoil 8.1 mi. Newnan and Franklin Rds.; \$37,500; C. A. Cohen, Contr., La Grange, Ga.; J. Law Zachry, Engr., 922 Courthouse, Atlanta, Ga.

Forsyth, Ga.—Monroe County Comms.; roads; vote Nov. 1 on \$160,000 bonds.

Washington, Ga.—Wilkes County Comms., Roads and Revenues, B. I. Cheney, Clerk; asphalt paving; \$300,000; Smith Construction Co., Contr., Atlanta, Ga.; H. S. Jaudon Engineering Co., Engr., Atlanta, Ga.

Carrollton, Ky.—Carroll County Comms.; roads; vote in Oct. on \$150,000 bonds.

Flemingsburg, Ky.—City, O. R. Bright, Mayor; 600 ft., asphalt paving; \$6500; concrete curb and gutters; State Road Dept., Engr., Frankfort, Ky.

Harrodsburg, Ky.—Mercer County Comms.;

complete Harrodsburg-Shakerstown highway to county line; \$75,000; State and Federal aid, \$45,000.

Owensboro, Ky.—City, John C. Calhoun, Mayor; pave 9th St. to Frederica St.; 1878 sq. yds. bituminous concrete foundation and wearing surface, 1207 lin. ft. curb and gutter; bids until Sept. 24; E. B. Shifley, Engr.

Alexandria, La.—Rapids Parish Police Jury; 3 3 m. gravel road from Woodworth.

Crowley, La.—Acadia Parish Police Jury; gravel roads in Fourth and Seventh Wards; voted \$300,000 bonds.

Jennings, La.—City; pave Cary Ave. Address The Mayor.

New Orleans, La.—City; street paving and drainage; 241,500 sq. yds. paving; \$2,000,000; bids opened Sept. 16 and 23; T. L. Willis, City Engr.; lately noted.

Baltimore, Md.—Board of Awards; let paving contract; Pennsylvania Engineering & Construction Co., Lawnsdowne, Pa.; Edmondson, Forest Park, Gwynn Oak, Rogers, Greenspring and Gwynns Falls Aves.; Geo. F. Wieghardt, Highways Engr.

Baltimore, Md.—Board of Awards; grade and pave with cement-concrete alleys; private alley contract No. 56; bids until Sept. 24; Geo. F. Wieghardt, Highways Engr.

St. Helena, Md.—United States Shipping Board, Engineering Fleet Corporation, C. P. Greer, Supt.; 2455 sq. yds. concrete paving, 248 lin. ft. curb and gutter, 8017 sq. ft. concrete sidewalk; bids until Sept. 22.

Columbus, Miss.—City; D. S. McClanahan, Mayor; pave 10 business blocks with cement; \$44,600; Henry C. Terry, Contr.; Gus E. Houser, Engr.

Clarksdale, Miss.—Coahoma County Supvrs., Y. E. Howell, Clk.; 13 mi. gravel road, from Friars Point to Clarksdale; 10 mi. gravel road, from Lyon to Coahoma; 8 mi. gravel road, from Sherard to Clarksdale; bids until Oct. 6; L. W. Mashburn, Engr.

Gulfport, Miss.—City; pave east side of 25th Ave. with Warrenite; 9 mi. Address The Mayor.

Laurel, Miss.—City, Goode Montgomery in charge; 1-2 mi. brick paving; \$20,000; bids until Sept. 29; W. A. Sawdon, Engr.

Meadville, Miss.—Franklin County Supvrs.; 32 mi. road; \$200,000 bonds.

McComb, Miss.—City, W. T. Denman, Mayor; 18,725 sq. yds. pavement, curb and gutter, storm sewers, vitrified pipe, manholes, catch basins; bids until Oct. 21; Xavier A. Kramer, Conslt. Engr., Magnolia, Miss.

Marks, Miss.—Quitman County Supvrs., M. A. Cole, Clk.; 15 mi. concrete road in McPherson Road Dist., No. 3; bids until Oct. 6.

McComb, Miss.—City; pave streets; bids until Oct. 1. Address The Mayor.

West Point, Miss.—Clay County Supvrs., L. J.

Howard, Clerk; macadam roads in Dists. Nos. 1 and 2 (Supvrs.' Dist. No. 5); \$70,000 bonds.

Yazoo City, Miss.—Yazoo County Highway Comm., Dist. No. 3, T. T. Craig, Chrmn.; 2 mi. River road, 2800 cu. yds. gravel; also 2 mi. Crupp-Valley road, 2800 cu. yds. gravel; bids until Sept. 27.

Independence, Mo.—Jackson County Commissioners; 3.1 mi. Lone Jack, East Road from Lone Jack to Jackson-Johnson County line; State Road Project No. 18; bituminous macadam surfacing 16 ft. wide, ditches and culverts; bids until Sept. 30; changed date from Sept. 2; O. C. Sheley, Highway Engr.

Rolla, Mo.—Phelps County Commrs.; roads; voted \$400,000 bonds.

Clinton, Mo.—Henry County Commrs.; roads in Clinton, Windsor and Fairview Townships; voted \$60,000, \$50,000 and \$40,000 bonds.

Troy, Mo.—Lincoln County Commrs.; 200 mi. gravel roads, bridges and culverts; vote Oct. 21 on \$800,000 bonds; A. J. Brown, County Engr.

Burgaw, N. C.—Pender County Commrs.; roads contemplate vote on \$200,000 bonds.

Concord, N. C.—City, Geo. H. Richmond, Clerk; grade and pave sidewalks on McGill, Church, Crowell, Marsh and other streets; 19,000 sq. yds. concrete walk; bids until Sept. 25.

Hickory, N. C.—City Commrs.; cement sidewalks on main streets; \$15,000 to \$20,000; Hugh Abee in charge.

Jefferson, N. C.—Ashe County Commrs., S. G. Parsons, Chrmn.; grade 2 mi. road, Project No. 1, West Jefferson to Jefferson; 16 mi. road, Project No. 2, Jefferson to Virginia line; 22 mi. road, Project No. 3, Jefferson to Watauga line; 6 mi. road, Project No. 4, Lansing to Sturgills; 5 mi. road, Project No. 5, Lansing to White Oak; concrete culverts; bids until Sept. 30.

Marshall, N. C.—Madison County Commrs., J. Will Roberts, Clerk; roads in California Creek, Middle Fork of Ivy, Upper Laurel and Hot Springs Townships; \$5000, \$15,000 and \$10,000 bonds.

Colgate, Okla.—Coal County Commrs.; roads in Bryan Township; voted \$50,000 bonds.

Muskogee, Okla.—City, W. W. Gilbert, Clerk; pave State St. with sheet asphalt, 1187 sq. yds.; curbing; \$6,333.13; H. H. White, City Engr.

Sapulpa, Okla.—City; pave 27,000 yds. streets; \$300,000; E. C. McCormick, Contr., care of Parker-Washington Co., 6161 Maple Ave., St. Louis, Mo.

Sapulpa, Okla.—Creek County Commrs.; 85 mi. hard-surfaced roads; voted \$1,000,000 bonds.

Stillwater, Okla.—Board of Agriculture, J. A. Whitehurst, Prest., Capitol Bldg., Oklahoma City; 3400 sq. vds. paving on campus of Agricultural and Mechanical College; 3200 lin. ft. curb and gutter; 650 lin. ft. storm sewers; bids until Oct. 2.

Anderson, S. C.—Anderson County Highway Comm., W. C. Austin, Secy.; highways and bridges;

- 75,000 sq. yds. paving 50,000 lin. ft. concrete curb; bids until Oct. 7; W. A. Sanders, Engr.
- Anderson, S. C.—Anderson County Highway Comsn., J. Mack King, Chrmn.; 255 mi. roads; \$1,450,000 available to begin construction; bids until Oct. 6; Wade A. Sanders, Engr.
- Florence, S. C.—City, H. K. Gilbert, Mayor; street improvements and drainage; vote on \$350,000 bonds; water-works and sewers, \$100,000.
- Pickens, S. C.—Pickens County Highway Comsn.; 5.69 mi. topsoil road, 16,300 cu. yds. topsoil; \$35,589; Blackenship & Phillips, Contractors, Spartanburg, S. C.
- Batesburg, S. C.—City; street paving; \$50,000 available; Nisbet Wingfield, Engr., Lamar Bldg., Augusta, Ga.
- Brownsville, Tenn.—Haywood County Commissioners; complete 41 mi. Memphis-to-Bristol Highway through Haywood county; voted \$200,000 bonds State and Federal aid, \$400,000.
- Dyersburg, Tenn.—City, L. E. Carne, Mayor; pave 10 asphalt streets and public square with asphalt; Thompson & Graham, Contrs., Nashville, Tenn.; Blakeman & Brayton, Engrs., Dyersburg.
- Gainesboro, Tenn.—Jackson County Commissioners; roads; voted \$95,000 bonds. State and Federal aid, \$190,000.
- Lexington, Tenn.—Lexington-Saltville Turnpike Co.; 25 mi. macadam road; bids until Sept. 29; F. M. Patton, Engr., Jackson, Tenn.
- Abilene, Tex.—Taylor County, E. M. Overshiner, County Judge; 7 mi. Highway No. 1, Road Dist. No 2, and part of Road Dist. No. 1, 24 ft. wide, gravel surfacing; \$21,013; Sanders Co., Engr., 505 Interurban Bldg., Dallas, Tex.
- Amarillo, Tex.—City; paving; \$150,000 bonds. Address The Mayor.
- Austin, Tex.—State votes Nov. 4 on amending constitution to permit issue \$75,000,000 road bonds; State Highway Comsn. will plan construction.
- Bryan, Tex.—Brazos County Commrs.; J. T. Maloney, County Judge; 10 mi. road; Horace Boyett, County Engr.; contract awarded.
- Caldwell, Tex.—Burleson County Commrs.; roads; vote Oct. 18 on \$1,000,000 bonds.
- Dallas, Tex.—Dallas County, Charles E. Gross, Auditor; grade 11.5 mi. Dallas-Denton Rd. (State Highway No. 40); bids until Oct. 6; W. J. Powell, County Engr.
- Brownwood, Tex.—City; 2 mi. tarvia street paving. Address The Mayor.
- Gilmer, Tex.—Upshur County Commrs.; let contracts for 70 mi. road; J. O. Smith, Pritchett, Tex., Pritchett Rd.; Smith Bros., Crockett, Tex., Simpsonville, Ore City and Glenwood Rds.; \$355,600.
- Houston, Tex.—City; gravel pavement on Orange St.; \$11,326; Horton & Horton, Contrs.
- Kountze, Tex.—Hardin County Commrs.; roads in Dist. No. 36 voted \$310,000 bonds.
- Lockhart, Tex.—City Comsn.; rebuild streets; \$20,000.
- Seymour, Tex.—Baylor County, Nat G. Mitchell, County Judge; caliche or clay surfacing, concrete drainage structures on 4.31 mi. Highway, 0.30, 16 ft. wide; \$22,401; W. E. Stephens, Contr.
- Pearsall, Tex.—City; pave streets; \$25,000. Address The Mayor.
- Terrell, Tex.—City; pave W. Moore Ave. Address The Mayor.
- Norfolk, Va.—Morningside Realty Co.; paving, curbing, sewers and water system; \$39,000; John E. Ballenger of Arnberg & MacDonald, Contrs.
- Richmond, Va.—City grade and pave Chamberlayne Ave. parkway; \$16,571.50; pave 4th St., \$16,504.09. Address The Mayor.
- Beckley, W. Va.—Raleigh County Commrs.; complete roads under \$1,000,000 bond issue; Vaughan Construction Co., Contr., Shawsville, Va.
- Fayetteville, W. Va.—Fayette County Commissioners, R. J. Stegall Clk.; pave 7 mi. Beckwith-Kanawha Falls Rd.; asphaltic concrete penetration macadam; bids until Oct. 6; J. K. McGrath, Road Engr.
- Keyser, W. Va.—Mineral County Commrs., A. A. Jordan, Clerk; 12 mi. Ridgely-Alaska Rd.; gravel surface roadway; bids until Sept. 23.
- Grafton, W. Va.—City, F. B. Cather, Commissioner of Streets; 1218 sq. yds. paving and 800 ft. concrete curb on Latrobe St.; bids opened Sept. 15.
- Huntington, W. Va.—City, Mat Miser, Commissioner Streets, Sewers, etc.; pave 12th Ave., 3d and 4th Sts.; \$17,960; A. B. Maupin, City Engr.; Duncan & Griffith, Contrs.
- Morgantown, W. Va.—Monongalia County Commissioners; 13 1-2 mi. hard surfaced roads in Union Dist.; voted \$150,000 bonds.
- Wayne, W. Va.—Wayne County Commrs.; ½ mi. Huntington-Kenova road; \$18,000; grade 5 mi. road from Wayne to Huntington; \$66,072.33; contracts awarded.
- Wheeling, W. Va.—City, Chas. O. Epbin, City Manager; 22,000 sq. yds. semi-monolithic paving; \$110,000; contract let for three districts; Jacovetty & Savage, Stringer & Springer, C. B. Kimberly Co.; H. A. Conrad, City Engr.
- Marks, Miss.—Bids will be received until October 6 by board of supervisors of Quitman county, M. A. Cole, clerk, for constructing 15 miles of concrete road in McPherson road district No. 3
- Moultrie, Ga.—Board of commissioners of Colquitt county will ask new bids for paving roads, bids formerly submitted having been rejected. The Chairman.
- Sanford, Fla.—Bids will be received until October 6 by board of commissioners of Seminole county, L. A. Brumley, chairman, for 176,799 feet of grading and paving on various roads and streets and for construction of bridges and culverts, Sanford, and G. R. Ramsey, engineer, Orlando, Fla.

Savannah, Ga.—Board of commissioners of Chatham county will ask bids for paving Louisville and Ogeechee roads, for which \$920,000 of \$2,500,000 bond issue is available. Oliver T. Bacon, chairman.

Yazoo City, Miss.—Bids will be received until September 25 by Highway Commission of First road district of Yazoo county for constructing seven mi. of federal aid road; 10,900 cubic yards of gravel. Xavier A. Kramer, state highway engineer, Jackson, Miss.

Andalusia, Ala.—City, T. E. Henderson, Mayor; 20,000 sq. yds. vitrolithic and 30,000 sq. yds. bitulithic street paving; \$188,000; M. D. Pace, City Engr.; Jamison & Holowell, Contrs., Montgomery, Ala.

Ashdown, Ark.—Little River County Commrs., Road Improvement Dist. No. 8, A. J. Russell, Commr.; grade and gravel 18 mi. road; \$126,000; James G. Sanderson, Contr.

Millican, Tex.—County commissioners to construct 10 miles of road, to cost \$75,000.

San Antonio, Tex.—County Commissioners plan to surface Southton road.

Fayetteville, Ark.—Washington County Commrs., Guy Taylor, Commr.; 20 mi. gravel macadam road in Road Dist. No. 5; \$125,000; bids until Sept. 20; Hamilton & Shreve Engrs.

Fayetteville, Ark.—Washington County Commrs.; 200 mi. macadam road; \$1,000,000; Hamilton & Shreve, Engrs., Fayetteville, Ark.; Springfield Construction Co., Contr., Springfield, Mo., and J. M. Phillips Constr. Co., Contr., Fayetteville, Ark.

Fordyce, Ark.—Dallas County Commrs., Sparkman Road Improvement Dist. No. 3, C. A. Doak, Commr.; 20 mi. road; Evans Construction Co., Contr., Little Rock, Ark.

Helena, Ark.—Commrs. Street Improvement Dist. No. 14, H. E. McRae, Chrmn.; 35,000 cu. yds. street grading; 79,000 lin. ft. curb and gutter; bids until Sept. 10; C. H. Purvis & Son, Engrs., Box 66, Helena, Ark.

Helena, Ark.—Phillips County Commrs., Helena and Old Town Road Improvement Dist.; 15 mi. 14-ft. roadway; J. M. Quarles, Engr., Helena, Ark.; Southern Bitulithic Co., Contr., Nashville, Tenn.

Helena, Ark.—Phillips County Commrs., Helene-Ferguson Road Improvement Dist., Sebastian Straub, Prest.; 63 mi. 14-ft. concrete road; \$1,700,000; Monroe & Parmlee, Engrs., P. O. Box 66; J. A. Burt, Contr., Gunnison, Miss.

Jonesboro, Ark.—Graighead County Commissioners; 18 mi. road from Jonesboro to Egypt; 7-in. concrete base, hard-surface top; \$250,000; Cobb & Lee, Engrs.; J. E. Edwards & Co., Contrs.

Little Rock, Ark.—State Highway Dept.; let road contracts; C. A. Rees & Co., A. O. U. W. Bldg., \$518,000, improve 69 mi. road; S. E. Evens Co., \$129,000, 26½ mi. gravel road; bridging culverts.

Little Rock, Ark.—Galloway Pike Improvement

Dist., Justin Matthews, Commr.; let contracts for improvement of 12 mi. Galloway Pike; Grady Garms, grade, construct concrete curb, culverts, pavements, etc.; Moreno Burkman Construction Co., St. Louis, Mo., pave with asphalt streets in district and east Washington Ave.; M. D. L. Cook, pave p.ke with warrenite to Lonoke County line; \$400,000 to \$500,000; Lund & Hill, Engrs.

Lonoke, Ark.—Lonoke County Commrs., Arkansas & Missouri Highway Dist., E. A. Howell, Secy., Cabot; 3.2-mi. road through Cabot, Austin and Ward; bids until Sept. 10; Blackshire & Mercer, Engrs., Searcy, Ark.

Searcy, Ark.—North Arkansas Highway Improvement Dist. Commrs. (Henry Patterson and others); let following contracts, totaling \$741,028, to construct sections of North Arkansas Highway in White County; Waggoner & Johnson, Judsonia, Ark., at \$191,643, section No. 1, north of Little Red River; Booth Bros., Searcy, at \$153,562.58, section No. 2, south of Little Red River; J. S. Kelley, Judsonia, Ark., at \$107,814.70, section No. 3, bridges and culverts; T. J. Connelly, Little Rock, at \$83,949, asphaltic surface treatment; Blackshire & Mercer, Engrs.

Miami, Fla.—City; pave 5th St.; curb, gutters and sidewalks; \$17,908.33; W. Murray, City Engr.

Haines City, Fla.—City, V. C. Thompson, Commr. Public Works; 40,000 sq. yds. paving; 41,640 ft. curbing; 2000 ft. storm sewers, 24 in. in diam., with concrete catch-basins, sidewalks, etc.; \$110,000; McElroy Engineering Co., Engr., Giddens Bldg., Tampa; Southern Road Building Co., Contr., Tampa.

Quincy, Fla.—City, J. P. Smith, Clk.; 27,000 sq. yds. paving; bids until Sept. 16; J. B. McCrary Co., Engr., Atlanta, Ga.

San Antonio, Tex.—Chapin-Colglazier construction Co. secured contract to resurface Culebra road, to cost \$36,000.

San Antonio, Tex.—County commissioners plan to improve Selma to New Braunfels highway.

Albany, Ga.—Shackelford County Commissioners; concrete curbing, etc.; \$25,000.

Athens, Ga.—Clarke County Commissioners, Roads and Revenues, Tate Wright, clerk; 3.7 miles concrete or bituminous paved road; bids until Sept. 23; E. L. Griggs, project engineer.

Buchanan, Ga.—Haralson County Commissioners; roads; vote Sept. 23 on \$200,000 bonds.

Trenton, Ga.—Dade County, Commissioners Roads and Revenues, John B. Dugan, Secretary; 9.8 miles Chattanooga-Birmingham highway (Federal aid road); 25,500 cubic yards sand-clay surfacing; also, 2.4 miles Federal-aid road south of Wildwood; 6250 cubic yards sand-clay surfacing; bids until Oct. 2; Johnston & Morgan, project engineers, 609 Flatiron Bldg., Atlanta, Ga.

Danville, Ky.—Boyle County Commissioners; 3

miles tarvia highway on Perryville road; \$10,000; Barrett Co., contractor.

Lexington, Ky.—City; extend Short street; vote Nov. 4 on \$300,000 bonds. Address The Mayor.

Owensboro, Ky.—City, John C. Calhoun, Mayor; improve 8th, 7th, Allen and other streets; \$33,189.92; E. B. Shifley, city engineer; Andrews Asphalt Paving Co., contractor.

Paris, Ky.—Bourbon County Commissioners; roads; voted \$500,000 bonds.

Princeton, Ky.—Caldwell County Commissioners; roads and bridges; vote Sept. 27 on \$300,000 bonds.

Harrisonburg, La.—Catahoula Parish Police Jury; roads; voted \$800,000 bonds.

Jennings, La.—Jefferson Davis Parish Police Jury; gravel roads in Ward 1; vote on \$175,000 bonds.

Jonesboro, La.—Jackson Parish Police Jury; 2 crossroads with gravel surface; voted \$500,000 bonds.

Lake Charles, La.—City Commission, L. L. Squires, clerk; 11,000 square yards brick paving on Common, Iris and Hodges streets; curbs and gutters; \$41,250; Ritchie Bros., contractors, Topeka, Kan.

Lake Charles, La.—City, J. A. Trotti, Mayor; pave 17,000 square yards with vertical fiber vitrified brick portions of seven streets; \$60,000.

Lake Charles, La.—Calcasieu Parish Police Jury; 12½ miles hard-surfaced roads in District No. 1, gravel surface; \$100,000; Floy & Hamilton, engineers.

Leesville, La.—Vernon Parish Police Jury; roads; sold \$225,000 bonds.

New Orleans, La.—City, Mayor Behrman; repave St. Charles street; \$84,593; T. L. Willis, city engineer.

Thibodaux, Ga.—La Fourche Parish Police Jury; roads in District No. 4; \$145,000 bonds.

Aberdeen, Md.—United States Government, J. D. Moen, Major, Q. M. C., Aberdeen Proving Grounds; 5 miles concrete roads, 16 and 20 feet wide; Claiborne & Johnston Co., contractor, 910 Garrett Bldg., Baltimore.

Yazoo City, Miss.—Yazoo County Highway Commission, First Road District; 7 miles road, Federal-aid Project No. 65 (State Trunk Road); 10,900 cubic yards gravel; bids until September 25; Xavier A. Kramer, State Highway Engineer, Jackson, Miss.

Indianola, Miss.—Sunflower County Road Commissioners, District No. 3; surface 2 miles old gravel road with asphalt; bids until September 22; John M. Harbert Engineering Co., engineer.

Jackson, Miss.—City Commission, F. M. Trussell, clerk; street paving, sewers, bridges, etc.; vote in November on \$105,000 bonds.

Vicksburg, Miss.—Warren County Supervisors; roads; vote Oct. 7 on \$500,000 bonds.

Vicksburg, Miss.—City, J. J. Hayes, Mayor; pave 50 blocks of streets.

Perryville, Mo.—Perry County Commissioners; Chas. E. Cashion, clerk; roads, bridges and culverts; vote September 16 on \$450,000 bonds.

Cartersville, Mo.—City; street paving; voted \$30,000 bonds. Address The Mayor.

Fulton, Mo.—Callaway County Commissioners; road in New Bloomfield Special Road District; \$130,000; Chockley Engineering Co., Kansas City, Mo.

Linn, Mo.—Osage County Commissioners; roads; vote September 27 on \$500,000 bonds.

Princeton, Mo.—Mercer County Commissioners; roads in Ravanna Township; vote Sept. 2 on \$39,000 bonds.

Rockport, Mo.—Town; pave 3½ miles streets; \$255,632.75; Lynch McDonald Co., contractor, Moberly, Mo.

Versailles, Mo.—Morgan County Commissioners; roads; vote on \$500,000 bonds.

Asheville, N. C.—State Highway Commission, James G. Stikeleather, Commissioner; let contract to Asheville Paving Co., 8 miles paving on Black Mountain Highway; H. A. Wells for grading; concrete base with asphalt top; \$300,000.

Greensboro, N. C.—North Carolina State Highway Commission, Division Office; 4.6 miles State highway (Federal-aid Project No. 47); 43,251 square yards bituminous surfacing or 43,251 square yards plain, one-course cement concrete pavement; bids until Sept. 26; W. S. Fallis, State Highway Engineer, Raleigh, N. C.

Goldsboro, N. C.—City, I. M. Cashell, City Manager; grade and pave streets with vitrified brick, wood block, concrete, sheet asphalt, asphaltic concrete or bitulithic; 100,000 square yards pavement; 55,000 linear feet concrete curb and gutter; 5,000 square yards sidewalk paving; bids until Oct. 9; J. L. Ludlow, consulting engineer, Winston-Salem, N. C.

Lumberton, N. C.—Robeson County Commissioners; roads in Raft Swamp Township; vote Oct. 30 on \$20,000 bonds.

Marion, N. C.—McDowell County Highway Commission, Hugh F. Little, chairman; 5½ miles mountain roads; bids until Sept. 12.

New Bern, N. C.—Zone Supply Officer, 17th and F streets, N. W., Washington, D. C.; rebuild roadway to New Bern, N. C., National Cemetery; bids until Sept. 15.

Roxboro, N. C.—North Carolina State Highway Commission, Division Office, Greensboro; 8.2 miles State highway (Federal-aid Project No. 25); 19,184 cubic yards soil surfacing; bids until Sept. 26; W. S. Fallis, State Highway Engineer, Raleigh, N. C.

Thomasville, N. C.—City, J. C. Green, Mayor; 20,000 to 50,000 square yards sheet asphalt pave-

ments; A. E. Taplin, engineer, High Point, N. C.; Adams, Evans & Co., contractors, 30 Church street, New York.

Williamston, N. C.—Town, W. T. Meadows, treasurer; pave business section; \$75,000.

McAlester, Okla.—Pittsburg County Commissioners; roads in Dow Township; vote Sept. 23 on \$50,000 bonds.

Andrews, S. C.—Town; improve streets; sold \$40,000 bonds. Address The Mayor.

Chester, S. C.—City; street paving; voted \$140,000 bonds. Address The Mayor.

Gaffney, S. C.—City; 2000 feet brick paving on Cherokee Ave.; 19 feet wide. Address The Mayor.

Greenville, S. C.—Greenville County Commissioners; 3.03 miles road; 20,000 square yards bituminous macadam surfacing; \$47,000; Slattery & Henry, contractors.

Orangeburg, S. C.—City, W. A. Livingston, Mayor; street paving; vote on bonds.

Spartanburg, S. C.—Spartanburg County Highway Commission; roads; \$449,500 bonds.

Carthage, Tenn.—Smith County, David Hodges, Judge; 100 miles roads; voted \$400,000 bonds.

Morristown, Tenn.—Town, D. C. Morris, Recorder; improve streets in Improvement Districts Nos. 14, 16 and 18; 38,750 square yards asphaltic concrete, 52,730 square feet concrete sidewalks; 17,260 lineal feet curb and gutter; bids until Sept. 30.

Abilene, Tex.—Taylor County Commissioners, E. M. Overshiner, County Judge; 4.7 miles road, gravel surface; concrete drainage structure; \$21,012; Henry Exall Elrod Co., engineers, 505 Interurban Bldg., Dallas, Tex.; Sanders Bros., contractors, Miami, Fla.

Beaumont, Tex.—Jefferson County, W. M. Carroll, Judge; 84,500 square yards paving; 6-in. concrete base, 2-in. asphalt surface; R. D. Thornton, engineer, Beaumont, Tex.; Horton & Horton, contractors, Houston, Tex.

Bellville, Tex.—Austin County Commissioners; roads; vote in October on \$1,500,000 bonds.

Belton, Tex.—City, H. R. Smith, secretary; improve Main, Penelope, East and other streets; bids until Sept. 17.

Eastland, Tex.—City, W. Lander, City Manager; 150,000 square yards vertical fiber brick pavement, 3 in. thick; 28,000 linear feet curb and gutter; bids until Sept. 6.

Corrigan, Tex.—Navarro County Commissioners; roads in Districts 2, 14 and 15; \$100,000, \$80,000 and \$40,000 bonds.

Granbury, Tex.—Hood County Commissioners, Geo. Tarrant, County Judge; 30 miles sand-gravel roads, bridges and culverts; \$210,000; H. E. Firman, engineer.

Denton, Tex.—City, J. W. Erwin, secretary; paving

on West Oak and North Locust streets, Hann and other avenues; 64,260 square yards paving; 33,850 linear feet curb and gutter; 10,900 linear feet storm sewers; bids until Sept. 9; Koch & Fowler, consulting engineers, 606 Sumpter Bldg., Dallas, Tex.

Karnes City, Tex.—Karnes County Commissioners; 12 miles King Trail Highway in Kenedy Road District; vote on \$300,000 bonds.

McKinney, Tex.—Collin County, R. L. Mouldon, Judge; roads; sold \$3,000,000 bonds.

Palo Pinto, Tex.—Palo Pinto County, W. F. Smith, County Judge; roads; vote on \$1,500,000 bonds; M. V. Smith, engineer.

Ranger, Tex.—City; grade 2 blocks on Main street; J. S. Barlow, city engineer.

Sulphur Springs, Tex.—Hopkins County Commissioners; roads; vote Sept. 27 on \$2,000,000 bonds.

Vernon, Tex.—City; street paving; voted \$15,000 bonds; A. J. Robinson, City Engineer.

Americus, Ga.—Board of commissioners of Sumter county has been requested by chamber of commerce to reconsider its action in selecting asphalted macadam as material to be used in constructing roads; board states it has been expected asphalt would be used. The Chairman.

Concrete Boats In China.

The first reinforced concrete boat built in the Far East will shortly be launched at Tanjong Rhu, where most concrete vessels will be constructed, say the Singapore Free Press. This boat is built to answer the somewhat special conditions of a ferry boat. It will be used by the Federated Malay States Railways in the Johore States for conveying wagon goods across to Johore. At present this service is assured by steel ferry boats. The scarcity of steel, however, made it imperative to adopt some other material; wood was rejected, the preference being given to reinforced concrete. The dimensions of the boat are: Length, 125 feet; beam, 27 feet; and moulded depth, 8 feet, the gross displacement being 500 tons. It has the shape of the existing steel ferries, and carries all the machinery necessary for the handling of the wagons, steering, etc. The construction has taken about five months, and proved very successful from the beginning. The boat will have to stand fairly heavy work, and for this reason it has been designed on conservative lines. It is expected that concrete boats have come to Singapore to stay, and earn as good a reputation as the land ferro-concrete constructions now possess. Brossard, Mopin & Co., the designers and builders of this ferry boat, are also actively engaged in the construction of a large sea-going motor vessel of 2500 tons deadweight.

Why Office Buildings Face Northeast

IF ANYONE had attempted to tell us a few years ago that the position and arrangements of a desk, filing cabinets and telephones directly affected operating costs and net profits, we would have been inclined to scoff openly. We were opening branch offices throughout the country, and we selected office space and purchased furniture and fixtures for each individual office just about as fancy dictated to the executive who happened to be in charge of that particular branch. Many of our desks and chairs were of unusual design. We were devoting little attention to the importance of the physical requirements of an office, and as a result it usually took us from two to six months to organize each branch satisfac-

torily, writes George A. Bland in *System* for June.

We studied the arrangement and equipment of other organizations. Not once did we find standardized office equipment. The fact set us to thinking.

Every one of our branches, today, is as near like every other as is possible without rearranging the office buildings in which we rent space. We select our offices by specification; our branch manager, even though he has never seen another branch, rents an office in the type of building we favor, at the right height, on the best side of the building. He buys the equipment by even more rigid specification; we tell him what make, size, and style of each kind to get. And the consequence, as I have said, is that any two of our offices employing the same number of people are as like as two peas.

Our business is almost all done by mail. Little passes through our branches except reports and orders. So proximity to the postoffice is the first requirement. The manager who rents an office for us always hunts in the vicinity of the postoffice for a place that fits our other specifications.

He avoids buildings that are too large, or that are so new that their rental is excessive. He steers clear of buildings more than 10 years old. And he confines his search to buildings given over entirely to offices and not at all to doctors, lumbermen, publishers, and brokers—none of whom offers much possibility as customers.

Some Tests for Picking Good Offices.

Once he finds a satisfactory building, the manager applies our tests to the available space. It must be above the seventh floor to be regarded as desirable. Unless it is situated ideally otherwise, it will not be accepted below the fifth.

The proper exposure is important, too, if the best working conditions are to be maintained. Almost without exception a west side is undesirable. The reason is that where a west light prevails the afternoon sun strikes directly on desks and other equipment; the glare not only gets on nerves of employees, but it also, by actual tests, slows up the progress of our work at the most critical time of day. Our experience is that the best exposure is east or north. Likewise, our second choice is south and our third west.

The outlook from any office, though perhaps a seeming trifle, is significant when the time consumed is multiplied by the number of times a day the attention of all employees is distracted by outside noise and other influences. An office above the seventh floor is less subject to the distractions of the street than quarters below the fifth floor. But that is not the only consideration.

When an executive looks out a window as he turns



Empire Life Insurance Building, Augusta, Ga.

W. L. Stoddart, New York, and G. Lloyd Pritchler, Augusta, Ga.
Associated Architects.

over some question in his mind, he is likely to be thrown out of tune if something catches his eye in an office across the way. And recognizing this fact we have rented the various office outlooks in the order of desirability: outside distant view; outside cut-off view; large court.

We provide ample working space for each employee, on the basis of allowing 100 square feet for each office employee and 50 square feet for each outside man. These figures include the space occupied by furniture, workers, and all incidentals.

I have had business men say to me that while these specifications are all right for larger organizations, they are impractical for the office employing not over three people. As a matter of fact, most of our business branches are single rooms. They have an entrance at one end and big windows opposite. For our purpose this office should never be more than 11 feet 4 inches wide and 22 feet deep. This space will care for three people comfortably, but it allows no room for expansion. Therefore, we consider such a space the absolute minimum.

Now 14 inches is a small space. Yet 14 inches in the width of an office has a direct bearing on facilitating the handling of detail and our profits. An office 12½ feet wide gives a much more desirable space, more elbow room, allowing the desks to be placed with one end against the wall and facing the door, using the light to the best advantage. Obviously, this means better working conditions and a more rapid handling of each day's business.

We consider an office 22 feet in depth the minimum; additional space—up to 26 feet—is more desirable, as it allows for some expansion. We believe that the ideal for this approximate-sized office is 12½ feet by 26 feet; a total of 325 square feet. While this is primarily an office to hold three workers, it allows expansion to equipment for four without serious crowding. Then, too, economy of space forces us to build a special coat cabinet in each branch office. This coat cabinet and the supply cabinet are the only two special pieces of furniture that we use in the operation of our business.

A corner room, or a room where the greatest dimension is along the window side, is unusually desirable from the standpoint of light and air. Its drawback comes from a lack of wall space. We require 35 feet of wall space to care for the back edges of all essential furniture and equipment. In our office this includes desks, filing cases, and the rest.

Perhaps the most important of all our requirements is natural light. We demand two or more windows, or else a very large single window. Artificial lighting must be directed entirely from the ceiling; first choice, semi-indirect fixtures; second choice, glazed ceiling globes.

In every one of our business branches we have standardized not only our furniture and equipment,

but also our arrangement and special equipment. Take the special equipment first: All of our office supplies, maps, forms, typewriter ribbons, pencils, and on down to stationery clips, are issued to each branch from the home office. To prevent waste and subsequent loss, we have designed a special supply cabinet which any carpenter can quickly construct at small cost.

How often you get an unfavorable impression, on entering an office, to find a man's hat on the top of a desk or a coat draped over the back of a chair! We feel that we cannot afford to allow either a customer or a casual visitor to leave one of our offices with an adverse impression.

As I have already said, we have standardized desks, chairs, rugs, and other furnishings. This, of course, is only a portion of our equipment. About one month before the date of opening an office our supply department ships a two months' supply of all of our regular forms and stationery, together with the other small fixtures required in any business office. All of the "working tools" for each desk are provided in this shipment, and the arrangement in each desk is practically the same in every office of our organization.

The arrangement of our desks and files is planned in advance to permit the work being passed from one employee to another without interruption and with little commotion—streamline production. Each day's work is planned to start at desk number 1 and go through to completion without a single employee being forced to leave his desk except for some special purpose.

To get a new business branch under way with a minimum loss of time and motion, we send experienced employees from our established offices. Then other clerks are employed and instructed in our methods of doing business. Never do we open an office with a "green force."

Tomorrow we may establish a new branch. From the hour our new office is opened it will give our customers the same competent service as our oldest established branch. This, we believe, is half the battle in entering a new field. And this much of our success, at least, is due to careful planning, a working system free from red tape, and from taking a long look ahead.

There is an old saw that runs something like this: "If you want something done, take it to a busy man." In adopting a practical working schedule for every employee, we have followed that sage advice. We all know that the successful busy man keeps his house in order and is ready for an emergency. Our experience is that any desk can be so organized that the employee will materially increase his output. And not only will he turn out more and better work, but he will also rapidly become worth more to the com-

pany. Keeping desks orderly is, therefore, a profitable practice that we do not overlook.

Even in many well-organized business establishments we often find desks annexing the work of the waste basket, filing cabinets, and storerooms.

We have whipped this problem by supplying and maintaining on each desk only that equipment needed regularly to handle current business. Every tool must be in its proper place and the chips and shavings of each day's business must not be allowed to accumulate. Frequent personal supervision by the office manager prevents any employee from backsliding into disorder.

Each desk is supplied with definite written instructions which fix the responsibilities of the employee who works there. They are printed on 3 x 5 cards kept in a small file. One card gives the summary of the work of each desk, and the others are given "subject headings" covering each side of the work.

Before each executive and clerk are those cards that cover the duties of the desk. When any work is even temporarily rearranged the card that refers specifically to the work attached is transferred accordingly. In this way the functions of each desk are always fixed; each clerk has a clear record of all things that he must do or look after; and whenever the work piles up at a given point it may be easily transferred to other desks with the assurance that it will be completed properly. These cards are supported by tickler cards which automatically come up on the date when the work must be completed. This method moves the work forward on each desk according to a definite schedule.

Some time ago we made an addition to our tickler file, including a weekly tickler for the ordering of supplies. When this tickler comes up at the end of each week, every desk is looked through. The needed supplies are ordered; and while no current papers or dead material are supposed to be in desk drawers, the weekly desk review brings up for disposition any matters that have found their way into temporary oblivion.

Speed in handling our work is absolutely necessary. As long as we keep the difference between speed and haste clearly before us, the work is turned out accurately. But our increasing volume of business demanded a greater daily output and a more speedy handling of details. We began our study to increase output in the stenographic departments.

Our first move was to analyze the methods our typists and stenographers used in placing stationery and forms in their machines. We quickly discovered that no two stenographers performed these operations in exactly the same way. In fact, so great was the variation that we decided to standardize the

entire operation. And here we obtained the cooperation of stenographers and typists.

How Information Was Collected Before a Decision.

For several weeks they experimented and checked their methods of handling routine tasks. Finally they all agreed that the best they could do involved three or more distinct operations, the increased number depending entirely upon the number of carbons required.

But we reduced the entire operation to one swift movement of the left hand by the use of a simple binder, made of the same quality of manila paper as our second sheets. When completed, it is the same size as our stationery. The carbon is placed face down on the binder, the top edge of the binder is then folded over the front, and the carbon is securely stitched to the binder. This stitching is about three-quarters of an inch from the top of the binder, leaving an edge of manila paper about one inch below the stitching. Here is the binder complete, with the carbon securely anchored. The second sheet is then placed under the carbon; the letterhead on top, inserted under the turned edge. This edge holds the letterhead in place. Where two or three carbons are needed, the process is similar.

These binders are made up in our supply department, with the letterheads and second sheets inserted. Packed 250 binders to a box, they are shipped direct to our various branch offices. The manufacturing is all done by boys, and the total cost is negligible when compared to the time saved in our stenographic departments.

Today our stenographers have but one pick-up in handling all correspondence; the daily stenographic output is approximately a third greater. As each binder is used it is placed in a box, to be shipped back to the home office supply department, refilled and returned. By dating the carbons with a rubber stamp, and by inspecting them when they are refilled, we prevent any carbon from staying in service too long. This means clear copies of all correspondence. Again, by inspecting carbons we prevent their being carelessly discarded.

Further investigation along production lines uncovered a considerable amount of lost motion in the handling of correspondence. The majority of our letters are letters of instructions passing between the home office and our various branches, or between branches and widely scattered local representatives. Here we found that, in dictating, many of our employees and executives did not get to the point in the first paragraph; and the majority of the letters were too long.

We met this by adopting an office memorandum that does away with salutations. Now, instead of writing "Mr. So and So, Portland Office, Dear Sir," or "Hello, Bill," we begin a letter by simply heading it "Portland." Then we get down to facts. In

place of signing it "Very truly yours, John Wether-
spoon," we sign it "Atlanta."

While we cannot state the precise saving, we have eliminated at least five typewritten lines. Another noticeable improvement is that the concise heading and signature encourage brevity. And the form has practically eliminated all comments irrelevant to specific business.

Another one of our methods is a great deal different from the methods commonly in use. Throughout our organization all work originates with our employees. Inquiries and reports do not go to an executive for routing through an office. Each report and inquiry goes directly from the mail desk to the clerk who must assume the responsibility for its handling—the functions of all clerks are clearly defined.

Therefore each clerk has to assemble all office information or special instructions covering each job, has to think it through, and has to decide definitely what is to be done. He then attaches a brief penciled memorandum to each set of papers, plainly stating the action that is to be taken, instructions as to the number of copies to be made, other departments interested, permanent and tickler records, correspondence and other pertinent details.

At a specified time every day each clerk presents his various problems to the executive over him, in the form that we call a "put-up." This states first what to do and then explains why. The information attached must support the clerk's conclusions. In this way errors are easily detected and the proper action outlined.

An Executive Advantage from This Office Plan.

This method of handling our business enables every executive to pass on a great many questions at first sight, moving rapidly through many transactions with the assurance that they have had careful thought by competent workers. Of course, every executive must know in detail the work of every employee in the organization to insure the proper handling of every case. But by directing only the final disposition of all business, our executives are able to reserve their full ability for the more important business problems.

Each put-up slip carries the initials of the clerk who handled it. This insures the return of every report with all papers attached from stenographers, record clerks, and other departments. The clerk then makes a final review of the entire case, checks the dictation, decides whether it is satisfactory, initials the carbon, and presents the finished letter to the chief executive, who signs without reading it. If the transaction is incomplete, not well written, or

unsatisfactory in any way, the clerk must again make his put-up to the executive. Here he must either be satisfied or overruled, depending entirely upon the judgment of his chief.

This puts directly up to the clerk the full responsibility for the proper handling of all business. He must see that everything is complete and that all employees handling the transaction are present when the first put-up is made to the office executive. The plan develops the ability of our employees to think quickly, make clear decisions, and act accordingly. But, more than that, it gives them an interest and a spirit in their work that can only bring out their best efforts and develop their executive ability.

If it is true that executives are born and not made, then the birth rate is low. And in our business we must develop executives as rapidly as possible. With this in mind, we hold that our managers are primarily experts kept in the office for the benefit of our clerks. Careful supervision is required to make sure that each clerk places before his chief all questions in need of executive attention, and at the same time handles everything classified as "regular," for which the lines of action are clearly defined.

With us an irregularity is something that does not look right. Clerks are not permitted to pass any business they do not understand. Again, they must make a put-up of everything that does not look right to them. It makes no difference whose jurisdiction is involved; if a job does not look right it must be stopped. Then in the next put-up it is carefully investigated.

The greatest value in this supervision is that it puts all irregularities up to the proper employee. And the success of this entire plan depends upon the cooperation of our clerks. Each one must accept in the proper spirit a put-up to the manager from another who has discovered an error or incomplete handling of any transaction. We handle all errors with the idea that they are caused—not made. Then we dig down and search out the cause; the correction follows logically.

In each office we maintain an inspector, always a graduate clerk. Over his desk must pass all routine. Business that has been handled by several departments, for instance, the inspector goes over carefully for a final review. When the inspector finds errors he brings them to the attention of the manager in the presence of the employees who handled the business. Letters and reports are not released for mailing until the inspector has initialed the office copy. Papers are not broken up and filed until they have been passed by the inspector. This, we believe, is perhaps our greatest service item, for above everything else he represents the interest of our customers.



An Artistic Interior. In winter the light window shades are supplanted by heavy curtains which may be drawn together so as effectually to shut out cold drafts. With the aid of fireplace and radiator the room thus proves comfortable even in severe weather.

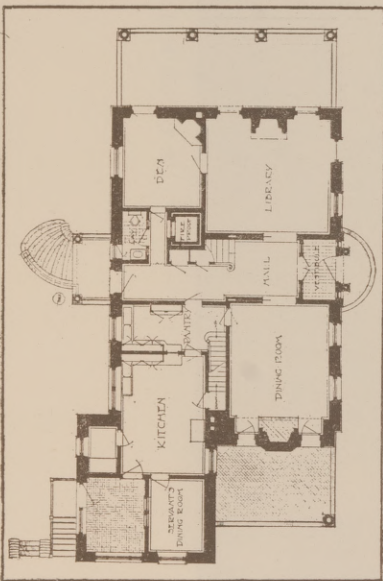


The Home of Mr. Henry S. Brophy, at Maplewood, N. J. B. Halstead Shepard, Architect.

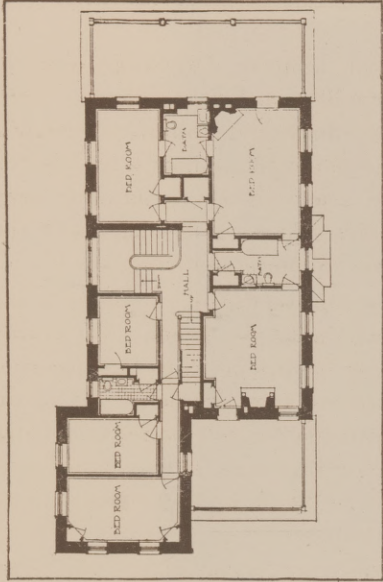


A Double House of Artistic Design, Each Separate and Individual.

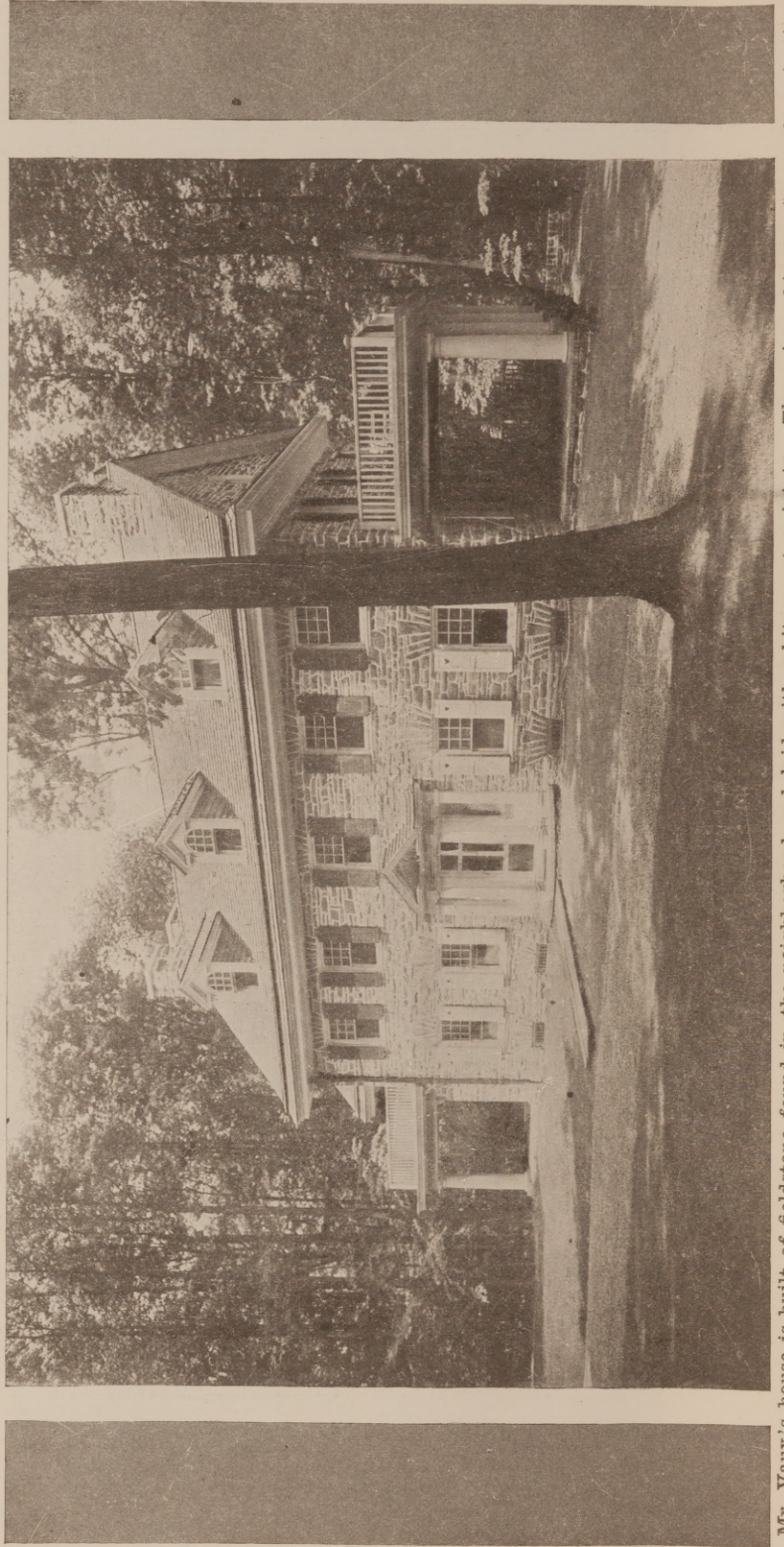
Residence of
 Mr. Geo. Vaux, Jr.,
 Bryn Mawr, Pa.
 ————
 Geo. Spencer Morris
 and
 Richard Erskine,
 Architects.



Between the hall and the den a lavatory has been built a convenience appreciated by the careful planner.



The bedrooms i the ell may be etirely isolated from the rest of the house, which is a matter of importance in case of sickness.



Mr. Vaux's house is built of fieldstone found in the neighborhood and laid with white mortar joints. There is a hip to the roof projecting about the house common to many houses in the neighborhood. Here its strong, horizontal line decreases the apparent height.

Grand Central Palace to Become a World Trade Mart.

Government Turns Building Back to Merchants and Manufacturers Exchange.

ONE of the biggest enterprises to be embarked upon, having in mind the extension of American commerce in foreign countries, as well as the importation of foreign goods to America, has just been inaugurated in New York City. It is the new proposition of the Merchant and Manufacturers Exchange of New York to make Grand Central Palace a great clearing house for world commerce.

On September 30, the United States Government turned Grand Central Palace back to the Merchants and Manufacturers Exchange. For months this great twelve-story building—the largest exposition building in the world—which occupies an entire city block, has been used as an army base hospital. Its evacuation, now taking place, will permit reconstruction of the entire interior so as to make it ideal as a permanent show place for all sorts of manufactured products. The industries will be grouped and permanent exhibits will be made on eight spacious floors, each floor having approximately 60,000 square feet of space. The remainder of the building (the four lower floors) will be utilized for the annual expositions which have made the building famous, such as the Automobile Show, Motor Boat Show, Flower Show, Electrical Exposition, Chemical Exposition, Hotel Men's Exposition, etc.

Permanent exhibits of products of the more important industries will be opened beginning October 15th. The merchants and Manufacturers Exchange has established foreign connections for export business in every important city of the world, and manufacturers, jobbers, retail dealers, and the thousands of foreign buyers undoubtedly soon will regard Grand Central Palace as the world's great trade center and will make it their headquarters when visiting New York. Looking forward to this the management will establish clubrooms, conference rooms, office facilities, etc., to increase the foreign buyers' comfort while in the Metropolis.

Never before has there been such a permanent exchange conducted along international lines which will give the American manufacturer an opportunity to come into direct contact with the domestic and foreign buyer. Some of the industries represented will occupy an entire floor, such as The International Farm Tractor and Implement Exchange, the International Hardware and Homefurnishings Exchange, which will be among the first to be opened, on the sixth and seventh floors respectively. Other enterprises under way for other floors are a permanent Mining Machinery Exposition, a Railway Equipment Exposition, Textile Display, Printing Trades Ex-

hibits, etc. The Farm Tractor Exchange and the Hardware Exchange will open on October 15, 1919. The plans of the Merchants and Manufacturers Exchange are decidedly elaborate, and in a number of ways they will afford a service to the manufacturer, jobber and dealer which has never been possible under the usual systems of merchandising.

Through its wide representation in other countries the Exchange will make its proposition known to every foreign buyer before he sails for America and acquaint him with the value of the service of the new enterprise, while in the United States and Canada the fact that the building is so well known leaves no doubt that it will be the mecca of thousands of domestic dealers and jobbers.

In spite of the fact that the building is an enormous one, space necessarily is limited and manufacturers interested in putting their products before the eyes of buyers in this highly convenient manner will have to step lively to secure space on the various floors. Only goods of proven quality and concerns of A-1 repute will be permitted to exhibit. Grand Central Palace, which is a beautiful building in itself and prior to the entry of the United States into the war, housed the largest expositions held in New York, is centrally located and most convenient to all railroads, steamship piers, hotels, theatres, and the shopping district. The march of the world's industrial progress during the reconstruction period will be largely via Grand Central Palace.

Union Agreement at Dallas.

Stabilization of building operations and an increase in building activity in Dallas, Texas, is predicted by contractors and builders as a result of the adoption of the joint agreement between the builders' association and the unions which have to do with building construction.

Heretofore contractors were unable in some instances to make a flat contract price on a job for the reason that they could not know when the unions might decide to raise the wage scale. Many contractors adopted the system of making a cost plus bid on all jobs; that is, a contract price was fixed, but agreement was made that if the wage scale was raised before the work was completed the owner of the building would have to stand for whatever increase was brought about by the raise in the wage scale.

Architects Urge Financial Aid To Boost the Building Program.

DIFFICULTY experienced in obtaining the necessary financial assistance for the more rapid construction of homes, while greatly lessened in the past few months, is still demanding the keen attention of architects, builders and bankers, says the weekly review of the American Architect. While action by government in enacting legislation to materially relieve the situation, will undoubtedly be supported in any reasonable measures, it will be considerable time before existing conditions can be fully met.

There are two bills at present awaiting enactment by senate, which are the only practical ones so far advanced to secure financial encouragement that will cause great building activity in spite of the prevailing high labor wage scale and material prices. One is to encourage the building of homes by providing for exemption from taxation of the income on mortgages on real estate, the total principal of which does not exceed \$40,000 when held by an individual, and the other the home loan bank plan. It is proposed that the government license these building associations to form into group organizations or local home loan banks, with which they may deposit their mortgages and receive long term loans upon them, the funds becoming available through the issuance by the district home loan banks of salable bonds against mortgages deposited.

Licensing of the federal government would function to standardize these bonds and make them most attractive to the investor. At the same time it would have all the security of the well-placed first mortgage, and, in addition, the security of a collection of such mortgages backed by a reserve fund against possible loss. It is to be hoped that these securities may be sold on such favorable terms as to permit minimum charge of interest to the home builder and save him the annoyance and hardship of commissions and bonuses so frequently suffered.

It is certain that the United States can do little to relieve the necessities of the country in securing additional housing facilities except by encouraging a proper financing of housing undertakings. The creation of a federal home loan banking system through the medium of the building and loan association of the United States will enable the people of the country to obtain money on reasonable terms for the building of homes.

While there has been a slight recession from the enormous building activity of June due to numerous strikes in many sections and the general spirit of

labor unrest which has developed there is a marked increase in industrial activity which has created a wide demand for construction materials of almost every description. The demand for lumber at the present time is far in excess of the supply. Lumber prices are the highest ever known. Manufacturers in many instances are unable to accept the business offered because of depleted stocks.

Manufacturers and wholesalers for the most part agree that there is liberal buying, not only on the part of dealers, but also by the general public. With the close of the war there has come an era of spending with too little regard for the price. To this may be largely attributed the steadily increasing trend of values. It is this continuation of demand—the demand pent-up during the war because of governmental restrictions—together with a shortage of supply, also due to the war, that is making a rising market. Even if there were not a new price level, the prices of the most ordinary commodities would remain high and in many cases increase, due to the economic situation surrounding their production and sale. As a result there would be a tendency toward an increase on the rest of the commodities in order to eliminate price discrepancies, and this of itself would force a new price level.

Generally speaking, 70 per cent of the cost of production of articles in common use may be attributed to wages. This explains why the most important reason for the general increase in prices and for the maintenance of high prices is the higher wage scale. The union wage scale in the New York city building trades shows an increase of from 13 to 69 per cent from July, 1915, to July, 1919, an average increase of about 39 per cent. Building materials increased from 71 to 240 per cent in the same period. This increase is reflected to the same extent in other sections of the country.

Road Builders Demand More Cars.

Good roads advocates and representatives of highway commissions in five southern states, Mississippi, Arkansas, Texas, Oklahoma and Tennessee, met in Memphis, Tenn., and adopted resolutions asking that more cars be supplied for the transportation of road building materials. At the present time road building in the South is seriously hampered by lack of crushed stone.

"The World Tomorrow"

ACCORDING to the Mechanics & Metals National Bank of New York, the United States faces an obligation that no other nation in history ever faced—that of supplying for some time to come the economic support of the world. In a book entitled "The World Tomorrow" which it has just prepared, this bank maintains that with the return of peace other nations must now, more than ever, draw their life from us, or else suffer possible social, industrial and financial breakdown.

The bank summarizes the situation confronting the United States as one in which it must supply practically all of Europe with

Food,
Goods,
Credit,
Sympathy.

"To take the last of these first," says the bank in "The World Tomorrow," "sympathy of an intelligent and understanding kind is essential to the welfare of Europe during the early part of the reconstruction period, else the other three needs named will not be satisfied in the proper manner. A realization that Europe's condition is tragically altered from what it was five years ago must govern our attitude in everything we do, for then we will the more readily supply the goods and credit for Europe's up-building.

"These are the goods above all else that Europe needs, and that we can supply: grain and provisions; machinery, railroad equipment and rolling stock; steel, iron, copper and other metals; coal, wool, cotton and lumber. These goods are needed up to an unlimited amount. The same circumstances that call upon us to send food call upon us to send materials to relieve a people oppressed by a most harassing situation—one in which industry is benumbed because tools and materials necessary to relieve disorganization actually do not exist.

"As for credit, our willingness to extend financial accommodation against which various nations and people may draw, until such time when they can meet their obligations with goods or gold, will count strongly henceforward. If people abroad are to buy goods of us, credits will have to be arranged in their behalf, and we will find it necessary to accept these as the only kind of payment our customers can afford for the present."

In spite of the urgent present need of Europe for materials and credit, the Mechanics & Metals National Bank maintains a striking spirit of optimism throughout its book, explaining that inasmuch as recovery after other wars has always come more quickly than was believed possible, a rapid recovery from this war may be looked for very soon. "War,"

it says, "is as old as mankind. So also, ingenuity and courage are as old as mankind. War has always brought hardship and suffering. Human courage and ingenuity, in turn, have produced that with which to surmount the hardship and overcome the suffering. War has always called forth destructive forces in mankind. By a compensating paradox, it has also called forth qualities to overcome those destructive forces: valor, self-reliance, capacity for sacrifice, immunity to hardship, ingenuity.

"Looking to the future, there are certain human forces that we can count upon to help balance the set-back of the war, namely, the toughened moral fiber, the energized physical strength, the intense desire for restoring material welfare of the men who have returned from the fighting."

To prove the soundness of its position in taking a cheerful view of the outlook, the bank describes the manner of Europe's recovery following the thirty years' war of the seventeenth century as well as the recovery of the "So terrible had been the famine during the war" it is explained, "that cases of United States following the civil war. Of unusual interest is the account of Germany's rapid revival from a state of prostration in the seventeenth century far worse than that seen in that country today. According to the bank's narrative, the thirty years' war was of such a character that industries and commercial routes in Germany were obliterated, towns were leveled to the ground, homes were charred masses and scattered hovels. Before peace was signed, population had fallen to 12,000,000 from 30,000,000 when the war began. Starving creatures cut down criminals from the gallows to eat them. So great was the depopulation that in Franconia the state passed a law authorizing every man to marry two wives and forbidding men and women from becoming monks and nuns.

"It was from such abject misery as these terms and figures signify that Germany arose. Frederick William, the 'Great Elector,' laid the foundation of empire in Germany's ruins, and laid them so well that in a comparatively few years, Europe saw Germany stepping forth to conquer, successfully encountering both France and Sweden in less than a generation after its surrender of territory to those countries."

Birmingham Permits.

Building permit values in August in Birmingham, Ala., aggregated \$507,540. Of this, \$246,793 was for frame and brick veneer buildings and \$124,275 for business buildings. The other permits were for repairs and additions.

Trade Notes of Interest

Handbook Steel-Lumber Sections.

The National Pressed Steel Company, Massillon, Ohio, producers of Hot Rolled Stripes and Steel Lumber Sections in ROBAL Steels, are distributing a reference handbook to engineers and architects for their use in designing various types of building construction.

The data and information embodied in this publication will prove useful to all designers of buildings, as it covers a light weight, economical, fireproof system of construction in Steel Lumber with structural steel and kindred materials. Complete specifications on Steel Lumber construction, properties of sections, tables of safe loads, construction details, and other designing data are all clearly illustrated and described.

Steel Lumber is supplied in long lengths on a tonnage basis to steel fabricators, the same as steel shapes are handled,—providing prompt shipment—best service and close co-operation between owners, architects and builders.

New Self-Draining Radiator.

“See that pipe across the bottom of our new Pressweld Radiator,” said J. A. Irwin, of The American Pressweld Radiator Corp. “Well, sir,” he went on, “that’s going to make a lot of architects and heating engineers mighty happy.

“See what it does. That pipe drains every drop of condensation out of the radiator. It eliminates all water pockets and water pockets have been the one possible objection to sheet metal radiation. It provides increased heating area and greater air circulation between the radiator sections. I tell you, a good heating plant hooked up with that new radiator for less expense than anything yet devised. And, it will last too, that’s the best part of it all.

We weld the sections securely into the pipe, as you see, making the radiator practically one solid piece. It is light, too—light enough to hang on the walls or ceiling, without strain.

“Have we issued any descriptive literature yet? Why, yes! We’ve just printed an attractively illustrated folder. It clearly shows how this new, self-

drained radiator is built and works. Believe me, every good building project will have them in the specification sheets as soon as architects and heating engineers know about them. Have your professional friends write us for a copy of the new folder, also a new catalog that gives all technical data and measurements together with tables of ratings, etc. Just address The American Pressweld Radiator Corporation, at Detroit, Michigan. We’ll send ’em right away.”

Foreign Trade Opportunities.

Where addresses are omitted they may be obtained from the Bureau of Foreign and Domestic Commerce, Washington, D. C., and at the branch offices of the Bureau, 315 Custom House, New York, N. Y.; 629 Federal Building, Chicago, Ill., and Association of Commerce Building New Orleans, La., and 310 Custom House, San Francisco, Cal. For convenience in filing please use separate letter sheet for each trade opportunity request.

30209.—The purchase of all kinds of nickel-plated bathroom fittings is desired by a company in England. Quotations should be given c. i. f. English port or f. o. b. New York. Reference.

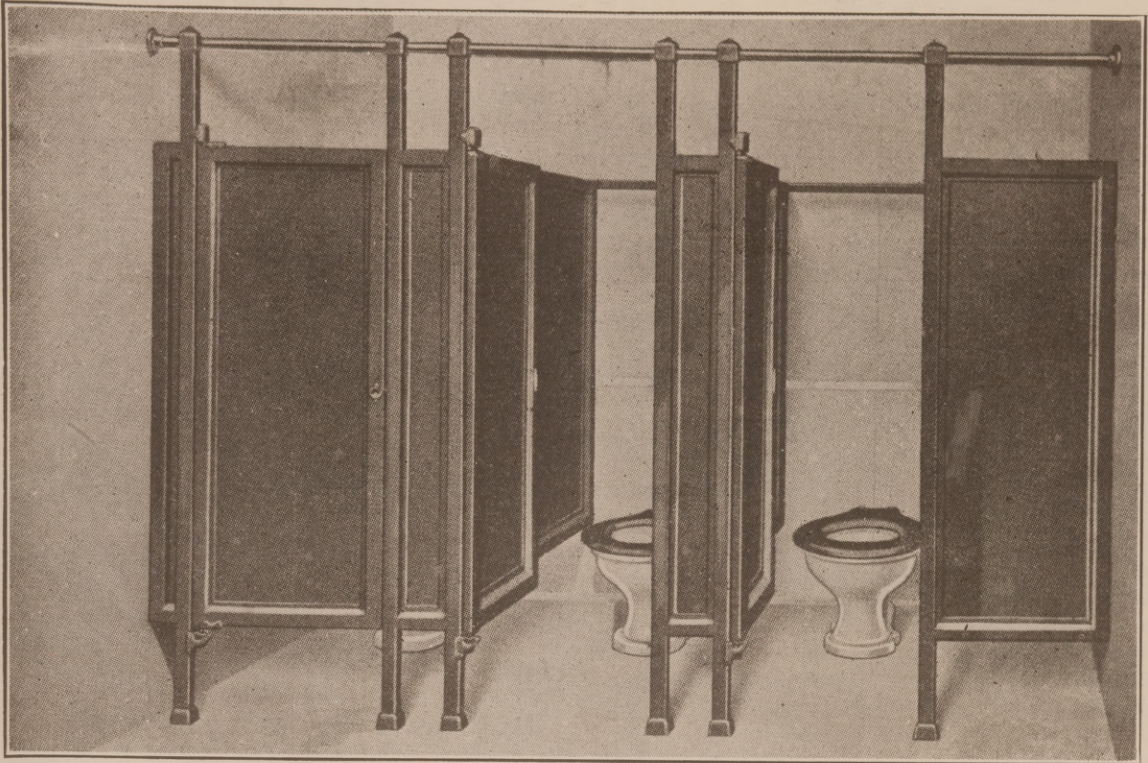
30482.—An agency is desired by a man in France for the sale of steel plates, tin plates, and cement. Correspondence may be in English. References.

30574.—A manufacturer in Scotland desires to secure an agency for outright purchase of building bricks, enameled bricks, drainage material, enameled fire-clay sinks, closets, lavatories, urinals, baths, Portland cement, plaster board, wall tiles, sanitary drinking fountains, etc. Quotations should be given c. i. f. Glasgow. References.

50519.—A merchant from Cyprus, who is in the United States for a short time, desires to secure an agency for the sale in Cyprus and Syria of cement, roofing material, hardware, lumber, plumbing supplies, glass and paints. References.

Find Brick Cheaper than Wood.

According to estimates worked out by County School Commissioner C. W. Pittman, the cost of building and maintenance of the wood buildings is about as great as that of brick, when the difference in insurance is taken in consideration. He figures that the \$70,000 voted by Ware county for building school houses would be more wisely expended in building of brick buildings than if lumber was used. This matter, said Mr. Pittman will be looked into closely by the board of education, and it is probable that the material to be used will be brick.

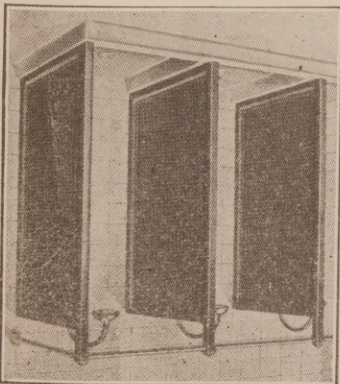


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Building and Construction News.

Bank and Office.

Haleyville, Ala.—National Bank; \$25,000 capital; considering erecting brick building.

Lake Village, Ark.—Chicot Bank & Trust Co., C. F. Tompkins, Cash.; bids until Oct. 13 to erect building; plans and specifications from St. Louis Bank Equipment & Fixture Co., 8th and Walnut Sts., St. Louis.

Marianna, Fla.—Bank of Greenwood; building to replace structure noted damaged by fire.

Hardy, Ky.—Kentucky River Coal Corp.; Y. M. C. A. and church building.

Hazard, Ky.—D. W. Fulp and others; 6 office buildings; 3 stories; brick; \$120,000.

Hazard, Ky.—J. B. Hoge and others; office building; brick.

Whitesburg, Ky.—David Hays and others; office building.

Baltimore, Md.—Wilbur F. Spice, 316-18 Chamber of Commerce; \$75,000 office building, South and Water Sts.; 36.7 x 87.8 ft.; 3 stories; foundation for 12 stories; brick and marble; probably steam heat; Smith & May, Archts., 1133 Calvert Bldg.; bids opened in about 60 days.

Baltimore, Md.—Mercantile Trust & Deposit Co., Calvert and Redwood Sts.; alter and enlarge building; add 2 stories; brick; reinforced concrete slab floors; lower vault; install heating plant; tile roof; low-pressure steam heat; electric gear tractor elevator; Trowbridge & Livingstone, Archts., 527 Fifth Ave., New York; bids in.

Hurlock, Md.—Citizens' Bank of Hurlock, Edgar B. Simmons; erect building at Poplar and Main Sts.

St. Louis, Mo.—A. Heman Construction Co., Title Guaranty Trust Bldg.; \$100,000 bank and office building; 2 stories; 70 x 100 ft.; brick, concrete and stucco; Angela Realty Co., Engrs.

Danbury, N. C.—Citizens' Bank, J. H. Ellington, Prest.; bank building.

Wilmington, N. C.—H. L. Vollers; office building, leased by Alexander Sprunt & Sons, Inc.; 3 stories; 66 x 86 ft.; reinforced concrete; built-up roof; reinforced concrete and tile floors; steam heat; electric lights. Address Henry E. Bonitz, Archt.

Houston, Tex.—Humble Oil & Refining Co.; reported to erect 10 or 12-story office building; Clinton & Russell, Archts., 32 Nassau St., New York.

Guyan, Va.—Guyan Valley Bank; remodeled building; W. B. Smith, Archt., Huntington, W. Va.

King George, Va.—Bank of King George, Dr. G. C. Mann, Prest.; bank.

Winchester, Va.—Commercial Bank; erect building.

Greenwood, Fla.—Bank building will be erected by Bank of Greenwood.

Lavonia, Ga.—Architect Frederick J. Orr, Athens, Ga., is preparing plans for bank building to be erected here.

Church Buildings.

Adel, Ga.—Plans for church building to be erected by Baptist church have been accepted; seating capacity of more than 500. Rev. J. E. Hall, pastor.

Birmingham, Ala.—St. Joseph church has permit to erect church building; frame; \$3,500. The Pastor.

Dewey Rose, Ga.—Fund of \$5,000 has been raised for erecting church building for Baptist church. The Pastor.

Florence, Ala.—Annex for Sunday school purposes will be erected to building of First Methodist church; two stories and basement. The Pastor.

Forsyth, Ga.—First Baptist church has tentative plans for church building; brick; \$30,000; expected that construction will be begun in short time. The Pastor.

Jacksonville, Fla.—Church building will be erected here

by Society of Fathers of St. Joseph, with headquarters in Baltimore; seating capacity of 400; school rooms; \$60,000; plans are being prepared and construction will be begun in short time. Father Gumbleton will have general charge of construction arrangements.

Mobile, Ala.—W. B. Hewitt will supervise construction of church building for Central Baptist church, Rev. J. E. Barnes, pastor; three stories; brick veneer; seating capacity of 1,500; \$30,000.

Rock Springs, Ga.—Rock Springs Presbyterian church, Dr. William Huck, pastor, will erect church building next spring.

Tifton, Ga.—Remodeling of building of Episcopal church has been begun under supervision of C. V. Arnold; building will be moved and painted; concrete steps; \$1,400.

Mobile, Ala.—Central Baptist church, Rev. J. E. Barnes, pastor; \$18,000 building; 3 stories; brick veneer; seating capacity 1,500; asbestos shingle roof; pine floor; hot-air heat; electric lights; J. E. Greene, Archt., 1905 American Trust Bldg., Birmingham; W. B. Hewitt will supervise construction. Address J. E. Barnes.

Cullman, Ala.—First Methodist church; building; contemplated. Address The Pastor.

Pine Bluff, Ark.—First Methodist church, considering plans for \$100,000 church and \$15,000 parsonage; Dr. J. A. E. Baylor, Architectural Secretary of Board of Church Extension, M. E. Church, South, Louisville, Ky.

Doerun, Ga.—Baptist church, Rev. W. M. Cutts, pastor; church and rectory; \$17,000; asphalt shingle roof; hardwood floors; hot-air heat; single reflector lights; concrete sidewalks; Jas. E. Greene, Archt., 1905 American Trust Bldg., Birmingham. Address Rev. W. M. Cutts.

Louisville, Ky.—Vount Vernon Street Methodist church; \$50,000 community center; swimming pool, gymnasium and library. Address The Pastor.

Charlotte, N. C.—First Baptist church, Rev. Luther Little, pastor; \$50,000 Sunday-school annex.

Elizabeth City, N. C.—Methodist Episcopal church; \$80,000 to \$100,000 building; 96 x 170 ft.; brick and stone; tile or slate roof; wood floors; steam heat; electric lights. Address J. M. Michael, Archt., Charlotte.

Gastonia, N. C.—Baptist church; \$30,000 to \$50,000 building. Address The Pastor.

Greensboro, N. C.—Holy Trinity Episcopal church, Rev. R. E. Roe, pastor; building; H. B. Upjohn, Archt., 456 4th Ave., New York.

Wilson, N. C.—Calvary Methodist church, Rev. J. Herbert Miller, pastor; \$15,000 building.

Abbeville, S. C.—Methodist church; building. Address The Pastor.

Andrews, S. C.—Methodist church; \$50,000 building. Address The Pastor.

Alpine, Tex.—Methodist Episcopal church South; \$26,000 building; about 70 x 125 ft.; brick or hollow tile; shingle or slate roof; bids opened within 90 days. Address Rev. J. H. Walker, pastor.

Caddo, Tex.—Methodist Episcopal church Extension Board, Dr. H. A. Boaz, Secy., Louisville, Ky.; church and parsonage.

Ennis, Tex.—Tabernacle Baptist church; \$50,000 to \$75,000 building; H. C. Leinbach, Archt., Dallas, Tex.

Gainesville, Tex.—E. J. Huffaker; bids until Sept. 30 to erect church building.

San Antonio, Tex.—Methodist church, Rev. H. R. Porter, pastor; \$15,000 building; reinforced concrete and brick; 50 x 65 feet; auditorium, bowl floor, seat 300; balcony; English basement; Beverly W. Spillman, Archt., Alamo Bank Bldg.

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BEDFORD, INDIANA.

Stephenville, Tex.—First Baptist church; \$75,000 building; C. H. Leinbach, Archt., Dallas.

Bristol, Va.—Mary Street Methodist church, Rev. J. E. Naff, pastor; building.

Richmond, Va.—Broad Street Methodist church; \$25,000 building. Address The Pastor.

Morgantown, W. Va.—Methodist Episcopal church; \$12,000 building. Address The Pastor.

Business and Store Buildings.

Bessemer, Ala.—J. J. Jordan; 2-story brick building.

Haleyville, Ala.—Drewery Bros.; brick business building.

Haleyville, Ala.—J. S. Halbert; brick business building.

Haleyville, Ala.—W. W. Haley; brick business building.

Haleyville, Ala.—G. W. Crosswhite; brick business building.

Haleyville, Ala.—B. J. Cowart; \$10,000 to \$12,000 garage and mercantile building; brick; 2 stories.

Washington, D. C.—Cohen & Hughes; \$55,000 building, 1221 E St., N. W.; 2 stories; brick; A. P. Clark, Archt., 816 14th St., N. W.

Jacksonville, Fla.—N. L. Enelson; remodel building; \$10,000.

Palmetto, Fla.—Harlee & Harrison; \$20,000 building; 2 stories; brick; plate-glass front.

Atlanta, Ga.—Mrs. J. A. Corley; \$10,000 addition and alterations.

Ashland, Ky.—Kent Prichard; 2-story building; 25 x 63 ft.; brick; wood floors; composition roof; plate-glass and prism front; combination electric elevator; J. M. King, Archt.; ready for bids Oct. 12.

Bowling Green, Ky.—Samuel and J. Louis Pushin; 6-story business building.

Paducah, Ky.—McKinney-Guedry Co.; \$20,000 building; 93 x 123 ft.; slow-burning construction; 3-ply built-up roof; wood floors; city lights; freight elevator; W. E. Gore, Archt.; day labor.

Seco, Ky.—E. C. Bentley; store and office building.

St. Louis, Mo.—Geo. F. Town, Jr.; 6-story and basement store and office building.

Springfield, Mo.—Springfield Stone & Fuel Co.; rebuild burned structure.

Orangeburg, S. C.—Wm. C. Wolfe; several stores.

Winnsboro, Tex.—C. W. Moore; 2-story brick building; 25 x 100 ft.

Norfolk, Va.—R. A. Jones; alterations to 2 buildings; brick; cement and tile floors; hot-water heat; \$15,000; Russell Edward Mitchell & Co., Archts., Flatiron Bldg.

Beckley, W. Va.—Dr. T. E. Combs; building.

Albany, Ala.—Store building will be remodeled by C. E. Frost and A. J. Keyes, Athens, Ala.

Columbia, S. C.—Architect Philander P. Scroggs, Whitley L. Ewing, associate, Augusta, Ga., are preparing plans

for store front for Stelling-Nickerson Shoe Co.; "Easyset" metal bars, marble base; hardwood floors; tile work and birch and fir doors; construction coming winter.

Public Buildings.

Washington, D. C.—Bureau of Yards and Docks, Navy Dept., C. W. Parks, Chief, Washington, D. C., bids until Oct. 15 for completion of storage plant for fuel oil at navy yard; drawings and specifications (No. 4035) at Bureau or Commandant of navy yard.

Kansas City, Mo.—Substation.—Thomas C. Bourke; probably 7-story building; 2 stories; for postoffice; 20,000 sq. ft. floor space; concrete; site 100 x 115 ft.; loading dock; ultimate plans call for 10-story structure.

Galena, Mo.—Stone County Clk.; bids until Oct. 6 for \$50,000 courthouse; C. H. Sudhoelter Co., Archt., 215 W. 9th St., Joplin, Mo.

Lincolnton, N. C.—Lincoln County; \$100,000 courthouse. Address County Commrs.

Roxboro, N. C.—Person County Commrs.; \$20,000 courthouse and jail; 4 stories; fireproof; brick; granite trim; Harry Barton, Archt., Greensboro, N. C.

Ashville, N. C.—City; \$50,000 comfort station; concrete, marble and mahogany. Address City Commrs.

Charlotte, N. C.—Mecklenburg County and City Commrs.; \$20,000 home for women.

Selma, Ala.—Hotel Albert, F. A. Cater, Mgr.; \$15,000 addition; 10 rooms and baths; 20 additional rooms contemplated.

Jonesboro, Ark.—J. S. Parsons; 50-room addition to Parsons Hotel.

Hartwell, Ga.—Plans are being prepared for hotel building to be erected by Hartwell Hotel Co. at cost of \$100,000, as reported previously in The Industrial Index. Building committee, J. H. Skelton, A. N. Alford, D. C. Alford, J. A. W. Brown and C. I. Kidd.

Kissimmee, Fla.—Davis & Shook will improve building of Manhattan Hotel, which they have just purchased.

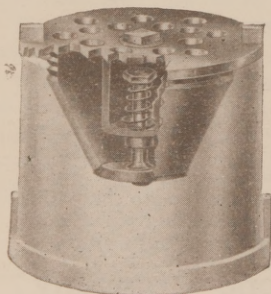
Milledgeville, Ga.—Building of Baldwin Hotel will be improved; exterior will be re-painted.

Rock Hill, S. C.—Bids will be received until October 10 at office of Architect N. G. Walker, this city, for erecting hotel building for City Investment Co., W. G. Stevens, president; five stories and basement; 40 x 100 ft.; reinforced concrete; heating equipment; elevator; 40 guest rooms.

St. Augustine, Fla.—Fred Hall, representative of New York syndicate, stated that the syndicate will expend several millions of dollars in improving property here, construction to be begun in short time; improvements to include 1,000-room hotel building, 50 bungalows, two club-houses and canals.

Tuscaloosa, Ala.—Dr. J. S. Thomas, Chrmn. of Committee to erect Y. M. C. A. building.

East Point, Ga.—East Point Masonic Temple Co., C. H. Livsey, rest.; \$25,000 temple.



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MADE BOTH PLAIN AND GOOSENECK

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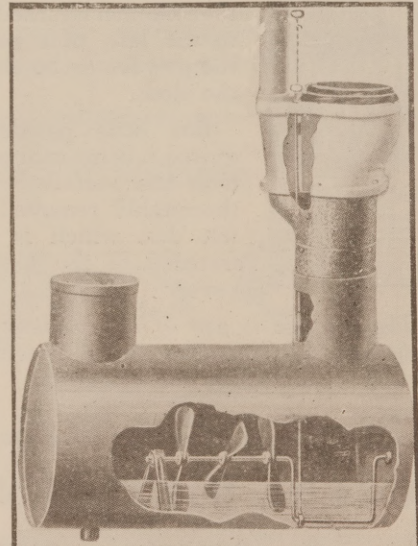
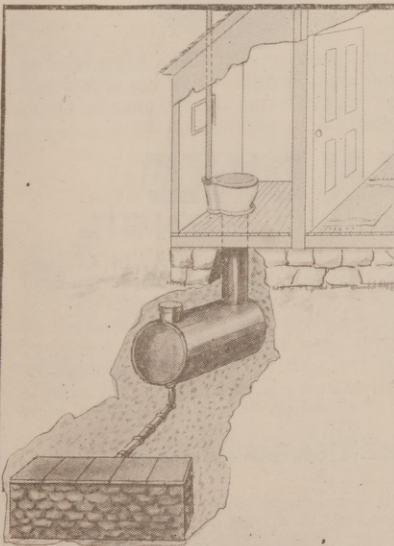
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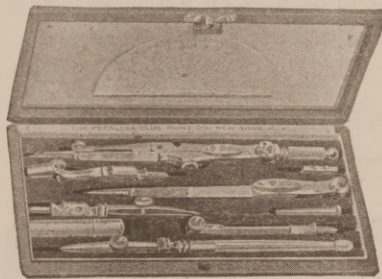
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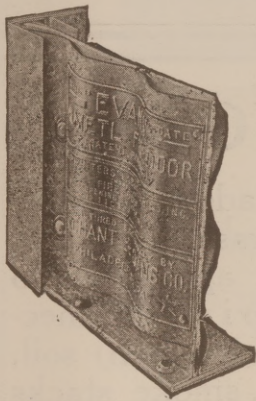
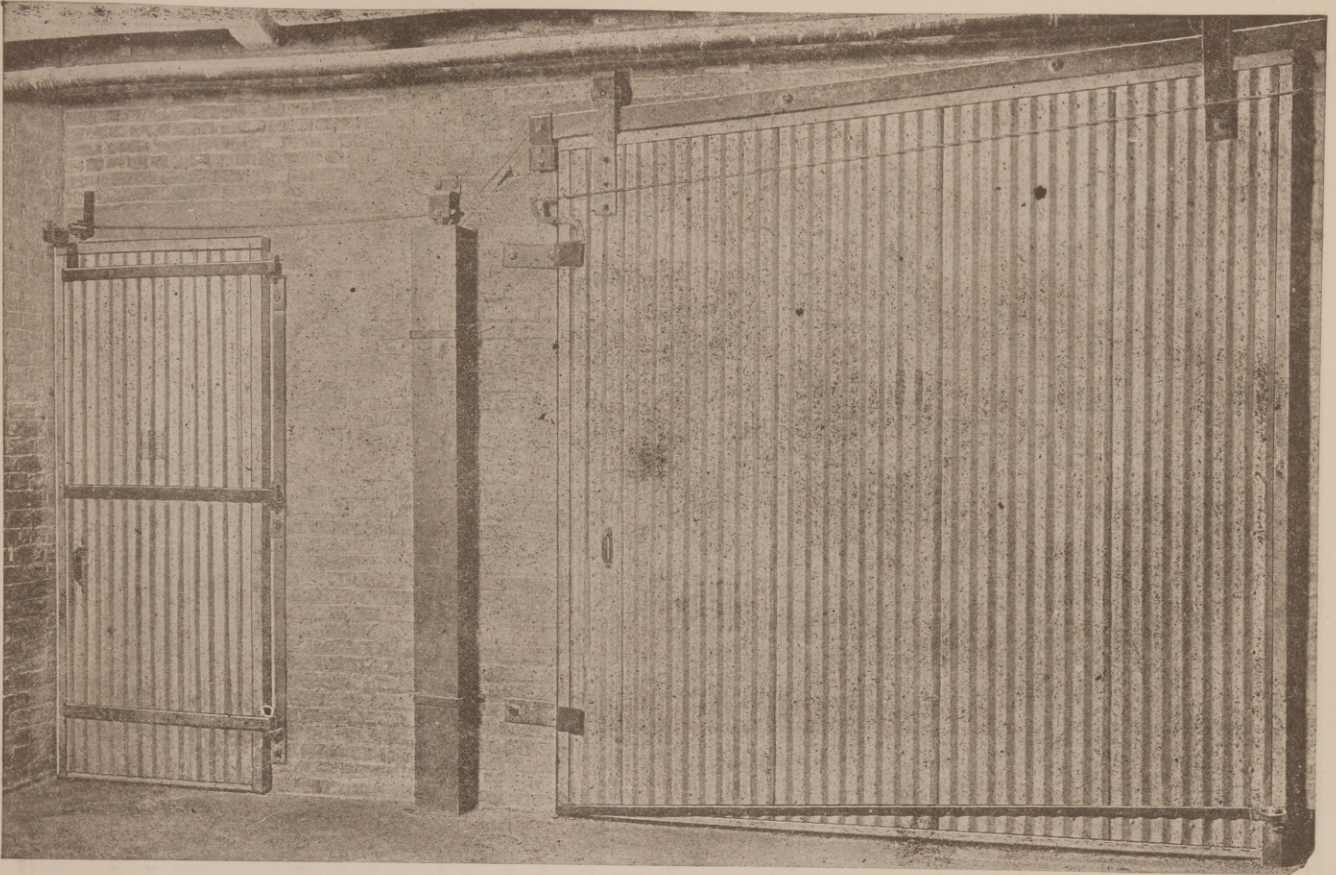
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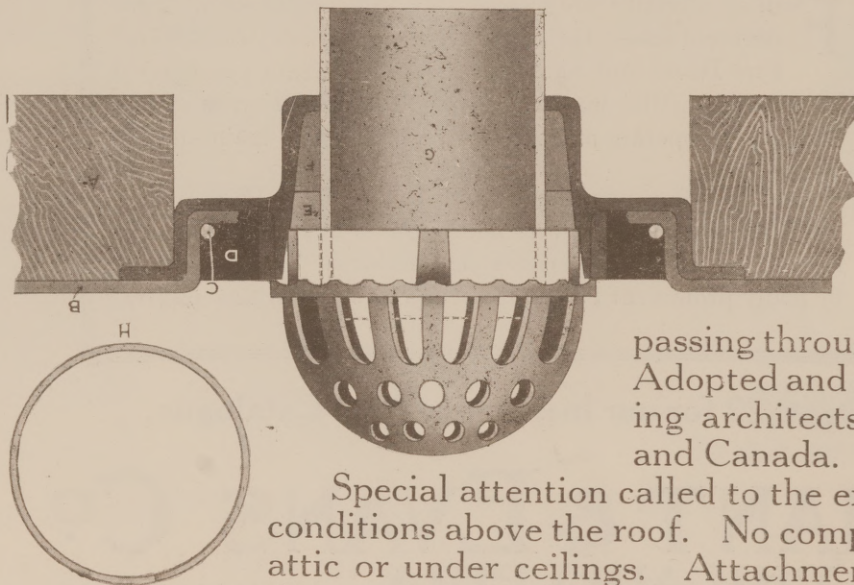
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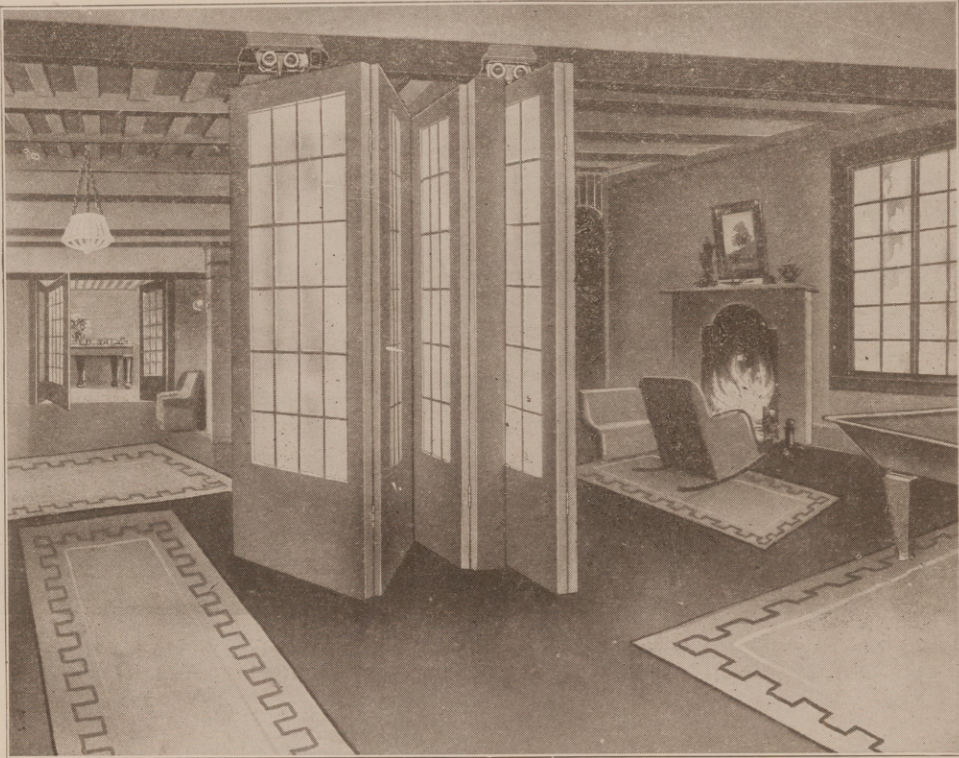
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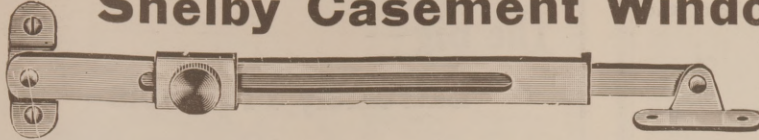
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Made at Shelby, O.
Sold Everywhere.



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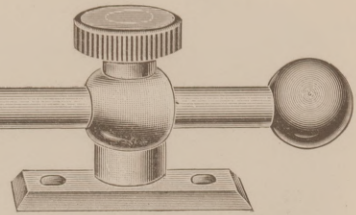
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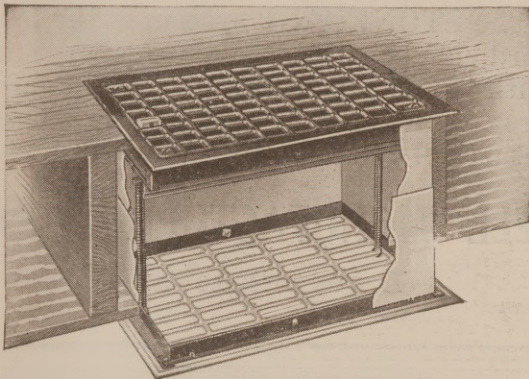


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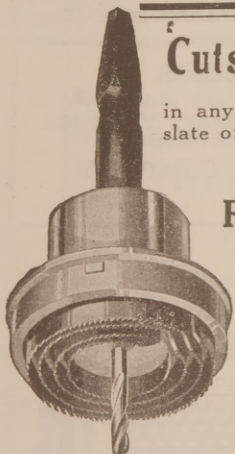
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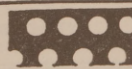
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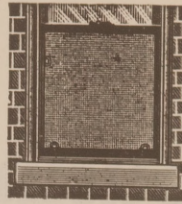
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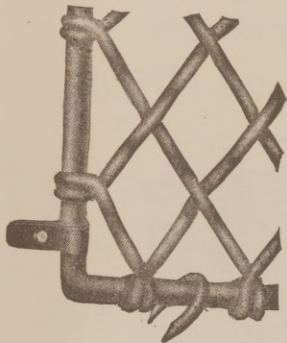
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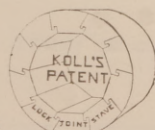


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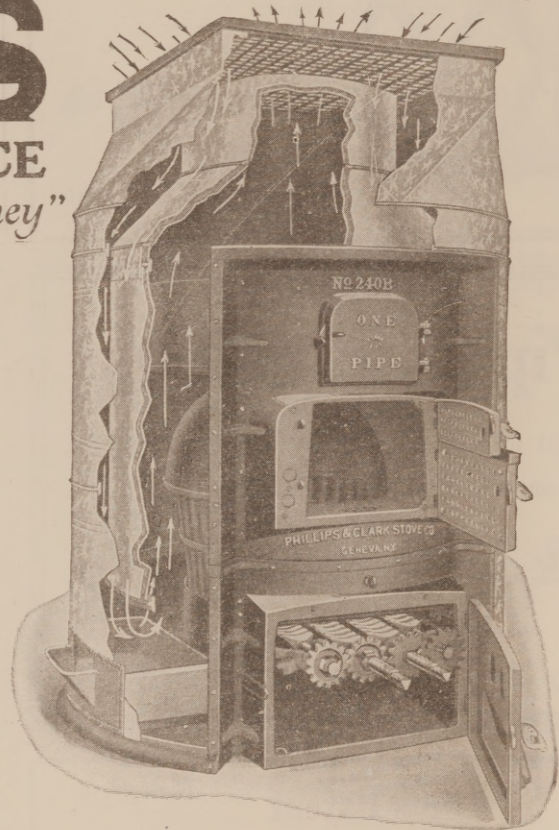
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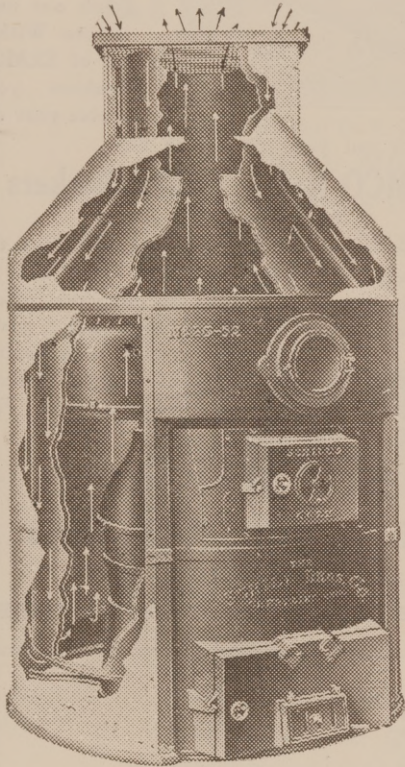
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Stands for the last word in economical and healthful Heating

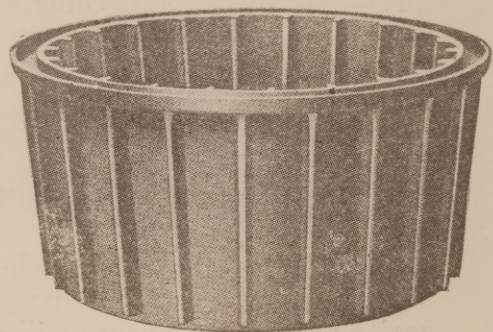


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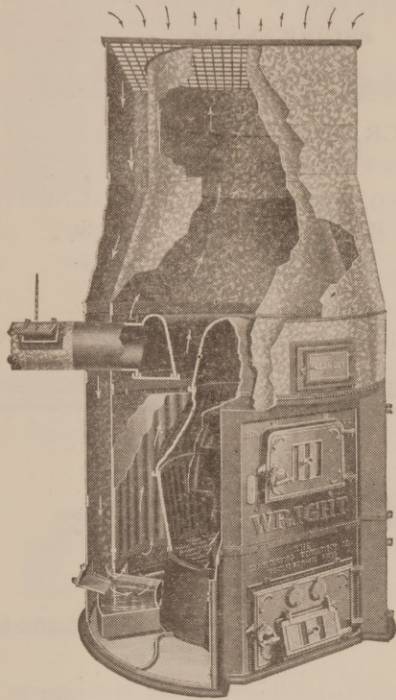
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SPECIAL HUMIDIFIER**

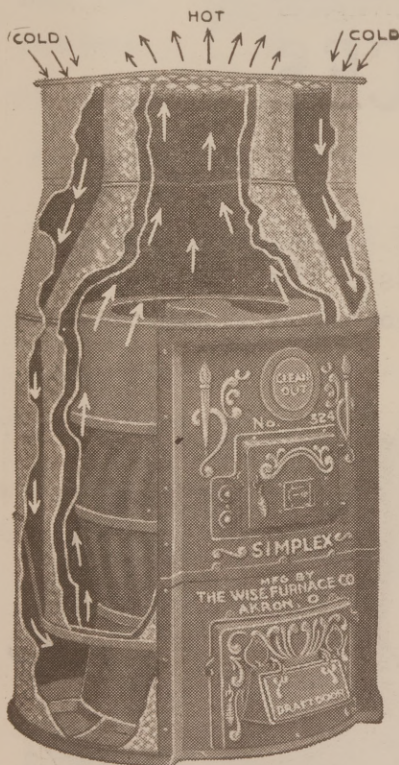
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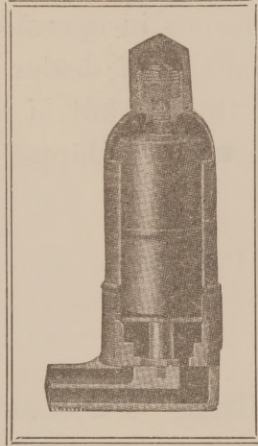
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Guaranteed for five years.

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TRADE NAME REGISTERED
STEEL FURNACES

Give your customers the best their money can buy.

Its **Gas proof** and **Dust tight** construction appeals to the owner. Contractors can make no greater contribution, for the comfort and convenience of their customers, than the installation of a **FRONT RANK** Furnace.

Plans Free.

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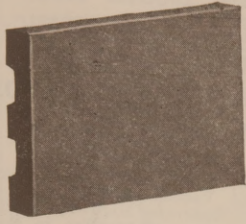
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HIGH GRADE

ELEVATORS

FOR

Passenger and Freight Service

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Passenger

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WE MAKE ALL KINDS OF ELEVATORS

ANY SPEED AND CAPACITY DESIRED

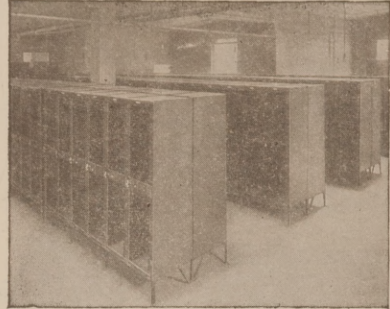
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Metal Lockers

OF EVERY DESCRIPTION

Steel Equipments for Hotels,
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Machine Guards
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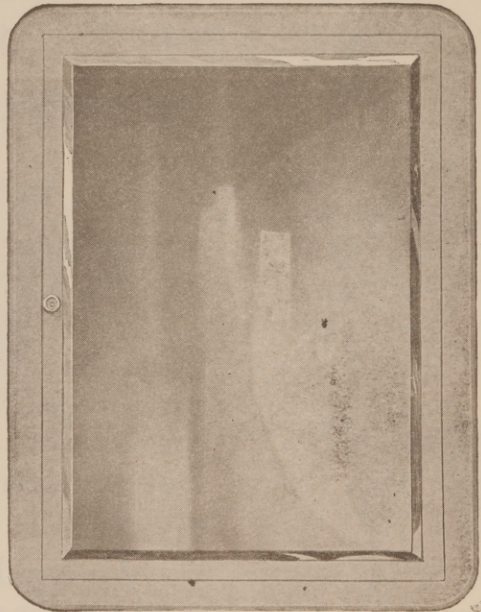
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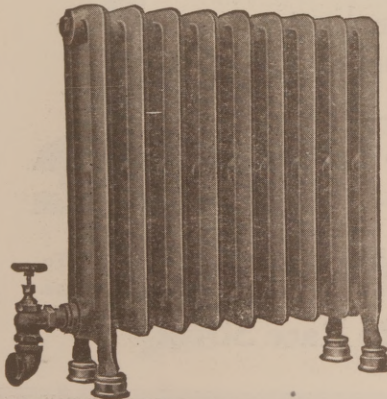


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"WHITE STEEL" SANITARY FURNITURE CO.

Dept. 10, Detroit, Mich.

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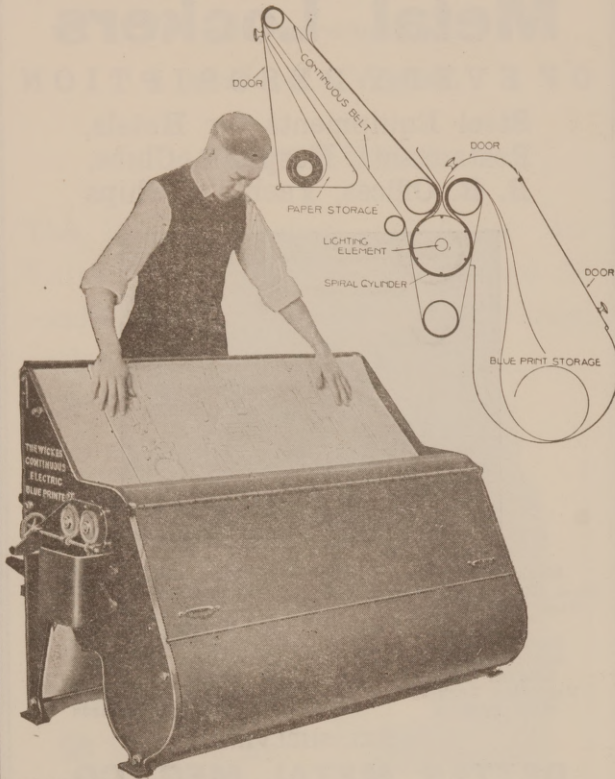
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justable Foot jacks
it up in a jiffy.

Simply the twist
of your wrist un-
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The Wickes
Continuous Electric. Sells
half the price. Uses half
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There is now under construction in Lee County, Mississippi, connecting Saitillo and Verona, twelve miles of magnificent Concrete Highway. Still another is under construction in Fulton County, Georgia, three miles from Atlanta. These roads will last for all time, monuments to the Commissions that built them.

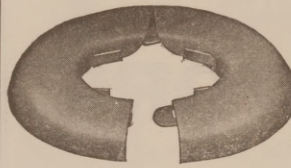
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DIXIE PORTLAND CEMENT CO.

James Building, Chattanooga, Tenn.
CONCRETE FOR PERMANENCE

The No. 10 Cold Rolled Steel Combination Ceiling and Floor Plate

B. & C. PLATES



B & C Plates can be put on at the completion of your work and fastened securely thru a simple but positive lock joint. The B & C Catalogue shows the unique construction of our many types and tells the full B & C story. What is your name and address?

The Beaton & Corbin Mfg. Co. Conn.
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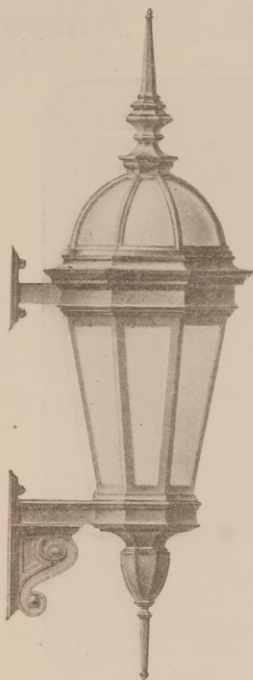
Capacity 15 Cars Per Day
Washed and Screened Gravel and Sand for all purposes. Concrete Gravel, Roofing Gravel, Reinforced Concrete Gravel (thoroughly tested and proved superior to granite in fire resisting qualities), Pea Gravel, Screened Sand, Concrete Sand, Marble Sand (finest for sawing marble). Used throughout Georgia and Alabama. Gravel Pit, Cook's Ala.

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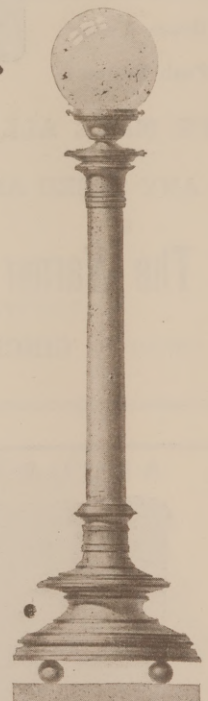
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Over 350 models of Lamp Standards, Lamp Brackets, Pier Lights, etc., enable us to satisfy practically any possible requirements. Write for our several catalogues illustrating a complete line of our products.

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To Southern Architects and Builders —Increased Slate Service

OUR organization of twenty-five foremost slate quarries in Pennsylvania was satisfactorily tested in rendering urgent service to the Government in its housing needs.

Now our increased facilities are at your disposal. Most standard sizes carried in stock; special sizes made quickly.

But whether you need treads, wainscoting, urinals, closets or other slate units, we can make prompt shipment.

The drafting department gladly offers its help. Or if you send blueprint or other specifications we will make quotation.



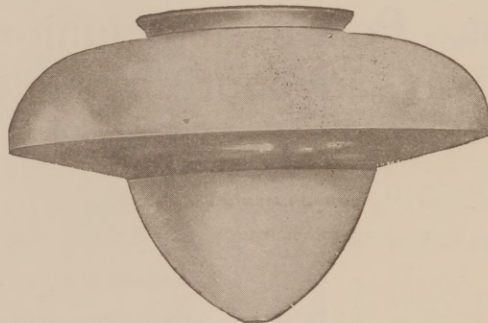
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Manufacturing Five Carloads Daily

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PROMPT SHIPMENTS ON ELEVEN EIGHT TWELVE Better Say Express



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Four sizes: 10x4, 13x6, 16x6, 18x8.

In individual cartons, crated.

The unit without a bad habit.



THE PHOENIX GLASS CO.

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BUILD SILOS!

With the Polk System Junior all-steel machine. Build four-inch wall, monolithic concrete silos that will compete dollar for dollar in cost with the better grades of wood stave. Then all the silo business will come your way.

The Polk System Junior also builds water tanks, well houses, garages, root cellars and numerous other buildings badly needed on every farm. You can get yourself a big, profitable business started at very low cost. Polk System Junior pays its own way--and more. Write today.

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Manufacturers of all kinds of
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Send for our 180-page fully illustrated catalog which contains a vast amount of information on sheet metal products. The contractor's best reference book.

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THE ONLY ONE-PIECE TREAD ON THE MARKET



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Write Specialty Department **A. M. CASTLE & CO., CHICAGO**

SLATE ROOFS

THE SPREADING OF FIRE

in a community is made possible in most every instance by the use of inflammable roofing material, such as wooden shingles, asphalt, etc.

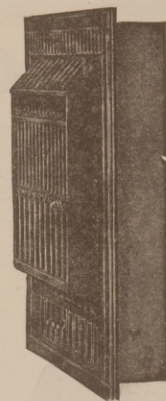
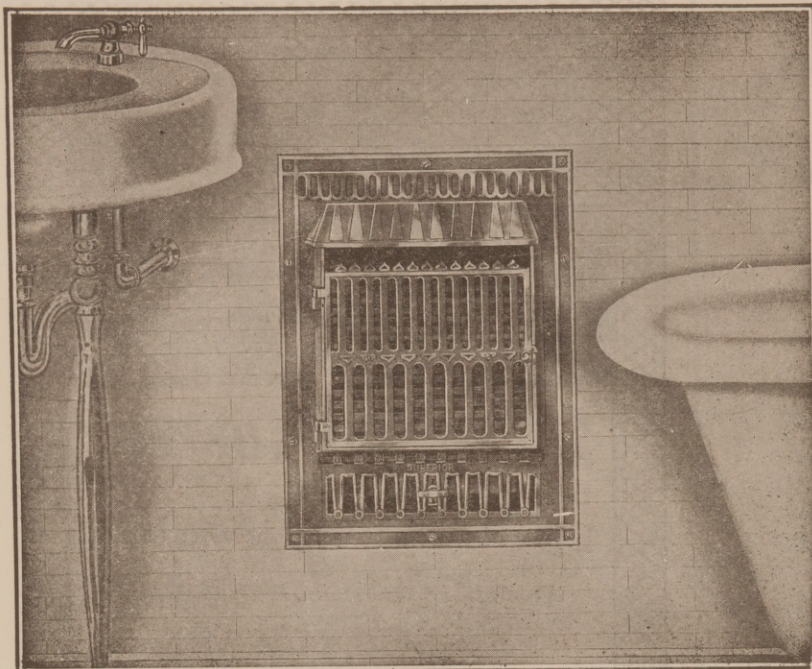
Hundreds of great fires could have been prevented — thus saving many precious lives and millions of dollars' worth of valuable property, had only SLATE been used in the beginning.

SLATE is the ideal Roofing provided by Nature for roofing purposes— why not let Nature take its course?



VENDOR SLATE CO.
Largest Shippers of Roofing Slate in the World
BANGOR, PENNSYLVANIA





U. S. Pat. June 28,

1910

Side View

Side of Cast

Front:

14 ins. wide

18 ins. high

Size of Body

of Heater:

12 1/2 ins. wide

16 1/4 ins. high

4 3/4 ins. deep.

For Natural and Artificial Gas

THE Superior bathroom heater differs materially from any other device for bathroom heating. The front is of Colonial design, cast iron heavily plated, which is fitted with a door for convenience in lighting without danger of being burned. It is constructed to be used in the regular wood partition, tiled or plastered wall of the bathroom and has the appearance of a hot air register, set 14 or 18 inches from the floor.

It is flueless and odorless, as the flames come in contact with nothing but air, (thereby eliminating asbestos and other artificial substances commonly used in all other types of heaters, which become soiled and unsightly.) Its construction is such as to make it entirely free from any danger whatsoever from fire, the body of the heater being lined both inside and outside with heavy asbestos, as well as having a large circulating cold air space around the inner frame which contains the burner. The inner frame also is covered with heavy asbestos.

The burner, which is made of Imported Lava Tips, is fitted with an adjustable check for regulating the combustion on the different pressures of gas. No air mixer is used, as the gas comes in contact with the air through very small lava tips; it mixes and purifies itself, leaving no odor from the gas whatever. It is made so that the heat from the gas jet causes the air furnished to be drawn from the floor through the fender and pass up over the flame, discharging itself back into the room, thus creating a continuous circulation of pure air through the room at all times.

ODORLESS AND FLUELESS

This heater is equipped with lower corrugated copper reflectors and an upper corrugated deflector, also, upper reflector and baffle plate on the cast door for directing the products of combustion back to the point where it comes in direct contact with the air drawn from the floor, which greatly purifies it. The deflector plate not only directs the heat, but hides the gas jets and reflects the light down upon the lower reflectors, giving a very luminous and pleasing effect. This method of heating a bathroom is not only convenient, but very economical and safe, doing away with the objectionable bathroom stove.

The Superior Bathroom Heater not only ornaments the bath-room handsomely but it quickly heats it to just the desired temperature at the least expense. By its use it is possible to bathe and complete the toilet in perfect comfort without firing an expensive furnace which too frequently destroys the delightful coolness so much appreciated in all other parts of the house during warm weather. In fact, it is a necessity in every up-to-date modern home.

Leading architects and designers throughout the United States and foreign countries always specify "Superior" Bathroom Heaters when the best is desired. The front is heavily plated and polished as handsomely as a watch case.

This heater is made for either outside or inside connection, and whenever neither kind is specified in the order, the kind for outside connection will invariably be sent, as that style is generally preferred when the gas line is not inside the wall. In plan for new house the pipe should be about 5 inches to the left of center of opening and come up just as high as the bottom of same, for convenience in setting.

FINISHES:—NICKEL, JAPANESE BRONZE, or BRIGHT BRASS.

Be careful to specify finish and to state whether outside or inside connection is wanted when ordering.

Complete with valve and adjustable check. Bright Brass, Nickel or Japanese Bronze Finish. **NO FLUES NO ODOR NO ASBESTOS NO LARGE GAS BILLS NO DANGER FROM FIRE**

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—AND MINING—

Wall Moulding and Dental Plaster

Its Working Qualities Make It a Favorite Among Architects and Contractors

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KANSAS CITY, MO.

MILLS: GLOBE, NEW MEXICO.

Meyer's Cement and Liquid

For Patching and Repairing Marble, Granite, Slate and Cement Work of Every Description
Large Stock on Hand.

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| 1 Kilo Can . . . \$1.50 | Barrel Powder, 50 Kilos. \$.80 per kilo |
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| Small Can80 | ALL PRICES F. O. B. New York City |

We also handle Dugan's invisible Patcher for patching all kinds of Limestone and Bluestone

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Our 26-Oz. "A"
Quality

Crystal Sheet Glass

Was Used in This
Building

Designed by Pierson U-Bar Co. Erected by Hitchings & Co., Elizabeth, N. J.

Because of the splendid uniform-quality of American Window Glass Company's products they are used almost universally where a dependable glass is required.

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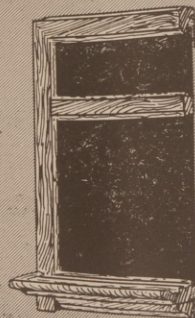
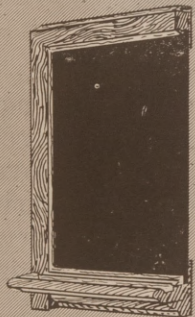
214 Front St., San Francisco, Cal.
440 N. Main St., Memphis, Tenn.
609 Century Building, St. Louis, Mo.
43 Tremont St., Boston, Mass.
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Perfect Jointing To Fit Exact Spaces

Accurate jointing is of the *utmost importance* to insure a perfect blackboard job.

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Send your requirements to us for an estimate.

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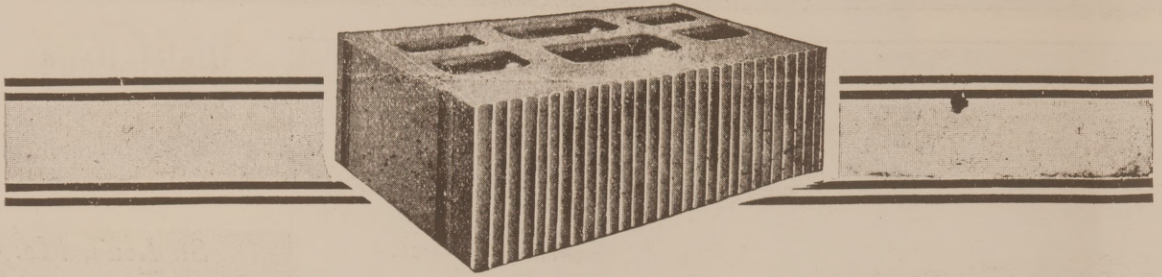
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Headquarters: PEN ARGYL, PENNSYLVANIA

Mills at Slatington, Wind Gap, Pen Argyl and Bangor.

"Absolutely Satisfactory"



McIntyre ^{Live} Air-Space Building Tile

—how you can make them at a profit

The time for you to establish a McIntyre building tile plant is NOW.

If you wait until next spring you will probably find that some more enterprising chap has already established a McIntyre plant on the very site you had selected.

The demand for building units is going to be enormous. It represents a big opportunity for live men with the right kind of snap.

Here are the advantages of the McIntyre Live Air Space Building Tile as a building material.

It is a light unit and the masons like to lay it.

It being light it does not sacrifice strength. It is dense, strong, waterproof.

It lays up a wall that admits air at the bottom and lets it out at the top under the roof plate. This blanket of live air is a perfect insulator.

McIntyre tile walls may be put up at considerable saving over brick construction and at a lower cost even than wood frame construction.

These tile are manufactured on automatic machines in permanent plants.

The machines are operated by power and turn out from 2,000 to 3,000 building tile per day which will displace in the wall 12,000 to 18,000 common building brick.

We want to establish a McIntyre tile plant in every community where the proper raw materials are available and where a sufficient market is assured for the product.

This is a proposition to be taken up by men who have ability in handling concrete, who have the capacity for overseeing a simple manufacturing operation and who can secure the necessary selling organization.



Bottom View of McIntyre Building Tile

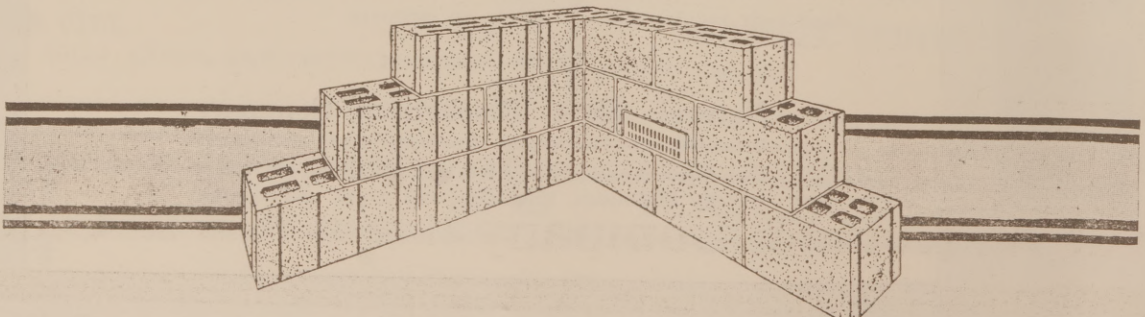
Note that this tile when laid in the wall really forms a triple concrete wall with two blankets of live air space. The design of the tile is such that it is easily taken hold of. It is a unit that workmen do not object to handling.

Write for complete details, which will be outlined to you frankly.

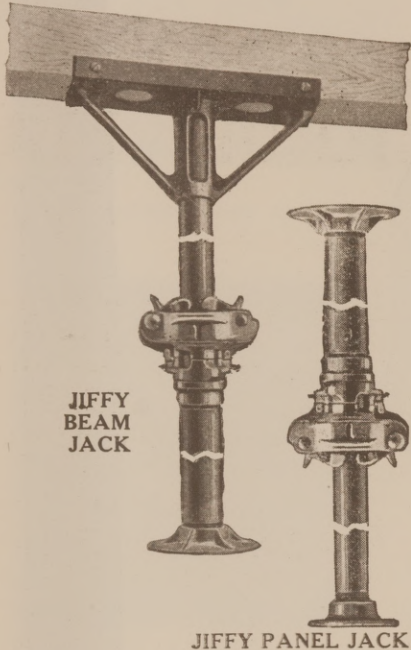
The Concrete Engineering Co., Engineers Building **Cleveland, Ohio**

Exclusive Sales Agent for

The Automatic Concrete Machinery Company



CONSERVE YOUR LABOR AVOID UNNECESSARY WASTE WITH THIS EQUIPMENT



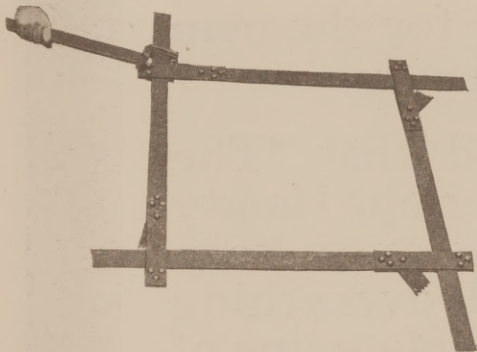
JIFFY
BEAM
JACK

JIFFY PANEL JACK

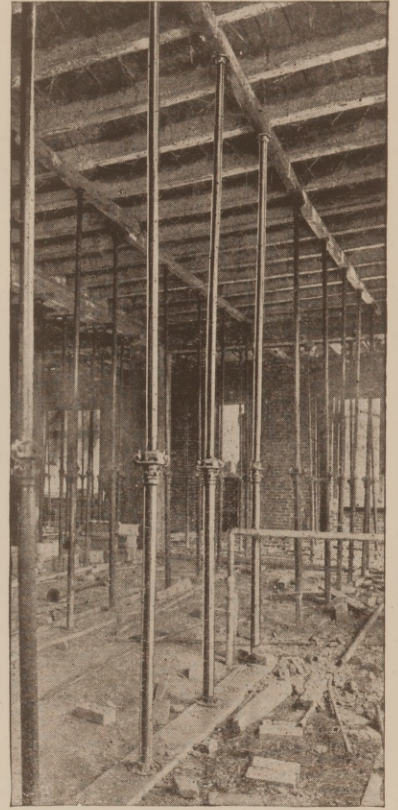
Jiffy Adjustable Jacks
—used for supporting panels, wide trenches, retaining walls and temporary shoring. Four holes in top cap provide for fastening of timbers, or prevent displacement of timbers, while form work is being erected.

JIFFY ADJUSTABLE CLAMPS

JIFFY Column Clamp Also Means Bigger Profits



Simplest and quickest to set. Requires no wedging. No dead space in its adjustment. Automatically squares column. Positively closes all cracks. Also made for round columns. No small parts to get lost.



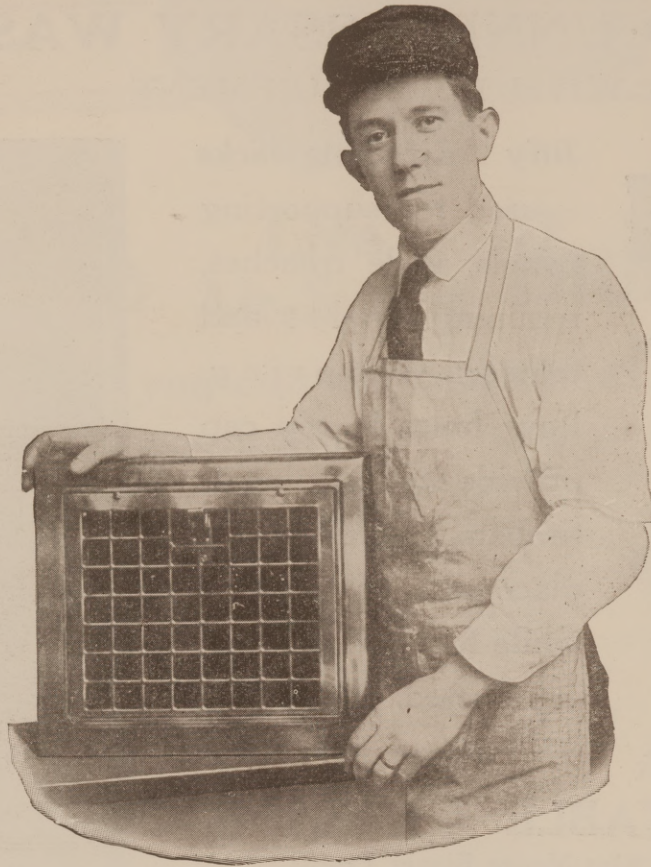
Jiffy Jacks are here shown making money for Fred Drew, Inc., Woodward Bldg., Washington, D. C., on the Kennedy Apartments. Jacks are set full height under 14 inch floor slab.

YOU SHOULD USE JIFFY ADJUSTABLE JACKS and COLUMN CLAMPS *Because:*

- 1—They will help you to secure more contracts where competition is close, by reducing labor and material items in your estimates.
- 2—The large money-saving and money-earning value of this equipment has been proven in actual use by many contractors.
- 3—Low maintenance cost of these devices means more dollars saved on the work.
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- 6—This equipment is of simple construction, light in weight, easy to operate and practically indestructible.

Write for details and prices at once.

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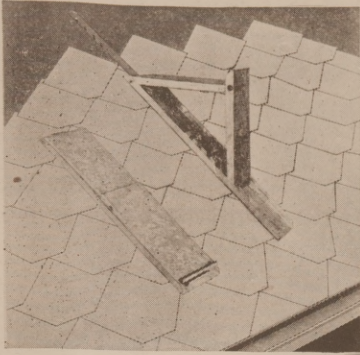
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Asbestos Slate Roof

Save Time,
Energy and
Materials
by using—

The Ajax Roofing Bracket

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For Slating—Tiling—Shingling

They are strong and durable—of old flat when not in use—adjustable to any pitch of roof—quickly attached and detached.

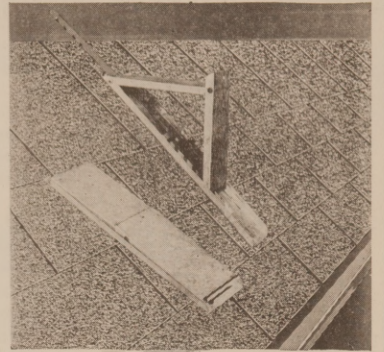
Write for price circular.

Ask your jobber for them.

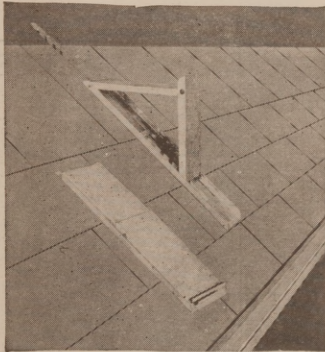
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Asbestos Shingle Roof.



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Barnwell & Barnwell, Architects.

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Used Throughout

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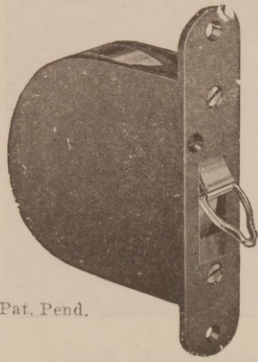
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For use in all classes of new work. Box frames unnecessary. Mortise cut at mill reduces cost of installing. Counterbalance sashes perfectly unaffected by atmospheric conditions. Cheapest method for modernizing old window, as alterations in sashes and frames are not necessary. Sashes should be weighed before ordering.

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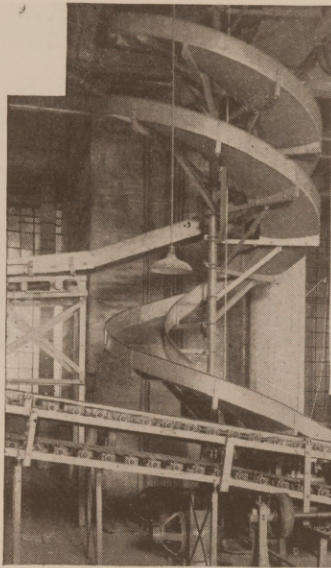
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PARAMOUNT MORTAR COLORS
 "WILL NEVER FADE"

IF given a square deal at mixing box. Use 100 lbs. per 1000 brick, and every job will be absolutely satisfactory.

Four colors—Chocolate, Buff, Black, Red.

The Lookout Paint Mfg. Co.
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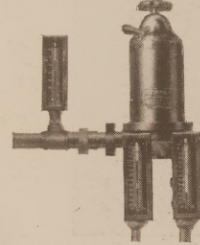
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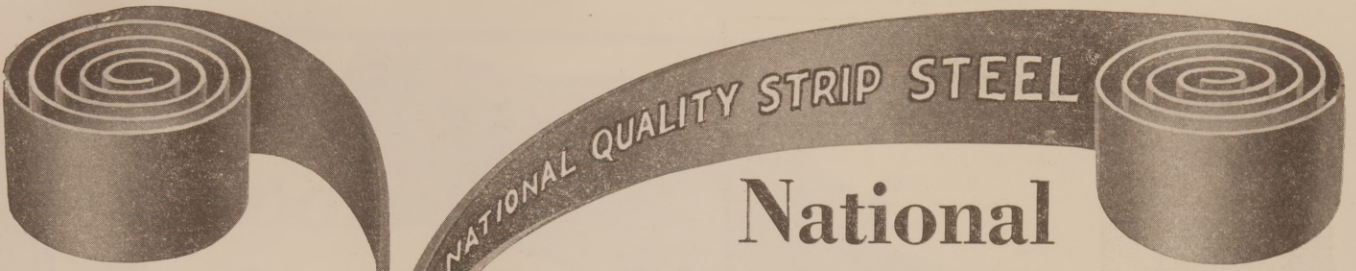
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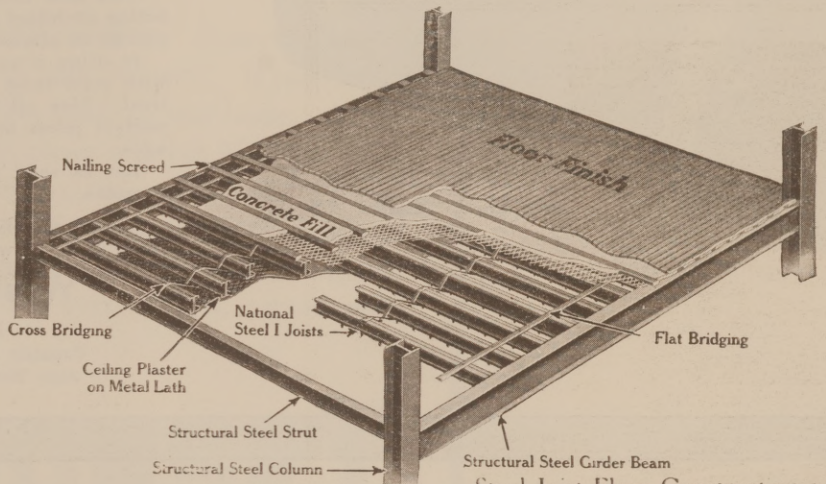
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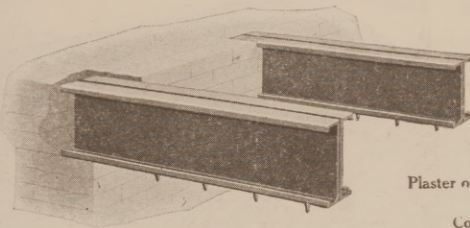


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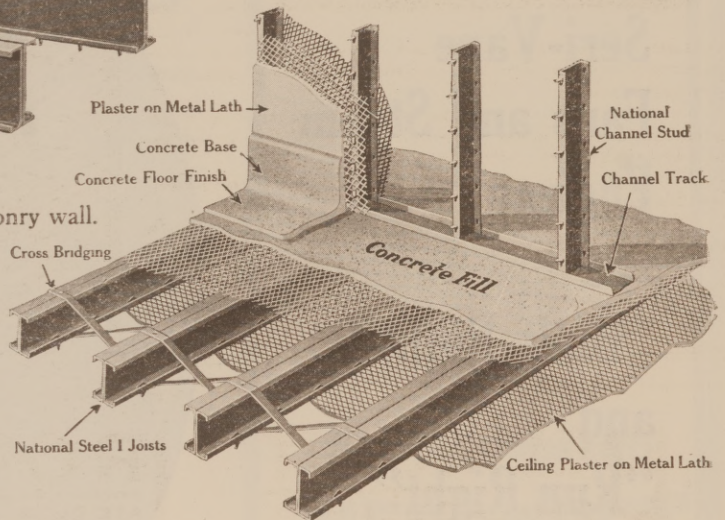
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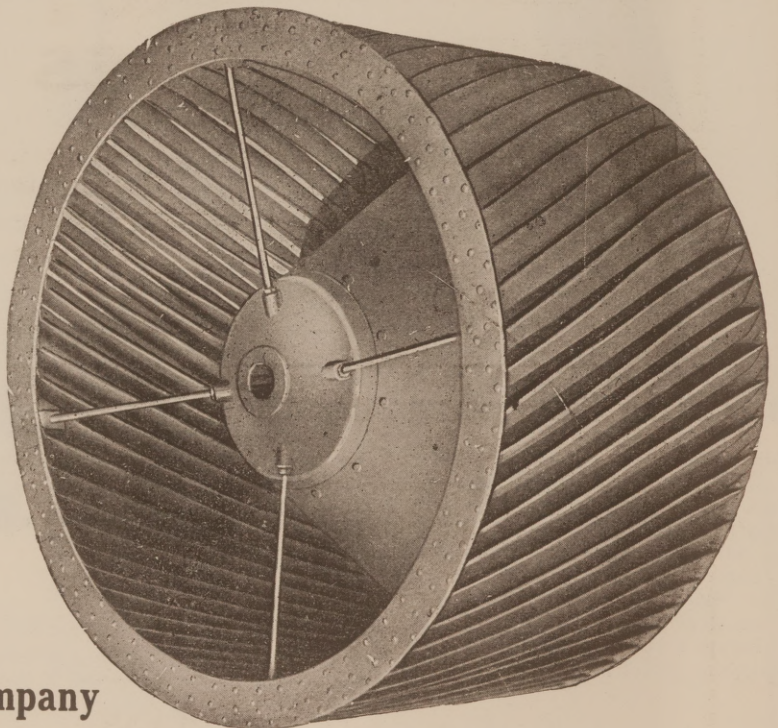
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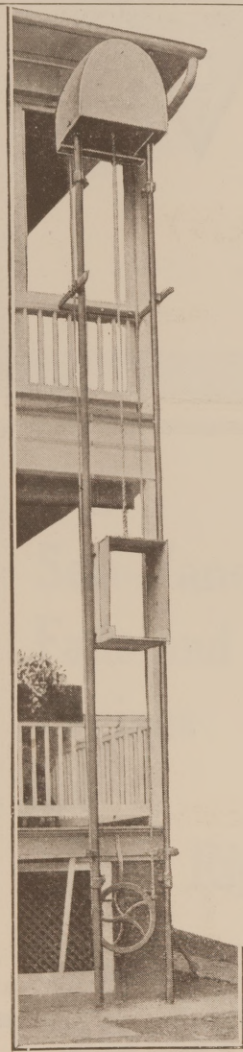
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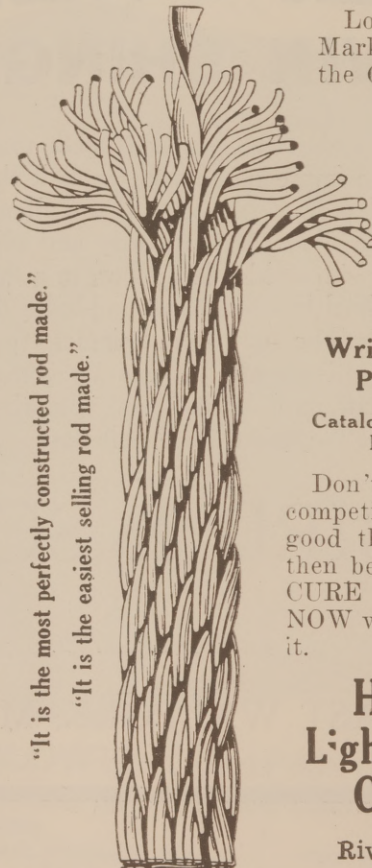
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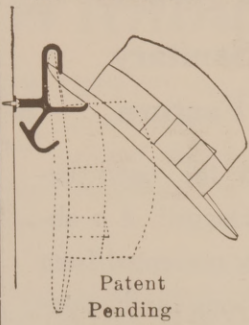
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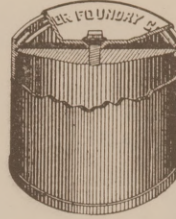
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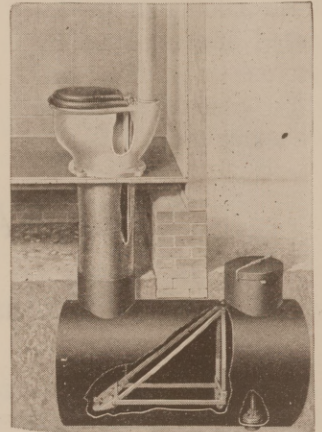
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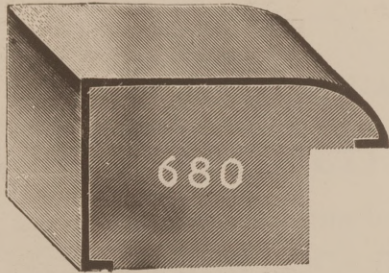
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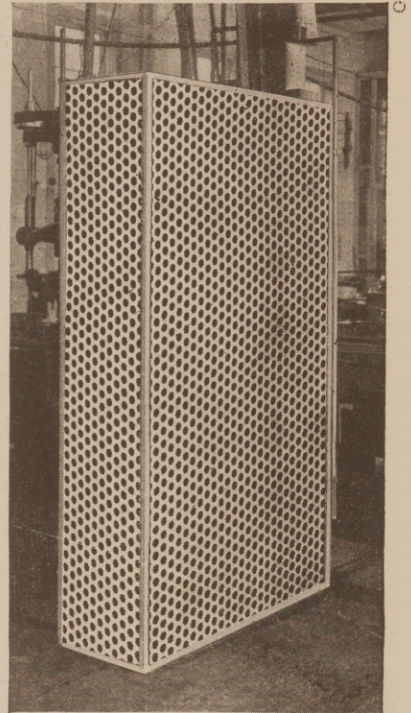
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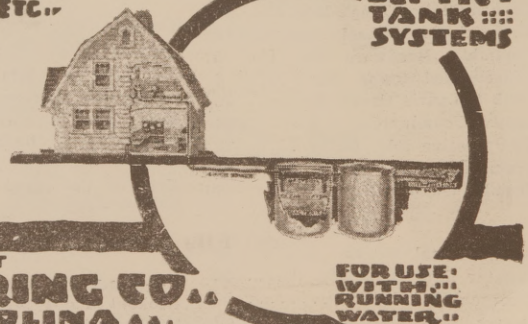
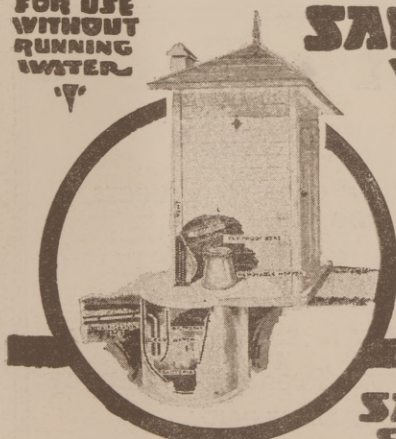
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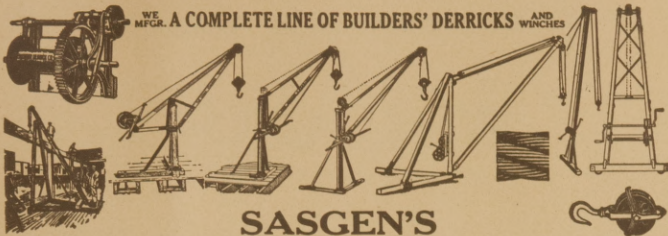
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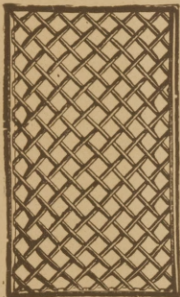


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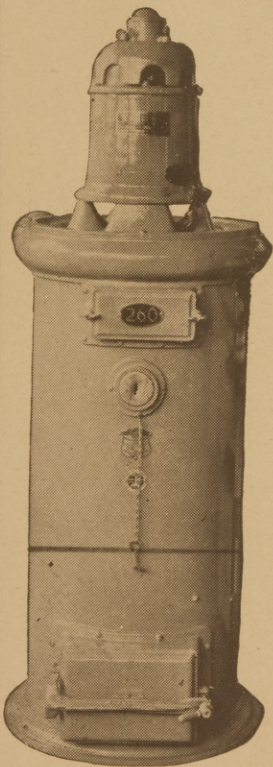
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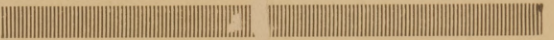
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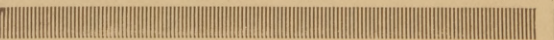
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