

NOVEMBER 26, 1904

THE AMERICAN ARCHITECT AND BUILDING NEWS

Vol. LXXXVI

REGULAR EDITION

No. 1509

ARCHITECTURE

ENGINEERING

DECORATION

CONSTRUCTION

NEW YORK
Times Building, Broadway and 42d Street

BOSTON OFFICE
8 Dix Place

Price
15
Cents

CONTENTS

TEXT: pp. 65-72.

EDITORIAL SUMMARY.

PASSENGER ELEVATORS—II.

EMERGENCY EXITS IN THEATRES.

THE TEMPLES AT PHILAE.

ILLUSTRATIONS.

CHURCH OF THE EPIPHANY, WINCHESTER, MASS.

INTERIOR DETAILS OF CHANCEL OF SAME CHURCH.

TRANSVERSE SECTION OF THE SAME CHURCH.

CARDIFF HOUSE, WIMBLEDON, ENGLAND.

(Additional Illustrations in the International Edition.)

INTERIOR DETAILS OF NAVE, CHURCH OF THE EPIPHANY,
WINCHESTER, MASS.

EXTERIOR DETAILS OF NAVE OF THE SAME CHURCH.

ELEVATORS

OUR FACILITIES INCLUDE

A modern factory. Competent engineering talent. A local agent and a force of skilled mechanics in Boston, New York, Philadelphia, Baltimore and Atlanta. We offer you the best Passenger and Freight Elevators (Hydraulic, Electric, Belt or Hand Power.) We guarantee right prices for the apparatus furnished. Prompt attention to inquiries and prompt shipments. :: :: :: :: ::

Morse, Williams & Co.

Philadelphia Boston New York Baltimore Atlanta



The Great Church Light

is made to fit all conditions. All styles from the plainest to the most elaborate. All we know about church lighting is yours on request.

I. P. FRINK, 551 PEARL ST., NEW YORK.

(For Classified List see Cover 3.)

Alphabetical List of Advertisers.

A Algonquin Red Slate Co.....v American Mason Safety Tread Co.....vii American Sheet and Tin Plate Co...E Architect and Contract Reporter, Theii Art Metal Construction Co.....vi Associated Expanded Metal Co.....x Atlas Portland Cement Co.....M	E Elevator Supply and Repair Co.....1 Elston, A. A.....xi Erickson Electric Equipment Co.....xi	L Lawrence Scientific School.....1 Loomis-Manning Filter Co.....1 Lord & Burnham Co.....v	S Samson Cordage Works.....E Sargent & Co.....(Cov.) 2 Shultz Belting Co.....xi Silver Lake Co.....xi Simpson Bros. Corporation.....xi Sleep, Elliot & King Co.....xi Smith & Co., Edward.....1 Smith Co., H. B.....E Society of Beaux-Arts Architects, The.....1 Spaulding Print Paper Co.....xi Standard Fire-escape & Mfg. Co.....xi Standard Sanitary Mfg. Co.....ii Sturtevant Co., B. F.....3
B Barrett Mfg. Co..... Batchelder & Co., C. H.....xi Benedict & Burnham Mfg. Co.....E Bergen Mfg. Co.....ii Blodgett Clock Co.....vi Broad Gauge Iron Stall & Vane Worksxi Building News, The.....3 Butcher Polish Co.....ii	F Fisher & Co., Robert C.....1 Flynt Building & Construction Co.....1 Fowle, Herbertxi French & Co., Samuel H.....v Frink, I. P.....(Cov.) 2	M Mass. Institute of Technology.....1 Miller & Bro., James A.....v Morrill & Whiton Construction Co...xi Morrill, E. P.....viii Morse, Williams & Co.....E Morse & Whyte.....xi Moss, Chas. E.....xi Mott, J. L.....viii	T Taylor Co., N. & G.....E Taylor, J. W.....vi Thorn, J. S., Co.....xi Troy Laundry Machine Co.....(Cov.) 4 Truss Metal Lath Co.....vii
C Cabot, Samuel.....vi Cairns, Hugh.....xi Campbell, Walter M.....viii Chicago & Alton Railway.....v Chicago Clothes Dryer Works.....xi Cornell University.....1 Craig, David.....E Crane Co.....vi Cudell, F. E.....viii Cutler Mfg. Co.....ii	G Gallagher & Munro.....xi Gilbreth, Frank B.....xi Gilbreth Seam-face Granite Co.....xi Globe Ventilator Co.....(Cov.) 3 Gurnsey Heater Mfg. Co.....(Cov.) 4	N National Fireproofing Co.....iii Neuchatel Asphalt Co.....vi New England Tank and Tower Co...E New Jersey Zinc Co.....xi Newman, George A.....viii New York Belting & Packing Co...E New York Metal Ceiling Co.....v Northwestern Terra-Cotta Co.....xii	U University of Pennsylvania.....1 United States Foundry and Sales Co.vii U. S. Mineral Wool Co.....viii
D Dadmun, Leon E., &.....xi Deane, E. Eldon.....vii Dixon Crucible Co., Jos.....v	H Hartmann Bros. Mfg. Co.....vii Harvard University.....1 Hayes, Geo.....v Hecla Iron Works.....4	O Ohio State University.....1 Okonite Co. (Ltd.).....E	V Valle & Young.....(Cov.) 4
	J Jackson & Co., Wm. H.....(Cov.) 4 Jager Co., Charles J.....E Jenkins Bros.....vi Johnson & Co., H. A.....xi Jones, T. W.....E	P Passaic Steel Co.....xi Pitt, W. E.....iv	W Warren Chemical Mfg. Co.....vi Washington University School of Engineering and Architecture.....1 Whittier Machine Co.....1 Williams, John.....viii Winslow Bros. Co., The.....1
	K Keasbey & Mattison Company.....vii Kinnear Mfg. Co., The.....(Cov.) 2	R Richey, Browne & Donald.....vi Richter Mfg. Co.....3 Rider-Erickson Engine Co.....v Robey-French Co.....xi Rutan, W. L.....xi	Y Yale & Towne Mfg. Co.....xii

THE AMERICAN ARCHITECT AND BUILDING NEWS

A WEEKLY JOURNAL OF CONSTRUCTIVE AND DECORATIVE ART.

VOL. LXXXVI.—No. 1509.

SATURDAY, NOVEMBER 26, 1904.

PRICE, 1/2 INTERNATIONAL ISSUE, 50 CTS.
1/2 REGULAR ISSUE, 15 CTS.

WHITTIER MACHINE CO.,

PASSENGER AND FREIGHT
ELEVATORS.

53 STATE STREET

BOSTON.

BOOKS:

"Door and Window Grilles."

104 Plates: 10" x 14 1/2".
In Cloth, \$7.50.
In Portfolio, \$6.50.

THE AMERICAN ARCHITECT, Publishers.



ARCHITECTURAL INSTRUCTION

BOSTON, MASS.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

DEPARTMENT OF ARCHITECTURE.

Options in Architectural Engineering and
Landscape Architecture.

College graduates and draughtsmen admitted
as special students.

SUMMER COURSES in Elementary De-
sign and Shades and Shadows. Proficiency in
these subjects will enable draughtsmen and
students from other colleges to enter third year
work.

For catalogues and information apply to

H. W. TYLER, Secretary,

Mass. Institute of Technology, Boston, Mass.

LOOMIS FILTERS.

ESTABLISHED 1880.

Improved System. Simple and Effective.

LOOMIS-MANNING FILTER CO.

Main Office: 828 Land Title Bldg., Broad and
Chestnut Streets, PHILADELPHIA.
Boston. New York. Baltimore. Washington.

CAMBRIDGE, MASS.

HARVARD UNIVERSITY.

THE LAWRENCE SCIENTIFIC SCHOOL

offers professional courses in Forestry, Engineer-
ing, Mining and Metallurgy, Architecture, Land-
scape Architecture, etc. Students admitted by
examination and by transfer from other Schools
or Colleges. Approved Special Students admitted
without examinations. New and enlarged equip-
ment. For Catalogue apply to the Secretary.
I. L. LOVE, 16 University Hall, Cambridge, Mass.
N. S. SHALER, Dean.

COLUMBUS, OHIO.

OHIO STATE UNIVERSITY COLLEGE OF ENGINEERING

Offers four-year courses in Architecture, Civil,
Electrical, Mechanical and Mining Engineering,
and in Ceramic. Tuition free. For informa-
tion address

President W. O. THOMPSON, Columbus, O.

ITHACA, N. Y.

CORNELL UNIVERSITY

COLLEGE OF ARCHITECTURE

Offers a four-year course in Architecture leading to
the degree of B. Arch.; also a two-year special course
with certificate.

NEW YORK.

THE SOCIETY OF BEAUX-ARTS ARCHITECTS

has established

A FREE COURSE OF STUDY

open to draughtsmen and students of any city mod-
elled on the general plan pursued at the Ecole des
Beaux-Arts in Paris, and comprising frequent prob-
lems in Orders, Design, Archeology, etc.

For information apply to the Secretary of the Com-
mittee on Education, 3 East 88d St., New York City.

FLYNT

BUILDING AND CONSTRUCTION CO.

GENERAL OFFICE, PALMER, MASS.

We contract to perform all labor and furnish all mate-
rial of the different classes required to build complete

CHURCHES, HOTELS, MILLS, PUBLIC
BUILDINGS AND RESIDENCES.

Also for the construction of

RAILROADS, DAMS AND BRIDGES.

We solicit correspondence with those wishing to
place the construction of any proposed new work
under our CONTRACT, which shall include all branches
connected with the work. To such parties we will
furnish satisfactory references from those for whom
we have performed similar work.

Ornamental Iron and Bronze

The WINSLOW BROS. CO.

CHICAGO

NEW YORK

New York Office, 160 Fifth Avenue

PHILADELPHIA, PA.

UNIVERSITY OF PENNSYLVANIA

SCHOOL OF ARCHITECTURE

FOUR-YEAR COURSE. (Degree B. S. in Arch.)
(Architectural engineering may be taken in lieu of
advanced design, etc.)

GRADUATE YEAR. (Degree M. S. in Arch.)
(Allowing specialization in design or in architectural
engineering, etc.)

SPECIAL COURSE OF TWO YEARS. (Certificate.
(For qualified draughtsmen; affording option in archi-
tectural engineering.)

COMBINED COURSES IN ARTS AND ARCHITECTURE
by which A. B. and B. S. in Arch. may be taken in six
years.

COLLEGE GRADUATES granted advanced standing.
SUMMER COURSES in elementary and general subjects
through which advanced standing in the Four Year
Course may be secured.

For full information address: DR. J. H. PENNIMAN,
Dean, College Hall, University of Pennsylvania, Phila-
delphia, Pa.

ST. LOUIS, MO.

WASHINGTON UNIVERSITY

DEPARTMENT OF ARCHITECTURE

Offers a professional four-year course in Archi-
tecture. Admission by examination or by certifi-
cate or diploma from other schools and colleges
Draughtsmen are admitted as special students.

THE ROBERT C. FISHER

COMPANY

Successors to Fisher & Bird

MARBLE and GRANITE WORKS

139th-140th Sts.:—Locust Ave. and East River
Established 1830. NEW YORK

A PERFECT RUBBED FINISH



can be obtained only by using varnish made from gums hard
enough to stand rubbing. Dull glass or polished surfaces can
always be obtained by using

I.X.L. Preservative Coatings

Write for Varnish information

EDWARD SMITH & CO., Varnish Makers and
Color Grinders

45 Broadway, New York

59 Market Street, Chicago



Berger's "Classik"

Metal Ceilings Were Given

A Gold Medal

And endorsed as the best metal ceilings in the world by a jury of experts at the St. Louis Exposition. They're made for stores, offices, residences, churches, schools, lodge rooms and every kind of structure. We make them exclusively. Our handsome ceiling catalogue free if you are interested in metal ceilings.

The Berger Mfg. Company
Canton, Ohio.

NEW YORK BOSTON PHILADELPHIA ST. LOUIS

J. W. TAYLOR'S PHOTOGRAPH SERIES

OF AMERICAN ARCHITECTURE

324 Dearborn Street, CHICAGO, ILL.

FOR INFORMATION ABOUT

U. S. MAIL CHUTES

Which are a necessity in Office Buildings and Hotels, write to the sole makers

THE CUTLER MFG. COMPANY
ROCHESTER, N. Y.

PATENTED

AUTHORIZED

"La Construction Moderne,"

A journal of whose merits our readers have had opportunity to judge because of our frequent reference to it and our occasional republication of designs that are published in it, is the most complete and most interesting of the French architectural journals.

The seventeenth annual volume is now in course of publication.

Subscription, including postage, 35 francs

Each weekly issue contains, besides the illustrations included in the text, two full-page plates, which by themselves are worth double the amount of the annual subscription.

**PRICE OF BACK ANNUAL VOLUMES
40 FRANCS**

Address for subscriptions and catalogues

**Librairie de la Construction
Moderne**

13 Rue Bonaparte, Paris, France

Established Nearly 40 Years

The Architect

And

Contract Reporter

Published Every Friday by P. A. Gilbert Wood

6 to 11 Imperial Buildings

Ludgate Circus

London, E. C.

Price, Fourpence

The "ARCHITECT AND CONTRACT REPORTER" has been established nearly 40 years; has a large and influential circulation; has been proved to be the best medium for advertising to Architects, Builders and Contractors; has the finest illustrations, and has been especially noted for its Art reproductions.

Send us six English 1d. stamps, and we will mail you sample copy.

Send us post-office money order for 50 cents and we will send you the last six weeks' issues.

On receipt of \$6.25 we will forward for 12 months.

"Standard"

Porcelain Enameled Ware

Is supreme in Design, Quality and Durability

IN recognition of this distinction the Honorable Jury of Awards of the LOUISIANA PURCHASE EXPOSITION, St. LOUIS, 1904, has conferred upon "Standard" Ware, which was exhibited in competition with all other sanitary goods of domestic and foreign manufacture, the highest awards and honors, namely

THE GRAND PRIZE

Since 1893 "Standard" Ware has been honored with the highest awards at every great exposition, nine in all. Of these awards, three have been obtained in foreign lands, and six in the United States. Each award constitutes the highest official honor of the period.

Standard Sanitary Mfg. Co.

PITTSBURG, U. S. A.

NATIONAL FIRE-PROOFING CO.

PITTSBURGH
PHILADELPHIA

NEW YORK
CHICAGO

BOSTON
BALTIMORE

We own patents for the Johnson System of Fire-proofing. Residences and other buildings can be made fire-proof without the use of steel. Let us give you estimates.

BOOKS:

"Italian Renaissance Doorways."

104 Plates: 10" x 14 1/2".

In Cloth, \$7.50.

In Portfolio, \$6.50.

AMERICAN ARCHITECT COMPANY, Publishers.

NOW
READY

Students' Edition OF THE "Georgian Period"

Topographical Index of Advertisers.

(For pagination, see Alphabetical Index on Cover 2.)

CONNECTICUT.		MASSACHUSETTS.		NEW YORK.	
South Norwalk.		Boston.		N. Y. City.	
United States Foundry and Sales Company Castings		Silver Lake Co. Sash-Cord		Hayes, George Metallic Lathing	
Stamford.		Simpson Bros., Corporation. Asbestolith		Hecla Iron Works.	
Yale & Towne Mfg. Co. Locks		Sleep, Elliot & King Co.		Ornamental Iron and Bronze	
Waterbury.		Modeling and Ornamental Plaster		Jackson & Co., Wm. H. Grates	
Benedict & Burnham Mfg. Co.		Spaulding Print Paper Co. Blue Prints		Jenkins Bros. Valves	
Seamless Tubing		Standard Fire-escape & Mfg. Co.		Jones, T. W. Vases	
ENGLAND.		Fire-escapes		Mott Iron Works, The. Iron Work	
London.		Sturtevant Co., B. F. Fan System		Neuchatel Asphalt Co. Asphalt	
Architect and Contract Reporter, The. Magazine.		Whittier Machine Co. Elevators		New Jersey Zinc Co. Zinc White	
Building News, The. Periodical		Cambridge.		New York Belting and Packing Co., Ltd. Interlocking Rubber Tiling	
Chicago.		Lawrence Scientific School (Harvard University) Architectural School		N. Y. Metal Ceiling Co. Metal Ceilings	
ILLINOIS.		Palmer.		Okonite Co., Ltd. Insulated Wire	
Chicago & Alton Railway Railroad		Flynt Building & Construction Co. Building Contractors		Pitt, W. R. Folding-Gates	
Crane Co. Valves		Worcester.		Rider-Ericsson Engine Co.	
Miller & Bro., J. A. Wire Glass Windows		Algonquin Red Slate Co. Paint		Hot-Air Engines	
Northwestern Terra-Cotta Co. Terra-Cotta		MISSOURI.		Sargent & Co. Builders' Hardware	
Taylor, J. W. Photographs		St. Louis.		Smith Co., H. B. Steam Heat	
Winslow Bros. Co., The. Ornamental Iron and Bronze		Washington University School of Engineering and Architecture. School		Smith & Co., Edward. Varnishes	
Baltimore.		NEW JERSEY.		Society of Beaux-Arts Architects. School	
MARYLAND.		Jersey City.		The Robert C. Fisher Company. Marble	
Vaile & Young Skylights		Dixon Crucible Co., Jos. Graphite		Truss Metal Lath Co. Metal Lathing	
MASSACHUSETTS.		Paterson.		U. S. Mineral Wool Co. Mineral Wool	
Boston.		Passaic Steel Co. Structural Iron		Warren Chemical & Mfg. Co. Asphalt Roofing	
American Mason Safety Tread Co. Stair Tread		Tenafly.		Williams, John. Wrought Metal	
Batchelder & Co., C. H. Roofing Duck		Richter Mfg. Co. Tape-strolea		Yale & Towne. Hardware (Art)	
Blodgett Clock Co. Clocks		NEW YORK.		Rochester.	
Broad Gauge Iron Stall & Vane Works. Stable Fixtures		Irvington-on-Hudson.		Cutler Mfg. Co. Mail Chutes	
Butcher Polish Co. Floor Polish		Lord & Burnham Co. Conservatories		Troy.	
Cabot, Samuel Deafening Quilt		Ithaca.		Globe Ventilator Co. Ventilators	
Cairns, H. Stone Carving and Modeling		Cornell University. Architectural School		Troy Laundry Machinery Co. Washing-Machines	
Campbell, Walter M. Perspectives		Jamestown.		OHIO.	
Craig, David Clean-out		Art Metal Construction Co. Metal Furniture		Canton.	
Dadmun, Leon E. Photography		Maspeth, L. I., New York City.		Berger Mfg. Co., The. Metal Ceilings	
Elston & Co., A. A. Buildings Torn Down		Richey, Browne & Donald. Ornamental Iron and Bronze		Cleveland.	
Erickson Electric Equipment Co. Electrical Contractors		Mount Vernon.		Cudell, F. E. Traps	
Fowle, Herbert Ornamental Plastering		Hartman Bros. Mfg. Co. Metal Furniture		Columbus.	
Gallagher & Munro Co. Plasterers		N. Y. City.		Kinnear Mfg. Co., The. Steel Rolling Doors	
Gurney Heater Mfg. Co. Hot-water, etc.		American Tin Plate Co. Roofing Tin		Ohio State University. Architectural School	
Jager Co., Charles J. Engineers		Associated Expanded Metal Co. Expanded Metal		PENNSYLVANIA.	
Johnson & Co., H. A. Portable Ovens		Atlas Cement Co. Cement		Ambler.	
Massachusetts Institute of Technology. School		Barrett Mfg. Co. Waterproofing		Keasbey & Mattison Co. Magnesia Covering	
Morrill & Whiton Construction Co. Masons and Builders		Chicago Clothes Dryer Works. Laundry Drying Machinery		Philadelphia.	
Morss & Whyte. Wire & Metal Works		Clifford & Lawton Books		French & Co., Samuel H. Mortar Colors	
Moss, Chas. E. Blue Prints		Deane, E. Eldon Draughtsman		Loomis-Manning Filter Co. Filters	
New England Tank and Tower Co. Tanks		Elevator Supply and Repair Co. Electric Signals		Morse, Williams & Co. Elevators	
Robey-French Co. Photographic Supplies		Frink, I. P. Reflectors		Newman, Geo. A. Perspectives	
Rutan, Wm. L. Building Contractor		Gilbreth, Frank B. Waterproof Cellars		Taylor Co., N. & G. Roofing Tin	
Samson Cordage Works. Sash-Cord		Gilbreth Seam-face Granite Co.		Thorn, J. S. Sheet Metal	
Shultz Belting Co. Leather Belting				University of Pennsylvania School	
				Pittsburgh.	
				National Fireproofing Co. Fireproofing	
				Standard Sanitary Mfg. Co. Porcelain Enameled Ware	

"Topical Architecture"

¶ People—both architects and publishers—smiled incredulously, some years ago, at our belief that we could find such demand for a new architectural publication as would make it profitable.

¶ We have found such demand, and "Topical Architecture," instead of succumbing early, as prophesied, entered on its fifth year of publication with the issue for November, 1903.

¶ The periodical is useful, well worth the money, and proceeds on lines different from any other publication.

¶ Isn't it your practice to sort out, classify and file away in drawers, cases, boxes or portfolios the photographs and other architectural illustrations that you may acquire? If so, why not add to these collections the *already classified* illustrations that are published in "Topical Architecture" by accepting one of the following:—

- | | |
|--------|--|
| \$3.00 | One year's subscription —Nov. '03-Oct. '04. |
| 5.00 | Two years' subscription—Nov. '02-Oct. '04. |
| 10.00 | Complete from beginning to Nov. '03 [46 issues]. |
| 12.00 | Complete from beginning to Nov. '04 [58 issues]. |
| 15.00 | { Complete from beginning to Nov. '03 and <u>either</u>
" <i>Italian Renaissance Doorways</i> " or " <i>Door</i>
<i>and Window Grilles</i> ," in portfolio. |
| 25.00 | { Complete from beginning to Nov. '04 and <u>both</u>
" <i>Italian Renaissance Doorways</i> " and " <i>Door and</i>
<i>Window Grilles</i> ," bound in cloth. |

NOTE:—"Italian Renaissance Doorways" and "Door and Window Grilles" are the first two volumes of the Topical Architecture Library and in character, make-up and quality conform with the monthly issues of "Topical Architecture" itself, but no plate contained in either book has been or will ever be published in the periodical: their contents can be had only in book form.

THE AMERICAN ARCHITECT

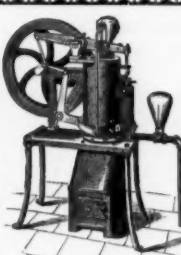
PUBLISHERS

NEW YORK

BOSTON

One Quality **Double the Life** *Four Colors*
of Steel Work and Metal Surfaces
 by Painting With
Dixon's Silica-Graphite Paint
Joseph Dixon Crucible Co. Jersey City, U.S.A.

.. WATER ..
RIDER & ERICSSON HOT-AIR
PUMPING ENGINES

If water is required for household use, lawns, flower beds or stable, no pump in the world will pump it so safely, cheaply and reliably. No danger, as from steam. No complication, as in gasoline engines. No uncertainty, as in windmills. Prices reduced. Catalogue "B" on application.

RIDER-ERICSSON ENGINE CO.
 35 Warren Street, New York
 239 Franklin Street, Boston
 692 Craig Street, Montreal, P. Q.
 40 Dearborn Street, Chicago
 40 North 7th St., Philadelphia
 Teniente-Rey 71, Havana, Cuba



CORRECT TIME

Fine Self-Winding Clocks for Office Buildings, Residences, Libraries, Churches, Etc.

Self-Winding Tower Clocks. No heavy weights. No stopping by storms.

Program Clocks and Time Systems for Schools, Public Buildings, Etc.

20,000 in Use

Write for Catalog

Blodgett Clock Co., 141 Franklin St., Boston

THE BUILDING NEWS

FOURPENCE WEEKLY

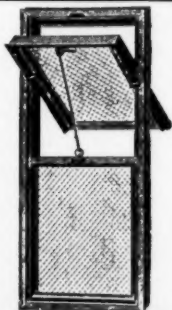
For 50 Years the Leading Architectural and Building Trades' Journal

LARGEST CIRCULATION. BEST ILLUSTRATIONS

Annual Subscription to United States } \$6.25 or £1 6s.
 including postage

BEST MEDIUM FOR ADVERTISERS. Specimen Copy free on receipt of postcard.

STRAND NEWSPAPER COMPANY, LIMITED, CLEMENT'S HOUSE
 STRAND, LONDON, W. C., ENGLAND



James A. Miller & Bro.

133 So. Clinton St., Chicago

Manufacturers

Fire Retarding Wire Glass Windows
Sheet Metal Frames and Sash

Skylights, Tile, Slate and Metal Roofing

Established 1844

Peerless Mortar Colors

Black, Red, Brown, Buff

NEW COLORS

Moss Green, Royal Purple, French Gray,
 Pompeian Buff, Colonial Drab

They are the original colors manufactured, and
 are the brightest and most durable

SAMUEL H. FRENCH & CO.
PHILADELPHIA

ALGONQUIN RED PAINT

Ready mixed for use. The best paint on earth
 for roofs, bridges, fences, buildings, and iron
 and wood work generally.

ALGONQUIN RED SLATE CO.
WORCESTER, MASS.

Conservatories, Greenhouses, Vineries, Etc.

Designed, erected and heated. Catalogue, also special
 plans and estimates, on application.

LORD & BURNHAM CO.,
 1133 Broadway - - - New York City

BOOKS:

"Renaissance Fireplaces."

40 Gelatine Plates, on bond paper, 9" x 11".
 In Envelope, Price \$5.00.

THE AMERICAN ARCHITECT, Publishers.



THE ALTON'S 1904 COW-BOY GIRL
 TRADE-MARK.
 "Sequel to the Fencing Girl."
 Copyright, 1903, by Chicago & Alton Railway.

ART CALENDAR

Four graceful poses from life; figures ten inches high, reproduced in colors by a process far superior to last year's calendar. Highest example of lithographic art.

"THE ONLY WAY"

to own one of these beautiful calendars is to send twenty-five cents with name of publication in which you read this advertisement, to Geo. J. CHARLTON, Gen'l Passenger Agent, Chicago & Alton Railway, CHICAGO, ILL.
 The best railway line between CHICAGO, ST. LOUIS, KANSAS CITY and PEORIA. Take the "Alton" to the St. Louis World's Fair, 1904.



JENKINS BROS., RADIATOR VALVES

The best grade of new steam metal is used, which takes a beautiful color when finished, making them entirely suitable for hotels, apartment houses and residences where the highest grade of work is demanded.

Our Trade Mark is stamped on all genuine.

JENKINS BROS., New York, Boston, Philadelphia, Chicago, London.

WARREN'S TRINIDAD ASPHALT ROOFING "ANCHOR BRAND" PAVING

THE BEST MATERIAL FOR

WARREN CHEMICAL & MFG. CO. 17 Battery Place, N. Y.

CRANE VALVES

ESTABLISHED 1855

ASPHALT FLOORS, ROOFS, SIDEWALKS AND CARRIAGE-WAYS

Of Public Buildings, Hospitals,
Warehouses, Stables, Cellars, etc.

Laid with VAL de TRAVERS ROCK ASPHALT,

DURABLE, FIREPROOF AND IMPERVIOUS.

For estimates and list of works executed, apply to

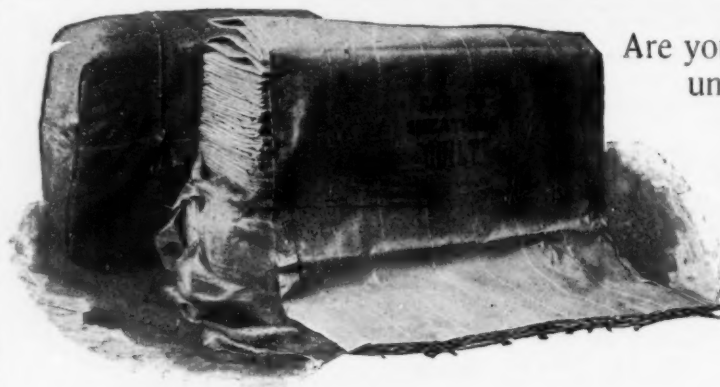
THE NEUCHATEL ASPHALT CO., Limited

265 BROADWAY - - - - NEW YORK.

"Minor Fountains"

Being No. 3 of a Series of
"Architectural Odds and Ends"

40 Gelatine Prints, \$5 Per Copy
AMERICAN ARCHITECT CO.



Are you aware that eel-grass is almost
uninflammable?

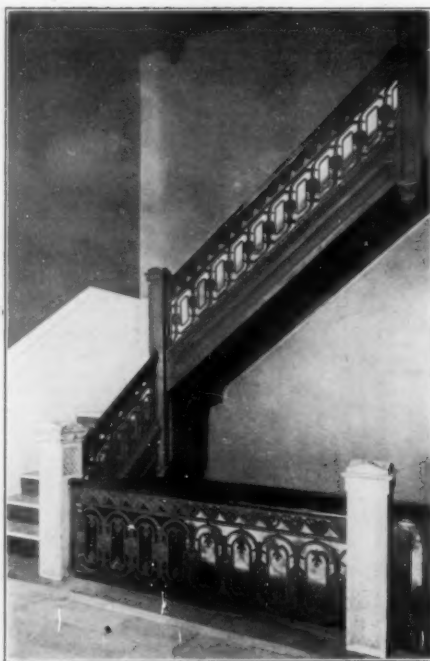
Do you know anything more
inflammable than flax?

Our Sheathing and Deafening
Quilt is made of eel-grass.

The imitations of our Sheath-
ing and Deafening Quilt are
made of flax or refuse tow.

SAMUEL CABOT, SOLE MANUFACTURER, BOSTON, MASS.

Richey, Browne & Donald



Staircase, Farmers' Bank Building, Pittsburgh, Pa.
Alden & Barlow, Architects.

M A S P E T H
Borough of Queens
New York City
NEW YORK

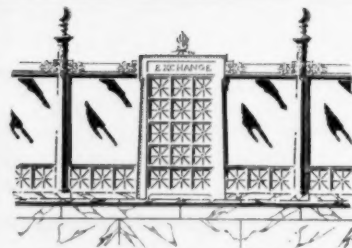
I R O N
BRONZE
—AND—
BRASS

Stairs, Elevator
Enclosures, 
Bank Counter 
Rails, Doors, 
Gates and Grilles.

ORNAMENTAL IRON and BRONZE

United States Foundry and Sales Company

South Norwalk
CONNECTICUT



Fine Metal Work

We invite the attention of architects
to our unsurpassed facilities for the
production of fine wrought and cast
metal work in steel and bronze for
counter screens, partitions, etc.

Particularly does our product in
steel and bronze plates combined with
architectural cast bronze work repre-
sent a distinctly new treatment
worthy of examination.

On application we will send our
Folio 467 containing views of COM-
PLETE EQUIPMENTS IN MAR-
BLE, STEEL AND BRONZE for
Banks and Offices.

Art Metal Construction Co.,
Jamestown, N. Y.

For Fireproofing Wooden Buildings

KEASBEY & MATTISON COMPANY'S "CENTURY" SHINGLES

With ordinary Care these Shingles will last a Century, without Painting or any other treatment whatever. They are the

Cheapest Shingles for Everyday Use

ABSOLUTELY FIREPROOF

Last Forever

Manufactured by

**THE KEASBEY & MATTISON CO.
AMBLER, PENNA.**

Standard Size 14x16 in. or any size to order. Our "Century" Sheathing for general fireproofing use can be had in large sizes

Address all correspondence to THE KEASBEY & MATTISON CO., AMBLER, PA.

BINDING.

The Standard Binding of the *American Architect* is a Cloth binding, which varies in color for the several editions, as follows:—

For the Regular Edition, Maroon.
International Edition, Blue.

The REGULAR EDITION is bound in Semi-annual Volumes.

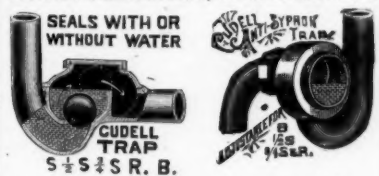
The INTERNATIONAL EDITION is bound in Quarterly Volumes.

The price for binding is \$2.00 per volume, Semi-annual or Quarterly. Any variation from our standard practice will entail an increased charge.

In every case the Plates are bound all together at the back of the volume to which they belong—the Double Plates being mounted upon guards.

Volumes sent to us for Binding will be treated according to this system, unless instructions of a contrary nature are given at the time the work is placed in our hands.

Put into the White House by the U. S. Government



F. E. CUDELL'S
Patent Sewer-Gas and Back-Water Trap
For Wash-bowls, Sinks, Bath and Wash-Tub
CLEVELAND, O.

HECLA IRON WORKS

N. 11th and Berry Sts., Brooklyn, N. Y.
ARCHITECTURAL METAL WORK
Stairs, Elevator Fronts, etc.

"HECLA FIREPROOFING" combines Metal with fireproof material for Windows, Doors, Stair Treads, etc.

Steel Concrete

Kuhne's Sheet Metal Structural Element for Fire-Proof Construction. Floors, Stairs, Partitions, Furrings, Outside Walls, Roofs, Side-walks, Trunk Sewers, Tanks, etc.

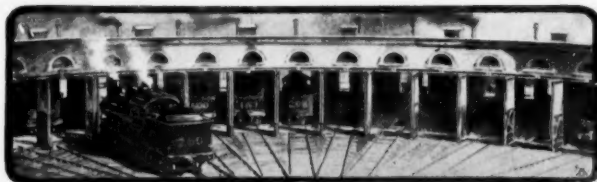
TRUSS METAL LATH COMPANY, Mfrs.
15-25 Whitehall St., New York

HEAT YOUR ROUND HOUSE by the STURTEVANT SYSTEM

and melt
THE ICE AND SNOW

from
The Locomotives

in one-third the time



Installed in all the leading round houses. A forced circulation of air, under absolute control. No leaky steam pipes.

B. F. STURTEVANT CO.
BOSTON, MASSACHUSETTS

General Office and Works, Hyde Park, Mass.

New York

Philadelphia

Chicago

London

201



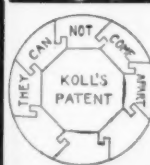
THE GENUINE
YALE LOCK
is made only by the

Yale & Towne

Mfg. Company.

General Offices: 9-11-13 Murray St.,
New York City.

How to distinguish it from its many imitations is carefully explained, with illustrations, in a little brochure which will be sent on request.



KOLL'S
Patent Lock Joint
Staved Columns

are particularly well adapted for out-door use. Made in all sizes from 5 in. to 42 in. diameter and proportionate lengths.

HARTMAN BROS. MFG. CO.
St. Vernon, N. Y., U. S. A.
N. Y. Office, 1123 Broadway.
Western Factory, Henry Sanders
Co., 77-85 Weed St., Chicago, Ill.

TAPESTROLEA BEST FOR ALL WALLS

Artistic in color and finish. Easily put on. All grades, plain, colored or decorated. Prepared Canvases and Muslin. Send for TAPESTROLEA booklet and sample books.

RICHTER MFG. CO.

BURLAPS

2 Franklin Ave., Tenafly, N. J.

The American Architect and Building News

IS PUBLISHED EVERY SATURDAY BY
THE AMERICAN ARCHITECT,
New York and Boston.

Advance Subscription Rates:

Regular Edition, \$6.00 per year; six months, \$ 3.50

[Foreign Postage, \$2.00 Extra.]

International Edition, per year in advance 16.00
" " quarterly " 18.00

ALSO PUBLISHERS OF

Topical Architecture

(Monthly)

Subscription \$3 per year

Payment should be made to American Architect Co. direct, either by draft or post-office order.

Address all business correspondence to the publishers direct.

Advertising Agents:

New York City:—

H. M. Carleton, Temple Court, 5 Beekman St.

Agents at Large:—

F. P. Spokesfield, 8 Dix Place, Boston, Mass.

Advertising Rates: For "wants" and "proposals," 15 cents per line (8 words to the line), each insertion. 50 cents the least charge. Other rates on application.

See last or next issue for the following advertisements:—

American Sheet & Tin Plate Co.
Benedict & Burnham Mfg. Co.
Butcher Polish Co.
N. E. Tank & Tower Co.
H. B. Smith Co.
N. & G. Taylor Co.
New York Belting & Packing Co.
Okonite Co.
Sargent & Co.
Samson Cordage Works.
T. W. Jones.

See the first issue of the month for the following advertisements:—

Atlas Portland Cement Co.
New Jersey Zinc Co.
Pitt. Wm. R.

ADDRESSES WANTED.

We shall be obliged to anyone who can provide us with the present addresses of any of the subjoined parties.

American Architect Co.,
238 Tremont St., Boston.

BARLOW, W. F., lately of Bar Harbor, Me.

BEESON, E. W., Jeffersonville, Ind.

BENKIRT, G. F., lately of 302 East Grace St., Richmond, Va.

CARPENTER, R. W. E., lately of Pittsburgh, Pa.

COLBERT, H. W., lately of Woodbury, Ga.

CUPPERWELL, E. W., lately of Union Stock Yards, Chicago, Ill.

DANS, F. L., lately of Ithaca, N. Y.

HAYES, JAS. T., lately of Syracuse, N. Y.

KNOX, PIERCE & DURVEA, lately of Worcester, Mass.

LOCKE, S. E., lately of Los Angeles, Cal.

MCCARTHY, P. A., lately of Indianapolis, Ind.

MARTLING, J. H., lately of Kansas City, Mo.

MAYDWELL & MCCLINTOCK, lately of 22 Sheldon Block, El Paso, Tex.

PERSPECTIVES RENDERED

IN PEN-AND-INK AND WATER-COLOR,

WALTER M. CAMPBELL,

8 Beacon St., Boston, Mass.

PERSPECTIVES

DRAWN AND RENDERED IN
WATER COLOR, PEN AND INK
AND WASH. PRICES REASONABLE

GEORGE A. NEWMAN

806 Provident Building Philadelphia, Pa.

Architectural Drawing Rendered

IN PEN-AND-INK

E. P. MORRILL

31 Bedford Street, Boston

E. ELDON DEANE,

Architectural Colorist and Draughtsman.

42 Seymour Building, Fifth Ave., cor. 42d St.

NEW YORK CITY.

Mason Safety Treads For STAIRS, WOOD, IRON, MARBLE
or CEMENT, new or old
Hundreds of thousands in use
Am. Mason Safety Tread Co., Boston

BRONZE

JNO. WILLIAMS
BRONZE FOUNDRY AND WORKS
WROUGHT IRON WORKS
544 to 556 WEST 27th STREET, NEW YORK

WROUGHT IRON

MINERAL WOOL

FIRE, SOUND and VERMIN PROOF INSULATOR.

Samples and Circulars Free.

**U. S. Mineral Wool Co., 143 Liberty Street,
NEW YORK.**

THE J. L. MOTT IRON WORKS

88 Beekman St., New York, N. Y.

The Tucker Improved Grease Trap

For use in Residences, Hotels, Clubs, etc.

Circulars may be had on application.



Copyright, 1902, by The J. L. Mott Iron Works.

BRANCHES

110 Fifth Ave., New York 911 Locust St., St. Louis
878 Boylston St., Boston Flood Bldg., San Francisco
1128 Walnut St., Philadelphia 135 Adams St., Chicago

NOVEK, BERNARD, lately of 914 Lumber Exchange, Minneapolis, Minn.

O'BRIEN, JAMES, lately of Bridgeport, Conn.

RICE, JOE, lately of Beaumont, Tex.

SHAFFER, MATTHEW, lately of Johnstown, Pa.

STONE, EDWIN J., lately of Worcester, Mass.

WEBSTER, W. H., lately of "The Naseby," Toledo, O.

WILCOX, F. O., lately of 614 Commercial St., New Orleans, La.

WOLF, JAMES, lately of 125 Broadway New York, N. Y.

BUILDING INTELLIGENCE.

(Reported for the American Architect and Building News.)

(Although a large portion of the building intelligence is provided by their regular correspondents, the editors greatly desire to receive voluntary information, especially from the smaller and outlying towns.)

ADVANCE RUMORS.

BALTIMORE, MD.—The Baltimore and Ohio Railroad Co. will erect a \$2,000,000 office building at the corner of Baltimore and Charles Sts., on a plot 155 by 128 feet.

BALTIMORE, MD.—The selection of the plans of Messrs. Parker & Thomas, Boston, by the trustees of Johns Hopkins University, for the development of Homewood, the future site of the University buildings and grounds, includes the laying out of the grounds and furnishing designs for the buildings, but the trustees retain the right to select architect or architects to furnish other designs for any of the buildings.

BROOKLYN, N. Y.—The fund of \$600,000 for construction is now complete, and a new Academy of Music will soon take the place of the old building destroyed by fire. Cor-

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

poration will be capitalized at \$1,000,000 and the full amount will be used in purchasing a site and erecting the new Academy. Four or five possible sites are under consideration.

BUFFALO, N. Y.—Plans are to be drawn for a new market building, and submitted to the Common Council, and necessary steps taken to obtain a bond issue of \$100,000. It is thought a desirable building can be erected for this sum. If a new building is erected, it will be much larger than the present structure, and the stalls that surround the building will have a huge glass and steel canopy over them.

BURLINGTON, VT.—An appropriation of \$60,000 has been made by the General Assembly for the erection and equipment of a building for the University of Vermont, to be known as Morrill Agricultural Hall, in memory of the late Senator Justin S. Morrill.

BATTLE CREEK, MICH.—Maurice P. Carney has drawn plans for a \$30,000 brick and stone stable building for W. R. Hande, 74x140, having gravel roof, wire glass, metal skylights, ventilators, sidewalk lights, etc. There will be ninety-six stalls and twenty-four box stalls. Bids close December 5.

BLOOMINGTON, ILL.—A new hospital building will be erected in the Spring, by St. Joseph's Catholic Hospital. Cost, \$40,000.

BROOKLYN, N. Y.—The Hanover Theatre Company, 22 Court St., will erect a theatre building after plans by Architects Kirby, Petit & Green, 23 West Thirty-fourth St., New York. It will have metal roof and skylight, structural steel and iron, fireproof construction, etc. Cost, \$200,000.



BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

CAMDEN, S. C.—Bids are desired by the County Commissioners of Kershaw County until Dec. 17, for the erection at Camden of a courthouse for said county. J. M. Sowell, County Supervisor.

COLUMBIA, TENN.—Bids are desired by Thompson, Gibel & Asmus, architects, 72-74 Cole Bldg., Nashville, Tenn., until Dec. 5, for remodeling four buildings and other work at the Arsenal, Columbia, for the Military School trustees.

COEUR D'ALENE, IDAHO.—It is reported that the Coeur d'Alene & Spokane Electric Ry. Co. and F. A. Blackwell have pledged \$75,000 for the erection of a hotel.

DUBUQUE, IA.—The Masonic fraternity contemplates the erection of a temple to cost \$30,000.

DETROIT, MICH.—Mrs. Tracy McGregor has furnished \$20,000 to erect a home for the Visiting Nurses' Association, corner Brush Street and Forest Avenue.

Albert Kahn is preparing plans for a new building for the country club at Grosse Pointe.

George D. Mason is preparing drawings for a large addition to the Masonic Temple. It will be 8-stories and 50 x 130 feet, located on Lafayette Ave.

N. Wardrop is preparing plans for an addition to St. Mary's Hospital, to be known as the Sister Mary Frances Memorial.

GAINESVILLE, FLA.—Bids will be received by the Supervising Architect, Washington, D. C., until Dec. 21st, for construction of U. S. Postoffice at Gainesville, as advertised in THE AMERICAN ARCHITECT.

HARRISON, ARK.—Bids will be received until Dec. 20, by the Supervising Architect, Washington, D. C., for installing low-pressure steam heating apparatus in the U. S. Postoffice and Courthouse at Harrison, as advertised in THE AMERICAN ARCHITECT.

HOUSTON, TEX.—Mackenzie & Torre, architects, Tulane-Newcomb Bldg., New Orleans, La., are drawing plans for a 12-story, steel-frame office building for the Cornucopia Publishing Co., of Houston, to cost \$300,000. Enamelled brick, terra-cotta and marble exterior, reinforced concrete floors, electric elevators, lighting and power plants, Tabor sash pivots. Plans will be ready for bids in two months. E. C. Robertson, 511½ Main St., secretary of company.

LA SALLE, ILL.—La Salle is to have a new \$30,000 city hall.

LITTLE ROCK, ARK.—Plans by Architect Whitehead, of Owensboro, Ky., and George R. Mann, of Little Rock, have been accepted for the new \$30,000 edifice for the Chris-

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

tian congregation at Tenth and Louisiana Sts.

LEWISTON, ME.—The new church to be erected for St. Peter's R. C. Parish will be the largest in the State of Maine. It will occupy the site of the present building on Bartlett St., and will be in the Gothic style of architecture. The cost will reach the hundreds of thousands, although it cannot be accurately estimated as yet. Work of construction to begin in March.

MANITOU, COLO.—The Norris House, which was destroyed by fire, is to be rebuilt by the owner, J. A. Ray. The new hotel will be of brick and sandstone, costing \$30,000.

MERIDIAN, MISS.—The directors of the Meridian Terminal Co. have accepted plans for the \$250,000 depot which they will erect in this city.

MEMPHIS, TENN.—The Business Men's Club has purchased for \$55,000 the two lots, 13 and 15 Monroe St., and will erect a handsome home for the organization, after Sept. 1, 1906, when it will be given possession of the property.

NEW YORK, N. Y.—James B. Haggin has decided to erect a residence on the old Progress Club property at the northeast corner of Fifth Ave. and 63d St., which he purchased in June, 1901, for \$763,000. The plot measures 100x100 ft.

NEW YORK, N. Y.—York & Sawyer, 156 Fifth Ave., have drawn plans for a \$400,000 hospital building for the Eye and Ear Hospital.

NEW YORK, N. Y.—The new museum building which Archer M. Huntington is to present to the Hispanic Society of New York will stand in Audubon Park, at 155th St., near Broadway. Plans have been filed and call for a 5-story, fireproof structure of the Ionic type, 70 by 100 feet. The facade will be of ornamental brick and limestone ashlar. Estimated cost, \$150,000. Architect, Chas. P. Huntington.

NEW YORK, N. Y.—A press report states that the Boreel building, at No. 115 Broadway, will be torn down on May 1, to make room for a new structure. The building stands on property formerly owned by Sarah Boreel, daughter of John Jacob Astor. It is the intention to extend the new Trinity building on the site.

NEW YORK, N. Y.—It is reported that a special hospital for immigrants affected with contagious diseases will be erected and that it has been determined to build an artificial island on which to locate it, as the price of land in New York is so high. The sum of \$150,000 is available and work will begin at an early date.

PORTLAND, ORE.—Bids will be received until Dec. 13, by the Supervising Architect, Washington, D. C., for installing low-pressure steam heating apparatus in the U. S. Postoffice and Courthouse at Portland, as advertised in THE AMERICAN ARCHITECT.

PORTLAND, ORE.—A press report states that at a meeting of the board of managers at Boston, Mass., held to see what action would be taken in the Lewis-Clark Exposition to open in Portland, June 1, 1905, the board decided to accept the report given by Hon. Wilson H. Fairbank and also the lot selected at his recent visit. A building will be erected to house the exhibits controlled by Massachusetts at St. Louis, and

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

these exhibits will be packed and forwarded to Portland, as soon as possible after the St. Louis Exposition closes. C. Howard Walker, a Boston architect, will be instructed by the board to propose plans for an exhibition building.

PITTSBURG, PA.—It is stated that the Western University of Pennsylvania is to be moved from Allegheny to Pittsburg proper and placed near the new Carnegie Technical School being built by Mr. Carnegie. About fifty acres of ground, sufficient for twenty large university buildings, is being secured at a cost of about \$2,000,000, and the work of construction will be begun before long. Nearly fifty people have pledged themselves to give from \$40,000 to \$100,000 each, for the school. Mr. Carnegie's contribution has not been announced.

POSSUM GLORY, PA.—Contract for erection of 40 dwelling houses here, for the H. J. Weaver Coal Co., of Philadelphia, has been awarded to John P. Kennedy, of Blairsville. Cost, \$50,000.

PURVIS, MISS.—P. H. Weather, of Jackson, is drawing plans for a \$50,000 courthouse, to be erected at this place.

PITTSBURG, PA.—The State Board of Normal Regents has recommended that the legislature appropriate \$60,000 for the purpose of buying land and erecting a building in Pittsburg for the normal training auxiliary to the State Normal School.

PITTSBURG, PA.—A 6-story fireproof brick and steel store building will be erected by T. J. Keenan, at 909 Penn Ave., after plans by F. C. Sauer, 804 Penn Ave. Building will be 20 by 160 feet. Cost, \$60,000. Mr. Keenan will also erect a 7-story fireproof building, 40 by 110 feet, at 938-940 Penn Ave., costing \$100,000.

PITTSBURG, PA.—J. W. Sherrer will erect seven modern dwellings on Jackson St. Cost, complete, \$45,000.

Contract for erection of a 2-story annex and Farmers' Deposit National Bank building has been awarded W. F. Nimble & Sons, Allegheny City. Interior of marble and hardwood. Cost, \$90,000.

RICHMOND, VA.—The Railroad Young Men's Christian Association of this city will soon take up with the executive officers of the railways entering this city the erection of a building to cost \$25,000, as a home for the association.

ROCHESTER, N. Y.—J. Foster Warner is architect of the new Buell building to be erected on Main St. It will be 5 stories, fireproof, 78 by 159 feet, costing \$80,000. Edward Strancken will do the mason work.

SEWARD, NEB.—A new courthouse and jail will be erected here, costing \$100,000.

ST. LOUIS, MO.—Architect O. J. Wilhelm, Granite building, has designed a 2-story brick building for the Strassburger Conservatory of Music, 2200 St. Louis Ave., to cost \$30,000.

SYRACUSE, N. Y.—The Board of Trustees of the Homeopathic Hospital will erect a \$50,000 pavilion on the west side of the present hospital.

SAN BERNARDINO, CAL.—Plans have been drawn for a hotel to be erected by the Arrowhead Hot Springs Hotel Company at the north of this city. Capital, \$500,000.

SEATTLE, WASH.—The Schwabacher Hardware Company will erect an eight-story block on 1st Ave. S. and King St., to

THE CRAIC
Cleanout and Dead-
End Stopper
An Improvement in
DRAINAGE CLEANOUTS
For Sale by all Jobbers



Manufactured by
**DAVID CRAIG, 70 BROAD STREET
BOSTON, MASS.**

J. S. THORN CO.
Architectural Sheet Metal Works
Manufacturers and Erectors of Ventilating Sky-
lights, Fire-proof Window Frames and Sash, and
Opening Fixtures to operate ventilating sashes.
Nos. 1223-33 Callowhill St., Philadelphia, Pa.

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

cost about \$200,000. Bebb & Mendel, archi-
tects.

The Imperial Development Company will
erect two three-story and basement brick
blocks at 5th Ave. S. and Washington St.,
costing \$20,000 each. Soderquist & Rose-
leaf, contractors.

SENECA FALLS, N. Y.—A press report
states that contracts for erecting the State
Street School have been awarded as fol-
lows: General construction, to Barlow &
Morehouse, at \$20,759; plumbing, to Story
& Strong, at \$1,335, and heating to Emig &
Hatmaker, of Geneva, at \$3,130.

SPRINGFIELD, MASS.—Work on the new
Technical High School will begin soon. The
building is to be of red brick, with lime-
stone trimmings. The interior of the rooms
in the rear will be of the regular mill fin-
ish, with painted brick walls, and the front
rooms, with the exception of the corridors,
will be finished off. The gymnasium in the
basement will be walled with brick, painted.
Estimated cost, including the land, \$280,000.

SYRACUSE, N. Y.—The Central New York
Alumni Association of the Phi Delta Theta
fraternity has been incorporated for the
purpose of erecting a \$40,000 fraternity
house at Syracuse University. No plans
have as yet been adopted.

SCRANTON, PA.—The judges, together
with the County Commissioners, after vis-
iting and examining the new court house at
York, Pa., have employed Mr. J. A. Demp-
wolf, architect, of York, Pa., to prepare
plans for the new extension and remodeling
of the Lackawanna County Court House at
Scranton. The addition will be of stone,
15 feet x 100 feet, and contain new county
offices on first floor, two additional court
and jury rooms and judges' chambers on
second floor with law library, superintend-
ent of public schools and district attorney's
rooms on third floor. The remodeling of
the existing building will consist of enlarg-
ing the offices and introducing a 36-foot
wide cross hall with stone stairway from
basement to third floor, lightened from
dome above and making the entire third
floor available for jury rooms, offices and
toilets. Both the existing building and ad-
dition will be of the most thorough fire-
proof construction and fitted with every

EXPANDED METAL

For Fireproofing and Concrete Construction

ASSOCIATED EXPANDED METAL COMPANIES Room 1205, 256 Broadway
NEW YORK

PASSAIC STEEL COMPANY

A. C. FAIRCHILD, Pres.

GEO. H. BLAKELEY, Chf. Engr.

SUCCESSOR TO
Passaic Rolling Mill Company

J. B. COOKE, Sec. and Treas.

Manufacturers, Contractors and Engineers for all kinds of

Structural Steel Work for Buildings

Plans, Specifications and Estimates Furnished on Application.

Main Office and Works, Paterson, N. J. Boston Office, 31 State St. New York Office, 5 Nassau St.

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

tested modern device to facilitate the trans-
action of business as well as insure the
comfort of the officials and the public. The
addition will also include a new heating,
mechanical, ventilating and lighting plant.
The cost of these improvements has been
estimated at \$450,000.

VINCENNES, IND.—Bids will be received
by the Supervising Architect, Washington,
D. C., until Dec. 29th, for construction of
U. S. Postoffice at Vincennes as adver-
tised in THE AMERICAN ARCHITECT.

WASHINGTON, D. C.—A project is on foot
for taking down the Government Building
at St. Louis, and bringing it to Washington
for a permanent exhibit and convention
hall, and estimates have been furnished
for the work. The cost of moving and re-
building, it is estimated, would be about
\$400,000.

WATERTOWN, WIS.—An appropriation of
\$50,000 has been made by the Lutheran Syn-
nod for the erection of an addition to
Northwestern University. Plans will be
drawn at once and work commenced on
the structure early in the spring.

WILKINSBURG, PA.—A new school build-
ing will be erected by the Board of Educa-
tion on South Ave., Second Ward. It will
be of brick and stone, costing \$50,000.

WILMINGTON, DEL.—The contract price
for the new office building of the Pennsyl-
vania Railroad Co. is \$80,500. Roydhouse
& Ayers, Philadelphia, Pa., contractors. The
building will be five stories high, fronting
on French St., while side elevation will be
on Water St. Furness, Evans & Co., Phil-
adelphia, architects.

WOONSOCKET, R. I.—Ground has been
broken for the erection of a big storehouse
for the Lafayette Worsted Company off
Janiet Avenue. The building will have
concrete foundation and fire walls, wood
floors and roof, the outside of which will be
protected by metal. The storehouse will
have an up-to-date tramway connected with
the mill, and a new coal pocket which will
hold 1,000 tons of coal. When completed
the storehouse will be one of the largest in
the city, covering 17,000 square feet. Ad-
ditions may be made in the spring.

ARCHITECTS' REMOVALS, Etc.

ANNOUNCEMENT.—George A. Ross and
David H. MacFarlane announce that they
have formed a partnership for the general
practice of architecture under the firm name of
Ross & MacFarlane, Room 51, Bank of Ottawa
Building, St. James Street, Montreal. Tele-
phone, Main 227. They will be pleased to re-
ceive samples and catalogues.

1509

WANTED.

DRAWINGSMAN.—A thoroughly competent
draughtsman wanted Jan. 1, 1905. Address
PROUDFOOT & BIRD, Des Moines, Ia. 1509

PARTNERSHIP.—Opportunity is offered to a
young man to enter partnership in an es-
tablished architectural business. He must be a
graduated architect, 30 to 35 years of age, with
experience in designing, preparing specifications,
and supervising all classes of construction.
This is an opening for one who is ambitious to
leave salaried position for an independent busi-
ness or who desires to change present location
and connections. Reply, with details of experi-
ence, to "B. N." care The American Architect.
1509

PROPOSALS.

Treasury Department, Office of the Supervis-
ing Architect, Washington, D. C., November
12th, 1904. Sealed proposals will be received
at this office until 3 o'clock p. m. on the 13th
day of December, 1904, and then opened for the
installation of an electric passenger elevator in
the U. S. Post Office and Court House at Port-
land, Oregon, in accordance with drawing and
specifications, copies of which may be obtained
at this office at the discretion of the Supervis-
ing Architect. JAMES KNOX TAYLOR, Su-
pervising Architect. 1509

Treasury Department, Office, Supervising
Architect, Washington, D. C., November 10,
1904. Sealed proposals will be received at this
office until 3 o'clock p. m., on the 8th day of
December, 1904, and then opened, for the in-
stallation of two electric passenger elevators
in the U. S. Court House and Post Office at
Salt Lake City, Utah, in accordance with the
drawings and specifications, copies of which
may be obtained at this office, at the discretion
of the Supervising Architect. JAMES KNOX
TAYLOR, Supervising Architect. 1509

Treasury Department, Office of the Supervis-
ing Architect, Washington, D. C., November 14,
1904.—Sealed proposals will be received at this
office until 3 o'clock p. m. on the 20th day of
December, 1904, and then opened, for the low
pressure steam heating apparatus, complete in
place, for the U. S. Post Office and Court House
at Harrison, Arkansas, in accordance with
drawings and specification, copies of which
may be had at this office, or at the office of the
Superintendent at Harrison, Arkansas, at the dis-
cretion of the Supervising Architect. JAMES
KNOX TAYLOR, Supervising Architect. 1510

Treasury Department, Office of the Supervis-
ing Architect, Washington, D. C., November 15,
1904.—Sealed proposals will be received at this
office until 3 o'clock p. m. on the 13th day of
December, 1904, and then opened, for the low
pressure steam heating apparatus, complete in
place, for the U. S. Post Office and Court House
at Portland, Oregon, in accordance with
drawings and specification, copies of which
may be had at this office, or at the office of the
Superintendent at Portland, Oregon, at the dis-
cretion of the Supervising Architect. JAMES
KNOX TAYLOR, Supervising Architect. 1510

Treasury Department, Office of the Supervis-
ing Architect, Washington, D. C., November 16,
1904.—Sealed proposals will be received at this
office until 3 o'clock p. m. on the 21st day of
December, 1904, and then opened, for the con-
struction complete of the U. S. Post Office at
Gainesville, Florida, in accordance with the
drawings and specifications, copies of which may
be had at this office, or at the office of the Post-
master at Gainesville, Florida, at the discretion
of the Supervising Architect. JAMES KNOX
TAYLOR, Supervising Architect. 1510

Treasury Department, Office of the Supervis-
ing Architect, Washington, D. C., November 17,
1904.—Sealed proposals will be received at this
office until 3 o'clock p. m. on the 29th day of
December, 1904, and then opened, for the con-
struction, complete, of the U. S. Post Office at
Vincennes, Indiana, in accordance with the
drawings and specifications, copies of which
may be had at this office or at the office of the
Postmaster at Vincennes, Indiana, at the dis-
cretion of the Supervising Architect. JAMES
KNOX TAYLOR, Supervising Architect. 1510

“Seats of the Colonists”



And Other Furnishings

Of this work which is intended to provide a supplementary volume to the three which constitute “The Georgian Period.” . . .

PART I IS NOW READY

This first part contains 28 plates, 10 in. x 14 in. of which many are measured drawings by . . .

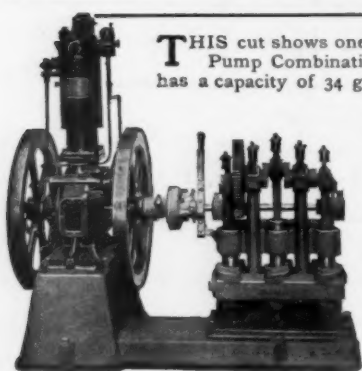
MR. HORACE C. DUNHAM

and 24 pages of text illustrated with nearly 100 text-cuts. **Price, In Portfolio, \$5.00 per Part**

The American Architect, Publishers
NEW YORK and BOSTON

New England Material-Men and Contractors

ARTISTIC WIRE & METAL WORKS. MORRIS & WHYTE, 75-81 Cornhill, Boston, Mass. ASBESTOLITH. SIMPSON BROS. CORPORATION, Room 58, 166 Devonshire St., Boston, Mass. BLUE PRINTING. CHAS. E. MOSS, Rapid Printing Papers, 38 Broad St., Boston. BLUE PRINTING (Continuous). SPAULDING PRINT PAPER CO., 44 Federal St., Boston, Mass. BUILDINGS TORN DOWN. A. A. ELSTON & CO., 166 Devonshire St., Boston, Mass. CONCRETE-STEEL CONSTRUCTION. SIMPSON BROS. CORPORATION, Room 58, 166 Devonshire St., Boston, Mass. CONTRACTORS & BUILDERS. WILLIAM L. RUTAN, 1016 Tremont Bldg., Boston. ELECTRICAL CONTRACTORS. ERICKSON ELECTRIC EQUIPMENT CO., 280 Devonshire St., Boston.	FIRE-ESCAPES. STANDARD FIRE-ESCAPE & MFG. CO., 120 Milk St., Boston, Mass. LAUNDRY DRYING MACHINERY. CHICAGO CLOTHES DRYER WORKS, 136-138 West 24th St., New York. LEATHER BELTING. SHULTZ BELTING CO., 114 High St., Boston, Mass. MASONS AND BUILDERS. MORRILL & WHITON CONSTRUCTION CO., 35 Federal St., Boston, Mass. MODELLING AND ORNAMENTAL PLASTER. SLEEP, ELLIOT & KING CO., 351 Cambridge St., Boston. ORNAMENTAL PLASTERING. HERBERT FOWLE, 43 Bristol St., Boston, Mass. PHOTOGRAPHIC SUPPLIES. ROBEY-FRENCH CO., 34 Bromfield St., Boston, Mass. Cameras. PHOTOGRAPHY. LEON E. DADMUN, 11 Portland St., Boston, Mass.	PLASTERERS. GALLAGHER & MUNRO CO., 166 Devonshire St., Boston, Mass. PORTABLE OVENS. H. A. JOHNSON & CO., 224 State St., Boston, Mass. ROOFING DUCK. C. H. BATCHELDER & CO., 234 State St., Boston, Mass. SASH CORD. SILVER LAKE CO., 78 Chauncey St., Boston. SEAM-FACE GRANITE. GILBRETH SEAM-FACE GRANITE CO., Park Row Building, New York. 176 Federal St., Boston. STABLE FIXTURES. BROAD GAUGE IRON STALL & VANE WORKS, 53 Elm St., Boston, Mass. STONE CARVING AND MODELING. HUGH CAIRNS, 48a Sudbury Street, Boston. WATERPROOF CELLARS. FRANK B. GILBRETH, Park Row Bldg., New York. 176 Federal St., Boston.
--	--	--



THIS cut shows one of our smaller Gasolene Engine and Triplex Pump Combinations. The Engine is of 3 Hp. and the outfit has a capacity of 34 gallons a minute discharged at 146' elevation. We are consulting and contracting engineers for Complete Water Works Systems, using Windmills, Gasolene Engines, and Electric or Steam Pumps, and are prepared to give advice to anyone on proposed plants and to submit proposals and estimates for the whole or any part of same. Send for our special catalogue on this subject.

CHARLES J. JAGER COMPANY
174 HIGH ST., BOSTON

Cathedral of St. John the Divine. New York, N. Y.

WE offer the illustrations of the competitive designs for the great Protestant Episcopal Cathedral, now building on Bloomingdale Heights, New York, submitted by the following Architects:

CARRÈRE & HASTINGS	New York, N. Y.	CRAM & WENTWORTH	Boston, Mass.
EDWARD P. CASEY	" "	JOHN LYMAN FAXON	" "
HENRY M. CONGDON	" "	PEABODY & STEARNS	" "
ROBERT W. GIBSON	" "	" "	" "
B. G. GOODHUE	" "	STEPHEN C. EARLE	Worcester, Mass.
HEINS & LA FARGE	" "	" "	" "
HUSS & BUCK	" "	T. P. CHANDLER, Jr.	Philadelphia, Pa.
W. A. POTTER & R. H. ROBERTSON	" "	COPE & STEWARDSON	" "
RENWICK, ASPINWALL & RUSSELL	" "	" "	" "
FREDERICK C. WITHERS	" "	W. S. FRASER	Pittsburgh, Pa.
" "	" "	" "	" "
PARFITT BROTHERS	Brooklyn, N. Y.	L. S. BUFFINGTON	Minneapolis, Pa.
" "	" "	" "	" "
W. HALSEY WOOD	Newark, N. J.	VAN BRUNT & HOWE	Kansas City, Mo.
" "	" "	" "	" "

In all, fifty-seven plates [loose], 14 x 20 inches, printed on plate-paper.
Price, \$2.50 per set.

The **AMERICAN ARCHITECT,**
NEW YORK AND BOSTON.

The Northwestern Terra-Cotta Co.

Manufacturers of High Grade

**Architectural
Terra-Cotta**
CHICAGO

BOOKS:

"The Library of Congress."

20 Plates, folio. Price, \$5.00.

THE AMERICAN ARCHITECT, Publishers,
New York and Boston.

"Cohesive Construction."

An Essay on the

**Theory and History of
Cohesive Construction.**

By RAFAEL GUASTAVINO - - - Architect.

Price, \$1.25.

For Sale by the **AMERICAN ARCHITECT.**

MASONRY IN MODERN WORK

A "Prolegomenos" on the
Function of Masonry in Modern
Architectural Structures

By R. GUASTAVINO, Architect

Price...
Paper Cover, 30 Cents

For Sale by the
AMERICAN ARCHITECT

[See Alphabetical Index on Cover 2 for Pagination.]

CLASSIFIED ADVERTISEMENTS

[Advertisers can be indexed only under a single head free of charge.]

ARTISTIC WIRE AND METAL WORKS. Morss & Whyte, Boston.....	BRASS GOODS (Plumbers). Standard Sanitary Mfg. Co., Pitts- burgh, Pa.....	COLUMNS (Lock Joint). Hartmann Bros. Mfg. Co., Mount Vernon, N. Y.....	DOORS (Steel Rolling). Kinnear Mfg. Co., The, Columbus, O.
ASBESTOLITH. Simpson Bros. Corporation, Boston..	BRONZEWORX (Ornamental). Richey, Browne & Donald, Maspeth, L. I., New York City.....	CONCRETE-STEEL CONSTRUCTION. Simpson Bros. Corporation, Boston..	DRAUGHTSMAN. E. Eldon Deane, New York.....
ASPHALT. Neuchatel Asphalt Co., New York...	United States Foundry and Sales Company, South Norwalk, Conn...	CONSERVATORIES. Lord & Burnham Co., Irvington-on- Hudson, N. Y.....	DRINKING FOUNTAINS. Standard Sanitary Mfg. Co., Pitts- burgh, Pa.....
ASPHALT ROOFING. Warren Chemical & Mfg. Co., N. Y.	WINSTON BROS. CO., THE, CHICAGO, ILL.	CONTRACTING. Flynt Building & Construction Co., Palmer, Mass.....	ELECTRIC APPARATUS. Edison Light Boston.....
BATH ROOM FIXTURES. Standard Sanitary Mfg. Co., Pitts- burgh, Pa.....	BUILDINGS TORN DOWN. Elston & Co., A. A., Boston.....	Rutan, William L., Boston.....	ELECTRICAL CONTRACTORS. Erickson Electric Equipment Co., Boston.....
BATH TUBS (Porcelain Enamelled). Standard Sanitary Mfg. Co., Pitts- burgh, Pa.....	CEMENT. Atlas Cement Co., New York.....	CONTRACTORS AND BUILDERS. Rutan, William L., Boston.....	ELECTRIC SIGNALS. Elevator Supply & Repair Co., New York.....
BOOKS. Clifford & Lawton, New York, N. Y.	CLEAN-OUT. Craig, David, Boston.....	CORDAGE. Samson Cordage Works, Boston.....	ELEVATORS, ETC. Morss, Williams & Co., Philadelphia. Whittier Machine Co. Boston.....
BLUE PRINTS. Morss, Chas. E., Boston.....	CLOCKS. Blodgett Clock Co., Boston.....	CUTLER PAT. MAILING SYSTEM. Cutler Mfg. Co., Rochester, N. Y.	ENAMELLED IRON (Plumbers' Ware.) Standard Sanitary Mfg. Co., Pitts- burgh, Pa.....
Spaulding Print Paper Co., Boston..	CLOSETS. Standard Sanitary Mfg. Co., Pitts- burgh, Pa.....	DEAFENING QUILT. Samuel Cabot, Boston, Mass.....	

The American Architect and Building News

VOL. LXXXVI

SATURDAY, NOVEMBER 26, 1904

No. 1509



SUMMARY:—

Death of General Cesnola, Director of the Metropolitan Museum of Fine Arts.—The Various Architects to the Military Academy at West Point.—Cleaning New York City-hall by Sand-blast.—French Architects and the Code Napoléon.—Automatic Sprinklers Made Useless by Careless Painters.	65
PASSENGER ELEVATORS—II.	67
EMERGENCY EXITS IN THEATRES.	71
THE TEMPLES AT PHILÆ.	71

ILLUSTRATIONS:—

Church of the Epiphany, Winchester, Mass.—Transverse Section of the Same.—Interior Details of Chancel of the Same.—Cardiff House, Wimbledon, England. Additional: Details of Interior of Nave: Church of the Epiphany, Winchester, Mass.—Exterior Details of the Same.	72
NOTES AND CLIPPINGS.	72

IT is with mixed feelings that a good many people will learn of the death of Luigi Palma di Cesnola, for more than a quarter of a century the executive head of the Metropolitan Museum, New York, which during that time has advanced from the level now held by museums of fine art at, say, Springfield, Mass., or Detroit, Mich., to a place of much honor and importance amongst the world's great museums. It was most unfortunate for General Cesnola that many men of solid attainment never could, and never can, bring themselves to believe anything but that in the notorious quarrel between General Cesnola and Gaston L. Feuardent, in 1880, the latter was essentially in the right. The fact that much of the once overpowering display of Cypriote antiquities has been withdrawn from exhibition is something gained, though that was not the real point at issue, and though it hardly needed Mr. Edward Robinson's patient examination of the Boston figurines to satisfy many persons that much of the Tanagra finds was rank stuff. General Cesnola had loyal friends, however, whose unswerving support enabled him to live down the unpleasant days of the Feuardent libel suit, and it is unquestionable that during the recent years of his directorship the Museum has prospered greatly.

GENERAL CESNOLA was born in 1832, in the neighborhood of Turin, and as the natural consequence of a training at a military school joined the Sardinian Army on graduation, serving in the war of 1849, and again in the Crimean War. His thirst for adventures not satisfied, he came to this country and on the outbreak of the Civil War obtained a commission in a New York Cavalry regiment, being mustered as a colonel, though he has always been called General. Between 1857 and 1877 he was United States Consul to Cyprus, and it is a curious as well as surprising thing to find a man, who for nearly twenty years had led a stirring and

adventurous life, suddenly breaking off his old habits and devoting himself to the dry-as-dust study of Cypriote antiquities—whether real or fabricated by modern skill. It is a curious and most unexpected *volte face*; but, perhaps, any other person of military training and experience might, if he had inherited certain artistic instincts, have accomplished a similar metamorphosis during so prolonged an exile in Cyprus; at all events ten years of quiet study might easily prepare one to fill acceptably the important part of director of a growing metropolitan museum of art.

THE War Department issues an announcement under date of November 14, 1904, of which the following is the significant portion:

"The United States Civil Service Commission announces an examination on December 28, 1904, to secure eligibles from which to make certification to fill a vacancy in the position of architect, at \$3,500 per annum, to be engaged on the work of reconstructing the United States Military Academy at West Point, N. Y., another vacancy in the position of architect, at \$5,000 per annum, to be employed in supervising the erection and remodeling of permanent army posts, and similar vacancies as they may occur in that Department.

"No applicant who is in any way connected with the designing or supervising architects of the Military Academy will be entitled to be considered for selection to the position at West Point, but such applicant may compete for the other position.

"Applicants should at once apply to the United States Civil Service Commission, Washington, D. C., for application Form 304 and special form. No application will be accepted unless properly executed and filed, in complete form, with the material required, with the Commission at Washington prior to the hour of closing business on December 28, 1904. In applying for this examination the exact title [Architect, War Department] as given at the head of this announcement should be used in the application."

AS our readers probably know, ten architectural firms competed for the West Point work, and a jury of eminent architects and army officers recommended to Secretary Root that the design of Messrs. Cram, Goodhue & Ferguson, of Boston, be awarded the competition. On May 31, 1903, Secretary Root approved the jury's action and, on the following day the above firm was notified of their selection. A contract was then made with the architects, in which, after providing that the successful competitor should receive 3½ per cent. of the cost of the buildings, it was provided that "The Government will also undertake that the Consulting Architect to be appointed, at a yearly salary of \$5,000, shall be the successful competitor, or some one connected with his office. The Government will pay such traveling and office expenses as may be incurred by the Consulting Architect in the per-

formance of his duties in connection with the execution of the plans, but this expense, together with the salary of the Consulting Architect, will not in any case be allowed to exceed 1½ per cent. of the cost of the buildings."

This new notice from the War Department will interest architects who will be curious to know what are to be the duties of the new architect for the Military Academy.

THE first time we visited London, we were impressed with the artistic impropriety of the general painting of what were obviously stone houses that was going on at the West End—but that was before we had seen what defacement could be worked by London soot—while the washing and scrubbing that, a few weeks later, we saw going on in Paris seemed quite natural, though not at all necessary. We are reminded of this by the outcry made in the daily papers against the cleaning with the sand-blast of New York's much esteemed City Hall, an outcry that the makers seek to justify by recalling the world-wide protest that was evoked some years ago when St. Mark's was scraped clean, to the destruction of its wonderful mellow tones and richly colored stains. But the two cases are dissimilar. St. Mark's was endowed with what may be called a patina, which enhanced its original beauties; the City Hall was simply dirty and, so, disfigured. Thanks to the fact that the marble which John McComb selected has almost as much blue in it as white, the cleansing does not produce a violent contrast between the clean and the uncleaned parts, and it seems beyond dispute that the cleansing will result in the building's gaining in effectiveness. But while this is so it is still questionable whether such cleansing was advisable. However discreetly the sand-blast may be manipulated, it certainly does wear off a film of the outer surface of the stone; not of much consequence where the main walls are concerned, but of considerable importance when it is remembered that the removal of this film increases the space between dentils, blunts the arrises of all angles, and flattens all mouldings. Even this may not be of much consequence unless the process is repeated at frequent intervals. But what is of importance, it seems to us, is the action that is likely to follow the removal of the protecting skin of dirt and the consequent exposure of a freshly triturated surface of limestone to atmospheric influences. The dirt that is being removed is really in large part a felting of fine vegetable matter mixed with dust, which, while it disfigures, none the less protects what it rests upon. Here again the evil is not so very great as the New York atmosphere is not as yet very heavily charged with sulphuretted hydrogen.

SOME one writing in the *Architect* about the Code Napoléon, apropos of the centenary of that famous body of laws that takes place this year, uses a phrase or two which seem to explain how it happens that the Code bears with such harshness upon architects. Our writer says: "But Bonaparte and his commission looked on civil work from a military point of view. Architects were treated as if they were commanders who were expected to make arrangements by which every defect in the carrying out of an enterprise was to be avoided. . . . the

First Consul was a master of detail and he could not understand how an architect could be allowed to evade the closest connection with all parts of his building." Theoretically and logically Bonaparte was right, and the responsibility imposed by the Code is not too heavy, except in the matter of the term during which an architect's pecuniary responsibility must endure. To our comparatively untrameled practitioners, ten years of suspense for every job completed, even when the work is believed to be well and thoroughly carried out, is too wearing on the nervous system, and when it is known that the owner has compelled the scaling down of material and workmanship to the lowest possible level of safety, the pocket nerve must endure much agony before the ten years have elapsed.

THE existence of the famous Articles 1792 and 2270, which fix the responsibility of architects, explains why it is almost impossible that there should be any such great "plan-factories" in France as there are in this country and why a French architect is held to be in full and successful practice if he has two or three buildings under construction at the same time, for it is known that he can hardly give competent supervision, such as the Code requires, to more. It is through this limitation of his endeavor that the French architect is able to give so much more personal attention to the working out of the detail of his design than is possible for the American practitioner. Another curiosity of the Code is that all things are either *meubles* or *immeubles*, that is either personal or real estate, and this produces some singular classifications in what may be called neutral articles. Amongst other things it classes at times articles that distinctly are "movable" as "fixtures." For example, let a vestibule, say, be designed with a pair of niches for the reception of statues and let statues finally be installed there, these statues then, *ipso facto*, become *immeubles* and are as much fixtures as the door-knob or chimneypiece, and removable from their resting-place only by and with the permission of the landlord.

EVERYONE is familiar with the conscienceless way in which many mechanics perform their tasks, the worst offender perhaps being the house-painter, who has no scruples as to smearing, if not covering and concealing, with his paint and varnish all sorts of joints in woodwork and metalwork that were designed to be movable working parts. A circular of the Boston Manufacturers' Mutual Fire Insurance Co. calls attention to a real peril that is caused by this too common carelessness of the brothers of the brush. During a recent tour of inspection it was noticed that at several mills, where painting had been done since the last inspection, not only the valves but the fuses of the automatic-sprinklers had been more or less covered with paint, thus not only causing the valve to stick to its seat, but delaying the melting of the fuse. It is due to the painters to explain that in several cases it was found that the painting had been done with the pneumatic-brush, which applies the paint in a rather hit-or-miss manner, and absolutely precludes the possibility of avoiding joints and working parts.

Passenger Elevators—II.

THE success of the high-pressure hydraulic system in London, and the small elevators built for use at this high pressure, led makers in the United States to install high pressure plants.

A high-pressure hydraulic elevator system for freight purposes, designed by Mr. R. C. Smith, had been installed at the Brooklyn Sugar Refinery, by Otis Brothers & Co. in 1890, and a similar plant of 49 elevators, designed by Mr. George H. Reynolds, was installed in 1895 at the Cupples Buildings, St. Louis, Mo., by the Crane Elevator Company. These plants demonstrated the economy of the high-pressure system, especially where the distribution of power extended over a large area, and the latter was the first installation to which a high-class pumping engine was applied. This was a compound, fly-wheel, pumping engine, built by the Laidlaw-Dunn-Gordon Company, and was the forerunner of pumping engines of the type now used extensively in elevator systems.

In 1894 a plant of 12 elevators, operated under a pressure of 800 lb. per sq. in., was built by Otis Brothers & Co., of New York, and installed in the shafts of the Glasgow Harbor Tunnel, Scotland. These were used for lowering and lifting vehicles and passengers using the tunnel, and it was the first, and probably the only, instance where elevators were the only means of access to and egress from a tunnel. These elevators were described and illustrated fully in *Engineering* at the time of their installation. Their success led Otis Brothers & Co. to install similar elevators in office buildings, and in 1896 a plant of four was installed in the Girard Trust Company's building, Broad and Chestnut Streets, Philadelphia, Pa., and shortly afterward a similar plant was installed in the American Tract Society Building, Nassau Street, New York City.

Several high-pressure elevator installations were also made, at about the same time, in Chicago, by the Crane Elevator Company. The installation in the Girard Trust Building, in Philadelphia, was the first passenger elevator plant in which the consumption of power was in some degree proportional to the work to be done, i. e., the load to be lifted. This was accomplished by a differential machine, consisting of a piston working in a cylinder, the piston being attached to a ram, or enlarged piston rod, the area of the ram being proportioned to the assumed average load, and the area of the piston to the maximum load. An automatic

change valve (invented by Mr. R. H. Thorpe), was arranged so that the annular space around the ram and under the piston could be connected with the discharge reservoir, or with the pressure main, the change valve itself being operated by the pressure in the upper end of the cylinder above the piston.

When the lower end of the cylinder is connected with the discharge reservoir, the power exerted is that due to the full area of the piston, and the machine consumes the full volume of the cylinder of pressure water. When the automatic valve connects the lower end of the cylinder with the pressure system, the water in the annular space is circulated into the upper end of the cylinder, and the machine consumes only the volume of the ram.

As the pressure in the top of the cylinder is a measure of the load in the car, the change valve adjusts the consumption automatically to suit the load. The economy of such an apparatus can be readily understood when it is considered that, in ordinary passenger service in office buildings, the average load carried by an elevator rarely exceeds one-half of its total lifting capacity, and very frequently is not much more than one-third. Hence, where such a device is not used, the hydraulic elevator must consume its full power with every trip, notwithstanding that the full load may be quite an unusual occurrence. The operation of this device is shown in Fig. 3, the direction of the arrows showing the flow of the water under the different conditions.

This plant was operated by two Worthington compound, duplex, pressure pumps, and two Worthington

steam accumulators. The plant installed in the Girard Building was successful, and is in use to-day, but new controlling valves, of the low-pressure pilot type, described hereafter, have been substituted lately for the original valves.

In general, these high-pressure plants were not successful. They fulfilled all that was expected of them as lifting machines, and in economy of operation; but the high pressures used necessitated extremely small pilot valves, in which it was difficult to maintain the packings, and which, when not packed, involved too great a loss by leakage, and hence were difficult to handle, a slight variation in the condition of the pilots destroying the adjustment of the operating devices. Also, the necessarily small apertures in the pilots were readily clogged by shreds of packing. Hence they fell into disfavor, and in some

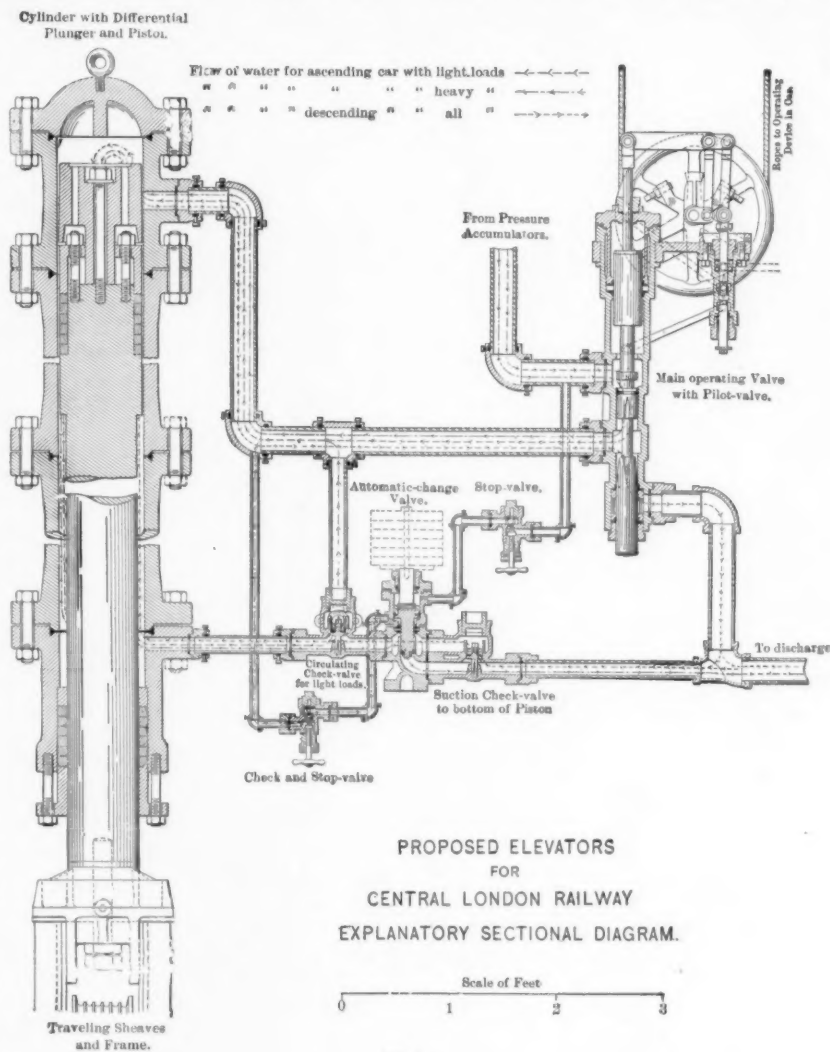


FIG. 3.

instances were removed and other types installed in their places.

These difficulties led elevator builders to give attention to the improvement of the low-pressure types, in the endeavor to attain the same economies accomplished with the high-pressure and yet retain the simple construction of the old standard types, and in 1896 plants were installed in the Bowling Green and St. Paul Buildings, and in 1898 in the Standard Oil Building, in New York City, in which, instead of arranging the machines themselves to be of varying power, two pressures were supplied: low pressures, suited to the average loads to be carried, and which were usually from 100 to 120 lb.; and high pressures, to suit the heavier loads, which were from 180 to 200 lb. A special form of controlling valve was used by which either the high or low pressure could be admitted to the cylinder, as required.

The use of this system developed an advantage, which had not been foreseen: Even when the cylinder was connected with the high pressure, unless the load in the car required this high pressure, a proportion of the low pressure water was taken into the cylinder by the injector action of the high-pressure water moving at high velocity through the valve, so that the consumption of power was adjusted automatically to the requirements of the actual load in the car.

At the Bowling Green and

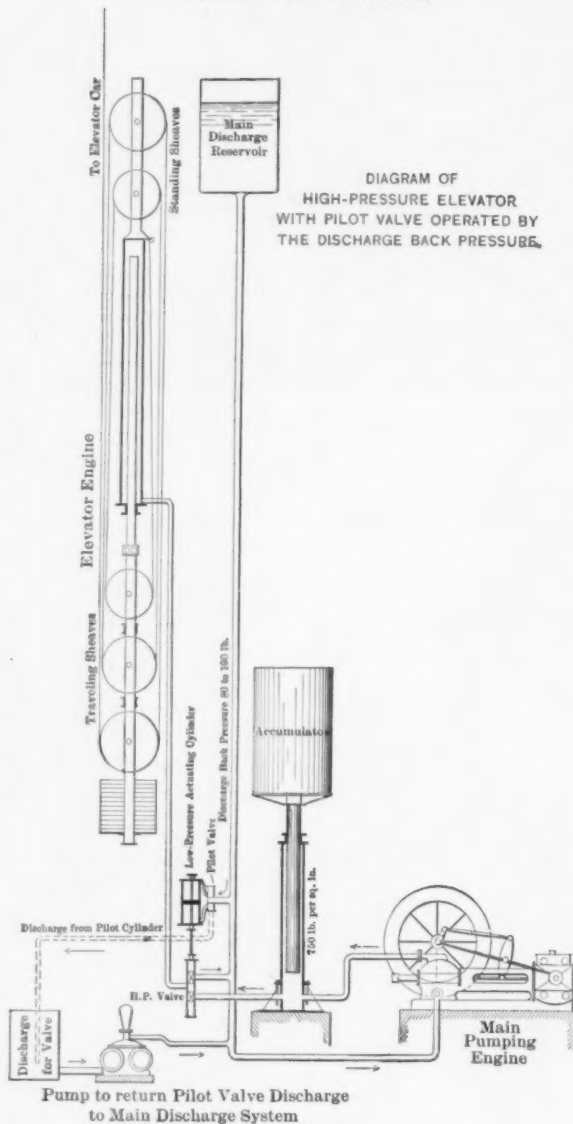


FIG. 5.

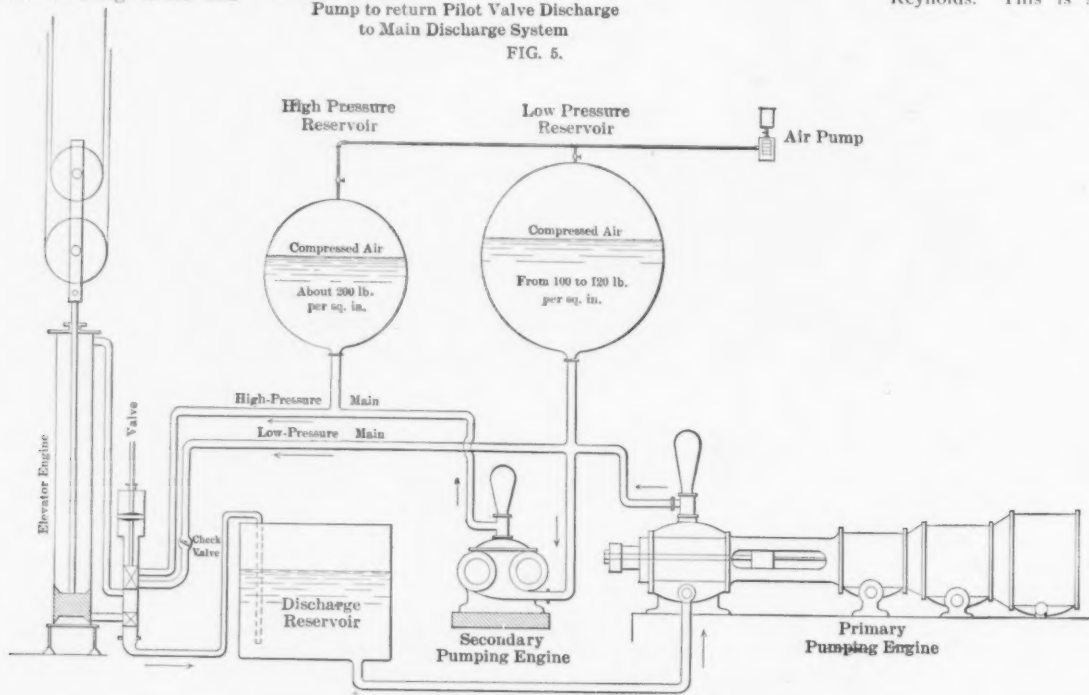


FIG. 4.—DIAGRAM OF DOUBLE PRESSURE SYSTEM.

St. Paul Buildings, the primary or low pressure was produced by Worthington, direct-acting, triple-expansion, pumping engines. The higher pressure was produced by a "Booster," which was an ordinary, direct-acting, compound, duplex pump, taking suction from the low-pressure system, and boosting to the higher pressure. By this arrangement all the water used was pumped by an economical engine to the lower pressure (the pressure generally used). The booster having to do only the occasional work, and only performing the difference in work between the low and the high pressure, could be of smaller dimensions, and of a less expensive type.

At the Standard Oil Building, a three-cylinder compound, fly-wheel, pumping engine designed by Forrest M. Towl, M. Am. Soc. C. E., was used, arranged so that, normally, all three pump cylinders delivered into the low-pressure tank, and, by a change valve, controlled automatically by the high-pressure tank, one cylinder could be thrown in series with the others, and deliver into the high-pressure tank. Fig. 4 shows the general arrangement, as used at the Bowling Green Building, and is representative of the others.

The high-pressure plant installed in the American Tract Society Building was replaced in 1897 by a novel type of elevator designed by Messrs. R. T. Crane and George H. Reynolds. This is shown in

Plate III. This machine consists of a heavy plunger, of a length a little over half the rise of the car. This is hung at its upper extremity to a sheave under which the ropes supporting the car pass, thus making the gear, or ratio of car travel to plunger travel, 2:1. The plunger passes through a stuffing-box into a cylinder of steel pipe of slightly larger diameter than the plunger. The plunger is of sufficient weight to lift the car and its load, and overcome the frictional resistance of the mechanical parts as well as the hydraulic resistance of the valve and pipes, when the water is allowed to discharge from under it. The car is lowered by admitting water pressure under the plunger, thus supporting part of its weight and allowing the car to descend.

produced by a fly-wheel pumping engine delivering into a weighted accumulator. This elevator is excellent in operation, running with smoothness and speed, and making excellent stops. Several were installed in various buildings (principally in the West), and it would have become a popular type but for an unfortunate accident, due to the failure of the air-pressure in the discharge reservoir.

This trouble was obviated afterward by substituting for the air-pressure reservoir an open-discharge reservoir placed at a higher elevation than the head of the cylinder. Nevertheless, the elevator had lost its popularity, and no further installations were made. It is, however, a type possessing the advantages of

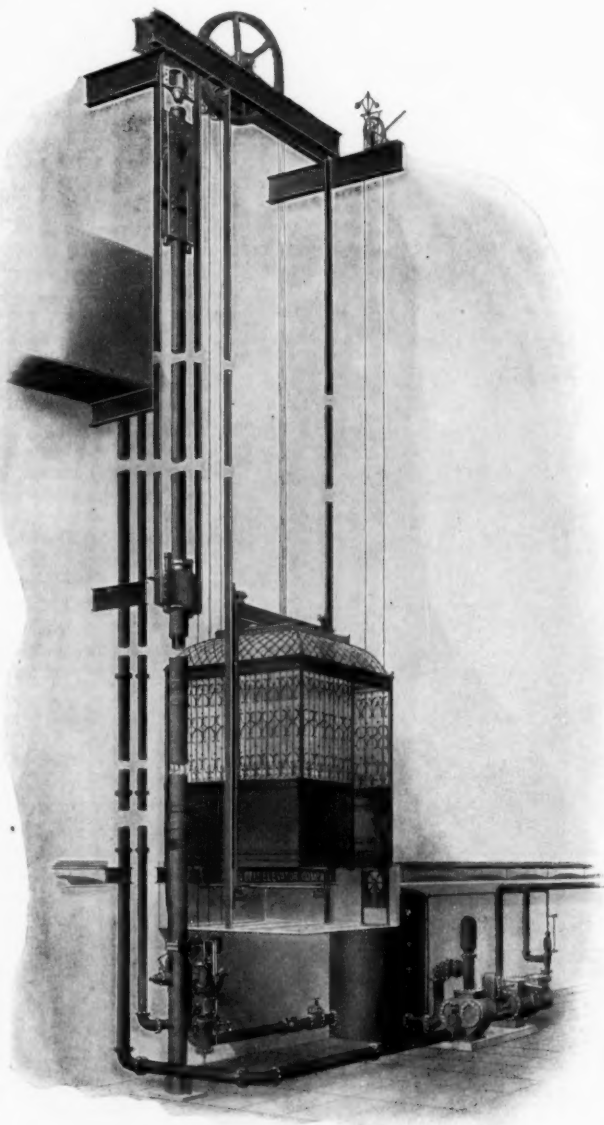


PLATE III.—PULLING-PLUNGER ELEVATOR.

The long column of water under the plunger, when the plunger is in its upper position, is supported by air pressure in a closed discharge reservoir, and the difference of head, due to the varying height of the column of water under the plunger, is compensated by the weight of the cables suspending the car. For this purpose, the weight of the cables per unit of length is:

$$w = 0.434 \frac{A}{3} = 0.1447 A,$$

in which A = the area of the plunger.

The pressure for raising the plunger and lowering the car is

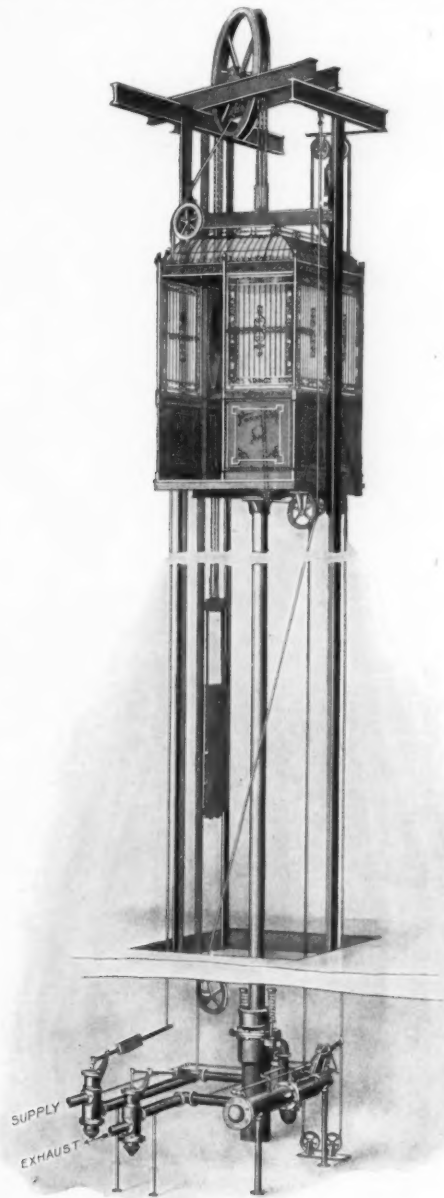


PLATE IV.—PLUNGER ELEVATOR.

low gear and requiring small horizontal space. It is suitable for use in very high buildings, admits of the application of high pressures and their resulting economy, and there is no doubt that it will come into more general use in the future.

About 1899 the plunger type of elevator came into use on a larger scale. It is the machine used for many years in Europe, where it had received a high development. It had been used in this country extensively for very heavy freight purposes and short lifts, and had been applied for passenger service for low buildings and short rises; but improvements in the art of drilling holes in the ground developed by the oil industry, and the

improvement made by steel pipe makers in their product, reduced to some extent the great expense heretofore incident to the installation of this type, and it was introduced and is being used to-day, to an extent not warranted by its actual merits. Its chief advantage is that, the cylinder being sunk in the ground, the usual space in the building taken for machines of other types is saved; but when it is considered that the space taken up by the actual elevator machine in any case is but a small proportion of the space taken up by the apparatus producing the power to operate it and the means of controlling it, this is not as great an advantage as would appear at first sight. In the mind of the public such a machine seems safe, in that the car is supported from underneath instead of being suspended, and this has inspired such confidence that these machines are usually installed without any safety devices whatsoever. With the high speeds and high rises usual to-day, this sense of security is not justified. This type of machine is shown on Plate IV. It consists of a tube sunk in the ground a distance equal to the rise of the elevator, a plunger attached to the bottom of the car working in this tube through a stuffing-box. The variation of the plunger displacement is compensated by the weight of the cables connecting the car to the counterbalance - weight, thus the variation of

pressure under the plunger for each unit of movement is equal to $0.434 A$, in which A is the area of the plunger. For each unit of movement of the car the cables gain or lose one unit of length on the car side, and lose or gain one unit of length on the counterbalance side, doubling their effect; thus the weight of the cables per unit of length must be equal to

$$0.434 \frac{A}{2} = 0.217 A.$$

The mechanical efficiency of this machine is very high, nearly 90 per cent; but its net efficiency for high rises and high speeds is low, on account of the large amount of unbalanced weight required to bring the moving masses to rest.

The advantages of high-pressure elevators, namely, low percentage of hydraulic loss, admitting of high speed with reasonable sizes of valves and pipes and maintenance of speed close to the limit of the lifting capacity; greater economy, due to the reduction of hydraulic losses, especially where power is distributed over large distances; saving of space, etc., caused elevator builders to give great study to the one defect, namely, the pilot valve. But no important success was reached until Mr. H. F. Witte, of Chicago, hit upon the simple expedient of abandoning the high-pressure pilot valve and operating the high-pressure controlling valve by a low-pressure piston and pilot valve,

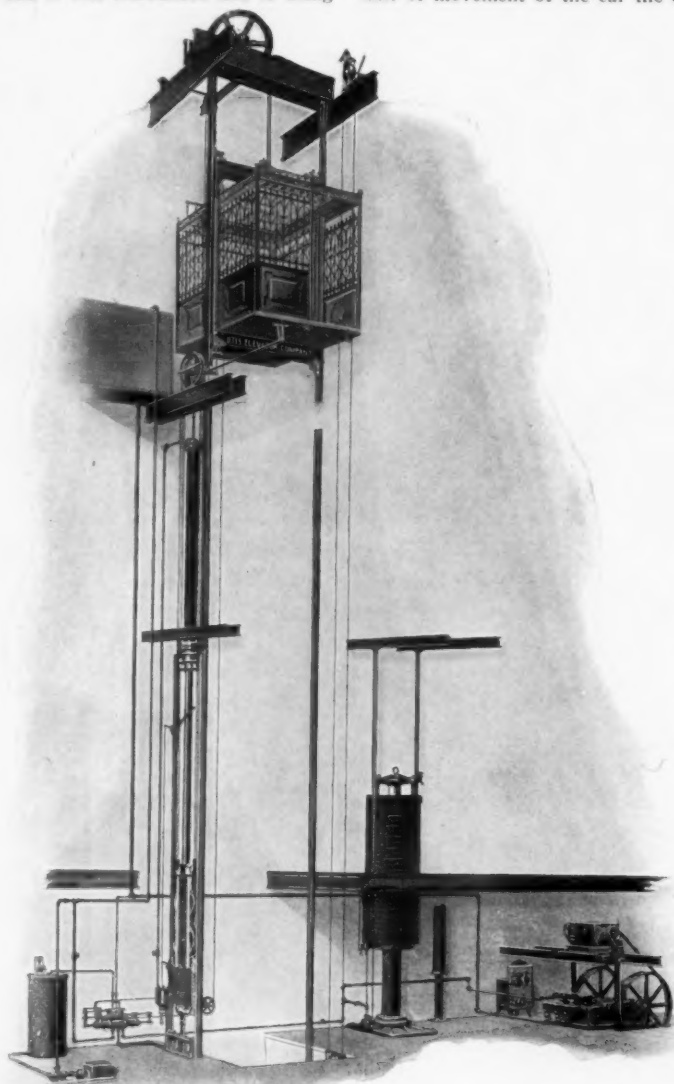


PLATE V.—HIGH-PRESSURE ELEVATOR WITH ELECTRIC PUMP.

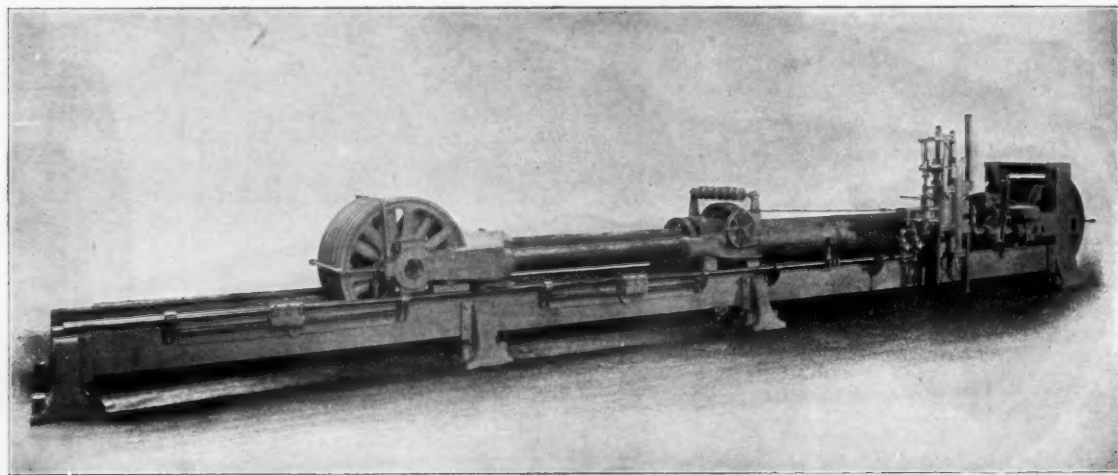


PLATE VI.—HIGH-PRESSURE ENGINE.

taking pressure from a separate system. This at once solved the problem, as it eliminated the one objectionable feature, and substituted the well-known low-pressure pilot, which had been in successful use for many years. This arrangement is shown in Fig. 5.

With the high-pressure elevator, the discharge reservoir could be placed at a high elevation; in fact, requires to be thus placed to be above the highest point of travel of the elevator piston or plunger. No loss of power was entailed by this position of the reservoir, as the pressure due to its head was applied to the suction of the pump.

Mr. Witte also hit upon the expedient of using the pressure from this discharge reservoir for the operation of the pilot-valve device. Thus the system required a separate system only in part, *i. e.*, a line of pipe to carry the discharge from the pilot cylinders back to the engine-room. A special small pump was placed in the engine-room to return the water discharged by the pilot valves to the main discharge system.

High-pressure elevators at once came into use again. Several were installed in 1898 in the Montgomery Ward Building, in Chicago, and, a year later, a plant of eight such elevators was installed in the Schlessinger & Meyer Building, in Chicago. The latter are operated by electrically-driven pumps, delivering into weighted accumulators, the pump motors taking current from the street mains.

In 1902 a plant of 43 high-pressure elevators was installed in the buildings of the Prudential Insurance Company, Newark, N. J., the elevators in the five buildings being operated from a central pumping plant of three Laidlaw-Dunn-Gordon compound, fly-wheel, pumping engines and weighted accumulators.

A plant of nine high-pressure elevators is in operation in the Land Title Building, Broad Street, Philadelphia, Pa., also operated by compound, fly-wheel, pumping engines and weighted accumulators. A plant similar to those described has just been installed in the Bessemer Building, at Pittsburg, Pa., operated by power developed at the Henry Phipps Power-House, the intention being to operate similar plants in other buildings to be erected hereafter from the same power-house.

A plant of 42 high-pressure elevators has been completed lately in the buildings of the Metropolitan Life Insurance Company, Twenty-third Street, New York City. These, also, are operated by compound, fly-wheel, pumping engines and weighted accumulators.

All these plants (with the exception of those of the Metropolitan Life Insurance Company) are of the vertical-cylinder, inverted-plunger type, as shown on Plate V.

In the plant at the Metropolitan Life, some engines are of the vertical type, and others of the horizontal type, as shown on Plate VI.

With the later high-pressure plants, the double power arrangement of the earlier high-pressure plants, or the double-pressure system used with some of the low-pressure plants heretofore mentioned, has not been used, as the high mechanical efficiency of the machines, and reduction of hydraulic losses, coupled with the excellent results attained by the high-duty pumping engines, has reduced the cost of operation to so low a point that the additional cost of these systems does not seem warranted. Should occasion arise in the future for still greater economy, it can be attained by the addition of these devices.

(To be continued.)

EMERGENCY EXITS IN THEATRES.

ACCORDING to a recent communication in the German technical publication, *Gesundheits-Ingenieur*, the Magistrate of the city of Munich has, with the approval of the chief of the fire department, determined that the word "emergency exit" shall not be used any longer in theatres. All those exits which are intended for the public, and which up to the present time have largely been designated as emergency exits, will hereafter be merely lettered "exits," and it is ordained that they must be so maintained and arranged that they are regularly used after each performance, in order to make the public become acquainted with all the available exits, so that in case of danger they will know where to find them and how to use them. This measure of safety is not new and has been in use in the Berlin theatres and places of public assembly since the year 1890. It is also in use in some of the Boston and New York theatres; but notwithstanding this it is a measure for the safety of the public which deserves to be widely promulgated. It is not only necessary that the public visiting the theatre should know at all times how to reach the open air in the best and

quickest manner, but it is likewise necessary that the employés of the theatre should use all the exits from time to time, even if in so doing there should be created an unpleasant draft in the auditorium.

If the old term "emergency exit" is permitted to continue in use—and it seems that even in Berlin, notwithstanding the ordinance forbidding its use, it has in the past few years again been taken up—it may easily happen that the employés of the theatre may forbid the use of some exits, claiming that they should only be opened and made use of as their name implies, in case of danger. In the city of Munich additional reasons were brought forth for prohibiting, in the future, the use of the term "emergency exits." Briefly stated they are as follows: Persons visiting concert-halls or theatres do so with the desire to enjoy a few hours of quiet comfort and amusement after the work and excitement of the day. It is apparent that their object cannot be attained if the playgoers find staring in their face at each second door the unfortunate words "emergency exits," because they are thereby reminded again and again of the danger and perils to which they may be exposed in the theatre.

It is claimed that on the contrary the public should find all possible causes for reassurance, for this helps more than anything else in preventing a fire panic. It should be made acquainted with the fact that by means of the emergency exits, which during the entire performance stand open for use, a safe provision is made for them to leave the building in the shortest possible time, should a fire or false panic occur.

W. P. G.

TEMPLES AT PHILÆ.

A LETTER has appeared in the *Times* from Colonel Henry Knollys, who says: Possibly the evidence which I this year personally collected at Philæ, and subsequently confirmed at Cairo and elsewhere, may not be valueless as bearing on "F.R.S.'s" letter to the *Times* of October 17.

He asks: "Will any steps be taken about the many buildings which would be ruined if they are submerged?"

An amiable, though possibly a foolish, deduction suggests he is not aware that £28,000, approximately, has already been expended in works for the preservation of the Philæ temples alone, exposed to damage from the Assouan barrage. In fact, that every precautionary measure which foresight, science, labor and unstinted cost could suggest have some time back been adopted.

The following are a few of the facts and of my measurements which I carefully noted on the spot concerning the condition of the island after the last annual rise of the Nile.

A massive stone dam had been constructed on the land side, north, for the protection of the chief building, the Temple of Isis. Its foundations were sunk deep below the ground, and I found its dimensions to be: Length, 201 feet; breadth at base, 51 feet; perpendicular height, varying from 17 feet to 7 feet. The great temple itself was originally built on solid rock, and therefore required no strengthening, but six of the principal buildings had been effectually "underpinned."

The maximum rise during last year's floods was sharply defined on all the walls, and the following were my measurements of the heights of these markings from the bases: Pharaoh's Bed, 8 feet; Temple of Hathor, 5 feet 6 inches; Isis Birth-house, south end, 7 feet 6 inches; Pylon, Portal of Nectabenos, inside, 7 feet 6 inches; West Colonnade, 10 feet 6 inches; Vestibule of Nectabenos, 12 feet; Hadrian's Gate, 4 feet 6 inches. To these some inches must be added for saturation through capillary attraction.

Not more than an inch of water had covered the flooring of the Temple of Isis.

Owing to the sandy nature of the soil the ground had in most places reverted to a condition of dust; but the interiors of the buildings presented a discolored, mouldy aspect, and the brilliant tints had greatly faded up to the level of high-water mark; yet the deposit of Nile mud was much less than anticipated, and the cost of removal and scouring had been covered by £6 10s. On the other hand, the structures did not indicate a trace of subsidence, or toppling over, or of stonework deterioration.

A high official in the Philæ vicinity, whose whole heart and whole professional interest are absorbed in the preservation of Egyptian antiquities, expressed himself to me to the following effect:

(From my shorthand notes.) "The barrage engineers have done all that could possibly be imagined to preserve the structures of Philæ. They . . . brought every single building into

a condition of stability far greater than it possessed before and even greater than that of any other existing ancient building in Egypt. The new foundations have reached right down through the mud to rock. The engineers asked the Egyptologists if any further precautions could be adopted, and the answer was 'No.' Justice requires I should give my verdict in favor of the strenuous labors and success of the engineers in their preservation of the temples. The strengthening will be permanent—at all events, for an indefinite number of years. The barrage has, in fact, permanently preserved Philæ in an architectural point of view; in a picturesque point of view, however, it is destroyed."

Yes, this latter point is indisputable; the trees will be drowned; the foliage will vanish, and the waters will rise to so high a level that during a great part of the year lovely Philæ will no longer appear perched on a beautiful eminence.

Should you think this letter worth publication, I purpose dealing further with the measures contemplated to avert famine annually from an additional four or five millions of the Egyptian population. It is possible many may think this preservation should take precedence of the preservation of architectural antiquities, however lovely; and may hesitate at "F.R.S.'s" parallel of Torquemada, Robespierre and the Communists—apparently, to such men as Lord Cromer, Sir William Garstin and Sir John Aird.



A CORRECTION.—We must ask our subscribers to make a correction in the illustration of the "Hunnewell Building" published in our issue for November 12 last. On what seemed to be good authority we ascribed the authorship of the design to Messrs. Shaw & Hunnewell, but could not verify the fact as these gentlemen have dissolved partnership and are, we understand, both traveling in Europe. The building was actually designed by Messrs. Longfellow, Alden & Harlow.

CHURCH OF THE EPIPHANY, WINCHESTER, MASS. MESSRS. WARREN, SMITH & BISCOE, ARCHITECTS, BOSTON, MASS.

INTERIOR DETAILS OF CHANCEL OF THE SAME CHURCH.

TRANSVERSE SECTION OF THE SAME CHURCH.

"CARDIFF HOUSE," PARKSIDE, WIMBLEDON, ENGLAND. MESSRS. HUBBARD & MOORE, ARCHITECTS.

(This plate is copied from *The Architect*.)

Additional Illustrations Issued Only with the International Edition.

INTERIOR DETAILS OF THE NAVE: CHURCH OF THE EPIPHANY, WINCHESTER, MASS.

EXTERIOR DETAILS OF THE NAVE OF THE SAME CHURCH.



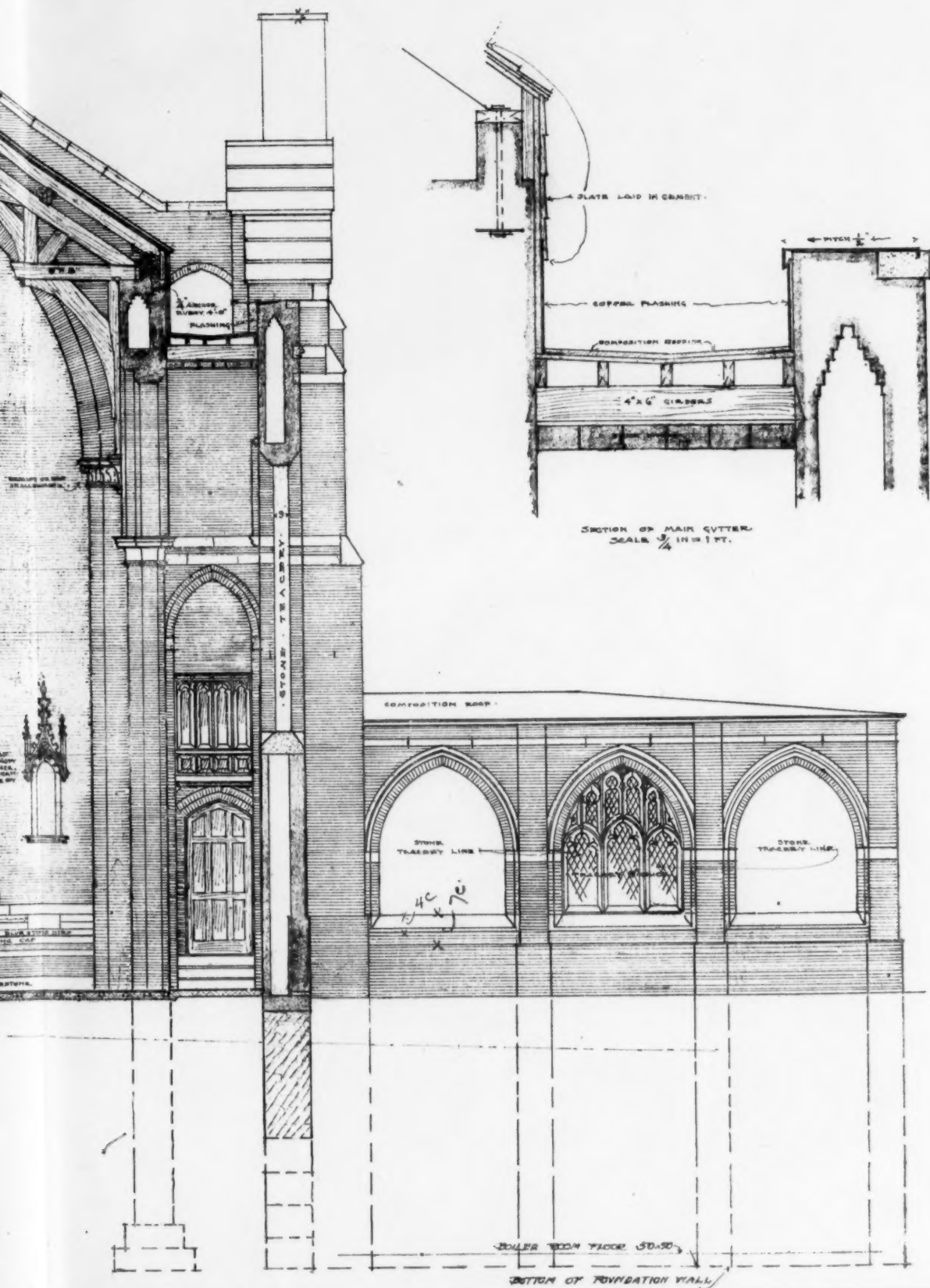
A COLLECTION OF HISTORIC DOORS.—Near Pontefract (France) lives a banker who has a museum of old doors. They are from old houses, castles or abbeys that have some historic interest. Quite lately he bid £1,000 in Paris for the door through which, during the French Revolution, Marie Antoinette, Charlotte Corday, Danton and Robespierre passed to the guillotine. One of his doors is said to have shut off Charles II. from his Roundhead pursuers, and it bears marks of a battering ram. A collection of ancient weathercocks is also one of this gentleman's possessions.—*Exchange*.

A CHARMING MEMORIAL INSCRIPTION.—Tablets bearing the names of members of the Middle Dutch Church, at Second Avenue and Seventh Street, New York, who were killed in the steam-boat *General Slocum* disaster last June, were unveiled in the church recently. Preceding the names of the victims is the following dedication:

"To the glory of God, the Father, the Son, and the Holy Ghost, and in loving memory of that company of children, a part of Christ's flock here, who on a radiant summer day, which began like a garland of flowers, but ended like a crown of thorns, gave up their innocent lives in fire and flood, passing within the veil on Wednesday, June 15, A. D. 1904, by the burning of the steam-boat *General Slocum* in the waters of the East River."

MEASURING BUILDINGS.—W. Horace Lange, representing the North American Building Statistics Society of Philadelphia, has just completed an inspection of Buffalo's high office buildings, the measurements being made annually for the society's table of statistics of the various "skyscrapers" in the United States. Mr. Lange found that two of Buffalo's buildings had settled about one and three-fourths inches during the past four years, but he ascribes the settling to natural causes which need cause no alarm. His measurements are made with an inkrometer, an instrument so delicately adjusted that it measures the height of buildings down to the minutest fraction of an inch.—*Buffalo Commercial*.

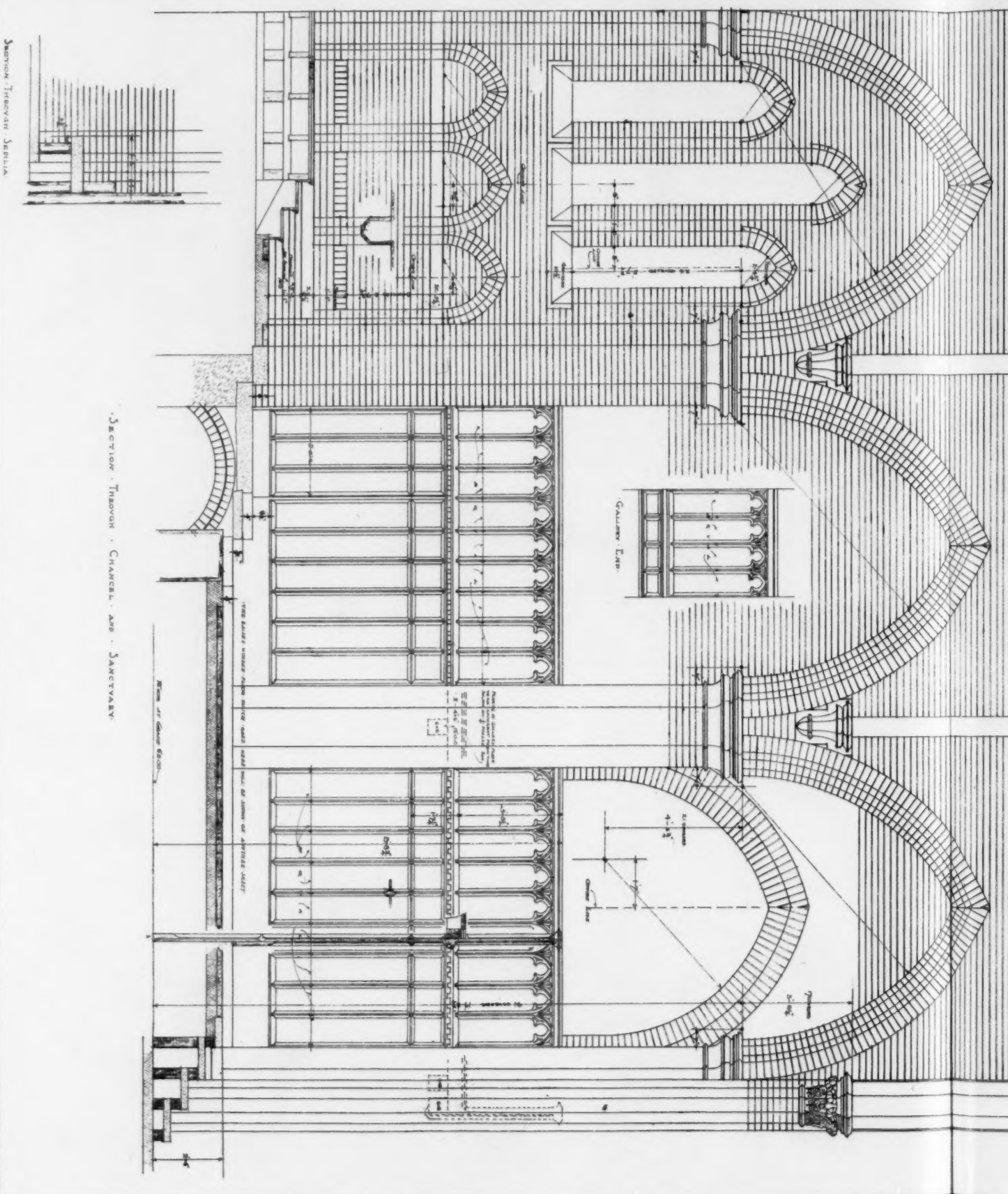
MYSTERY OF THE MONOLITH.—Among the greatest mysteries in the mystery of human history on earth, the monoliths that stand in various parts of the globe have always been chief. These strange stone monuments, generally rude, with hardly any sculpture, but wonderfully large in size, are scattered everywhere. The most famous of them are the cromlechs, such as those in Stonehenge, in England. Others are found in the western part of France, in the northern part of Germany as far as the Oder River, in Denmark, and in Sweden. Northern Africa, Madagascar and Asia, from Mount Sinai and the Caucasus to India, all have some here and there. Lately they have been discovered even in Siberia. There are several places in Japan where such stones stand. Others have been found in North and South America. Among the most wonderful and mysterious of them all are the vast, almost terrifying, stones, rudely sculptured, that have been found on lonely Easter Island in the Pacific Ocean. The mystery as to what these stones meant was not the only puzzle. The greatest puzzle was how primitive people without knowledge of engineering and without known appliances could have moved and erected such giant blocks, some of which weigh as much as two hundred and fifty tons. In many districts where the great memorials stand there are no stones of such size to be found in the earth. Consequently they must have been transported from places long distances away. For many generations, ever since men have spent any time in thinking over these matters, scientists have puzzled their heads over the monoliths in vain. Whether they classed them as all being the same or whether they divided them into different classes, they remained the same riddle. Lately, however, there has been a systematic study of all the monolith memorials of the world, and as a result a novel theory has been advanced. It is that one race—that of the Phœnicians—erected all these monuments. Of course, if this is correct, it means that history will have to be revised, for it would show that the Phœnicians once knew all about the whole globe, and that they had visited America and Asia long before modern days. The first thing that led to the assumption that the Phœnicians had raised the monuments was the observation of M. Levistre, a French archaeologist, that almost all the monoliths were to be found near the mouths of great rivers or along their courses. This pointed to a people that used ships. Now the Celts were never strong on the water. Their boats were primitive, being made mostly of wicker-work, covered with hides, and they were unable to move any distance from land in these clumsy and unseaworthy contrivances. Consequently, when the question arose as to what race was advanced in navigation in that early time when these monuments were put up, the answer naturally came that the only race known to be a race of sailors and merchants then was the race of Phœnicians. And if they were the Phœnicians, how did they come to reach America? They had colonies on the islands of the Western Mediterranean, and even in the islands of the Atlantic Ocean, as history proves. It is not hard to imagine that they may have found their way to America. Some archaeologists are even willing to believe that they reached America by way of the lost Atlantis, that legendary continent that is now sunken somewhere in the Atlantic Ocean, if it ever existed. At any rate, the theory that the Phœnicians were the erectors of the monoliths of the world to commemorate discoveries or for religious purposes, has gained strength through the recent discovery of a great upright stone near the river Loire, which has Phœnician words engraved deeply on it. Translated, these words say: "On this spot was slain our brave comrade." In San Luis, in Bolivia, is one of these stones, which has on it the engraving of a footprint and a snake with its head raised. The footprint is a well-known Phœnician symbol of death, and is found on many stones that cover ancient Phœnician burial sites. And the snake with head raised is another acknowledged Phœnician emblem. It signifies a march forward. Exactly the same symbols as those on the South American stone have been found on a stone in Central France.—*Chicago Chronicle*.



HELIO TYPE CO., BOSTON.

CH OF THE EPIPHANY, WINCHESTER, MASS.
 & BISCOE, ARCHITECTS.

The American Architect
 Nov. 26, 1904.
 No. 1509.



COPYRIGHT, 1904, BY AR. ARCHITECT CO.

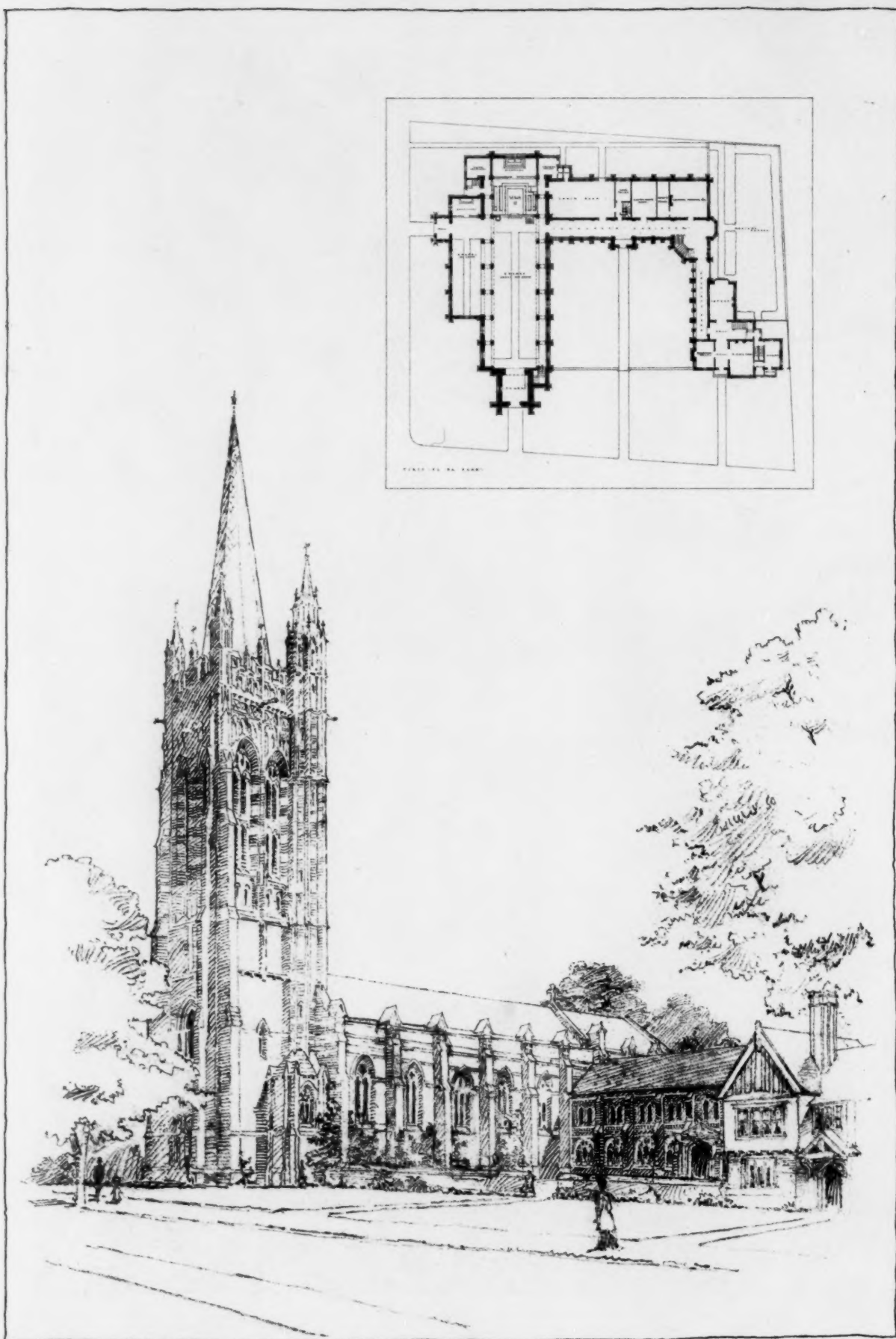
SECTION THROUGH CHANCEL AND SANCTUARY

INTERIOR DETAILS OF CHANCEL: CHURCH OF THE EPIPHANY, WINCHESTER, MASS.

WARREN, SMITH & BISCOE, ARCHITECTS.

RELATIVE CO., BOSTON.

The American Architect
Nov. 26, 1904.
No. 1509.

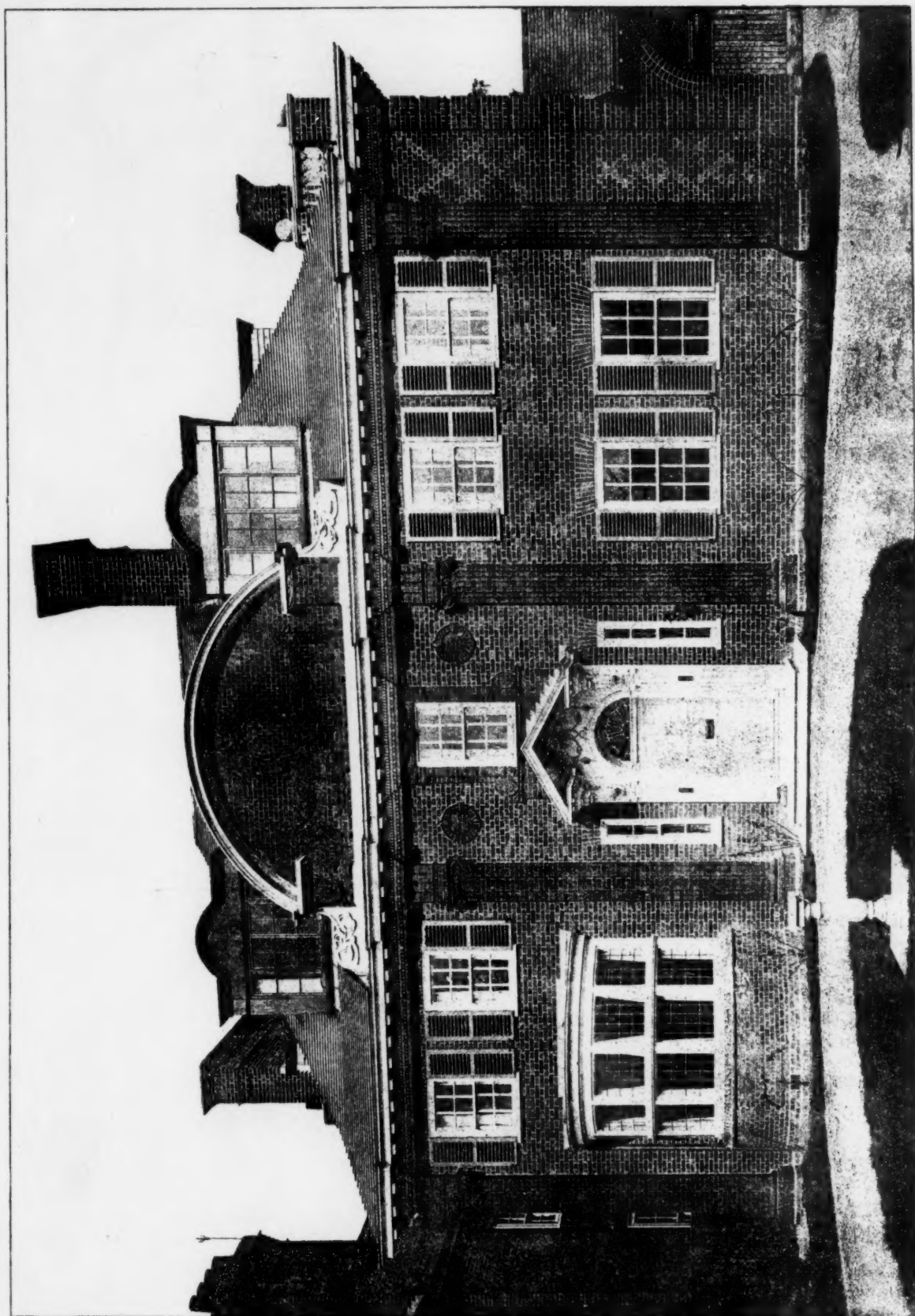


COPYRIGHT, 1904, BY AM. ARCHITECT CO.

HELIOTYPE CO., BOSTON.

CHURCH OF THE EPIPHANY, WINCHESTER, MASS.
WARREN, SMITH & BISCOE, ARCHITECTS.

The American Architect
Nov. 26, 1904.
No. 1509.



HELIOTYPE CO., BOSTON.

"CARDIFF HOUSE," PARKSIDE, WIMBLEDON.
MESSRS. HUBBARD & MOORE, ARCHITECTS.

The American Architect
Nov. 26, 1904.
No. 1509.