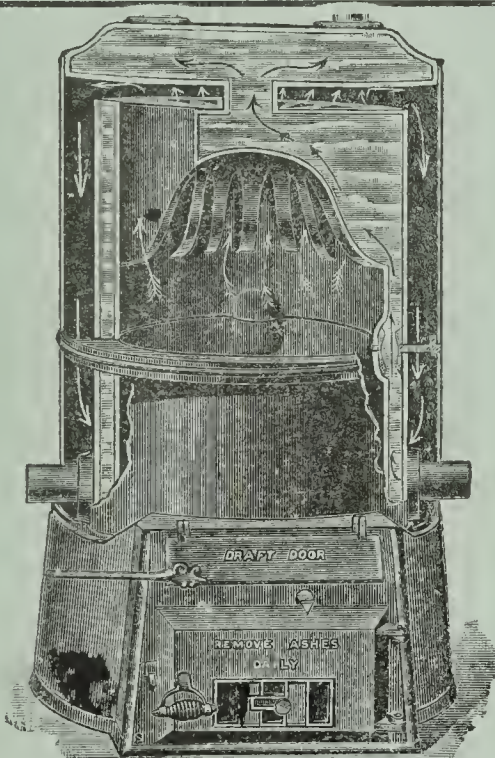


# THE WESTERN ARCHITECT

VOL. I. No. 3.

MINNEAPOLIS and ST. PAUL, October, 1902

Subscription \$5.00 a Year



Standard  
Boiler  
For  
House Heating  
**E. H. Rank  
& CO.**

607 HENNEPIN AVE.  
MINNEAPOLIS

Telephones:  
N. W. 1358.  
T. C. 453.

THE BEST PLACE TO BUY  
**Gas Fixtures**

IS AT THE

**WHITTELSEY**  
GAS & ELECTRIC FIXTURE COY.

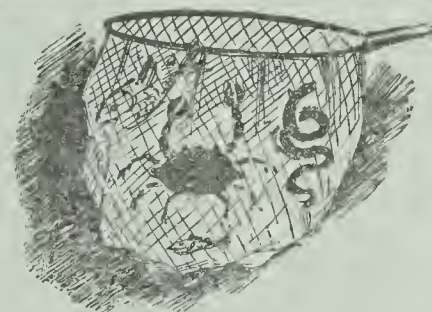
311 Second Ave. So.,

Because we are **MANUFACTURERS** and can give the  
BEST BARGAINS.

DO NOT FORGET THE ADDRESS.

## Net Results

Come every time  
in your press-brick  
work when you  
specify



### Menomonie Hydraulic Press Brick

Absolutely the hardest, heaviest and densest press brick made. In all standards and fancy shapes and colors. Unlimited quantities furnished of EXACTLY the same shade. We have lots of Sand Mold brick, too. Write for prices.

**Menomonie Hydraulic Press Brick Company,**  
S. J. HEWSON, SALES AGENT  
10 North 3d Street, Minneapolis, Minn.

## GEO. H. LAWES & CO.

AGENTS FOR

CABOTS "SHINGLE STAINS" and "QUILT"  
CELADON COY'S ROOFING TILES  
FLEXIBLE COY'S ROLLING PARTITIONS  
HIGGIN'S METAL FRAME WINDOW SCREENS  
N. W. EXPANDED METAL LATH  
RINALD'S PORCELAIN ENAMEL PAINT  
SWEETZ DUMB WAITERS and ELEVATORS  
UNION METAL CORNER BEADS  
UNION BRICK BONDS

We carry in Stock Cabots Stains and Quilt, Metal Lath, Metal Corner Beads,  
Mineral Wood, Mortor Colors, Brick Bonds and Rinalds Enamel Paint

**MINNEAPOLIS OFFICE,**  
842 Lumber Exchange.  
Phone T. C. 60.

**ST. PAUL OFFICE,**  
49 E. Fifth Street.  
Phones T. C. 1027, N. W. 2239 L-1.

Residence Phone, T. C. 6036 Park.



**K. F. LOTT, Agent.**

503 Kasota Building,  
Minneapolis.

T. C. Phone 2468.

27 Gillilan Block,  
St. Paul.

Phones N. W. 2068 J-2. T. C. 68.

**LUXFER PRISMS**

For Lighting Dark Stores, Offices and Basements.

**Composition Capitals and Ornaments**

For Interior and Exterior.

**Ornamental Plaster.**

**Kettle River  
Quarries Company.**



Quarries at SANDSTONE, MINN.

Paving,  
Curbing,  
Crosswalks,  
Building Stone.

Send  
Plans  
for  
Estimate  
We Pay Express.

GENERAL OFFICES:

Oneida Block, Minneapolis.

**THE POND & HASEY CO.**

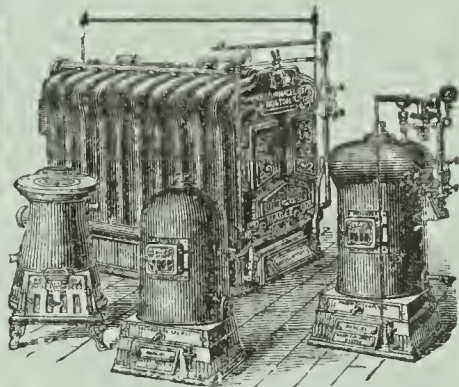
Successors to A. A. POND.

Contractors for

High and Low Pressure  
Steam, Hot Water  
and  
Hot Blast Heating

Mechanical and Natural  
Ventilation Hot Air  
Furnaces and Combina-  
tion Heaters.

Tin, Sheet Iron and  
Copper Work.

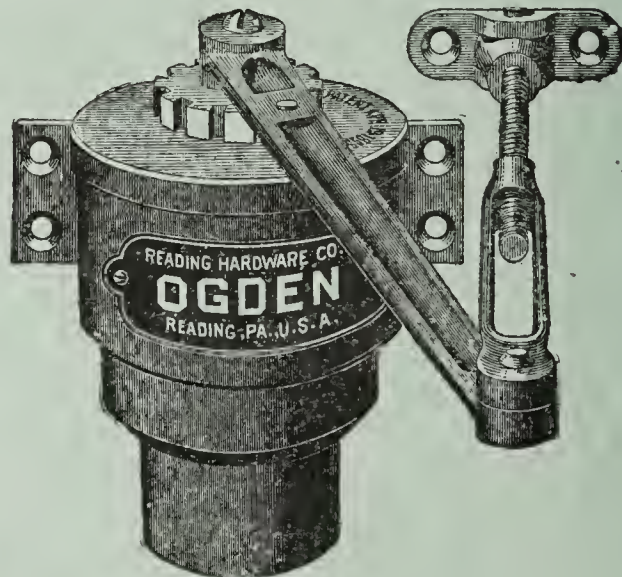


231 Fifth Ave. S. Minneapolis.

**THE OGDEN**

AUTOMATICALLY REGULATED

Liquid Door Check and Spring, over 200 in New  
State Capitol.



The Only Check that Fully Controls the Door.

—FOR SALE BY—

**Gardner Hardware Co.**

304-306 HENNEPIN AVE.,

MINNEAPOLIS, MINN.

**NORTHWESTERN FOUNDRY**

**SPECIALS:**

- STEEL BEAMS
- GIRDERS
- IRON STAIRS
- SIDEWALK LIGHTS
- ROOF TRUSSES
- FIRE ESCAPES
- IRON COLUMNS
- STORE FRONTS
- SEWER CASTINGS
- STABLE FIXTURES
- ORNAM'NTL VASES
- STATION STOVES

S. T. FERGUSON, President.  
J. F. FERGUSON, Vice President.  
E. S. COFFIN, Secretary and Treasurer  
Successors to S. T. FERGUSON, Proprietor.

**STRUCTURAL IRON AND  
FOUNDRY WORK.**

**WATER PIPE SPECIALS  
LIGHT AND HEAVY CASTINGS.**

**312 Tenth Ave. S.  
Minneapolis, Minnesota.**

Automatic and Half Automatic  
Gates and Dumb Waiters.

Electric Motors  
and Dynamos.

# GUST LAGERQUIST,

MANUFACTURER OF

DIRECT AND BELTED ELECTRIC

Passenger, Freight,  
Power and Hand Power **ELEVATORS**

18 to 28 First Avenue North,

Minneapolis.

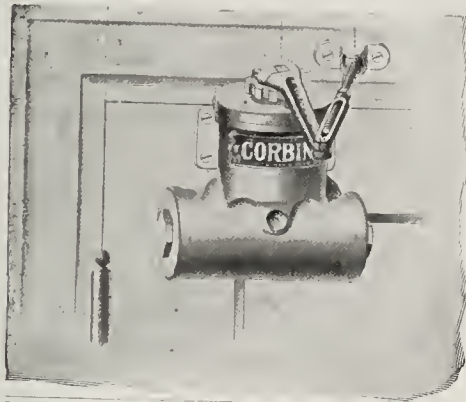
Minnesota.

# Harry B. Cramer Co.

FRESCO, INTERIOR  
and EXTERIOR **Painting.**

213 So. Sixth Street,  
MINNEAPOLIS.

1443 Both Phones. 1443



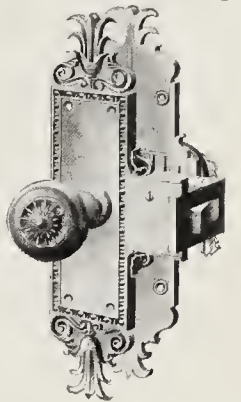
## BUILDERS' HARDWARE.

—FIGURE WITH US ON—

# CORBIN LOCKS.

**WARNER HARDWARE COMPANY,**

11 South Fourth Street, - Minneapolis, Minn.



# Northern Hydraulic Cement.

(SEMI-PORTLAND)

—Manufactured by—

# Pembina Portland Cement Co.

GRAND FORKS, N. D.

# Davis Heating & Plumbing Co.

ESTABLISHED 1872.

Heating  
Engineers.



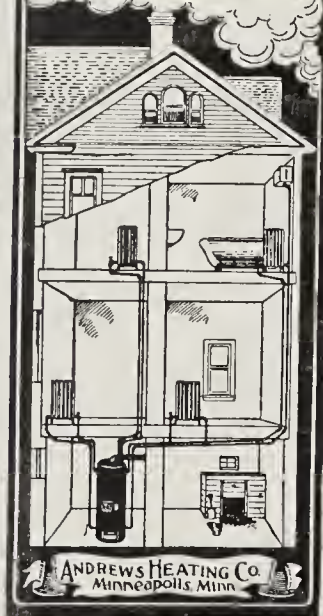
And  
Contractors.

187-189 East Sixth Street,

St. Paul,

Minneapolis, Minn.

## HOME HEATING



# HOT WATER HEATING.....

For Homes  
and Offices.

The Andrews Heating System is scientifically designed; each individual plant is planned by an expert engineering engineer; economical in fuel using and easy to take care of

Our booklet "Home Heating" explains our method of selling heating plants by mail, at closest prices. We send it free.

ADDRESS

854 Globe Building,

Minneapolis.

# L. A. McIVOR & CO.

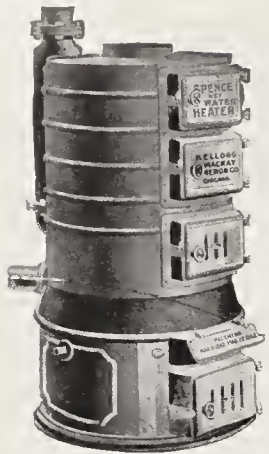
Interior Decorators and Furnishers.

STUDIOS, 816-817 Lumber Exchange.

Our specialties include everything that pertains to INTERIOR DECORATION, with attention to the outlining of COLOR SCHEMES, the applying of WALL PAPERS and TAPESTRIES, hanging of laces and drapery fabrics, selection of RUGS, CARPETS and FURNITURE, etc., and everything in the line of

## Natural Adornment.

We would consider it a pleasure to furnish ideas and estimates.



„Spence” Hot Water Heater

**KELLOGG=  
MACKAY=  
CAMERON  
COMPANY,**

MANUFACTURERS OF

**Boilers and Radiators**

Heating and Ventilating Material      Pipe, Brass Goods and Fitters' Supplies.

222 LAKE STREET, [STATION U.]

**Chicago, Ill.**

Branches: Kansas City, Mo., Minneapolis, Minn.

H. N. LEIGHTON, Pres. and Treas      EBEN E. LEIGHTON, Sec'y  
W. H. LYON, Vice-Pres.

**H. N. Leighton Company,**

**GENERAL.....Contractors and Builders.**

216 Sixth Street South,

MINNEAPOLIS, - - MINNESOTA,

Northwestern Tel. 1063.

Twin City Tel. 2084.

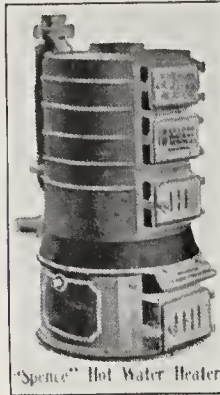
**John A. Cullen,**

**General Plastering Contractor**

114 WEST 3rd STREET,

**St. Paul, Minn.**

ESTIMATES CHEERFULLY GIVEN.



„Spence” Hot Water Heater

**J. N. SMITH & CO.**  
**Steam and Hot Water Heating**

**PLUMBING**

Gas Fixtures, Gas Fitting, Repair Work

613 1st AVE. SO MINNEAPOLIS, MINN.

TELEPHONES: N. W. Main 2591. T. C. 704

Remodeling Carefully Executed  
By Skilled Workers.

T. C. 1057.

N. W. Main 2421 L-.

**J. A. SHOGREN,**

**HEATING AND VENTILATING,**

Tin, Sheet Iron,  
Copper Work.

FURNACES CLEANED AND REPAIRED.

1414-1416 Hennepin Ave.,

MINNEAPOLIS, MINN.



The attention of the Public and Trade is called to the

**Anchor Stone Laundry Tray.**

This tray is made of crushed Granite and the best Imported German Portland Cement with siamese brass plug and coupling—all made in one piece with round corners and without joint. It is easy to keep clean and superior to all other Stone Trays. They have given entire satisfaction when others have failed. For information, prices, etc.

Write the Anchor Stone Laundry Tray Co.,  
Tel. Main 3339 L-1. ADOLPH JOHNSON, Mgr.  
MINNEAPOLIS, MINN.

Architectural and Ornamental Iron Work of all Kinds.

**GREAT WESTERN ORNAMENTAL IRON WORKS.**

H. L. WALTON, Manager.

Manufacturers of Art Metal Work and Bank Fixtures. ✪

OFFICE AND WORKS,  
107 First Ave N.

Both Telephones.  
Minneapolis, Minn.

Telephones: N. W. 900 2.

T. C. 802.

W. I. GRAY

GEO. K. BELDEN

**W. I. GRAY & CO.**

**Contracting Engineers.**

Electric Light, Heating, Ventilating and Water  
Works Plant.

804 Sykes Block, - - Minneapolis, Minn.

C. E. TAYLOR.      G. L. WATSON.

**C. E. TAYLOR & CO.,**

Wall Paper, Painting and Decorating.

612 NICOLLET AVE.

T. C. Phone 1991      MINNEAPOLIS,  
N. W. Phone M. 2599      MINN.



With one end of these rolls in Winnipeg and the other in Galveston, Texas, you will get an idea of the amount of roof surface we have covered this year.

# CAREY'S

## Magnesia Flexible Cement Roofing.

Adapted to all climates and all classes of buildings, from a church steeple to a roof garden; from the north pole to the equator. Not affected by heat or cold. The lightest, most durable, most elastic, most popular roofing on earth. Will not crack, bulge, buckle, shrink or swell, and remains water tight at all times. Acids, gases, fumes or smoke do not affect it. Roofing contracts TAKEN and GUARANTEED in any part of the west.

### Prepare for Winter.

Cover your pipes with CAREY'S 85 per cent Magnesia, Asbestos Moulded or Wool Felt Perfecto Pipe Coverings, for high or low pressure. Asbestos Block Covering, Sectional Lagging and Asbestos Cement Felting. Retort Cement, Furnace Pipe Covering and Asbestos Paper.

Samples, Catalogues, Price Lists and Detailed Information cheerfully furnished on application.

# W. S. NOTT COMPANY,

200-206 First Avenue South,

MINNEAPOLIS, MINN,

SOLE NORTHWESTERN AGENTS.

Dealers in the celebrated WESTERN BRAND BUILDING PAPERS, Prepared Roofings, Roof Coatings, Stack Paints and Roofers Supplies. Western agents K'SENE FIREPROOF COLD WATER PAINT, in white and colors. Will not rub off, and especially adapted to all mill construction buildings, elevators, mills, factories etc.

Local and Long Distance Telephones, Both Lines Main 376.

### Classified List of Advertisers

	Page
<b>ARCHITECTURAL INSTRUMENTS.</b>	
Arnold Kuhlo .....	VII
<b>ARCHITECTURAL IRON WORK.</b>	
St. Paul Foundry Co. . . . .	3rd Page of Cover
Northwestern Foundry . . . . .	2d Page of Cover
Crown Iron Works Co. . . . .	XII
<b>ARCHITECTURAL TERRA COTTA.</b>	
J. C. Landers & Co. . . . .	VI
<b>ARCHITECTURAL DECORATIONS.</b>	
Harold Johnson .....	VI
K. F. Lott .....	2d Page of Cover
<b>BRICKS (PRESSED).</b>	
Menomonie Hydraulic Pressed Brick Co. . . . .	1st Page of Cover
J. C. Landers & Co. . . . .	VI
<b>BUILDERS' HARDWARE.</b>	
Gardner Hardware Co. . . . .	2d Page of Cover
J. F. McGnire .....	VI
W. K. Morison & Co. . . . .	VI
Warner Hardware Co. . . . .	III
<b>BUILDING PAPER.</b>	
Samuel Cabot .....	X
W. S. Nott Company .....	V
<b>CEMENTS.</b>	
D. L. Bell .....	Last Page of Cover
J. C. Landers & Co. . . . .	VI
Menomonie Hydraulic Pressed Brick Co. . . . .	1st Page of Cover
Fowler & Pay .....	VI
Paine-Nixon Co. . . . .	XII
Pembina Portland Cement Co. . . . .	III
<b>CONTRACTORS AND BUILDERS.</b>	
H. N. Leighton Company. . . . .	IV
John Wunder .....	X
<b>COMPOSITION ORNAMENTS.</b>	
Harold Johnson .....	VI
K. F. Lott .....	2d Page of Cover
<b>DRAUGHTING INSTRUMENTS.</b>	
Arnold Kuhlo .....	VII
John A. Schlener .....	XIV
<b>DUMB WAITERS.</b>	
Geo. H. Lawes & Co. . . . .	1st Page of Cover
Lee & Hoff Mfg. Co. . . . .	XII

	Page
<b>ELECTRIC AND GAS FIXTURES.</b>	
J. N. Smith & Co. . . . .	IV
Whittelsey Gas & Electric Fixture Co. . . . .	1st Page of Cover
Minneapolis General Electric Co. . . . .	VII
<b>ELEVATORS.</b>	
Gust Lagerquist .....	III
Lee & Hoff Mfg. Co. . . . .	XII
<b>ELECTRICAL CONTRACTORS.</b>	
W. I. Gray & Co. . . . .	IV
<b>ELECTRICAL SUPPLIES.</b>	
Electrical Engineering Co. . . . .	IX
<b>FLOOR DEAFENER.</b>	
Samuel Cabot .....	IX
Geo. H. Lawes & Co. . . . .	1st Page of Cover
<b>FIREPROOFING.</b>	
Harold Johnson .....	VI
J. C. Landers & Co. . . . .	VI
Northwestern Fireproofing Works. . . . .	IV
<b>HEATING AND VENTILATING APPARATUS.</b>	
American Heating Co. . . . .	XII
Andrews Heating Co. . . . .	III
Archambo Heating & Plumbing Co. . . . .	XII
Davis Heating and Plumbing Co. . . . .	III
D. R. Black .....	XII
Kelley & Lamb .....	VI
Kellogg-Mackay-Cameron Company. . . . .	IV
Pond & Hasey Co. . . . .	2d Page of Cover
E. H. Rank & Co. . . . .	1st Page of Cover
J. A. Shogren .....	IV
<b>INTERIOR DECORATORS.</b>	
John C. Barton & Co. . . . .	VIII
Harry B. Cramer Co. . . . .	III
L. A. McIvor & Co. . . . .	III
<b>LAUNDRY TRAYS.</b>	
Anchor Stone Laundry Tray Co. . . . .	IV
<b>MARBLE AND TILES.</b>	
Drake Mantel & Tile Co. . . . .	V
Northwestern Mantel Co. . . . .	IX
<b>METALLIC LATH.</b>	
Geo. H. Lawes & Co. . . . .	1st Page of Cover
<b>MANTELS, GRATES AND TILING.</b>	
Drake Mantel & Tile Co. . . . .	V
Northwestern Mantel Co. . . . .	IX
<b>ORNAMENTAL IRON MANUFACTURERS.</b>	
Flour City Ornamental Iron Works. . . . .	IX
Great Western Ornamental Iron Wks. . . . .	IV
<b>OFFICE FIXTURES.</b>	
Horton Manfg. Co. . . . .	XI
<b>PAINTERS.</b>	
John C. Barton & Co. . . . .	VI

	Page
Harry B. Cramer Co. . . . .	III
L. A. McIvor & Co. . . . .	III
<b>PRISMS.</b>	
K. F. Lott .....	2d Page of Cover
<b>PLASTERERS.</b>	
John A. Cullen .....	XIV
<b>PLUMBERS.</b>	
Farrell & Turnbull. . . . .	XII
Kelley & Lamb .....	VI
J. N. Smith & Co. . . . .	IV
E. H. Rank & Co. . . . .	1st Page of Cover
<b>ROOFING TILES.</b>	
Celadon Roofing Tile Co. . . . .	IX
<b>RADIATORS.</b>	
Kellogg, Mackay Cameron Co. . . . .	IV
United States Radiator Co. . . . .	V
<b>ROOFERS AND ROOFERS' MATERIALS.</b>	
Celadon Roofing Tile Co. . . . .	IX
Deetz & Co. . . . .	XII
Haag-Laubach Roofing & Cornice Co. . . . .	X
Lefebvre Roofing & Cornice Co. . . . .	X
George F. Boehme. . . . .	XI
Geo. H. Lawes & Co. . . . .	1st Page of Cover
Northwestern Roofing & Cornice Wks. . . . .	XIV
Scribner-Libbey Co. . . . .	XIV
Selden Roofing & Manfg. Co. . . . .	XIII
St. Paul Roofing Cornice & Ornament Co. . . . .	XIII
<b>REFRIGERATORS.</b>	
McCray Refrigerator Co. . . . .	VII
<b>SPRING WATER.</b>	
Indian Medical Spring Co. . . . .	IV
<b>STONE.</b>	
The Breen Stone Co. . . . .	VIII
Kettle River Quarries Co. . . . .	2d Page of Cover
Wm. Penn & Co. . . . .	VII
<b>SHINGLE STAINS.</b>	
Geo. H. Lawes & Co. . . . .	1st Page of Cover
Samuel Cabot. . . . .	VII
<b>Typewriters.</b>	
Remington Typewriter Co. . . . .	XI
<b>VARNISHES.</b>	
Twin City Varnish Co. . . . .	VII
<b>WINDOW SCREENS.</b>	
The Higgin Mfg. Co. . . . .	IX
<b>WALL PLASTER.</b>	
Cardiff Gypsum Plaster Co. . . . .	Last Cover
United States Gypsum Co. . . . .	3d Cover Page
<b>WINDOW SASH HANGERS AND FASTENERS</b>	
The Heath-Quinby Mfg. Co. . . . .	XIII
R. G. Winter. . . . .	X
The Stanley Works . . . . .	3d Page of Cover
<b>WALL PAPER.</b>	
C. E. Taylor & Co. . . . .	IV

## PUBLISHER'S DEPARTMENT.

### THE WESTERN ARCHITECT

IS PUBLISHED THE 1ST OF EACH MONTH BY

THE WESTERN ARCHITECT PUBLISHING COMPANY.

J. WALTER STEVENS, St. Paul, Secretary.

FRED'CK KEES, Minneapolis, Minn., President.

F. A. GREENLAW, General Manager.

J. L. SWINDELLE, Manager Advertising Department

Insurance Exchange Building, MINNEAPOLIS, MINN.

St. PAUL, Commercial Building.

#### New Quarry of Serpentine Marble Near Spokane, Wash.

A magnificent new deposit of green serpentine has been opened at the quarries of the United States Marble Company, near Valley, Wash. It is a superb marine green, taking a fine polish. The stone is unrivaled in color and texture by that produced anywhere in the country, and it is equal to the green marble found in the ancient Roman temples taken from quarries which are now lost.

Seven years ago Thomas H. Greenway, a marble worker from England, discovered this deposit of Serpentine marble in Washington. He is now superintendent of the United States Marble Company, which controls the quarries he discovered. The deposit is a steep bluff, 100 feet high, 1,000 feet long, and of great but unknown depth. On the surface the marble is white, and passes through the various shades of yellow and light green until, at a slight depth, the beautiful deep green Serpentine onyx is reached. The quarries have been worked for only four years, but in that time the product has sprung into fame. Mr. George W. White, at 1133 Broadway, New York, is the general Eastern agent of the company, and Mr. C. E. Mitchell, of Spokane, Wash., is the general manager.

The Washington Commissioners at the late Pan-American exhibition, held at Buffalo, N. Y., stated that they believed the quarrying of this beautiful Serpentine marble was destined to become one of the state's great industries. Architects generally speak in the highest praise of it as it is singularly free from fractures, and the green colorings with faint, light mottlings, run entirely through it.

#### A Worthy Devise.

One of the many practical results of the inventive genius of man which will tend to create a blessing in the household is an automatic air valve, manufactured by the Kellogg-Mackay-Cameron Company, of Chicago, Kansas City, and Minneapolis.

It is known to the trade as the K. M. C. valve, and is made in two sizes. It is readily attached to the radiator, and working automatically, it allows the free escape of air from the radiator and closes itself against the escape of water by flotation, and against steam by expansion. It creates a uniform temperature and adds largely to the heating power of the radiator. It is said that those who love comfort in their homes and have

regard for health, see to it that the architect specifies it.

There are many valves on the market that are more or less valuable assistants in controlling the power of the radiator, and if not neglected give fairly good results, but it is stated on good authority that the K. M. C. valve actually thrives on neglect. As regards to prices, etc., the Kellogg-Mackay-Cameron Company will be pleased to furnish all the desired information upon application to the address given above.

### SEALED PROPOSAL

#### ADVERTISEMENTS.

Announcements in this department will be inserted at the uniform rate of 25 cents per line, each issue. For three or more consecutive insertions of the same advertisement 20 cents per line for each insertion.

Copy for new advertisements should be sent us by the 25th of each month.

#### TREASURY DEPARTMENT,

Office of the Supervising Architect, Washington, D. C., September 3, 1902.

Sealed Proposals will be received at this office until 2 o'clock p. m., on the 7th day of October, 1902, and then opened, for the construction (except heating apparatus, electric wiring and conduits) of the United States Post Office at Joplin, Missouri, in accordance with the drawings and specification, copies of which may be had at this office, or the office of the Postmaster, at Joplin, Mo., at the discretion of the Supervising Architect.

JAMES KNOX TAYLOR,  
Supervising Architect.



ALL  
ARCHITECTS  
AND  
BUILDERS  
READ

The Western Architect  
That's Enough

## KELLY & LAMB,

Steam and Hot Water Heating,

Sanitary Plumbing,

PIPE CUTTING, PIPE COVERING,

Gas Fitting.

313 Third Ave. So., Minneapolis, Minn.

# DRAKE MANTEL & TILE Co.

## MANTELS - MARBLE - MOSAICS.

**MANUFACTURERS  
WHOLESALEERS  
CONTRACTORS**



**ST. PAUL, MINN., 66 E. THIRD ST.  
MINNEAPOLIS, MINN., 510 SECOND AVE. S.  
FACTORY, PLATO AVE. AND C. G. W. RY.**

Wm. Penn. J. F. Tostevin, Jr.

## WM. PENN & CO.,

**LAKE SUPERIOR STONE.**

Wholesale and Retail Dealers in—  
Portage Entry Redstone. Port Wing Brownstone. Kettle River Sandstone. Bedford Limestone. Berea, Ohio Sandstone, etc. Mill and Office Tower Bay Slip.  
**SEND IN YOUR PLANS FOR ESTIMATES.**

Our Specialty is shipping Cut Stone by Rail. **West Superior, Wis.**

## FREE INSPECTION SERVICE.

We will provide the services of a competent inspector for your electric light wiring **FREE of COST** and guarantee satisfactory wiring. May we send a representative to explain our **REDUCED RATES.** Electric light is the **CLEANEST, SAFEST and BEST** artificial light known.

### Minneapolis General Electric Co.,

15 and 17 SOUTH FIFTH STREET.  
Telephone N. W. Main 189 Twin City 1320.



# ARNOLD KUHLO,

—MANUFACTURER OF—

## Architectural, Draughting and Engineering Instruments.

Instruments Carefully Repaired and Adjusted.

### 320 Roberts Street, - - St. Paul.

# WHY?

Are most of the Leading Architects of

## St. Paul, Minneapolis and the Northwest

SPECIFYING

Twin City Varnish Co.'s Varnishes and Floorette.

# Because

They are assured of a first-class finish whenever the goods are used. Our varnishes are all manufactured in St. Paul, therefore they are best adapted to the climatic conditions of the northwest

Drop us a line and we will be pleased to give you valuable information in regard to wood and floor finishing.

## Twin City Varnish Co.,

**ST. PAUL, - MINNESOTA.**



# Cabot's Shingle Stains.

The only real STAINS; distinguishable by their clear, transparent tones and richness and durability of color. Backed by twenty years' successful use and guarantee of the manufacturer.

## Cabot's Sheathing and Deafening "Quilt"

The only scientific insulator. The only deadener that has the power of absorbing and dissipating sound waves. Sanitary and unflammable. Warmer and one-half cheaper than back-plaster. Avoid cow-hair imitations. Samples and full information on application.

### Samuel Cabot, SOLE MANUF'URER,

**BOSTON, MASS.**

VICTOR H. SCHNEIDER, Agent,  
**8 WOOSTER ST., NEW YORK.**

# ARCHITECTURAL

DECORATIONS IN COMPO.



.. Slate ..

ROOFING IN  
RED, GREEN,  
PURPLE & BLACK.  
Also Slabs, URINALS,  
Blackboards Etc.



.. Hollow Tile ..

Fireproofing

Set in Place or Delivered.

**HAROLD JOHNSON,** Building Materials,

216-217 LUMBER EXCHANGE,

Telephone Main 1218.

Minneapolis, Minn.

# HARDWARE...

A Few Good Things in Hardware.

Corbin Locks, Stanley Butts, Bommer,  
Chicago and Matchless Spring Hinges.  
Wilcox Door Hangers, Fitch Sash Lock.

GIVE US A CHANCE TO FIGURE WITH YOU.

**J. F. McGUIRE,**

56 East 6th Street, - - - ST. PAUL.

**John C. Barton & Co.**

814 Nicollet Ave.

Minneapolis.



Fabrics, Pottery, Furniture, Wall Paper  
Carpeting, Fine Cabinet Work, Fresco  
Decorations, Painting, and Hard  
Wood Finishing.

Re-upholstering and Repairing Old Furniture a Specialty.

See our fine line of wall papers before buying. Largest and best stock in the city.

PRESSED BRICK, TIFFANY  
ENAMELED BRICK.

PHILADELPHIA AND BOSTON  
FIRE PLACE MANTELS:

AKRON VITRIFIED ROOF TILE.  
HERRINGBONE EXPANDED  
STEEL LATH.

J. G. WILSON'S ROLLING PAR-  
TITIONS and STEEL SHUTTERS.

ARCHITECTURAL  
TERRA COTTA.

PORTLAND and  
NATURAL CEMENTS, Plasters.

**J. C. Landers & Co.**

818 LUMBER EXCHANGE,

Minneapolis, - - - Minn.

# BUILDERS' HARDWARE

IS OUR SPECIALTY.

Largest Variety and Stock in the  
Northwest to Select From.



Modern Hardware for

Office - Buildings,

Public " "

Bank " "

Library " "

Church " "

School " "

Asylum " "

Hotel " "

Warehouse " "

Business " "

And Modern Residences and Cottages.

Write us for Information.

**W. K. MORISON & CO.**

Minneapolis, Minn.



# THE *Western Architect*

AN ILLUSTRATED MONTHLY JOURNAL  
DEVOTED TO ARCHITECTURE AND ALLIED ARTS

VOL. 1.

OCTOBER, 1902

No. 3.

## THE WESTERN ARCHITECT.

IS PUBLISHED ON THE 1ST OF EACH MONTH

BY

THE WESTERN ARCHITECT PUBLISHING CO.  
(Incorporated.)

FRED'CK KEES, Minneapolis, Minn., President  
J. WALTER STEVENS, St. Paul, Minn., Secretary.

F. A. GREENLAW, General Manager.

J. L. SWINDELLE, Manager Advertising Dept.  
Insurance Exchange Building, MINNEAPOLIS, MINN.

ST. PAUL OFFICE, Commercial Building.

DULUTH OFFICE, 618 Manhattan Building.  
(Builders' Exchange.)  
E. POWERS, Manager.

NEW YORK OFFICE, 280 Broadway, Suite 289.  
C. T. WAUGH, Manager.

EDITOR.

F. G. Corser, N. Y. Life Building. . . . . Minneapolis

BOARD OF ASSOCIATE EDITORS:

GEO. E. BERTRAND . . . . . Minneapolis  
CHARLES L. PILLSBURY . . . . . Minneapolis  
J. WALTER STEVENS . . . . . St. Paul  
S. M. COLBURN . . . . . Minneapolis  
L. A. LAMOREAUX . . . . . Minneapolis  
MARK FITZPATRICK . . . . . St. Paul  
HARRY W. JONES . . . . . Minneapolis  
C. A. REED . . . . . St. Paul  
CHAS. S. SEDGWICK . . . . . Minneapolis  
E. P. OVERMIRE . . . . . Minneapolis  
LOUIS LOCKWOOD . . . . . St. Paul  
CHAS. R. ALDRICH . . . . . Minneapolis  
FRANK H. NUTTER . . . . . Minneapolis  
EDWARD S. STEBBINS . . . . . Minneapolis

CONSULTING BOARD OF ARCHITECTS ON SUBJECTS  
FOR ILLUSTRATIONS.

CLARENCE H. JOHNSTON . . . . . St. Paul  
THOMAS G. HOLYOKE . . . . . St. Paul  
A. B. CHAMBERLIN . . . . . Minneapolis  
WM. CHANNING WHITNEY . . . . . Minneapolis  
A. H. STEM . . . . . St. Paul  
L. LONG . . . . . Minneapolis

Subscriptions in United States and Canada, mailed flat,  
\$5.00 a year, strictly in advance.

Advertising Rates made known on application.

Remittance for Subscription and Advertising may be made by  
check, bank draft, express or post office order, always payable to  
The Western Architect Publishing Co., Insurance Exchange  
Building, Minneapolis, Minnesota.

AMONG the later mergers incorporating in New Jersey is the United States Realty and Construction Company; capital, \$66,000,000 taking in the George A. Fuller Construction Company, which we believe was capitalized at \$10,000,000 two years or so since. Three or four realty companies to one construction company is the way the new mixture is proportioned.



THE foundations of the wrecked Venetian campanile being pronounced sound, and quite a bit of the materials of the edifice being found to have survived the fall without injury, two solid arguments exist for restoring the tower on the old site. It is gratifying that such liberal subscriptions have been made toward the rebuilding, by some guesses already enough for the purpose.



HAD "L'Art Nouveau" first seen the light in our country, its parentage would have been traced without difficulty to the candy-pull,—even Mr. Sullivan would not have been under suspicion. But in France, whatever its origin, it has shown enough of vitality and action to stretch its sinuous, insincere, and sometimes screechy self out of the prints and to actually have itself frozen into alleged architecture. What the future has in store for it is not hard to guess. Meanwhile things have been built and decorated in the semblance of things on the earth or the air over or the waters under the earth that really look worse than some of the first fruits of the new art.



SOME late trials in Boston of the more common fire-proof partitions indicate that those of terra cotta and similar blocks plastered, are far more sound-proof than those of metal laths supported by metal studding and all plastered in solidly. This would be expected. If, however, the steel studs are staggered and considerable "felt" or "quilt" woven between them before metal lathing and plastering the two sides, a partition can be made that is considerably more sound-proof than one with the terra cotta blocks doubled with no felt or quilt between. These fibrous substances might reduce the fire-proof nature of the partition under extreme circumstances unless the well-known sea-weed quilt with asbestos covering were used.

How the British editor of architectural weeklies learned the art of producing so many acceptable weekly inches of reading matter doesn't appear. Perhaps they are not. At any rate the only similar venture on this side the Atlantic is not imitated. It is not long since our esteemed weekly contemporary gave any amount of space to a disaster that had happened to a new concrete elevator at Duluth a year or two ago, showing by "figgers" how the builders had put up something hopelessly faulty in design. Meanwhile the break had been repaired and the whole thing used for a year or so as if nothing had happened. Later this yawning weekly space couldn't be filled outside politics, so we have columns showing how the great coal strike is really a political strike by the toughs who lead the miners' organization, a proof being found in the fact that a group of eminent and highly approved party politicians failed to induce a settlement. From which conclusion a column or so of argument leads on to the further conclusion that 148,000 workmen are either dupes or roughs. Such things come of a state of mind inseparable from those clamorous inexorable weekly inches.

The Western Architect is published monthly, at about the middle of the month, and the middle of all of the Western World that amounts to much.

By the way, one way of accounting for the disaster to the elevator is that damp grain in one of the bins sweat and swelled till it "caked" enough to keep its place for such time as allowed considerable grain to be drawn from below the cake, when the mass that was suspended, fell; and between the falling grain and the confined air below it, something had to give way.



WHILE the visitor to Rome may be glad to do as the Romans do, the visitor to remains of outlying Roman grandeur is often made glad by finding that the builders of these provincial cities were not obliged to do as the Romans did. Roman remains, especially of the Eastern empire, show something of freedom from imperial influence, sometimes a little breaking out of that intellectual character which distinguished Greek work. The ruins of Heliopolis, in modern Baalbek, are exciting new interest by reason of the German excavations and explorations now in progress there. It is the good fortune of The Western Architect to have a friend just returned from Syria whose communication in another column describes the German work and discoveries. The Germans do not allow the new discoveries to be photographed by others, for which reason we are able to show only such views of the ruins as appeared above ground before the excavations began. But in some way the Kaiser's men were less jealous of the tablet mounted in one of the upper niches of the

famous wall of the upper temple,—the art and heart memento of the fraternizing of modern imperialism, divine right, and what not, as represented by William and Abdul,—for the tablet is only guarded against kodaks and sling-shots by a wire screen in a wooden frame.



THE Mississippi, on its way to St. Anthony Falls, passes many a farm and small town. It brings, among other things, many a pine and cedar log. As it reaches the City by the Falls, part of its waters are pumped through miles of pipes to reservoirs, there to stagnate till drawn through other miles of pipes to supply the city. Those who desired the reservoirs obtained the city's credit for their building, largely by a plea for pure water. Much was said and written in those times, and since, about a filtering plant, but there are no filters. The credit of the city has been much used since the construction of the reservoirs in connection therewith and pumping water thereto. There are those who claim all these outlays to have been made in the interest of pure water. Springs are used because believed by some to supply purer water, and distilling plants for the same reason. These distill water only. Wells are patronized for the same reason. The river furnishes water that always differs from what it furnishes at another time. So do the reservoirs, naturally. Springs mostly furnish water that looks clear enough, but which deposits this and that. When a spring-water patron breaks a jug in which delivery is made, he is said to transfer his custom. Wells, unless they pierce the lime-rock which underlies most of the town, and draw their supply from the sand-rock underneath, are in favor with no one who has thought about it. Some wells, supplied by this soft sand-rock and fortified against surface drainage, yield water that is clear for a while, but soon becomes turbid when exposed to light and air, coating the pitcher, not often scoured, with a red-brown deposit. Thousands of people drink these various waters for years, and if made sick by them, are unconscious of it. The question of pure water in this city is not, and never has been, acute,—an issue. It has come handy when "needed improvements" were to be secured. The lime-rock floor on which most of the city rests, has its fissures and even "faults," where for a space it may not be found at all, unless at a different level from the rim of the fault. Man has pierced it here and there, and the underlying sand rock houses miles of tunnels. The river has gouged a great gorge in and through it, and deep into the soft sand-rock below. Nature has strewed much upon this lime-rock floor, mostly sand. Looking from the river's gorge, it is only here and there that one may see water running into it from off the lime-rock floor. What has become of most of the rinsings of this town that have run through the sandy cover to this cracked, faulty, and much-pierced lime-rock floor? In

this town a school-house may draw more than a thousand pupils from no great space on this sandy cover. The space need not be sewerred much, nor paved at all. What kind of a water-supply may be expected from a well in the school-yard, even though it pierce the lime-rock?



IF CROP reports are true, certain consumers will soon find one item of the cost of buildings less distasteful. Unless the immense flax crop can be so manipulated as to neutralize the general course of supply and demand, linseed oil prices must soon take a downward course. Possibly a shortage in the Russian crop may lead to American shipments to cover a wider area than usual, but otherwise a very great surplus is predicted here. Linseed oil prices have their curious features as affecting the ultimate consumer. It is not easy to see how, with oil ranging from 25c to 80c per gallon at retail in barrel lots within the last three years, retail prices of linoleum, of varnishes, and of good grades of ready-mixed paints have kept the even tenor of their several ways. The retailer is favored by cheap oil, because, as it is sold at many points, he makes nothing any way, and he is naturally grateful for conditions that permit him to make nothing with the least capital. The painter likes to have cheap oil, for it enables him the more easily to compete with the ready-mixed paints. Whoever is shrewd enough to use the mixed paints sold in paste form also gets the benefit of low-priced oil. The fellow who thinks he can paint his own work, but is doubtful as to his ability to mix paints, buys such as are ready mixed, and he would seem to be obliged to buy when the ingredients are dear, in order to get his money's worth. That he ever gets his money's worth is denied by many a painter, who preaches "lead and oil," for the reason that the "ready-mixed" goods tempt so many to dispense with his services. We trust no reader will fail to remark our skill and self-denial in going so far without saying a word about the respective merits of the two great rival paints.

As to building prices in the West generally, it is becoming evident here and there that they have advanced beyond the safety point and are checking enterprise. The cause of this falling off at points seems to be not so much the high prices of materials, noticeably those produced by "combines," as the antics of some contractors and labor unions, or groups. Not that these are more culpable, but they come more directly into contact with the man who wants to build, and the course of some of them is a continual reminder of the ancient owner of the fowl that laid golden eggs. Building activity in the West, it must be remembered, has very little in common with the great "boom" that culminated late in the '80's, when almost any kind of a building could be put up on the faith that some one would be found who would loan the money to pay for it. Compared with that time there is now very little

speculative building, and it is idle to expect every one who is thinking of building to be carried off his feet by the current of building activity. Men who build for investment have a habit of counting the cost, and when they run against items that are manifestly absurdly high they wait.

Children, and others, used to be told of the king who boastfully showed his hoard of gold to a sage, who said: "One day shall come a king with more and better iron than thou, and he shall take thy gold from thee." Around the greatest of lakes lies a kingdom with more and better iron in its hills than may be found elsewhere. The people of this kingdom were on a time digging their ores and were making of them iron according to their needs in workshops. They made great beams in a new and better way than others, and they made smaller irons in their shops, according to their needs. Then came the men with golden hoards, and closed these shops and carried these ores a thousand miles and sold to the people of this kingdom such iron as they must have at double price.

\* \* \*

AMONG the first fruits of the movement culminating in the "Insurance Engineering Experiment Station," promoted by Mr. Edward Atkinson, and in charge of Prof. Charles L. Norton, of the Massachusetts Institute of Technology, are reports of tests of so-called "fire-proofing" processes for treating wood. These tests did not cover a wide range, in fact, were largely confined to woods furnished by three of six leading companies engaged in the treatment of woods to increase their fire-resisting properties. Only one of the six, by the way, is said to have made broad claims as to the absolutely fire-proof character of its goods. The tests were conducted in several ways, so as to be, if not conclusive, at least instructive. As reported by the journals devoted to insurance engineering, which gives much space to these trials, opinions of disinterested people whose judgment is worth considering varied in no great degree, Prof. Norton and Mr. Atkinson not being able to see any great value in the processes, while Prof. Woolson, of Columbia College, was willing to give the several treatments credit for fire-retarding qualities of some value. The three processes tried, one of which, if we remember rightly, is largely used by the government in naval construction, vary somewhat in efficiency; but while the treated woods flame less readily than those not treated, specimens furnished by any of the companies make pretty good fuel, while flaming less they "glow" easily. Small sticks of treated woods supported at ends and subjected to the heat of a Bunsen flame, were destroyed quite easily, although they did not break quite so soon in any case as did the untreated woods. Incidentally it appeared that the treated woods acquired undesirable qualities that might, under some circumstances, more than offset any gain in value from added fire-resisting

properties. Prof. Norton found treated pieces more brittle, and it was told that saws and other tools used on them rusted over night. If such corrosion is persistent, what is to become of work dependent upon nails, anchors, and the like to keep these treated woods in place?

The reports hint at less thorough trials of processes, which consisted of simply coating the surface instead of forcing chemicals into the wood, and these superficial processes seem to have stood certain tests better than those receiving the more extended attention. It is quite possible that continued efforts may bring to the notice of the Station some process which its managers may recommend. As the case now stands every advance in methods for substituting inflammable materials for wood in construction is to be hailed, while a successful surface treatment that can be applied to timbers already built in would probably be worth far more than one which involves treatment of the wood in factories by impregnating the whole. Treatment of wood in factories by impregnation must be attended with considerable expense, and before this is incurred the situation should be carefully canvassed to see if a substitute for wood may not be found that is practicable and within cost limitations. As to superficial treatments, there are some situations where freshly slaked lime, applied hot, if possible, is of value, not only as a disinfectant, but as a retarder of fire. It has been the habit of some constructors to use in place of a large solid beam, two pieces bolted together, each with one-half the cross section of the large beam. This has made the lumber bill somewhat easier to fill, and has given a chance to season the timbers better before placing in the building, avoiding season checks to some extent; but recent fires have shown these made-up beams to be dangerous, because inevitable shrinkage and warping separates the halves in places so that fire will work between, and as the streams of water that readily put out the fire of the exposed parts cannot reach between the halves, the beam is destroyed from within. Thorough coating with hot whitewash of such sides of these half-beams as will be concealed by bolting together, by laying the plank flooring and by walling in or framing the ends, might not only disinfect these ends of all germs like that producing *dry-rot*, but might sufficiently protect the point from fire.

---

Some people who read that about good roads have been at me to know how it was that neither Mr. Boz, young Martin nor my father mentioned my present employer. Probably he had run away from home before they knew old man Pecksniff, in which case neither the old man nor Merry nor Cherry would have mentioned him. At any rate I made up my mind to see how he would stand it himself if I took leave of him for a day without asking. He took on a lot, it was

unprecedented, and all that; but I wouldn't have missed seeing the men make paving-stones, let alone the other work, for twice the fuss he made. For one thing, it showed me to be true what we hear now and then,—that it takes more skill to use a hammer right than any other tool. Channelers and pneumatic drills and saws and crunchers, if that's what they are called, are all right in their way, but if a fellow is out to see something really interesting, let him watch the men make paving stones.

The most shapeless piece of hard stone is brought to a man who works only with hammers, not even anything to measure with but the eye. He hits it a few blows with a sledge sort of a hammer, with a blunt chisely edge, turns it over, gives it a thump or two, and it splits as true as a slate. The odd part is, that the plane he splits it on seems to have no relation to the lay of it in the quarry nor to the way nature threw it together; but it is the place he wants to split it, that is all. Well, the big stone is in just about the size of paving stones while you wait, and he takes a hammer and with a trifle of spalling he turns out paving stones without a mark of face or sides, varying nowhere a half-inch in thickness, the face as flat and square as you would want. Some men will turn these out up to 300 a day.

I can see now why it was that the Chicago stone-cutters made such a row about that stone out in the southwest corner of the state, and over the line in South Dakota, that quartzite that is so much harder than anything Pharaoh had about him. The people out in those quarries knew well enough that they never could cut the stone with anything of the nature of point or chisel for less than two or three times what other cut stone cost, but they found out what they could do with hammers and they went about contracting for quarry-faced ashlar where the requirements for joints were not too strict. Perhaps the making of paving stones taught them how. When the Chicago stone-cutters saw what was going on, they said, "Here, this isn't stone-cutting, this isn't even building, this is paving. We are not going to work on buildings that are paved on the sides, and when we quit the other building trades will quit." Those were the times when a declaration of that kind passed at par, too, in Chicago.

Mr. Hayes may have let them "spall" the quartzite for that big church on Grant street,—I never noticed,—he did a clever thing at any rate when he trimmed his openings with a toolable stone.

But to go back to Sandstone-on-Kettle-River. We climbed around in places intended for goats, and if there had been almost any other kind of stone there these ways would have to be mended or left to the goats, but if you have ever seen steps of this stone in winter in town, you have noticed that they are the kind that don't let you slip, either the first winter or the tenth. There is one other stone that is about as good

in this respect, and that grows by the Erie Canal in Western New York, and is known in several states where it is used as Medina stone. If these sand stone people would only exert themselves to get in some down-town sidewalks, there would be plenty of calls for more after the first winter.

—Mr. Pinch, Jr.

The structure which will shelter examples of various industries at the Louisiana Purchase Exposition, to be held in St. Louis in 1904, will cover an area of 14 acres and will be executed in the Italian Renaissance style of architecture. It will contain two interior courts, embracing together an area of 121,000 square feet, so that the net area of building under roof will be 448,000 square feet, or slightly over 10 acres. The north front of the building is formed by two straight lines, each 600 feet in length, meeting at the center of the building in a projecting angle of 150 degrees. The south front is parallel to the north one and is of two lengths of about 460 feet each. The exterior of the structure shows a continuous colonnade, with the exception of the west front and west half of the north front. The architectural features of the building include corner pavilions, monumental entrances at the east and west fronts, smaller turrets flanking the main tower and dome, which is to be 350 feet in height, a portico in front of the main tower and an open colonnaded screen of segmental circular design in front of the dome.

### An Eastern Architect and a Western Building.

The following article recently appeared in one of our leading exchanges, and although there may have been a time when some western town would do such disgraceful thing as indicated in this item, that period has passed, and we now seriously doubt whether there is a single place in the entire west where this fraudulent kind of work would be even thought of:

"I happened to be out west," said a Pittsburg architect, "when a certain town decided to erect a city-hall. Architects were invited to send in plans and specifications, and, although I hadn't fully decided to compete, I dropped in on a boss alderman one day to secure some information. I had been told that he was at the head of a ring, and it didn't take me long to discover that such information was correct. We had scarcely passed a dozen words, when he said:

"Mr. Blank, this building is to cost \$800,000."

"Yes."

"And there must be at least \$200,000 to divide up among the pickings."

"Yes."

"Can you plan an \$800,000 building which will yield \$200,000 worth of pickings?"

"I have never done so."

"Then don't begin here. You'd not only muddle your own plans and specifications, but you'd tempt us to steal your whack of the stealings, and we want to get out of it with a little honor left to tackle some other job with. Try a railroad, water job or something easy, and good morning to you."



By GEORGE E. BERTRAND,  
of BERTRAND & CHAMBERLIN, Architects.

### Romanesque Churches.

At the commencement of the Christian era, the city of Rome was the capital of the civilized world. All of those portions of the three continents of Europe, Asia, and Africa bordering on the Mediterranean, and even the barbarous island of Britain in the far west beyond the province of Gaul, and the kingdoms beyond Jerusalem in the remote east, were subject to her dominion. She levied upon these vast territories the tribute of their arms, treasure, and harvests; and in return gave them her laws, letters, and discipline.

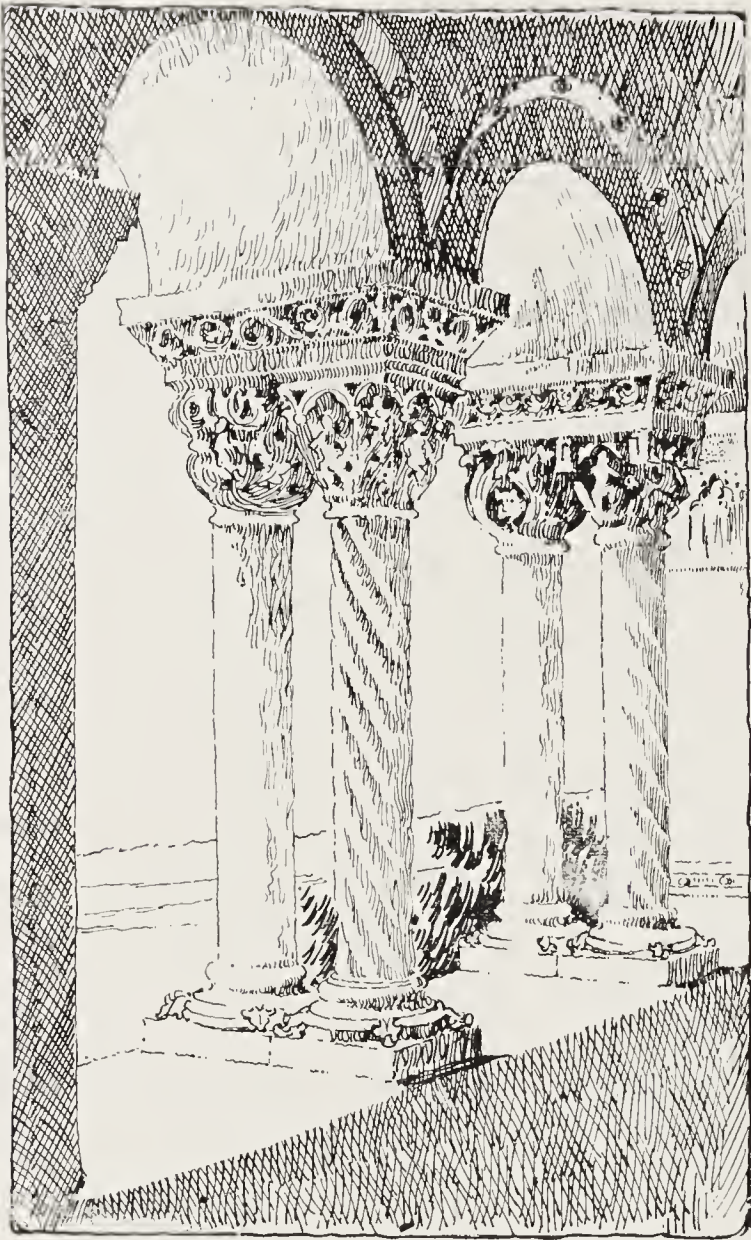
At that time all that was potent in the advancement of the human race either emanated from or gravitated towards Rome. The early struggles and vicissitudes of the Christian sect took place mainly within the Roman dominions. It was alien to the institution of paganism, and it would be in the natural course of events that, in order to supplant the influence of the pagan belief, it would seek to establish itself firmly and permanently in the great center of paganism, from which all enlightening influences radiated.

It was natural that the early Christians should make their greatest efforts and suffer their greatest sacrifices in the city of Rome, where the population was at once the most advanced in the culture of the age, and the most debauched in the degrading rites of paganism. It was natural that in their inspired zeal for the saving of their fellow men, they should bear to be hunted like wild animals and compelled to hide in the caverns under the city, when they might have worshipped with greater security elsewhere.

If the imperial sanction could be gained for the practice of the new faith in Rome, the Christians would obtain a point of departure for the promulgation of the faith, which no other vantage ground could as speedily accomplish.

The early Christians of Rome were no doubt, principally Romans by descent, by birth, and by training. They spoke the same language, and had the same manners, the same habits of thought, and the same ideals outside of their religious belief, as their pagan fellows.

Upon receiving official recognition and emerging from the seclusion in which they had been forced by the hatred of existing institutions, they would select from among the public buildings then in common use, those best adapted for the performance of their reli-



gious ceremonies. There were no buildings in Rome which could be found more suited to their purpose than the basilicas or halls of justice. As Ferguson says: "The bishops naturally took the place previously occupied by the praetor or quaestor, the presbyters those of the assessors. The altar in front of the apse, where the pious heathens poured out libations at the commencement and conclusion of all important business, served equally for the celebration of Christian rites, and with the fewest possible changes, either in the form of the ceremonies or in the nature of the business transacted therein, the basilica of the heathen became the ecclesia or place of assembly of the early Christian community."

Thus it happened that the buildings erected later expressly for the purpose of Christian worship had their prototypes in the Roman basilicas.

In the early centuries of the Christian era, before the settlement of the Gothic barbarians in southern Europe, the church architecture of Spain, southern France, and Italy, where the Latin racial characteristics predominated, was the lineal descendant of the Roman basilica. It was lacking in the studied refinements of its pagan prototypes, but the boldness and

vigor and freedom of its treatment of mass indicated the transition which was taking place in thought and feeling from the old ideals to the new.

It was essentially a physical expression in constructional form. The horizontal lines of the classical styles still predominated, but without the refining touch of antique culture. If the early church builders felt the inspiration of the new ideals of life, they had not yet found an intelligible medium through which to give it expression. They still endeavored to convey their thoughts in the language they knew, but their vocabulary was lacking. It was impossible that a medium of expression which had gradually developed and crystallized in the atmosphere of a mythology and an art which dealt mainly with the physical and intellectual aspects of nature and human existence, should express the great devotional ecstasy that subordinated the flesh and all its manifestations in any form, to an exalted spirituality.

It might be said that the style of the early Christian or Romanesque church was a provincial dialect of the magnificent and sumptuous diction of the Roman and classical age; a language whose utmost power could only depict the attributes of the pagan gods, whose characteristics were essentially physical and human. It was a language of form confined in its expression to the classical ideals of life; a style of architecture in which the horizontal lines predominated, and which could not extend above the horizon, which joins the intellectual and physical in art expression.

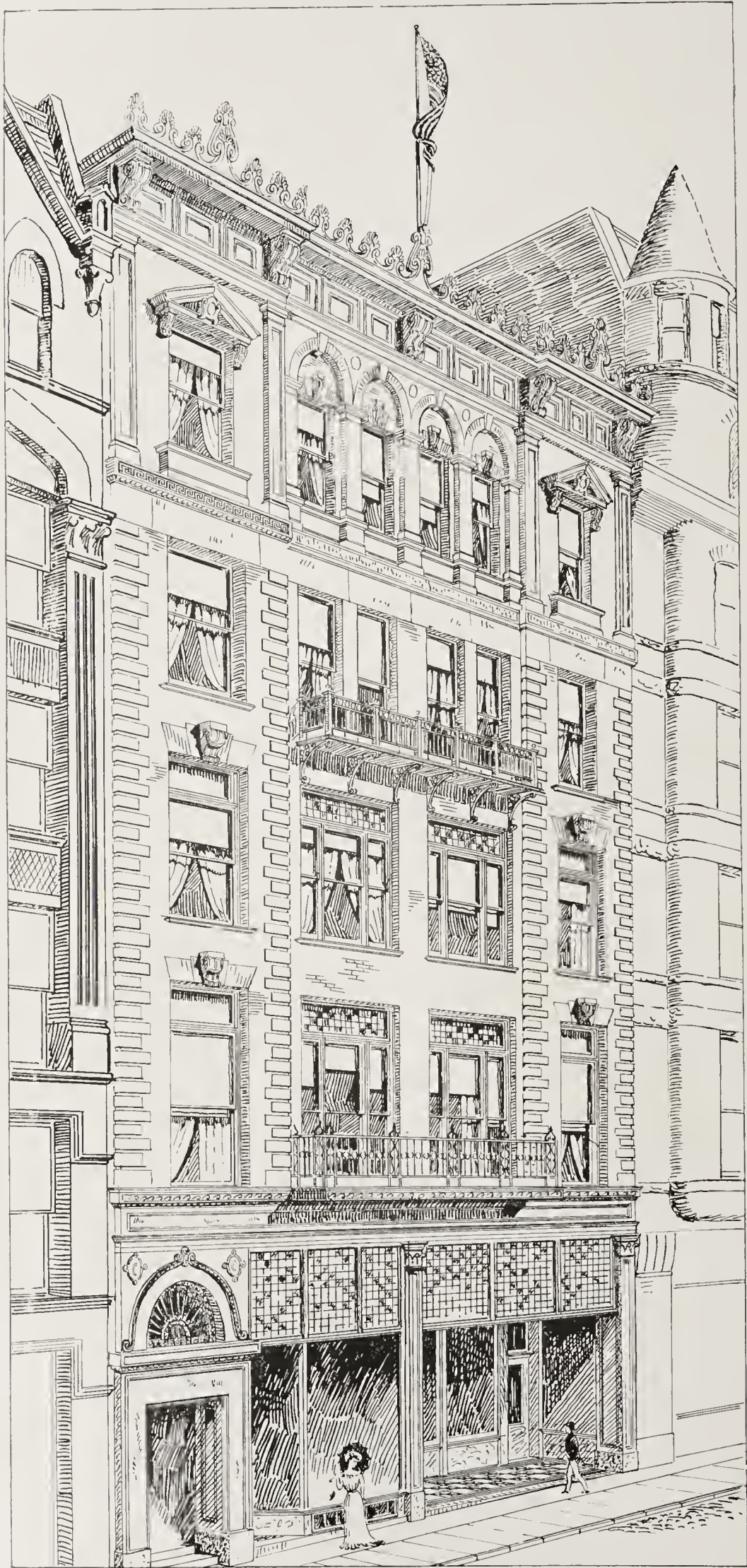
Judged from the classical standpoint, the Romanesque churches of southern Europe represent the decadence of a style which found its fitting expression in the magnificent public buildings and temples of Rome; a style expressive of power, weight, pressure, and necessarily unable to express the purely spiritual emotions of the new life. It was a fugitive remnant of a style which had eminently served its purpose as a medium of expression of a civilization which was slowly crumbling to decay, and whose form-language was inadequate for a society whose moral and religious ideals had become so totally different.

While the Romanesque builders still involuntarily planned and constructed in accordance with pagan tradition, yet the absence of the old forms of studied conventional ornament, and the presence of a growing profusion of crude naturalistic forms of animals and plants, drawn fresh from the earth, which is the original source of all form symbolism, was the unmistakable indication of the budding germs of a new flora of art, which was later to develop into the perfect and distinct devotional form expression of the middle ages.

---

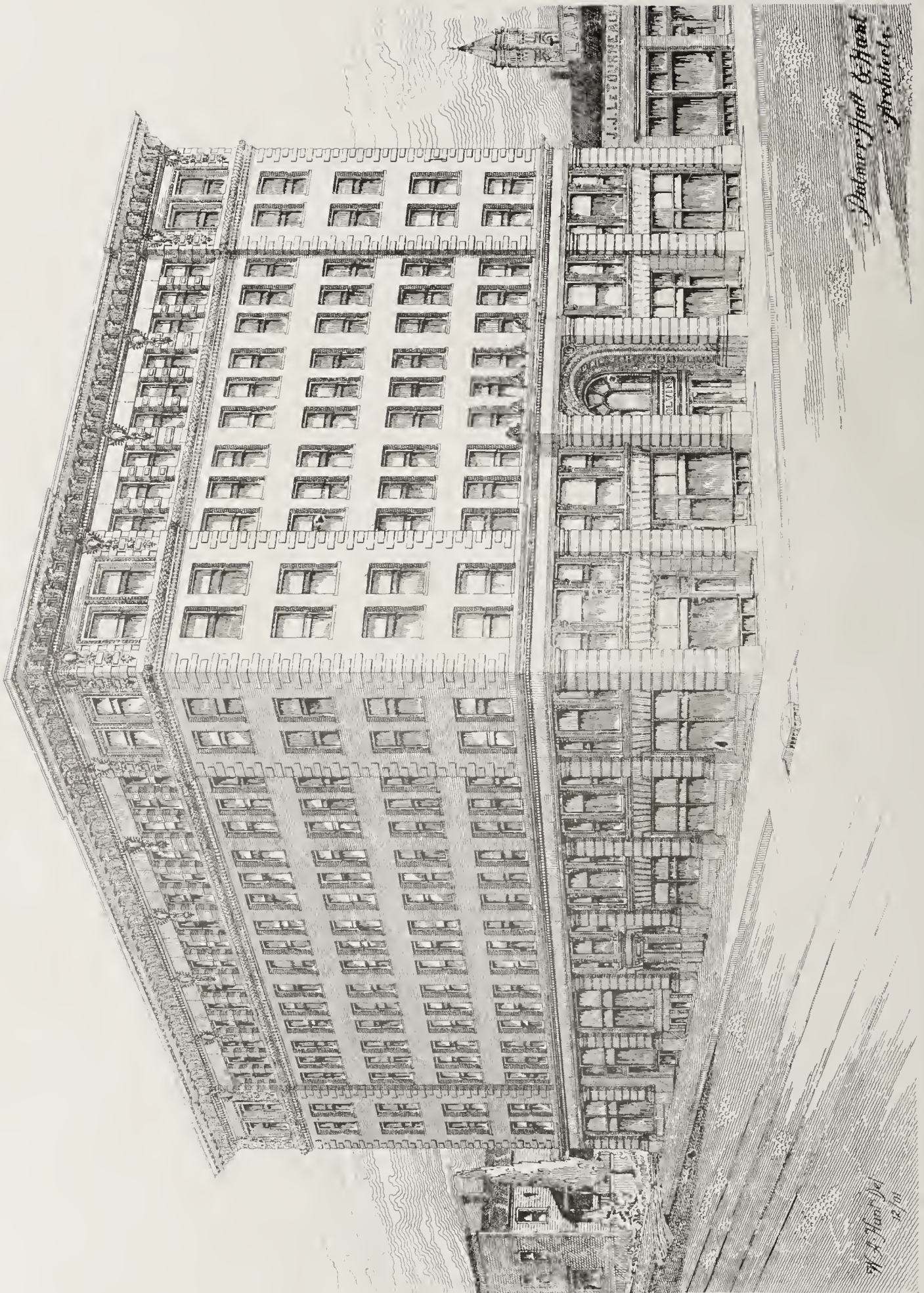
The designs for the Mining and Metallurgy building for the St. Louis World's Fair, by Theodore C. Link, architect, has been completed. The building is to be the same size as the Liberal Arts building, 750 wide by 525 feet long.

LIBRARY  
OF THE  
UNIVERSITY OF ALABAMA





LIBRARY  
OF THE  
UNIVERSITY OF ALABAMA



Supplement to  
THE WESTERN ARCHITECT.

WOLVIN BUILDING, Duluth Minn.  
PALMER, HALL & HUNT, Architects, Duluth.

October 1902

*Palmer Hall & Hunt  
Architects*



Supplement to  
THE WESTERN ARCHITECT.

A RESIDENCE AT PASADENA, CAL.

October 1902

LIBRARY  
OF THE  
UNIVERSITY OF ALABAMA



Supplement to  
THE WESTERN ARCHITECT.

A RESIDENCE AT LOS ANGELES, CAL.

October 1902

LIBRARY  
OF THE  
UNIVERSITY OF ALABAMA



Supplement to  
THE WESTERN ARCHITECT.

A COTTAGE AT PASADENA, CAL.

October 1902



Supplement to  
THE WESTERN ARCHITECT.

A RESIDENCE AT LOS ANGELES, CAL.

October 1902

LIBRARY  
OF THE  
UNIVERSITY OF ALABAMA



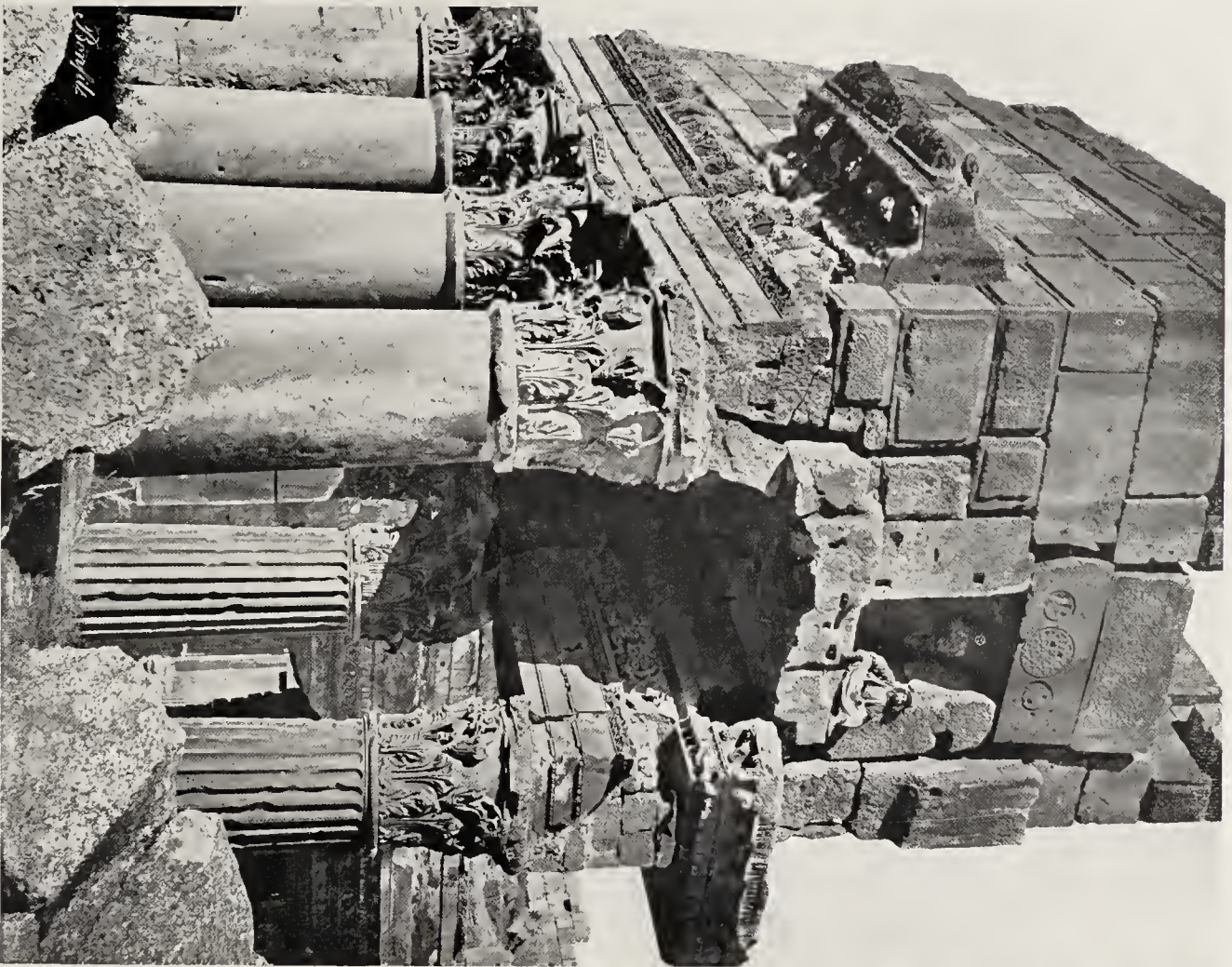


Supplement to  
THE WESTERN ARCHITECT.

A RESIDENCE AT LOS ANGELES CAL.

October 1902

LIBRARY  
OF THE  
UNIVERSITY OF ALABAMA



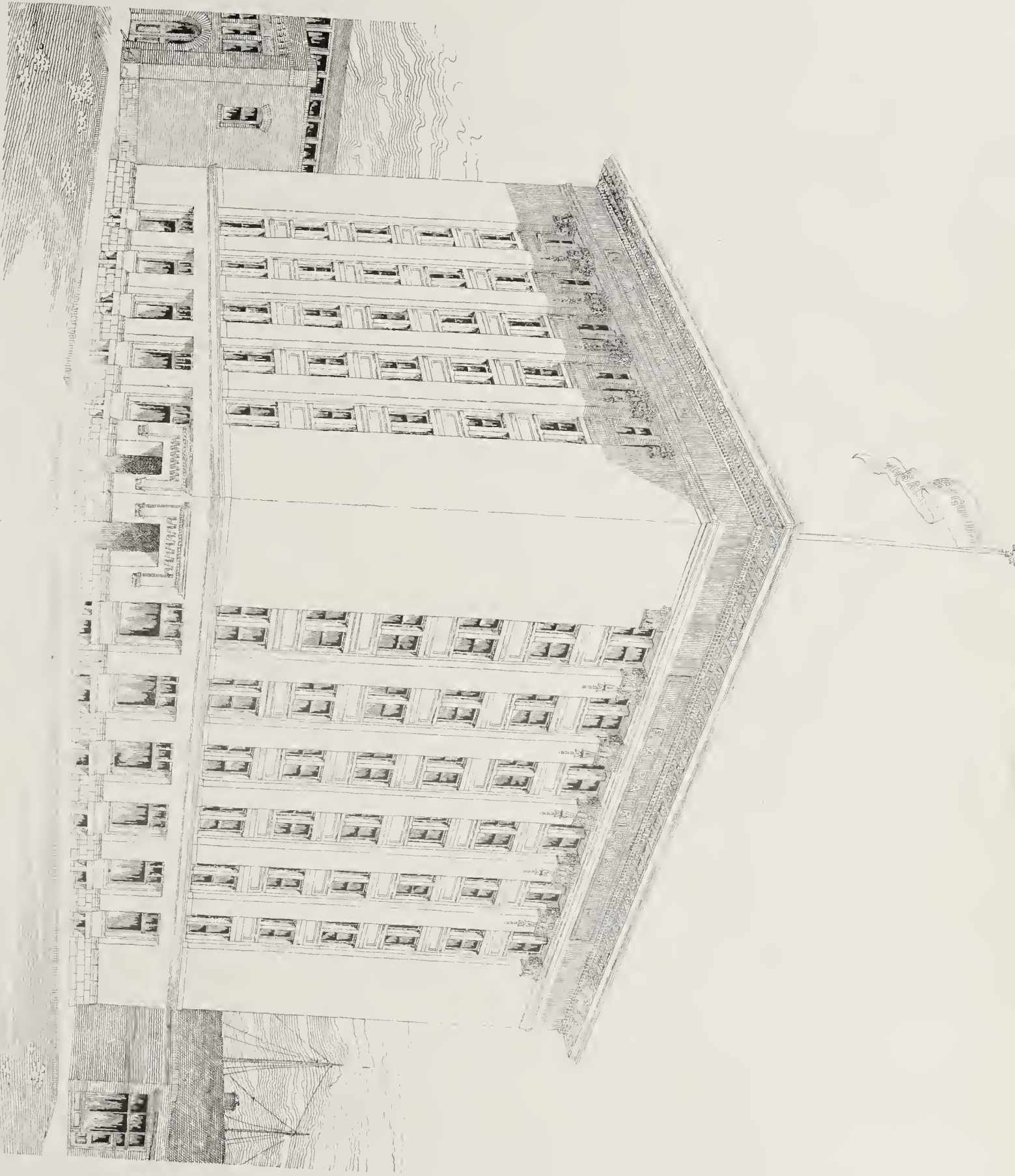
Supplement to  
THE WESTERN ARCHITECT.

FROM RUINS OF BALBEK (Heliopolis)  
See Correspondence.

October 1902

U. S. E.  
UNIVERSITY OF ALABAMA

Supplement to  
THE WESTERN ARCHITECT.



WHOLESALE BUILDING OF F. A. PATRICK & CO., Duluth, Minn.  
PALMER, HALL, & HUNT, Architects, Duluth.

LIBRARY  
OF THE  
UNIVERSITY OF ALABAMA



RESIDENCE FOR  
GEO. H. CROSBY ESQ.  
DULUTH, MINN.

I. VERNON HILL ARCHITECT,  
DULUTH - MINN.

Supplement to  
THE WESTERN ARCHITECT.

RESIDENCE FOR GEO. H. CROSBY, Esq., Duluth, Minn.  
I. VERNON, III., Architect, Duluth.

October 1902

LIBRARY  
OF THE  
UNIVERSITY OF ALABAMA



### Red Wing Produces One-Half of Minnesota's Clay Products.

According to the government census reports on clay products and manufactures, Red Wing enjoys the distinction of producing fully one-half of the output of the state of Minnesota.

An unsatisfactory condition is shown in clay working, not only in Minnesota, but throughout the United States as a whole, the capital invested in 1900 and the output being several per cent less than in the year 1890, but this, the census report explains, was due to the hard times of 1893, which closed the brick yards. The brick industry, according to the census report, is the first to feel the effect of hard times and the last to recover.

But Red Wing has not been affected by the general decline. While the remainder of the state has been going backward, Red Wing has more than doubled its clay manufactures, a fact which is indicated in the figures of the report.

The big falling off in clay-working in ten years has been in the manufacture of common brick, which has decreased from a value of \$1,089,468 in 1890 to \$753,825 in 1900. The manufacture of pressed and fancy brick shows increase in quantity, though a decrease in value. The manufacture of sewer pipe has come up from practically nothing in 1890 to nearly \$200,000 in 1900, and here is where Red Wing helps out the state at large in keeping up its reputation among clay producers.

The increase in the amount of business of the potteries of the state is not shown, but the product for 1900 is given at \$206,300. The number of men employed in all clay industries in the state is 1,276 in 1900, against 2,238 in 1890. The falling off is explained as largely due to the introduction of machinery.

Besides making appropriations for the erection of 185 new government buildings, Uncle Sam has decided to enlarge and repair some fifty-eight old buildings, and congress has consented to increase the cost of several others now under construction, this being necessary because of the increased cost of materials and labor. Some of the new buildings are to be models in their way; notably the new postoffice for the city of St. Louis, which is to be completed in time for the coming exposition. Extensive enlargement and repairs are to be made on the old government building at Richmond, Va., which was occupied by Jefferson Davis and the confederate secretary of the treasury during the civil war. In Cleveland the site for a new government building has been changed in order to harmonize with a plan for grouping all the public structures between the lake and the square. The city is to build a new court-house, a city hall, an art gallery, an auditorium and a public library, and congress has consented to change the location of the federal building so as to conform to the system of the group. Supervising Architect Taylor has recently been in Minneapolis to plan repairs for our antiquated and out-grown building.

### German Excavations at Baalbek.

By George C. Doolittle.

Every traveler in the Holy Land visits, if possible, the vast ruins of the ancient Roman city of Heliopolis. It is situated at Baalbek, a small modern Syrian town, usurper of the former dignity and grandeur of its ruined predecessor. In the autumn of 1898 came a royal tourist, the emperor of Germany, whose immense retinue and equipment for tent life filled the town with splendor and unwonted activity, almost a repetition of old Roman days. Among other ceremonies was the unveiling of a tablet inside the Temple of Jupiter, commemorative of his visit. On one-half the marble slab are sentiments in German with the royal German crest. In the parallel column is the same in Arabic, but surmounted by the Sultan's monogram. Queer combination,—Jupiter, Abdul Hamid, and William!



The Quarry before recent excavations, with ruins of Baalbek in distance

Some good archeological results, however, have sprung from this triumvirate, for the Sultan was pleased to grant to the Emperor permission to excavate in the mighty ruins. This the Kaiser's men are doing with characteristic Teuton patience and thoroughness. A competent corps of engineers has been sent to Baalbek (largely at royal expense), and the partial results of their work after two years of excavation are extremely interesting. They have made most careful and accurate drawings of the ground plan on each level, as they have cleared away the debris. The position of each important stone and column, just where it fell and even the angle at which it lay, has been noted on the diagrams. Their restoration drawings, revised and corrected as further operations have brought to their hand added knowledge and details, are marvels of carefulness and reveal what must have been the magnificence of the great temple area and structures.

It was the good fortune of the writer to traverse the length and breadth of the ruins with the chief engineer, plans and restorations in hand. The area of

the operations is immense, but this does not daunt German persistence. Plots of ground surrounding the ruins have been purchased and filled with debris,—earth and stones. Temporary tracks for moving the

dump-carts have been laid in all directions, and so great is the amount of rubbish removed that it has entirely changed the contour of the surrounding district and panorama.



View of principal ruins of Baalbek. The smaller and foremost Temple of which the cella and portions of the peristyle remain standing is 228 feet long.

The change within the ruins is commensurate with the labor bestowed. The great temples originally stood upon this vast area. The larger, the Temple of the Sun, consists of four distinct sections of varying size, from east to west. The first is the grand portico, reached by a broad flight of steps. It is a rectangle, originally with twelve columns in front; the whole portico is now filled with debris. Two Latin inscriptions announce that this great temple was erected and dedicated by Antoninus Pius and Julia Domna (hence about 190 A. D.). Excavations in this portico are now in progress, though so recently begun that no results can be tabulated. Behind this, and connected by a triple doorway whose portals are, respectively, 10, 23, and 10 feet wide, is the hexagonal court, where the engineers have done some excellent work. They have uncovered a large hexagonal paved floor, several feet lower than the other level, surrounded by steps (also preserving the hexagonal outline). Several stone altars were found among the rubbish, their bases so cut as to fit exactly over the edge of the highest step. On all sides of this court, except the western, which was open to the next division, were shell-shaped niches and lateral chambers. Passing eastward to the immense square entrance court of the temple proper, the

observer is in an area 450 feet long by 360 feet wide. Here the excavations have brought to light the original Roman altar, upon which sacrifices were offered before the entrance to the Temple of the Sun. The Christian emperor, Theodosius (about 285 A. D.), thought to efface this heathen altar by building upon it a large basilica. The foundations of the church have been carefully traced by the Germans, though they were largely removed in uncovering the altar area and the grand series of wide steps leading up to the temple level. This mighty edifice was surrounded by a peristyle of nineteen columns on each side and ten at the ends of these, but only six now remain, the glory of Baalbek. Sixty feet high, with Corinthian capitals, surmounted by their entablature, these great pillars tower above all else.

Surrounding the temple and its peristyle, on the north, west, and south, is a strange enclosing wall, made of the giant stones which have rendered Baalbek famous. These walls on the north and west are fully exposed. But the south wall lies buried under a vast pile of debris. To prove the theory of this surrounding wall the Germans have excavated at a distance of 29 feet from the peristyle, and have come upon just such gigantic blocks as form the wall upon the other two sides.



Photo by our correspondent, showing an inner wall of the Temple of Jupiter, the Sultaunkaiserlicherstein and the lost art of using engaged half columns with effect.

A stone 70 feet long, 14 feet thick, and 13 feet wide cannot be easily hid. This vast temple area from east to west, with its portico, two courts and temple proper, was open to the sky, and worshippers standing under the great central doorway at the eastern portico could look clear across to the resplendant Temple of the Sun.

Operations before the portal of the smaller temple—the Temple of Jupiter—have brought to light a vast double series of steps and platforms, reaching from the great portal far before it alongside the walls of the Temple of the Sun. For centuries this great plaza has been buried under rubbish, a wall built across it in one place, and a Turkish fortification jutting over and upon it. The Temple of Jupiter is one of the most beautiful of archeological remains in all Syria.

Much smaller than the mighty sun temple, although itself 228 feet long, it was roofed over, and had a peristyle all about it. This consisted originally of fifteen columns on the north and south sides, and eight at the rear towards the west, and also eight at the front. The portal was guarded by a double row of columns, each ending in one beautifully fluted. This work was Corinthian in style, very elaborate and beautiful. The ceiling between the surrounding peristyle and the cella was elaborately enriched with a paneling containing the figures of gods and emperors, alternating. These panels were contrived to fill in a beautiful geometrical framework all profusely carved.

The engineers have removed the rubbish from this peristyle, have strengthened some of the columns, and secured from falling the famous leaning column on the south side of the temple. Work at the great portal of the temple has wrought marked changes. For many years the central stone of the lintel over this



Great Portal of the Temple of Jupiter as it appeared before the visit of our correspondent. This Portal was 21 ft. 4 in. wide.

great portal, a sort of great key-stone, which had slipped down four or five feet, has been kept from falling out by a stone pier built under it. Now this has been raised to position and securely fastened, and the unsightly stone prop removed. Thus has disappeared one of the items found in every guide-book. Tourists may miss it, but they will never regret its absence. Once more the portal appears in its entirety 21 feet in width, a gem of elaborately wrought carved work, with vines, garlands, and figures in lavish profusion. Now that the key-stone has been raised and the ugly prop removed, its decorations can again be studied. On the under side is the figure of an eagle with outstretched wings, holding in its talons a staff, and in its beak long garlands, held at the other ends by cupids or genii. This great portal is flanked by piers or wall masses large enough to inclose stairways leading to the top of the walls and originally to the roof.

The interior walls of the temple are ornamented with fluted half-columns surmounted by exquisite Corinthian capitals, and the interstices occupied by a double arrangement of niches. The Germans are attempting the Herculean task of clearing out the interior of the temple. They have found that the floor is nearly as far below the ground level as is the top of the walls above it. Thus the great portal assumes its original magnificent proportions. The only thing to suffer by this mighty transformation is the memorial tablet of the Emperor and Sultan. It now reminds one of Baron Munchausen's horse tied during a great blizzard to a church spire (mistaken for a hitching-post), and left hanging there after the next morning's fierce sun had melted the great snow-drift. When the Temple of Jupiter shall have been entirely cleared of debris, and, possibly, the old altar discovered and set in place, it will add wonderfully to the already grand interior of the heathen temple, already the most magnificent and beautiful antiquity in all Syria.

The Egyptians of all nations seemed to have built and planned with the most exclusive regard to permanence, says one of the London architectural papers. They designed to make antiquities. A dim, bewildered instinct, a yearning after immortality, was the primum mobile of all their undertakings. They preferred an unconscious existence in the form of hideous mummies to utter dissolution; they feared that the bodiless spirit might lose its personal identity, and expected, or wished, after the expiration of the great cycle, to find all that they had left exactly as they left it—the same bodies, the same buildings, the same obelisks pointing at the same stars. Strange faith—that the soul, after all varieties of untried being, would return to animate a mummy. The Greeks built for beauty, the Romans for magnificence, the Orientals for barbaric splendor (the Chinese, indeed, for fantastic finery), the Gothic nations for the sublimity of religious effect or martial strength, a Dutchman builds to please himself, a sensible Englishman for convenience, others of that nation to show their wealth or their taste. But the Egyptian built in defiance of time, or rather propitiated that ruthless power by erecting him altars whereon to inscribe his victories over all beside.

## Warm Air and Combination Heating.

By E. H. Roberts.

The comparative merits and scope of the several systems of heating, and their adaptability to different classes of buildings, are subjects worthy of the most careful study by every architect. What the heart and lungs are to an individual, the heating and ventilating plant is to a building. Each system of heating has advantages not shared by other systems, and each has a particular sphere of usefulness, so that what is said in this article in favor of warm-air heating should not be construed as an attempt to minimize the value of the other systems.

Under certain conditions, however, warm-air heat is not only satisfactory, but it is the pleasantest and most convenient, as well as the most economical, system that can be installed; for example, a certain wholesale firm in Minneapolis is heating with a single furnace a three-story store-building, 50x150 feet in size, with seventeen, sixteen, and fifteen foot ceilings on first, second, and third floors, respectively. The first floor is heated to seventy degrees; the second floor, from sixty to sixty-five degrees, and the third to fifty degrees. There are altogether about 360,000 cubic feet to be warmed and the heat is uniform and satisfactory in every nook and corner of the building.

The fuel required for the entire building all last winter cost one hundred and two dollars (\$102.00), and the owner is so well pleased that he would not exchange his furnace for the most expensive hot-water or steam plant.

To obtain such results as this, certain conditions are necessary:

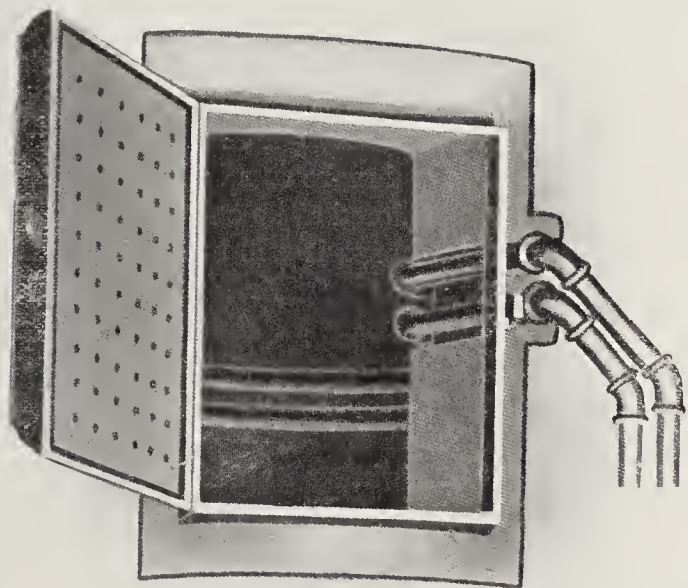
First.—The building must be so arranged that the air can circulate through every part without recourse to long basement pipes.

Second.—The apparatus must be so constructed as to utilize every available unit of heat. In this instance there is a preponderance of radiating surface to heat-absorbing surface of over ten to one, and a fire travel of nearly forty linear feet.

Third.—The apparatus must be properly placed. More furnaces fail to give satisfaction because they do not meet this condition than for any other one reason. Nothing connected with a heating-plant is more important than the proper location of the furnace and warm-air registers, and the size and arrangement of the air-supply.

Fourth.—The fourth essential to successful furnace heating is the size of the heater. This should be amply large for the work it has to do, and the result will be economy of fuel and greater durability of the furnace. It is not necessary that a furnace should be several sizes larger than required; indeed, this is a positive disadvantage, but it is easier to get along with a furnace which is much too large than one a little too small, just as a man with a No. 7 foot would be more comfortable in No. 9 shoes than a man with a No. 9 foot would be in No. 7 shoes.

Aside from churches, where furnaces are almost universally used and where their superiority to other systems is not questioned, the largest sphere of the warm-air furnace is in residence heating, and here it is that mistakes are, perhaps, most often made. More skill and judgment are required to install a warm-air furnace properly than to put in a steam or hot-water plant, because with the latter the circulation of heat is positive, and if the pipes are properly graded there is no serious danger of failure, while the circulation of the warm air depends upon numerous conditions not always thoroughly understood by the average heating contractor. It is a comparatively easy matter for an experienced engineer to change over a defective warm-air plant, and effect a saving of from 33 1-3 to 50 per cent in the amount of fuel consumed. Another point to be considered is convenience of operation. There are some furnaces good enough as far as heating capacity is concerned that would try the patience of Job, because they are made without any reference to convenience in starting fires, feeding, shaking, dumping, regulating, etc.



The accompanying cut shows a very simple arrangement whereby the coil for heating a kitchen tank is located in an off-set at one side of the feed-door, where it is entirely out of the way and avoids the necessity of drilling or otherwise weakening the heater. Every furnace should be provided with a direct draft-damper to give an immediate outlet for smoke and gas when starting or replenishing fires, and when this damper is closed the smoke products should be compelled to circulate far enough and in such a direction that every bit of available heat will be utilized.

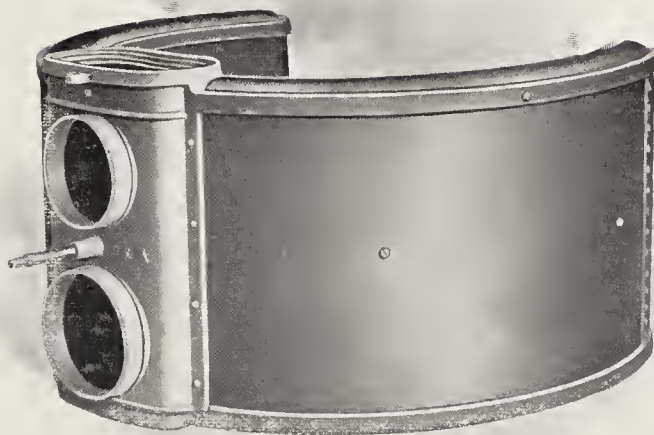
When such a furnace as I have endeavored to describe, has been properly placed in a building adapted to furnace heating, there is nothing in the line of heating apparatus more satisfactory or more economical.

In comparison with other systems the warm-air furnace has the following advantages: The cost of in-

stallation is less, and the expense of maintenance is as small, as, if not less than, with other systems; there is no danger of pipes freezing or of expensive repairs of any kind becoming necessary. Furnace heat is also more sanitary, because pure air is supplied to the building and more perfect ventilation can be obtained. Warm-air registers, and particularly the new side-wall registers, are usually less objectionable than radiators, on account of the space occupied by the latter and the difficulty in sweeping under them.

Furnaces also transmit the heat to rooms with which they are connected much more quickly than either hot-water or steam boilers, and this is a great convenience in mild weather when a few sticks of wood will do in a few moments what would require hours and considerable fuel to do with a hot-water plant.

To offset these advantages there is the trouble sometimes experienced in heating remote rooms, or such parts of the building as are exposed to prevailing winds, but this can usually be obviated by locating the furnace so as to favor such rooms or by arranging for



a circulation that will draw the warm air over to the colder parts of the building.

When houses are not conveniently arranged for warm-air heat, a combination of warm air and hot water is often a great advantage over warm air alone, and this style of heating has rapidly grown in favor during the past few years. It combines the advantages of both warm air and hot water without the disadvantages of either, and is in many respects the ideal system of heating.

In placing a combination plant the same general rules apply as with furnaces, but, in addition, the shape, size, and location of the boiler must be considered. It is a very common mistake to load down a furnace with more hot-water radiation than it can carry successfully, and as a result the warm air part is rendered inefficient.

It is sometimes contended that the demand for furnaces will decrease as people get better able to afford more expensive plants, but we consider this a mistake. It is probably no exaggeration to say that the sale of warm-air furnaces and combination heaters throughout the northwest has doubled during the past year, and we believe that the demand for this apparatus will continue to grow in popularity as architects and the public generally become better acquainted with the proper methods of installation, and the style of plant which is best suited to one's needs.

---

### Painting a Floor.

Very frequently a painter may be asked to paint a floor, and in many cases is instructed as to the color, and other little matters. In the case of the floor being one that is to be done with oil paint, and to have much wear, the painter should select such coloring substances of certain earthy matters only, because the use of white lead for such a purpose is an error that should be avoided.

Many will advocate the use of lead in painting floors because of its supreme density and body, under the mistaken idea that density adds to its wearing quality. As a matter of fact no oil paint will stand less wear than white lead or colors composed largely of white lead. It simply covers the surface, and is one of the best paints employed to protect woodwork where there is no great wear.

Ochres make the best wearing paints, and they may be applied in several ways. They may be mixed with the oil, and applied with a brush in the usual manner, or they may be applied when mixed with hot stale beer and glue water, and when dry two coats of oil may be laid on thinly with a good strong brush, and, if properly done, the work will be lasting and satisfactory.

Care must be taken that the floor is perfectly clean and dry before the color is applied, and if the latter is mixed with oil, the floor should receive two coats, both of which should be well brushed in.

With new floors certain stains may be applied, and give satisfactory results without any sizing. When water stains are used they can be allowed to thoroughly sink in, and should then be varnished.

---

As a guide to the decorator who may be uncertain as to his ability to properly contrast colors, the following is offered as a guide in his decorative work: Black and warm brown; violet and pale green; violet and light rose; deep blue and golden brown; chocolate and bright blue; deep red and gray; maroon and warm green; deep blue and pink; chocolate and pea green.

The superficial area of floor space is found by taking the measurements of each room separately from wall to wall, squaring, and adding together. The walls are not taken account of. Measurement of a building "per square" for rough pricing is, however, obtained

by taking the dimensions from out to out of the walls at the ground level, so as to include any projection of the plinth or other set-off. The cubical contents of a building are usually found by taking the dimensions from out to out of walls and from half the depth of footings to half-way up the roof.

---

Architect Cass Gilbert, of St. Paul and New York, has been commissioned to make plans providing for a new 20-story building on the present site of the Continental National Bank building in Chicago, besides adding ten stories to the Rand-McNally building, which adjoins on the west. It is said that this new enterprise in Chicago building operations will involve an expenditure of over \$4,000,000.

The Construction News, of that city, says that "It is possible that Mr. Gilbert will give his brother practitioners in Chicago some ideas worth cultivating and broaden their view as to office building architecture."

A large number of good things emanate from the west, and we will no doubt be pardoned in mentioning The Western Architect as one of them.

---

### Cement and Building Material.

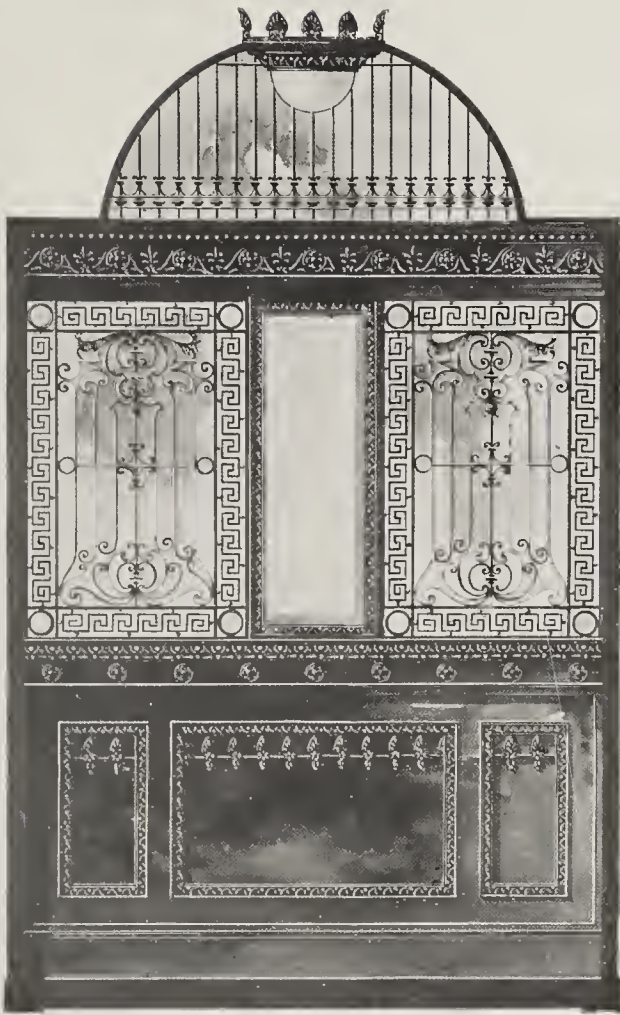
Grand Rapids (Mich.) bricklayers and masons have taken a stand against the use of cement for walls of buildings. To them this innovation seems harmful to their trade. Doubtless it may prove so, as cement is coming into use more and more as a building material. Thus far it may be considered to be only in the infancy of its development. Perhaps it will be just as well to have some understanding reached without bad feeling. If cement is to be the coming building material, however, it will be idle for masons to attempt to prevent its use. By becoming adepts in the handling of this material these tradesmen can continue to find profitable employment. By fighting its use and permitting others to become experts, bricklayers may eventually find the demand for their labor greatly reduced. It is worse than useless for these workers to attempt to get in the way of progress.—Exchange.

---

On the 14th the detached bell tower of St. Mark's cathedral, in Venice, the tower known as the Campanile, fell with a great crash in a pile of ruins 100 feet high. The height of the tower was 327 feet. It was erected in 888, restored in 1329, topped with marble in 1417, and crowned with the statue of an angel in 1517.

The cause of the collapse will not be made clear until the debris is cleared away for the restoration, which it is most gratifying to learn, has been promptly arranged for, a prominent New York banker of Venetian birth being numbered among the liberal subscribers.

Newspaper accounts give causes in every degree of plausibility—damage from a stroke of lightning being among the foremost. Another suggestion is made that the piling upon which most of Venetian buildings are supposed to stand may have given out. Meanwhile every street corner has its "I-told-you-so."



FLOUR CITY ORNAMENTAL IRON WORKS,  
M'frs and designers of Ornamental Iron and Bronze - - MINNEAPOLIS

F. O. Streed, Pres. and Treas. A. Peterson, Vice-Pres. C. M. A. Carlson, Sec



## Northwestern Mantel Co.,

MANUFACTURERS OF

Wooden Mantels, Counters, Bank, Store and Office  
Fixtures, Marble, Slate and Mosaic Work,  
Plumbers' and Butchers' Marble.

**Monuments and Headstones.**

Dealers in Grates, Tile and Tile Flooring. Factory, Salesroom and Office,  
419-421 Sixth St. So.,  
MINNEAPOLIS, MINN

TELEPHONE { N. W. Main 1084 J.  
Twin City 723.

# CELADON Roofing Tile Company

EASTERN OFFICE:  
Room 1123-4 156 Fifth Ave.  
NEW YORK,

WESTERN OFFICE:  
Room 1001-2 204 Dearborn St.,  
CHICAGO.

FACTORIES { ALFRED, N. Y. GEO. H. LAWES & COMPANY, Agents,  
OTTAWA, ILL. 49 EAST FIFTH ST., ST. PAUL. 842 LUMBER EXCHANGE, MINNEAPOLIS.

MORGAN BROOKS, President.  
GEO. W. HAYFORD, Sec.-Treas.

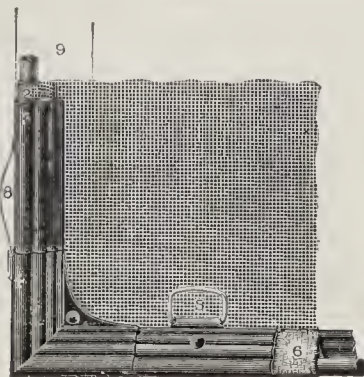
## ELECTRICAL ENGINEERING

PHONES: N. W. Main 1722  
Twin City 170

Wholesale and Retail Dealers in EVERYTHING ELECTRICAL.

SPECIALTIES: ELECTRIC LIGHT, POWER SUPPLIES, ELECTRIC HOUSE GOODS, TELEPHONES, ETC.

ELECTRICAL ENGINEERING COMPANY, - - - 248-250 Hennepin Ave, Minneapolis, Minn.



Corner Section of Screen

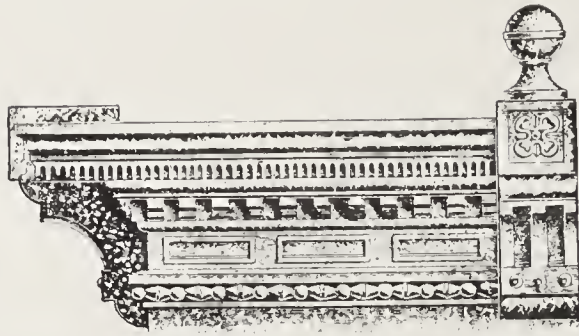
## The "Higgin" Metal Frame Window Screen

Does not shrink, swell, warp or come to pieces in the corners. Is neat, light, ornamental and durable. Is easily removed from window and replaced. Allows for either top or bottom ventilation. Just the thing for your new home. Send for Catalogue. Estimates Free.

The HIGGIN Manufacturing Co., - - - Newport, Ky.

Jos. M. LEFEBVRE, President,  
P. A. DESLAURIERS, VICE-PRES.

L. T. LEFEBVRE, TREAS.  
GUSTAV A. CARIVEAU, Sec



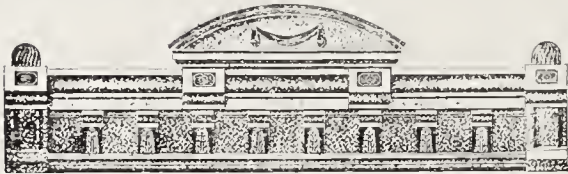
### Lefebvre Roofing and Cornice Company,

—MANUFACTURERS OF—

## Architectual Sheet Metal Work

ROOFING in Asphalt, Pitch and Gravel, Iron, Tin and Slate.

26 East Eighth Street, - - - ST. PAUL, MINN.  
TELEPHONE CALL, 1147.



### HAAG-LAUBACH ROOFING & CORNICE CO.

Manufacturers of Cornices, Sky Lights, Steel Ceilings, and Sheet Metal Work of all Descriptions for Buildings.

Special attention given to Ventilation and Hot Blast Work.

Estimates cheerfully furnished. - - - All work has our personal attention  
Call Us up if you are in need of Anything in Our Line.

N. W. Phone. 1409 J-1 24-34 West Third Street, - - - ST. PAUL, MINNESOTA.

## THE BREEN STONE CO., 418 Germania Life Insurance Building, St. Paul, - Minnesota.

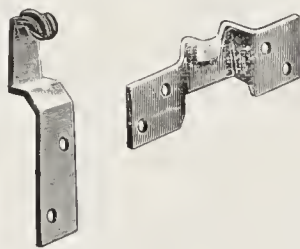
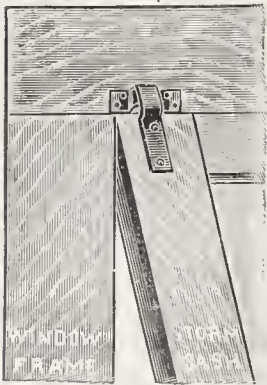
QUARRIES: St. Cloud. DRESSED AND UNDRESSED STONE.  
Kasota.

# THE "SENSIBLE" Storm Sash--Screen Hanger and Fastener.

ENDORSED AND SPECIFIED BY LEADING ARCHITECTS EVERYWHERE.

They are made of malleable iron which insures the greatest strength. Their peculiar construction forms an absolute safety lock that prevents the window from being blown off the hooks in the most severe weather. They can be hung or taken off from the inside of the house at pleasure.

The only Hangers and Fastener on Market that bring Sash on tight.

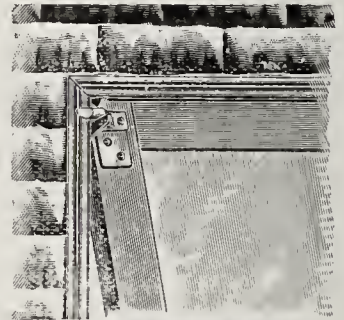


Hanger No. 1

Hanger No. 2 is especially desirable for Brick Buildings the portion attached to the Casing being made of the best wrought steel, and that fastened to the Sash is made of the finest malleable iron, making it very strong and secure.



HANGER NO. 2



FASTENER NO 1 MALLEABLE  
The eccentric slot pulls the sash close to the casing, allowing no air to enter the room.

These Goods have a fine Japan Finish and are packed with black screws



HANGER NO 3



Screen Hanger No. 3 can be fastened to 3/4 blind stop, therefore not in the way of storm windows, shutters or blinds, and can be used on whole or half screens.

R. G. WINTER. 327 NICOLLET ANENUE, MINNEAPOLIS, - - - MINN.

MANUFACTURED BY



## RAILROAD NOTICES

The Milwaukee will enlarge its freight depot in St. Paul. The addition will be 200 feet long and will be completed this fall.

The Minneapolis & St. Louis will build a new freight house at Fort Dodge, Iowa, and possibly a passenger station. The expenditure will be \$25,000.

The Union Depot Company of St. Paul will build a \$6,000 engine house and shops at the end of Third street. It will build also a turntable in the station yards.

A party of Milwaukee officials, including A. J. Earling, president, H. R. Williams, general manager, and many of the board of directors, including William Rockefeller, were in Minneapolis recently on the annual inspection tour. They went west on the Hastings & Dakota division.

The beautiful booklet issued by the Oregon Railroad and Navigation Company descriptive of Oregon, Washington and Idaho, contains much of interest to the prospective settler and many are turning their eyes toward that section of the union. The booklet is nicely illustrated and gives attention to the many industries in these states. Send six cents in stamps to A. L. Craig, General Passenger Agent, Oregon Railroad and Navigation Company, at Portland, Oregon, and receive one of these beautiful booklets.

Not in one train but in many. The North-Western Limited and Badger State Express trains to Chicago, the Twin City-Omaha Express, the Twin City-Omaha Limited, and the Twilight Limited are away ahead of any other trains. In fact the NorthWestern line over which these trains run was the first line in the west to establish this high class of service and to the North-Western Line belongs all the credit there may be of giving to the people of the Twin Cities the best equipped trains in the world. Others may imitate but have not equalled.

\$32.90 to California and Arizona points via the Chicago Great Western railway. Tickets on sale daily during September and October. Five-day stop-overs allowed at certain California points. Through tourist cars. For further information inquire of L. C. Rains, agent corner Nicollet avenue and Fifth street, Minneapolis.

The progressive spirit of the Northwestern Line is clearly shown by the fact that they operated the first Pullman sleeping cars in the northwest, the first dining cars, the first compartment sleepers, the first library buffet cars, the first parlor cars, and, more recently, were the first to introduce observation cafe car service out of the twin cities to Chicago, to Omaha and to Duluth.

FOR

### Length AND Quality OF Service



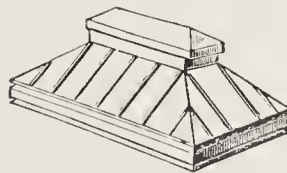
## The Remington

DEFIES COMPETITION.

WYCKOFF, SEAMANS & BENEDICT.

ST. PAUL.

MINNEAPOLIS.



George F. Boehme Cornice  
Roofing & Sheet Metal Works

7 East Third Street,

ST. PAUL, MINNESOTA.

Sky Lights, Metallic Fronts, Steel  
Ceilings, Sidings and Roofing.

TELEPHONE MAIN 2287.

## Horton Manufacturing Company.

255-257 Sixth Avenue So.,

MINNEAPOLIS.

# OFFICE FITTINGS

CHURCH AND SALOON FIXTURES.

Manufacturers of

Mantels, Sideboards, etc., Alterations and Repairing.

**DULUTH, MINN.**

Heating, Ventilating,  
Plumbing, and Fire  
Extinguishing  
Equipment.

**AMERICAN HEATING CO.,**  
229 Michigan St., Duluth, Minn.



**Farrell & Turnbull,**  
Plumbing,

Steam and Hot Water Heating  
and Gas Fitting.

125 EAST SUPERIOR STREET,  
Duluth, = = Minn.

**DEETZ & COMPANY,**

SKY LIGHTS ROOFING  
and FIRE PROOF DOORS,  
SMOKESTACKS and VENTILATING PIPES,

**ROOFING**

IN TIN, IRON, SLATE, PITCH and GRAVEL and ASPHALT  
408 EAST SUPERIOR ST.,  
DULUTH, - - MINNESOTA.

**PAINE & NIXON CO,**  
GLASS. Wholesale BRICK.

**BUILDING MATERIAL.**

L. D. Phone 566.

Mirrors, DS, SS, Plate and Ornamental Glass of all kinds. Lime, Cement, H. W. Plaster, Wire and Metal Lath Fireproofing Tile. Common, Veneer, Pressed and Fire Brick of all kinds. Passenger and Freight Elevators. Ornamental and Structural Iron. Parquet and Hardwood Flooring. Roofing and Blackboard Slate.

Minneapolis Office, 617 Masonic Temple.

106 WEST MICHIGAN ST., - - DULUTH, MINN

LOW PRICES  
ESMIMATES FURNISHED

STEAM AND  
HOT WATER BOILERS

**D. R. Black,**  
Plumbing, Steam and Hot Water Heating.

20 THIRD AVE. WEST,

TELEPHONE 450.

DULUTH, MINN.

**Crown Iron Works Co.**

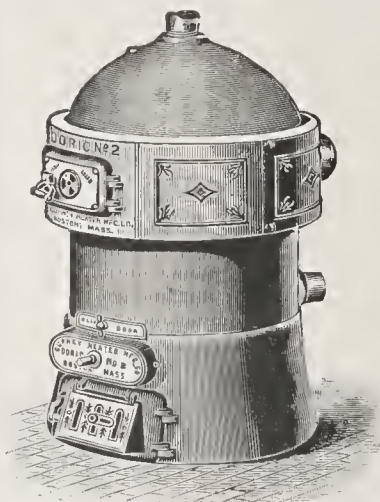
Bridge and Jail Work.

MACHINE WORK OF ALL DESCRIPTIONS.

Iron Columns  Steel Beams.

Sidewalk Lights, Heavy Forgings, Roof Trusses  
Fire Escapes, Iron Fences, Iron Stairs,  
Graftings, Lintels.

113-115 Second Ave. So. E., MINNEAPOLIS, MINN,

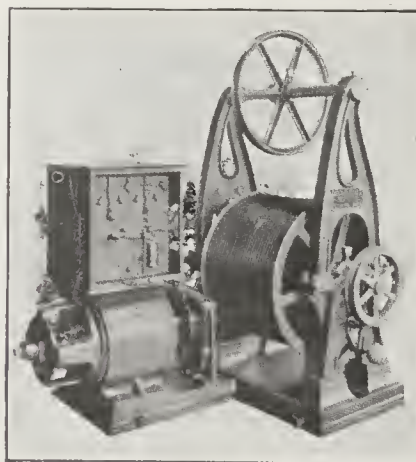


**Archambo Heating  
and Plumbing Co.**

221 So. Third St., Minneapolis, Minn

Hot Air Furnaces and Com-  
bination Heaters. Steam  
and Hot Water Heating and  
ventilating apparatus. Sanitary  
Plumbing and Gas Fitting.  
Engineers' and Steam  
Filters' Supplies.

Telephone 248.



**Lee & Hoff Mfg Co.**

Manufacturers of

**Elevators**

Passenger, Freight, Electric  
Steam, and Hand Power.

Dumb Waiters, Automatic  
Doors and Gates.

Nos. 81 to 91 Fillmore Ave.,  
St. Paul, = Minn.

**Frank H. Nutter,**  
MINNEAPOLIS, MINN.

Landscape Architect and Engineer.

Parks, Cemeteries, Public and Private Grounds.  
Correspondence Solicited. 710 Sykes Block, 254-256 Hennepin Ave.

**P A T E N T S**

obtained on inventions and designs. Trade-marks  
prints and labels registered.

**R. W. BISHOP,** ATTORNEY AT LAW,  
WASHINGTON D. C.

Established  
1878.

# Selden Roofing & Manufacturing Company.

—MANUFACTURERS OF—

**GALVANIZED IRON and COPPER CORNICE,**

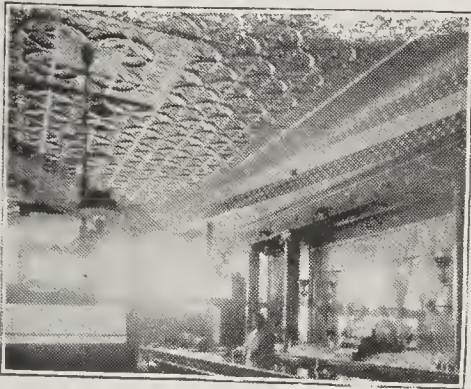
Architectural Sheet Metal Work, Iron Doors and Shutters, Skylights, Ventilators, Corrugated Iron. ❀❀❀❀

ASPHALT, PITCH, GRAVEL **ROOFING** IRON, TIN AND SLATE.

41 South Eleventh Street,

= = = = =

Minneapolis, Minn.



**Steel Ceilings** are very beautiful, durable and not expensive.

SPECIALLY VALUABLE IN

**SCHOOLS, CHURCHES AND STORES.**

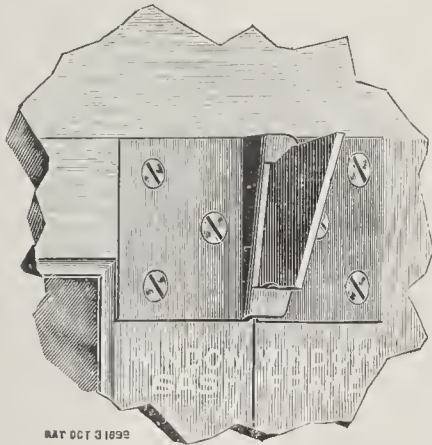
WE MANUFACTURE MANY HANDSOME PATTERNS

**St. Paul Roofing, Cornice & Ornament Co.,**

Send for Catalogue.

Cor. Wabasha and Water St., ST. PAUL, MINN.

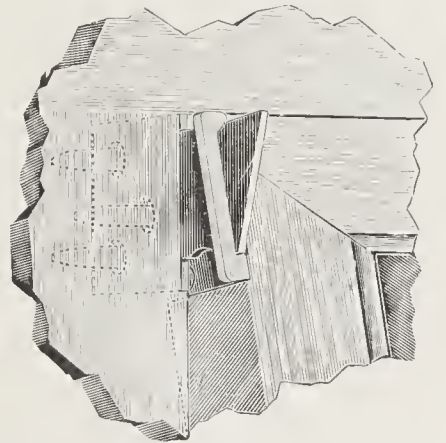
## “Acme” Storm Sash and Screen Hangers and Fasteners.



No. 1 or Visible

Made from **Wrought Steel** (strongest and most durable material known) with the finest tool steel **Dies** (insuring absolute accuracy.) **Will not blow off. Will not rattle.** Sash can be hung easier than with any other device.

The “**V**” Hangers and **Double side Fasteners** draw the Sash tightly up against stop, which it is impossible to do with a single Fastener at bottom.



No. 2 or Invisible

Fasteners work **AUTOMATICALLY** in opening. Hangers are made in two styles, No. 1 or “Visible”, and No. 2 or “Invisible”, the latter being adapted for use on brick houses. The two styles are **INTERCHANGEABLE**, the only Hangers made that are so, and that can be used in four different combinations. **ANY** of which may be used on **HALF** or **FULL** screens, no matter how thin. **This is the only Hanger made that can be used where sash is not flush with frames.**

The only Hangers and Fasteners actually manufactured in the Northwest. Call and inspect workmanship.



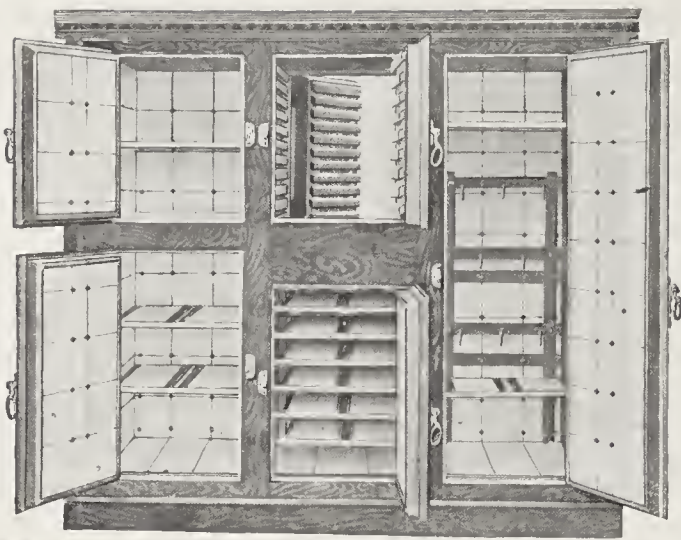
Handled by all Hardware Dealers, Sash and Door Factories and Carpenters.

For further information address the makers,

# The Heath-Quimby Mfg. Co.,

102 HENNEPIN AVENUE,

MINNEAPOLIS.



### McCRAy REFRIGERATOR.

Orderless Wood and Tile Lined BUILT TO ORDER. Also a full line of stock sizes ready for immediate shipment for Residences, Hotels, Clubs, Restaurants, Groceries, Meat Markets, Hospitals, Public Institutions, etc.

The McCray System insures perfect circulation of pure cold air; absolutely dry; never sweats; therefore is Perfectly Hygienic. For economical use of ice it has no equal. Physicians, prominent men, hospitals and sanitariums endorse the McCRAY REFRIGERATORS.

McCRAy REFRIGERATORS speak for themselves. Catalogues and estimates furnished free upon application. Catalogues: No. 36 for Residences; No. 45 for Public Institutions, Hotels and Cold Storage Houses; No. 55 for Groceries and Meat Markets.

McCRAy REFRIGERATOR COMPANY, 256 Mill Street, KENDALLVILLE, INDIANA.

Minneapolis Branch: Ornes, Esswein & Co., 251 Second Avenue South.

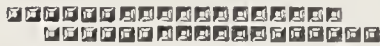
OTHER BRANCH OFFICES.—Chicago—55 Wabash Ave. New York—341 Broadway. Washington D. C.—610 11th St. N. W. Boston—52 Commercial St. St. Louis—404 North Third St. Birmingham, Ala.—1820 3d Ave. Detroit—7-9 Clifford St. Pittsburg—545 Liberty St. Columbus, O.—356 N. High St. San Francisco—103 Front St. Toronto, Can.—28 Wellington St. W. Columbia, S. C.—1210 Main St.

No. 219 SPECIAL TILE LINED REFRIGERATOR. Iced from rear porch.  
Built for J. C. TUCKER, Jr., Narragansett Pier, R.



#### MANUFACTURERS OF

Galvanized Iron Cornices, Window Caps, etc., Corrugated Iron, Hayes Patent Skylights, Fire-proof Doors and Shutters.



WM. RHODES, President.

GEO. H. RANNEY, Sec. & Treas

## Scribner-Libbey Co.



ST. PAUL, MINNESOTA.

OFFICE AND WORKS:  
FOURTH, COR. W. Fifth Street.

ESTABLISHED IN 1870.  
INCORPORATED IN 1883.

### ST. PAUL, MINN.



#### ROOFERS IN

Asphalt, Pitch and Gravel.

Slate and Iron.

Metal Ceilings.

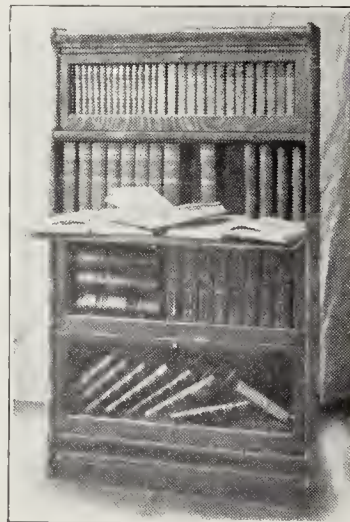


### THE PRIZER-PAINTER STOVE & HEATER CO.

MANUFACTURERS

### Henderson Hot Water and Steam Heaters

Northwestern Branch.  
Office, 19 Gilfillan  
Warehouse - St. Anthony Park  
ST. PAUL, MINN.  
A. W. LUCK - Manager  
Radiators and Supplies.



## Cree - Dickson

### SECTIONAL Book Cases.

This cut shows 4 sections high all the same width but to accommodate different height books. Each section fits perfectly on the one below and can be placed one on top of the other as high as the room will permit. The door on one of the Sections is open and in use as a shelf. The end of our case show a smooth surface and looks more like a solid case.

You can see the entire back of Books in the Cree-Dickson Sectional Book-case, because the door hangs an inch below the shelf, and there are no cross bars in the case. The weight of a book will hold the door in a horizontal position, and when removed the door closes automatically and therefore cannot be left open through neglect or absent-mindedness.

This book case is just the thing for Architects to keep their architectural library in as well as magazines, plates, photographs.

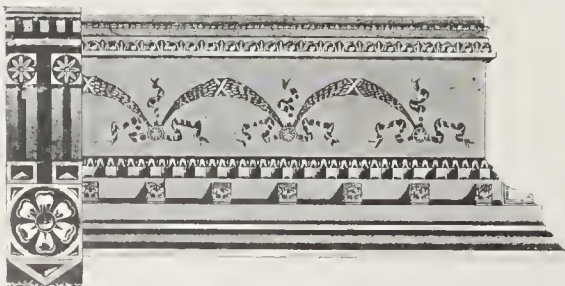
Send for Illustrated Discriptive Catalogue.

## Cree-Dickson Mfg. Co.

Phoenix Building,

Telephone Twin City 2418.

Minneapolis.



### Northwestern Roofing and Cornice W'ks

Phones T. C. 976.  
N. W. 1692-J-2

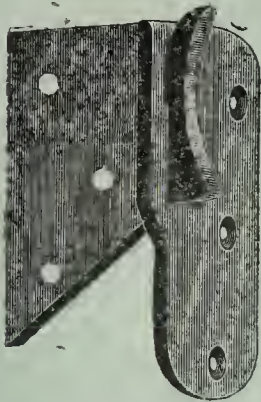
Copper, Galvanized Iron, Slate, Tin, Pitch and Gravel Roofing, Skylights, Finials, Conductors, Etc.

STEEL CEILINGS.

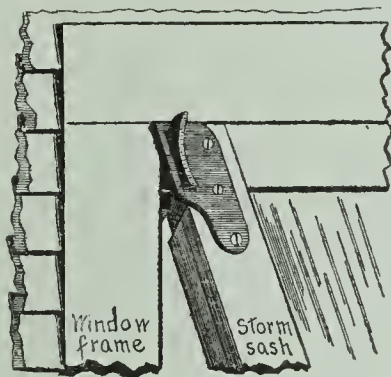
1111-13 SOUTH FIFTH STREET,

JOSEPH TYRA, Manager.

Minneapolis, Minn.



No. 1716  
Visible Hanger



No. 1716  
Visible Hanger

## Schroeder's Patent Hangers and Fasteners for Storm, Sash and Window Screens.

With these hangers storm sash can be easily and quickly put up or taken down without the aid of ladder, nails screws or tools. The fasteners permits the sash to be swung out for ventilation or cleaning. A perfect device for hanging storm sash or screens. Recommended by leading **Architects, Contractors and Builders.**

Sold by all **HARDWARE DEALERS** and **SASH MANUFACTURERS.**

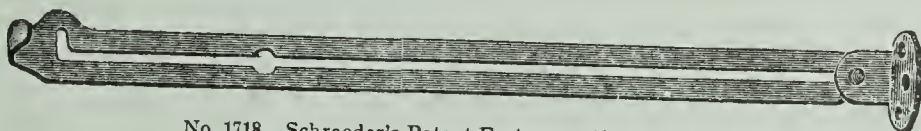
Manufactured by the

# Stanley Works,

NEW BRITIAN, CONN

Makers of

Ball Bearing Butts and Builders Hardware.



No. 1718. Schroeder's Patent Fastener. 10 inches long.

**BEST PAINT IN THE WORLD**  
**CARRARA**  
**PAINT**  
 MADE IN ALL COLORS AND WHITE

**LOWEST FIRST COST**

**WE GUARANTEE**

One Gallon to cover more surface, covers it better, outwears all others, cleans more readily, holds color elastic, non-porous, non-poisonous. ❀ ❀ ❀ ❀

**DOES NOT**

Crack, Chalk, Powder, Peel, Blister or Fade; Is not affected by Gases, Grease, Acids, Salt, Moisture or Changes in Temperature. ❀ ❀ ❀ ❀ ❀

**LONGEST LASTING**

**What CARRARA Paint ACTUALLY SAVES YOU**

In regular painting the paint amounts to only one-fourth of the total cost, the balance being labor. The price of Carrara Paint is about the same as old style paints, so that by using old style paints you save nothing to start with and find you have thrown away money in the end, for the reason that a house painted with the old style paints will seldom last 2 to 3 years, while Carrara Paint will actually wear from 8 to 10 years.

Write us for color card, testimonials and prices. Let us give you an estimate. ❀

**L. LAMB LUMBER COMPANY,**  
 (DISTRIBUTERS,) ST. PAUL

# Adamant

THE PERFECTION OF

# Wall Plaster

—Manufactured by—

**United States Gypsum Co.,**

MINNEAPOLIS, MINN.,

—ALSO—

Chicago, Ill. Milwaukee, Wis. W. Superior, Wis.

# St. Paul Foundry Company.



Manufacturers of

Architectural

Structural

Iron    

Engineers

Work  

Steel Trusses, Girders,  
Columns and Buildings.

Large Stock on hand of Beams,  
Channels, Angles and Plates.

General Foundry, Blacksmith and  
Machine Work.

Offices, Como Ave. and MacKubin Street.

Works, G. N. Ry., near Como Ave.

ST. PAUL.



This magnificent building, the Kansas City Post Office and Custom House, erected at a cost of two millions, is

PLASTERED WITH

## Kallolite Cement Plaster.




The government builds well and uses only the best material after carefully testing the different kinds.

### Cardiff Gypsum Plaster Co.

MANUFACTURERS.

Not Connected with any trust or Combine. FT. DODGE, IOWA.

# D. L. BELL

Wholesale and Retail Dealer  
in all Kinds of   

## LIME, CEMENT, PLASTER PARIS,

Hair and Fire Brick.

Northwestern Agents for the Celebrated Utica Cement.

Office: 274 Jackson St.,  
Telephone Call 259-3.

St. Paul, Minn.

# “Richardson’s” Fire Proof Doors

WITH FRAMES AND CASINGS MAKE YOUR BUILDING  
FIRE PROOF and are HANDSOME in APPEARANCE.

[They are used throughout

Office

Hotel

Theatre

Hospital

Sanitarium

Mercantile and

Warehouse Bldgs.

Special Designs for Entrance Doors Executed,  
FINISHED IN OLD COPPER, BRASS, GRAINED or PAINTED.

## FIRE PROOF DOOR CO., MINNEAPOLIS, MINN.