

# Southern Architect and Building News

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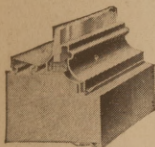
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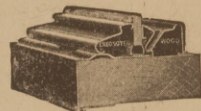
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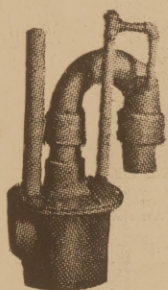
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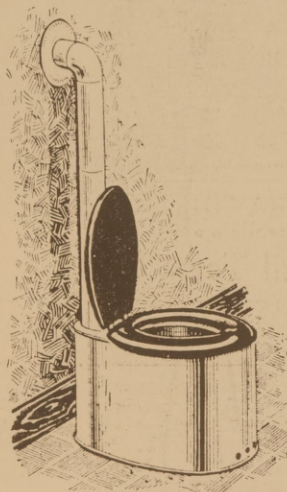
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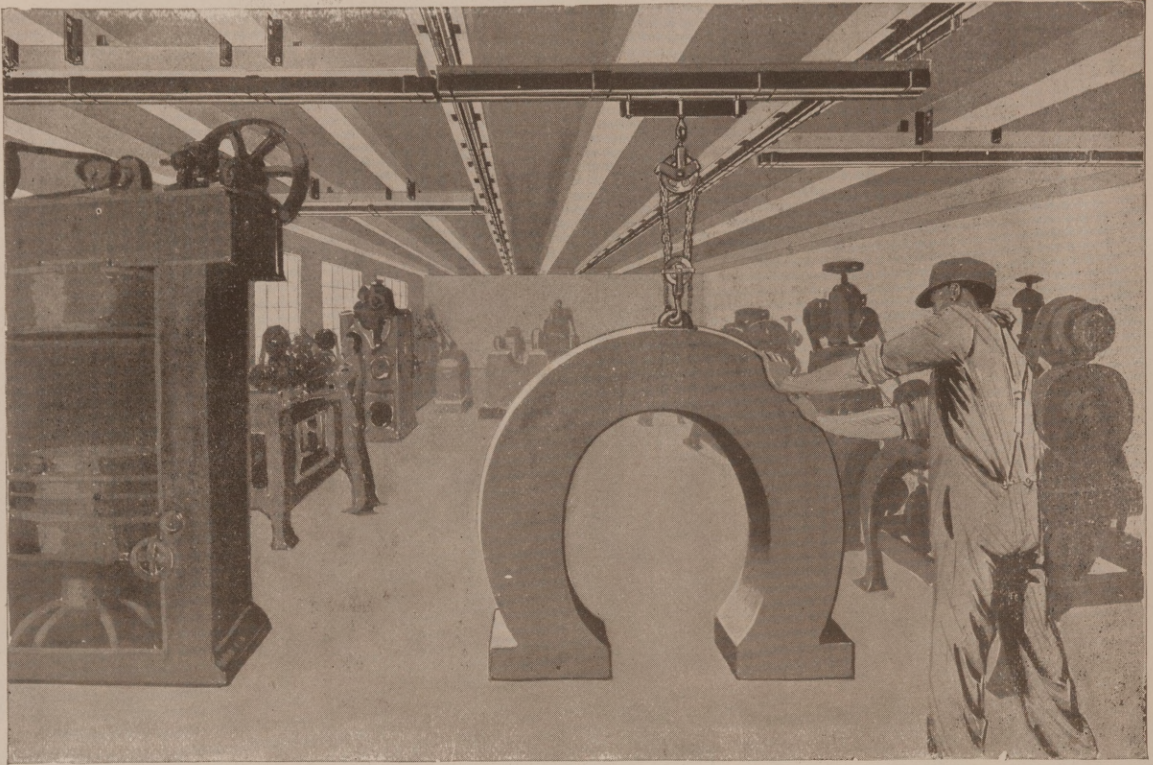
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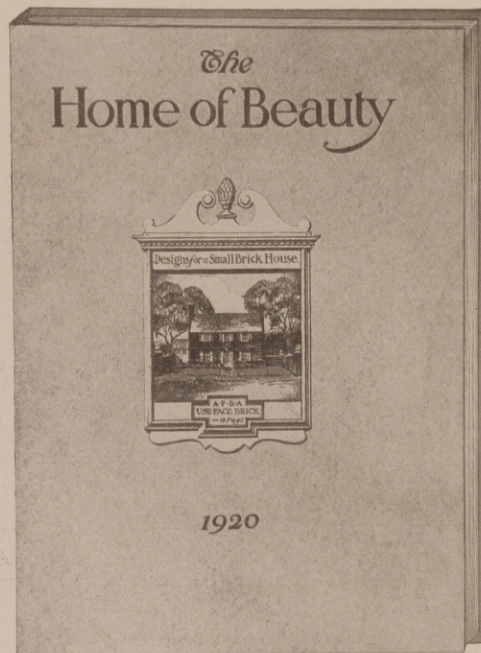
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17—Elevator Door Equipment  
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## "The Home of Beauty"

**T**HIS BOOKLET presents the fifty designs, selected by the jury of awards as the best submitted in the competition which the "Architectural Forum" conducted for The American Face Brick Association last summer.

You will recall that the program called for a Face Brick house to cost \$7000.

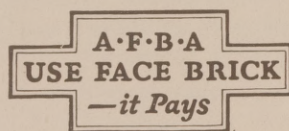
The designs published in "The Home of Beauty" show a broad variety of treatment, both in design and floor-plan arrangement; and should at this time, when there is such a wide interest in the building of small homes, offer helpful suggestions to architects

designing houses of this character.

The text is devoted to presenting the advantages of permanent, artistic homes; and contains, among other timely information, a table showing the Comparative Costs of the common types of wall construction.

There is also an article by Mr. Aymar Embury II, on "How to Build a House," which explains, in a most interesting manner, the proper relationship between owner, builder and architect. If every "client" would read this article, there would be less joy taken out of the lives of architects.

*A copy of "The Home of Beauty" will be sent to any architect asking for it on his office stationery.*



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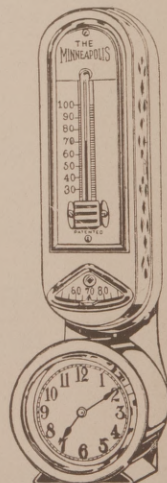
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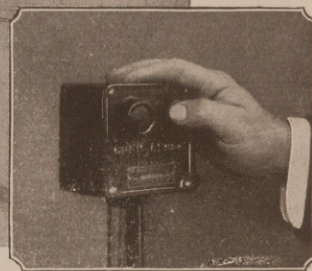
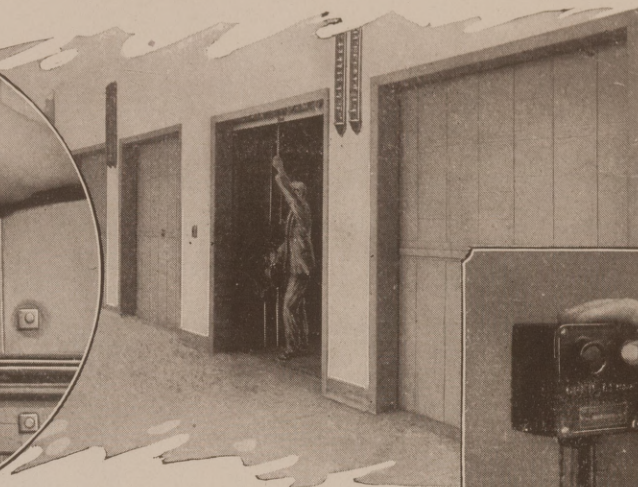
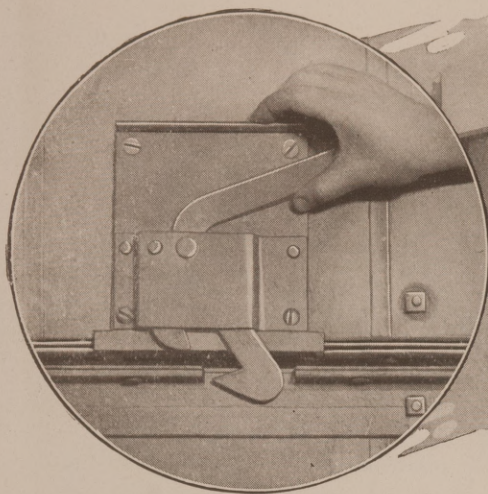
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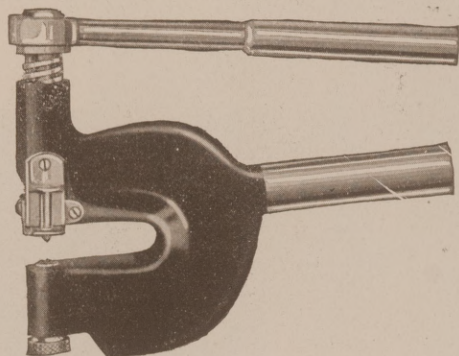
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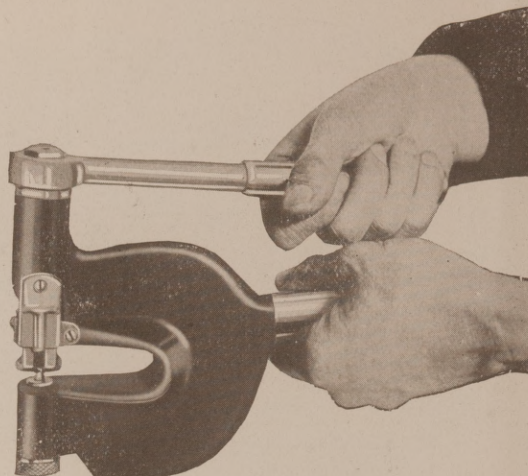
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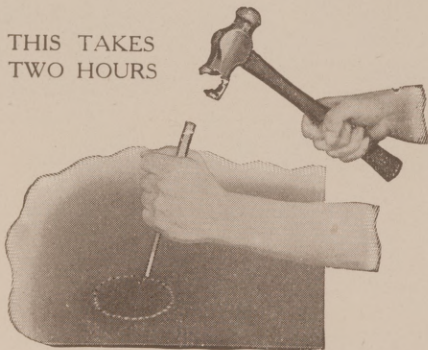
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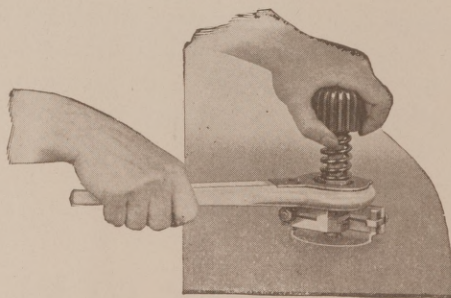
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# Southern Architect and Building News

WITH WHICH IS CONSOLIDATED "SOUTHERN BUILDING RECORD"

VOL. XLIV.

DALTON and ATLANTA, GA., APRIL, 1920.

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  
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Dalton, Ga.

Price \$2.00 Per Year.

### TO OUR ADVERTISERS

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*We cannot be responsible for changes not  
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### The World's Tallest Chimney.

Hardly does one place boast of the tallest stack  
chimney in the world when a taller one is built at  
another place. Japan boasted one 570 feet high and  
then Tacoma, Wash., built one with a height of 573  
feet. But now the record has gone to Anaconda,  
Mont., where a stack rises 585 feet and has an inside  
diameter of 60 feet at the top.

One wonders as to the purpose of such enormous  
stacks. A draft must be created and the smelter  
gases disposed of. But besides that, the stack does

reclamation work. From the metallurgical smoke  
are reclaimed gold, silver, copper and arsenic which  
would otherwise be wasted. It has been estimated  
that a stack in Arizona throws away 1,800 tons of  
copper a year.

A Montana smelter wastes enough sulphur diox-  
ide in a day to make 3,400 tons of sulphuric acid.  
Not only is it desirable to recover this material, but  
unless recovered the surrounding vegetation and  
population suffer. For example, the present biggest  
stack is expected to recover 32 tons of arsenic a day  
—enough to poison all the potato bugs and other  
pests in the world, it would seem.

### The "Middle Classes" Movement.

Early last year the "Middle Classes' Union" was  
organized in London. In this country such an organ-  
ization probably would be called "The Common Peo-  
ple's Union." It is not strange, therefore, to find  
England taking the lead in the current middle class  
movement, because in that country middle class feel-  
ing and the necessity for middle class action was first  
appreciated.

The unions' aims were thus officially set forth in  
the constitution:

To promote mutual understanding between  
all classes of the community and secure an equit-  
able distribution of national taxation.

To obtain the removal of unfair burdens on  
the middle classes, and to enable them by collec-  
tive action to protect their interests from legis-  
lative or industrial oppression.

To scrutinize and watch all legislation and  
administration, and to secure suitable amend-  
ments of the law where the interests of the mid-  
dle classes are unfairly prejudiced.

To support by legal action if necessary, the  
interests of any member which raise questions of  
general principle affecting the middle classes.

In an official statement elaborating the principles  
set down in the constitution, it is further stated that  
"the Middle Classes' Union is not concerned with  
social distinctions or religious variations. What it  
is concerned with is the interests which exist between  
those of capital and those of labor. In this sense the  
Middle Classes are the people with the middle inter-  
ests."

While the Union recognizes that in political and  
economic affairs there are three main sections, two  
of them the extremists—the upper and the lower, the  
right and the left, the monopolist and the syndicalist,

call them what one will—and the third the Middle Class. From The Southern Architect & Building News' viewpoint, it is left to the individual after all to determine whether he comes within this larger section—as a consumer, as a taxpayer, or as a law-maker.

### Mr. Jay, the Architect.

The following letter has been received from Mr. C. E. Jay, an architect at hCattanooga, Tenn.:

Editor Southern Architect:—In the current (February) number of your very interesting paper I observe a picture of a "Residence of Wm. D. Richardson, Tampa, Fla. Courtesy of L. F. Drake, Architect, Tampa, Fla."

I would respectfully draw your attention to the fact that Mr. Drake is slightly mistaken if he thinks that he is the architect of this building, because the owner of this building, Mr. Richardson, and at least a dozen of the older architects in Tampa, know that I am the architect who designed and detailed this. How in the world Mr. Drake can have made such a mistake is a mystery to

Yours truly,

C. E. Jay.

We want to say in Mr. Drake's behalf that when this photograph came to us it was in response to a request for several photographs of pretty residences at Tampa, not necessarily his own work. Mr. Drake was very kind to send us a batch and among them was the one above referred to. Now, it is to be noted in the cut-line that Mr. Drake is given only credit for having sent us the photograph, at least that was the intention of that line. However, we are glad to have Mr. Jay's letter. It gets the record straight, for we are sure Mr. Drake waives all claim to having designed the residence and has never taken the credit upon himself, as we now recall the correspondence. We do say this is a pretty residence and has been admired on several occasions.

### Had An Eye For Beauty.

The late Mr. Cecil Gabbett was a fine railroad man in his day, and the writer is reminded by his death, which occurred a short while ago at his Florida home, of having talked with him on several occasions, of his desire to see things grow along the line he was then managing, the old Savannah, Americus and Montgomery Railroad. Fact is, had he continued with that line he would have used all his power to build up the country through which the road now passes.

And he will be remembered for one thing: Wherever he superintended a railroad line he left behind beauty spots around the stations in the way of parks and gardens. Such things are not only pleasing to travelers, but are educative to the people along the line. The example is quickly contagious. It prevents the grounds and stations from becoming

dumping places of dirt and cinders, not alone being eyesores, but also beds of dangerous germs for fire and disease.

Mr. Gabbett planted little beauty spots up and down his lines, first on the West Point line, afterwards on the Central of Georgia, and it is to be hoped that the example originally set by Mr. Gabbett will be followed, and the tendency now is to do so, judging by a recent decision of the Central of Georgia since that road has been turned back to its owners.

The railroad is a great educator and civilizer. It has gone far afield and employed men who develop the surrounding country, attract investors to their territory and increased the products of the field and orchard. They give prizes for increased yield of corn and grain, for the improvement of domestic cattle and in fact are doing many commendable things for the country along their lines which we are glad to see are going to continue with greater enthusiasm than has even been known.

### House without Nails or Masonry.

This is a house made without masonry or nails. It contains not a particle of iron or other metal. Santa Maria posts, cross beams and flooring of bamboo, siding made of split-bamboo and rattan, and roof of nipa palm leaves, all bound together with native fibers constitute the house, a typical Philippine shack, which is also typical, with slight modifications, of human abodes in hundreds of tropical countries and islands. The bamboo and the palm are universal of growth in the tropics, the world around, and the ordinary native house on the mainland or on any of the thousands of islands off from the Malay peninsula differs but little from those of South America or Cuba.

They are built on stilts or high uprights to prevent the numerous "varmints" and reptiles from too close an association with the inmates and all are constructed with the idea of keeping out the rain, but not the air. The palm thatch is water tight, but the sides while cunningly woven to shed slanting downpours, are like sieves so far as admitting the breezes are concerned. They also admit flies and mosquitoes, but every native of a tropical land is provided with a mosquito bar, frequently a simple canopy of light calico or cheese cloth. Ordinary mosquito netting is useless. Tropical mosquitoes are absolutely merciless and will crawl and crowd their way into apertures where no self-respecting North American mosquito would think of going.

The tropical shack has the advantage over our houses in that a man and his wife, and a couple of children to help in the weaving, will collect all the material necessary from the forest and build the house with less than a week's labor. If the house burns down, even with no fire insurance collectible, it is a small matter to rear another house in place of the old one.



## Concrete Roofing

### DIMENSIONS AND WEIGHTS.

Size of 1 Concretile, 9 x 14 $\frac{3}{4}$  in.

Weight of 1 Concretile, 5 lbs.

Surface exposed to weather, 8 x 12 in.

Number of Concretile per square, 150.

Weight per square, 750 lbs.

Until the last few years the price of a roof material that would not warp, curl-up, nor deteriorate with age was far beyond the reach of the average builder. But today we have Walter Concretile, the only permanent, fireproof and artistic roof that can be purchased at a reasonable price. For twenty years experiments have been made, in this county, with concrete roof products which would be as thoroughly satisfactory as the cement tile made for so many years in the old country.

Large interlocking slabs used so extensively on industrial buildings now solve the roof problem in that class of construction. Walter Concretile satisfies the same demand for residences, barns and public

buildings. These artistic tiles are now covering thousands of roofs in this country.

Concrete-roof-tile passed the experimental stage fifty years ago in the old country. But, until the Walter Machinery Company turned out their present machine it was impossible to get sufficient production to compete in price with other low priced roof materials.

There are now many Walter Concretile plants getting sufficient production to enable the owners to lay this tile at a price equal to that of a good grade stained shingle. The standard and most distinctive color of Walter Concretile is the silver-grey. However, numerous cities are getting good results with different shades of red. Attractive ridge-rolls, finials, gable starters, etc., greatly enhance the beauty of this beautiful roof. Many other special shapes are made on the Walter Machine.

Approved by underwriters  
Specified by Architects  
Adds beauty and permanence  
Light weight  
Low in cost  
Interlocking

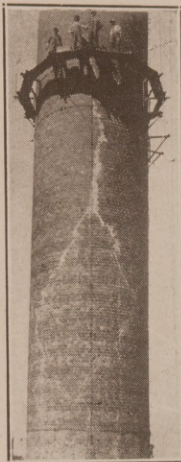
Fireproof  
Frostproof  
Stormproof  
Waterproof  
No wear  
No repair

Easy to make---easy to sell  
"A roof for all time"

**Walter Concrete Machinery Co.** Saks Building  
Indianapolis, Ind.



Eight apartment building, corner Maple Boulevard and Delaware St., Indianapolis, Ind. Roofed by Gibraltar Concretile Co., with "Walter Concretile." Perry E. Powell, owner and builder.



## Hoosier Stack & Construction Company

Builders of

### RADIAL BRICK CHIMNEYS

for

Power Plants and Other Purposes

SPECIALISTS IN REPAIRING DEFECTIVE CHIMNEYS

Inspection and Repairing While Your Plant is in Operation

Prompt repairs may save your chimney from becoming insecure and dangerous. A slight defect, a break in the binding forces of its masonry, will impair and destroy the draft, and waste fuel.

If you care to have us make an inspection of your chimney just drop us a line, and we will then inform you what an inspection will cost.

Correspondence is Solicited

**HOOSIER STACK AND CONSTRUCTION COMPANY**

232 Hume-Mansur Bldg.

INDIANAPOLIS, IND.

Phone Main 2985



## ONWARD AIR MOISTENERS

AN ATTACHMENT FOR FURNACES,  
HOT WATER, STEAM AND VAPOR SYSTEMS

Properly Humidified Air, Lower Temperatures, More Water and Less Fuel in Heating Homes. Moisture is Generated from Filtered Water Direct into the Rooms.

Also Mfgs. of

**AUTOMATIC FURNACE WATER PAN FILLER**

If Your Jobber Will Not Supply You, Write Us.

**ONWARD MFG. CO., Menasha, Wis.**

## Underground Garbage Receivers



The sanitary way to store garbage. That filthy garbage pail shows up again this Spring. We have had fifteen years experience eliminating them. Thousands of satisfied customers appreciate the change.

Our Truck will wheel your ash barrel up or down steps.

Our Spiral Truss Ribbed Ash Barrel is lighter and stronger, a real investment.

Send for catalogue on each. Goods sold direct. Look for our Trade Marks.

**C. H. Stephenson, Mfr.**

31 Farrar St.

LYNN, MASS.



Beautify your surroundings with

## RUSTIC FURNITURE

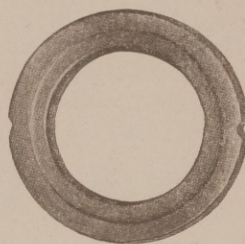
We always have in stock summer houses, arbors, pergolas, settees, chairs, tables, flower boxes, bird houses, etc. For further information send for catalogue.

**Dixie Wood Company**

31 Cain Ave.

TRENTON, N. J.

## SNOW FLEXIBLE GASKETS



do make

**WATER CLOSET  
JOINTS**

that:—

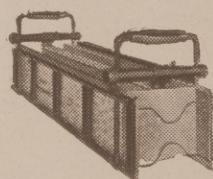
Do not leak sewer gas,  
Do not leak water,  
Are durable.

For any bowl.

Sold thru the jobbers.

**SNOW FLEXIBLE GASKET CO.**  
Chicago, Illinois

## Build the Hollow-Wall-Way with UNIVERSAL Cement Molds



and get dry, warm, frost-proof hollow concrete walls. Best and most sanitary for all kinds of buildings.

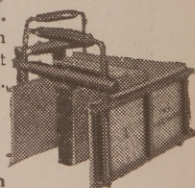
Warmest in cold weather; coolest in warm weather. Cheapest, quickest and most scientific way of building.

Send for circulars.

**The Universal Cement Mo'd Co.**

North Milwaukee

Wisconsin





# The LUNKEN WINDOW CO

## A Double-hung Window Having 100% Ventilation



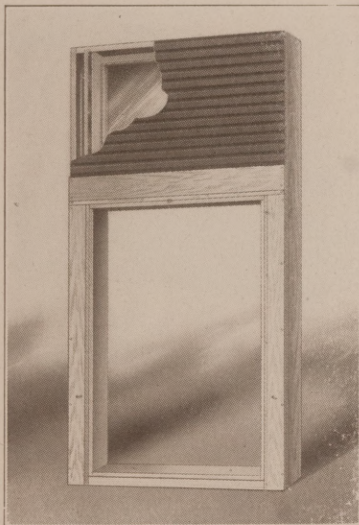
**A** DOUBLE-HUNG window absolutely normal in appearance and operation, yet which, by the use of a weathertight head pocket gives full opening ventilation.

Entire length screens in two parts slide also into the headpocket during periods the house is unoccupied or when not wanted.

Weatherstripped against northern climates, storm and dust tight anywhere, and will not rattle.

Clean both sash both sides from standing position on floor.

Goes in the standard 3 $\frac{3}{4}$ " stud wall. Permits blinds, shutters or awnings on exterior in the usual fashion: Nor any change of decoration inside necessary.



Comes on job ready to set in rough opening. Nothing to detail, superintend or worry about. Complete as is, in every particular, except inside and outside trim, which you supply to your own detail.

Western Office & Exhibit  
175 West Jackson Blvd.,  
Chicago

The Lunken Window combines in a single ready-made-and-fitted unit about everything every window ought always to have been like. F. S. D's on request showing relationship to all construction—also general descriptive literature, either or both, on request. An important departure in windows and one of highest usefulness for residences, hotels, sanitariums, hospitals and office buildings where ventilation and freedom from maintenance cost are appreciated.



## THE LUNKEN WINDOW COMPANY

ARCHITECTURAL DEPARTMENT  
Room 4091  
512 Fifth Avenue New York

Normal in appearance and operation. Full 100 per cent ventilation yet simple and servant proof. Dust tight and rattle proof. Quickly cleaned from inside: A real window with full length small mesh screens.

Main Office & Plant  
4032 Cherry St.,  
Cincinnati, Ohio



TRADE 'M' MARK

*A Guarantee of***Quality****Durability****Workmanship**

**Extra Heavy Quick Opening Hot Water Radiator Valve with Union.**

Let us send you our best prices.  
Let us figure on your requirements.

Manufactured by

**Milwaukee Valve Co.**

139 Burrell St.,

MILWAUKEE, WIS.

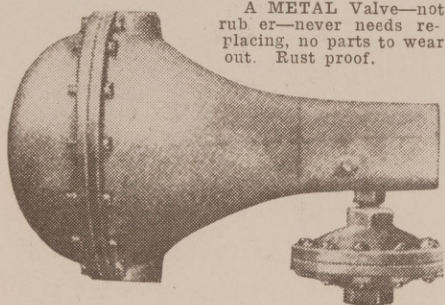


Good carving adds the finishing touch to the whole exterior of the building. Our carving department represents just one of the features of Ingalls service.

## Ofeldt Automatic Water Regulator

has proved a remarkable success wherever used.

Maintains at all times proper water level in boiler.



A METAL Valve—not rubber—never needs replacing, no parts to wear out. Rust proof.

Oscillates with action of water passing through it, which keeps it clean and free from dirt.

Light, compact, yet rugged in construction.

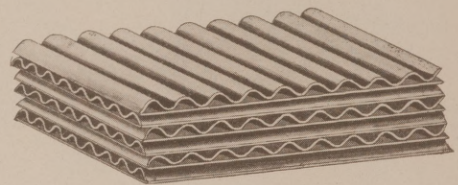
This device is not a pump, injector or trap, but a highly efficient water regulator.

Write for particulars

**The Ofeldt Gas Fired Boiler Co., Inc., Nyack, N.Y.**

Makers of Water Tube Boilers for 25 years

## Asbestos Air Cell Blocks



For lining ceilings, covering boilers and other hot surfaces these blocks have proven to be very efficient. They are made of corrugated asbestos paper which leaves small spaces for confining of air.

Whenever in need of Pipe and Boiler Coverings or kindred articles, remember that there is a "Diamond N" product that is built for that particular purpose. If a job puzzles you, ask us what we have for it.

Write for prices

**Norristown Magnesia & Asbestos Co.**

Norristown, Pa.

### Market for Lumber in Wales.

There is considerable import trade in lumber carried on in the Swansea district, Wales, as may be seen from the following tabulation showing the imports through the two principal ports of the district, Swansea, and Port Talbot, for the years 1914, 1915, 1918, and the first 10 months of 1919:

Kinds of lumber.	1914	1915	1918	1919(10 months.
Deals, battens and boards--	49,560	37,179	1,199	32,267
Pit wood -----	145,241	129,980	76,858	114,543

The housing committee of the city of Swansea estimates a shortage of 6,000 houses for the city alone; and a tentative plan, extending over the next 10 years, has been formulated to meet this need. The houses will be chiefly of a class to suit the needs of the working people. Already contracts have been let for the first 150 of these houses which are to be ready within nine months; and plans are being made for the letting of contracts for 150 more houses. It is proposed to let contracts for about 150 houses each three months. The houses will be built of brick, but there will be a demand for large quantities of lumber for the wood work.

Domestic demands will by no means suffice to meet the demand, and dealers are looking to foreign markets for stocks. Imports in the past have come chiefly from the following markets and in the following kinds of wood: United States—pitch pine, oak and elm; Canada—spruce, birch and yellow pine; Scandinavia—spruce and birch. By far the largest part of the imports consists of spruce and pine.

In addition to the demands for lumber for houses there is also a fair demand for spruce and oak for making railway cars.

Large quantities of pit wood are consumed in this district as supports in the coal mines. Before the war most of the pit wood was imported, the stocks coming from France, Spain, Portugal, Scandinavia, and Finland. During the war the imports fell off heavily, as may be seen from the above table. The trade has now begun to revive, and there is a good demand for the imported article. The stocks come chiefly from France and Spain, and are of fir or spruce.

A distinction is made on the local market between pit wood and pit props. The former is timber with the bark on it, cut into lengths suitable for shipping. The latter is sawn lumber. Pit props as used in this district are of the following usual sizes: 4½ feet by 2½ inches by 4 inches; 5½ feet by 3 inches by 4½ inches; 6½ feet by 3 inches by 6 inches; 9 feet by 3 inches by 7½ inches; 13 feet by 4½ inches by 8 inches.

Importations during the current year have been

almost wholly pit wood, in cargo lots from France and Spain. There is no import duty or restriction on timber or lumber imported into the United Kingdom at present.

[A list of representative import lumber firms in the Swansea consular district of Wales can be obtained from the Bureau of Foreign and Domestic Commerce or its district and co-operative offices by referring to file No. 1877.]

### Lumber Tragedy of United States.

“1. The New England states are no longer self-supporting in a lumber way.

“2. The Lake States, once our greatest producers of lumber, are now importing lumber to keep alive the many wood-using industries in that section.

“3. The center of the lumber industry is fast moving to the Pacific Coast, which means long hauls and high freight rates.

“4. The lumber people of the Southern States admit they are through in fifteen or twenty years, as far as yellow pine is concerned.

“5. The forest fire loss in this country is about \$28,000,000 every year, and the area burned over is ten times greater every year than the devastated areas of France we have heard so much about. This must stop.”—U. S. Agricultural Department.

### The Richness of the South.

Arthur D. Little of Boston, one of the really well informed men of the North—especially among chemists—has been saying things of the South that have attracted the attention of the Birmingham News, one of the great newspapers of the South—a newspaper that never tires of promoting the South's material advantages and interests.

The News quotes a recent statement of Dr. Little as follows:

The South has more than half the iron ore in the United States, and 75 per cent of all the coking coal; great stores of lignite, natural gas and oil. Here is the purest salt which occurs in nature, the cheapest and purest sulphur, clays endless in variety and extent, bauxite for aluminum and for abrasive, limestone adjacent to coal and iron, phosphate rock, gypsum, barytes, shale and quartz, ores of zinc and manganese, lead and nickel, titanium and tin. \* \* \* There is enough wood waste in the South to supply the country's needs for paper. \* \* \* The value of the South's corn crop now approximately equals that of cotton, and affords a basis for great corn product industries. \* \* \* The 5,000,000,000 horsepower available in Southern streams should mean the development of great groups of co-ordinated industries \* \* \* on a scale incomparably more vast than anything yet known.

### Builders Advised to Wait No Longer.

The following is a timely resume of an article on building conditions in America as given by The Literary Digest which we desire to pass along to our readers:

Do not put off till next year the building that might be started this spring is, in short, the advice given to prospective builders and investors concerned about building by Mr. Allen E. Beals, secretary of the Dow Service Daily Building Reports. Building costs are excessively high, but this expert insists that nothing is to be gained by waiting unless one is prepared to wait five years or more. As Mr. Beals reminds us in a signed article on the financial page of the New York American, "after the Civil war thirteen years elapsed before the price of building materials reverted to prewar levels." Even though the price peak of materials may be reached in less time than that, it seems to this authority on the building market that there will be a high price level either at or above the present prices which will be maintained for a long time. So the best thing for the builder to do is to start his plans at once instead of waiting until next spring and finding that prices are still higher. The builder need not expect a speedy job. Up to the present the lack of labor has been interfering with the completion of work, but Mr. Beals believes that "from this time forth the retarding factor will concern itself to the ability of getting materials as they are needed." But there are things "that are decidedly in the builder's favor," we are told; they include the present market price, for building material will not suddenly recede; he will be assured of high returns upon his enterprise for at least two years after the supply of building material and their prices return to an approximate normal, and he will get probably a better constructed building because less reliable contractors are now out of the market. Discussing the whole building situation Mr. Beals notes that "since the armistice a year ago the building interests have passed through a vale of paradoxes that has no parallel in war or in any other era in the memory of business men," and he continues:

The building-material man, whether he be manufacturer, distributor, dealer, contractor, or consumer, is today confronted with a potential demand far beyond the plant capacities of the entire country to meet for the next five years, at least, even operating at 80 per cent of maximum plant output, which, with the shortened work-week and scarcity of common labor, restricts actual production of building commodities in the basic departments at least to barely more than 50 per cent.

To the prospective builder of homes, factories, commercial buildings, or the investor designing and contemplating the construction of hotels, theaters,

apartment houses, or tenements, this looks like a forbidding outlook. In the last year it has checked actual building construction to about 40 per cent of normal for New York and vicinity.

### A Work of Art.

Says the Springfield, Mass. Republican:

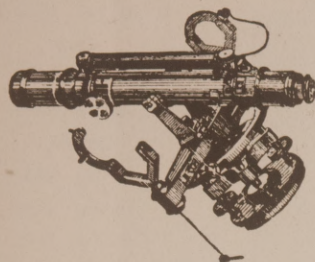
The Hartford Times and the city of Hartford are to be congratulated on the plans for the handsome building which the newspaper is to erect for its exclusive use on one of the most attractive sites in city. On a large plot on Prospect street facing the Morgan memorial and the new municipal building, the Times building will have for its neighbors some of the finest architectural works in the city, and it will be worthy of its company. The most striking feature of the building will be its principal facade, including in its structure the six columns, two pilasters and a considerable portion of the colored glazed tiling which was removed from the Madison-avenue Presbyterian church (Dr. Parkhurst's church) in New York city when it was torn down to make way for a sky-scraper. This church was the last and one of the best of the works of the late Stanford White and it will be a satisfaction to lovers of art everywhere that it is not to be entirely lost. In the Hartford building, of which Donn Barber is the architect, the rich green granite columns, originally of the Corinthian order, will be altered to the Doric. As a working newspaper plant, the Times building promises to be one of the best in the country. It will be roughly 65 feet deep by 165 feet long, three stories above grade in front and four stories in the rear, fireproof and with a maximum glass area. A mezzanine floor will afford visitors a convenient opportunity to see the presses at work.

### Brick, Tile and Pipe Works in East Africa.

Consul S. W. Ells reports from Nairobi, British East Africa, that The Nairobi Brick, Tile and Pipe Works, which was recently organized, is ready for production on a fairly large scale. It is expected that the output will be 500,000 bricks monthly in addition to 100,000 Mangalore roofing tiles. The company owns a clay deposit of about 50 acres with a good depth of clay suitable for all purposes. The immediate output will be stock building bricks, but it is expected in the near future to turn out bricks of all expected in the near future to turn out bricks of all colors.

### Favor Open Shop.

The Builders' Exchange of Danville, Va., has gone on record in a strong public statement in favor of the open-shop principles as the best operating basis for all concerned. The exchange numbers in its membership all but two of the general contractors of the city.



If you contemplate the purchase of a

## Transit or Level

consult us. We specialize in

Instrument and Field Equipment for Architects, Builders and Contractors. . . .

Catalogue on request

No. 6183 Builders Convertible Wye Level \$75.00

**F. Weber & Co.**

**Philadelphia**

Main Office: 1220 Buttonwood St.  
Retail Store: 1125 Chestnut Street  
Baltimore, Maryland  
227 Park Avenue

St. Louis, Missouri  
825 Washington Ave.

## Perforated Radial and Common Brick

# CHIMNEYS

**American Chimney Construction Co.**

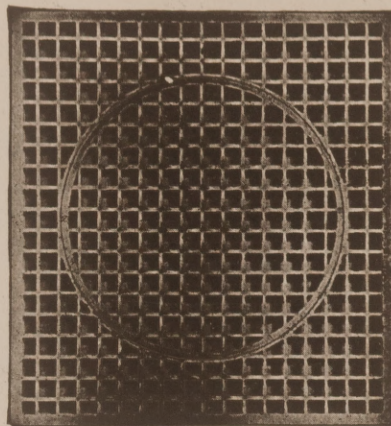
Suite 407-408 Oxford Bldg., Chicago, Illinois

All Repairs Made While Chimney Is in Use

Cleveland, Ohio, Branch: 505 Superior Building

## 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.**

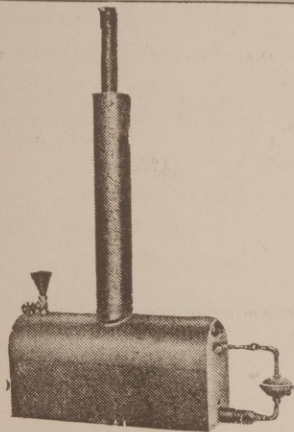
NEW YORK

Chicago

Boston

Cleveland

Bridgeburg, Ont.



## Just Imagine---NO COAL, NO ASHES, NO LABOR HEATING BY HOT WATER OR STEAM THE VESUVIUS WAY

The greatest advance in house heating in more than a quarter century. A heating plant that uses gas, regulates itself and is as easy to operate as a gas stove.

Only 24 inches long by 11 inches high and 7 inches wide. More economical than coal.

**VESUVIUS ENGINEERING CO., Inc.,**

No. 7 West 42nd St., New York, N. Y.

## Something New

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

**ELLIOTT Combination Water Heater and Gas Stove Top**

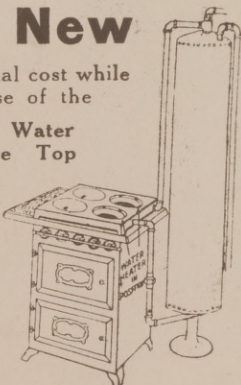
Soon pays for itself in gas-saving. Sizes to fit any gas range.

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.



## WINSLOW WINDOWS

AUSTRAL BALANCE  
WINSLOW CASEMENTS  
All Solid Rolled Steel

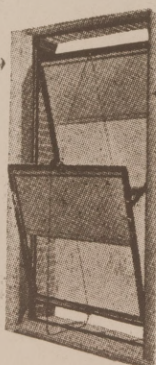
Scientific ventilation, maximum light, weather tightness, easy operation—the perfect window for Offices, Hospitals, Government buildings, etc.

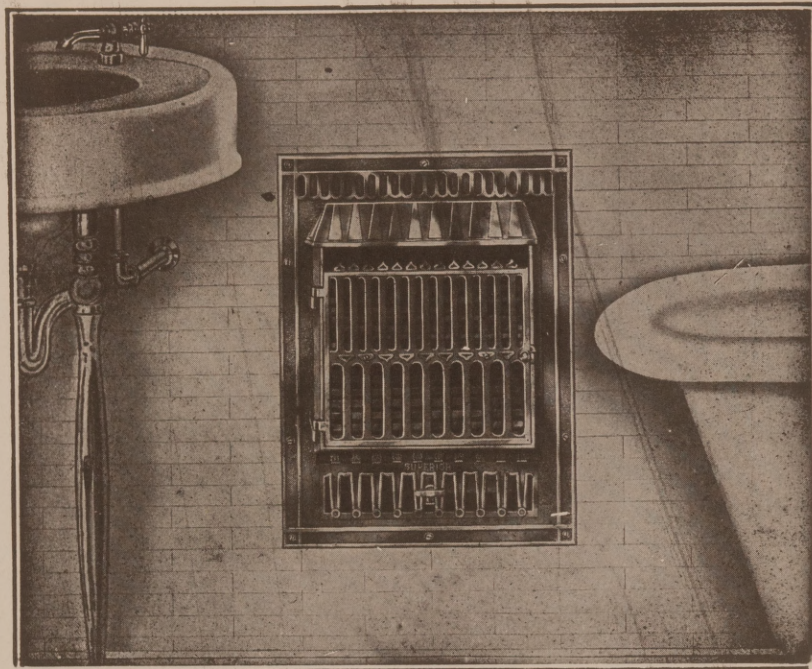
**WINSLOW BROS & CO.,**

Window Department

512 W. 27th St., NEW YORK

Branches in All Principal Cities





Superior Bathroom Heater in Use with Tiled Bathroom.

from any danger whatever 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.

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**

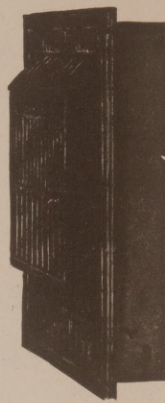
**NO ASBESTOS**

**NO LARGE GAS BILLS**

**NO DANGER FROM FIRE**

**The Superior Manufacturing Company, N. S., Pittsburg, Pa.**

General Offices and Factory: Corner Said and Magnolia Streets, North Side.



U. S. Pat. June 28,

1910

Side View

Side of Cast

Front:

14 ins. wide

18 ins. high

Size of Body

of Heater:

12½ ins. wide

16¼ ins. high

4½ 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 inside 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

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**NO FLUES**

**NO ODOR**

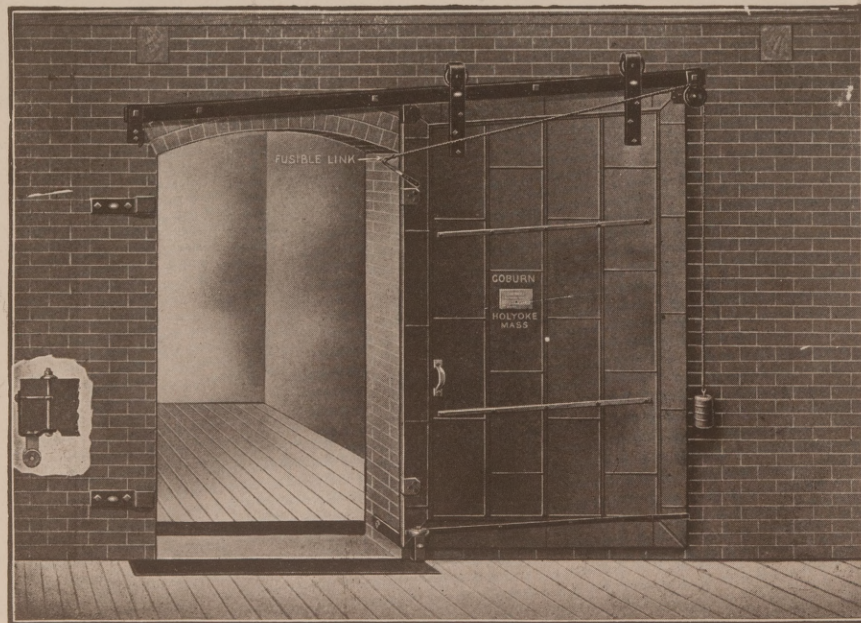
**NO ASBESTOS**

**NO LARGE GAS BILLS**

**NO DANGER FROM FIRE**

**The Superior Manufacturing Company, N. S., Pittsburg, Pa.**

General Offices and Factory: Corner Said and Magnolia Streets, North Side.



## COBURN Fire Proof Doors FOR ALL PURPOSES

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 Track Mfg.  
Company  
HOLYOKE, MASS.**

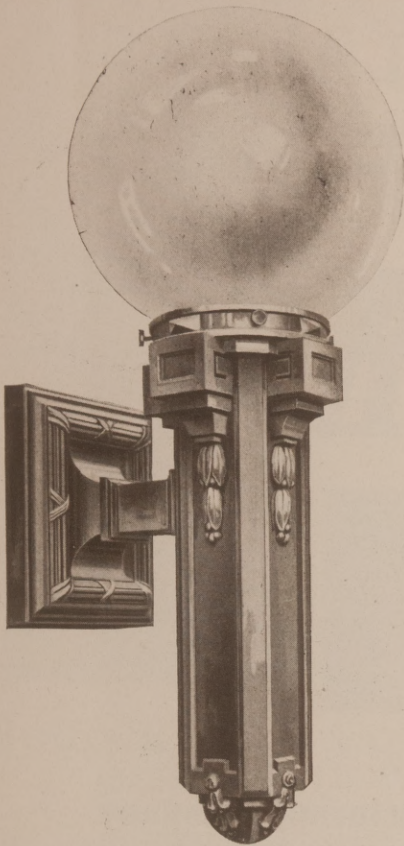
## EXTERIOR LIGHTING FIXTURES

LAMP STANDARDS, BRACKETS AND LANTERNS  
OVER 360 DIFFERENT DESIGNS

Among our extensive line of products are fixtures suitable for any requirement.

Let us give you the benefit of our years of successful manufacture of these fixtures.

Prices quoted on special designs submitted to us. Write for catalogues.



No. 107  
2' 0" High to Bottom of Globe.

## SMYSER-ROYER CO.

PHILADELPHIA OFFICE AND STUDIO

1225 Race Street

Works: YORK, PA.

## MODERN BUSINESS BUILDERS BURDICK LIGHT BATHS

Are constructed upon basic principles of Therapeutic efficiency which have secured for them the highest awards by recognized authorities.

### Their Practical Value

Has brought the Light Bath into universal popular demand in American Hotels, Sanitaria and Homes.

### Their Surpassing Advantages

Burdick ventilating system.  
Sanitary adjustable collarette.  
All steel construction.  
Standardized by National Board of Underwriters.  
Types for every purpose.

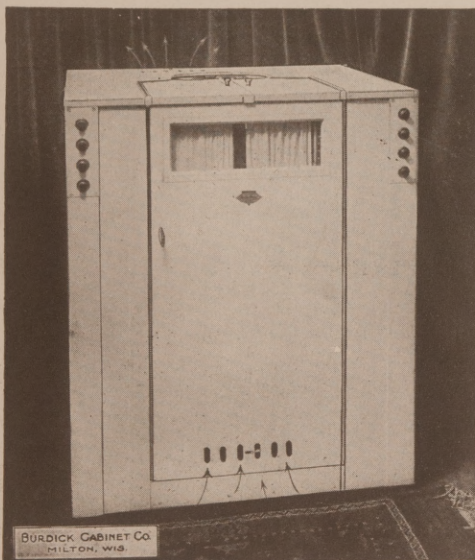
Adapted for use in U. S. Military Hospitals.

Write today for free book, "Health and Efficiency—How to get it," and a copy of our illustrated catalogue in three colors.

## BURDICK CABINET COMPANY

Chicago Office:  
614 Venetian Bldg.

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MILTON, WIS.



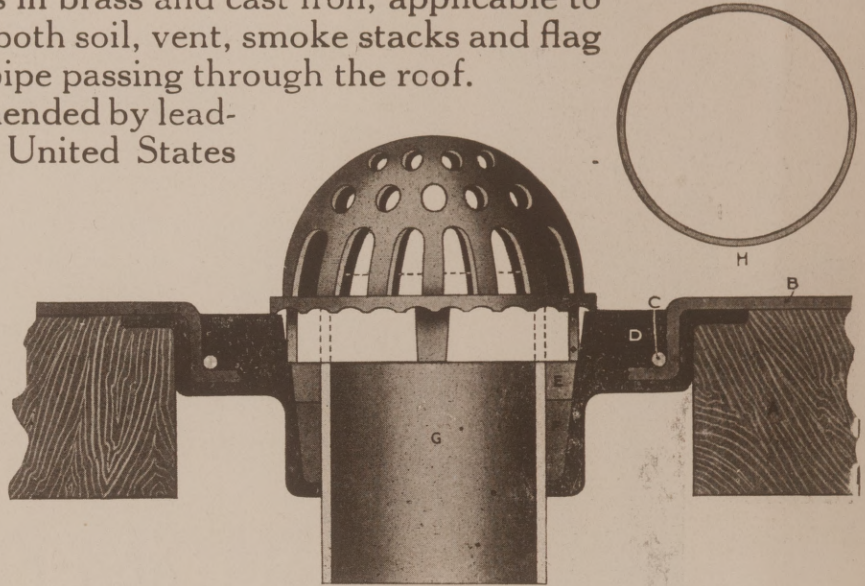
Observe ventilators at bottom of front door and top of cabinet which permits of free circulation of fresh air.

# MODERN ROOF FLANGES

Made in all sizes in brass and cast iron, applicable to all pipe connections, both soil, vent, smoke stacks and flag poles or any type of pipe passing through the roof.

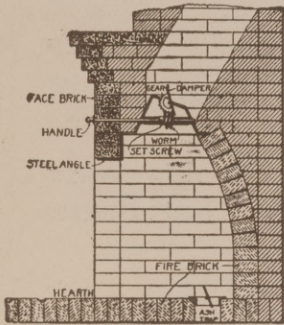
Adopted and recommended by leading architects in the United States and Canada.

Special attention called to the expanding and bonding conditions above the roof. No complicated connections in attic or under ceilings. Attachments all made plain for operator.



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

**Mechanicsville Specialty Supply Manufacturing Company**  
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**STOVER**  
Mfg. & Engine Co.  
FREPORT ILL.

## Build the Fireplace Right

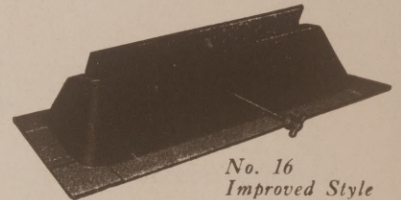
Don't try to reduce the cost by leaving out a good damper. It results in an expensive fireplace to operate and allows rain, wind, birds, and other objectionable things to enter the room when the fireplace is not in use.

Stover Dampers support the brick work, form a smooth throat, regulate the draft perfectly, and reduce the labor cost of erecting fireplaces.

The price is low enough so a Stover Damper can be used in every fireplace. Made in several styles for all size openings. The Improved style shown above is one of the most popular.

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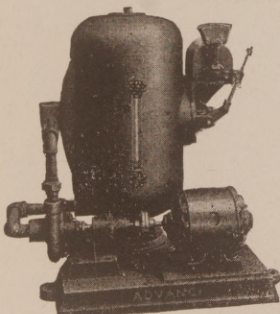


No. 16  
Improved Style  
Made in 7 Sizes

Stover Mfg. & Engine Co., 722 East St., Freeport, Ill.  
Send us Catalog No. 1740.

Name ..... Business .....  
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For Vapor and Low Pressure Steam Heating System

We guarantee absolute satisfaction on return systems where our outfits are used. There is a partial vacuum produced on the return mains and receiver of these outfits. The water is automatically discharged into boiler at pressures ranging from zero to twenty pounds, and we insure positive protection against overloading motor with our special safety nozzle.

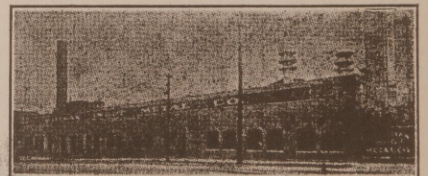
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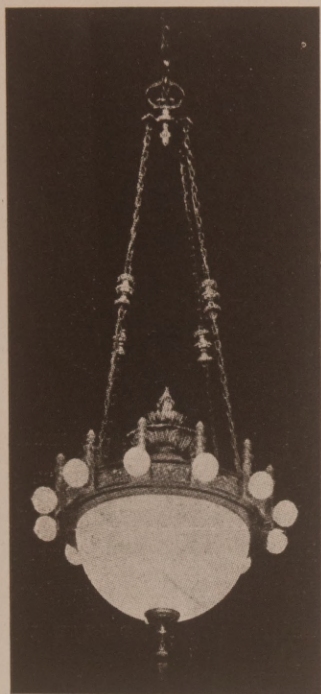
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Equitable  
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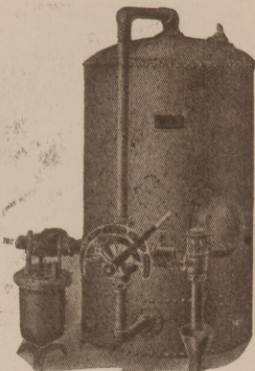
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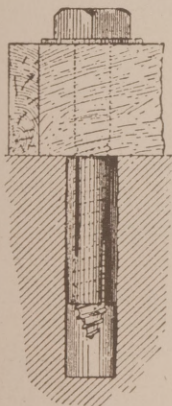
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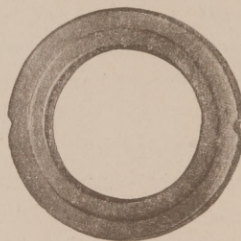
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Do not leak sewer gas,  
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**SNOW FLEXIBLE GASKET CO.**

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Manufacturers of

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Write for Illustrated Folder.

## Others Discuss Some Timely Topics

### Paint Specifications.

If to do were as easy as to say how to do, there would be little faultfinding in this matter-of-fact world of ours. The trouble too often is that the "sayers" do not say enough and the "doers" do not do enough. To eliminate this condition so far as paints, pigments and oils are concerned is the mission of the published specifications of the Bureau of Standards, a copy of which has just come to hand.

The specifications recommended are for the guidance of the government and of the trade. Among them are suggested standards for basic carbonate white lead, basic sulphate white lead, zinc oxide, leaded zinc oxide and turpentine.

Scientific analyses and investigations such as those referred to in the foregoing are invaluable—if they are applied. Unfortunately, the very individuals for whom these analyses and investigations are so carefully made and recorded know them not. At any rate, they are honored more in the breach than in the observance. Government officials in passing upon paint bids, time after time make awards at prices that are ridiculous, considering the cost of raw material, labor and other overhead. Careful tests and analyses undoubtedly would show that adulterants and substitutes are being used in many of the delivered products. But government purchasing agents, notoriously those in the army, either are not familiar with their own specifications or they rely too much on the honesty of those who make the bids.

A strict adherence to the standards set forth in specifications will go far toward restoring the word "honesty" to its former exalted position in the business world. That is, if all products that do not meet the requirements are turned back to the manufacturer. But to turn these back presupposes an expert knowledge and careful testing. These have been conspicuously absent in the past.

The preliminary draft of the specifications herein referred to was submitted to representative paint and varnish makers and to manufacturers of various basic materials. It is presumed, therefore, that the standards as published reflect the views of those in these industries. All that is left, then, is to live up to them.—Oil, Paint and Drug Reporter.

### Yellow Light Best.

Illuminating engineers some months ago made a series of tests with incandescent electric lamps gas gas mantles graded for color and oil lamps, the candlepower being the same in each case. The larger the number of yellow rays in the light, it was found, the greater the optical efficiency. Blue rays were found to be conducive to earlier fatigue of the eyes. Thus it appears that the general preference for light of a yellowish cast is not the result of mere whim or habit but of the eyes' recognition of the fact that such a light is less tiring.

### Shortage of Belgian Plate Glass.

The following cablegram has been received from Trade Commissioner Herring at Brussels, Belgium, concerning the shortage of Belgian plate glass:

Advise prospective customers of Belgian plate glass that it is practically useless to attempt to obtain supplies now. Efforts are made to supply pre-war customers in export markets, but no surplus is available for new clients. It is impossible even to accept orders for future delivery. Labor shortage and lack of coal and raw materials still delay production, now about 60 per cent normal. No prospects of immediate increase.

### 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 6th day of April, 1920.

FRED McSWAIN.

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



We have been marching ahead at a great rate during all the past weeks---tremendously busy filling an unending stream of orders for HANDY pipe.

A few more weeks and we will be in the very midst of the biggest building season ever known, and if you are not ready to take care of your share you should "accelerate."

We'll be glad to help you!

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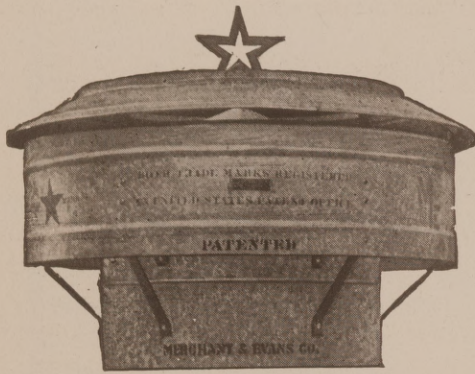
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## "Star" Ventilators

(Patented)

FRESH AIR decreases nerve strain and stimulates effort, consequently employees work to better advantage in well-ventilated buildings. Wherever "Star" Ventilators are specified, your client is assured of the best and most economical ventilator investment procurable.

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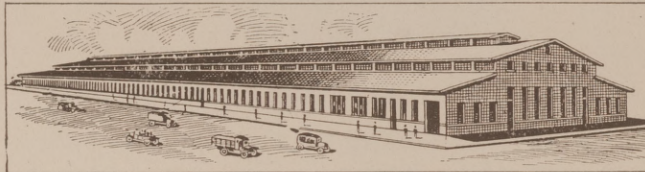


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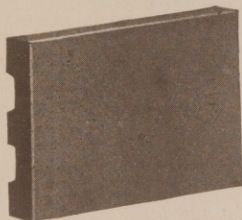
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of Porches, Terraces, Corridors, Kitchens,  
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Heats 30 gallons of Hot Water in one hour.

No wicks—no odor—  
makes its own gas.

Double copper coil construction.

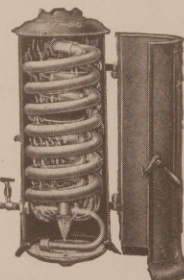
Economical—

Burns eight solid hours  
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*Circular and prices on  
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# The FLOOR BOX

## WITH THE REVERSIBLE COVER



Prompt  
Shipments



Though fully realizing that there are many Floor Boxes of varying quality and design, many architects give deservable recognition to

### FA Floor Boxes

by specifying them in all their representative jobs.

They do this not altogether because of the excellent construction and design of FA Floor Boxes, but largely because of the fact that this is an ALL-IN-ONE FLOOR BOX—the reversible cover allowing the Floor Box to be converted instantly into active service without purchasing additional parts; in other words, specifying a complete Floor Box at no greater cost than the ordinary types.

This and the following features make FA Floor Boxes not only desirable but lowest in installation cost consistent with quality and good workmanship.

The top is readily adjustable for variations of  $\frac{3}{4}$  of an inch. It is absolutely watertight. Its generous dimensions of  $4\frac{3}{4}$ " square and  $3\frac{3}{4}$ " deep will accommodate three  $\frac{3}{4}$ " or two 1" conduits in one side.

The reversible cover, when removed, allows a clear opening of 3" for adjustments.

Bulletin describing FA Floor Boxes will be sent to you upon request.

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## The Most Beautiful Fireplace

IS INCOMPLETE WITHOUT A

### PEERLESS DOME DAMPER

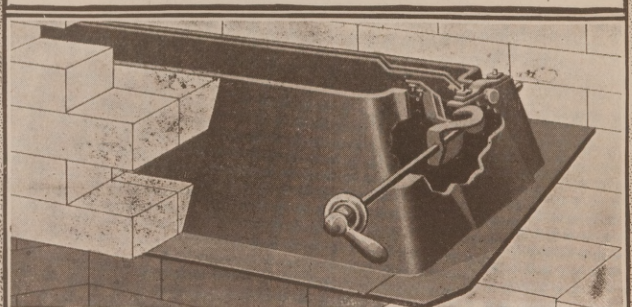
If you specify a Peerless Dome Damper in every Fireplace you design you will have the satisfaction of knowing that your clients will derive the fullest possible comfort and enjoyment from an open fire.

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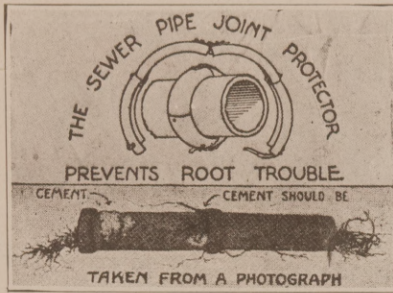
Write today for Catalog "C" illustrating Peerless Dome Dampers, Ash Traps, Ash Doors, Peerless Fireplace Furniture and name of the Peerless Dealer in your city.

**PEERLESS MANUFACTURING CO.**  
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Makers of Fireplace Furniture  
LOUISVILLE, KY.



There is a Peerless Dome Damper for every fireplace. Unique features of operation. Cannot get out of order. Blueprints furnished.

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This shows cement removed while installing.  
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is made of 20 gauge galvanized sheet iron and laps over at the quarter connections.

It is flexible so as to allow edge of Protector to fit tight to any untrue pipe.

Also make special "Protector" for connections of 6-inch stone pipe to 4-inch iron pipe.

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MOBILE, ALABAMA.

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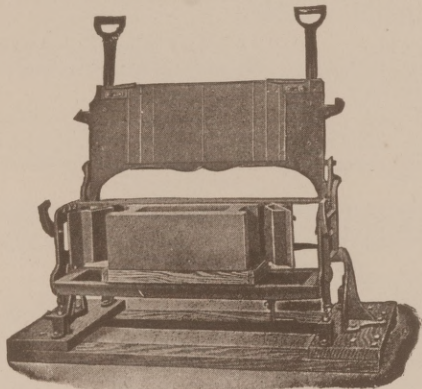
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No. 5 Miles Block Machines

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No. 5 Automatic Tampers No. 4 Automatic Tampers  
Universal Adjustable Sill Cap and Step Molds.



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DEPT. 28.

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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.

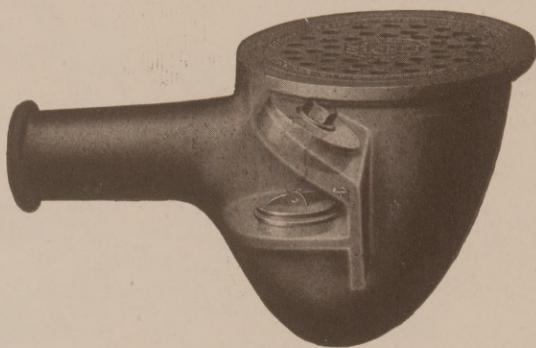
**Wood-Mosaic Company**  
New Albany, Indiana

# SIGNET FLOOR DRAIN

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

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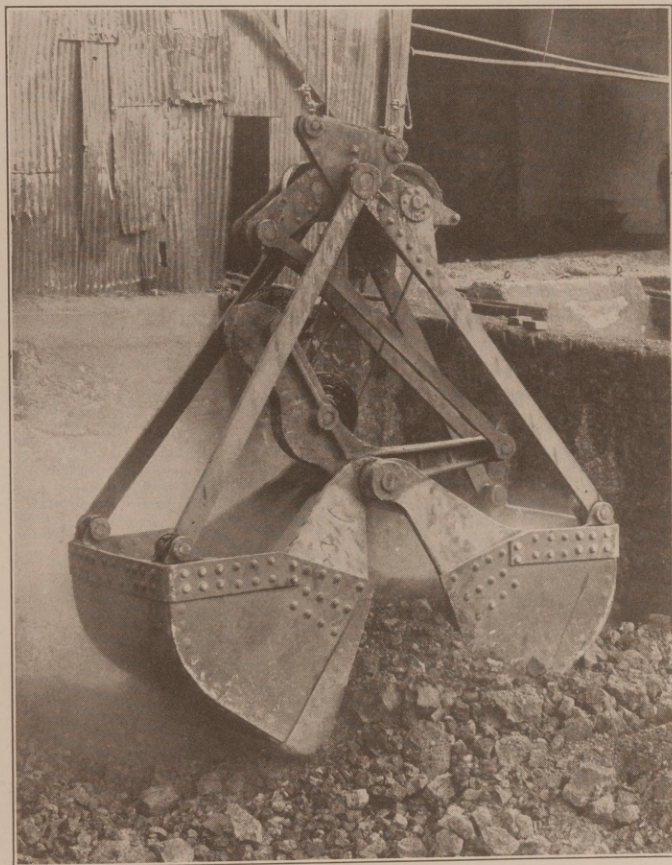
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A product backed by 40 years experience in the manufacturing of contractors' equipment.



Buckets constructed entirely of Steel Lip Plates of High Carbon Steel which are attached in such a manner as to take all shear from rivets.

All Bearings bronze bushed with suitable oiling device.

SPECIAL ATTENTION IS DIRECTED TO THE BUFFALO EQUALIZING ARM—THE PRE-DOMINATING FEATURE OF ALL BUFFALO BUCKETS. Causes scoops to travel with uniform speed—insuring a MAXIMUM LOAD AT EVERY DIG.

We build buckets from  $\frac{1}{2}$  to 3 yards for excavating, handling coal, sand and gravel—dredging and similar work.

Write us for catalogue and prices.

Buffalo Standard Type Bucket, designed for handling coal, sand, gravel and similar bulk materials.

**BUFFALO HOIST & DERRICK CO., 129 Erie Street, BUFFALO, N. Y.**

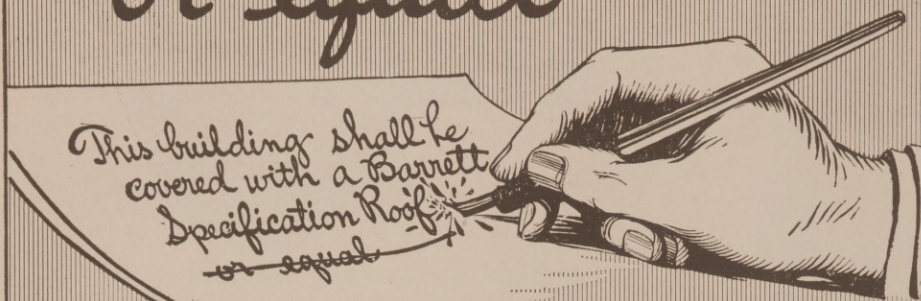
## IRON PIPE RAILINGS

When in the market for Pipe Railing for Stairs, Bridges or Retaining Walls, send us your drawings. We can quote you prices that will be worth considering.

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**PIPE RAILING CONSTRUCTION CO., Long Island City, New York**

--or equal



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SIX years ago, we told architects that they had "better break the pen" before writing "or equal" in their roofing specifications.

It was important then but is even more important now, because Barrett Specification Roofs carry a Surety Bond Guarantee.

No "or equal" roof dares to give such a bond.

IN writing your roofing specifications it is important *not* to add the loophole phrase "or equal."

An "or equal" Specification puts the honest contractor at a disadvantage and leaves the way open for any less scrupulous bidder to "skin the job" by using inferior materials and construction.

If you will write into your roofing specification simply this—"The roof shall be laid according to The Barrett Specification dated May 1, 1916, and the roofing contractor shall secure for me the (20- or 10-Year) Surety Bond therein mentioned," you will be assured of several important things—

First—You will have the benefit of competitive bidding, on an equal basis, among roofing contractors.

Second—You will receive the Barrett Inspection Service *without charge*.

Third—You will have a roof that is guaranteed by a Surety Bond to be free from maintenance expense for the guarantee period.

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### The Surety Bond Guarantee

THE Barrett Company is the *only* Company that has enough confidence in its roof to put back of it a Surety Bond. In fact, no other concern will guarantee a roof for so long a period, much less furnish a Surety Bond.

The Surety Bond is offered on all Barrett Specification Roofs of fifty squares or more in all cities of 25,000 or over, *and in smaller places where our Inspection Service is available*. It is issued by the U. S. Fidelity & Guaranty Company of Baltimore, and exempts the owner from all maintenance expense for the life of the Bond.

Our only stipulations are that the Barrett Specification dated May 1, 1916, shall be strictly followed and that the roofing contractor shall be approved by us and his work subject to our inspection.

These roofs take the base rate of insurance and cost less per year of service than any other type of "permanent" roof.

When you have written the details of the Barrett Specification Roof in your contract, *stop there*. You will always be glad you didn't insert "or equal."

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The Barrett Specification 20-Year Bonded Roof represents the most permanent roof-covering it is possible to construct, and while we bond it for twenty years only, we can name many buildings carrying this type of roofing that have been service over roofing that have been in service over it.

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Both roofs are built of the same high-class waterproofing materials, the only difference being the amount used.

Full details regarding these Bonded Roofs and copies of The Barrett Specification sent free on request.

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**Barrett Specification Roofs**

Bonded for 20 and 10 Years

# Southern Architect and Building News

VOL. XLIV.

DALTON and ATLANTA, GA., APRIL, 1920.

No. 6

## Checking Schedule for Projected School Buildings

### Part II

By James O. Betelle, A. I. A.

**A**FTER the Preliminary Plans of the proposed school building have been submitted by the Architect, and approved by the Board of Education and the Superintendent, the Architect proceeds with the preparation of final estimating and working drawings. When these estimating plans and specifications are completed, they are usually submitted to the Board of Education and Superintendent for final approval and authority to advertise for bids and to send them out to Contractors for estimates.

Blueprints of the final plans and specifications for approval should be left with the Board and ample time given to carefully look over same, by the Superintendent and Board members having the matter in charge. Any fundamental changes should always be made in the Preliminary Plans and only slight corrections, if found absolutely essential, should be made in these final plans.

After the estimating drawings are issued, to the Contractors, no changes should be made. If mistakes or discrepancies are discovered, this can be taken care of by mailing a "Bulletin" to each Contractor figuring, which Bulletin is afterwards made part of the contract. The law requires that a contract must be let in strict accordance with the plans, specifications and estimate submitted. After the award of the contract and start of construction changes should be avoided. Changes at this time are liable to lead to disputes, misunderstandings, and very often to excessive extra costs.

It is the duty of the School Board and Superintendent to know in a general way what the plans and specifications include or omit, and satisfy themselves that special items which they have discussed from time to time during the preparation of the plans have been properly taken care of. It is practically impossible for the busy Superintendent and the busier School Board members to read through the entire specifications and to see and check up everything on the plans. In fact, if they did have the time, they would find that the greater part of the plans and specifications were of a technical nature, of no interest to the layman, and not easily understood by him.

Ambitious School Superintendents or Building

Committee Members often take home the plans and specifications with the idea of reading them through, word for word. After conscientiously reading the first fifteen or twenty pages out of a hundred or more, they find that the technical nature and volume of the pages makes it practically impossible to make any headway, or get a clear understanding of what the plans and specifications actually call for. It is with the idea of simplifying this procedure and giving the Superintendent and the Board members the information with a minimum amount of labor, that the memoranda given below have been prepared.

The examination and approval of the plans by the Superintendent is not with the idea of relieving the Architect of any of his responsibilities. It is the Architect's duty to see that the plans and specifications are complete and agree with each other, and that the State and Local Laws applying to School Buildings have been complied with. Also that the instructions given from time to time by the Board, as to arrangement, materials or finishes, are carried out, and that a complete, substantial and safe building is produced when the plans and specifications are executed in brick, stone and mortar.

The list given below will be of assistance in helping to check important points covered by the plans and specifications, without the necessity of reading through the specifications word for word. If the persons in authority will make sure that the various items mentioned in this list are taken care of as they desire them, they will have gone a great way towards obtaining a building that will meet with their special requirements.

In case you cannot find in the plans and specifications some of the items mentioned below, ask your Architect to point out the same to you, or if omitted to explain how he proposed taking care of the same.

The list could very well be supplemented by reading over the "Score Card of the City School Building" and "Score Card of Rural School Building" together with the explanations that accompany same, as prepared by Dr. George D. Strayer, Professor of Educational Administration, Teachers College, Columbia University, New York City. These score cards suggest many items to investigate and be sure are prop-

erly taken care of where same apply to your building.

### General.

See that instructions as to number of Classrooms, and Special Rooms are carried out on plans.

See that the instructions as to Method of Making Payments to Contractors, Time of Completion of Building, Insurance, etc., are carried out in the specifications.

Check up the corporate name of the Board of Education mentioned in the specifications as Owner of the proposed building. This is often wrongly stated.

Decide who furnishes and pays for water, light, and heat, used during construction of the building—the Owner or the Contractor?

See that specifications require Contractor to file plans and obtain and pay for Building Permit, or that it is otherwise properly taken care of.

Provision for temporary office for Contractor with telephone connection, during construction of building.

See that temporary toilet facilities are provided for workmen from start to completion of job.

Investigate cutting down of certain trees within the area of new building and the boxing around or protecting of these trees which are to remain.

Removal of any old building on site and disposal of old material. Is it desired to save any old materials?

### Masonry.

Provision in the specification if rock is encountered in excavations? (It is usual for Contractors to estimate on excavations of ordinary clay, stating an extra price in their estimate per cubic yard if rock is encountered).

Provision in specification for keeping excavations free from water if same is encountered while digging?

What measures have been taken to make walls and floors of rooms below grade waterproof?

Do soil conditions make a tile sub-surface drain necessary around the building?

What quality of lime, sand and cement has been specified?

Cement sidewalks, paths and drives?

Composition of mortar:

Usually 1 part cement, 3 parts sand, and 10% lime putty.

Composition of concrete:

A good mixture is 1 part cement, 3 parts sand and 5 parts broken stone.

Take note where cement floors are called for on plans and specifications:

Consult Architect and learn location where any special kind of floor has been used other than the ordinary wood floor. The School Board is often surprised on completion of building to find that a cement floor has been laid in a Manual Training Room where sharp tools are used and sometimes dropped and

ruined, and wood floor in the Forge Room where hot coals fall on the floor. Special notice should therefore be taken about materials of finished floors in all rooms and spaces.

Take note where fireproof floor construction and roofs are called for:

In a fireproof building it is assumed that all floor construction is fireproof, although the roof construction is sometimes built of heavy timber to save money. In a semi-fireproof building it is usual to make the Corridors and Stairs fireproof, and also floors and ceilings of Boiler Room and Manual Training Room fireproof. Other construction of wood.

Look up kind of material used in outside walls above and below grade:

Concrete, stone, brick, terra cotta blocks, wood, etc.?

Materials of inside partitions and where do fireproof walls occur?:

Minor interior partitions are usually wood in a semi-fireproof building, and brick, terra cotta, plaster block, etc., in a fireproof building. In a semi-fireproof building certain interior partitions should be fireproof such as enclosing walls of Boiler Room, Manual Training Rooms, Corridors, Stairs, etc. It is well to know just where these occur.

What outside face brick has been specified?:

Have sample submitted for approval of Board.

What outside trim has been specified?:

Stone, terra cotta, copper, galvanized sheet iron, wood, etc.

Have sample submitted for approval if stone or terra cotta.

What spaces or rooms in building have the brick or terra cotta walls or ceilings left exposed without plaster?:

The Board and Superintendents are often surprised when going through a finished school building to find certain rooms not plastered. This is as it should be in certain rooms, such as Store Rooms, Play Courts, Boiler Room, etc., but all such unplastered spaces should be checked up and agreed to.

Inquire how building is damp proofed above grade::

All outside walls whether brick, terra cotta block, or concrete, should be furred. That is, the inside plastering kept 1 in. or more away from the inside face of outside wall, thus leaving an air space and preventing moisture from penetrating outside walls and through plaster into finished rooms.

Kind of plaster specified:

"Old Fashion" mortar is where lump lime is slacked and sand hair mixed into same by hand. This takes considerable time, as the slacked lime must be given opportunity to cure and cool, (not less than 30 days). It is also difficult to be assured of correct proportions and too much sand is often used.

Factory mixed "Patent Plaster" has the sand and

hair accurately mixed with the lime at the mill. It is put up in bags and shipped direct to the job and only needs the addition of water to make it ready for immediate application. While a little more expensive than "Old Fashion" plaster, it is a much more scientific mixture.

Kind of lath specified:

Metal lath is always used in fireproof buildings. In semi-fireproof buildings, wood lath is used on partitions, but it is preferable to use metal lath on ceilings. Strips of metal lath should also be used where wood lath comes up against a brick wall, so as to avoid cracks by the shrinkage of the wood.

Metal Corner Beads:

Should be specified for all external angles in plaster work.

Finish of plaster:

Smooth or sand finish? Smooth finished plaster is generally used and is to be preferred as it is more sanitary than the rough sand finish.

#### Miscellaneous Iron Work.

Main stairs:

May be reinforced concrete or iron.

Height of risers and width of treads?

Risers not over 7 in. high.

Treads not less than 12 in. wide.

No open well hole should be permitted between flights on account of fire or smoke.

Balustrade rails at side should be not less than 5 ft. high to prevent accidents.

Hand rails should be provided on both sides of all flights of stairs.

Any iron stairs or iron ladder to roof?

Stairs should be shut off from corridors with fireproof smoke screen.

Miscellaneous:

Ash lift or other provision for getting ashes out of Boiler Room?

Are outside woven wire window guards specified for all ground floor windows?

Have coal holes or coal chutes been called for?

Any folding iron gates across corridors desired to cut off certain portions of building when Auditorium or other rooms are being used at nights?

Any iron fence called for around playgrounds and rest of property?

Any iron fire escapes?

Mud scrapers and mats at entrance doors?

Any fireproof record vault required?

#### Roofing and Sheet Metal.

Kind of roofing used in various places, such as tin, copper, pitch, felt, and slag, etc.

Material of flashings, gutter, and down spouts? (Should be copper).

Material of any metal cornices or other ornamental features on exterior? (Should be copper).

Type of skylights used? Wire glass used for

glazing with woven wire guards over same for protection.

All roofing and skylight work should be guaranteed by contractor as watertight for a period of years; with repairs made free of cost to Owners in case of leaks occurring during period of guarantee.

#### Carpentry.

Kind of wood and quality of same for Classroom floors. (Usually rift sawn yellow pine or clear maple.)

Kind of floors used in Corridors? (Wood, asphalt, cement, composition, linoleum, etc.)

Single or double floors used where wood floors are called for?

Bolts for window cleaner's belt on outside of all window frames, above ground floor?

Kind of windows specified—double hung sash, casement, revolving, or some special type?

Has sash cord or sash chain been specified for double hung windows?

Window frames caulked with oakum, and sash equipped with metal weather strips, to prevent excessive air leakage?

Kind of interior wood trim?

Location of picture moulding?

Kind of doors? Flush surface hospital type with glass panel in upper portion, or ordinary panelled wood door?

Kind of blackboards and their location? Slate or composition?

Type of chalk troughs? Height of chalk troughs above floor?

Cork display board in Classrooms and bulletin board in Corridors?

Dressers and cupboards in special rooms?

Any folding or rolling partitions required between Classrooms?

Are partitions between toilet fixtures wood, metal, soapstone, slate, etc.?

Bookcase and Teachers' Closets in each Classroom?

Special shelving in closet or store rooms?

Metal covered doors to Boiler Room and Manual Training Rooms, closing off same from Corridors and Basement?

Metal covered partitions and doors glazed with wire glass enclosing staircases and acting as a smoke and fire screen?

Hardware:

Materials and quality?

Key system for various rooms and master key for all doors?

Special locks for Special Rooms, such as Principal's Office, Laboratory, etc.

Numbers on doors to classrooms?

Panic bolts required on all outside doors.

Any spring checks desired on outside or inside doors to keep same closed?

Metal kickplates required across bottom of certain doors?

### Painting.

Materials and quality of same?

Number of coats of paint called for by specifications on wood, iron and plaster?

Samples of interior wood finish to be made for the approval of the Board?

Plaster walls painted and where?

Painting of brick walls and where?

Painting of cement floors. Where and what material used?

Lettering of doors to various rooms?

Special decorative painting of Auditorium and Main Entrance Hall?

Glazing:

Quality of glass used in outside windows?

Quality of glass used in exterior and interior indoors?

Obscure glass used in such place as Toilet Room windows, Shower and Locker Rooms, etc.

Wire glass for fireproof partitions, doors, and stair enclosures?

Leaded Glass?

### Plumbing.

Any hot water heating apparatus? Kind, size and location?

Location of fixtures to be supplied with hot water?

Is plumbing a cast iron or screw pipe job?

Disposal of rain water on surface of ground, or into sewer?

Pipe covering on hot and cold water and steam pipes?

Tests of system as required by local Board of Health?

Is hot water a circulating system or only a single pipe system?

Connections on outside of building for water hose?

Are fire line stand pipes and hose reels called for in corridors?

Plumbing fixtures? Examine illustration, or preferably see samples of all plumbing fixtures?

Water closet with seat action and pressure water tanks are to be preferred. Seats with open cut in front also preferred.

Individual white porcelain urinals about 4 ft. 6 in. high are to be preferred to the ordinary slate or soapstone urinal.

Look up location of Toilet Rooms and number of fixtures in each?

Location and number of drinking fountains?

Any floor drains called for in Toilet Rooms or Basement?

Any automatic cellar drain called for as required?

Number and location of shower baths?

Any water filters, storage tanks, pumps, etc., required?

Sewerage disposal plant required where no sewers are available.

Inside cast iron rain water leaders from roofs or outside sheet metal leaders?

Any laundry tubs desired in connection with Domestic Science Room?

Any pipes running through cold air rooms or any unheated spaces should be carefully covered to prevent freezing.

Vacuum cleaning system:

Type of machine? Portable or stationary?

Capacity of machine? Number of sweepers that can be used at one time?

Location of outlets?

Number of sets of hose and tools furnished?

Gas piping:

Check location of emergency gas outlets in corridors, stairs, auditorium, etc.

Provide gas outlets in Laboratories, Lunch Room, Domestic Science Room, Boiler Room, Teachers' Room, etc.

Location of gas meter and approval of piping installation by local gas company?

### Electric Work

Architect must obtain full information as to the kind of current and its phase and voltage furnished by the local Lighting Co.

Check up number of lights in Classrooms?

See how lights in Classrooms are controlled, either by local switch in Classroom or from panel boards in Corridors?

Any outside lights at entrance?

Base receptacles where needed?

Electric outlets for special furniture in Laboratories, Demonstration Tables, etc.

Outlet for motion picture of stereopticon machine?

Lights in Auditorium controlled by one main switch located near moving picture machine, in addition to switches in Dressing Room off the stage. At times it is necessary that moving picture operator be able to turn off and on Auditorium lights, as for instance when the film breaks, light should be turned on and off again by Operator when film is repaired.

Footlights on stage or side and overhead lights around proscenium arch. Provide plenty of overhead lighting on Stage so chorus or orchestra will have no trouble reading their music.

Location of program bells and how operated; by a program clock or hand push button?

Electric power for motors, fans and vacuum cleaner?

Outside door push button ringing bells in front Corridor and Boiler Room.

Special program bells in noisy rooms?

Push button and buzzer from stage to stereopticon location?

Fire alarm bells and their location? How operated.

Bells, telephones and clocks operated by dry batteries or storage batteries.

Long distance outside telephones?

Any interior telephone system? Location of central switchboard for interior telephone system?

Number and location of interior and outside telephones?

Number and location of secondary clocks in Classrooms which are operated by master clock in Principal's Office?

Location of master clock, program bells, switchboard fire alarm switchboard, telephone switchboard? (Usually in Principal's outer office.)

Any electric outlets required for electric irons or electric stoves?

Kind and design of lighting fixtures?

Is electric service wire from street main run exposed overhead on poles or concealed in conduit below ground?

Underwriters' Certificate of Inspection approving wiring installation, to be obtained by Contractor and filed with the Board of Education before final payment is made on contract. This certificate is needed in connection with fire insurance policy on building.

#### **Heating and Ventilating.**

General description of system?

Kind of piping system: one pipe, two pipe, vapor or vacuum system

Are fans used for either or both the fresh air supply and exhaust ventilation?

Type of boiler or furnace?

Kind of boiler grates—stationary or shaking grates? Kind and size of coal to be burned? Boiler grates should be suitable for kind of coal to be used. Oil burning boilers in certain localities.

Special provision for heating up Principal's Office, Board of Education, Superintendent's Office during winter holidays and evenings, so entire buildings will not have to be heated? ("Gas-steam" radiators good for this purpose.)

Is automatic temperature control called for? What sections are so controlled?

Quality of valves specified?

Quality of pipes specified?

Are Toilet Rooms specially ventilated independent of school ventilation?

If hot air blast system of heating is used, are direct radiators installed in rooms where water is located to prevent freezing during nights, Sundays and holidays?

Kind of air valves used: is an air line system specified with or without vacuum pump?

Is piping system valved for separate control of direct radiator in Classrooms, Auditorium, etc., and for direct air heaters for ventilation. Also so sections of building can be shut off in case of accident to any part of system?

Is ventilation of Classrooms and Auditorium controlled separately so that either section can be used without the other?

Types of radiators specified—wall or floor?

Any provision for humidifying air?

Any air washers?

Are all pipes covered?

All exposed pipes and radiators painted or bronzed?

Note—The Ventilating of school buildings is not an exact science where definite results can always be depended upon. It should therefore be designed and its installation supervised by a competent Heating and Ventilating Engineer, of ability and judgment. It is bad practice to have Steam Heating Contractors, Material Men, or anyone else who has something to sell, lay out the heating and ventilating plans and specifications. Heating and Ventilating systems have been subjected to a great deal of criticism, and no trouble or expense should be spared to get a layout adapted to the special building in hand. After the building is completed it should be operated by someone who knows more about a heating and ventilating plant than merely shoveling coal into the boilers.



# Annual Convention Southern Pine Association

**D**ENOUNCING labor's agitation for shorter hours as an "economic crime," demanding laws more favorable to timber conservation, and declaring the country's welfare depends on electing a President with qualifications that, as described, only remind one of the present incumbent by contrast, the Southern Pine Association held its fifth annual convention in New Orleans March 16-18. Officials of the association declared it the most successful convention ever held. The attendance passed the 500-mark. It represented most of the Southern States and several Northern, Eastern and Western. The price of lumber was shown to be lower in proportion than the price of other commodities.

A resolution was passed endorsing the organization known as "United Americans," which has as its object the suppression of Bolshevism. No formal vote was taken on the other issues summarized above, but the whole-hearted and earnest applause that greeted their enunciation by speakers gave eloquent testimony of the feelings of these representative men and captains of industry.

The association pledged itself to give the right of way to orders for material for freight-car construction. It said it would not oppose rate increases if placed on all commodities alike.

All the old officers were re-elected, with two new additions to the board of directors—G. E. Mattison of Malvern, Ark., and W. B. Harbeson of De Funiak Springs, Fla.

President A. L. Clark of Dallas, Tex., fired the first shot against President Wilson. In the closing lines of his annual address, after referring to the economic problems that beset the country, he said:

Then, if the God of hope, of love, of mercy will bless us and our country with a sound, level-headed, red-blooded, practical American business man for our next President, whose vision shall be unobscured and unclouded by the dust of dogmas and academic theories, and not obsessed with a fantastic dream of saving the whole world and mankind in mass before we are ourselves first saved, then indeed will the star of hope throw its resplendent rays upon us."

In the afternoon session on the same day E. G. Crawford, first vice-president United States Bank, Portland, Ore., speaking on the financial outlook, said:

"I hope that business the country over will arouse itself and put a stop to this maladministra-

tion; that facts, and not fancies, will rule; that big men will be chosen to fill all public positions."

These pointed allusions were tremendously received. There was much individual comment to the same purport in private discussion. And John H. Kirby of Houston, Tex., president of the National Lumber Manufacturers' Association, when asked to speak at the Members Council of the Association of Commerce two days later, made another reference to the present Administration, declaring it had brought autocracy for the first time to this country, and that the unrest of today and the unsettled condition of things was largely due to the country's revulsion of feeling.

Labor comment may be briefed as follows:

President Clark: "The labor situation has grown steadily worse, and is in a chaotic condition. Labor has been betrayed and misled by the radical and the agitator who feeds on him. I believe in the American laboring man. I believe he has been fooled into temporarily losing his way, but he will find it again. He will come to learn that the crippling of industry and reducing production recoils and strikes him, and destroys him en masse. It is not high prices that produce wealth. It is production. Therefore, this agitation for shorter hours is not only an economic crime, it poisons the soul and blights the orderly process of the people of the world toward comfort, peace and happiness, and like the fallen Kaiser, who followed his obsession, those who practice these false doctrines will themselves be destroyed with the rest."

John H. Kirby: "On this rostrum three years ago I warned you of how a privileged class was growing up in this country to grasp for itself special rights. That is the laboring class. While we were in the war struggle, that class took advantage of the nation's need to bludgeon the United States into granting it special privileges. While we were trying to help by getting out the timbers the nation needed, there were declared 6000 strikes. Now that we have won the war, should we not speak out against the forces that are attempting to conduct the Government in their own interest? Neither farmers nor lumbermen should be willing to turn the Government over to those who would manage it by vicious un-American practices and who would deny to the rest a square deal."

J. E. Rhodes, secretary-manager Southern Pine Association: "The war created a condition of class consciousness on the part of labor that was fostered by ambitious leaders who sought to advance their own personal powers. Their demands in behalf of

labor became so unreasonable that they have lost the good will of the great middle-class of Americans, and they are rapidly losing the confidence of their own followers. None of the great strikes, and few of the plans of the labor leaders projected during the year were successful, because they lacked the support of public opinion. In this connection, the determined and fearless stand by Mr. Gary against the plans of certain labor leaders to prevent him from dealing direct with the employees of the Steel Corporation, should not be forgotten."

Charles S. Keith, president Central Coal & Coke Co., Kansas City, Mo.: "That any group of individuals, through organization and by conspiracy, have the right to strike, is fundamentally unsound. When an organization of a minority of the citizens of the United States becomes so strong as to threaten the foundations of government itself, it is clearly and manifestly opposed to the public interest and should be controlled by law. My thought 'All combinations injurious to the public are unlawful.' Second: they should clearly define that any organization which does not make itself financially responsible for the acts of its members, any combinations of industrial workers and employers dealing in collective bargaining, who are unable to reach an agreement shall submit their disagreement to a board of arbitration to be named: one member by each of the organizations in disagreement, and the third by the U. S. District Court in whose district the disagreement arises. The failure to accept the determinations of such a board should be described in the act to be an act injurious to the public, and the declining party or parties should be required to dissolve its or their organizations, and pay the penalty provided for in the Act."

Ben S. Woodhead, president of the Beaumont (Tex.) Lumber Company, described how Beaumont business men had organized the Open Shop Association and destroyed the power of unions, when the latter insisted on demands that were considered unreasonable. He advised other communities to do likewise. "Many a projected strike in Texas has been recently abandoned," he said, "for the fear that it would precipitate organization of the Open Shop Association in such places."

Speaking on waste, Waddy B. Wood of the American Institute of Architects, Washington, D. C., suggested that "a tremendous saving in the cost of wooden houses could be effected if the drawings of the architects were sent direct to the mill and everything cut there, when all waste it can be used for other purposes, and not thrown away or burned-up at the building. I have been told by Mr. Sullivan of the Great Southern Lumber Company that this saving would amount to as much as 25 per cent."

Mr. Keith outlined the reasons for the present prices of lumber as follows: Demand for lumber has increased to 140 per cent of the pre-war demand, and stocks have dropped to 56 per cent. Three million homes are needed in the United States. "Cost of production has increased from \$10.46 in April, 1917, exclusive interest, income tax and stumpage, to \$26.34 in December, 1919. The cost, inclusive of stumpage, has increased from \$14.58 to \$31.75 in the section of the country blessed with the best physical condition of operation. In other parts, the cost is \$43.80 per 1000 feet.

"Production is high," said Mr. Keith, "because of the high cost of materials, the increased wages, and the excess profits tax, which latter has not encouraged expansion of the industry."

Dr. Morton A. Aldrich, dean of the College of Commerce of Tulane University, urged that foremen be developed and given more authority to increase plant efficiency. This could be done through foremen's meetings or conferences, he said. "The foreman likes and appreciates being called into conference. Not only does this interest him and make his pride in his work increase, but such consultation is a real stimulus to the foreman's loyalty."

Traffic and cut-over land activities were outlined by A. G. T. Moore, traffic manager and director of cut-over land utilization. Among the most important achievements of the year was the defeating of tentative trans-continental tariff No. 32-A, by which



Residence of Sanders P. Jones, Louisville, Ky.

a saving in freight differentials to Southern Pine operators of more than \$1,000,000 per annum was effected. Another victory was the securing of a penalty charge of \$10 a day beyond 48 hours detention of transit cars held for re-consignment. As a result, car efficiency in the lumber trade has been materially improved.

Talks on matters of detail and technical interest were made by L. R. Putman, Wallace J. Ferry, King H. Pullen, Earl Dionne, W. Graham Cole, R. M. Rickey, T. P. Johnston of New Orleans; R. H. Leavell of Kingsville, Tex.; Norman H. Johnston of New York; E. J. Hurst of Brookhaven, Miss.; J. W. Martin of Longville, La.; F. H. Farwell of Orange, Tex.; S. H. Fullerton of East St. Louis, Mo.; W. E. Guild of Jackson, Miss.; Thomas D. Perry of Grand Rapids, Mich.; John A. Dickinson of U. S. Department of Commerce; J. G. McDonough of Eau Claire, Wis.; L. B. Moses of Chicago, Ill.; R. F. Morse of Quitman, Miss.

Officers and directors elected for the coming year by the Southern Pine Association are:

A. L. Clark of Dallas, president; P. S. Gardiner of Laurel, Miss., vice-president; R. M. Hallowell of Elizabeth, La., vice-president; Henry M. Young of New Orleans, treasurer; J. E. Rhodes of New Orleans, secretary-manager.

The Directors:

Alabama: John L. Kaul, Kaul Lumber Co., Birmingham, and J. G. McGowin, W. T. Smith Lumber Co., Chapman.

Arkansas: G. E. Matison, Arkansas Land & Lumber Co., Malvern, and C. A. Buchner, Freeman-Smith Lumber Co., Millville.

Florida: A. L. Clark, Standard Lumber Co., Dallas, Tex., and W. B. Harbeson, W. B. Harbeson Lumber Co., DeFuniak Springs.

Georgia: I. H. Fetty, Savannah River Lumber Co., Savannah.

Louisiana: R. H. Hallowell, Industrial Lumber Co., Elizabeth, and F. W. Reimers, Natalbany Lumber Co., Hammond.

Mississippi: P. S. Gardiner, Eastman, Gardiner & Co., Laurel, and W. E. Guild, Finkbine Lumber Co., Jackson.

Missouri: Charles S. Keith, Central Coal & Coke Co., Kansas City; John H. Lucas, Johnson & Lucas, Kansas City; E. A. Frost, Frost-Johnson Lumber Co., Shreveport, La.

Oklahoma: D. V. Diercks, Diercks Lumber & Coal Co., Kansas City, Mo., and J. E. Crawford, Pine Belt Lumber Co., Lake Charles, La.

Texas: John H. Kirby, Kirby Lumber Co., Houston, and Eli Wiener, Angelina County Lumber Co., Keltys.

## London's Housing and Building Problems

A new solution for London's housing problem has been brought forward by Sir Martin Conway, who is spoken of by the newspapers as an authority on this subject, who has advocated the pulling down of large numbers of antiquated houses in the slum and congested areas and the erection on their sites of commodious, modern high buildings with anywhere from 10 to 30 floors, and who has given his views on this subject to the Evening Standard as follows:

It is a mistake to suppose that I advocate sky scrapers similar to those of New York. What I have in mind is a communal dwelling—a very tall building, certainly, but even wider than it is tall. If the building were 300 yards square it would do.

If we were to erect such dwellings in London we could house all classes in each one. There would be no trouble then about the servant problem, for the servants would live in the same building. If you were to knock down 10 little houses and build them one on top of the other, what would you get? You would get a big open space out of the combined back

yards, for the building would occupy only a quarter of the old site. If you could knock down the East End of London and accommodate the same number of people on a quarter of the area, you would have huge open spaces.

To live on such a co-operative system would solve all our town dwelling troubles and do away with a lot of such communal dwellings, and health would certainly not suffer. You would simply be extending the flat idea in a huge way. Those who lived at the top of the high building would get out of the London gloom. They would be above the worst of fogs, above the noise, the damp, and the dust. They would breathe the pure air and get fine views.

### Unusual Features—Concrete Houses.

In the lower part of each building there would be plenty of room for a club, a school, canteens, recreation rooms, libraries, a creche, playing rooms for children, smoking rooms, a cinema, shops, cooperative stores, and the like. The working woman with a family could send her baby to the creche and the others to the playing garden or the school. There

would be no necessity to play in the streets, with the commodious garden that each building would have. Each building, of course, would be centrally heated, with hot and cold water for each bedroom, and shilling-in-the-slot meters for gas and electric light. There would also be a laundry. Lifts, naturally, would be numerous.

It may be said by politicians that such a scheme would be unpopular. Of course, it would be if we were to contemplate an extension of the old tenement-house idea. But nothing of the kind is suggested. The new buildings would have the modern comforts and conveniences, and not be like the horrible, ill-equipped old tenements.

Another authority, Mr. C. Giles, of Henley on Thames, who built the first new house in South Oxfordshire, after the signing of the armistice, has patented an invention in solid core concrete construction. It is claimed that this reduces the cost of the average dwelling house by at least one-third, and a house which would ordinarily cost £750 can be built for under £500, or, allowing for the Government subsidy, £350. No bricks are required, and the work of building can be done without the employment of skilled labor. Building experts who have tested the invention speak highly of it.

#### **Important Improvement in Westminster.**

It is also reported in the daily papers that Parliament is expected early in the new session to give consideration to an important improvement in Westminster which will open up a large area for much-needed roads and buildings. The district covers 250,000 acres of old houses and narrow ways between Victoria Street and Millbank. The scheme provides for the building of a new "city" as an adjunct to the governing center of Westminster. It is intended as an Empire War Memorial.

For some months the London Traffic Board and a Cabinet committee have been considering the scheme. Sir Eric Geddes, Minister of Transport, has expressed a favorable opinion of the new main thoroughfare which it is proposed to run from Victoria Station along the line of Horseferry Road over a new Lambeth Bridge and through Lambeth to London Bridge. This road would have the effect of considerably relieving the east and west traffic along the Strand and Holborn. On the cleared area it is proposed to erect a Shakespeare theatre, new buildings for the University of London, a Gothic memorial chapel by Westminster Abbey, and industrial institutes.

A prominent architect, when interviewed on this subject, stated: "This district has been more or less dying waste, and it is badly needed for the erection of commercial buildings. It will be part of the scheme to erect large groups of offices. So great is the demand for offices that half of the suites in a large block of offices to be built near Victoria

Gardens have been let before the foundations have been dug."

#### **Labor Shortage—Economic Rents.**

Sir Kingsley Wood, who is parliamentary private secretary to Doctor Addison, and chairman of the London Housing Board, in a special interview with a representative of the Evening Standard, gave his views on this subject:

I think under the municipal scheme we shall have 100,000 houses in course of erection by May, and this, in my judgment, will not be a bad result. No one can question that there is a serious shortage of labor to-day in the building trade. I do not think it is any exaggeration to say some 200,000 men have left the trade. So far as the Government housing scheme is concerned, I do not hesitate to say that when it is in full swing, as it will be during the approaching spring months, there will be a grave shortage of labor unless some step is taken. Practically 75 per cent, if not more, of the building trade to-day is engaged on reconstruction work, factory work, and that other work which has been postponed for so many years, namely, housing repairs.

I know the great thing in the minds of a large number of the workers is the fear of unemployment. In my judgment, however, there is enough work to be done by the building trade to keep it in full swing for many years to come. What we really desire is the full cooperation of all employers and employees in the building trade. If we can get the support of the private builders of the country we shall have taken a very long step toward obtaining the 750,000 houses that we at least require to-day.

The worst thing we could do would be to inaugurate charity rents. What every worker ought to receive is a wage sufficient to pay a proper rent. Obviously, under present-day conditions the State will have to make a contribution to rents under our scheme. One-third of the cost of the ordinary house is being wiped out and regarded as a war loss. We are notifying the authorities to base their rents on this deduction with a view, within a period of years, say seven, to having rents fixed at their proper economic value.

#### **To Promote Engineering Education.**

A section of the society for the promotion of engineering education has been organized at Georgia Tech. The following officers have been elected: Dr. D. S. Elliott, chairman, Prof. R. S. King, vice-chairman; and Prof. R. R. Kirk, secretary and treasurer. The organization will meet monthly for the purpose of listening to talks by men prominent in the engineering profession, and also for the purpose of discussing local and national problems of engineering education.

# Mountain Houses for Summer Homes



Some Landscape Garden Effects in Grounds of Mrs. Hugh T. Inman, Atlanta  
E. BURTON COOKE, Landscape Artist



Top View—Taken Feb. 1, 1914, when construction work was started.



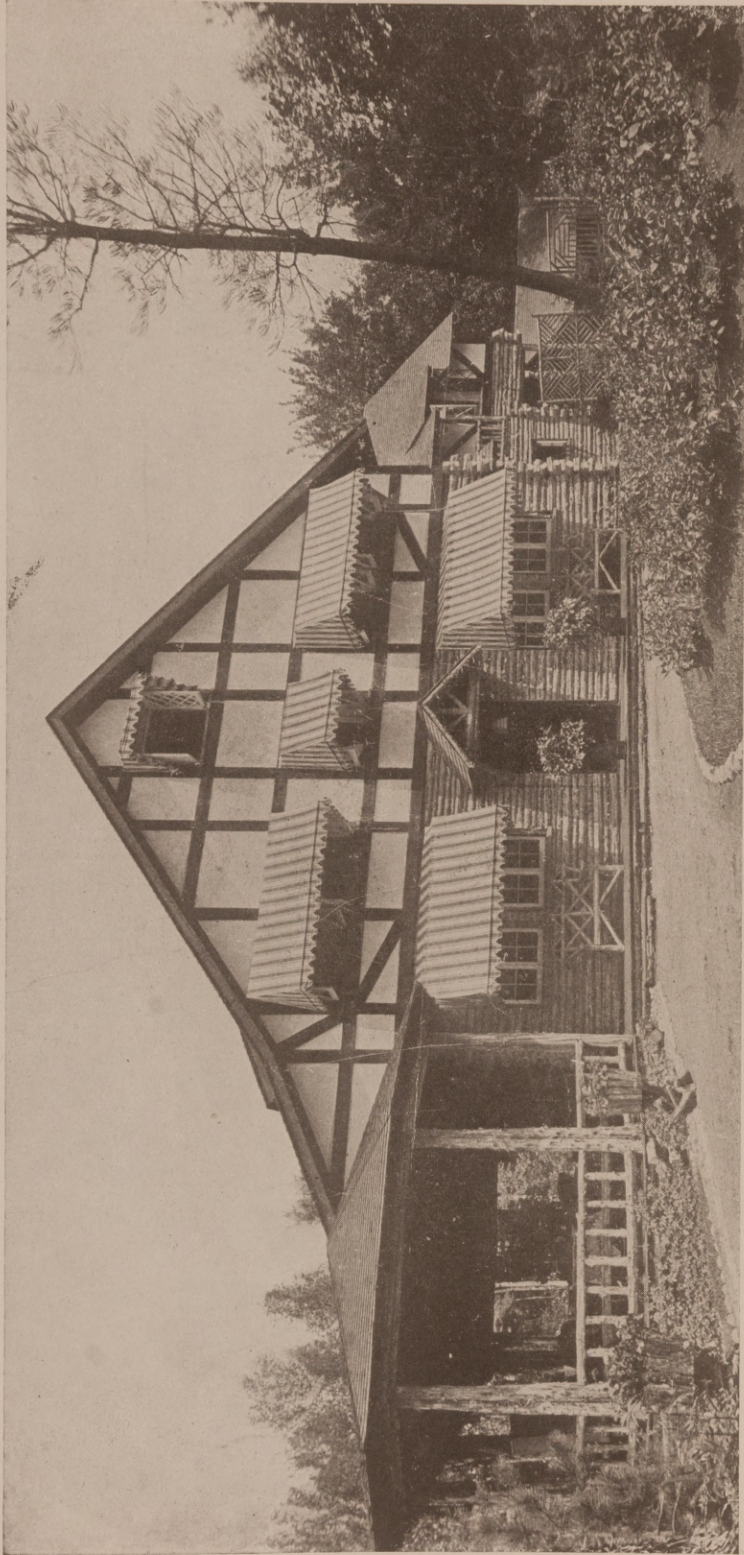
Bottom View—Taken just two months afterwards. Same spot.



Showing Front of Premises, Mrs. Hugh T. Inman.



Showing Inman grounds taken two months after planting. Walks were relaid and large Boxwoods brought from Old Homestead in country.



A Pretty Design for Summer Log Cabin in the Mountains.



California Type of Modern Bungalow.

# DIRECTORY OF AMERICAN ARCHITECTS

Specially Compiled for The Southern Architect and Building News, Atlanta, Ga.

## ALABAMA.

AUBURN—Biggin, Frederick.  
BESSEMER—Benns, W. E.  
BIRMINGHAM—Breeding, H. D.  
BIRMINGHAM—Brodie, T. L.  
BIRMINGHAM—Greene, J. E.  
BIRMINGHAM—Knight, Eugene H.  
BIRMINGHAM—Miller & Martin.  
BIRMINGHAM—Price, Ben.  
BIRMINGHAM—Rayfield, W. A.  
BIRMINGHAM—Ringer, J. G.  
BIRMINGHAM—Sallie & Newhinney.  
BIRMINGHAM—Ullman, Sidney M.  
BIRMINGHAM—Warren, W. T.  
BIRMINGHAM—Welston, Wm. Leslie.  
BIRMINGHAM—Wheelock, H. B.  
BIRMINGHAM—Whildin, D. O.  
HUNTSVILLE—Love, Edgar L.  
MOBILE—Downey & Deegan.  
MOBILE—Hayes, Chas. A.  
MOBILE—Hutchinson & Denham.  
MOBILE—Rogers, Geo. B.  
MONTGOMERY—Ausfeld, Frederick.  
MONTGOMERY—Gallher, C. F.  
MONTGOMERY—Lockwood, Frank.  
MONTGOMERY—Okel & Cooper.  
MONTGOMERY—Smith & Carter.  
TUSCALOOSA—Ayres, C. M.

## ARKANSAS.

FORT SMITH—Chilholm, A. C.  
HOT SPRINGS—Beaty, C. N.  
HOT SPRINGS—Hart, Frank J. W.  
HOT SPRINGS—Horn, J. G.  
JONESBORO—Mitchell, T. Edison.  
LITTLE ROCK—Almand, John Parks.  
LITTLE ROCK—Blaisdell, Frank M.  
LITTLE ROCK—Dill, Wm.  
LITTLE ROCK—Dugan, F. A.  
LITTLE ROCK—Ferrell, C. A.  
LITTLE ROCK—Gibb, Frank W.  
LITTLE ROCK—Harding, Thos.  
LITTLE ROCK—Harker, H. J.  
LITTLE ROCK—Mann, George R.  
LITTLE ROCK—Newman, H. H.  
LITTLE ROCK—Sanders, T. M.  
LITTLE ROCK—Stearn, Eugene John.  
LITTLE ROCK—Thompson, Chas. L.  
LITTLE ROCK—Watts, Charles.  
LITTLE ROCK—Weston, Harry J.  
PINE BLUFF—Selligman, Mitchell.  
TEXARKANA—Moore, Stewart.  
TEXARKANA—Witt, Seibert & Co.

## DELAWARE.

DOVER—Hirons, J. A.  
GEORGETOWN—Jones, Charles R.  
WILMINGTON—Brinckloe & Co.  
WILMINGTON—Brown & Whiteside.  
WILMINGTON—Cloud, Newton H.  
WILMINGTON—Crawford, Leon W.  
WILMINGTON—Hance, Wallace E.  
WILMINGTON—Kennedy, John J.  
WILMINGTON—May, Edward C.  
WILMINGTON—Rhodes, A. Edward.  
WILMINGTON—Rice, Edw. L., Jr.  
WILMINGTON—Rogers, Laussat R.  
WILMINGTON—Thompson, Jno. D., Jr.  
WILMINGTON—Tindall, Roscoe C.

## DISTRICT OF COLUMBIA.

WASHINGTON—Abbott, Franklin.  
WASHINGTON—Adams, Percy C.  
WASHINGTON—Atkinson, A. S. J.  
WASHINGTON—Baldwin, Frank C.  
WASHINGTON—Berrall, Jas.  
WASHINGTON—Boal, Theodore Davis.  
WASHINGTON—Brink, E. P. & Son.  
WASHINGTON—Brooke, Frederick.  
WASHINGTON—Brown, Glenn.  
WASHINGTON—Brown, Ward.  
WASHINGTON—Buckingham, Newell.  
WASHINGTON—Clark, Appleton P., Jr.  
WASHINGTON—Cooley, C. D. Co.  
WASHINGTON—Cooper, George S.  
WASHINGTON—Cooper, Jas. E.  
WASHINGTON—Cresson, William P.  
WASHINGTON—Davis, Wm. T.  
WASHINGTON—De Sibour, Jules H.  
WASHINGTON—Dessez, Leon E.  
WASHINGTON—Didden, C. A. & Son.  
WASHINGTON—Donn, E. W., Jr.  
WASHINGTON—Donn & Dem'ng.  
WASHINGTON—Fitzpatrick, Francis W.  
WASHINGTON—Fitz Simons, A. Burch.  
WASHINGTON—Fleming, Wm. H. Erwin.  
WASHINGTON—Flournoy & Flournoy.  
WASHINGTON—Fourchy, Robert.  
WASHINGTON—Fuller, Thos. J. D.  
WASHINGTON—Gay, Chas. M.  
WASHINGTON—Geare, R. W.  
WASHINGTON—Germuller, Julius.  
WASHINGTON—Goerner, Albert.  
WASHINGTON—Greenberg & Burke.  
WASHINGTON—Gregg & Leisenring.  
WASHINGTON—Grimm, Nicholas R.  
WASHINGTON—Guss, Walter G.  
WASHINGTON—Haller, Nicholas T. Co.  
WASHINGTON—Hamilton, E. N.

WASHINGTON—Harding, C. L.  
WASHINGTON—Harris, A. L.  
WASHINGTON—Hutton & Co.  
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WASHINGTON—Hensley, Melville D.  
WASHINGTON—Hornblower & Marshall.  
WASHINGTON—Hunter & Bell.  
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WASHINGTON—Keferstein, Carl B.  
WASHINGTON—Kendall & Smith.  
WASHINGTON—Lepley, Matthew G.  
WASHINGTON—Lindsey, Arthur G.  
WASHINGTON—Lubschez, Ben J.  
WASHINGTON—Macneil & Macneil.  
WASHINGTON—Marsh & Peter.  
WASHINGTON—Meyers, B. Frank.  
WASHINGTON—Milburn, Heister & Co.  
WASHINGTON—Miller, Clarence A.  
WASHINGTON—Miller, Otho.  
WASHINGTON—Mindeleff, Victor.  
WASHINGTON—Moore, M. F.  
WASHINGTON—Mullett, A. B. & Co.  
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WASHINGTON—Nichols, Wm. C.  
WASHINGTON—Norris, Lemuel.  
WASHINGTON—Palmer, Wm. J.  
WASHINGTON—Pelz, Paul J.  
WASHINGTON—Peaslee, Horace W.  
WASHINGTON—Pierson, A. B. & F. G.  
WASHINGTON—Piper, Edgar R.  
WASHINGTON—Plager, Wm. S.  
WASHINGTON—Poole, T. H. & Co.  
WASHINGTON—Pyle, Frederick B.  
WASHINGTON—Ray, Geo. N.  
WASHINGTON—Rose, Clarence T.  
WASHINGTON—Russell, Lewis H.  
WASHINGTON—Santmyers Geo. T.  
WASHINGTON—Serviss, Jean R.  
WASHINGTON—Schneider, Fred. T.  
WASHINGTON—Simmons, B. Stanley.  
WASHINGTON—Simmons, Francis A.  
WASHINGTON—S'mon, Louis A.  
WASHINGTON—Simons, Edgar P.  
WASHINGTON—Smith, Marshall J.  
WASHINGTON—Sohl, J. E. W.  
WASHINGTON—Sonnemann, Alex H.  
WASHINGTON—Speiden & Speiden.  
WASHINGTON—Stead, Robert.  
WASHINGTON—Sunderland, Erskin M.  
WASHINGTON—Talbot, Wm. R.  
WASHINGTON—Tepper & Diamond.  
WASHINGTON—Totten, G. Oakley, Jr.  
WASHINGTON—Turner, Samuel R.  
WASHINGTON—Tyrell, John Boardman.  
WASHINGTON—Upman, Frank.  
WASHINGTON—Vaughn, Merrill T.  
WASHINGTON—Vaughn, W. A.  
WASHINGTON—Vost, Oscar G.  
WASHINGTON—Von Nerta, George O.  
WASHINGTON—Waggamann, Clark & Eugene.  
WASHINGTON—Warner, Wm. F.  
WASHINGTON—Waterbury, Chas. Dann.  
WASHINGTON—Webb, C. Edgar.  
WASHINGTON—Wenig, Julius.  
WASHINGTON—West, Cloughton.  
WASHINGTON—Wetmore, J. A.  
WASHINGTON—Wheat, L. P.  
WASHINGTON—Wheaton, Francis B.  
WASHINGTON—Wilson & Piri.  
WASHINGTON—Winbigler, Cecil M.  
WASHINGTON—Wood, Waddy B.

## FLORIDA.

DAYTONA—Espedahl, Jacob.  
JACKSONVILLE—Benjamin, R. A.  
JACKSONVILLE—Camp, W. B.  
JACKSONVILLE—Dozier, Miss H. C.  
JACKSONVILLE—Greeley, Mellen Clark.  
JACKSONVILLE—Hammond, W. G.  
JACKSONVILLE—Homes, Rutledge.  
JACKSONVILLE—Holmes & Ehmman.  
JACKSONVILLE—Klutho, H. J.  
JACKSONVILLE—Mark & Sheftall.  
JACKSONVILLE—Marsh, W. M.  
JACKSONVILLE—Op'd'ke, F. W.  
JACKSONVILLE—Talley, W. B.  
JACKSONVILLE—Walsh, J. R.  
LAKELAND—Bryan & Potet.  
LEESBURG—Carr, W. H.  
LEMON CITY—Pfeiffer, Geo. L.  
MIAMI—De Garmo, Walter C.  
MIAMI—Geiger, A. C.  
MIAMI—La Pointe, Henry.  
MIAMI—Mundy, H. H.  
MIAMI—Nolan, E. A.  
MIAMI—Pfeiffer, G.  
MIAMI—Sculthorne, John H.  
OCALA—MacKay, Geo.  
PENSACOLA—Alfred, W. W.  
PENSACOLA—Frederick, W. O.  
PENSACOLA—Welch, S. J.  
PENSACOLA—Willis, W. D.  
ST. AUGUSTINE—Butler, G. T.

ST. PETERSBURG—Benjamin, M. E.  
ST. PETERSBURG—Dupont, Henry H. & Co.  
ST. PETERSBURG—Ferdon & Feltham.  
ST. PETERSBURG—McClarren, S. T.  
ST. PETERSBURG—Stuart, G. W.  
SARASTOA—Hall, Harold.  
TAMPA (WEST)—Biggar, John H.  
TAMPA—Bonfoey & Elliott.  
TAMPA—Fort & Parslow.  
TAMPA—James, Fred J.  
TAMPA—Johnson, A. H.  
TAMPA—Kennard, Francis, J.  
TAMPA—Mugge, A. B.  
TAMPA—Shaw, A. L.

## GEORGIA.

ALBANY—Reidy, M. J.  
ATHENS—Orr, Fred J.  
ATLANTA—Barili, Alfredo, Jr.  
ATLANTA—Battie, J. C.  
ATLANTA—Bleckley, Haralson.  
ATLANTA—Brown, A. Ten Eyck.  
ATLANTA—Brown, F. W.  
ATLANTA—Canton, A. N.  
ATLANTA—Carpenter, R. H.  
ATLANTA—Chapman, H. K.  
ATLANTA—Chase, Wm. J. J.  
ATLANTA—Dallas Co., P. A.  
ATLANTA—Edwards & Sayward.  
ATLANTA—Everett, A. F. N.  
ATLANTA—Dougherty, E. E.  
ATLANTA—Frazier, C. E.  
ATLANTA—Hentz, Reid & Adler.  
ATLANTA—Hill, Lodowick, J., Jr.  
ATLANTA—Hopson, Chas. H.  
ATLANTA—Lockwood, Greene & Co.  
ATLANTA—Mac Eachron & Co., J. R.  
ATLANTA—Mayre, P. Thornton.  
ATLANTA—Morgan & Dillon.  
ATLANTA—Morr's, M. F.  
ATLANTA—Murphy, Geo. E.  
ATLANTA—Powell, W. C.  
ATLANTA—Trowbridge, S. D.  
ATLANTA—Wachendorf, E. C.  
ATLANTA—Wagener, Fritz.  
ATLANTA—Walker & Chase.  
ATLANTA—Wilburn, (Miss) L. R.  
AUGUSTA—Campbell, Thos. M.  
AUGUSTA—Clark, Cortez.  
AUGUSTA—Scroggs, Philander P.  
BRUNSWICK—Anderson, Wm. C.  
COLUMBUS—Kelly, H. M.  
COLUMBUS—Lockwood, T. F.  
COLUMBUS—Smith, T. W. & E. O.  
MACON—Blair, Alexander.  
MACON—Dennis, P. E.  
MACON—Ellis, C. R.  
MACON—Happ & Shelverton.  
MACON—Nisbet, Brown & Dunwody.  
MACON—Persley, L. H.  
ROME—Rawlins, H. A.  
ROME—Smith, Hine.  
SAVANNAH—Drummond, E. L.  
SAVANNAH—Kops, J. de Bruyn.  
SAVANNAH—Levy & Clark.  
SAVANNAH—Nevitt, John J.  
SAVANNAH—Snedeker, J. Vorhees, Jr.  
SAVANNAH—Sugden, Percy.  
SAVANNAH—Urban, Henry.  
SAVANNAH—Wallin, Henrik.  
SAVANNAH—Witcover, H. W.  
VALDOSTA—Greer, Lloyd.  
WASHINGTON—Chafin, J. B.

## ILLINOIS.

ALTON—Maupin, Jas. M.  
ALTON—Pfeiffenberger, L. & Son.  
ALTON—Stelle, Oliver G.  
ANNAWAN—Hay, Mark.  
ATKINSON—Chapler, Elijah C.  
AURORA—Holden, B. E.  
AURORA—Malmer, Eugene.  
AURORA—Worst & Shepardson.  
AUSTIN—Floto, Julius.  
BLOOMINGTON—Miller, Geo. H.  
BLOOMINGTON—Moratz, Arthur F.  
BLOOMINGTON—Pillsbury, Arthur L.  
BLOOMINGTON—Simmons, Aaron T.  
CARIO—Kusener, Casper.  
CARBONDALE—Thompson, Thos. S.  
CARTHAGE—Payne, Geo. W. & Son.  
CHAMPAIGN—Clark, Chas. R.  
CHAMPAIGN—Hubard, Archie H.  
CHAMPAIGN—Kratz, E. V.  
CHAMPAIGN—Pankow, C. J.  
CHAMPAIGN—Ramey, G. E.  
CHAMPAIGN—Spencer, N. S. & Son.  
CHAMPAIGN—Temple, Harry R.  
CHARLESTON—Mitchell, Chas. D.  
COLLINSVILLE—Eberhardt, Henry W.  
DANVILLE—Garrett, Urias E.  
DANVILLE—Lewis & Dougherty.  
DANVILLE—Liese & Ludwick.

DANVILLE—McCoy & Skadden.  
 DANVILLE—Stuebe, Leon F. W.  
 DECATUR—Aschauer, Waggoner.  
 DECATUR—McNabb, Wm. O.  
 DECATUR—Patterson, Melville G.  
 DECATUR—Rosen, R. O.  
 DECATUR—Scribbins, John A.  
 DECATUR—Waggoner, A. M.  
 DIXON—Vail, Morrison H.  
 EAST MOLINE—Reeves, Alfred J.  
 E. ST. LOUIS—Frankel, Albert B.  
 E. ST. LOUIS—Kennedy, J. W.  
 E. ST. LOUIS—Mueller & Brokmeyer.  
 E. ST. LOUIS—Pfeiffenberger, L. & Son.  
 E. ST. LOUIS—Riester & Rubach.  
 EDWARDSVILLE—Kane, Michael B.  
 EDWARDSVILLE—Pauley, Charles.  
 ELGIN—Abell, Ralph E.  
 ELGIN—Morris, G. E.  
 EDWARDSVILLE—Postle, David E.  
 EVANSTON—Blake, Edgar O.  
 EVANSTON—Woodyatt, Ernest.  
 FAIRBURY—Schmetzler, Chas. H.  
 FOREST PARK—Burtar, Adolph G.  
 FOREST PARK—Karbach, Chas.  
 FORT SHERIDAN—Rice, Josiah L.  
 FREEPORT—Dustan, Urias M.  
 GALESBURG—Aldrich & Aldrich.  
 GALESBURG—Beadle, J. Grant.  
 GENESEO—Okeberg, Jno. V.  
 JACKSONVILLE—Buckingham, C. W.  
 JOLIET—Cowell, Herbert.  
 JOLIET—Hoen, Rudolph G.  
 JOLIET—Wallace, Charles L.  
 JOLIET—Wallace, Elizabeth B.  
 JOLIET—Webster, Chas. Woods.  
 KANKAKEE—Henry, Chas. D.  
 KEWANEE—Heaps, S. Leroy.  
 LA GRANGE—Krauch, Walter T.  
 LA SALLE—Matteson, Victor Andre.  
 LAKE FOREST—Jones, Frederick W.  
 LINCOLN—Deal & Ginzle.  
 MACOMB—Fuhr, Jno. H.  
 MACOMB—Holmes, Willis B.  
 MOLINE—Eckerman, Oscar A.  
 MOLINE—Eckland, Henry.  
 MOLINE—Schulzke, Wm. H.  
 MOLINE—Whitsitt, H. W.  
 MORGAN PARK—Blood, L. A.  
 MT. MORRIS—Buser, Nathaniel E.  
 MURPHYSBORO—Gill, R. Z.  
 OAK PARK—Bragstad, J. W.  
 OAK PARK—Ellis, Frank M.  
 OAK PARK—Fiddeke, H. G.  
 OAK PARK—Harned, Henry P.  
 OAK PARK—Hoffman, H. Curtis.  
 OAK PARK—Racine, Lewis.  
 OAK PARK—Randolph, S. M.  
 OAK PARK—Van Bergen, Jno. S.  
 OTTAWA—Hanifen, H. John.  
 OTTAWA—Richardson, Jason F., Jr.  
 PEORIA—Davis, Geo. H.  
 PEORIA—Day, Warren W.  
 PEORIA—Hercules, J. W.  
 PEORIA—Hercules, J. W.  
 PEORIA—Hewitt & Emerson.  
 PEORIA—Hotchkiss & Harris.  
 PEORIA—Hulsebus, Bernhard L.  
 PEORIA—Jobst, Valentine.  
 PEORIA—Kiefer, Albert.  
 PEORIA—King, John P., Jr.  
 PEORIA—Klein, Frederick J.  
 PEORIA—Koch, Henry A.  
 PEORIA—Reeves & Baillie.  
 PEORIA—Traeger, Chas. W.  
 PEORIA—Whitmeyer & Chaffee.  
 PERU—Wachter, Henry F.  
 PONTIAC—Young, Richard A.  
 QUINCY—Batschy, Jno.  
 QUINCY—Behrensmeier, George P.  
 QUINCY—Chatten, Harvey.  
 QUINCY—Geise, Martin J.  
 QUINCY—Ledebrink, Fred C.  
 QUINCY—Wood, Ernest M.  
 ROCKFORD—Bradley, Chas. W.  
 ROCKFORD—Carpenter, F. A.  
 ROCKFORD—Peterson & Johnson.  
 ROCK ISLAND—Cervin & Horn.  
 ROCK ISLAND—McLane, Cyrus D.  
 ROCK ISLAND—Stauduhar, Geo. P.  
 ROGERS PARK—Melin, Chas. W.  
 SANDWICH—Howison, Charles.  
 STERLING—Ecklund, Fugard & Knapp.  
 STERLING—Van Horne, Philip T.  
 STOCKTON—Goodmiller, Preston V.  
 STREATOR—Allen, A. W.  
 STREATOR—Foster, Wm. G.  
 SPRINGFIELD—Bullard & Bullard.  
 SPRINGFIELD—Conway, W. H.  
 SPRINGFIELD—Hanes, Samuel J.  
 SPRINGFIELD—Helmle & Helmle.  
 SPRINGFIELD—Reiger, Harry J.  
 SPRINGFIELD—Rinkaker, John.  
 TOLEDO—Ash, Percy.  
 TOLEDO—Curtis, N. C.  
 TOLEDO—Hanker, Chas.  
 URBANA—Maxwell, Wymer W.  
 URBANA—Royer, Jos. W.

URBANA—White, Jas. M.  
 WHEATON—Salisbury, Robt. H.  
 WILMETTE—Rae, Robt., Jr.  
 WILMETTE—Wood, Jas. M.

## INDIANA.

ANDERSON—Meckel, Jno.  
 ANDERSON—Watkins, Ernest R.  
 BEDFORD—Pritchett, Milton C.  
 BERNE—Bagley, Abraham.  
 BLOOMINGTON—Doeppers Co., E. C.  
 BLOOMINGTON—Nichols, John Lincoln.  
 BRAZIL—Johnson, M. H., Jr.  
 CLINTON—Thomas, C. M.  
 COLUMBUS—Clevenger & Co., C. R.  
 COLUMBUS—Crowe, R. B.  
 CONNERSVILLE—Griffin, H. M.  
 CONNERSVILLE—La Fayette, Cornwell.  
 CRAWFORDSVILLE—Griffith, Geo. T.  
 DECATUR—Christen, Chas.  
 DECATUR—Hoffman, Oscar.  
 ELKHART—Elwood, C. C.  
 ELKHART—Turnock, E. Hill.  
 ELWOOD—Risinger, W. A.  
 EVANSVILLE—Boyle & Co., Harry C.  
 EVANSVILLE—Capelle, A. J.  
 EVANSVILLE—Karges, H. Gilbert.  
 EVANSVILLE—Metzner, Louis.  
 EVANSVILLE—Russ, Wm. E.  
 EVANSVILLE—Schlotter, Frank J.  
 EVANSVILLE—Shoppell & Co., Clifford.  
 EVANSVILLE—Thurgood, C. L.  
 FORT WAYNE—Allen, Frank F. Lincoln  
 FORT WAYNE—Aurents, Raymond J.  
 FORT WAYNE—Fair, Perry W.  
 FORT WAYNE—Fordney, J. F.  
 FORT WAYNE—Griffith & Goodrich.  
 FORT WAYNE—King, Jno. F.  
 FORT WAYNE—Mahurin & Mahurin.  
 FORT WAYNE—Riedel, J. M. E.  
 FORT WAYNE—Weatherhogg, Chas. R.  
 FORT WAYNE—Wing & Botteron.  
 FRANKFORT—Collins & Co., O. C.  
 GARY—Erickson, Herbert.  
 GARY—Hiner, Lewis E.  
 GARY—James, S. H.  
 GARY—Kendrick, Chas. E.  
 GARY—Verplank, J. J.  
 GARY—Wicks, A. F.  
 HAMMOND—Berry & Co., Addison C.  
 HAMMOND—Hutton & Son, Jos. T.  
 HAMMOND—Turner, Mac.  
 HUNTINGTON—Brineman, M. D.  
 HUNTINGTON—Gierhart, J. B.  
 INDIANA HARBOR—Corwall, Fay D.  
 INDIANAPOLIS—Albersmeier, Wm. H.  
 INDIANAPOLIS—Bacon, Chas. E.  
 INDIANAPOLIS—Bass, Kowlton & Graham.  
 INDIANAPOLIS—Bates, Chas. E.  
 INDIANAPOLIS—Bedeke, Geo. V.  
 INDIANAPOLIS—Bohlen & Son, D. A.  
 INDIANAPOLIS—Brossmann, Chas.  
 INDIANAPOLIS—Brown, W. H.  
 INDIANAPOLIS—Brubaker & Stern.  
 INDIANAPOLIS—Byfield, Chas. H.  
 INDIANAPOLIS—Cannon Co., Fernald S.  
 INDIANAPOLIS—Carr, Merritt L.  
 INDIANAPOLIS—Daggett & Co., R. P.  
 INDIANAPOLIS—Dark, Stephen C.  
 INDIANAPOLIS—Dunlap, Elmer E.  
 INDIANAPOLIS—Elridge, Wm. K.  
 INDIANAPOLIS—Foltz, Herbert.  
 INDIANAPOLIS—French, Rollin E.  
 INDIANAPOLIS—Freijez, Chas. T.  
 INDIANAPOLIS—Garms, W. H.  
 INDIANAPOLIS—George, MacLucas & Fitton.  
 INDIANAPOLIS—Gordon, Geo. W.  
 INDIANAPOLIS—Grindle, Alf.  
 INDIANAPOLIS—Harrison, Merritt.  
 INDIANAPOLIS—Hastings, Samuel A.  
 INDIANAPOLIS—Hice, Harry M.  
 INDIANAPOLIS—Hoogland, Geo. E.  
 INDIANAPOLIS—Hunter, Frank B.  
 INDIANAPOLIS—Kopf, J. Edwin.  
 INDIANAPOLIS—Krauss, W. K.  
 INDIANAPOLIS—McGuire & Shook.  
 INDIANAPOLIS—Martindale, Clarence.  
 INDIANAPOLIS—Moore, W. Scott & Co.  
 INDIANAPOLIS—Morris, Chas. O.  
 INDIANAPOLIS—Morck, Wm. O.  
 INDIANAPOLIS—Parker, Wilson B.  
 INDIANAPOLIS—Riedel & Co., Frank P.  
 INDIANAPOLIS—Rubush & Hunter.  
 INDIANAPOLIS—Russ, W. E.  
 INDIANAPOLIS—Schellschmidt, Alvin B.  
 INDIANAPOLIS—Scherer, Adolf.  
 INDIANAPOLIS—Sturges, Louis H.  
 INDIANAPOLIS—Vonnegut & Bohn.  
 INDIANAPOLIS—Wallick, Frederick.  
 INDIANAPOLIS—Winterrowd, Thos. A.  
 KOKOMO—Barrett, Chas. W.  
 KOKOMO—Dunlap, Elmer E.  
 KOKOMO—Honeywell Co., A. A.  
 KOKOMO—McFann, Cassius C.  
 KOKOMO—Shaffer, Edwin M.  
 KOKOMO—Young, Robt. L. & I. Russell.  
 LAFAYETTE—Alexander & Son, Jas. F.

LAFAYETTE—Brown, G. S.  
 LAFAYETTE—Gault, Edw. E.  
 LAFAYETTE—Kashner & Son, C. D.  
 LAFAYETTE—Nicol, Chas. W.  
 LINTON—Fritz, John T.  
 LOGANSPOUT—Crain, Jas. E.  
 LOGANSPOUT—Horn, Carl J.  
 MARION—Bowstead, Henry G.  
 MARION—Elder, Hiram.  
 MARION—French, Burt L.  
 MARION—Plato, Samuel.  
 MICHIGAN CITY—Ahlgrim, F. H.  
 MISHAWAKA—Brubaker, O. C.  
 MONTICELLO—Young, Samuel.  
 MUNCIE—Houch, Chas. H.  
 MUNCIE—Kibele, Cuno.  
 MUNIE—Thompson, M. G.  
 NEW CASTLE—Taylor, Chas. W.  
 PERU—Fike Co., H. P.  
 PLYMOUTH—Ness, J. E.  
 RICHMOND—Campfield, Edwin M.  
 RICHMOND—Hasecoeter, J. A.  
 RICHMOND—Higgs, J. Ed.  
 RICHMOND—Hodge, Omar.  
 RICHMOND—Kaufman & Son, Wm. S.  
 RICHMOND—Mansfield, Geo. W.  
 RICHMOND—Mueller & Werking.  
 RICHMOND—Yates, Stephen O.  
 SEYMOUR—Hall, Robt. H.  
 SOUTH BEND—Austin & Shambleau.  
 SOUTH BEND—Freyermuth & Maurer.  
 SOUTH BEND—Schneider, Walter W.  
 SOUTH BEND—Young, Ernest W.  
 TERRE HAUTE—Floyd, W. H.  
 TERRE HAUTE—Gibbons, Robert E.  
 TERRE HAUTE—Johnson & Miller.  
 TERRE HAUTE—Koerner, Robert A.  
 TERRE HAUTE—Scott, Charles E.  
 TERRE HAUTE—Self, James E.  
 TERRE HAUTE—Shourds, Dalton R.  
 TERRE HAUTE—Vrydagh, J. G.  
 TERRE HAUTE—Vrydagh, Robt. T.  
 UNION CITY—Loch, C. E.  
 VALPARAISO—Lembke, Chas. F.  
 VALPARAISO—Snader, D. L.  
 VINCENNES—Bayard, Jno. B.  
 VINCENNES—Gaddis, Jno. W.  
 VINCENNES—Osterhaze, Louis H.  
 WABASH—Stewart, Wm.  
 WARSAW—Craig, Samuel A.

## KANSAS.

BELOIT—Slack, Frank.  
 CHANUTE—Pratt, J. W.  
 COFFEYVILLE—Henderson, C. A.  
 EMPORIA—Brinkmann, H. W.  
 EMPORIA—Marx, Wm. F.  
 EMPORIA—Squires, Chas. W.  
 FORT SCOTT—Gardner, J. H.  
 FORT SCOTT—Huff & Co., Walter S.  
 GREAT BEND—Redman & Maher.  
 HALSTEAD—Steele, Benton.  
 HUTCHINSON—Hulse & Co., W. E.  
 HUTCHINSON—Mann & Gerow.  
 HUTCHINSON—Martin, C. F.  
 HUTCHINSON—Riggs, J. S.  
 INDEPENDENCE—Fletcher, F. F.  
 LAWRENCE—Blair, Albert E.  
 LAWRENCE—Goldsmith, Goldwin.  
 LEAVENTHURTH—Fetham, Wm. P.  
 MANHATTAN—Baker, Cecil Frank.  
 MANHATTAN—Winter, H. B.  
 OTTAWA—Washburn & Sons, Geo. P.  
 PARSONS—Briggs, J. E.  
 PITTSBURG—Collin, A. C.  
 PITTSBURG—Munn, G. J.  
 SALINA—Hudson, A. K.  
 SALINA—Smith, C. A.  
 SALINA—Wilmarth & Zerbe.  
 TOPEKA—Chandler, Chas. H.  
 TOPEKA—Cuthbert, E. D.  
 TOPEKA—Gamble, R. L.  
 TOPEKA—Holland & Son, J. C.  
 TOPEKA—Lescher, T. H.  
 TOPEKA—Marshall, Joseph.  
 TOPEKA—Squires, Frank C.  
 TOPEKA—Stanton, John F.  
 TOPEKA—Williamson, T. W.  
 TOPEKA—Wood, L. H.  
 WICHITA—Bond, S.  
 WICHITA—Charles, H. G.  
 WICHITA—Conrow, H. B.  
 WICHITA—Culver, W. W.  
 WICHITA—Schmidt, Lorentz.  
 WICHITA—McCune, F. G.  
 WICHITA—Street, N. V.  
 WICHITA—Terry, C. W.  
 WICHITA—Voigt, S. S.  
 WINFIELD—Fuller Co., J. N.  
 WINFIELD—Ross, I. R.

## KENTUCKY.

ASHLAND—King, J. M.  
 BARDSTOWN—Stanley, O.  
 BOWLING GREEN—Eleanor, C. M.  
 COVINGTON—Hildreth & Beekman.  
 COVINGTON—House & Sons, C. W.  
 COVINGTON—Schofield, Geo. W.  
 COVINGTON—Wisnall, Bernard T.

CYTHIANA—Stevens & Co., Joseph R.  
 DANVILLE—Van Dalsem, W. S.  
 FT. THOMAS—Weber, John R.  
 FRANKFORT—Oberwarth, Leo. L.  
 FULTON—Spradlin, W. H.  
 HENDERSON—Trible, E. S.  
 HOPKINSVILLE—Long, James Lee.  
 LEXINGTON—Anderson & Frankel.  
 LEXINGTON—Geretz, Martin.  
 LEXINGTON—Moore, John V.  
 LEXINGTON—Stamler, E.  
 LEXINGTON—Young, Chas. B.  
 LOUISVILLE—Collin, Val P.  
 LOUISVILLE—Curtin, C. A.  
 LOUISVILLE—Davis, Brinton B.  
 LOUISVILLE—Erhart, Fred.  
 LOUISVILLE—Gaffney, J. J.  
 LOUISVILLE—Gray & Wischmeyer.  
 LOUISVILLE—Hallenberg, Adolph.  
 LOUISVILLE—Hawes, Henry F.  
 LOUISVILLE—Hutchings & Sons, J. B.  
 LOUISVILLE—Joseph & Joseph.  
 LOUISVILLE—Korell, Emil.  
 LOUISVILLE—Loomis & Hartman.  
 LOUISVILLE—Meyer & Brenner.  
 LOUISVILLE—Murphy & Bro., D. X.  
 LOUISVILLE—Nevin, H. L.  
 LOUISVILLE—Nolan, Thos. J.  
 LOUISVILLE—Smith & Otis.  
 LOUISVILLE—Tafel, A. G.  
 LOUISVILLE—Thomas, Jno. H.  
 LOUISVILLE—Tyler, W. C.  
 LOUISVILLE—Ward & Glasop.  
 LOUISVILLE—Wolters, Henry.  
 LUDLOW—Purcell, Wm. R.  
 MOUNT STERLING—Williams, E. L.  
 NEWPORT—Beiting, Edward.  
 NEWPORT—Glick, Jacob.  
 NEWPORT—Raabe, Lawrence.  
 NEWPORT—Vogel, Chas.  
 NEWPORT—Ware, Randolph F.  
 NEWPORT—Wilson, Louis H.  
 OWENSBORO—Killian, A.  
 OWENSBORO—Kimberlin, C. W.  
 OWENSBORO—Whitehead, John W.  
 PADUCAH—Brainard, Wm. L.  
 PADUCAH—Lassiter & Bro., A. L.  
 RICHMOND—Moynahan & Forbes.  
 SHELBYVILLE—Gruber & Doss.  
 WINCHESTER—Crone, J. W.

## LOUISIANA.

ALEXANDRIA—Yaeger, C. Scott.  
 BATON ROUGE—Charlton, Chas. H., Jr.  
 COLFAX—Carver, Joe.  
 LAKE CHARLES—Phillip, E. W.  
 MONROE—Smith, J. W.  
 MORGAN CITY—Ghirardi, P. B.  
 NEW IBERIA—Phillip, E. W.  
 NEW ORLEANS—Andry, Paul.  
 NEW ORLEANS—Armstrong & Koch.  
 NEW ORLEANS—Bear, Albert G.  
 NEW ORLEANS—Boha, Arthur P.  
 NEW ORLEANS—Brandner, Joseph T.  
 NEW ORLEANS—Brune, T.  
 NEW ORLEANS—Burk, Wm. R.  
 NEW ORLEANS—Burton & Benbernagel.  
 NEW ORLEANS—Case, Chas. W.  
 NEW ORLEANS—Churchill, Frank.  
 NEW ORLEANS—Cothran, John R.  
 NEW ORLEANS—De Buys, Ratbone.  
 NEW ORLEANS—Diboll & Owen, Ltd.  
 NEW ORLEANS—Favrot & Livaudais.  
 NEW ORLEANS—Fromberg & Drennan.  
 NEW ORLEANS—Fulham, W. F.  
 NEW ORLEANS—Geary, Walter N.  
 NEW ORLEANS—Goldstein, Moise H.  
 NEW ORLEANS—Graveley & Co., Frank P.  
 NEW ORLEANS—Hay, Alex.  
 NEW ORLEANS—Jones & Roessle.  
 NEW ORLEANS—Kaiser, Wm. P.  
 NEW ORLEANS—Keener, Walter C.  
 NEW ORLEANS—Kohlman, Nathan.  
 NEW ORLEANS—Labouisse, S. S.  
 NEW ORLEANS—MacDonnell, Francis.  
 NEW ORLEANS—Mohr, Oscar P.  
 NEW ORLEANS—Nelson, A. J.  
 NEW ORLEANS—Nolan & Torre.  
 NEW ORLEANS—Raymond, Harold.  
 NEW ORLEANS—Smith, A. L.  
 NEW ORLEANS—Soule, R. Spencer.  
 NEW ORLEANS—Spurl, Edward F.  
 NEW ORLEANS—Stevens, W. L.  
 NEW ORLEANS—Stone, Samuel, Jr.  
 NEW ORLEANS—Thrad & Reilly.  
 NEW ORLEANS—Toledano, Wogan & Bernard.  
 NEW ORLEANS—Weil, Emile.  
 NEW ORLEANS—Weiss, Leon C.

NEW ORLEANS—Williams, C. Milo.  
 SHREVEPORT—Annan, J. P.  
 SHREVEPORT—Armstrong, A. J.  
 SHREVEPORT—Geop, E. A.  
 SHREVEPORT—Huff, Chas. B.  
 SHREVEPORT—King, Clarence W.  
 SHREVEPORT—Neild, E. F.  
 SHREVEPORT—Olschner, C. E.

## MISSISSIPPI.

BILOXI—Roof, H. H.  
 BROOKHAVEN—McCormick, Eugene.  
 CLARKSDALE—Alsp, M. M.  
 COLUMBUS—McClanahan & Terry.  
 GREENWOOD—McGeoy, Frank R.  
 JACKSON—Austin, H. N.  
 JACKSON—Hull, Emmett J.  
 JACKSON—Overstreet, N. W.  
 MAGNOLIA—Kramer, X. A.  
 MERIDIAN—Krouse, P. J.  
 MERIDIAN—Stuart, Burt.  
 MERIDIAN—Suttle, C. E.  
 VICKSBURG—Carlisle, Louise G.  
 VICKSBURG—Donovan, Michael J.

## MISSOURI.

BOONVILLE—Ravenel, Samuel W.  
 CAPE GIRARDEAU—Parlow, W. E.  
 CARTHAGE—Ehlers, A.  
 CARTHAGE—Prather, J. A.  
 CARTHAGE—Simpson, Percy K.  
 COLUMBIA—Pierce, Harry L.  
 DE SOTO—Hemme, Charles.  
 FULTON—Bell, M. F.  
 HANNIBAL—Martin, Malcolm S.  
 HANNIBAL—Schmitt, Ernest.  
 HOPKINS—Akin, John A.  
 INDEPENDENCE—McBride, R. L.  
 JEFFERSON CITY—Miller & Caffee.  
 JOPLIN—Michaelis, A. C.  
 JOPLIN—Sudhoelter, C. H. Co.  
 KANSAS CITY—Curtiss, Louis.  
 KANSAS CITY—Drake, H. Alex.  
 KANSAS CITY—Dunn, W. H.  
 KANSAS CITY—Edwards, S. E.  
 KANSAS CITY—Felt & Co., J. H.  
 KANSAS CITY—Green, Geo. Fuller.  
 KANSAS CITY—Greenebaum & Hardy.  
 KANSAS CITY—Gunn, Frederick C.  
 KANSAS CITY—Hamilton, F. B.  
 KANSAS CITY—Hare & Hare.  
 KANSAS CITY—Harris, W. G.  
 KANSAS CITY—Hertz, Alfred W.  
 KANSAS CITY—Hill, Henry E.  
 KANSAS CITY—Hofer, A. E.  
 KANSAS CITY—Hogg, Jas. Oliver.  
 KANSAS CITY—Hoit, Henry F.  
 KANSAS CITY—Jackson, Frank J.  
 KANSAS CITY—Jacobs, H. M.  
 KANSAS CITY—Keene & Simpson.  
 KANSAS CITY—Kleinsteuber, Alfred A.  
 KANSAS CITY—Knaus, Paul.  
 KANSAS CITY—Kurfuss, Selby H.  
 KANSAS CITY—Lauck & Lauck.  
 KANSAS CITY—Lodge, Wm. P.  
 KANSAS CITY—Mack, Clyde F.  
 KANSAS CITY—Madorie & Fields.  
 KANSAS CITY—Markgraf, Rhudolph.  
 KANSAS CITY—Marshall, David.  
 KANSAS CITY—Mellvain, Frederic E.  
 KANSAS CITY—McKeeknie & Trask.  
 KANSAS CITY—Owen & Payson.  
 KANSAS CITY—Owen, Albert S.  
 KANSAS CITY—Root & Siemens.  
 KANSAS CITY—Rose & Peterson.  
 KANSAS CITY—Sanneman, Ray H.  
 KANSAS CITY—Saylor, Wm. H.  
 KANSAS CITY—Schmidt, Claude P.  
 KANSAS CITY—Schumacher, Ramon.  
 KANSAS CITY—Scrage, W. E.  
 KANSAS CITY—Shepard, Farrar & Wiser.  
 KANSAS CITY—Sloan, Clifton B.  
 KANSAS CITY—Siemens, Geo. M.  
 KANSAS CITY—Smith, Rea & Lovitt.  
 KANSAS CITY—Sunderland, J. C.  
 KANSAS CITY—Tarbet, Samuel S.  
 KANSAS CITY—Thompson, J. Francis.  
 KANSAS CITY—Thurtle, John C.  
 KANSAS CITY—Turney, Albert.  
 KANSAS CITY—Vandenbergh, Chas. C.  
 KANSAS CITY—Van Brunt, Courtlandt.  
 KANSAS CITY—Van Brunt, John.  
 KANSAS CITY—White & Dean.  
 KANSAS CITY—Van Brunt & Hertz.  
 KANSAS CITY—Wight & Wight.  
 KANSAS CITY—Wildner, E. T.  
 KANSAS CITY—Williams, Chas. M.  
 KANSAS CITY—Williams, John C.

KANSAS CITY—Willis, Bixby.  
 KANSAS CITY—Wilson, Lewis G.  
 KANSAS CITY—Wright, Ward W.  
 KIRKSVILLE—Dunbar, Irvin.  
 KIRKSVILLE—Dunbar, J.  
 MEXICO—Elliott, Ben C.  
 MILAN—Schultz, S. E.  
 MOBERLY—Alt, Ludwig.  
 ST. JOSEPH—Boschen, W.  
 ST. JOSEPH—Eckel & Aldrich.  
 ST. JOSEPH—Heim, R. F.  
 ST. JOSEPH—Meier, Rudolph.  
 ST. LOUIS—Baker, Alfred M.  
 ST. LOUIS—Barnett, Haynes & Barnett.  
 ST. LOUIS—Barnett Co., T. P.  
 ST. LOUIS—Becker, Gerhard J.  
 ST. LOUIS—Black & Son, A. W.  
 ST. LOUIS—Bonsack, Frederick C.  
 ST. LOUIS—Bradley, Chas. C.  
 ST. LOUIS—Bradshaw, Preston J.  
 ST. LOUIS—Brueggman, G. F. A.  
 ST. LOUIS—Caldwell, Wm. A.  
 ST. LOUIS—Cann & Corrubia.  
 ST. LOUIS—Clymer, Harry G.  
 ST. LOUIS—Pe'toring, Chas. H.  
 ST. LOUIS—Detjen, Hy.  
 ST. LOUIS—Dunham Co., John M.  
 ST. LOUIS—Eames & Young.  
 ST. LOUIS—Ewald, Allen & Toensfeldt.  
 ST. LOUIS—Ferrand, Gabriel.  
 ST. LOUIS—Foell, Aug.  
 ST. LOUIS—Griesser, Wilhelm.  
 ST. LOUIS—Groves, Albert B.  
 ST. LOUIS—Gruen, Wm. H.  
 ST. LOUIS—Guentert, E.  
 ST. LOUIS—Haeger, Leonard.  
 ST. LOUIS—Haeussler, A. F.  
 ST. LOUIS—Hall & Graf.  
 ST. LOUIS—Harker, H. J.  
 ST. LOUIS—Helfensteller, Hirsch & Watson.  
 ST. LOUIS—Hellmuth & Hellmuth.  
 ST. LOUIS—Herthel, John W.  
 ST. LOUIS—Hess, Ernest J.  
 ST. LOUIS—Hirschenschein, J. M.  
 ST. LOUIS—Nohenschild, H. T.  
 ST. LOUIS—Howard, Norman B.  
 ST. LOUIS—Imbs, Thos. F.  
 ST. LOUIS—Ittner, Wm. B.  
 ST. LOUIS—Jacobs, Chas. W.  
 ST. LOUIS—Janessen, Ernest C.  
 ST. LOUIS—Jenness, Ernest C.  
 ST. LOUIS—Kennerly, Geo. H.  
 ST. LOUIS—Kessler, Geo. E. & Co.  
 ST. LOUIS—Kirsch, Robt. C.  
 ST. LOUIS—Kilpstein & Rathmann.  
 ST. LOUIS—Klutho, Victor J.  
 ST. LOUIS—Knell, Albert.  
 ST. LOUIS—Kring, Harvey H.  
 ST. LOUIS—La Beaume & Klein.  
 ST. LOUIS—Lange, John.  
 ST. LOUIS—Lawler, Edw. J.  
 ST. LOUIS—Levy, Wm.  
 ST. LOUIS—Link & Son, Theo. C.  
 ST. LOUIS—Little, Edmond C.  
 ST. LOUIS—Lucas, Wm. A.  
 ST. LOUIS—Lynch, J. Hal.  
 ST. LOUIS—McArdle, Monroe P.  
 ST. LOUIS—McMahon, Wm. P.  
 ST. LOUIS—Maenner & Davis.  
 ST. LOUIS—Manny, Edmund A.  
 ST. LOUIS—Maritz & Henderson.  
 ST. LOUIS—Mauran, Russell & Crowell.  
 ST. LOUIS—May, Chas. F.  
 ST. LOUIS—Meyer, A.  
 ST. LOUIS—Mills, W. H.  
 ST. LOUIS—Nolte & Nauman.  
 ST. LOUIS—Osterhorn, Robt.  
 ST. LOUIS—Paulus, John D.  
 ST. LOUIS—Pendleton, Louis B.  
 ST. LOUIS—Powers, Herbert W.  
 ST. LOUIS—Preisler, Ernest.  
 ST. LOUIS—Ridington, A. Blair.  
 ST. LOUIS—Roach, Harry F.  
 ST. LOUIS—Robinson, John Beverly.  
 ST. LOUIS—Roth & Studv.  
 ST. LOUIS—Saum, Architect.  
 ST. LOUIS—Schaunberg, Hy., Jr.  
 ST. LOUIS—Senne, J. H.  
 ST. LOUIS—Stephen, Jr., David.  
 ST. LOUIS—Stephens & Pearson.  
 ST. LOUIS—Study, Guy.  
 ST. LOUIS—Swarting, G. Wm.  
 ST. LOUIS—Wageley, Geo. L.  
 ST. LOUIS—Wagner, Hy. A.  
 ST. LOUIS—Wees, J. L.  
 ST. LOUIS—Wessbecker & Hillebrand.  
 ST. LOUIS—Wilhelmi, Otto J.  
 ST. LOUIS—Wray, Chas. H.

ST. LOUIS—Wuest, Gustav P.  
ST. LOUIS—Yoder & Co., O. R.  
ST. LOUIS—Young, T. C.  
SEDALIA—Bast, T. W.  
SPRINGFIELD—Foley & Voorhees.  
SPRINGFIELD—Heckenlively, J. L.  
ST. LOUIS—Reed, Geo. F.  
ST. LOUIS—Toribitt, A. N.  
WEBSTER GROVES—Opperman, C. B.

#### NORTH CAROLINA.

ASHEVILLE—Chum, Chas. H.  
ASHEVILLE—Claudius, Henry F.  
ASHEVILLE—Davis, T. E.  
ASHEVILLE—East, Wm. J.  
ASHEVILLE—Lord, Wm. Henry.  
ASHEVILLE—Parker, Chas. N.  
ASHEVILLE—Smith & Carrier.  
CHARLOTTE—Ashbury, Louis H.  
CHARLOTTE—Biberstein, R. C.  
CHARLOTTE—Bonfoey, F. L.  
CHARLOTTE—Hook, Chas. C.  
CHARLOTTE—Hunter & Gordon.  
CHARLOTTE—McMichael, J. M.  
CHARLOTTE—Peeps, Wm. H.  
CHARLOTTE—Rogers, W. G.  
CHARLOTTE—Wheeler & Stern.  
DURHAM—Linthicum, Hill C. & H. Colvin.  
DURHAM—Rose, Garland R.  
ELIZABETH CITY—Kramer, J. B.  
FAYETTEVILLE—Thain, T. T.  
GOLDSBORO—Boney, Leslie N.  
GREENSBORO—Armfield, G. W.  
GREENSBORO—Barton, Harry.  
GREENSBORO—Brewer, W. L.  
GREENSBORO—Weston, F. A.  
HENDERSONVILLE—Stillwell, Erle G.  
HICKORY—Herman, Q. E.  
LEAKSVILLE—Hopper, James C.  
LOUISBURG—Davis, M. Stuart.  
LUMBERTON—Russell, J. M.  
MT. GILEAD—Haywood, Wm. T.  
NEUBERN—Simpson, H. W.  
RALEIGH—Briggs, Jno. D.  
RALEIGH—Hartage, C. E.  
RALEIGH—Keller, H. P. S.  
RALEIGH—Kennedy, J. M.  
RALEIGH—Salter, J. A.  
RALEIGH—Simpson, Frank B.  
RALEIGH—Thomson, Frank K.  
ROCKY MOUNT—Stout, Jno. C.  
SALISBURY—Ramsey, John E.  
SOUTHPORT—Rappleyea, Geo. W.  
WASHINGTON—Miller, C. C.  
WILMINGTON—Bonitz, Henry E.  
WILMINGTON—Gause & Lynch.  
WILMINGTON—Leitner, J. F.  
WILMINGTON—Perry, Samuel E.  
WILMINGTON—Stephens, Burett M.  
WILSON—Benton & Benton.  
WILSON—Moore, S. B.  
WINSTON-SALEM—Hendricks, G. C.  
WINSTON-SALEM—Hill, J. R.  
WINSTON-SALEM—Humphreys, C. Gilbert.  
WINSTON-SALEM—Keeney, H. M.  
WINSTON-SALEM—Northrup & O'Brien.

#### OHIO.

AKRON—Boen'sch & Kraus.  
AKRON—Cooley, C. D. Co.  
AKRON—Fichter & Brooker.  
AKRON—Frank, Wagner & Mitchell.  
AKRON—Ginther, Wm. P.  
AKRON—Haglock, Fred W.  
AKRON—Harpster & Bliss.  
AKRON—Henry & Murphy.  
AKRON—Lauer, M. P.  
AKRON—Mantz, N. A.  
AKRON—Trowbridge & Ackerman.  
AKRON—Weary, F. O.  
AKRON—Weise, "Nborn" Ralph.  
ALLIANCE—Matchett, W. W.  
ASHTABULA—Wilson, John L.  
BARNESVILLE—Patterson, B. C.  
BELLEFONTAINE—Shawver, John L. & Bros.  
BOWLING GREEN—Minor, W. H.  
BOWLING GREEN—Stewart, S. P. & Son.  
BOWLING GREEN—Strong, L. T.  
BREMEN—Ricket, C. W.  
BRIDGEPORT—Lindsay, James.  
BUCYRUS—Unger, William.  
CAMBRIDGE—Orr, Jno. F.  
CAMBRIDGE—Petrik, J. G.  
CANTON—Arbaugh, R. B.  
CANTON—Firestone, Charles E. Co.  
CANTON—Herrman, Edmund.  
CANTON—Tilden, Guy & Son.  
CANTON—Wagner, H. J.  
CELINA—Vonder, Horst Jos.  
CHILLICOTHE—Schweitzer, John.  
CINCINNATI—Baldwin, Bert L.  
CINCINNATI—Bausmith & Drainie.  
CINCINNATI—Boll, John H.  
CINCINNATI—Bostrom, R. E.  
CINCINNATI—Burroughs, G. C.  
CINCINNATI—Carpenter & Weldon.  
CINCINNATI—Cordes, H. W.  
CINCINNATI—Davis, David.  
CINCINNATI—Dean, Arthur D.  
CINCINNATI—De Camp, Benj. C.  
CINCINNATI—Deeken, John Henri.  
CINCINNATI—Dittoe, Fahnestock & Ferber.

CINCINNATI—Dornette, Edward H.  
CINCINNATI—Drach, Gustave W.  
CINCINNATI—Elzner, A. O.  
CINCINNATI—Elzner & Anderson.  
CINCINNATI—Fechheimer, A. Lincoln.  
CINCINNATI—Fisher, Martin.  
CINCINNATI—Foster, C. M.  
CINCINNATI—Franklin, Wm. W. & Son.  
CINCINNATI—Garber & Woodward.  
CINCINNATI—Glaser, Emile F.  
CINCINNATI—Godlev S. S. & G. H.  
CINCINNATI—Hake, Harry.  
CINCINNATI—Hannafor, S. & Sons.  
CINCINNATI—Hart, Jos. H.  
CINCINNATI—Hensgen, Fred.  
CINCINNATI—Hooper, Henry N.  
CINCINNATI—House, C. W.  
CINCINNATI—Hughes, B. S.  
CINCINNATI—Hunt, Roland E.  
CINCINNATI—Kau, Max.  
CINCINNATI—Kegler, E. R.  
CINCINNATI—Klein, Albert F.  
CINCINNATI—Kruckemeyer, Edwd. H.  
CINCINNATI—Kuball, Albert C.  
CINCINNATI—Kunz, Anthony, Jr.  
CINCINNATI—Lindsay, J. R.  
CINCINNATI—McCloy, Howard.  
CINCINNATI—Naylor, M. E.  
CINCINNATI—Owens, Chas. S.  
CINCINNATI—Pfeiffer, Walter.  
CINCINNATI—Price, Harry M.  
CINCINNATI—Rapp, G. W.  
CINCINNATI—Reig, Anton.  
CINCINNATI—Robinson, W. Stanton.  
CINCINNATI—Rueckert, Jacob J.  
CINCINNATI—Sax, Moritz.  
CINCINNATI—Schmidt, Harley C.  
CINCINNATI—Schwartz, Oscar.  
CINCINNATI—Schwarz, Julius J.  
CINCINNATI—Shelblessy, J. F.  
CINCINNATI—Simms, J. Clay.  
CINCINNATI—Slottemyer, Edward.  
CINCINNATI—Smith & Heitmeyer.  
CINCINNATI—Spelman, H.  
CINCINNATI—Stegner & Hughes.  
CINCINNATI—Steinkamp, Jos. G. & Co.  
CINCINNATI—Stewart, James R. & Robt. W.  
CINCINNATI—Strong, Chas. R.  
CINCINNATI—Taylor, Chas. C.  
CINCINNATI—Tebow, Newton.  
CINCINNATI—Thom, John C. & Sons.  
CINCINNATI—Tietig & Lee.  
CINCINNATI—Weber, C. C. & E. A.  
CINCINNATI—Werner & Adkins.  
CINCINNATI—Wilson, L. H.  
CINCINNATI—Wisnall, Bernard T.  
CINCINNATI—Zettel & Rapp.  
CLEVELAND—Archer-Frost Co.  
CLEVELAND—Babcock & Penton.  
CLEVELAND—Badgley, S. R.  
CLEVELAND—Barnum, F. S.  
CLEVELAND—Baird, Frederick.  
CLEVELAND—Berman Samuel J.  
CLEVELAND—Bohm, G. B.  
CLEVELAND—Bohnard & Parsson.  
CLEVELAND—Briggs & Nelson.  
CLEVELAND—Brown, R. J.  
CLEVELAND—Cahill & Armstrong.  
CLEVELAND—Caldwell, Walter G.  
CLEVELAND—Cameron, James L.  
CLEVELAND—Chamberlin O. N.  
CLEVELAND—Clark, Harlan M.  
CLEVELAND—Coghlan & Saunders.  
CLEVELAND—Conner, Theodore.  
CLEVELAND—Cone, Harry A.  
CLEVELAND—Corbusier, J. W. C.  
CLEVELAND—Corning, Burt W.  
CLEVELAND—Crome, M. A.  
CLEVELAND—Davidson, H. O.  
CLEVELAND—Dereum & Peer.  
CLEVELAND—D' Camillo, Raymond C.  
CLEVELAND—Dodds-Page Co.  
CLEVELAND—Dyer, J. Milton.  
CLEVELAND—Eisenmann, John.  
CLEVELAND—Fish, F. S.  
CLEVELAND—Fraser, James M.  
CLEVELAND—Frink, Engineering Co.  
CLEVELAND—Frost, R. E.  
CLEVELAND—Fulton & Taylor.  
CLEVELAND—Gabelle, Henry C.  
CLEVELAND—Garfield, Abram.  
CLEVELAND—Gawn, D.  
CLEVELAND—Gibbons, E. F.  
CLEVELAND—Goldfein, E. H.  
CLEVELAND—Graham, John H.  
CLEVELAND—Greene, Robinson.  
CLEVELAND—Greco, Chas. R.  
CLEVELAND—Griehle, G. A.  
CLEVELAND—Griffith, F. Morrison.  
CLEVELAND—Hall, Wilbur M.  
CLEVELAND—Hammond, Geo. F.  
CLEVELAND—Hannon, Arthur M.  
CLEVELAND—Harris, Alf. W.  
CLEVELAND—Hatch, Edw. G.  
CLEVELAND—Hinsdale, Reynold H.  
CLEVELAND—Hirsch, Willard.  
CLEVELAND—Hodges, W. W. Co.  
CLEVELAND—Honkinson, Chas. W.  
CLEVELAND—Howell & Thomas.  
CLEVELAND—Hradilek, Henry.  
CLEVELAND—Hrrocek, F. J.  
CLEVELAND—Hubbell & Benes.

CLEVELAND—Hubby, R. G.  
CLEVELAND—Huberty, Ernest.  
CLEVELAND—Hudson, W. Asa.  
CLEVELAND—Hulett, Ralph M. Co.  
CLEVELAND—Janowitz, A. F.  
CLEVELAND—Jansen, Wm. C.  
CLEVELAND—Jeffrey, H. J.  
CLEVELAND—Johnson, Geo. H.  
CLEVELAND—Kalsch, John.  
CLEVELAND—Kauffman Architectural Co.  
CLEVELAND—Kodian, Walter Martin.  
CLEVELAND—King, Geo. S.  
CLEVELAND—Knox & Elliott.  
CLEVELAND—Koehl, Wm.  
CLEVELAND—Logan & Rankin.  
CLEVELAND—Long & Long.  
CLEVELAND—Lougee, Wm. S.  
CLEVELAND—Luzius, P. H.  
CLEVELAND—Mauer, Herman W.  
CLEVELAND—McGrath, J. P.  
CLEVELAND—Matzinger, Paul.  
CLEVELAND—Meade, F. B. & J. M.  
CLEVELAND—Miller, J. M.  
CLEVELAND—Mills, Rhines, Bellman & Nordhoff.  
CLEVELAND—Mittermiller, A. S.  
CLEVELAND—Mooney, Wm. J.  
CLEVELAND—Morrow, David W.  
CLEVELAND—Morse, H. M.  
CLEVELAND—Newson, John Henry.  
CLEVELAND—Nicklas, Wm. H.  
CLEVELAND—Oviatt, A. N.  
CLEVELAND—Owen, W. C.  
CLEVELAND—Pennington, Chas. S.  
CLEVELAND—Petti, N.  
CLEVELAND—Porter, Harry L.  
CLEVELAND—Post, Geo. B. & Sons.  
CLEVELAND—Potter, Myron P.  
CLEVELAND—Powell, Wm. R.  
CLEVELAND—Richardson & Yost.  
CLEVELAND—Ritchie, Geo. W.  
CLEVELAND—Robnson, P. E.  
CLEVELAND—Ruggles, Edd A.  
CLEVELAND—Sabin, Wm. Warren.  
CLEVELAND—Schneider, Chas. S.  
CLEVELAND—Schneider & Potter.  
CLEVELAND—Schweinfurth Chas. F.  
CLEVELAND—Schofield, Levi T.  
CLEVELAND—Shaffer, Matthey T.  
CLEVELAND—Shimmin, Harlen E.  
CLEVELAND—Shupe, Harry L.  
CLEVELAND—Skeel, Albert E.  
CLEVELAND—Skeel, Frank D.  
CLEVELAND—Smith Bros.  
CLEVELAND—Smith, Edward E.  
CLEVELAND—Smith, Geo. H.  
CLEVELAND—Smith, Walter H.  
CLEVELAND—Sprackling, A. E.  
CLEVELAND—Stapf, Otto K.  
CLEVELAND—Starrett & Van Vleck.  
CLEVELAND—Stedman, Chas. R.  
CLEVELAND—Steffens & Steffens.  
CLEVELAND—Striebing, Frederic W.  
CLEVELAND—Swigart, Herbert.  
CLEVELAND—Tenbush, Garhard A.  
CLEVELAND—Thomas, Lewis W.  
CLEVELAND—Tousley, Chas. E.  
CLEVELAND—Vetter, H. B.  
CLEVELAND—Vorce, M. B. & Co.  
CLEVELAND—Walker & Weeks.  
CLEVELAND—Walsh, Henry A.  
CLEVELAND—Warner, Franz C.  
CLEVELAND—Warner, Jno.  
CLEVELAND—Watterson, Wm. R.  
CLEVELAND—Weis, Max H.  
CLEVELAND—Weis, S. H.  
CLEVELAND—White, Charles F.  
CLEVELAND—Wolf, A. C.  
CLEVELAND—Wright & Hohl.  
COLUMBUS—Babbitt, Edw. F.  
COLUMBUS—Bellows, C. W.  
COLUMBUS—Bradford, Jos. N.  
COLUMBUS—Bryan, Frank.  
COLUMBUS—Chubb, Charles St., Jr.  
COLUMBUS—Corbett, Miss Ella M.  
COLUMBUS—Darst, Otto C.  
COLUMBUS—Dawson, Richard.  
COLUMBUS—Eiselt, Henrich E.  
COLUMBUS—Eliott, Frederick W.  
COLUMBUS—Goldsmith, Jacob S.  
COLUMBUS—Gribben, J. Upton.  
COLUMBUS—Holbrook, Harry C.  
COLUMBUS—Howard & Merriam.  
COLUMBUS—Howell & Thomas.  
COLUMBUS—Jinscho, C. L.  
COLUMBUS—Jones, H. Chas.  
COLUMBUS—Jones, J. A.  
COLUMBUS—Julian, V. S. & R. E.  
COLUMBUS—Marriott, Allen & Hall.  
COLUMBUS—Matheny, Allen & Mounts.  
COLUMBUS—Mills, Wilbur T.  
COLUMBUS—Mills & Millsbaugh Co.  
COLUMBUS—Mounjoy, Carl H.  
COLUMBUS—Packard, F. L.  
COLUMBUS—Pruitt, Edw. E.  
COLUMBUS—Richards, McCarty & Bulford.  
COLUMBUS—Ridgeway, J. A.  
COLUMBUS—Riebel & Sons.  
COLUMBUS—Rusk & Sheets.  
COLUMBUS—Sheets, Cree.  
COLUMBUS—Sims, Ray.  
COLUMBUS—Snyder, Ralph.

COLUMBUS—Stribling & Lum.  
 COLUMBUS—Todhunter, H. H.  
 COLUMBUS—Tremaine, Wm. H.  
 DAYTON—Brannon, Chas. W.  
 DAYTON—Dexter & McCluer.  
 DAYTON—Gage & Gemin.  
 DAYTON—Gebhart, R. E.  
 DAYTON—German, Howard W.  
 DAYTON—Griffith, Harry C.  
 DAYTON—Herby's, Chas. Sons.  
 DAYTON—Hughes, Fred J. & Co.  
 DAYTON—Jaekle, W. L.  
 DAYTON—Kayler, J. Chalmers.  
 DAYTON—Lott, Louis.  
 DAYTON—McNeal, David H.  
 DAYTON—Mountstephen, Edw. J.  
 DAYTON—Moyer, A. F.  
 DAYTON—Niehus, Gustave A.  
 DAYTON—Pardoner, John H., Jr.  
 DAYTON—Peters, Herman & Brown.  
 DAYTON—Pretzinger, Albert & E. P.  
 DAYTON—Ritzert, Oliver.  
 DAYTON—Schenck & Walker.  
 DAYTON—Schenck & Williams.  
 DAYTON—Stacy, W. H.  
 DAYTON—Sutter, Frank L.  
 DAYTON—Thies & Thies.  
 DAYTON—Vance, J. P.  
 DAYTON—Walker, Geo. R. & Co.  
 DAYTON—Williams, Chas. I.  
 DEFANCE—Hale, J. I.  
 DELAWARE—Schureman, D. S. & Son.  
 EAST LIVERPOOL—Martin, Thos. A.  
 EAST LIVERPOOL—Metsch, Cassius M.  
 EATON—Barrett, Thos. A.  
 ELYRIA—Rissmann, Paul A.  
 ELYRIA—Siltsbee, J. R.  
 FINDLAY—Forgeson, J. & Son.  
 FINDLAY—Horn, Geo. J.  
 FOSTORIA—Smith, F. M.  
 FREDERICKSTOWN—Bradrick, W. S.  
 FREMONT—Shilvey, S. H. & R. H.  
 GALION—Jones, Harlan.  
 HAMILTON—Barkman, Geo.  
 HAMILTON—Lingler, Wm. D.  
 HAMILTON—Mueller, Frederick G.  
 IRONTON—Morgan, Evan.  
 IRONTON—Murray, Ralph.  
 KENTON—Strong, Paul K.  
 LANCASTER—Crooks, R. E.  
 LANCASTER—Getz, W. F.  
 LANCASTER—Older, G. B.  
 LIMA—De Curtins, Andrew.  
 LIMA—Leech & Leech.  
 LIMA—McLaughlin & Hulsken.  
 LIMA—Matthews, B. F.  
 LIMA—Wade, C. F.  
 LOGAN—Magoon, M. A.  
 LORAIN—Ellis, C. C.  
 LORAIN—Ford, Hamilton E.  
 LORAIN—Rissman, Paul A.  
 LORAIN—Wurmser, H. O.  
 MANSFIELD—Althouse & Jones.  
 MANSFIELD—Hursh, Joseph.  
 MANSFIELD—Redding, Vernon.  
 MANSFIELD—Seibert, B. F.  
 MARIETTA—Hovey, Geo. Walter.  
 MARION—Ellis, J. Lewis.  
 MARION—Sloan, J. J.  
 MARION—Zachman, Ezra B.  
 MARTIN'S FERRY—Brown, W. N.  
 MARYVILLE—McCann, E. G.  
 MARYVILLE—Weidman Bros.  
 MASSILLON—Herrmann, Edmund.  
 MASSILLON—Wilhelm, Karl E.  
 METAMORA—Young, William & Son.  
 MIDDLETOWN—Oelen, Carl E.  
 MONTPELIER—Carpenter, O. A.  
 NEWARK—Hawkins, O. J.  
 NEWARK—Patton, Wm.  
 NEW PHILADELPHIA—Lewis, J. E.  
 NILES—Souder, C. P.  
 PAINESVILLE—Downer, Frederick N.  
 PIQUA—Bowdle, C. F.  
 PORTSMOUTH—De Voss, W. A.  
 RAVENNA—Greene, J. W.  
 SANDUSKY—Millott, Henry C.  
 SANDUSKY—O'Donnell & Wolfe.  
 SANDUSKY—Shively, S. H. & R. H.  
 SIDNEY—Doran, Jas. W.  
 SIDNEY—Landenbach, H. L.  
 SPRINGFIELD—Greger, Edwin F.  
 SPRINGFIELD—Drach, Gustav N. & Wm. F. Miller.  
 SPRINGFIELD—Gable, R. F.  
 SPRINGFIELD—Gotwald, Robert C.  
 SPRINGFIELD—Hall & Lethly.  
 SPRINGFIELD—Shilling, Wm. K.  
 SPRINGFIELD—Smith, Harry G.  
 SPRINGFIELD—Stover, A. W. Co.  
 SPRINGFIELD—Whiting, Junius F.  
 STEUBENVILLE—Peterson & Clarke.  
 TIFFIN—Ernst, Chas.  
 TIFFIN—Netcher, George W.  
 TOLEDO—Attel, Sidney E.  
 TOLEDO—Bates & Gamble.  
 TOLEDO—Becker, Bernhard.  
 TOLEDO—Beelman, Claude W.  
 TOLEDO—Bill, C. H.  
 TOLEDO—Buer, Jacob J.  
 TOLEDO—Downey, J. A.

TOLEDO—Fallis, E. O.  
 TOLEDO—Gamble, Charles M.  
 TOLEDO—Gee, Edwin M.  
 TOLEDO—Huber, Jos. C., Jr.  
 TOLEDO—Huber, Thomas F.  
 TOLEDO—Hunt & Kopitke.  
 TOLEDO—Kopitke & Krige.  
 TOLEDO—Langdon & Hohly.  
 TOLEDO—Liebold, H. Albin.  
 TOLEDO—Meyer, Albert T.  
 TOLEDO—Mills, Rhines, Bellman & Nordoff.

TOLEDO—Rheinfrank, G. B.  
 TOLEDO—Schriber & Bellman.  
 TOLEDO—Stine, David L.  
 TOLEDO—Stopfelt, Manfred M.  
 TOLEDO—Taylor & Main.  
 TOLEDO—Thal & Alfel.  
 TOLEDO—Thurstin, Wilber G.  
 TOLEDO—Tschumy & Co.  
 TOLEDO—Wachter, H. W.  
 TOLEDO—Walker, Forest E.  
 TOLEDO—Welker, L. G.  
 TOLEDO—Wtaker, Edward F.  
 TROY—Shilling, W. Walter.  
 WAPAKONETA—Uher, J. N.  
 WARREN—Davis, J. W.  
 WARREN—Keich, R. J.  
 WARREN—Sidells, Byron T.  
 WASHINGTON COURT HOUSE—Hicks, J. Howard.

WASHINGTON COURT HOUSE—Sanders, Wm.  
 WILMINGTON—Shepherd & Son.  
 XENIA—Heaton, Jno.  
 XENIA—Owens, H. W.  
 YOUNGSTOWN—Boucherie, L. & Son.  
 YOUNGSTOWN—Clemens, L. J.  
 YOUNGSTOWN—Decker, J. L.  
 YOUNGSTOWN—Ellenberger, H. C.  
 YOUNGSTOWN—Ellis, Wm. J.  
 YOUNGSTOWN—Ford, H. L.  
 YOUNGSTOWN—Goldston, F. J.  
 YOUNGSTOWN—Hawk & Co.  
 YOUNGSTOWN—Judd, A. F.  
 YOUNGSTOWN—Kline & Zenk.  
 YOUNGSTOWN—Miller, Louis.  
 YOUNGSTOWN—Miller & Son.  
 YOUNGSTOWN—Owslve, C. H. & C. F.  
 YOUNGSTOWN—Ott, C. J.  
 YOUNGSTOWN—Skogz, G. A.  
 YOUNGSTOWN—Sanley & Scheibel.  
 YOUNGSTOWN—Thompson, E. R.  
 YOUNGSTOWN—Vaughn, George.  
 ZANESVILLE—Handshy, C. E.  
 ZANESVILLE—Meyer Harry C.

## OKLAHOMA.

AFTON—Bast, W. H.  
 ALVA—Green, Cyrus.  
 ARDMORE—White, J. B.  
 BARTLESVILLE—Pabcock, L. H.  
 BARTLESVILLE—Everman, Walton.  
 DURANT—Hicks, Jewell.  
 EL RENO—Riley, W. H.  
 ENID—Shaw, R. W.  
 MCLESTER—Walsh, J. J.  
 MUSKOGEE—Dawson, Chas. W.  
 MUSKOGEE—Hardin, M. T.  
 MUSKOGEE—Valeur, H. O.  
 MUSKOGEE—Whitlock, J. A.  
 NEW KIRK—Jenkins, Charles B.  
 OKLAHOMA CITY—Bailey & Baile.  
 OKLAHOMA CITY—Bramblet & Husman.  
 OKLAHOMA CITY—Hawks, J. W.  
 OKLAHOMA CITY—Layton & Smith.  
 OKLAHOMA CITY—Hair & Co., C. E.  
 OKLAHOMA CITY—Schmidt, W. T.  
 OKLAHOMA CITY—Weathers, P. H.  
 SAPULA—Popkin, Charles Adrain.  
 SHAWNEE—DAVIS, A. C.  
 SHAWNEE—Peters, E. J.  
 TULSA—Cross, M. C.  
 TULSA—Curtin & Co.  
 TULSA—Eichenfeld, Dan'l.  
 TULSA—Mott, A. H.  
 TULSA—Robb, J. W.  
 TULSA—Ruggles, L. H.  
 TULSA—Starr, Jno. V.  
 TULSA—Winkler, Geo.

## SOUTH CAROLINA.

ANDERSON—Paldwin, J. J.  
 ANDERSON—Casey & Flint.  
 ANDERSON—Sayre, C. Gadsden.  
 CAMDEN—Fort, O. M.  
 CAMDEN—Mitcham, R. W.  
 CHARLESTON—Renson & Parbot.  
 CHARLESTON—Hyer, David.  
 CHARLESTON—Newcomer, John D.  
 CHARLESTON—Todd Simmons & Todd.  
 CHARLESTON—Walker & Burden.  
 CLEMSON COLLEGE—Lee, R. E.  
 COLUMBIA—Hambr, A. W.  
 COLUMBIA—Lafave & Lafaye.  
 COLUMBIA—Sam, J. H.  
 COLUMBIA—Ureghart & Johnson.  
 COLUMBIA—Wilson & Son—ayrac.  
 FLORENCE—Hicks & Harper.  
 FLORENCE—Wills & Co., W. J.  
 GREENVILLE—Connineham, F. H.  
 GREENVILLE—Jones, H. O.  
 GREENVILLE—Martin & Andrews.  
 GREENVILLE—Neves, W. D.

GREENVILLE—Rogers, F. G.  
 GREENVILLE—Sirina, J. E.  
 GREENWOOD—Cothran, Thos. W.  
 GREENWOOD—Summons, Hemphill.  
 ROCK HILL—Gilchrist, A. D.  
 ROCK HILL—Starr Julian S.  
 ROCK HILL—Walker, N. Gaillard.  
 SPARTANBURG—Collins, J. Frank.  
 SPARTANBURG—Proffit, L. D.  
 SPARTANBURG—Tinsley, S. P.  
 SUMTER—Johnson, J. H.

## TENNESSEE.

BRISTOL—Brown, Thos. S.  
 BRISTOL—Burnett & Logan.  
 BRISTOL—Doriot, H.  
 BRISTOL—Kearfott, Clarence B.  
 CHATTANOOGA—Alsop, J. D.  
 CHATTANOOGA—Barnwell & Barnwell.  
 CHATTANOOGA—Bearden, C. E.  
 CHATTANOOGA—Carlton, Chas. W.  
 CHATTANOOGA—Hunt, R. H.  
 CHATTANOOGA—Jones, C. T.  
 CHATTANOOGA—Sears, W. H.  
 CLARKSVILLE—Ritter Co., H. W.  
 CLARKSVILLE—Smith, G. Tandy.  
 FRANKLIN—Williams, G.  
 JACKSON—Heavner, R. A.  
 JOHNSON CITY—Beeson, D. R.  
 JOHNSON CITY—Mitchell, C. G.  
 JOHNSON CITY—Owen, W. C.  
 KNOXVILLE—Barber & McMurray.  
 KNOXVILLE—Bauman, J. F.  
 KNOXVILLE—Bauman, Albert B.  
 KNOXVILLE—Brackney, C. C.  
 KNOXVILLE—Gildard, W. H.  
 KNOXVILLE—Graf & Sons, R. F.  
 KNOXVILLE—Gredig, Albert E.  
 KNOXVILLE—Manley, Fred.  
 KNOXVILLE—Parmelee & Son, M. E.  
 KNOXVILLE—Ryno, John H.  
 KNOXVILLE—Waters, L. C.  
 MEMPHIS—Bailey, W. T.  
 MEMPHIS—Eely, Fred H.  
 MEMPHIS—Gaisford, Jno.  
 MEMPHIS—Hanker & Cairns.  
 MEMPHIS—Jones & Furbinger.  
 MEMPHIS—Lester, W. C.  
 MEMPHIS—McGee, H. T.  
 MEMPHIS—Mahan & Broadwell.  
 MEMPHIS—Pfeil, C. O.  
 MEMPHIS—Regan & Weller.  
 MEMPHIS—Shaw & Co., G. M.  
 MEMPHIS—Shearer & Roman.  
 MEMPHIS—Weigel, S. J.  
 MORRISTOWN—Smith, Roswell E.  
 MURFREESBORO—Bell, W. R., Jr.  
 NASHVILLE—Asmus & Norton.  
 NASHVILLE—Biggers, T. J.  
 NASHVILLE—Billis, O. J.  
 NASHVILLE—Colley, Clarence K.  
 NASHVILLE—Colley, J. H.  
 NASHVILLE—Dickey, D. Anderson.  
 NASHVILLE—Dougherty, E. E.  
 NASHVILLE—Ferguson, Chas. A.  
 NASHVILLE—Frahm, Harry J.  
 NASHVILLE—Gardner, T. W.  
 NASHVILLE—Hart, R. E.  
 NASHVILLE—Hibbs, H. C.  
 NASHVILLE—Hodge, B. J.  
 NASHVILLE—Ludlow & Peabody.  
 NASHVILLE—McMurray, S. M.  
 NASHVILLE—Marr & Holman.  
 NASHVILLE—Motz, C. C.  
 NASHVILLE—Pritz, (Miss) Bessie.  
 NASHVILLE—Sharps, Robert.  
 NASHVILLE—Smith, C. W.  
 NASHVILLE—Southgate, Donald W.  
 NASHVILLE—Yeaman, James H.  
 PARIS—Kridler, C. V.  
 SOUTH PITTSBURG—Patton, R. B.  
 UNION CITY—Taylor, H. P.

## TEXAS.

AMARILLO—Berry, J. C.  
 AMARILLO—Kaufman, W. R.  
 AMARILLO—Rice, W. M.  
 AMARILLO—Risser, C. & Co.  
 AMARILLO—Rouquemore, O. G.  
 ARLINGTON—Nelson, S.  
 AUSTIN—Andrewartha, John.  
 AUSTIN—Endress & Watkin.  
 AUSTIN—Gideon, Samuel Edward.  
 AUSTIN—Tredell, Leslie N.  
 AUSTIN—Ketchum, W. E.  
 AUSTIN—Kreisle, Edwin C.  
 AUSTIN—Kuehne, Chasey & Geisecke.  
 AUSTIN—Page, C. H. & Bro.  
 AUSTIN—Thomas, Roy L.  
 AUSTIN—Walsh, Dennis R.  
 AUSTIN—Watson, A. O.  
 BAY CITY—Large, J. E.  
 BEAUMONT—Babin & Beck.  
 BEAUMONT—Cooke & Co.  
 BEAUMONT—Logan, C. A.  
 BEAUMONT—Mauer-Knoblock.  
 BEAUMONT—Parker Martin Co.  
 BEAUMONT—Steinman, F. W.  
 BROWNWOOD—Mount, Henry.  
 COLLEGE STATION—Adelsberger, Rolland.  
 CORPUS CHRISTI—Dale, Guy.  
 CORSICANA—Blanding, H. O.

DALLAS—Bothwell, J. L.  
 DALLAS—Brickey & Brickey.  
 DALLAS—Bulger, C. W. & Son.  
 DALLAS—Coburn, Douglas F.  
 DALLAS—Galbraith, T. J.  
 DALLAS—Gill, J. O.  
 DALLAS—Hill, C. D. & Co.  
 DALLAS—Hubbell & Greene.  
 DALLAS—Lang & Witchell.  
 DALLAS—Martens, Wm.  
 DALLAS—Mathews, J. D.  
 DALLAS—Mauran, Russell & Crowell.  
 DALLAS—Overbeck, H. A.  
 DALLAS—Overbeck, J. Ed.  
 DALLAS—Rowe, Joseph W.  
 DALLAS—Sites, C. P.  
 DALLAS—Thomson, H. B.  
 DALLAS—Thurman, L. L. & Co.  
 DALLAS—Walker, I. A.  
 DALLAS—Woerner, F. J.  
 DALLAS—Ye Planry, Inc.  
 EL PASO—Beutel, H. M.  
 EL PASO—Bogardus, J. R.  
 EL PASO—Braunton & Liebert.  
 EL PASO—Fritch, Alfred R.  
 EL PASO—Gibson & Robertson.  
 EL PASO—Kneezel, Edward.  
 EL PASO—Krause, Ernest.  
 EL PASO—Leech, Austin.  
 EL PASO—McGee, Percy, Jr.  
 EL PASO—McKee, J. S.  
 EL PASO—Mauer, H. C.  
 EL PASO—Orlopp, H. A.  
 EL PASO—Patton, S. E.  
 EL PASO—Thornton, O. H. & Co.  
 EL PASO—Trost & Trost.  
 FORT WORTH—Field & Clarkson.  
 FORT WORTH—Forbes, Chas. W.  
 FORT WORTH—Hoeffler, Conrad.  
 FORT WORTH—Leake, Boudinot G.  
 FORT WORTH—Newell, Walter.  
 FORT WORTH—Pollard, John H.  
 FORT WORTH—Prettyman, Jacob.  
 FORT WORTH—Reed, Wm.  
 FORT WORTH—Sanquinet & Staats.  
 FORT WORTH—Singleton, F. J.  
 FORT WORTH—Van Slyke-Woodruff & Mul-  
 ler.  
 FORT WORTH—Waller, M. L.  
 FORT WORTH—Weinman, L. B.  
 GAINESVILLE—Garrett, J. G. & Son.  
 GALVESTON—Bellis, A. J.  
 GALVESTON—Clayton, Nicholas J.  
 GALVESTON—Green, L. S.  
 GALVESTON—Hill, C. D. & Co.  
 GALVESTON—McKenzie, Donald N.  
 GALVESTON—Mudrak, Rudolph.  
 GALVESTON—Smith, Wm. J.  
 GALVESTON—Stoe & Stowe.  
 GREENVILLE—Kilmer, Roy.  
 GREENVILLE—Lindsey, Geo.  
 GREENVILLE—Macklin, H. B.  
 GREENVILLE—Ragsdale, W. R.  
 HOUSTON—Briscoe, B. P.  
 HOUSTON—Brown, Russel Co.  
 HOUSTON—Cannon, G. J.  
 HOUSTON—Collingnon, G. W.  
 HOUSTON—Collins, G. H.  
 HOUSTON—Cooke & Co.  
 HOUSTON—Cram & Ferguson.  
 HOUSTON—Dawson, A. N.  
 HOUSTON—Delisle, Adrien.  
 HOUSTON—Finger & Bailey.  
 HOUSTON—Finn, Alfred G.  
 HOUSTON—Fruehling, G. H.  
 HOUSTON—Gray, Richard H.  
 HOUSTON—Hardin, R. A.  
 HOUSTON—Jones & Tabor.  
 HOUSTON—Ledbetter, Lou's.  
 HOUSTON—Litzmann, Paul.  
 HOUSTON—Lorehn, Olle J.  
 HOUSTON—McDonald, C. C.  
 HOUSTON—McLelland, John.  
 HOUSTON—McNeir, F. W.  
 HOUSTON—Marhett, F. J.  
 HOUSTON—Meyer, F. H.  
 HOUSTON—Murdock, W. S.  
 HOUSTON—Nelson, C. N.  
 HOUSTON—Pigg, A. C.  
 HOUSTON—Pittman, D. D.  
 HOUSTON—Rhodes, W. S.  
 HOUSTON—Rue, F. E.  
 HOUSTON—Sanguinett, Staats & Gottlieb.  
 HOUSTON—Shoemaker, Harry W.  
 HOUSTON—Steele, Resin D.

HOUSTON—Teich, Fred C.  
 HOUSTON—Watkin, Wm. Ward.  
 JACKSONVILLE—Ray, S. W.  
 LAREDO—Chaille, D. J.  
 LAREDO—Giles, Alfred Co.  
 LAREDO—Suthered & Co.  
 MARSHALL—Carpenter, John.  
 MARSHALL—Lancaster, C. G.  
 NAVASTOTA—Meyer, Wm. H.  
 PARIS—Barry, Smith & Withers.  
 PORT ARTHUR—Wagnall, C. L.  
 POST—Gilmore, R. E.  
 SAN ANGELO—Fuffni, Oscar.  
 SAN ANTONIO—Adams & Adams.  
 SAN ANTONIO—Ayres, Altee B.  
 SAN ANTONIO—Behles, E. P.  
 SAN ANTONIO—Boelhaue, C. T.  
 SAN ANTONIO—Bowen, F. J.  
 SAN ANTONIO—Cameron, R. H.  
 SAN ANTONIO—Dielmann, L. M. J.  
 SAN ANTONIO—Fincham, C. T.  
 SAN ANTONIO—Gaenslen, Frederick B.  
 SAN ANTONIO—Gartner, F. B.  
 SAN ANTONIO—Giles, Alfred Co.  
 SAN ANTONIO—Hagy, W. N.  
 SAN ANTONIO—Herff, A. A.  
 SAN ANTONIO—Langworthy, R. O.  
 SAN ANTONIO—Middletown, L. D.  
 SAN ANTONIO—Neumann, R. F.  
 SAN ANTONIO—Page, Harvey L. Co.  
 SAN ANTONIO—Piepls, H. T.  
 SAN ANTONIO—Perce, R. L.  
 SAN ANTONIO—Reuter & Harrington.  
 SAN ANTONIO—Seutter, Carl Von.  
 SAN ANTONIO—Scott, H. L.  
 SAN ANTONIO—Spillman, B. W.  
 SAN ANTONIO—Texas Cons. Co.  
 SAN ANTONIO—Wahrenberger, J.  
 SAN ANTONIO—Williams, J. C., Jr.  
 SAN MARCOS—McLellan, J. L.  
 SHERMAN—Elliott, S. B.  
 SHERMAN—Tackett, W. A.  
 SHERMAN—Tuloch, Jno.  
 SWEETWATER—Bryant, J. R.  
 TEXARKANA—(See Texarkana, Ark.)  
 TYLER—Bothwell, J. H.  
 WACO—Brooks, Wm. H.  
 WACO—Burnett, Geo. C.  
 WACO—Dudley, Wm. W.  
 WACO—Lane, Roy E.  
 WACO—Pearson, T. Brooks.  
 WACO—Reed, Edward H.  
 WACO—Ross & Caso.  
 WACO—Scott, Milton W. & Co.  
 WACO—Ye Planry of Waco.  
 WHARTON—Jopling, C. E.  
 WICHITA FALLS—Jones, Evan, Jr.  
 WICHITA FALLS—Pate, Charles J.  
 WICHITA FALLS—Roberts & Berwis.  
 WICHITA FALLS—Voelcker & Dixon.

#### VIRGINIA.

ABINGDON—Musser, W. H. & Son.  
 ALEXANDRIA—Clark, Wm. L.  
 BEAVER DAM—Noland, William C.  
 BERKLEY—(See Norfolk.)  
 CHARLOTTESVILLE—Bradbury, Eugene.  
 CHARLOTTESVILLE—Kidd & Ashly.  
 CHARLOTTESVILLE—Wingfield, Nimrod T.  
 COVINGTON—Pace, S. E.  
 DANVILLE—Heard, Cardwell & Craighill.  
 DANVILLE—Pritchett & Henderson.  
 DUBLIN—Shufflebarger, F. N.  
 FALLS CHURCH—Von Herbulis, A. O.  
 FREDERICKSBURG—Baldwin, Frank C.  
 FREDERICKSBURG—Stern, Philip N.  
 HAMPTON—Holtzelaw, C. Taylor.  
 HAMPTON—Remington, Cornelius.  
 HARRISONBURG—Heatwole, J. S. & Co.  
 LEXINGTON—McDowell, W. B.  
 LYNCHBURG—Craighill, S. P.  
 LYNCHBURG—Heard & Cardwell.  
 LYNCHBURG—Johnson, S. S.  
 LYNCHBURG—McLaughlin, J. T.  
 NEWPORT NEWS—Connell, Geo. E.  
 NEWPORT NEWS—Mackee & Williams.  
 NEWPORT NEWS—Simpson, H. W.  
 NORFOLK—Abrames, Harvey.  
 NORFOLK—Archer, R. C., Jr.  
 NORFOLK—Benton & Benton.  
 NORFOLK—Diehl, H. Robert.  
 NORFOLK—Diehl, Wm. Newton.  
 NORFOLK—Ferguson, Carlow & Wrenn.  
 NORFOLK—Freeman, Arthur C., Jr.  
 NORFOLK—Lee, Jas. W.  
 NORFOLK—Mitchell, Benj. F.

NORFOLK—Mitchell, Rossel Edward.  
 NORFOLK—Moser, Philip B.  
 NORFOLK—Moss, L. R.  
 NORFOLK—Neff & Thompson.  
 NORFOLK—Peebles, J. K.  
 NORFOLK—Porter, J. N. W.  
 NORFOLK—Simpson, H. W.  
 NORFOLK—Taylor, Wickham C.  
 NORFOLK—Wilcox, F. Nelson.  
 NORFOLK—Winn, John D.  
 PEIERSBURG—Andrews, M. P. & Co.  
 PEIERSBURG—Craig, S. Daley.  
 PEIERSBURG—Dillon, C. E.  
 PEIERSBURG—Munden, R. A.  
 PORTSMOUTH—Cassell, Chas. M.  
 PORTSMOUTH—Major, Chas. M.  
 RICHMOND—Anderson, D. Wiley.  
 RICHMOND—Ashbury & Whitehurst.  
 RICHMOND—Bryant, Chas. K.  
 RICHMOND—Cain, Herbert L.  
 RICHMOND—Carneal & Johnson.  
 RICHMOND—Fox, Julian P.  
 RICHMOND—Hallett, Marcus.  
 RICHMOND—Huntt, Albert F.  
 RICHMOND—Lambert & Hartsook.  
 RICHMOND—Lee, W. D.  
 RICHMOND—Messerchmidt, H. Carl.  
 RICHMOND—Noland & Baskerville.  
 RICHMOND—Robinson, Chas. M.  
 RICHMOND—Ruehrmund, Carl.  
 RICHMOND—West, Wm. C.  
 RICHMOND—Wright, Marcellus E.  
 ROANOKE—Frye & Chesterman.  
 ROANOKE—Miller, H. M.  
 STAUNTON—Collins, T. J. & Son.  
 SUFFOLK—Wimborne, P. J.  
 WINCHESTER—Diffenderfer, E. H.  
 WINCHESTER—Neuman, J. C.  
 WYTHEVILLE—Williams, Geo. C.

#### WEST VIRGINIA.

BLUEFIELD—Carter, T. T.  
 BLUEFIELD—Hill, Geo. H.  
 BLUEFIELD—Mahood, Alex B.  
 BLUEFIELD—Pedigo & Garry.  
 BLUEFIELD—Shufflebarger, E. L.  
 BUCKHANNON—Hughes, D. C.  
 CEREDO—Gieske, J. R.  
 CHARLESTON—Carson, Alexander W.  
 CHARLESTON—Davidson, Wayland F.  
 CHARLESTON—Dick, David & Son.  
 CHARLESTON—Given & Given.  
 CHARLESTON—Higginbotham & Knapp.  
 CHARLESTON—Montgomery, Jas.  
 CHARLESTON—Warne, H. Rus.  
 CHARLESTON—Wiggins, Paul N.  
 CLARKSBURG—Ford, Stephen W.  
 CLARKSBURG—Hickman, Charles L.  
 CLARKSBURG—Holmboe & Lafferty.  
 CLARKSBURG—La Mont, A. G.  
 CLARKSBURG—Wood, Edw. J.  
 DIAMOND—Kuney, M. D.  
 DUNMORE—Nore, J. A.  
 ELKINS—Darby, H. M.  
 FAIRMONT—Gillis, Russell A.  
 FAIRMONT—Lyons, Andrews C.  
 FAIRMONT—Snider, C. H.  
 HINTON—Lavender, Jas. B.  
 HUNTINGTON—Alger, Edwin N.  
 HUNTINGTON—Bates, Richard M.  
 HUNTINGTON—Day, Robert L.  
 HUNTINGTON—Dean, Levi J.  
 HUNTINGTON—Dickey, A. F.  
 HUNTINGTON—Gieske, J. R.  
 HUNTINGTON—Lowe, Lloyd C.  
 HUNTINGTON—Meanor & Sweeney.  
 HUNTINGTON—Ritter, Verus T.  
 HUNTINGTON—Wilkins Co., W. G.  
 MORGANTOWN—Jacobs, Elmer F.  
 PARKERSBURG—Adair, Richard H.  
 PARKERSBURG—Patton, Wm. Howe.  
 PARKERSBURG—Samsbury, Theo., Jr.  
 PARKERSBURG—Schneider, Harvey W.  
 PRINCETON—Wysong, A. F.  
 WELLSBURG—Wells, M. L.  
 WESTON—Arnold, A. A.  
 WESTON—Moore, J. S.  
 WHEELING—Bates, Chas. W.  
 WHEELING—Dayton, Albert F.  
 WHEELING—Dieringer, Geo. H.  
 WHEELING—Far's, Fred F.  
 WHEELING—Franzheim, E. B.  
 WHEELING—Giesey, M. F.  
 WHEELING—Klieves, Archibald L.  
 WHEELING—Leiner, Jos.  
 WHEELING—McCarty, Chas. D.  
 WHEELING—Vester & Son.

## SOUTHERN ARCHITECT & BUILDING NEWS

### The Most Practical Advertising on Earth

You get the most practical advertising possible by using The Southern Architect. You reach people who are buying millions worth annually in your line. You secure the good-will of our readers, because they like to see their home paper supported. You pay for no waste circulation. You cannot reach these buyers through any other one building paper who will appreciate your patronage so much. You cannot go wrong in sending us your order now, when the South is such a big buyer, because of the high price of cotton. Write for rates to

**THE SOUTHERN ARCHITECT & BUILDING NEWS, ATLANTA, GA.**

## Personal Mention

### Greeley Made Chief Forester.

Col. W. B. Greeley who has been selected to succeed Henry S. Graves as chief of the United States Forest Service has been in the forest service continuously since 1904, except for two years of military service with the American expeditionary forces. Col. Greeley is 40 years old, and a native of California. Entering the forest service in a minor capacity, he rose through all the grades until he became assistant chief. When the United States entered the world war he was assigned the task of recruiting the forestry troops for service in France. Later he was given command of the forestry section of the American expeditionary forces, in charge of 21,000 forestry troops, which were engaged in lumbering operations in every part of France. For the distinguished services he rendered in this position, Colonel Greeley was decorated by both the French and British governments.

### Wintering At Savannah.

Mr. John Howells, of New York, son of William Dean Howells, the author, and himself an author and a well known architect besides, has been spending the winter at Savannah, Ga., with his father. Mr. John Howells has been collecting material for a book which he is compiling on Colonial Architecture.

### Architect Celebrates 85th Birthday.

R. C. Bruce, one of Atlanta's oldest and best-known architects, who was before his retirement a member of the firm of Bruce & Morgan, celebrated on Sunday, March 14, his 85th birthday. This firm has designed many of the large and important buildings in Atlanta and in other parts of the state.

The fact that Mr. Morgan has passed the eighty-fifth milestone of his life was mentioned by Dr. L. O. Bricker at the Sunday morning service held in the First Christian church, of which he has been an influential member ever since coming to Atlanta. He was congratulated by Dr. Bricker, the pastor, and by the members of the congregation, who greeted him at the close of the service.

### Landscape Architect Dead.

John C. Olmstead, a landscape architect who designed many exposition grounds and park systems throughout the country, died at his home in Brookline, Mass., February 24. He planned the grounds of the world's fair at Chicago and expositions at Seattle and Winnipeg, Man. Park systems laid out by him include those of Boston, Chicago (South parks); Buf-

falo, Rochester, N. Y.; Hartford, Louisville, Milwaukee, Seattle and Spokane.

Mr. Olmstead was a nephew and the adopted son of Frederick Law Olmstead, the landscape architect, whose partner he became and with whom he was associated in his most notable work.

### Architect John C. Battle Dead.

Mr. John C. Battle, well-known architect, died in Atlanta, Ga., March 3. Mr. Battle had devoted some thirty years of his life to architecture and draughting work, and had earned for himself a place of prominence along this line. He was head draughtsman for the late Mr. W. S. Denny on the Piedmont hotel plans, and assisted in the planning of many other buildings in Atlanta.

At the time of his death Mr. Battle was in his fifty-first year.

### Establish Jennings, La., Office.

The firm of Nolan & Torre, Architects & Engineers, New Orleans, has recently established a branch office in Jennings, La. Mr. C. S. Moss has been placed in charge, and is looking after a large amount of construction work in Southwest Louisiana.

### Heads Engineering Society.

Prof. T. P. Branch, head of the department of civil engineering at Georgia School of Technology, has been elected president of the A. T. S.—Affiliated Technical Society—of Atlanta. This organization is composed of the members of the various technical engineering associations which have branches in Atlanta. In addition to having charge of the civil engineering department at Tech, Prof. Branch is secretary of the faculty and dean of the Co-operative department.

### Large Lumber Companies Reduce Prices.

Price reductions amounting to 10 to 30 per cent. under present prices are announced by the distributing agency for 11 lumber mills as a measure looking toward stabilization of the lumber market.



Nashville, Tenn., Union Depot.

### Federal Engineering Changes.

Far reaching changes in the executive machinery of the federal government were proposed in bills introduced in each house of congress. The federal department of the interior will become the department of public works, if the legislation proposed is enacted. The main idea is to assemble all engineering activities of the government in one department.

Such bureaus of the interior department as are non-engineering in character are to be placed under the jurisdiction of appropriate departments, while engineering bureaus from other departments are to be included in the department of public works. The bill proposes that the patent office is to be removed from the interior department and placed under the department of commerce. The bureau of pensions is assigned to the department of the treasury. The bureau of education goes to the labor department. The bureau of Indian affairs is also transferred to the department of labor, with the proviso that the engineering and construction work and the land and mineral surveys now performed under the direction of the bureau of Indian affairs are to be prosecuted under the department of public works. St. Elizabeth's Hospital and the Freedman's Hospital in this city are assigned to the treasury department. Columbia institution for the deaf and the Howard University go to the bureau of education, under the provisions of the bill.

On the other hand, the department of public works is slated to absorb the supervising architect's office of the treasury department; the construction division, river and harbor improvements, Mississippi River commission, and California debris commission of the war department; the bureau of standards and the coast and geodetic survey of the department of commerce; the bureau of public roads and the forest service of the department of agriculture.

The bill provides that the secretary of public works "shall by training and experience be qualified to administer the affairs of the department and to evaluate the technical principles and operations involved in the work thereof." The measure excepts from the foregoing provision the cabinet officer who is at the head of the department at the time of the passage of the bill.

Four assistant secretaries, each to be paid \$7,500 per annum, are provided and their duties outlined. One assistant secretary is to have administrative jurisdiction over all matters of engineering design and construction. Another is to have charge of architectural design and construction. The third is to have jurisdiction over all scientific work and surveys, while the fourth is to be in immediate charge of all land and legal matters. The assistant secretaries are charged with the duty of co-ordinating and bringing into efficient relationship all the activities

of the department so that it may be harmoniously and efficiently administered.

An important feature of the bill is the proviso that engineer officers of the U. S. army detailed on non-military work are to be assigned by the secretary of war to like duties under the new department, for not over two years. This enables the secretary of public works to make gradual transfers of improvements and instrumentalities to civil administration without detriment to public interest. Members of the corps of engineers may, under the direction of the secretary of public works, be detailed by the secretary of war to temporary duty in the new department for such instruction, training and experience as is desired.

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### The Savannah Builders.

Reports from Savannah, both through the public press and other sources, indicate that the fellowship dinner of the Savannah Builders' Exchange was an unqualified success in every way. Beautiful invitations had previously been issued to this delightful affair, and the select list of outsiders who were so complimented felt themselves honored, indeed. A dinner of the famous Savannah kind was served. H. A. Butterfield, president of the Savannah Builders' Exchange, was the toastmaster for the evening, and was happy in that capacity. Several of the Savannah city officials were present, and Mayor Stewart and numbers of aldermen endorsed the proposed revised building code for that city. Chairman William Artley of the recently appointed code committee of the Exchange made a report in which he declared that Savannah is at present practically without a building code. An ordinance covering this defect is to be introduced soon, and the city officials present pledged their support to the movement to provide a completely revised and up-to-date code. John N. Davis and Meldrim Thompson made a most interesting report of the recent fight at Indianapolis whereby Savannah won the 1921 meeting of the National Association of Builders' Exchanges over such formidable competitors as Chicago, San Francisco, St. Louis, Memphis and New York. The supper had its music and also its surprises, and the entertainment and reception committee of the Exchange, composed of I. L. Echols, Sylvan M. Byck, John N. Davis, Meldrim Thompson and A. L. P. Smith was freely complimented upon its original conception of how to make a happy evening to order. Officers of the Savannah Builders' Exchange are as follows: President, H. A. Butterfield; vice-president, J. G. Butler; secretary-treasurer, J. H. Reese; directors—W. H. Artley, I. L. Echols, A. W. Morehouse, F. McRae, Frank Woollard, A. L. P. Smith, M. O. Seckinger, J. P. Wheless, L. B. Fowler, J. F. White, Norton Frierson and C. C. Cambridge.

# To The Saturation Point

Moisture is a sly and insidious destroyer. Disintegration and decay quickly begin where moisture strikes in.

The serviceability of a building paper is in direct ratio to its water-proof qualities.

There's no doubt about NEPONSET Black Waterproof Building Paper being **absolutely** waterproof. Take a strip of it and immerse it in a bucket of water. Leave it there a long time—it will not disintegrate. An ordinary sheathing paper will not stand this test.

NEPONSET Black Waterproof Building Paper is impregnated with the special NEPONSET Waterproofing preparation until every square inch of it can hold no more. It is waterproofed **to the saturation point**. Not just coated or surfaced!

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INCORPORATED  
(Established 1795)

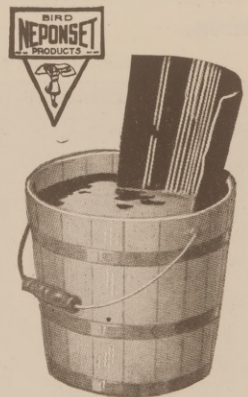
East Walpole, Mass.

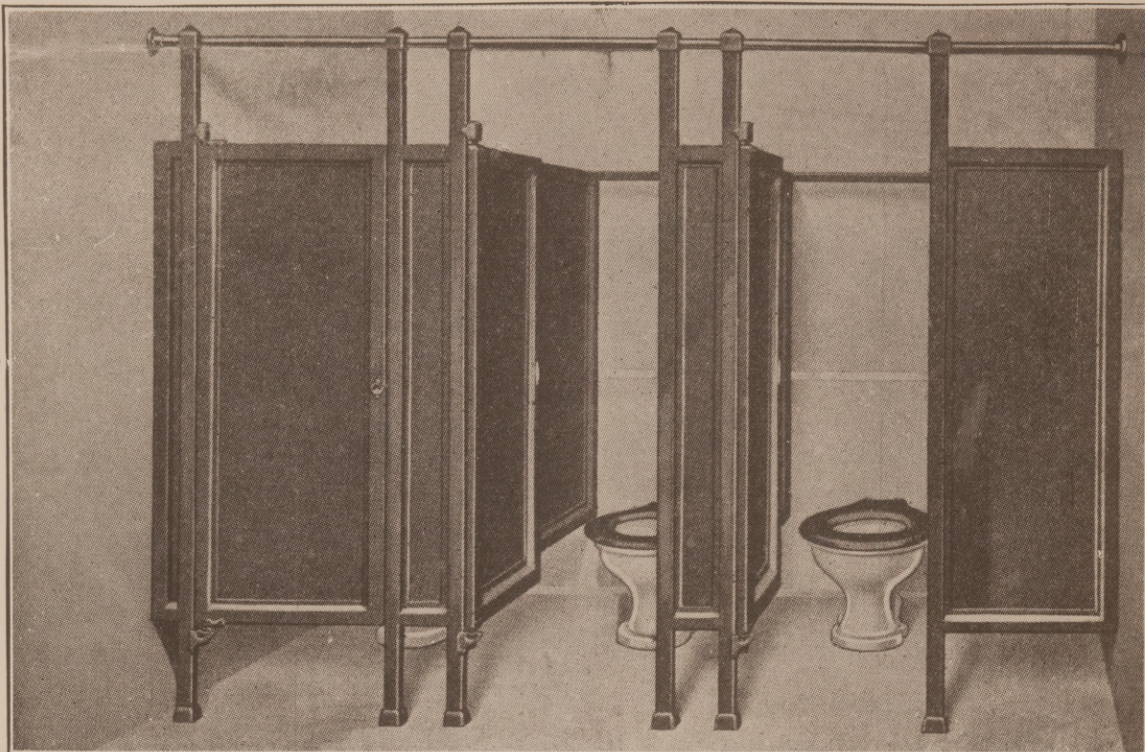
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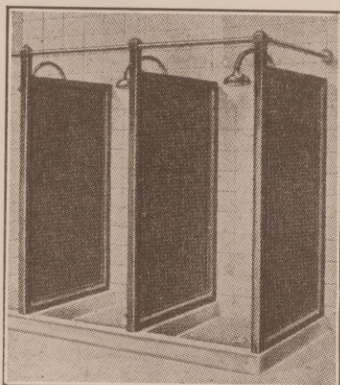


## *Sanymetal* TOILET PARTITIONS

TRADE MARK U. S. REG.

During the war our entire output was taken over for Government Arsenals, Navy Yards, Cantonments, etc. SANYMETAL products are again available for rapid delivery to you.

In life-long durability, in clean-cut, wholesome appearance, in extra sanitation — SANYMETAL PARTITIONS yield your customer the utmost for his money. For factory, schoolhouse, hotel, comfort station, or other public buildings SANYMETAL is recognized as being in a class by itself. Every SANYMETAL installation you sell brings **you** new business.



Furnished in a variety of designs, with or without doors, in standard or special units easily erected on the job. Built throughout of Armco Ingot Iron —built to last. Every SANYMETAL door swings on SANYMETAL GRAVITY ROLLER HINGES—the better hinges for less money.

### SHOWER BATH PARTITIONS.

SANYMETAL Shower Bath Partitions are simple in design and erection, inexpensive, and extremely durable. Curb or flush sink designs furnished for any layout. Made of lead-coated steel stock, specially waterproofed with a mineral oxide, with a hard baked enamel finish.

Complete SANYMETAL Catalogue and price lists on request.

**The R. F. Carpenter Manufacturing Co.**  
980 East 64th St.,  
Cleveland, Ohio

# An Old Ontario Hotel

UNDER its windows, framed between square-built warehouses of limestone masonry the other side the way, brilliant in sunlight, lay a section of the lake harbor of Kingston, Ontario, just where the Cataraqui, a river famed of Indian tribes long before the earliest French explorers found their way up the St. Lawrence, flows into Lake Ontario.

In the harbor, martello towers, relic of a long-forgotten war, raised their cylindric stone bulk, monuments of peace for a hundred years, from quiet water, as also from the green foreshore of the headland across the harbor, where, half hid amid the trees, the buildings of a military college were visible. In colorful contrast to the white quietness of the towers, a harbor crane, convoyed by a gay green tug, puffed, clanked, and rattled as it swung and turned upon its floating base of revolution, and lift-and lowered its derrick arms with pendant "clamshells" discharging the petrine load of unseen scows. Beyond the point a tow went down the bay, bound for the St. Lawrence, out of the lake.

## The Path of Feet Uncounted.

In the floor of marble slabs, between front door and desk, desk and foot of stair, and stair foot and dining room, was visible and tactable the path of peregrine feet uncounted. Even before certain of the chairs ranged along the sides and down the center of the lobby might be perceived a dishing, a slight and receptive suavity, unobtrusively welcoming to one's feet, companionably suggestive of others foregone who alike had found at just those points, in just such a comfortably-armed chair, of a long-passed type, vantage from which to contemplate the passing world of the hotel lobby.

The columned height of a heavily coffered and molded ceiling, paneled walls and columned doorways, their primal classic whiteness mellowed with years and cleanings unnumbered to that warmth of tint that speaks of human association and use, spoke as did the genial courtesy of the white-headed clerk, of a larger, easier-timed day when traveling was still something of an undertaking, and "stopping at the hotel" an event. One felt, registration completed, that one was not merely a room number and a ledger account. The delivery of the room key and the summoning of the bellboy were like the delivery of the keys of a city, and one followed him to the apportioned apartment with a pleasant feeling of being an integral part of the establishment.

## The Stairs.

There was no elevator. But in its place there came again at the stair the sense of an old-world and friendly spaciousness, writ large in the generous

width from rail to wall, in depth of tread and ease of rise, in the curiously-shaped and passage-polished brass-arming, studded with many round-headed nails which broadly guarded, in place of carpet, every white-painted tread. A walnut handrail, of a mold section that showed in every ovolo, quirk, and cavetto the heart's pride of the artisan who devised it, carried on white-turned balusters of a proud fineness of line, and swept upon itself above the bottom step, on half-a-dozen grouped balusters for a newel, into a terminal volute with a combined continuity and conclusion of the descendant line which made one feel the pride of the old-time joiner in his craft. In easy ascent following the line of the stairs, across the entire width of the stair well, three broad windows, whitely draped with lace curtains of a pattern forgotten when bicycles went out of fashion, rose to the second floor ceiling. As one passed through the light-tempering and patterned veil there was a sense of sun reflected from courtyard walls warmly white, with distant dome and tower rising high above them.

## Steam Heating an Afterthought.

The very obviousness of the provision for it showed that steam heating was an afterthought, apparently quite some time after. Evidence was indubitable here and there of a primal and displaced system of stove heat. Having been freed once from the catch to afford the sojourners entrance to their allotted room, the lock upon the door responded to the key with such reluctance that it was easier to leave it unlocked. This was nothing out of the way. Nobody in the building, from the bravely tall and athletic, clean-shaven and crisply groomed sergeant of Northwest Mounted Police seeking recruits, to the last schoolboy-faced and pink-cheeked subaltern on special duty or waiting demobilization, or the lumberman from the Pacific coast or the salesman from Montreal or Toronto, ever locked a door save as a matter of form.

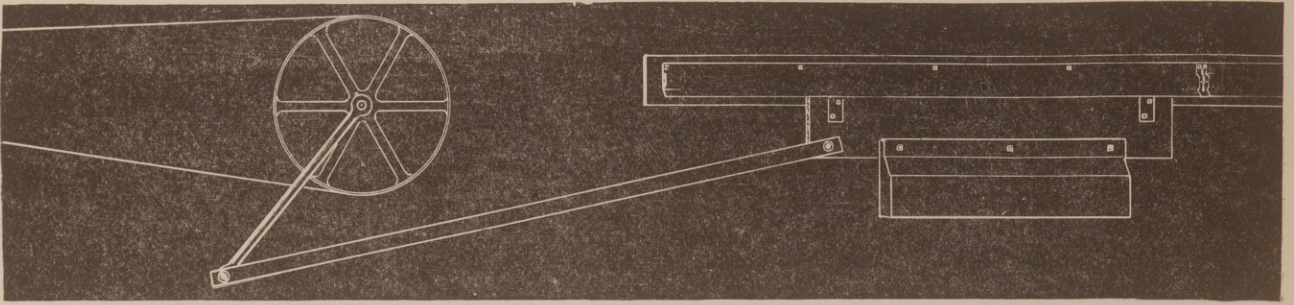
## A Message to the Office.

There was a push button by the side of the door, and near it a card which enjoined pressure once for bellboy, twice for ice water, and so forth to half a dozen or so possible requirements of a guest. One of the travelers exerted pressure as instructed. There followed colloquy at the door, and presently a bellboy arrived with desired ice water. The other traveler, observing the employment of two people for a single service, queried:

"Didn't you push the button twice?"

"Yes, and the clerk came up to see what was

(Continued on page 54.)



## “Hummer” Door Hanger stands terrific test

To satisfy ourselves we mounted in our plant an 800-pound barn door on a Porter “Hummer” Door Track and Hanger taken from regular stock. With a belt-and-wheel drive, as indicated above, we moved this door back and forth *continuously* a distance equivalent to 50 miles.

Then we removed one side of a hanger truck frame and photographed it. At the right we reproduce the *unretouched photograph*. It shows that after undergoing this severe strain the bearings give practically no evidence of wear.

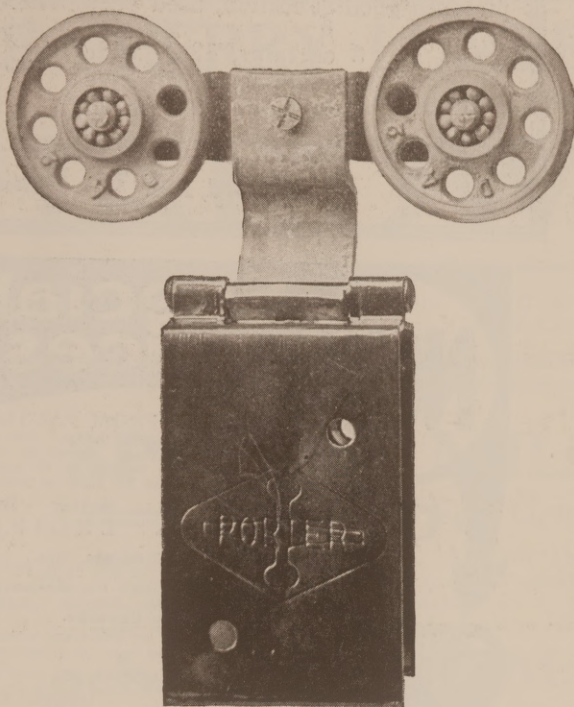
We have performed this test many times since and are ready and willing to perform it again at any time. The apparatus is still standing in our plant.

The entire mechanism and the bearings used in this test were taken at random from stock. The mechanism and the bearings that we sell to

thousands of barn-owners in “Hummer” Door Hangers are as exactly like those used in this test as standardized manufacture can make them.

A very light belt wheel and driving rod were used in this test. Although the door weighed nearly half a ton (800 pounds), the nice balance of the “Hummer” enabled us to use a pull of only a few pounds. What the practical barn-owner wants in his outfit is simplicity of design, ease of operation and strength. And these are the outstanding features of Porter equipment.

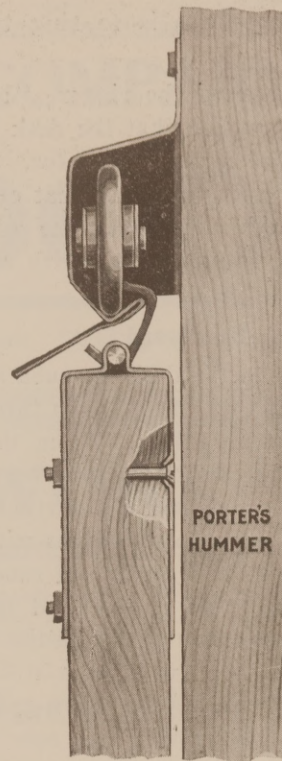
# PORTER



**Unretouched photograph of Hanger  
Truck Frame after test**

When you stop to consider that the strain placed upon the "Hummer" bearings in this test was *continuous*, we believe that you will agree with us that this is the most astonishing demonstration of durability ever made with door hanger equipment.

It would take many years of service in the average barn or other building to place this strain upon a door hanger, and then the strain would never be continuous. Figure it out for yourself.



**Sectional view of the "Hummer"  
showing "V" construction**

Look at the V-shaped track on which the roller-bearing tandem wheels run. Here is the principle of the most easily operated door hanger ever built. The track is made of a single piece of heavy gauge steel so formed as to have great strength and rigidity. The two-point contact reduces friction and makes the wheels self-centering. The track forms a bird-proof and storm-proof covering for the door.

*Write for full information and catalogs describing our line of Barn Equipment, Door Hangers, Garage Equipment, and Hay Tools*

**J. E. PORTER COMPANY**  
861 Guion Street,     Ottawa, Illinois

# BARN EQUIPMENT

### An Old Ontar'io Hotel.

wanted, and sent the boy with the water."

"But the card says one is to ring twice for that."

"Yes, I know," agreed the ringer; "but those bells are so seldom punched that the desk has long ago forgotten what the signals stand for. You can see by the very aspect of the place that everybody goes down to the desk and talks over what they want with the clerk, as one friend with another." And it was verily so.

### The Courtyard.

On the way down to the desk for such a conference, the white warmth of reflected sun through the stair windows prompted a halt. From the depth of a generous window jamb there was seen below, deserted and still, a courtyard, the further side of which was closed by a range of stables with upper stories carried on three wide arches of random masonry. Two of them were closed, and the third opened in rich depth of shadow through the depth of the building into the green vista of a still further court, full of June greenness, suggesting a distant Anglican cathedral close from which rose a minor tower and a dome beyond, towering over the stable roofs. Rectangles of utter dark where slats had been broken from the closed shutters spoke of the long disused and empty upper floors. Weathering stones and crippled window shutters alike spoke of the day when the waterside street on which the hotel fronted had been the stage road, busy with multifarious goings and coming, and the hotel stables, now quiet, had been cheerfully full of equine sounds and stable men's activities, odorous with the sweetness of hay and the fragrance of oats. One could almost hear again the rattle of halter chain and the stamp of impatient hoofs, the swish of curry-comb and scraper, tinkling splash of water and the rustle of pigeon's wings in wheeling flight.

A muffled and detonatory roar broke the stillness of the court, and from beneath the windows, out of shadow into the sunlight that warmed so kindly the old stage stables, there backed up a modern automobile, and at one moment were seen two days together.

### New Contractors' Association.

The contractors of Florence, S. C., have formed an association which will operate not only for the good of the contractors themselves but also will serve as a protection in these days of high costs to the general building public. The association is known as the Florence Contractors Association and the officers elected are as follows: President, W. P. Tennes; Secretary and Treasurer, T. B. Haynesworth.

## FOR SALE

One lot of steel roll curtains with chains complete, in good condition, used very little.

3 curtains, 13-6" wide  
2 curtains, 10-6" wide  
2 curtains, 9-0" wide

**JOHN A. ROWE CUT STONE CO.**

Bedford, Ind.



## Special prices

DIRECT FROM FACTORY

Save money at present prices. You can't beat our quality as proved by many thousand engines working in all sections of the country, on all kinds of jobs.

## OTTAWA

**Better Built  
Engines**

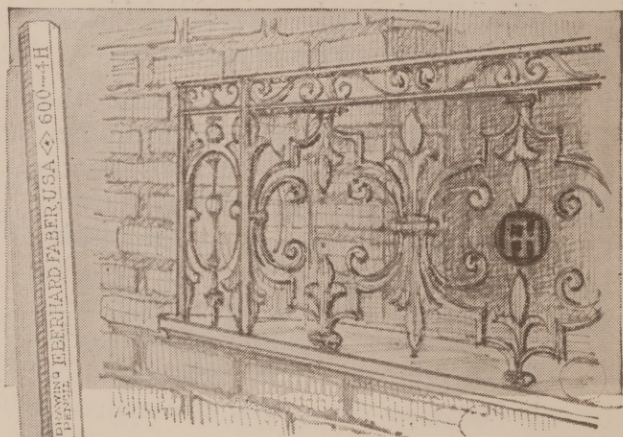
Kerosene, Gasoline, Distillate, Gas.  
 Sizes 2, 3, 4, 5, 6, 7, 8, 10, 12, 16 and 22 H.-P. Stationary, Portable, and Sawrig styles. Use cheapest fuel. Easy to start; easy to operate. Durable. Reliable.  
 90-days trial. 10-year Guarantee.

Book Free

Gives low prices and makes all engines easy to understand.

OTTAWA MFG. CO.

3026 King St.,
Ottawa, Kans.



Franklin Jones Hunt, Architect.

Van Dyke Drawing Pencils are made in 16 degrees of lead, graduating from 6B, softest, to 8H, hardest.

## From the point of a 4H VAN DYKE DRAWING PENCIL

Not the softest or hardest of the hard degrees, but an *intermediate hard lead* that is generally preferred for its hard fine point and depth of tone.

Two Van Dyke Drawing Pencils (the degrees preferred) and an Artist Eraser will be sent you upon receipt of fifteen cents. Address us at 37 Greenpoint Avenue, Brooklyn, N. Y., Dep't. N.

**EBERHARD FABER**

"Oldest Pencil Factory in America."  
NEW YORK

# LUMBER DEPARTMENT

## Southern Architect and Building News

VOL. XLIV.

DALTON and ATLANTA, GA., APRIL, 1920.

No. 6

### THE CHERRY LUMBER COMPANY, Inc.

CINCINNATI, OHIO

# HARDWOODS

Specialties: Cherry Lumber, Walnut Lumber, Kiln Dried Hardwoods, Glued-up Blocking, Dimension Orders, Custom Kiln-Drying.

## SPECIAL MILL WORK

*High Grade*

Our specialty is manufacturing millwork to fit any architect's requirements in any wood desired. Veneered doors and all other items of millwork manufactured in our own plant. A full mechanical equipment and experienced organization enables us to guarantee prompt service and accurate workmanship and material of good quality. Send us plans for estimate.

### Enochs Lumber & Manufacturing Co.

JACKSON, MISS.

### Alabama Hewn Oak Timber.



Reg. U. S. A.

THE S. K. TAYLOR LUMBER  
COMPANY  
MOBILE, ALABAMA

### Manasota Lumber Corp.

Manasota, Florida.  
P. O., VENICE, FLA.

Double Saw Mill, Dry Kilns and Planing Mill

### Long Leaf Yellow Pine

Manufacturers of

Railroad and Car Materials  
Boat Lumber and Timbers  
Railroad Ties

Shingles, Laths  
Ceiling, Siding  
Factory Flooring, Roofers

### *The Handwriting on the Floor*

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

We buy the raw lumber from veneer mills, which enables us to obtain the choicest flitches. Our lumber is not resawed. Resawed material cannot be kiln dried successfully. And we guarantee our stock to be thoroughly kiln-dried.

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

**The Eagelsfield-Stewart Co.**  
"The Sudden Shippers."  
Indianapolis, Ind.



### World's Largest Lumber Association.

Formation of the American Lumber association, the largest wholesale lumber organization in the world, was announced in New Orleans March 6.

Approximately a half billion dollars is behind the organization, it was stated. The association is composed of leading wholesale lumber dealers in all important cities in the United States—many with selling connections in all parts of the world.

The announced purposes of the organization are:

- 1.—Standardize the buying and distribution of the wholesale lumber business.
- 2.—Enforcement of a rigid code of business ethics among lumber wholesalers.
- 3.—Systematize distribution so that no part of the market shall cry in vain for lumber while other parts of the market are glutted and,
- 4.—Devise means for eliminating the present enormous wastage in the lumber industry.

Headquarters will be established in Chicago and operations will be begun the latter part of March. L. R. Putman, of New Orleans, former director of advertising and trade extension of the Southern Pine association, who made the announcement, has been named manager of the association. L. Germain, Jr., head of the Germain Lumber company, Pittsburgh, Pa., is president.

The new association is patterned after the National Bureau of Wholesale Lumber distributors, formed during the war to serve the government's lumber needs, Mr. Putman stated.

It was stated that this is the first national organization of wholesale lumber dealers ever effected in this country. The central office in Chicago, it was stated, will act as a lumber clearing house for the country's leading wholesalers through which close touch will be maintained with world needs enabling the association to distribute the nation's lumber supply so as to meet the markets' demands at minimum expense.

A program of conservation of the nation's lumber resources already has been mapped out by the association, according to the announcement. Every field will be covered by the association, there being departments for yellow pine, Douglas fir, cypress, red cedar, white pine, hardwoods and all other kinds.

### Anne Morgan Buys Birmingham Lumber.

Miss Anne Morgan, who has been in Birmingham, Ala., explaining the work that is being done by the American commission for the industrial relief of devastated France, was a guest of the Wholesale Lumbermen's Club of Birmingham at its monthly dinner and made an interesting talk. The French were unable to rebuild their homes promptly, she said, because they lacked the tools of production.

All the sawmills, all the factories, all the machinery that could be useful in economic restoration, had been stolen or destroyed by the Germans, and the repatriated French soldiers on their return found a wasted and barren land. The chief work of the relief commission, she said, had been to furnish the mechanical means by which the French could harvest crops, resume their manufactures and support themselves. While in attendance on this meeting, Miss Morgan placed an order for 120,000 feet of Alabama lumber to be used in rebuilding work in France.

L. R. Putnam of New Orleans, director of advertising and trade extension of the Southern Pine Association, was also a speaker at this meeting of the Wholesale Lumbermen's Club, and told of the aims and methods of the association in opening new markets for Southern pine.

### Lumber Men Deny Accusation.

Judge John E. McCall, in federal district court at Memphis, granted the application of the government for a preliminary injunction to enjoin F. R. Gadd, statistical commissioner of the "open competition" plan, a statistical auxiliary of the American Hardwood Manufacturers' Association and the more than 300 members of the plan, from further exchange of distribution of stock and sales statements and certain other trade reports which the government charged tended to restrain trade, eliminate competition and maintain prices in the hardwood lumber industry.

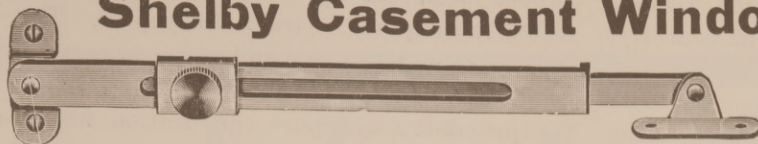
Attorneys for the association deny in detail the allegations.

Denying that rise of prices cited in the government bill was due to "any other than natural causes" the answer held that the defendants "are within their lawful rights in associating themselves for the purpose of furnishing each other with accurate information of the basic facts of the industry," including statistics showing the rate of production, stocks on hand and prices at which the product has been sold and that "such association does not cease to be lawful because, informed by the knowledge so obtained, but acting without agreement, understanding or concert of action, the individual members may ask different prices, higher or lower as the case may be, from those that they would have asked if they had not been thus informed."

Specific denial is made of the charge in the government bill that a conspiracy existed to restrain interstate commerce and maintain hardwood lumber prices or that the plan recommended or contemplated, oral agreements among the members to eliminate competition.

In the bill of complaint a report issued from the headquarters of the organization here, in which reference was made to "evil practices" was cited by the government bill and the allegation made that the

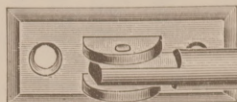
## Shelby Casement Window Adjusters



No. 1

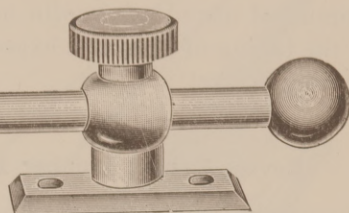
No. 1 This Adjuster is universal for right or left hand windows opening in or out. Will hold the window positively locked in any position. Can also be used as a friction stay. It is also furnished with brackets to be used where attachment to window casing or trim board is necessary.

No. 2 This Adjuster is for right or left hand windows opening out. It is very strong and has  $\frac{3}{4}$  inch wrought steel rod made in 8, 10, 12 and 15 inch lengths.



No. 2

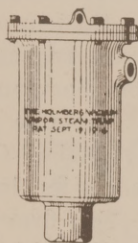
Made at Shelby, O.  
Sold Everywhere.



**The Shelby Spring Hinge Co.,**

**Shelby, Ohio**

## No More Sizzling Air Valves



The Holmberg Vacuum Vapor Steam Trap, attached to any single pipe steam job, will eject all the air. Save 30% in fuel, and increase the efficiency 30%.

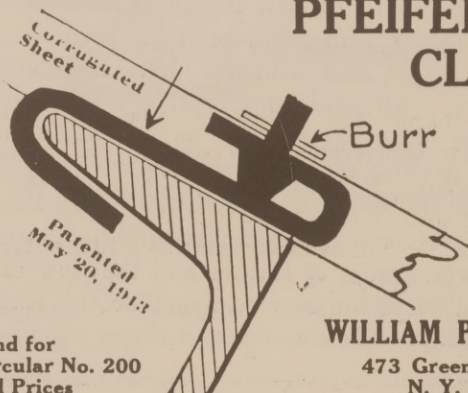
Capacity of each Trap, One Thousand Feet. No other specialties required. Order from your jobber, or direct from factory. Send for particulars.

**THE HOLMBERG STEAM TRAP CO.**

LINDSBORG, KANSAS

For Fastening Corrugated Roofing and Siding Use

## PFEIFER CLIPS



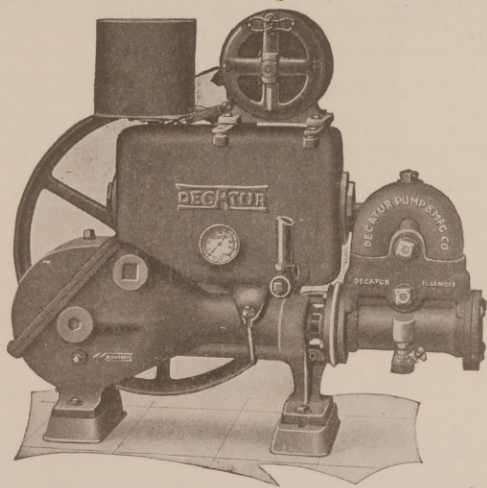
Send for  
Circular No. 200  
and Prices

**WILLIAM PFEIFER**  
473 Greenwich St.  
N. Y. City

PUMPS

"IF IT'S A DECATUR IT'S A BETTER PUMP"

## ARE YOU INSTALLING MODERN **DECATUR** WATER SYSTEMS?



Plumbers now recognize that time-saving is a big factor in this "Building Age." Simple as A, B, C. Installing the "Decatur Way" makes the work simple and easy. It will pay you to investigate the "Decatur Way." Do It Today.

"They Give Satisfaction"

**DECATUR PUMP & MANUFACTURING CO.**  
NOISELESS GEARED

DEEP AND SHALLOW WELL PUMPS  
Main Office and Factory. DECATUR, ILLINOIS

Pacific Coast Representatives:

Seattle  
Portland

WM. P. HORN CO.

San Francisco  
Los Angeles

# No Wasted Heat

Heating water by the Detroit Systems saves gas. Your clients will be delighted to hear about its gas saving possibilities.

Send for complete description  
today.

**Detroit Heater Corporation**

715-19 Grand River Avenue

**DETROIT**

**MICHIGAN**

phrase meant "the practice of competing in price so as to secure business." This construction, the answer contends, was incorrect, and, on the contrary, the words referred to wholly different subjects, such as one mill attempting to entice labor from another; the shipping of mixed grades of lumber in the same car and the taking of orders in excess of capacity on an ascending market.

### Revise Export Lumber Rates.

In increasing lumber export rates in southeastern territory just before the carriers were turned back to their owners, the railroad administration has aroused the lumber interests of the South to protest to the interstate commerce commission which, on March 1, resumed its rate regulation functions.

A. G. T. Moore, of New Orleans, chairman of the South went to Washington to assist in preparation of a petition to be filed with the interstate commerce commission. All interests concerned claim that restoration of lower export rates on lumber and other products passing through southeastern ports is of prime importance.

Mr. Moore said that much overproduction exists in the lower grades of lumber and that low export rates tend to create new tonnage for the carriers, new wealth for the country and better business all around.

"The railroads of the country recognized this fact when they established the rates now cancelled by the administration," said Mr. Moore, "and we hope that constructive co-operation between the railroads and the lumber industries will be resumed and these increases not championed, now that the roads have been restored to their owners. Unfortunately, the United States railroad administration in its quest for revenue, proceeded on the theory for which certain railroad managers were condemned in the past, namely, 'discrimination' and charging all the traffic would bear."

It will be pointed out to the commission that whereas the freight receipts per car mile on all traffic for class one roads in the South, according to one of Mr. Moore's exhibits, were 16.385 cents during the normal period, 1911 to 1914, the receipts per car mile on lumber shipments were 17.739 cents. The receipts per car for the average distance haul showed a like higher charge on lumber traffic compared with the average of all traffic, while the average load per car hauled was 25.6 tons in the case of lumber, and only 17.6 tons average in the case of all traffic. The hazard of transporting lumber is nil, as cars unsuited for any other traffic can be used in handling lumber.

In section 3, of general order 28, of June, 1918, which allowed a horizontal 25 per cent rate increase on freight generally throughout the country, the rail

road administration provided for cancellation of all export rates, and that domestic rates must be collected to the ports on traffic for export. There was no complaint about this at the time, because of war conditions. Later, the export rates on lumber were readjusted through port equalization based on an accepted "key or pivot at" domestic rate. This does not specifically comply with section 3, but will cost the lumber shippers alone \$970,000 annually in freight paid on their product for export over and above the normal export rates. These advances range from 50 to 100 per cent, and, being effective only east of the Mississippi river, a situation of discrimination against southeastern lumber exporters is created.

### Canadian Lumber Production More.

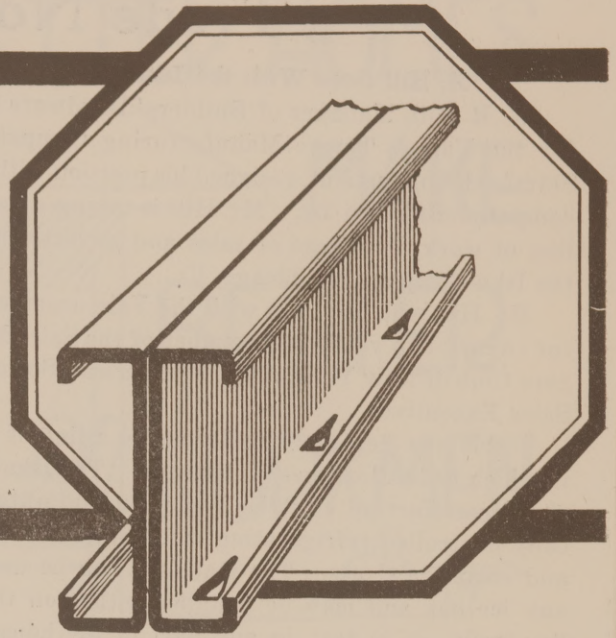
The lumber production in the forests of Alberta will be greater this winter and spring than in any former season on account of the extremely heavy demand. Practically all of the lumber companies are expanding their facilities, the most notable expansion being that of the McLaren Lumber Co., Blairmore, which is preparing to increase its daily capacity from 80,000 to 300,000 feet. This firm recently purchased the mill of the Prince Albert Lumber Co., Prince Albert, Saskatchewan, and is removing the outfit to Old Man River at Macleod. The mill acquired from Prince Albert has a daily capacity of 225,000 feet. The McLaren Lumber Co. has three camps in operation the year round.

The Phoenix Lumber Co. is also increasing its capacity by erecting a new mill on the Canadian Northern Railway and Saskatchewan River near Harburg. This company is engaged in filling an order for 500,000 railway ties placed by the Canadian National Railways. Several hundred bushmen are engaged on this company's berth.

The Eau Claire Lumber Co., of Calgary, plans for heavy cutting. The total output planned is for more than 7,000,000 feet, of which 4,000,000 are to be produced on the Spray River near Banff and 3,000,000 on the Ghost River northwest of Morley. The Wilson Lumber Co., of High River, will increase its cutting this year, particularly on the Highwood range. Production will also be increased by the smaller companies and portable outfits.

J. S. Coombs, Crown timber inspector, said that the cutting of timber would be the largest for many years, if not the heaviest in the province's history. Mr. Coombs said that crews were larger on all berths than in previous years. Lumber orders and prices are higher than at any time previously. Lumber companies are being offered from \$36 to \$40 per thousand feet, while wages for bushmen have increased from \$35 a month and board in pre-war years to \$85 a month and board.

# Steel Joist Floor Construction



*Light Occupancy Structures Demand It!*

**72%** of all fires start from within. Ten years from today the structures with a fire-proof shell and combustible floor-joists will be out-of-date or else frankly a temporary make-shift.

Steel Lumber Sections, approved by the leaders in the architectural and engineering professions and tested by 12 years of service in completed structures, have wrought the change. Only this year has production made possible extended national usefulness.

Seven structural advantages lay claim to the specification:—



*The toughness of our metal is shown in this trade mark, made from actual photo of a strip of our steel "cold-folded."*

1. Ability to resist high temperatures without warping or buckling.
2. New economies in construction.
3. Perfect foundation for all flooring and ceiling materials.
4. Increase in safe spans and simplified framing.
5. Rapid erection with any available labor.
6. Reduction of fire hazard.
7. Local service by fabricators selected for responsibility, experience and ability.

Our handbook of National Steel Lumber Sections, a complete reference on the subject, points the way to many economies both in construction and in designing time. Free on request.

**The NATIONAL PRESSED STEEL CO.**  
**MASSILLON, OHIO**  
 MANUFACTURERS OF STRIP STEEL AND STEEL LUMBER SECTIONS

# NATIONAL STEEL LUMBER SECTIONS

# Trade Notes of Interest

## W. R. Hill Goes With the Isko Company.

W. R. Hill, Manager of Builders' Hardware Sales for the Yale & Towne Manufacturing Company of Stamford, Connecticut, resigned his position with that company on March 1st. Mr. Hill is taking up a new line of work, in charge of sales and advertising for the Isko Company of Chicago, Ill.

Mr. Hill who has been with the Yale organization for twenty-two years, is a member of the Sales Managers Club of New York, and the American Society of Sales Executives.

In his new field he is undertaking a line of work in which he has long been interested. The Isko Company manufacture electrically driven and automatically controlled refrigerating machines for domestic and commercial use. The machines can be used on any ice box and may be installed either on the ice box itself, or, in fact, in any part of the house. It was only after thorough tests that proved the satisfactory application and operation of the refrigerating machines that Mr. Hill determined to apply his many years of experience in selling and advertising to the development of the Isko Company's machine.

His many friends in business and in personal fields will follow his new venture with a great deal of interest.

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## "Trane Data."

We are in receipt of a new publication from The Trane Company, La Cross, Wis., entitled "Trane Data." This is their new bulletin No. 11 and contains practical information for engineers and contractors. In addition to the technical data in connection with the Trane System itself and the Trane Vapor Heating Specialties, there is a large amount of valuable data on radiation boilers, chimney sizes, chimney flues, etc. A copy of this valuable contribution on the subject of vapor heating may be had for the asking.

---

## Important Announcement to Trade.

H. E. Hessler Company, Syracuse, N. Y., announce they are about to place on the market the "Hessler Adjustable Plumbing Vent Pipe Flashing" and will discontinue the manufacture of the McGuire Roof Flashing. They have in stock a limited number of different sizes and can fill orders for these. Their jobbing discount effective March 1: Galvanized flanges, 60%; copper flanges 50%, same terms and freight allowance applying as formerly. Sample on request.

Practicability and simplicity have been attained in building the new Hessler flashing. The adjustable feature consists of an all-lead calking ring firmly fastened to the adjustable collar, being an improvement on the old method.

## Structural Slate.

Chapter 1 of a series of bulletins on structural slate has been issued by the Structural Slate Co., Pen Argyle, Pa., which, it is stated, represents a majority of the producers in the Pennsylvania slate district. This publication tells about the slate quarries, presenting an illustration of a typical operation, and it also goes into details with descriptions and pictures showing how the slate is gotten out and the appearance of the finished product.

---

## Handsome Booklet on "Lathes."

The Cisco Machine Tool Co., Cincinnati, in its latest catalogue gives full descriptions, with fine and detailed illustrations, of its lathes, which are made in the following sizes: 12, 14, 16, 18, 20, 24 and 26 inches. It says that all parts can be duplicated. Also that only three wrenches are needed on an entire lathe; all gears are covered and there are ample oiling devices on all bearings. In addition to this information the second page of the catalogue gives complete specifications. Besides pictures of the products of the company, the booklet also contains several excellent illustrations of the plant inside and outside.

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## 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.

32107.—An insurance agent in Spain desires to secure an agency for the sale of lumber. Quotations on lumber should be given c. i. f. Spanish port. Correspondence should be in Spanish or French. References.

32112.—A merchant in Turkey desires to purchase paints, oils, dyes, colors, and varnishes. Correspondence may be in English. References.

32118.—An agency is desired by a business man in Switzerland for the sale of chemicals, varnishes, and colors. Quotations should be given c. i. f. Switzerland. Terms, payment against document. Correspondence may be in English. Reference.

32309.—A firm in Danzig is interested in handling an agency on a commission basis for the sale of sawn and cut lumber, both hard and soft; also sleepers. It would like to get into direct communication with leading American sawmills. Quotations should be given c. i. f. Danzig or German Baltic ports. Correspondence may be in English. References.



BETTER HOMES  
MAKE  
BETTER  
WORKMEN

Health is the first consideration. And health means contentment — ambition — greater loyalty. Without modern toilet conveniences in the homes of your workmen, you are working against the odds of human nature and medical science.

"My district is unsewered"—is no longer an excuse.

## Kaustine System Toilets

**REQUIRES NO WATER NOR SEWER CONNECTION**

Based on principles advocated by health authorities. Dispose of sewage immediately after discharge from body. Chemical reaction insures sanitation.

No bailing, as with ordinary chemical closets. Sewage is flushed into leaching pool, by means of drain valve, after disinfection in Armco Iron tanks. Kaustine tanks and all metal parts are constructed of Armco Iron and specially treated.

Convenient—Healthful—Odorless. The Kaustine System gives your employes' families city conveniences. Easily

installed. We can tell you how best to solve the problem in your locality. Write for this information and for the Kaustine catalog, which has revolutionized sanitation in mill and factory villages.

**KAUSTINE CO., Inc.**

**BUFFALO, N. Y.**

Trenton, N. J.

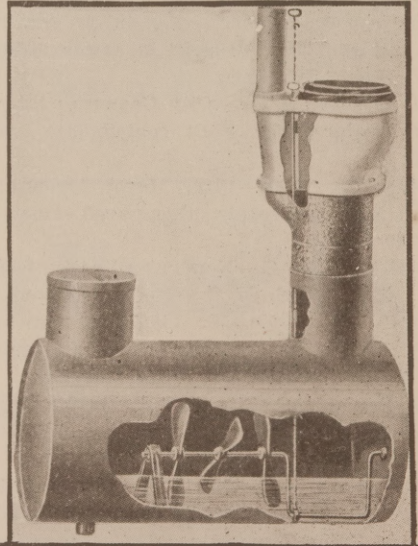
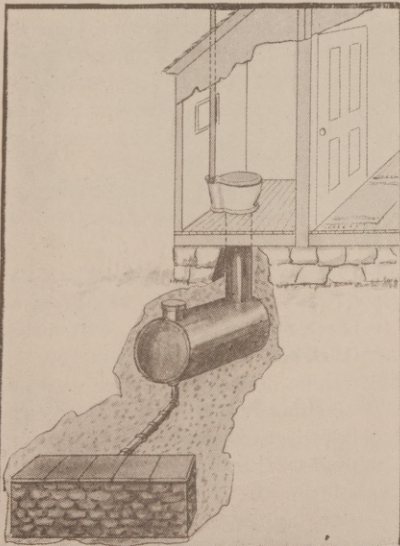
Philadelphia, Pa.

Atlanta, Ga.

Oakland, Cal.

Spokane, Wash.

Toronto, Ont.



# Building and Construction News

## Road and Street Construction.

Little Rock, Ark.—Comms. Little Rock-Pulaski Road Improvement Dist. No. 10, B. Bodeman, Secy.; construct 55 mi. streets and roads in Sections 1 and 2, including Crystal Hil, Conway and Alexander roads; asphaltic concrete or warrenite paving on rolled stone or concrete base; plain concrete paving; culverts and bridges; bids until April 26; Lund & Hill, Engrs., 527 Southern Trust Bldg.

Magnolia, Ark.—Columbia County Comms., Magnolia-McNeil Road Improvement Dist. No. 1, W. R. Cross, Secy.; construct graded road with 12-ft. gravel surface; 21,200 cu. yds. gravel; 60,000 cu. yds. grading, \$140,000; W. P. Ritchie, Contr., Camden, Ark.; Parkes Engineering Co., Engr., Pine Bluff, Ark.

Mountain View, Ark.—Stone County Comms., Improvement Dist. No. 3; construct roads; sold \$80,000 bonds.

Searcy, Ark.—White County Road Improvement Dist. No. 7, John W. Baker, Secy., Higginson, Ark.; construct 17 mi. gravel road; 47,045 cu. yds. gravel; \$300,000; J. A. Burt, Contr., Gunnison, Miss.; E. E. Mashburn, Engr., Cotton Plant, Ark.

Hinesville, Ga.—Liberty County Comms., W. C. Hodges, Clk.; construct roads; vote Apr. 20 on \$200,000 bonds.

Jackson, Ga.—Butts County Comms., J. O. Gaston, Comms.; construct 5 mi. road; \$45,000 available; vote on bonds Gassaway, La.—Town, R. Lee Boone, Mayor; improve Elk St.; vote May 9 on \$50,000 bonds.

Bladenboro, N. C.—Town, R. C. Bridger, Clerk; improve streets; vote April 6 on \$10,000 bonds.

Dunn, N. C.—Harnett County Comms., Lillington, N. C.; construct 50 mi. roads; clay gravel; \$200,000; P. R. Ashby, Contr., Raleigh, N. C.; W. T. Smith, Engr., Lillington.

Kennansville, N. C.—North Carolina State Highway Commission Div. Office, Raleigh, S. C.; construct 11.32 mi. State Highway; Federal-aid Project No. 103; 27,800 cu. yds. topsoil surfacing, 35,069 cu. yds. excavation; bridges and culverts; 37,390 lbs. reinforcing steel; bids until April 7; W. S. Fallis, State Highway Engr.

Pittsboro, N. C.—North Carolina State Highway Comsn., Raleigh, N. C.; construct 12.6 mi. top-soil road between Pittsboro and Orange County line; Project So. 99; \$84,546.92; T. W. Chandler, Contr., Virgilina, Va.

Salisbury, N. C.—City, W. T. Rainey, Clk.; pave streets in Dists. 8, 9, 10, 11, 12 and 13; 28,950 sq. yds. bitulithic, sheet asphalt or concrete paving; 4300 sq. yds. bitulithic resurfacing over macadam; 21,250 lin. ft. granite curb; 4260 sq. yds. gutter; 335 ft. 12 to 24 in. sewers; bids until April 14; J. W. Webb, City Engr.

Hattiesburg, Miss.—City Comms.; improve streets, construct water-works, etc.; contemplate vote on \$400,000 bonds.

Meridian, Miss.—City, Mayor Dabney; pave Twenty-fourth Ave., and repair other paved streets; vote May 4 on \$215,000 bonds.

Smithfield, N. C.—North Carolina State Highway Comsn., Div. Office Raleigh, N. C.; construct 6.02 mi. State Highway; Federal Project No. 58; 14667 cu. yds. topsoil surfacing; 27,060 cu. yds. excavation; bridges and culverts; bids until Apr. 7; W. S. Fallis, State Highway Engr.

St. Pauls, N. C. City, J. C. Lentz, Mayor; improve streets, water-works and sewer system; issue \$125,000 bonds; Carolina Engineering Co., Engr., Wilmington, N. C.

Wadesboro, N. C.—North Carolina State Highway Comsn., Raleigh, N. C.; construct 3.8 mi. top-soil road between Peachland and Union County line; \$43,396.45; Gibson Construction Co., Contr., Knoxville, Tenn.; John D. Waldrop, Highway Engr., Raleigh.

Whiteville, N. C.—North Carolina State Highway Comsn., Div. Office, Raleigh, N. C.; construct 7.03 mi. State Highway; Federal-aid Project No. 75; 20,683 cu. yds. top-soil surfacing; 37,286 cu. yds. excavation; bridges and culverts; bids until April 7; W. S. Fallis, State Highway Engr.

Anderson, S. C.—Highway Comsn.; awarded road contracts: Newell Company, 50 mi. road; Wright & Nave Construction Co., Dobbins Bridge road.

Columbia, Tenn.—Maury County Road Commission; gravel and chert roads; \$100,000 available; Frank A. Butler, Engr.

Memphis, Tenn.—Tennessee Dept. Highways, Nashville, Tenn.; construct 7.43 mi. State Highway No. 12 between Memphis and Mississippi State line; 104,600 cu. yds. bituminous macadam surface course; 102,073 sq. yds. reconstructed base course; cement concrete, bituminous concrete, rock asphalt, or sheet asphalt surface course with binder as alternates for bituminous macadam; bids until April 23; W. P. Moore, Ch. Engr., Nashville.

Ripley, Tenn.—Tennessee Dept. Highways, Nashville, Tenn.; construct 7.717 mi. State Highway No. 12 between Ripley and Tipton County line in Lauderdale County; 72,439 sq. yds. bituminous macadam or rock asphalt surface course; 46,520 cu. yds. excavation; bridges over 20-ft. span; bids until April 23; W. P. Moore, Ch. Engr., Nashville, Tenn.

Childress, Tex.—City, Dan Williams, Secy.; construct 30,000 sq. yds. street pavement; 40,000 sq. ft. sidewalk; 15,000 lin. ft. curb and gutter; bids until April 2; R. G. Carraway Co., Engr., Gainesville, Tex. (Supersedes recent item.)

Coleman, Tex.—Coleman County Comms.; construct roads; voted \$1,000,000 bonds.

Comanche, Tex.—Comanche County Commissioners; construct roads; vote March 30 on \$1,000,000 bonds.

Dumas, Tex.—Moore County Comms.; construct roads; issue \$30,000 bonds.

Pittsburg, Tex.—Camp County Comms.; construct roads; voted \$535,000 bonds.

Waco, Tex.—McLennan County, J. P. Alexander, Judge; .38 mi. Waco-Springfield road; .63 mi. Waco-Axtell road; \$48,769; Byars & Byars, Contrs.

Wichita Falls, Tex.—Wichita County Comms.; construct 44.34 mi. 18-ft. concrete roads; \$2,250,000; Potts & Prentice, Contrs., Waco, Tex.; J. M. Isbell, County Engr.

Anniston, Ala.—Seven miles of street will be paved at cost of \$345,646.84, by the city. The Mayor.

Charleston, S. C.—Bids will be received until April 15th, by the Charleston Sanitary & Drainage Commissioners, for the construction of 7.384 mi. asphaltic concrete road on Charleston-Savannah highway; 77,883 sq. yds. asphaltic concrete pavement; 46,773 cu. yds. earth excavation; bridges and culverts. Roy Pennell, State Highway Engineer, Columbia, S. C.

McComb City, Miss.—City invites bids until April 20 for constructing 2,000 square feet of concrete sidewalks. B. E. Butler, Clerk.

Montgomery, Ala.—City invites proposals until 11 A. M., April 20 for paving roadway of Cleveland Ave. from south side of Mildred St. to north side of Mill St., with brick asphalt, bitulithic, mineral rubber, wood block, concrete, vibrolithic concrete, asphaltic concrete or bitulithic on compact macadam base; work to include resetting of granite curbing, installing catch basins inlets, granite heads, etc.; plans, etc., on file with H. A. Washington, City Engineer, to whom communications should be addressed.

Rock Hill, S. C.—City invites bids until April 22 for constructing 130,000 square yards asphalt or other pavement; 90,000 lineal feet curb and gutter; 25,000 square yards sidewalk paving; 40,000 cubic yards of grading, etc. Gilbert C.



W. R. Thatcher,  
General Mgr.

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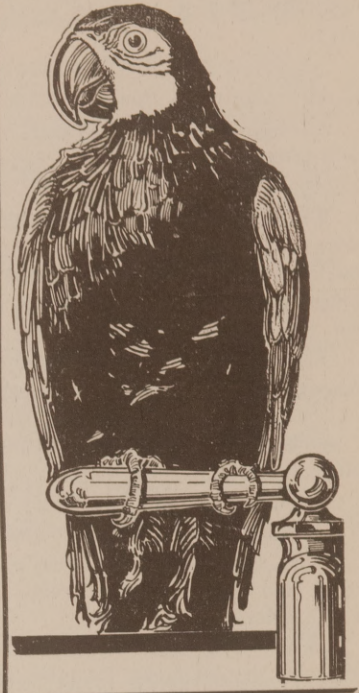
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DETROIT, MICH.

White, Engineer, Durham, N. C.; V. C. B. Blankenship, Mayor.

Alleville, S. C.—Alleville county voted \$450,000 of road bonds. Chairman County Commissioners.

Birmingham, Ala.—Jefferson County Board of Revenue will award contract April 28 for 21 road projects; sold \$2,000,000 of road bonds. The Chairman.

Decatur, Ga.—DeKalb county, L. T. Nash, Commissioner, will receive bids until April 22 for road construction; 17,493 cubic yards grading; 32,380 square yards paving; gutters, curbs, etc. E. V. Camp, Engineer, P. O. Box 421, Atlanta, Ga.

St. George, S. C.—Dorchester county will invite bids for constructing 21 miles of roadway; recently voted \$340,000 of road and bridge bonds. J. Roy Pennell, State Highway Commissioner, Columbia, S. C. Chairman County Commissioners.

Talbotton, Ga.—Talbot county voted \$50,000 of road bonds. Chairman County Commissioners.

York, S. C.—Bullock's Creek and Broad River Townships may vote on issuance of road bonds. Chairman County Commissioners.

Philadelphia, Miss.—Three beats of Neshoba county voted \$150,000 of road bonds. Chairman County Commissioners.

Winder, Ga.—Bids are invited until April 12 by Barrow county, H. G. Hill, Ordinary, for constructing 6.842 miles of road between the Jackson county line and Walton county line; 17,756.4 cubic yards topsoil; 29,281 cubic yards excavation; 1,762.5 lineal feet of 15 to 18-inch pipe; 4,118 pounds reinforcing steel. T. P. Wright, Project Engineer, 406 Walton Bldg., Atlanta, Ga.

Barnwell, S. C.—Bonds amounting to \$110,000 authorized for sewerage, paving and waterwork extension work; P. M. Buckingham, O. W. Harley and Edgar A. Brown, Commissioners of Public Works.

Orangeburg, S. C.—Later in month city will invite bids for constructing about ten miles of sidewalks. City Engineer Hawes.

Perry, Fla.—City will vote on issuance of \$25,000 of paving bonds. Total of \$150,000 will be available for paving. The Mayor.

Union, S. C.—City will vote on issuance of \$200,000 street improvement bonds for waterworks extensions. The Mayor.

### Bank and Office.

Ashland, Ky.—Ashland National Bank; erect 10-story building.

Alexandria, La.—Alexandria Bank & Trust Co., J. E. McAdams, organized by Citizens' Loan & Investment Co.; expend \$10,000 to remodel building.

Mansfield, La.—American National Bank, Walter M. Robertson, Prest.; erect building.

New Orleans, La.—Gretna Exchange & Savings Bank, Jules G. Fisher, Prest.; erect \$30,000 building; 35 x 67 ft.; pressed brick; Indiana limestone; burglar-proof vault; marble and mahogany fixtures; Sam Stone, Jr., Archt.

Aulander, N. C.—Farmers Bank; reported to erect building.

Salisbury, N. C.—First National Bank, H. P. Brandt, Cashr.; erect \$65,000 building; brick; tile floor; steam heat; A. C. Bosson, Archt., 680 5th Ave., New York.

Wallace, N. C.—Farmers' Bank & Trust Co.; erect \$20,000 to \$25,000 bank building; 2 stories; brick; tin roof; possibly tile floors.

Elk City, Okla.—Farmers' State Bank, care Mr. Hocker; erect bank building; 1 story and part basement; 50 x 70 ft.; brick, stone and reinforced concrete; fireproof; gravel roof; Hawk & Parr, Archts., Security Bldg., Oklahoma City.

Oklahoma City, Okla.—Liberty National Bank; remodel building; 5 stories and basement; stone and brick; \$125,000; Monnot & Reid, Archts., 409 Empire Bldg.

St. Matthews, S. C.—Home Bank; remodel building for bank.

Maryville, Tenn.—First National Bank; erect \$175,000 bank and office building; 5 stories; reinforced concrete, brick and stone; composition roof; vacuum heating plant; H. Graf & Sons, Archts. and Engrs., Knoxville, Tenn.

Lawrenceville, Va.—First National Bank; remodel interior; brick; H. T. Barnham, Archt., Chamber of Commerce Bldg., Richmond.

Petersburg, Va.—Atlantic Coast Realty Co.; erect \$80,000 office building; 2 stories and basement; 50 x 114 ft.; reinforced concrete, brick; limestone and terra-cotta trim; F. A. Bishop, Archt., Terminal Bldg.

Millville, W. Va.—Standard Lime & Stone Co., J. W. Baker, Prest., Martinsburg, W. Va.; erect 2-story brick building; B. Evard Mepner, Archt., 34 N. Market St., Frederick, Md.

Greer, S. C.—Planters' Bank, H. B. Carlisle, Spartanburg, S. C., will enlarge and improve building.

Atlanta, Ga.—E. W. and Winter Alfriend have acquired Majestic Hotel building on long lease, with privilege of purchasing, and will convert into commercial and office building; may erect theater in rear; new leases may buy old lease, so that they can get possession of the property at once.

### Church Buildings.

Fairhope, Ala.—St. James (Episcopal) Mission has plans for proposed church and parish house. Address John P. Lowell, Senior Warden.

Atlanta, Ga.—A. M. E. church will erect one story; brick structure; \$40,000. The Pastor.

LaGrange, Ga.—Presbyterian Church will erect edifice previously noted; brick; limestone; slate roof; cost, \$60,000. Plans have been prepared by Architects Lockwood & Poundstone, 600 Austell Bldg., Atlanta, Ga. The Pastor.

Savannah, Ga.—Church of the Blessed Sacrament will erect edifice; site 100 x 120; \$30,000. The Pastor.

Statesboro, Ga.—Presbyterian Church contemplating erection of edifice. The Pastor.

Valdosta, Ga.—Jewish Congregation has plans by Architect Lloyd Greer, Valdosta, for new synagogue; stucco on metal lath; slate roof. Construction work will be in charge of J. B. Elliot, Valdosta.

Warsaw, N. C.—Methodist Church, Rev. E. C. Glenn, Pastor, Faison; erect \$25,000 building; 40 x 56 ft.; brick; plaster board; rolling partitions; concrete floors; electric lights. Address A. P. Raiford.

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# CONTRACTORS' EQUIPMENT DEPARTMENT Southern Architect and Building News

VOL. XLIV

DALTON and ATLANTA, GA., APRIL, 1920

No. 6

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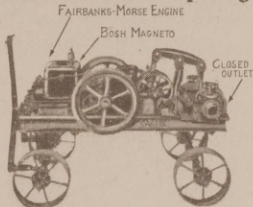
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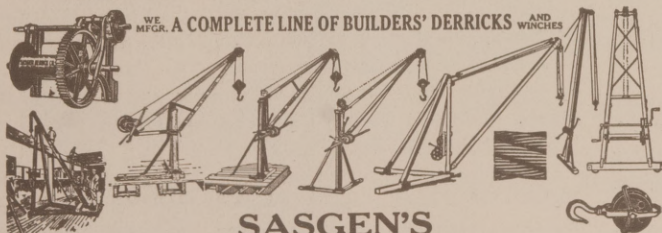
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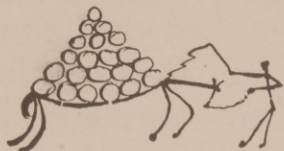
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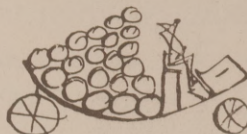
# Get the Idea of the Martin Method



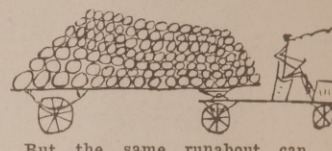
A horse cannot carry more than  $\frac{1}{4}$  ton



But can easily pull a ton.



A runabout will soon break down under a ton strain

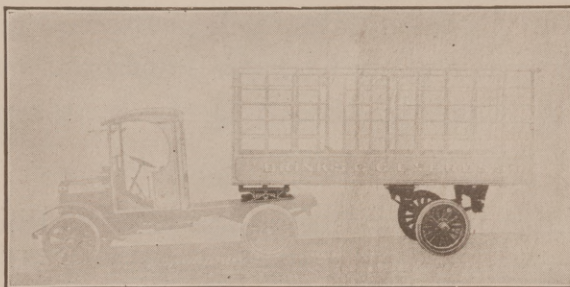


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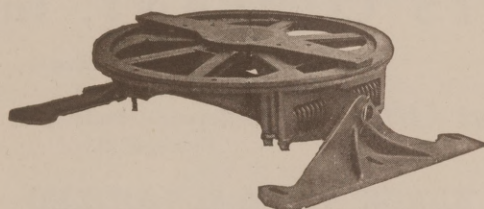


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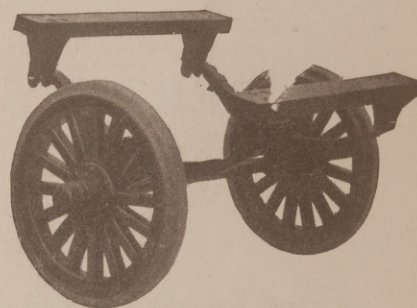
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Martin Rear End Assembly.

## Schools and Colleges.

Hattiesburg, Miss.—City, L. McAuley, Commr.; considering election on \$400,000 bonds; erect schools, etc.

Elon College, N. C.—Elon College Trustees; erect chemical laboratory; fraternity-house for Kappa Sigma Mu and Sigma Phi Beta.

Franklinton, N. C.—School Trustees, A. H. Vann, Chrmn.; erect \$100,000 building.

Jackson, Ga.—Board of Education; remodel and erect 4-room addition to high school; install heating plant; \$15,000 to \$20,000.

Okay, Ark.—School Board; erect \$25,000 school; bonds voted.

Wisner, La.—Board of Education, Jno. L. McDuff, Supt.; bids until April 15; erect \$40,000 high school; 2 stories; brick; 6 classrooms and auditorium; plans and specifications at office Edw. F. Neild, Archt., Shreveport.

Memphis, Tenn.—Board of Education, G. W. Garner, Secy.; bids until April 12 to erect addition to Lauderdale school and Cummings school; separate bids for plumbing, heating and electric wiring; Jones & Furbinger, Archts., Porter Bldg.

Bastrop, Tex.—Board of Education; erect \$30,000 high school; 2 stories; 58 x 60 ft.; brick and stucco; H. F. Kuehne, Archt., Littlefield Bldg., Austin.

Clarendon, Tex.—Texas College; erect addition wing to girls' hall; install central heating plant.

Charleston, S. C.—Lockwood, Greene & Co., Atlanta, Ga., will prepare plans for academic buildings, dormitories, etc.,

to be constructed by State Building Commission; \$600,000 to be expended.

LaFayette, Ala.—Citizens planning erection of High School building; bond election asked. The Mayor.

Lake, Miss.—Brick school house with composition roof will be erected by A. Wilkins, bids being received about April 15th. P. J. Krouse, Architect, Meridian, Miss.

Liberty, S. C.—Liberty School Trustees will erect building. (Recently voted \$31,000 of bonds.

Milledgeville, Ga.—Trustees of the Georgia Military College planning erection of new building. The President.

New Smyrna, Fla.—Trustees of New Smyrna Special Tax School District planning enlargement of present building.

Tampa, Fla.—Catholic congregation at Ybor City (suburb of Tampa) will erect \$80,000 school building; three stories; 55 x 130 feet; reinforced concrete. The Pastor.

Decatur, Ga.—City will vote on issuance of \$125,000 of bonds, of which \$100,000 will be for erecting high school building. The Mayor.

Duluth, Ga.—Election called for March 27 on issuance of \$10,000 of school bonds was postponed; date will be announced later. Heard Summerour, Secretary, School Board.

Kirkwood, Ga.—City will vote May 1 on issuance of \$55,000 of school bonds. The Mayor.

## Public Buildings.

Clarksdale, Miss.—New \$125,000 clubhouse, golf course and residential park. T. L. Moreau, 140 S. Dearborn St.,

Chicago, Ill., Landscape Architect; Wm. B. Langford, Golf Course Architect, Clarksdale.

Fort Pierce, Fla.—Over \$3,500 has been subscribed to fund for Woman's Club building. Mrs. Edgar Lewis and others.

Houston, Tex.—Carpenters Union, H. S. Smith, Prest.; erect \$120,000 office building; stores, first floor; carpenters' hall, top floor; 50 x 100 ft.; concrete; heating and lighting plant in basement; Finger & Cato, Archts.

Charleston, W. Va.—Scottish Rite Masons, W. T. Eisen-smith, Secy.; remodel building; raise stage in rear, etc.; H. Rus Warne, Archt.

Hattiesburg, Miss.—City, L. McAuley, Commr.; considering election on \$400,000 bonds; erect city hall, negro school, school for white children, etc.; F. B. Woodley, Supt. of Schools.

Dalhart, Tex.—Dallam County Commrs.; bids until April 12 to erect \$200,000 courthouse; Mann & Gerow, Archts., Hutchinson, Kans.; H. A. Noble, Structural Engr., 411 Reliance Bldg., Kansas City, Mo.

Enid, Okla.—Erect \$200,000 auditorium; 3 stories and basement; 128 x 230 ft.; brick, stone and reinforced concrete; fireproof; Layton, Smith & Forsyth, Archts., Southwest Natl. Bank, Oklahoma City.

Muskogee, Okla.—City; votes April 6 on \$275,000 bonds to erect \$150,000 hospital, \$100,000 grandstand and athletic park, \$25,000 to complete Honor Heights Park. Address The Mayor.

Belton, Tex.—City Council; vote April 6 on \$25,000 bonds to erect fire stations.

Wichita Falls, Tex.—Wichita County, W. W. Murphy, Auditor; bids until April 12; addition to jail; 8 tool-proof cells, etc.; plans and specifications on file with Mr. Murphy.

Birmingham, Ala.—City voted \$500,000 of auditorium bonds and will erect auditorium previously mentioned. The Mayor.

Athens, Ga.—Building committee of General Hospital, J. L. McLeroy, Chairman, invites proposals for erecting fire-proof building; plans and specifications may be had from Mr. McLeroy, by depositing check for \$25, to guarantee return of plans.

Columbia, S. C.—Architects Lafaye & Lafaye have prepared plans for nurses' home for Columbia Hospital, previously noted; brick; four stories; chemical laboratory, study-rooms, sleeping porches, etc.

Gaffney, S. C.—Dr. R. T. Ferguson will erect \$50,000 brick hospital, tile roof; terrazzo and oak floors; interior tile; hot-water heat; electric elevators; city lighting. Bids will be received in about 60 days. C. M. Robinson, Architect, Times-Dispatch Bldg., Richmond, Va. Address Owner.

Apalachicola, Fla.—Treasury Dept., Jas. A. Wetmore, Act. Supervising Archt., Washington, D. C.; erect postoffice and custom-house; 45 x 60 ft.; 32 ft. high; 2½ stories; R. V. Farnworth & Co. New Orleans, lowest bidders at \$96,923 for limestone construction.

Front Royal, Va.—Treasury Dept., Jas. A. Wetmore, Act. Supervising Archt., Washington, D. C.; erect \$41,800 post-office.

Tuscaloosa, Ala.—Board of Commrs., D. B. Robertson, Prest.; vote April 19 on \$50,000 hospital bonds. (Lately noted.)

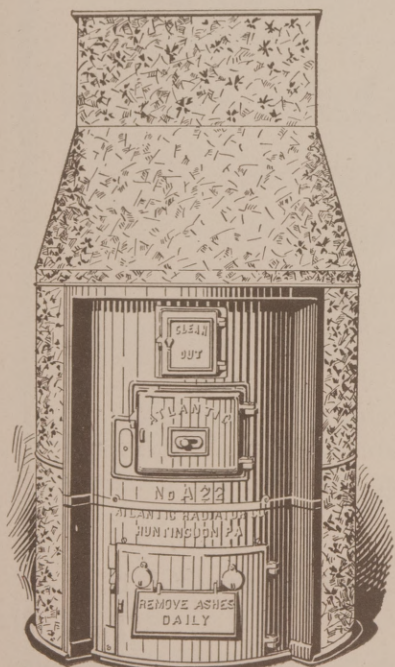
Abbeville, Ala.—Wilcox county grand jury recommends erection of courthouses in various militia districts of the county. Chairman County Commisisoners.

Orangeburg, S. C.—Jail commission planning to expend \$40,000 to \$50,000 on remodeling present jail structure. William C. Wolfe.

Athens, Ala.—Athens Hotel Co., planning erection new building; four stories; lobby and two store rooms on ground floor. Bem Price, Birmingham, Architect.

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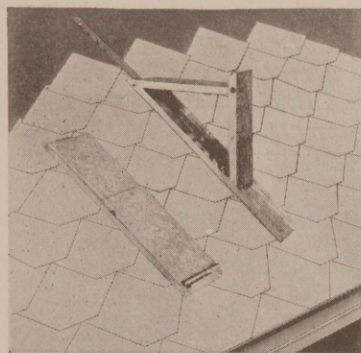
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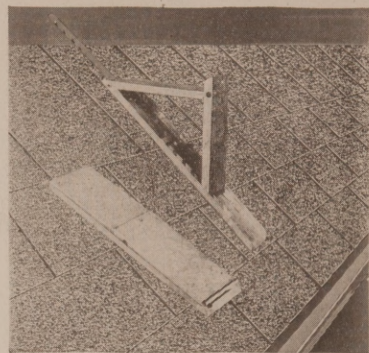
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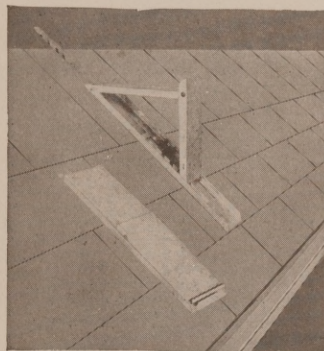
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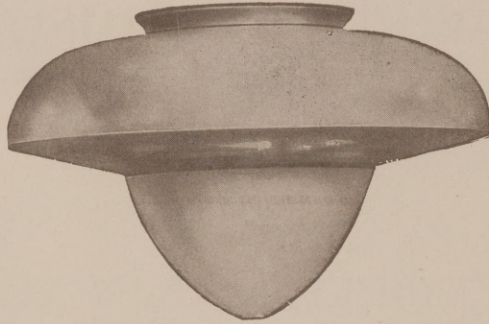
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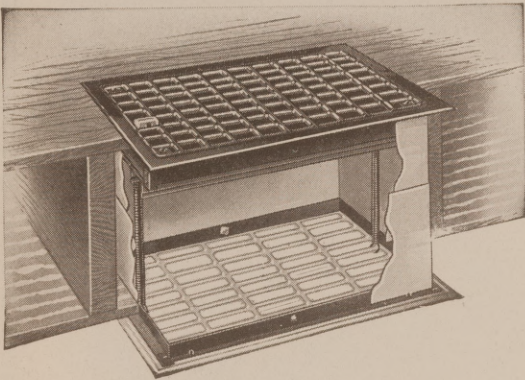
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Think what this feature means in connection with urinal stalls and other surfaces used for sanitary purposes which are exposed to constant moisture!

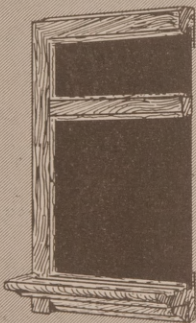
The Structural Service Bureau of Philadelphia, in co-operation with the Slate Industry, is preparing a valuable reference series on Structural Slate for Architects and Constructionists. Chapter I is now ready for distribution.



Mailed upon request.

**THE STRUCTURAL SLATE CO.**  
**PEN ARGYL** **PENNSYLVANIA**

## Natural Slate Blackboards



### *Perfect Jointing To Fit Exact Spaces*

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

Our expert "Jointers" apply the most painstaking care to this exacting work.

Every job must be *perfectly* true and smooth to conform to our rigid inspection at the mills.

We offer you the active cooperation of thirty-five quarries, mills and our Service Organization.

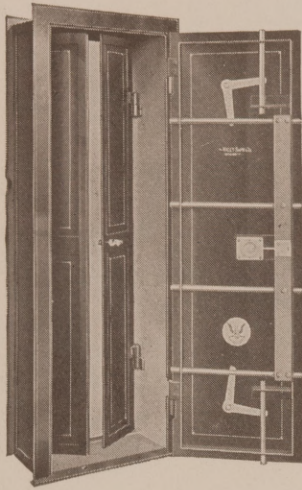
Send your requirements to us for an estimate.

Service Department

**Natural Slate Blackboard Company**  
*Representing Thirty-five Quarries and Companies*  
**Headquarters: PEN ARGYL, PENNSYLVANIA**  
*Mills at Slatington, Wind Gap, Pen Argyl and Bangor.*

## "Absolutely Satisfactory"

# The Hall's Safe Company



No. 1AA Fireproof Vault Door.

Wall Opening

79 High

32 Wide

20 Deep

P. O. BOX 846.



CINCINNATI, OHIO

SALESROOM: NEW YORK, N. Y., The Walker Safe Co., Inc., 388 Broadway.

MANUFACTURERS OF

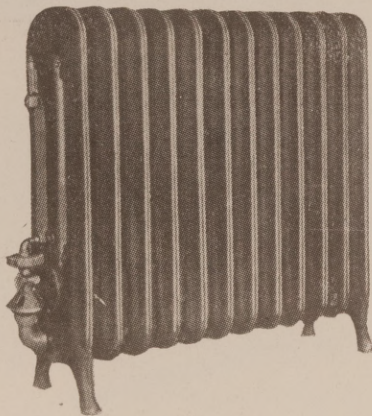
**Vault Fronts**      **Vault Linings**      **Grills and Gates**  
**Omnibuses**      **Chests**      **Deposit Boxes**  
**Filing Devices**      **Wall Safes**      **Tabernacles**  
**Fire Proof Safes—Burglar Proof Safes—Manganese**  
**Safes with Hall's Key-Combination or Time Locks.**  
**Finest Workmanship—Best Material and Finish**

## CO-OPERATIVE SERVICE.

This company maintains a department for co-operating with architects or clients in solving problems encountered in selecting and installing vaults.

Prices and estimates will be promptly furnished on application.

# Cuts Your Heating Cost



It Saves the Gas.

## Cabco Gas Steam Radiators

Are easy to install. They cost less than one-half of a Central Steam Heating Plant.

**Each Cabco Radiator a Separate and Complete Unit.**

If you have an old building, a hall or room not properly heated. If you are building a new home, apartment, store, duplex, church, garage, etc., you want to see the Cabco.

**Thousands in Use.**

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Manufactured by

**CABCO IRON WORKS, Inc.**

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**PITTSBURGH, PA.**

Dealers Write for Complete Information.

# Nashville Bridge Company

*Designers and Builders*

## Bridges and Structural Steel Work

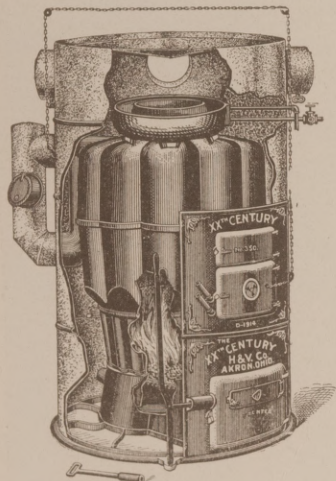
We helped build the Air Nitrate Plant at Muscle Shoals; Powder Plant at Old Hickory, Nashville; and Alcohol Plant at Collinwood.

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In the End, a XXth Century  
COSTS the LEAST

### THIS DEALER SAYS:

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"I have installed about 700 XXth Century Furnaces in the last seven years and I find they are all giving good service."

### XXTH CENTURY FURNACES

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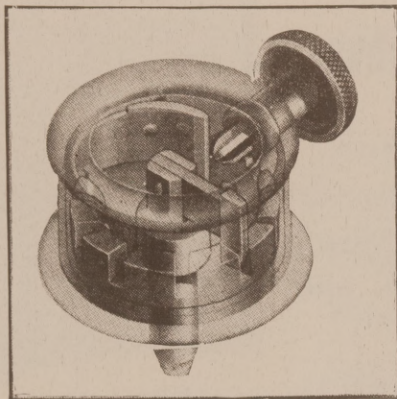
- Self filling water tank.
- Upright shaker lever.
- Indirect draft system that saves coal and carries off gas.
- Drop front grates.
- Made of highest grade, tested pig-iron throughout—no scraps.

*Write Department 1 for dealers terms.*

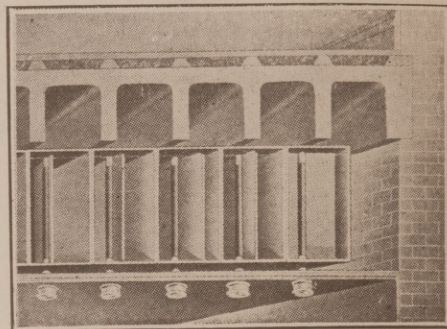
**XXth Century Heating & Ventilating Co.**  
**Akron, Ohio.**

## This Illustration Shows How the Perfecto Damper Regulator and Indicator

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



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



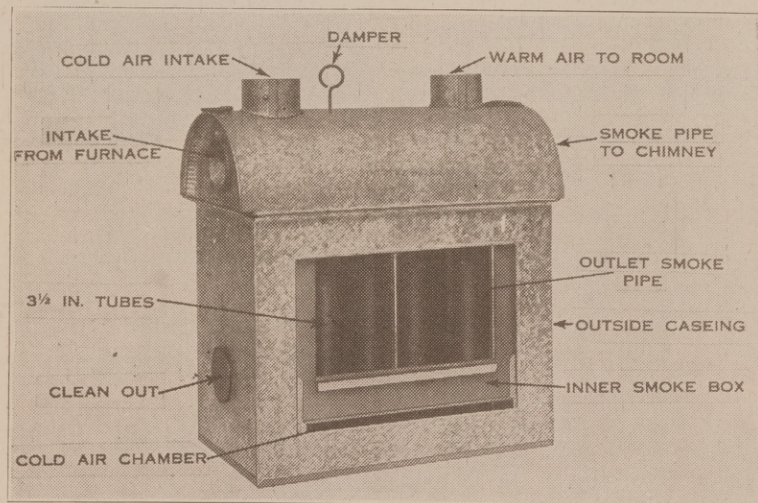
Send today for Descriptive Circular

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

Galvanized Iron Work for Heating and Ventilating Systems

## NO PIG IN A POKE IS HEAT FROM SMOKE

Forty to seventy-five per cent of the heat generated by the ordinary heating apparatus goes off up the chimney. The Sexton Air Circulating Radiators utilize all the heat that would ordinarily be wasted. In these days of high priced coal, if you can show your customer how you can increase the efficiency of his heating apparatus and insure his comfort at a moderate expense, you create a most desirable asset—a well pleased customer. One installed in a neighborhood sells another. The Sexton Money Saver Radiators are easily installed and are absolutely guaranteed. Write for circular and agency proposition.



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To be used on Range or Heating Stove for Single Room.—The best heat producing Radiators ever placed on the smoke pipe of a stove or range, will make as much heat and in some cases more than the stove to which it is attached, will not interfere with the draft of the stove, but will save heat that would otherwise be going out the chimney. Everyone is guaranteed to do what we claim for it. Made in two sizes.

**C. W. Sexton & Co.**

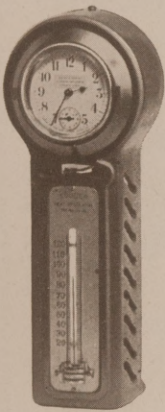
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## The Increasing Cost of Coal

is causing a greater demand everywhere for temperature control of heating systems. Saving coal is of especial interest now to home-owners and landlords.

You can meet this demand satisfactorily by installing the

### **SOUDER** For Perfect Heat Regulation **HEAT REGULATOR** **Auto-Wind** **Auto-Control**



The Souder not only saves coal, but time and labor as well.

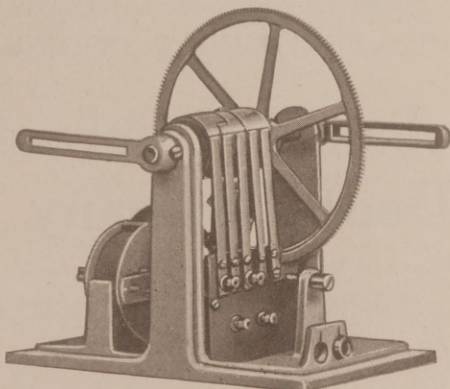
Fully automatic in operation. Does away with periodic winding and setting of clock, as on other regulators. Electrically driven motor — requires no winding or attention of any kind.

Do yourself and your customers a favor—install the Souder Regulator on both old and new work.

Write for details.

## **SOUDER-HORNSBY CO.**

Incorporated  
TAMAQUA, PA.



# 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.

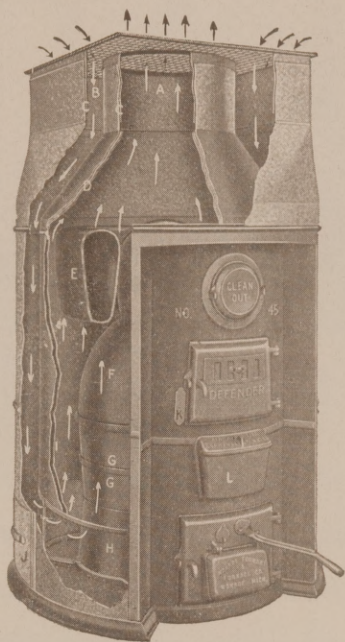
Hundreds of great fires could have been prevented — thus saving many precious lives and millions of dollars' worth of valuable property, had only SLATE been used in the beginning.

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





## 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.

## RELIANCE FIREPROOF DOORS and WINDOWS

ARE USED FOR

### High-Class Buildings

Reliance Fireproof Doors, Windows and Trim are selected because of their superiority in design, efficiency, material and workmanship.

The facilities of the Plant and organization of the company are such that architects and owners can be assured that all contracts will be executed within the allotted time and that every attention to detail necessary for the satisfactory completion of the work will be promptly accorded.

Plans and specifications sent for the purpose of estimating will be promptly returned at this company's expense, and if architects desire, details will be submitted showing most practical and economical methods of securing best results under special conditions.

WE SPECIALIZE IN 16 GAUGE  
BRONZE-COVERED DOORS

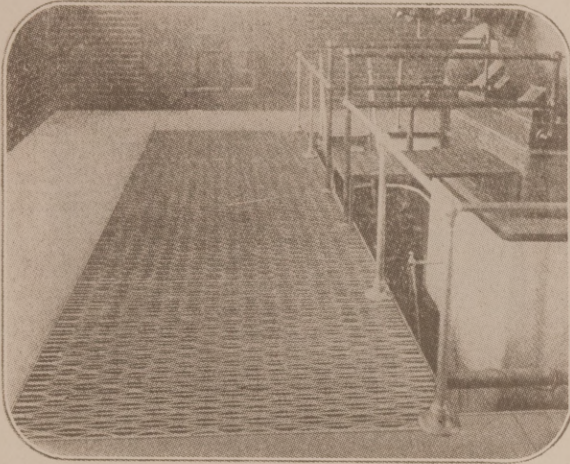
**Reliance Fireproof  
Door Company**

West and Milton Sts. & Greenpoint Ave.  
BROOKLYN, N. Y.

Represented in all the Principal Cities

# IRVING SUBWAY

TRADE  
(PATENTED) MARK  
THE FIREPROOF VENTILATING FLOORING



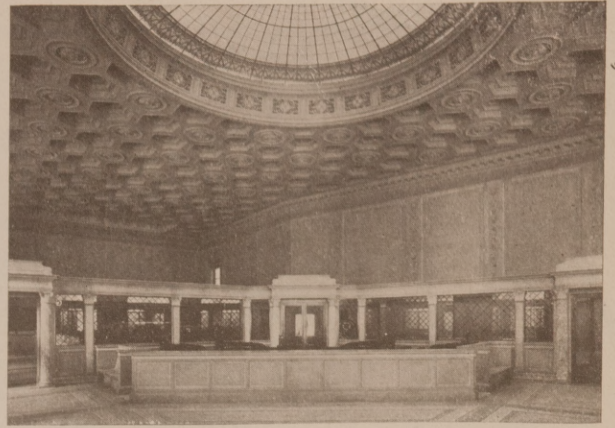
**Maximum Strength**  
**Maximum Lighting**  
**Maximum Ventilation**  
**Maximum Safety**  
**Minimum Weight**

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.



Interior of J. P. Morgan & Co., 23 Wall Street, New York  
 Meyer, Strong & Jones, Engineers  
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**Screen Reflectors**  
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## I. P. FRINK, Inc.

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CONTROLS LIGHTNING  
None Genuine Without this Trade-Mark

## LIGHTNING RODS

**That Are 100% Protection  
The Best By Test**

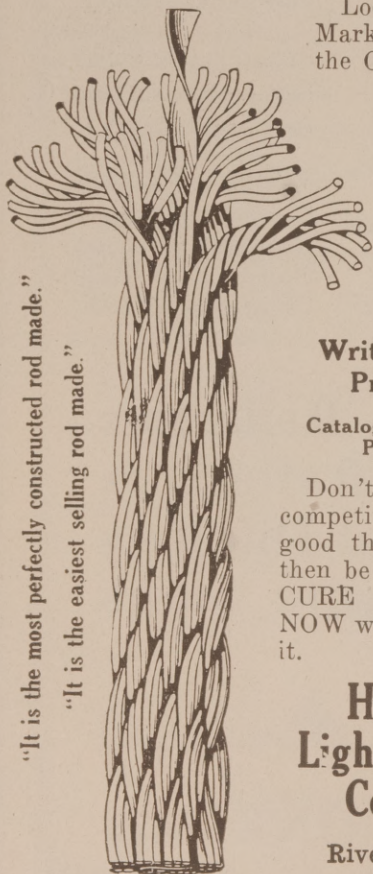
CARPENTERS and BUILDERS make large PROFITS selling our ALL FEATURE CABLE made of 36 strands of PURE SOFT COPPER with AUGER SHAPE PURE SOFT COPPER STRIP in center, which keeps the ground rod moist at all times. That's not all, it has all the wires on the outside exposed to the surface.

COVERING a period of 20 YEARS there has been over 120,000 buildings equipped with this SYSTEM without one single loss.

Your CLIENTS rely on your good judgment when they build. Lightning Protection is indispensable to their COMFORT. When you supply them with the HAWKEYE SYSTEM it means GUARANTEED PROTECTION for a Lifetime.

Don't be satisfied with just selling rods. Sell ABSOLUTE LIGHTNING PROTECTION. It costs no more than the ordinary.

Look for the Trade Mark on the Spool of the ORIGINAL ALL FEATURE LIGHTNING ROD. It is a sign of a MOIST GROUND ROD.



"It is the most perfectly constructed rod made."  
"It is the easiest selling rod made."

**Write for Our  
Proposition**

Catalog, Samples and  
Prices Free

Don't wait until your competitor sees it is a good thing. You will then be too late. SECURE the AGENCY NOW while you can get it.

**Hawkeye  
Lightning Rod  
Company**

Riverside, Iowa

## A Concrete Block House

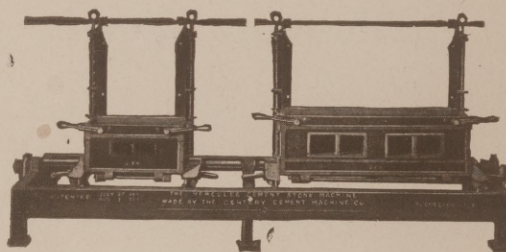
is not complete as to durability and appearance, unless the trimming is made of concrete. Artificial stone also makes ideal trimming for brick and stucco buildings. Stucco should be used on concrete blocks on account of color, low absorption and equal expansion.



All necessary blocks and trimming stone can be made on the

## HERCULES MACHINE

with any mineral facing desired.



## The HERCULES is

distinctive, elastic, accurate and durable with both quality and production considered.

The equipment may be extended to meet increasing demands. Simply add new plates or forms to the original machine. Get away from the close competition by using a **HERCULES**, and make high grade work to be used above the foundation.

May we send you our catalogue?

You cannot afford to be without our CEMENT BAG CLEANER, if you use any quantity of cement. May we send you a descriptive circular giving the savings that can be accomplished, and a partial list of users?

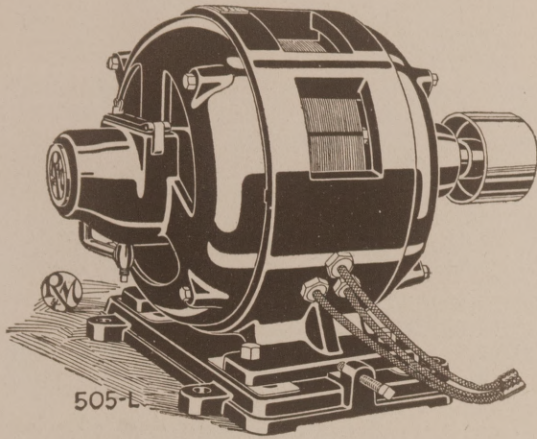
**Century Cement Machine Co.**

60 Brown's Race,

ROCHESTER, N. Y.

# BRYAN ELECTRIC CO.

58 EDGEWOOD AVENUE, ATLANTA, GA.



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

Estimates Furnished

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All kinds of new and used Electrical  
Machinery bought, sold and  
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ALL KINDS of ELECTRICAL WORK

MOTORS RENTED

Ivy 1788-1790

TELEPHONE YOUR WANTS

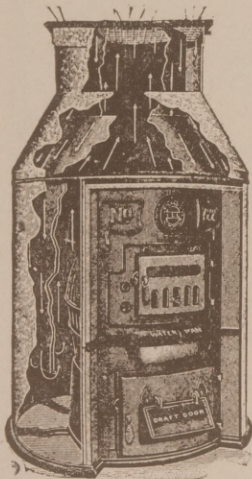
LOCAL AND LONG DISTANCE

## INCREASED SALES

When YOU Handle

## THE GREAT NORTHERN

The Perfected Pipeless Warm Air Heater



ALL CAST and ALL  
HEATING SURFACE

The high quality of THE GREAT NORTHERN Pipeless Warm Air Heater pleases users and increases sales. We meet all your demands for heaters. Our facilities are unequalled in the West. Our prices are the lowest.

Due to the materials used in the construction of THE GREAT NORTHERN Pipeless Warm Air Heater its heating efficiency is high. When you consider our ability promptly to supply your needs, you can see the advantage of an agency for THE GREAT NORTHERN Pipeless Warm Air Heater. Get complete information. We supply it to you.

WRITE TODAY FOR LITERATURE

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1522 Olive Street

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## MALLORY'S STANDARD SHUTTER WORKER

Opens and Closes the Shutters from the Inside,  
and Automatically Locks Them in Any Posi-  
tion Without Raising the Window

So simple that a child can operate it. No opening of the windows or dangerous leaning out to release an obstinate catch. A veritable labor saver.

Mallory Shutter Workers "first cost" is but little more than ordinary hinges and catches, and the labor of putting them on still less. Readily applied to old or new houses, whether frame, brick or stone; installation does not necessitate the tearing out of walls or the employment of an expert mechanic.

### STRONG AND DURABLE

Made of the most durable materials, carefully hand-fitted and finished in every part, thus insuring perfect and easy-working qualities and long wear.

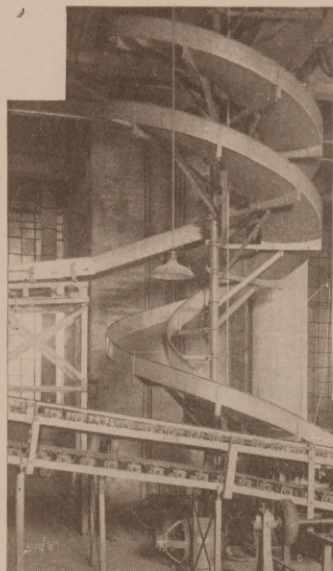
NOTE.—In ordering, be sure to state style of finish required and whether Workers are for frame or brick building.

MALLORY MANUFACTURING  
COMPANY

1700 Bloomfield Avenue  
FLEMINGTON, N. J.

Showing Handles on the  
Inside of Room





With Help Scarce  
AND  
Wages High  
NOW  
Is the Time  
when the need  
for our  
LABOR-**SAVING**  
SPIRAL CHUTES  
VERTICAL LIFTS  
AND  
MERCHANDISE  
CONVEYORS  
is imperative

We are  
glad to  
advise with  
architects or  
builders or  
direct with  
their clients  
and furnish

complete structural details and drawings to insure satisfactory results for the simplest or most elaborate requirements.

Through long experience we have learned how to combine every form of merchandise conveyor so as to obtain the most practical results.

When no standard form of conveyor is adequate, we design special machines.

When you want information on conveyors, write us. We can help you.

### The Haslett Spiral Chute Co.

Factory  
20th and Allegheny Ave.  
Philadelphia, Pa.

Southern Office  
253 Calvert Bldg.  
Baltimore, Md.

### THE ONLY SCREW HOLES IN THE WORLD



You drive the screw holes with a hammer in any material.  
The screw holes are made for wood screws or machine screws to fit all sizes of screws. The head is removed and you leave a permanent screw hole

### The Stine Screw Holes Co.

Manufacturers

WATERBURY, CONN., U. S. A.

DEPARTMENT 52

The Biggest  
Little Thing  
in the World

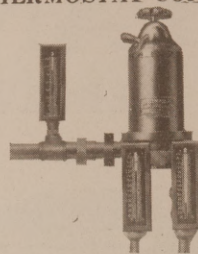
Some of the Reasons Why Screw Holes Will Be Bought and Used and Not Become Dead Stock for Anyone

- 1—They can be used without damage to receiving material.
- 2—They enable you to standardize to wood or machine screws in all material.
- 3—They are made of brass and will not rust under atmospheric or moisture conditions.
- 4—ECONOMY—They save more time value than the holes cost.
- 5—You get them for nothing and are paid for using them when you count time saved.
- 6—Screw holes have been needed ever since the first screw was used.
- 7—Special tools are NOT needed in using them in any material.
- 8—They can be used in any place a screw can be used.
- 9—By using screw holes, screws can be used in many places, and in many materials where it is impossible to use screws without them.
- 10—These are the only ready-made screw holes in the world.
- 11—No special screws are needed. These screw holes fit any wood screw or machine screw now in stock.
- 12—They make the neatest possible job in any material.
- 13—Every store where screws are sold must carry them in stock, because the line of screws is not complete without screw holes for them.
- 14—Every shop and factory where screws are used must also have these screw holes to fit the screws.
- 15—They are endorsed by all dealers in screws and by all users of screws.
- 16—Screw holes are entirely new and the world supply is yet to be furnished.
- 17—This is a progressive Old World of ours, and every active person in it must adopt all improved methods, and all new articles that will help him keep in the front line of progress.
- 18—Be among the first to stock up in screw holes if you are a dealer in screws.
- 19—Be among the first to install screw holes in your shop or factory, as you begin to save money soon as you use them.
- 20—In spite of the high cost of brass, screw holes are yet cheap.
- 21—We are letting the world know that screw holes can now be secured, by means of extensive advertising in all the principal Trade Journals that have the largest circulation among dealers in screw as well as users of screws.
- 22—Do not let your customer ask you for screw hole before you have them in stock. BE A LIVE WIRE.
- 23—They make everlasting holes in any material.
- 24—They mean "Plug-No-More" screw holes.
- 25—They are the result of Necessity being The Mother of Invention.
- 26—Anyone who can drive a nail can use screw holes.
- 27—Send for a sample and convince yourself.
- 28—Mechanics who see them say, "What do you think of that?"
- 29—In fact there are NO REASONS why screw holes should NOT be used.

Each of these reasons are enough to sell Screw Holes. There are many other reasons.

Write at once for our handsome Color Card showing screw holes in various materials which will be sent on request, together with samples and price list.

### LEONARD WATER MIXING VALVES THERMOSTAT CONTROL



"LEONARD" VALVES ARE THE ONLY WATER MIXING VALVES THAT PREDETERMINE TEMPERATURES BY DEGREES. THEY WILL REGULATE AND MAINTAIN TEMPERATURES AS CLOSE ON REDUCED FLOW AS ON FULL FLOW.

A WATER TEMPERATURE MIXING VALVE THAT IS CONTROLLED WITH A SOLID METAL THERMOSTAT CAN BE RELIED UPON TO PREDETERMINE AND MAINTAIN TEMPERATURES ACCURATELY AFTER YEARS OF SERVICE. THE "LEONARD" MIXING VALVE IS THAT KIND OF A VALVE.

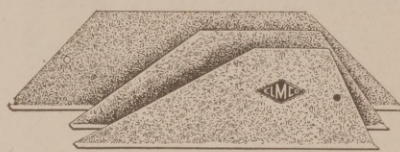
THEY ARE GUARANTEED FOR TWO YEARS. SPECIFY "LEONARD" VALVES AS YOUR CLIENTS ARE ENTITLED TO THE BEST. WRITE FOR BOOKLET.

New York Office  
50 Union Sq.

LEONARD-ROOKE CO.  
Providence, R. I.

## Mark Your Own Rafters Quickly and Accurately

ELMCO Handy Rafter Markers answer your need for a small building job on your farm or anywhere.



You don't need an expert to mark out your rafters. With a set of ELMCO markers your twelve year old

boy can mark out your rafters to fit.

### The ELMCO Handy Rafter Markers

(Patent Applied For)

Give you every angle and length you want for the ordinary small farm building. You only need a pencil and this set of markers to lay out your rafters the correct length—at any pitch you want. Saves you money—and no time wasted. Order a set of ELMCO Handy Rafter Markers for your Fall building job.



Only \$1.00 per Set sent parcel post paid.

E. F. ELMBERG CO., Mrfs.,  
BOX 15, PARKERSBURG, IOWA.

# Stop Wasting Your Blue Print Paper



## Pull-Measure-Tear

and a sheet of Blue Print Paper—*fresh, clean and of the desired length*—is ready for use from the

## DIETZGEN Economy Box

At the present cost of sensitized papers, this unequaled container effects a direct saving for you. It not only protects the paper from light and moisture, but eliminates the waste that results from soiling and uneven tearing when the paper is cut from the roll.

### Prevents Waste

as any length of paper can be drawn from the box, the desired length accurately measured by a spring tape attachment and quickly detached by means of a cutting edge.

Holds rolls of 50 yards or less, is substantially made of heavy sheet metal attractively finished with black lacquer, and can be fastened to wall or table.

Also adapted for Drawing and Tracing Papers, Tracing Cloth, Etc., in rolls not over 3¾ inches in diameter.

### Quotations on Request

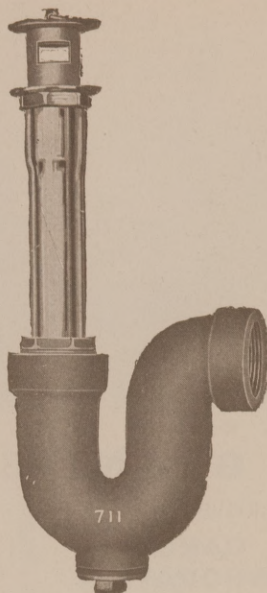
## EUGENE DIETZGEN CO.

### Branches:

Chicago      New Orleans      San Francisco  
New York      Pittsburgh

### Sales Offices:

Philadelphia      Washington



## “711”

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

## “711”

is a brief but sufficient way of

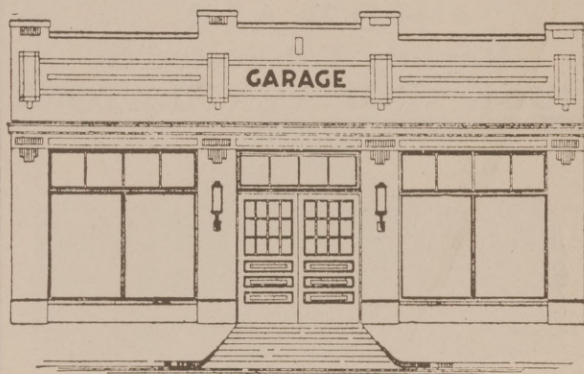
### BUILDING BIGGER BUSINESS

FOR BASINS, SINKS, TRAYS AND BATHS.

Write for prices.

## ESSEX FOUNDRY

Newark, N. J.



### 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.

Write for Catalog.

## George L. Mesker & Company

Complete Store Fronts      EVANSVILLE, INDIANA



## MT. AIRY GRANITE

QUARRIED EXCLUSIVELY BY

### THE NORTH CAROLINA GRANITE CORPORATION

MOUNT AIRY, N. C.

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10 E. 43rd Street New York City

**J. D. SARGENT GRANITE CO.**  
MOUNT AIRY, N. C.

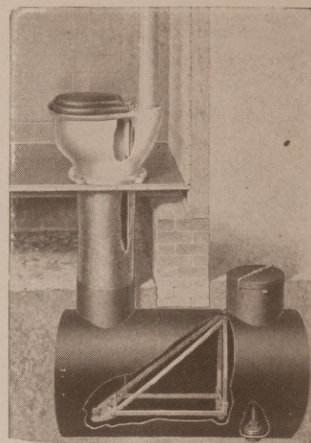
Will Quote on Finished Building and Monumental Work  
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is convenient, sanitary and beautiful. It is the equal of the modern flush closet of city homes.

### The Waterbury SANITARY SCAUSTIC CLOSET

affords modern closet convenience for homes, schools, factories, churches and all buildings where water and sewers are not available. Town and farm families are demanding the convenience, and comfort of indoor closets. The "Waterbury" so completely supplies this need that it surmounts all competition.



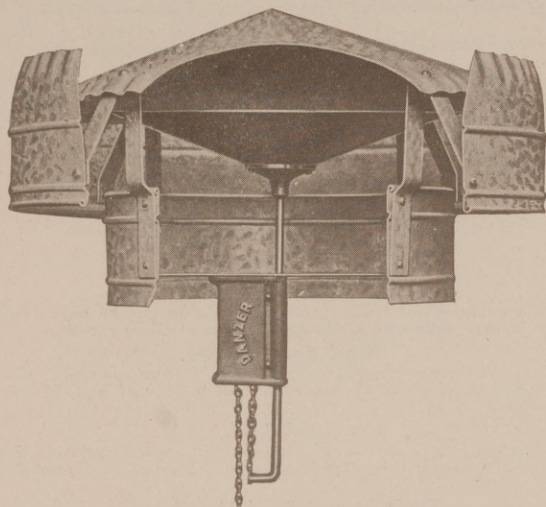
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Introduce this modern standard of closets in your community and you will uncover an active demand for hundreds of them. There's real profit in the "Waterbury" too. Retail price about \$80, freight equalized with Cincinnati.

Write us at once for information on exclusive agency offer.

**The Waterman-Waterbury Co.**  
Minneapolis, Minnesota

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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.

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## Wright Coal Chutes

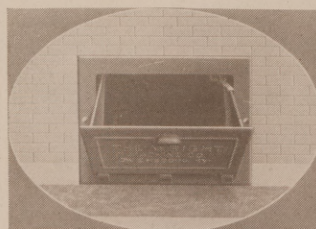


### Are Mechanically Right

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.

*If a user recommends  
a product, it's good.*

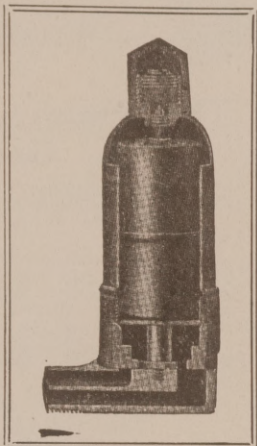
### ASK THE USER

The Russell Perfect Automatic Air Valve can be adjusted to any and all conditions. Made in all styles, bottom outlet, side outlet, lock shield and vacuum attachment.

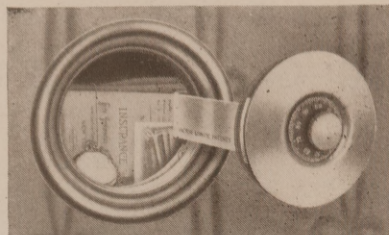
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DAY  
NECESSITY

ADAPTED  
FOR  
APARTMENT  
HOUSES

WE WILL BE GLAD TO SUBMIT DETAILS

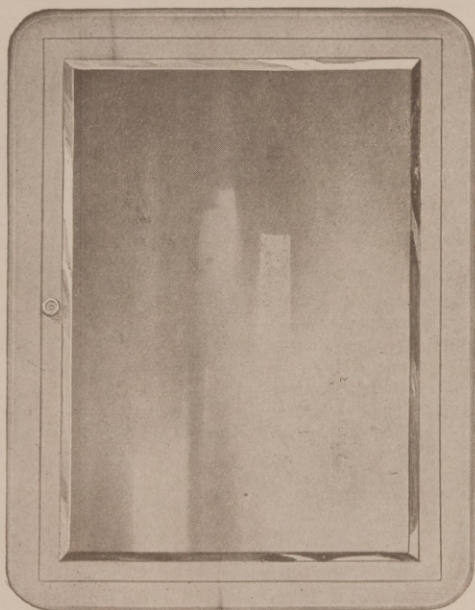
MANUFACTURED EXCLUSIVELY BY

**The Victor Safe & Lock Co.**

CINCINNATI, OHIO

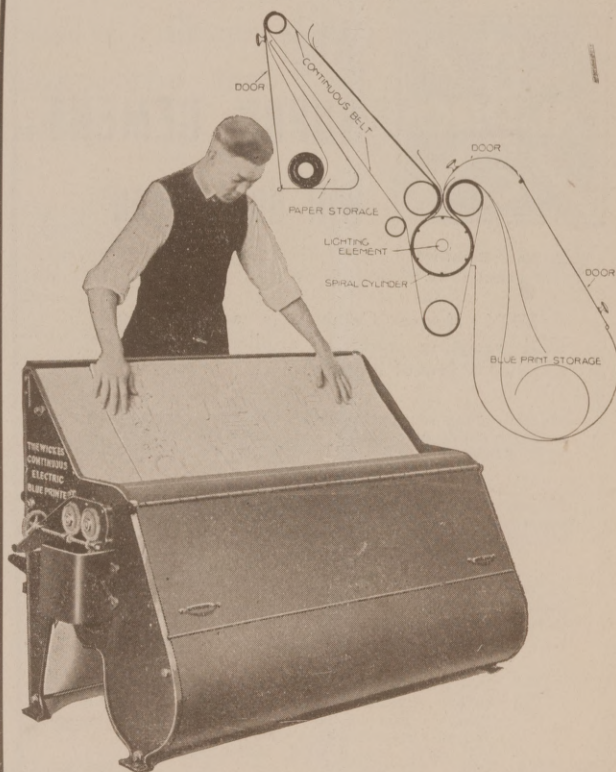
Also Manufacturers of Safes, Light and Heavy Vault  
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**"WHITE-STEEL" MEDICINE CABINETS**  
**"WHITE-STEEL" SANITARY FURNITURE CO.**  
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U. S. A.  
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**The Wickes**  
Continuous Electric. Sells  
half the price. Uses half  
the current of others

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MANUFACTURERS

### SALT GLAZED BRICK

of the Finest Quality.

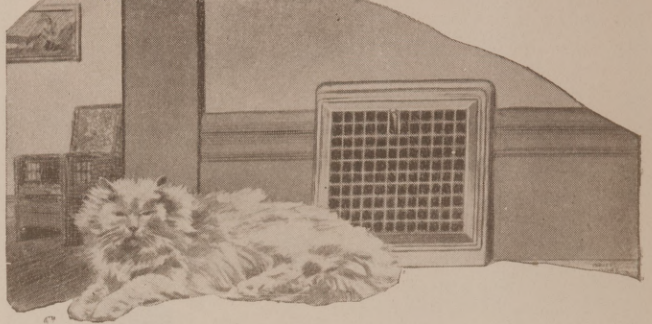
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## The Federal Clay Product Co.

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## 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 Columbia 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 Columbia Registers make a combination of which the heating contractor can be proud.

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Trade Mark Registered,  
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XXX Nupro Cement is a waterproof, acid resisting material applied hot. Here are just a few of its uses:

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Put your waterproofing problem up to our engineers. XXX Nupro Cement is just one of our products. We will recommend a material that will solve your present difficulties.

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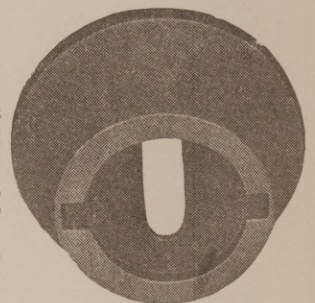
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## Advantages of Towe's Universal Concrete Insert

15 Good Reasons  
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3. Takes either head or nut end of each, impossible with any other insert.
4. All sizes of band iron can be used without twisting the iron.
5. Pipe can be used in place of round iron if so desired.
6. 1 1/4" of up and down adjustment.
7. Adjustment of 1 1/2" to all points of compass.
8. Only insert made which has up and down and side adjustment complete in itself.
9. Easy to install, drive two nails in form and already for concrete.



### PATENT APPLIED FOR

10. Locked in all positions.
11. Rod can be used with hook instead of nut or head.
12. Absolutely fool proof, cannot be misplaced in any way due to carelessness on part of mechanic.
13. Breaking load. For Insert over 3 ton. Traveler 2 1/2 ton.
14. Labor Saver.
15. With 2 1/2" St'd washer can use toggles, hooks or bolts.

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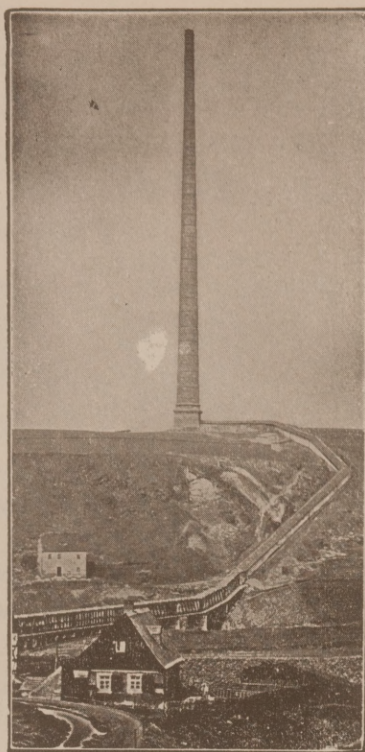
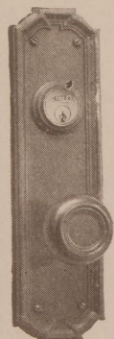
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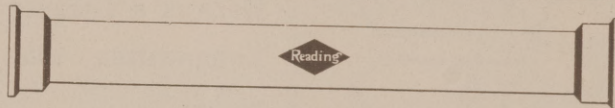
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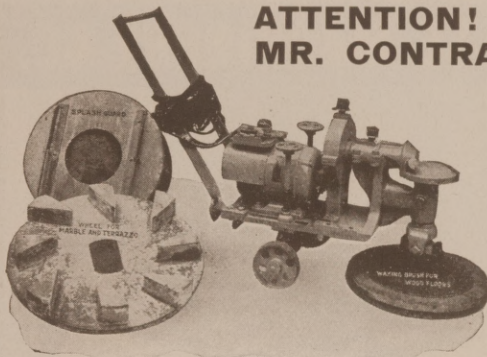
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Send for our 180-page fully illustrated catalog which contains a vast amount of information on sheet metal products. The contractor's best reference book.

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**BECAUSE**—It will pay for itself within three months and last a lifetime.

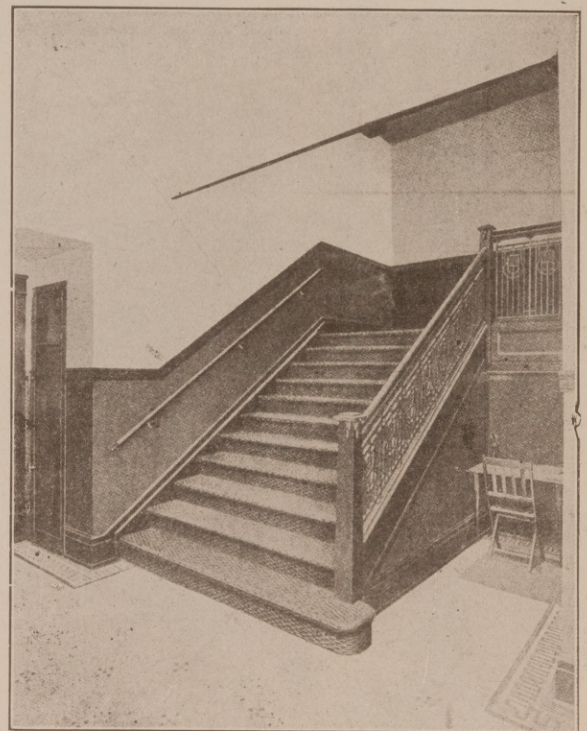
**BECAUSE**—It is the only machine with an adjustable splash-guard eliminating the splash nuisance and the danger of striking the wheel against the base or knocking a corner off.

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This means money to YOU and service to your customers.

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Manufactured in Four Different Types Exclusively by  
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precludes all danger of scalding.

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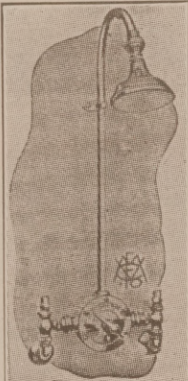


Fig. C 30



### Light & Air

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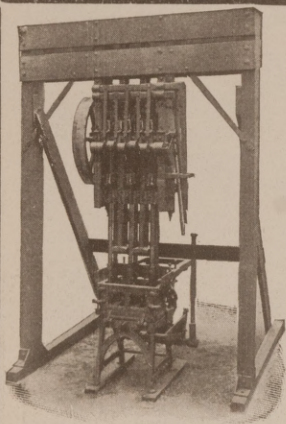
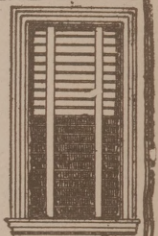
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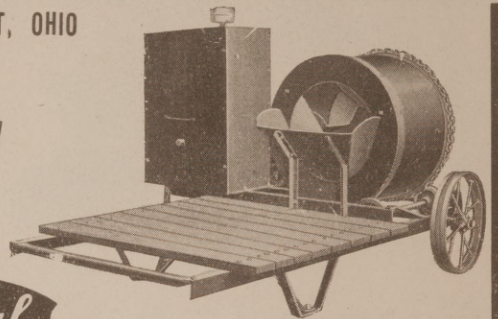
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What is best in the shop and the mine:

What a wonderful heater—what an all around beater:  
Is it any wonder the world says that they are fine.

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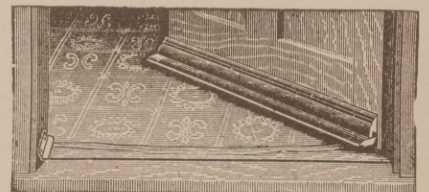
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**Airtight Automatic**

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This attachment automatically shuts the strip tight against the sill



Patented

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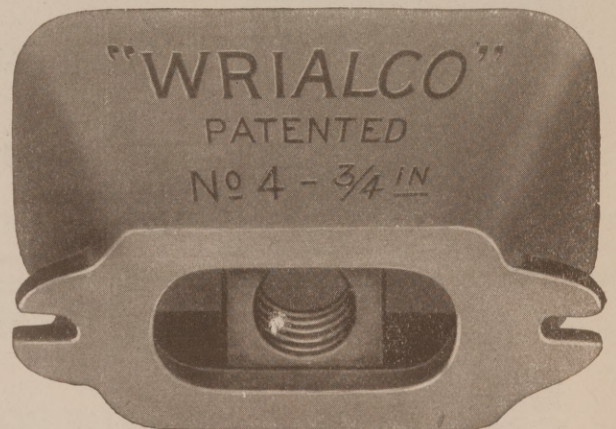
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A device for the support of anchorage of hangers for Automatic Sprinklers, Shafting and General Piping Work in buildings of concrete construction. Can be made rigid at any point of adjustment desired.

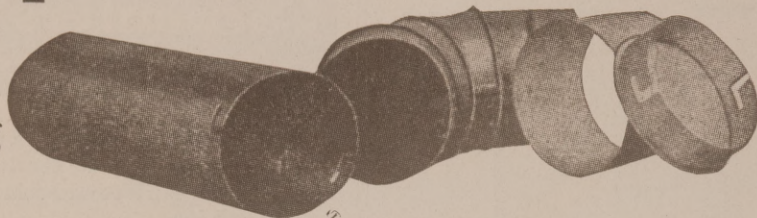
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Safety Interlocking Stove Pipe Company

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INCORPORATED 1888

Bedford, Indiana

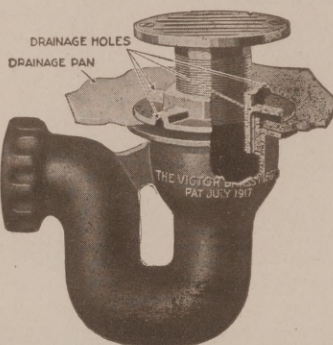
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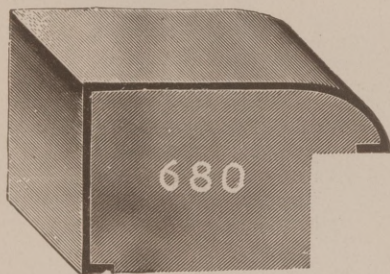
Victor traps are designed so compactly as to avoid cutting away construction work to install them.

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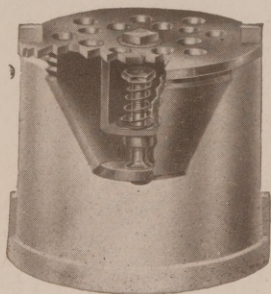
Simple in construction, but mighty efficient—no  
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The illustration above is a half-tone of the new green Ambler Asbestos Century Shingles and, so, shows exactly their color and texture and just how they lie on the roof, in one of the three methods of application. Ambler Shingles are one of the

### AMBLER ASBESTOS BUILDING PRODUCTS

**Ambler Asbestos Shingles** (Century Brand). Made in 3 styles, 4 permanent colors—Newport gray, natural slate, red and green. Lie snug to the roof, forming water-tight and fire-tight covering.

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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.

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LIGHT—AIR NO GLARE STEEL FRAME CLOTH VANES

Keeps Out Heat—For Skylights, Windows and Sleeping Porches—

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### Acid Proof

Prevents wood from expanding and contracting through absorption of moisture

Half the cost of oil paints

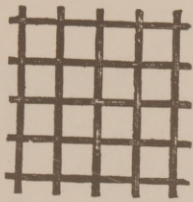
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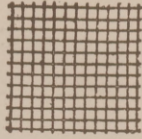
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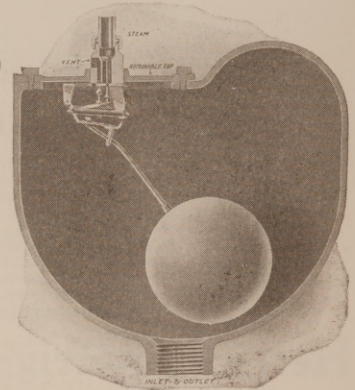
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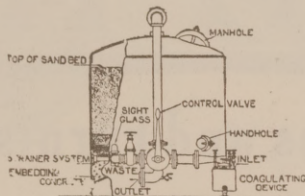
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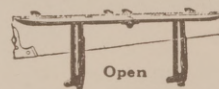
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14 in. jaw, wgt. 2 lbs.



\$2.25 Prepaid



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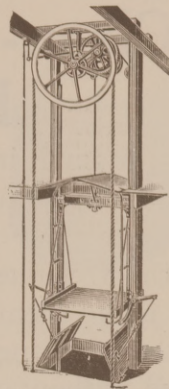
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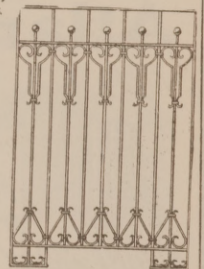
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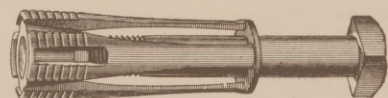
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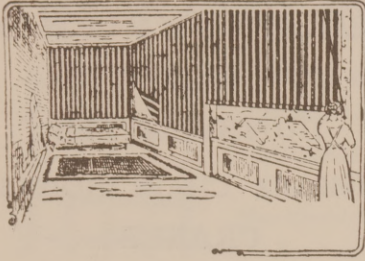
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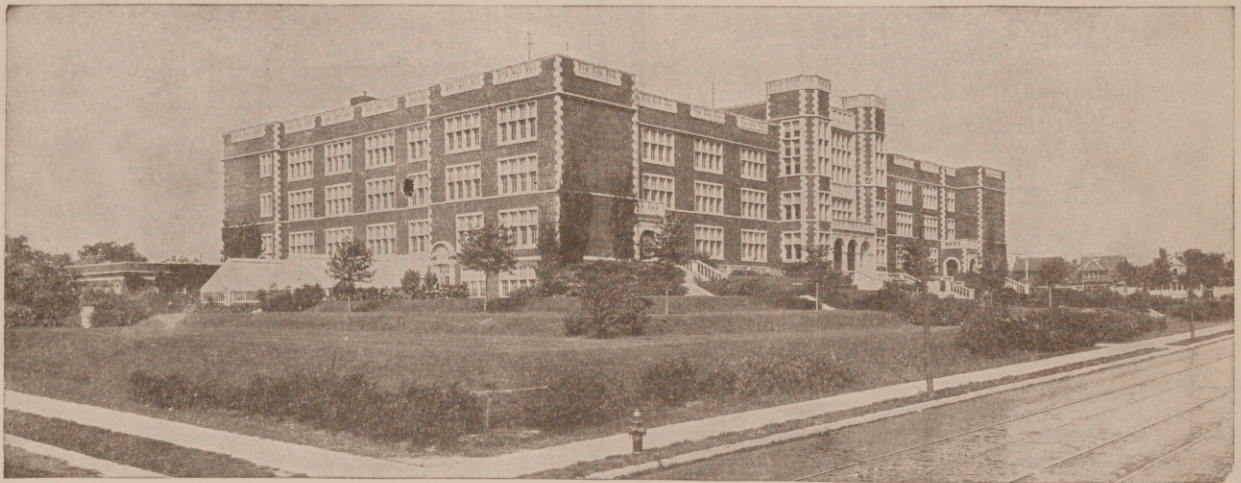
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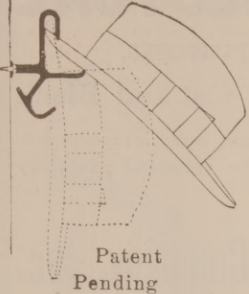
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Have your buildings finished right up to date by installing Universal Apparel Hooks. Look at the picture. It explains the clever principle.

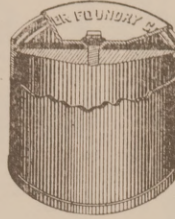
These hooks can now be had in large quantities at reduced prices. Tell us how many you need and we will try to satisfy you.

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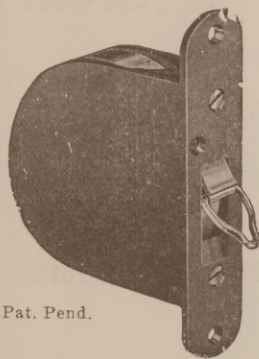
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For use in all classes of new work. Box frames unnecessary. Mortise cut at mill reduces cost of installing. Counterbalance sashes perfectly unaffected by atmospheric conditions. Cheapest method for modernizing old window, as alterations in sashes and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

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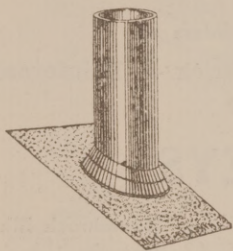
## LOOKOUT PARAMOUNT MORTAR COLORS "WILL NEVER FADE"

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Four colors—Chocolate, Buff, Black, Red.

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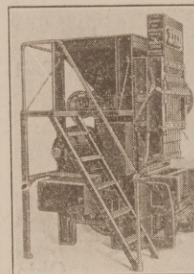


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Heavy lead  
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They never  
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### All-Automatic Power Concrete Stone Machine



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

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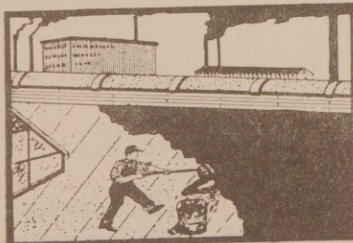
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80 STOCK SHAPES IN THREE DIFFERENT TEXTURES.  
Write for samples and cuts of artistic fireplaces.

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It toughens and callouses with age. It will not dry out, peel or crack. It is a scientific combination of pure asbestos, gums, waterproof lacquer, and non-volatile oils. It is unaffected by the severest cold or most intense heat—fireproof and rotproof. Contractors can make big profits coating leaky roofs with Gumlastic roof coating. A gallon covers from 50 to 75 square feet. It is a perfect coating for burlap, canvas, tar and gravel, concrete, felt, iron, tin and steel roofs. You can save your customers money by coating their roofs with Gumlastic. Write us today for complete information.

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

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

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**ECONOMY**  
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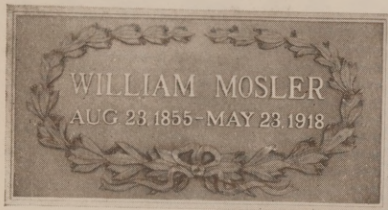
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Engineers and Builders of

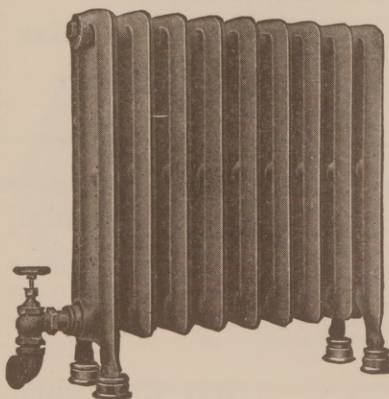
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A sample will be sent free upon request. Sold by jobbers.

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*From Manufacturers Direct. No Agents' Profits.*

The greatest of all modern conveniences. Rids suburban and farm life of one of the greatest drawbacks. The small town or farm home can now enjoy every advantage of the city dwellers and at no trouble. This convenience is a necessity for health, comfort and safety.

**No Plumbing; No Holes Cut in Floor;  
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Sanitary and Odorless.**

THE COATES INSIDE CHEMICAL CLOSET is approved by the highest medical authorities. It not only adds to comfort and convenience but to health as well. No home complete without one. Mail us your order today. **\$17.50.**

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Winter is coming. Will you go another season shoveling snow and freezing like you did last winter, or will you secure the COATES INSIDE CHEMICAL CLOSET and enjoy city comfort the year round? You owe it to your family to do away with the old outdoor closet. You can buy the COATES on a positive money-back guarantee, if not just as represented. Cost less than 5c a week to operate.

**No Agents—Sold Direct  
Full Value for Your Money  
and a Square Deal Always**

**Now  
\$17.50  
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\$22.50**

THE COATES INSIDE CHEMICAL CLOSET is strongly and handsomely made. It is scientifically constructed—no odors—no trouble. Finished in pure snow white enamel and can be readily installed in 30 minutes by any one in any place in the house. A toilet you can show your friends and be proud of. Order today on our positive guarantee. Shipped anywhere, on receipt of above price.

**Special Discount on 12 or  
More**

*Manufactured by*

**COATES SANITARY MANUFACTURING CO.**

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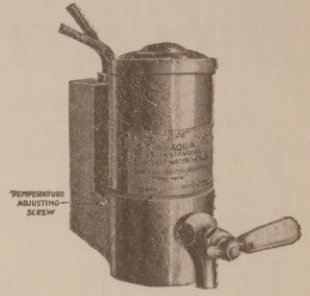


## INTRODUCING MYSELF

and you should know why. I have been telling you the past two months how my confidence in this device was the cause of investing my all—and its shameful past revealed itself too late. It is a fact that its five years existence, in the hands of many who lacked honesty, as well as every necessary essential for success, was an injustice to the electrical era. I respect those trade journal managers who told me that many past companies of electrical water heaters, including this one—were immoral—advertising "A Lamp Socket Device"—"Oceans of boiling water free"—"Send money in advance"—etc. They were right—so I told them, and I'll tell the whole world—"There are my five cards on the table—Product—Principles—Integrity—Good Will—Reputation: Please investigate"—and they did. That is why I want you to know me and the product that deserves my signature.

*H. Bobker*

President



# INSTANTANEOUS ELECTRIC Water Heaters

WENTWORTH-SAVAGE CO.



70-72 PEARL STREET, BOSTON, Feb. 18, 1925

SUBJECT

ATTENTION

URGENT SERVICE DESK  
E.T.T.-A

The Aqua Elec. Heater Co.,  
250 W 54th St.,  
New York City, N.Y.

Dear Sirs:—

We are very glad to acknowledge correspondence we have had with you regarding our acting as your representative in New England for the distribution of the Aqua Electric Water Heater, formerly known as the Geyser.

We would like to say at this time that the Geyser is the only water heater we have ever handled that has given satisfactory service. Now that this distribution has been organized we believe we will be able to do a large volume of business knowing that we have an article that will do the work it is called upon to perform.

Truly yours,

WENTWORTH-SAVAGE CO.,

*W. Savage*

APPLICABLE TO EITHER CURRENT .A. C. or D. C.

### BAD FEATURES

It is not a Lamp Socket Device.  
It must be installed properly.  
It consumes current.  
It is not beyond 100% efficient.  
It produces only hot and cold water.

### GOOD FEATURES

Instantaneously-instantaneous.  
97% efficiency for current consumed  
6.6 K. W.  
Cold water does not pass over Resistance Unit.  
It is a permanent device—properly wired.  
Construction—appearance, function, value, satisfaction, guaranteed, any voltage, immediate deliveries—Retail Price \$60.00—Canada, \$75.00.

### ARITHMETIC

Add the good features  
Subtract the bad ones  
Divide by the price  
Multiply by the demand

Total... Increased profits  
Satisfied customers

The Aqua Electric Heater Co.

250 West 54th Street  
NEW YORK, N. Y.

Factory,  
Bridgeport, Conn.

Phone  
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# FRONT RANK

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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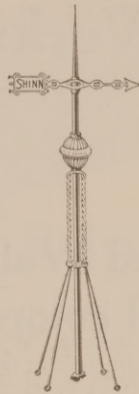
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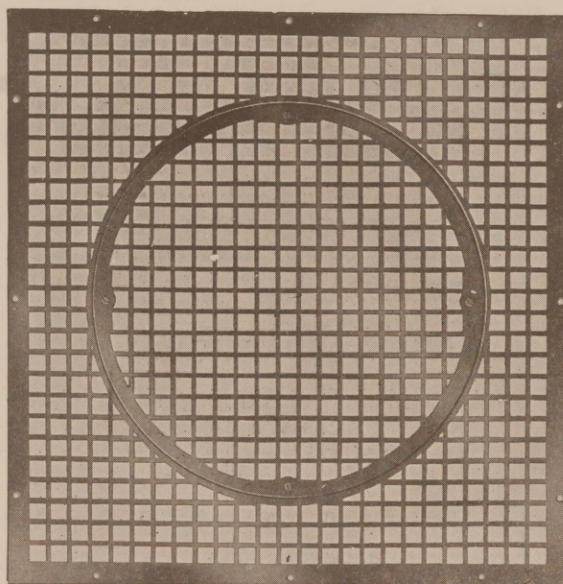
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# ANNOUNCEMENT

## Competition Among Manufacturers of Zeolite Water Softeners Assured

### Refinite Company Discloses Evidence To Invalidate Patent

#### *Plaintiff Would Withdraw Suit Against Refinite*

**I**N COURT at Buffalo, N. Y., a suit is pending against a user of the Refinite Water Softener and against the Refinite Company, manufacturer of this system. Infringement of patent rights claimed to have been granted under the name of a German inventor, is alleged.

This suit was filed, as most users of the Refinite system know, following a long period during which such action was openly threatened against and held as a club over, purchasers and prospective purchasers of Refinite Water Softeners.

In legal controversies of this nature courts have established that a basic patent on a device described in a printed publication two years before the patent is applied for, is not valid.

Evidence has just been disclosed proving that the type of water softening equipment attacked in this suit was described in such a publication at least three and one-half years before the date of application for the patent sued on.

SO CONCLUSIVE IS THIS EVIDENCE THAT THE PLAINTIFF HAS SIGNIFIED ITS WILLINGNESS TO WITHDRAW THE CHARGES AGAINST REFINITE, under certain conditions. The conditions, however, would be unfair to the trade and the consumer, as is explained later in this announcement.

### Why This Interests You

Prior to the competition created by the Refinite Company, the zeolite water softener field was practically controlled by one manufacturer. Prices of water softeners utilizing such mineral were very high.

The Refinite Company, due to its use of Nature's own water softening mineral, Refinite, was enabled to put on the market a really efficient and satisfactory system at a moderate and fair price.

Forthwith began a campaign of threats and intimidation. It was directed, not at the manufacturer of the Refinite system, but at users and prospective users. Many Refinite owners were urged to supplant their Softeners with another company's system, even at a big expense, as the only way to escape heavy legal penalties; prospective purchasers were told that selection of the Refinite Softener meant prosecution and damages.



Nature's Water Softener

Copyright 1920, The Refinite Company

At the same time propaganda of calumnies and falsehoods about Refinite were spread.

# EXTRAORDINARY

Such underhand and unfair business methods served only to make the Refinite Company more determined to "break open" the zeolite water softener field. By guaranteeing full protection against any possible loss from infringement action, it forced the issue until finally suit was filed.

The Refinite Company immediately took complete charge of the defense, as it had promised, and became a party to the suit. Delay followed delay. Meanwhile the campaign of intimidation directed against the trade continued.

## Offers to "Make a Deal" with Refinite Co.

When proof was presented that water softening equipment of this type was in use long before the patent was applied for, the Refinite Company demanded that the plaintiff withdraw the charges or go to immediate trial. The plaintiff proposed instead the following:

That the suit against the Refinite Company and the Refinite user be dropped but the plaintiff be allowed to continue its suit against another manufacturer and to validate its patent claims; and the Refinite Company then be allowed to operate under the patent or under a license.

## Refinite Company To Play Fair with the Trade

Such an arrangement would mean, of course, that the owner of the patent and the Refinite Company could manufacture and sell water softening equipment using zeolites. All others would be infringers. The field would virtually be monopolized, competition stifled, and prices could be boosted to—well, whatever levels these companies desired. The trade and the public—you who need soft water—would suffer.

The Refinite Company refused, and it herewith assures you that it will never enter into any such cabal.

\* \* \* \* \*

The Refinite Company realizes that lawsuits and other differences between business rivals ordinarily are of little interest to the public. Yet this instance, we feel, is an exception. You are interested in soft water. You want the best water softener to be had, you want the development of this science continued and you DO NOT WANT to pay more than a reasonable price for such service. Therefore, we consider it our duty to give you the facts and advise you as to the status of the infringement suit.

We know there have been a few prospective purchasers of Refinite Water Softeners who have been intimidated by the threats of suit. But we are pleased to find that at hundreds of others were not. The business of the Refinite Company has shown a very gratifying increase every month over the previous month since the beginning of the fight.

Refinite engineers are at your service at any time, without obligation whatsoever on your part, to confer with you about a Refinite system for your use. Address our nearest office and one will call. And until the legal action referred to above is finally settled, the Refinite Company will be very glad to furnish you full protection (surety bond if desired) against any possible expense resulting from such a suit.

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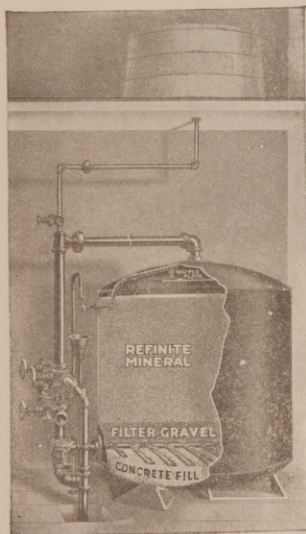
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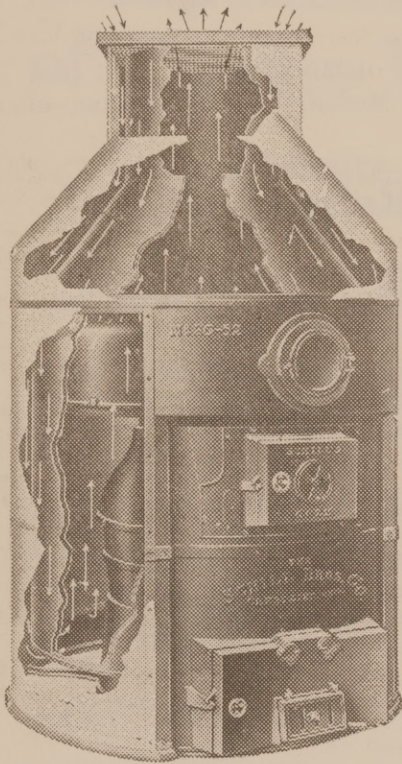
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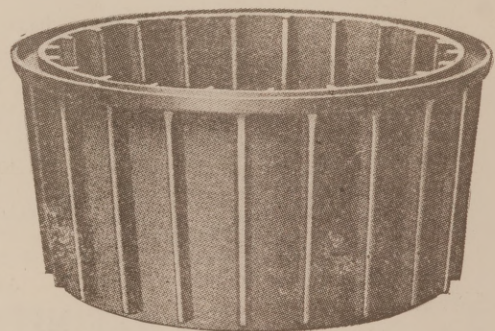


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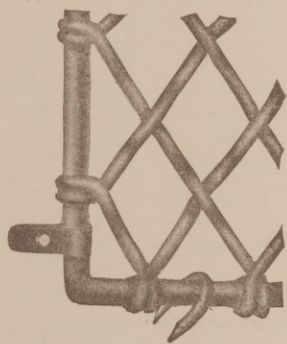
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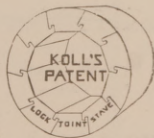
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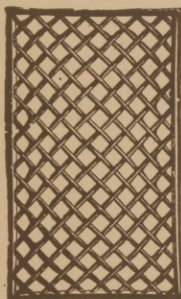
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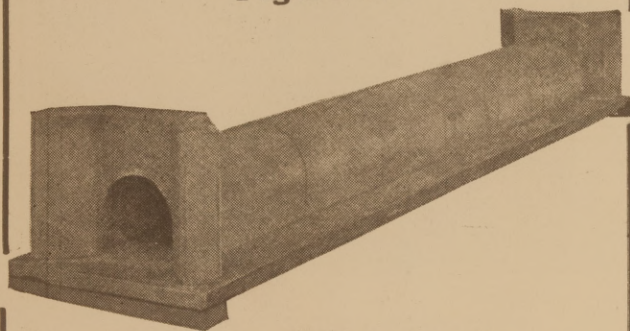
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