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-CONSTRVCTIVE-
-DECORATIVE-
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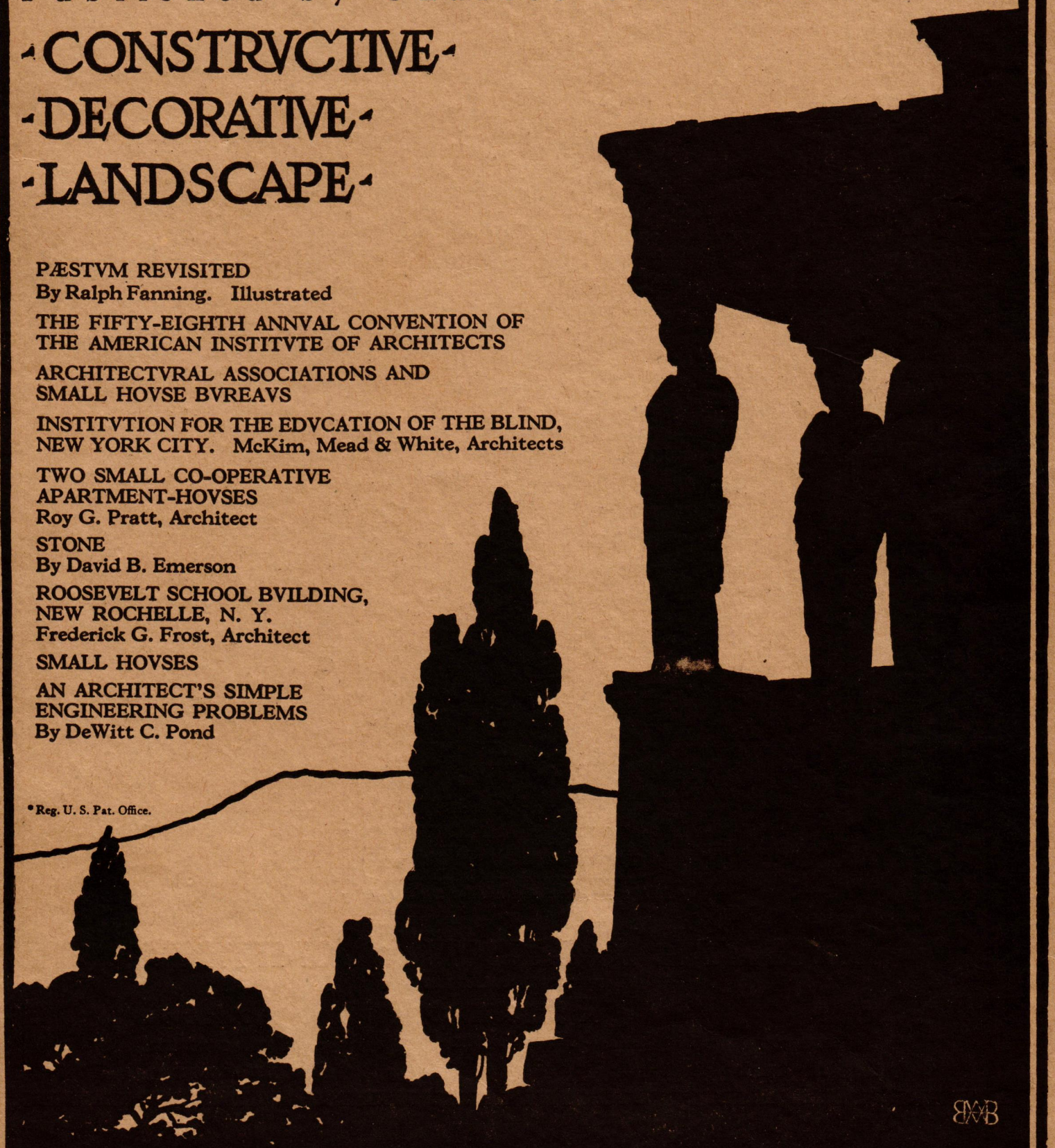

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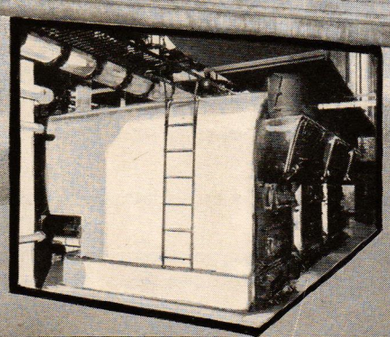

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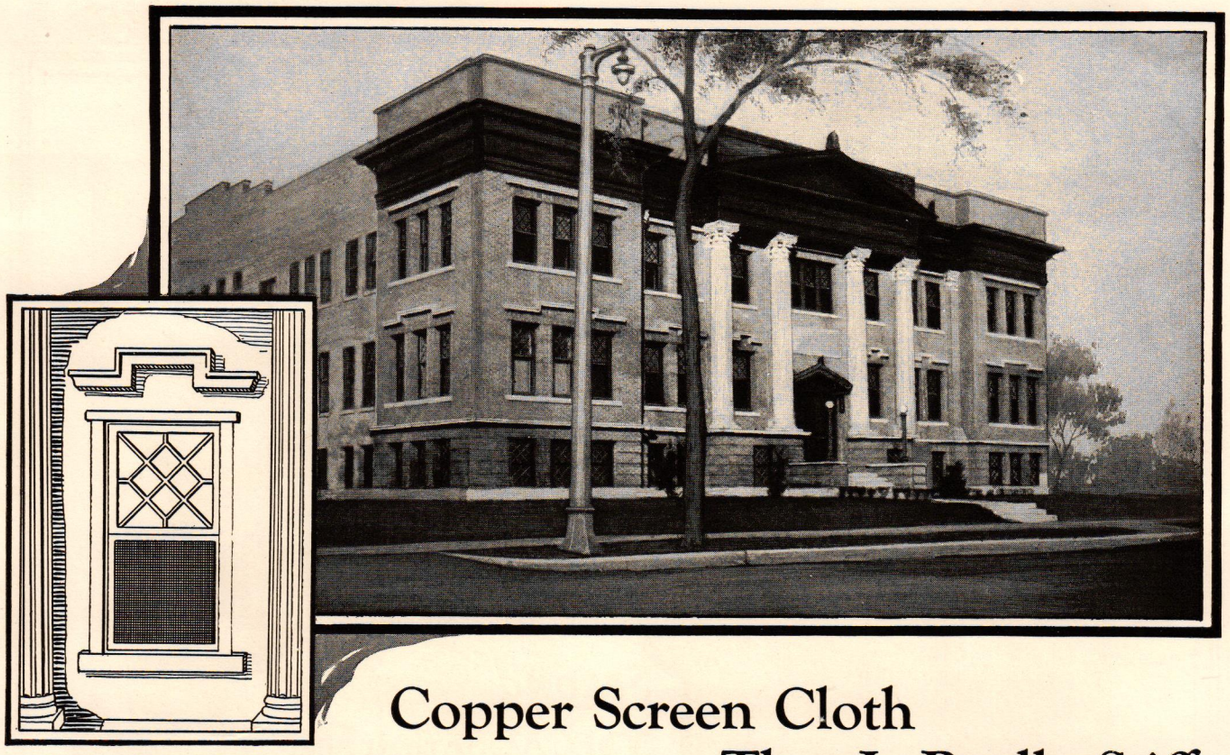
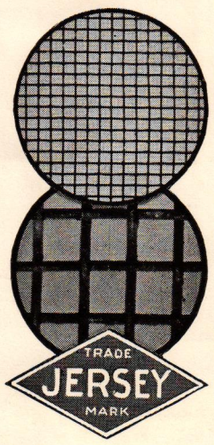


Excelsior Masonic Temple, Milwaukee, Wis. Screened with Jersey Copper Screen Cloth. (Insert) Detail of one of the windows.



In the upper circle is shown an unretouched photograph, actual size, of Copper Screen Cloth (heavy grade) made by The New Jersey Wire Cloth Company, which has been subjected to the action of salt air for more than twelve years.

In the circle below is the same Copper Screen Cloth enlarged 4 diameters.

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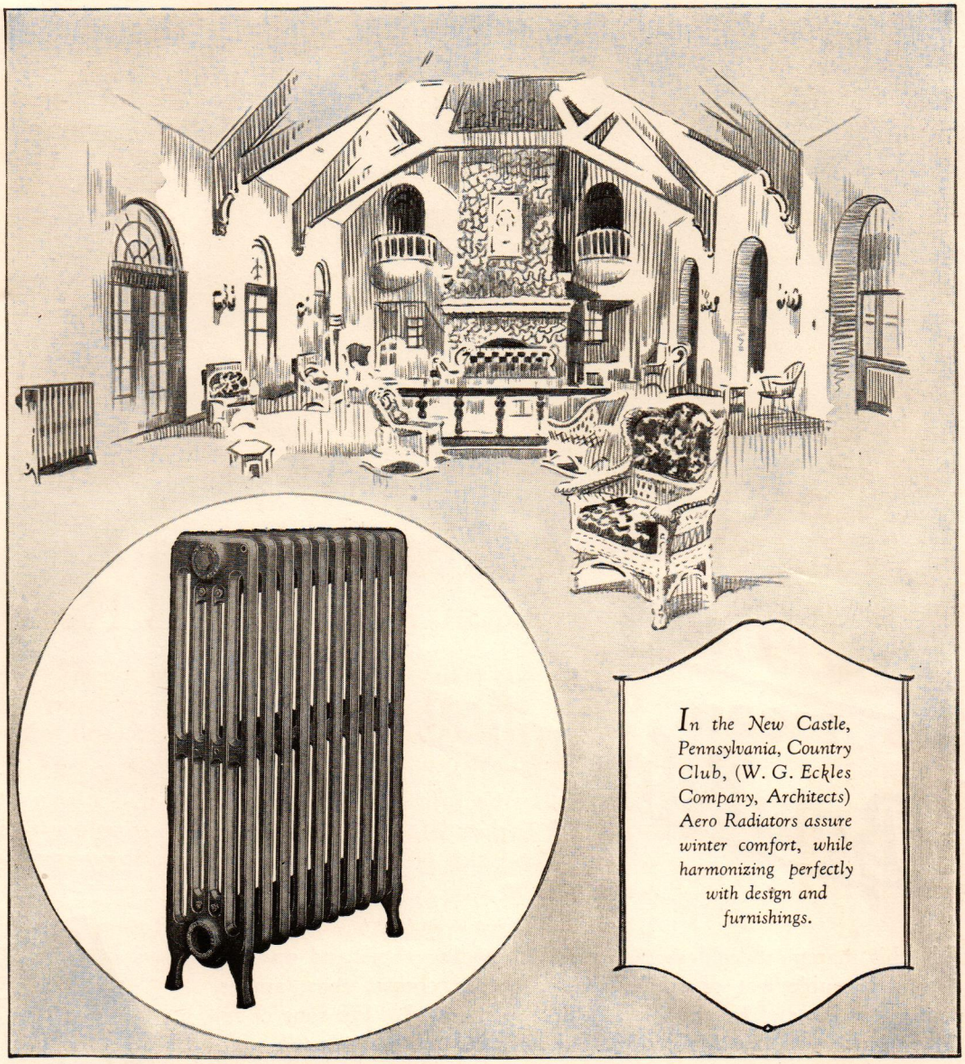

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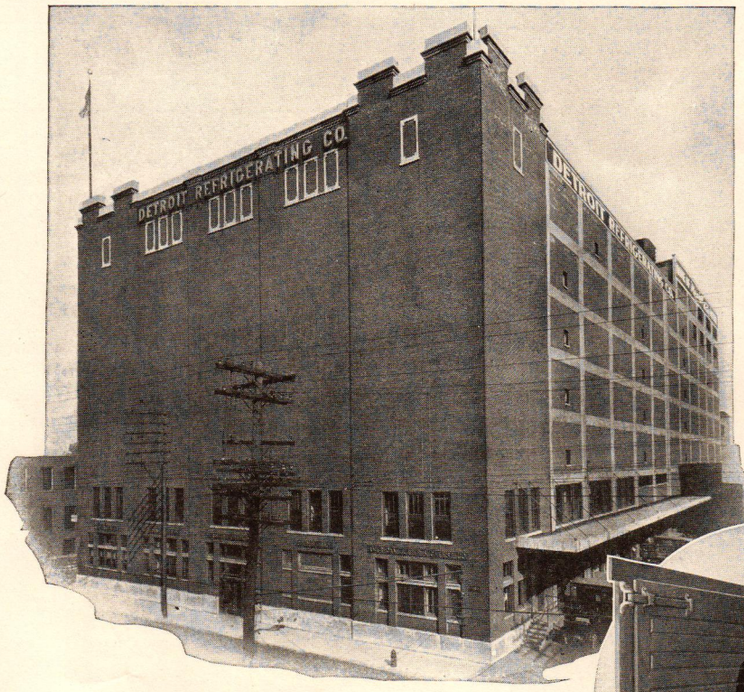

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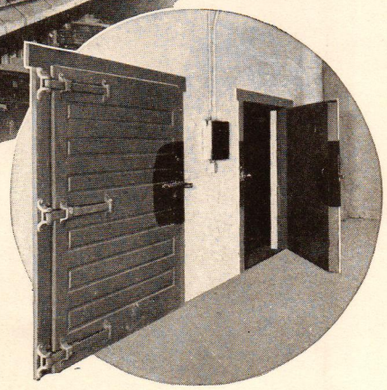

The inset shows two of the many Jamison doors in this building. Note the length of the hinges. They are exceptionally strong and permit adjustable spring pressure, a patented Jamison feature.

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IN this mammoth cold storage plant, providing three and one-half million cubic feet of storage space, butter, cheese, eggs, apples, poultry, meats and other delicate edibles are stored. 370 tons of refrigeration are produced daily for that purpose.

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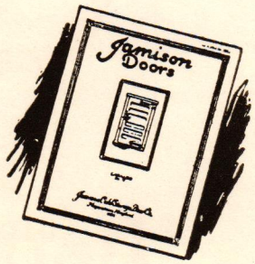

Bear in mind that Jamison makes other equipment besides Cold Storage Doors. Our catalog will be helpful to any architect whose plans must provide for the installation of cold storage equipment. A copy will be sent on request.

Jamison Doors

Jamison Cold Storage Door Company

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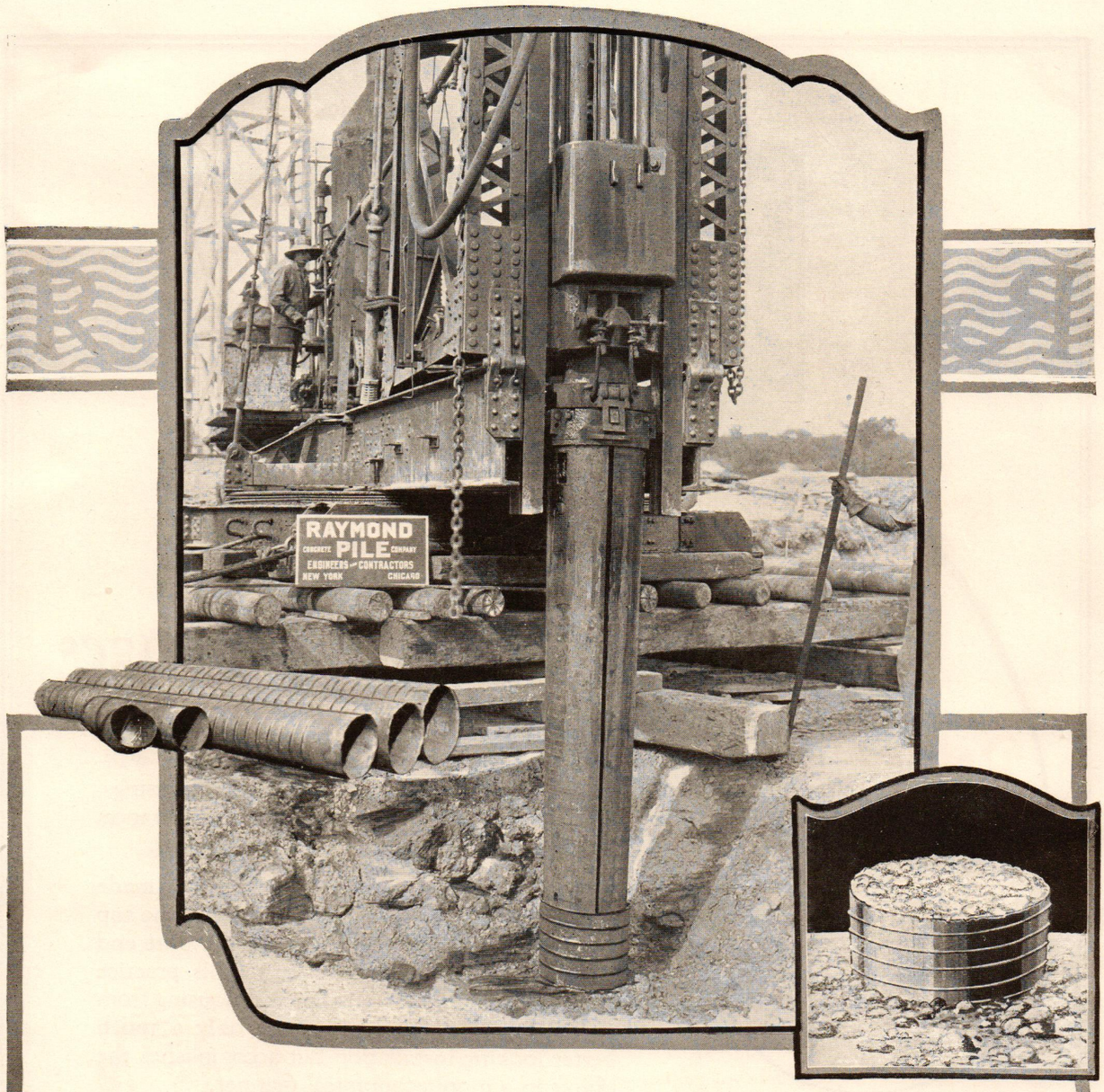

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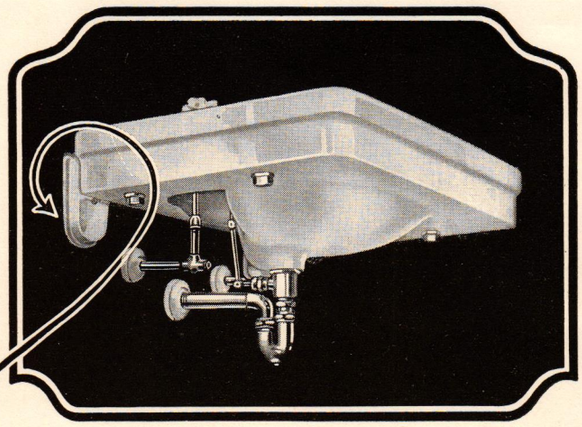

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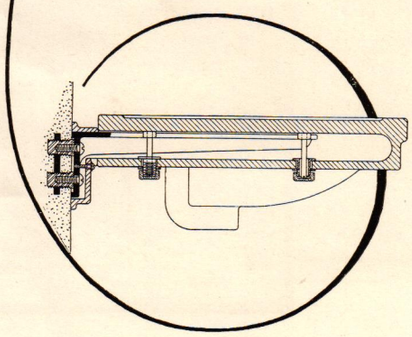

Cross section, showing the Tepeco concealed bracket and how it is secured to lavatory. Note the adjustment provided in the bolts locking the lavatory to the brackets, which also provides for the leveling of the lavatory. It may be installed to set the lavatory at any desired height from the floor. There is a Tepeco bracket for every form of wall connection.

THE necessity to cover the large bracket required in the installation of most wall-hung lavatories has resulted in bracket housings, which not only present a clumsy appearance, but increase the cost of the fixture as well.

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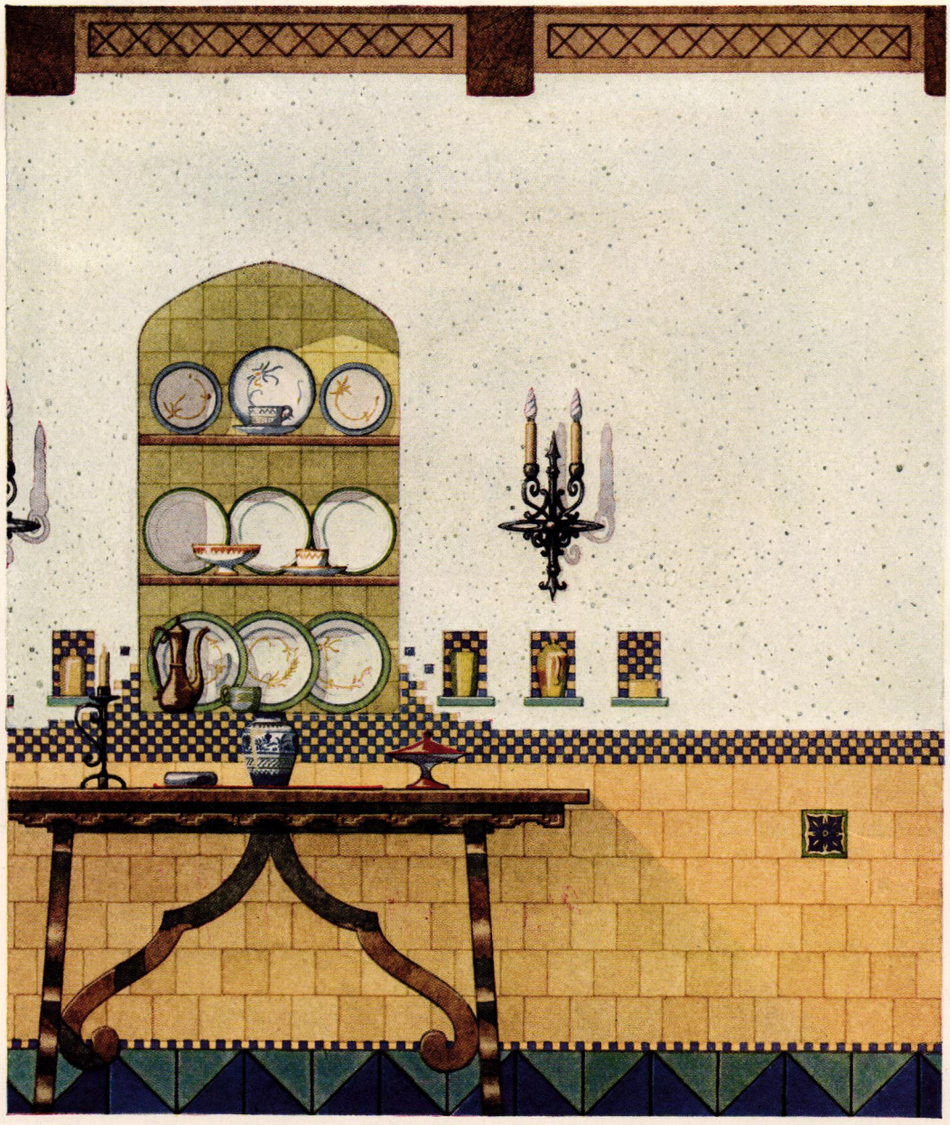
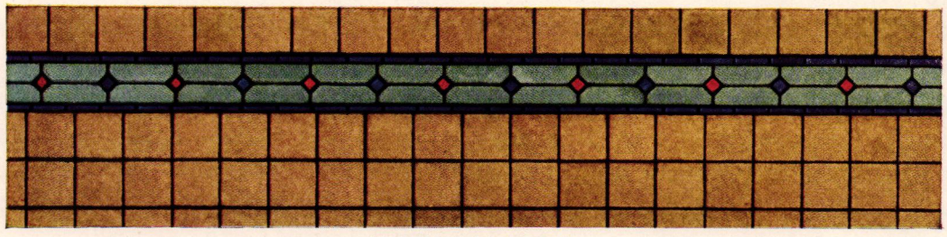


TYPICAL WALL SECTION

Standard size plate illustration in full colors, with detailed description for specifying the tiles shown in this Spanish-American Dining Room will be forwarded for 4cents postage. "Beautiful Tiles" booklet free.



SECTION OF FLOOR
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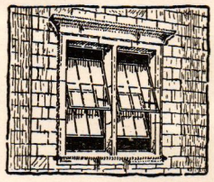

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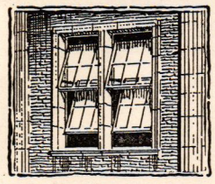

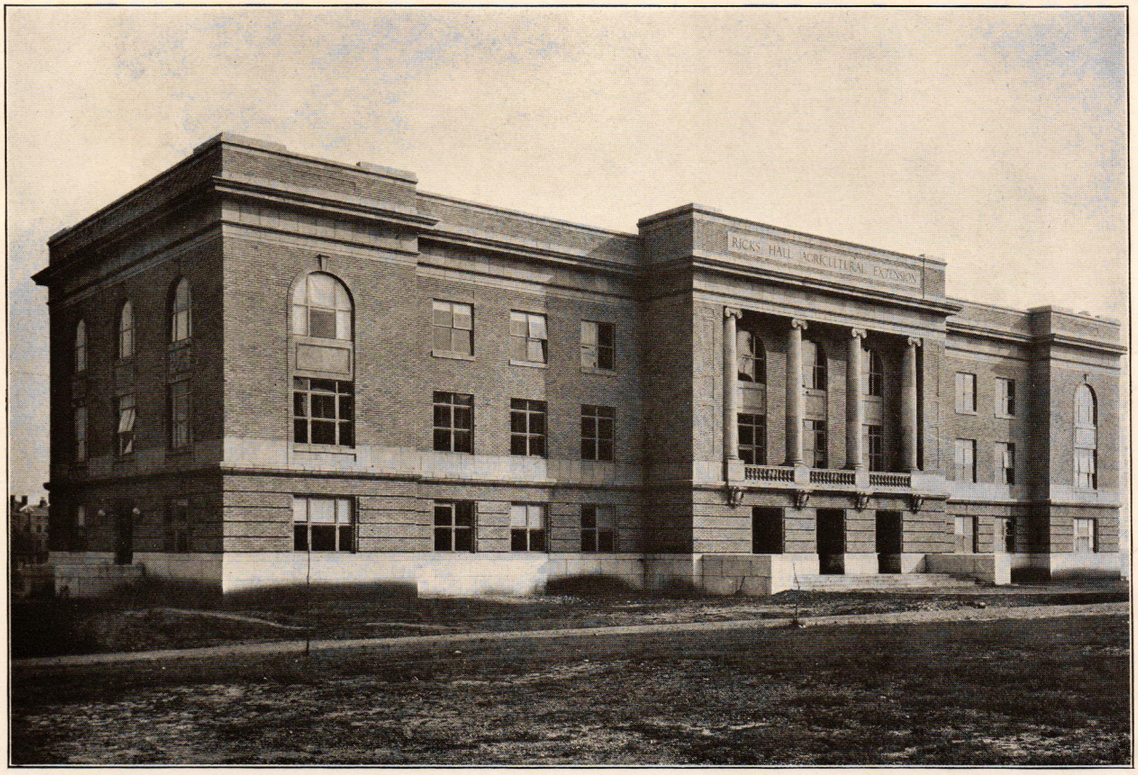

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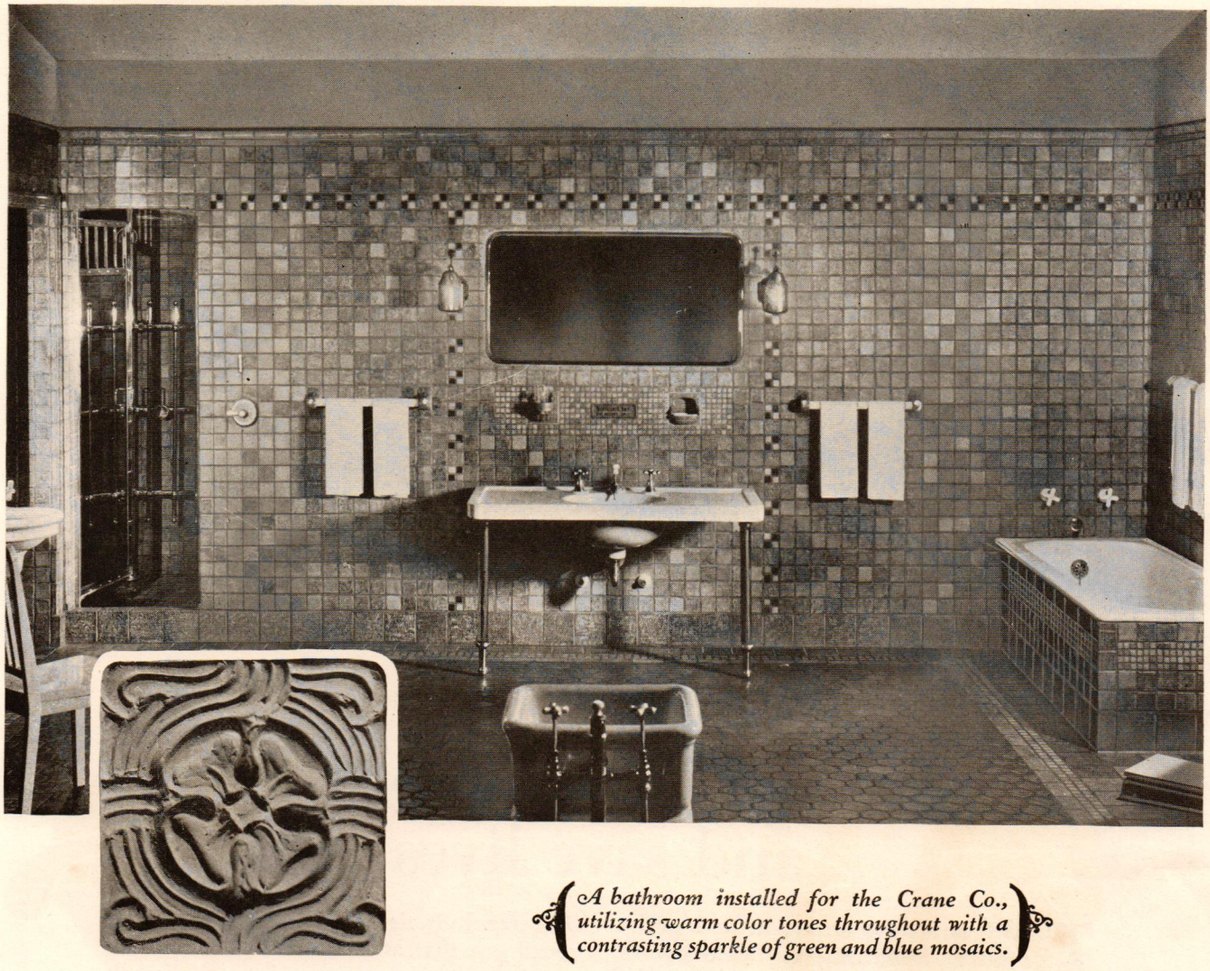

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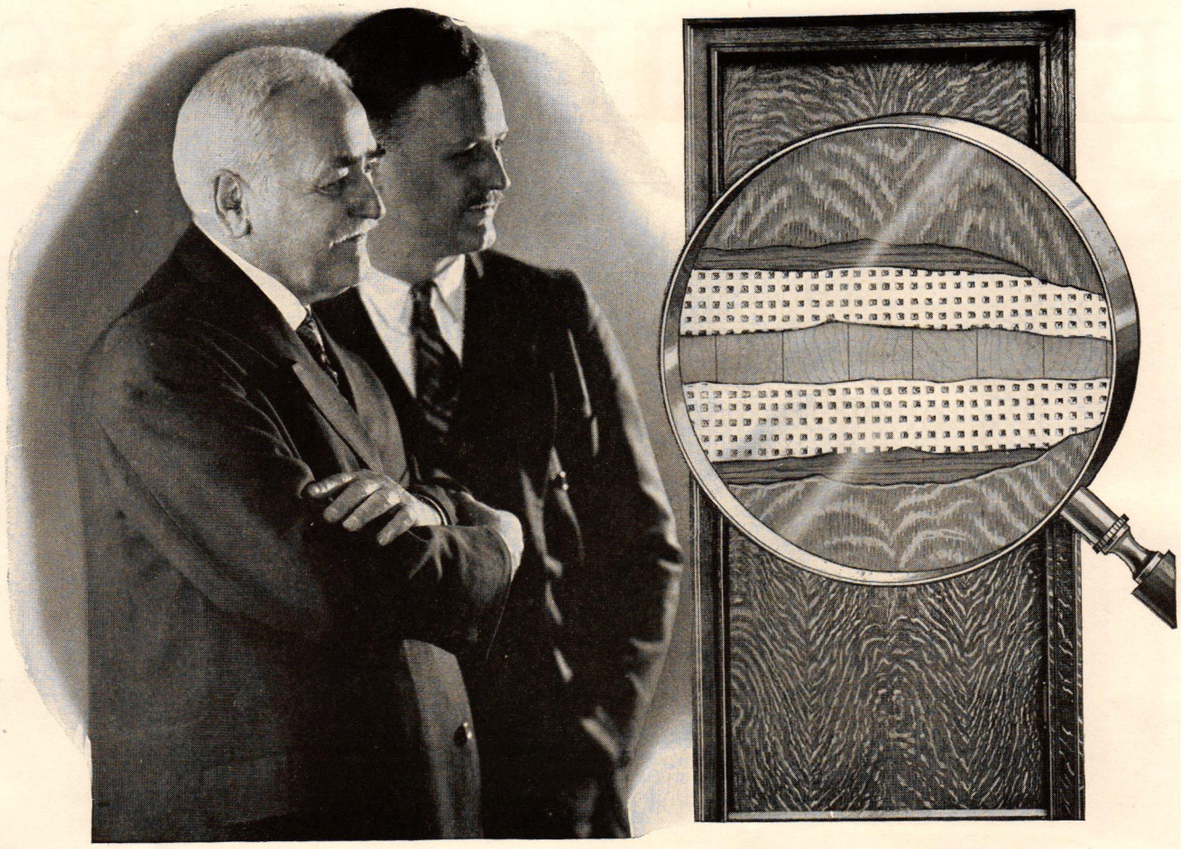

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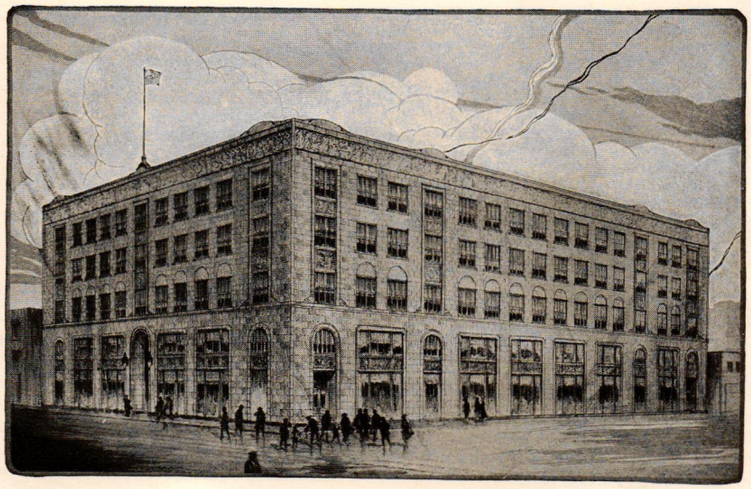
Gentlemen:

Referring to your letter of January 29th, we installed Duriron Drain Lines in our new building, because upon investigation we found that it would resist the action of the acids which we used.

When we installed an Engraving Dept., our first experience was with a lead pipe which lasted two years. This pipe was then replaced by a clay pipe, which gave satisfactory service because, in the old building, we had a straight drop from our Engraving Department.

In our new building various elbows and curves were required and consequently we were looking for a pipe which would resist acids, should any lay dormant in the piping. We believe our Duriron installation has solved our problem.

Very truly yours,
G. O. SCHLAEFLI
Purchasing Agent
The Milwaukee Journal



THE NEW MILWAUKEE JOURNAL BUILDING
Largest Newspaper Plant in the Northwest
Frank D. Chase, Inc., Architects

The DURIRON COMPANY
DAYTON · OHIO

A6-I-RTG

Blending—

A remarkable new way of obtaining rubbed effects with LIQUID GRANITE

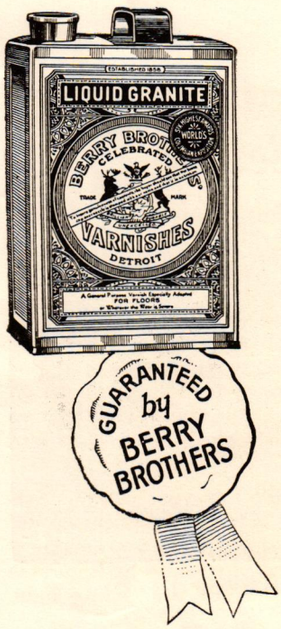
HERE is a discovery worth thousands of dollars to those who make use of it!

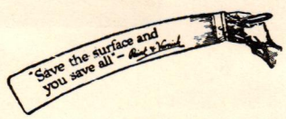
A varnish finish closely resembling a rubbed surface — in fact a finish that in some respects is even superior to a rubbed one — may be obtained by blending Liquid Granite (gloss) with Liquid Granite (dull).

Any desired degree of luster is possible. For floors, a splendid formula is three parts dull and one part gloss.

Blending Liquid Granite not only eliminates the time and expense that rubbing requires, but also produces a soft-toned finish of beautiful sheen that does not have a "rubbed-off" effect.

Few varnishes can be blended. The high quality and absolute uniformity of Liquid Granite, however, make it a varnish that may safely be blended even by a layman.

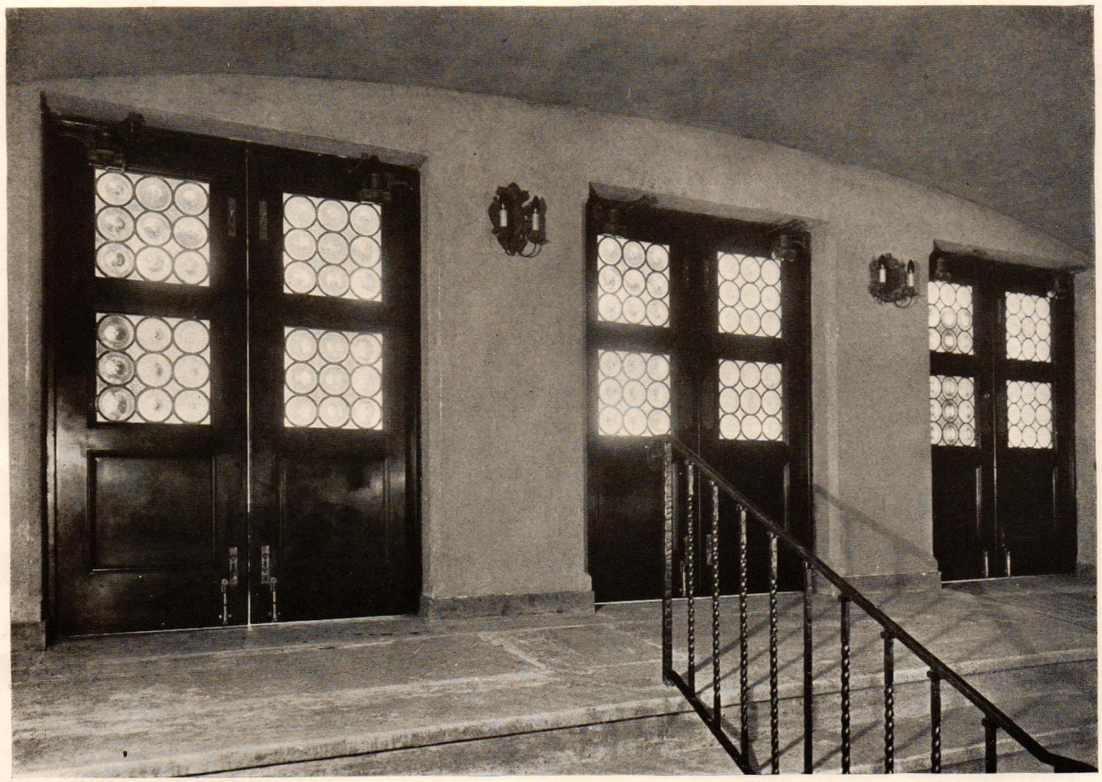




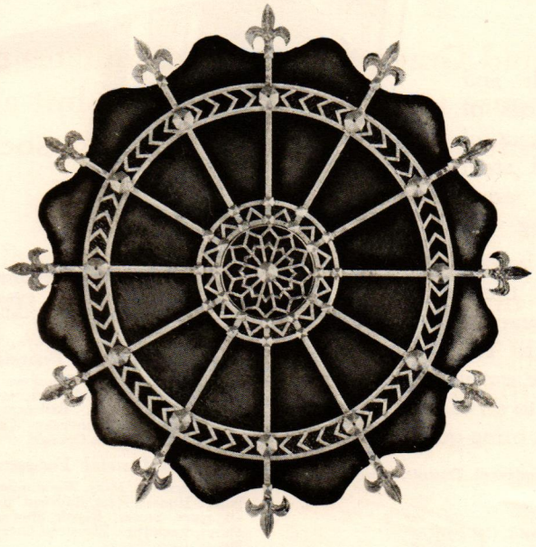
BERRY BROTHERS INC.

Varnishes Enamels Stains

Detroit, Mich. Walkerville, Ont.



Entrance lobby of the new Guild Theatre, 52nd St., New York, C. Howard Crane, Kenneth Franzheim and Charles H. Bettis, Architects. The art glass was executed by the WM. A. DAUNT CO.



One of the Illuminated Art Glass Ceiling Light Panels, Balcony Soffit, Guild Theatre.

Skilled Craftsmen At Your Service

Both owners and architects joined in expressing complete satisfaction with the work of the WM. A. DAUNT Co. in this beautiful new theatre.

This concern of artists is at your service. Their work in the Guild Theatre represents every requirement of material and workmanship that only years of experience can put into them. They are specialists in the design and construction of ceiling light features, art glass panels, windows and all other glass and metal requirements.

Let them work with you on your design. Ask the WM. A. DAUNT Co. for any ideas on the subject. Visit the showrooms and make a selection of glass and metals from hundreds of various designs and see the ceiling light construction.

An architect's bulletin will be sent on request.

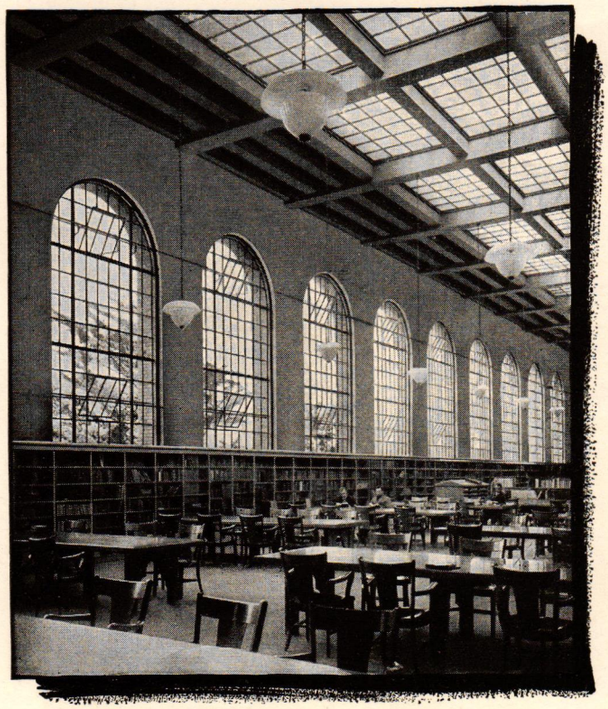
WM. A. DAUNT CO.

Metal and Glass Products :: Specialists in Lighting Effects

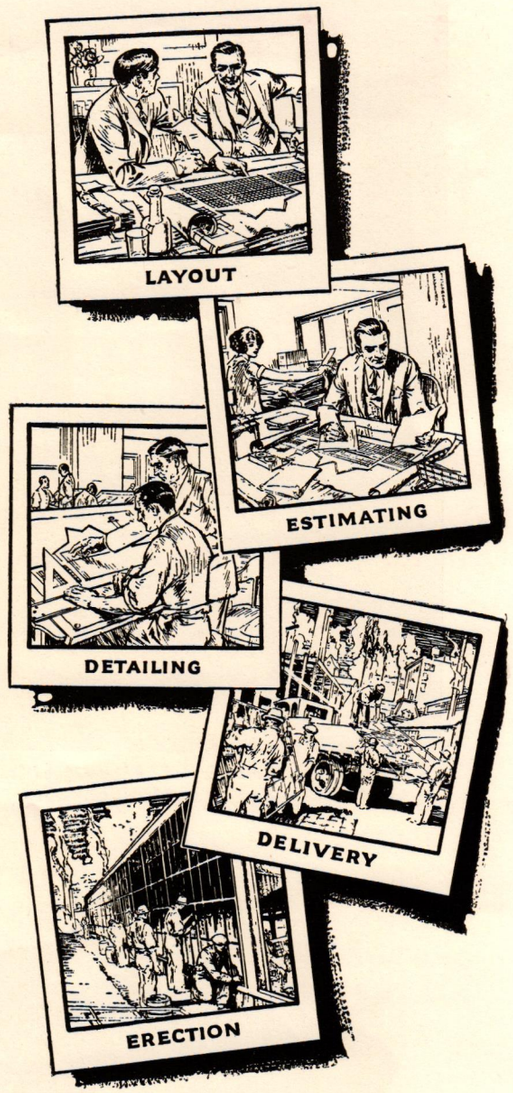
110 East 42d Street

New York City

Fenestra Windows — Fenestra Service



Leland Stanford University Library Building where Fenestra Windows and Fenestra Service were specified.



Write Them Both into Your Specifications

—then you'll have steel windows of the most suitable type, architecturally correct, beautiful, practical and enduring—for Fenestra Windows (see the list opposite) will cover every window need.

—then you'll have the advantage of a complete steel window service which embraces layout, estimating, detailing, delivery AND erection by the Fenestra Construction Company—a service based upon experience, for Fenestra men are steel sash specialists who have designed, built and erected hundreds of thousands of beautiful and practical steel windows for every type of building.

—and then you'll have both the windows and the service quickly available wherever your operations may be located. There are Fenestra organizations in every section of the country ready to serve you. A telephone call will bring quick action.

Architectural Fenestra
—for Schools, Libraries, Offices, Banks, Theatres, Club Houses, Art Galleries, Hospitals, Hotels.

Residential Fenestra
including Casement Windows for Residences, Apartments, Dormitories, Sleeping Porches, Sun Parlors. Basement Windows for Every type of Foundation Wall. Utility Windows for Private Garages.

Industrial Fenestra
—for Factories, Mills, Warehouses, Garages, Power Houses, Piers, Railroad Buildings of all types, Stores, Repair Shops, Machine Shops, Foundries, Elevators, Creameries, Ice Plants, Pent Houses.

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—for Jails, Prisons, Reformatories, Asylums.

DETROIT STEEL PRODUCTS COMPANY, R-2288 East Grand Boulevard, Detroit, Mich.
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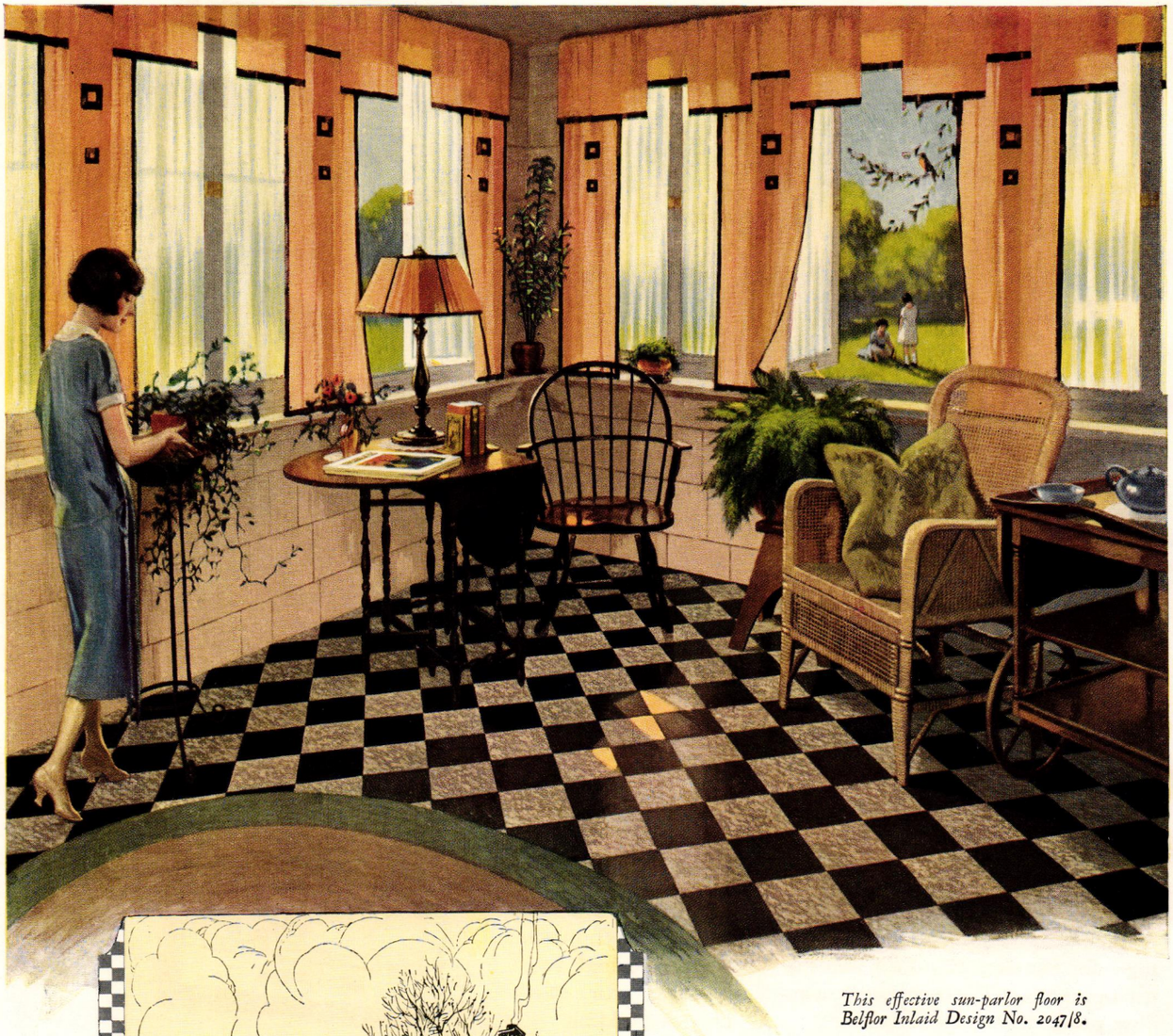
***Factories* in Detroit, Mich., Oakland, Cal., and Toronto, Ont., Canada.**

Fenestra

for schools and institutions
homes and apartments
commercial buildings
all industrial structures



This effective sun-parlor floor is Belflor Inlaid Design No. 20478.

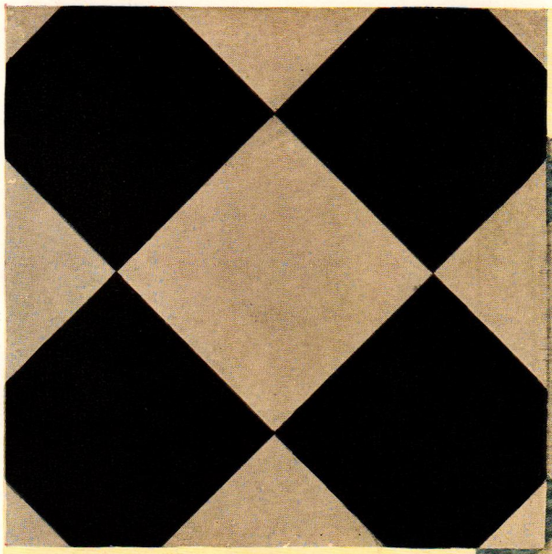
In the suburban home of Mr. Albert Humble, architect, at Douglas Manor, Long Island, Nairn Inlaid Linoleum was laid in sun-parlor, kitchen and pantry.

Note how the Belflor Inlaid checkerboard design, in softly clouded gray and lustrous black, has been used to strike the keynote of the scheme of decoration of the sunroom.

Other designs of Nairn Inlaids are shown on the next page.

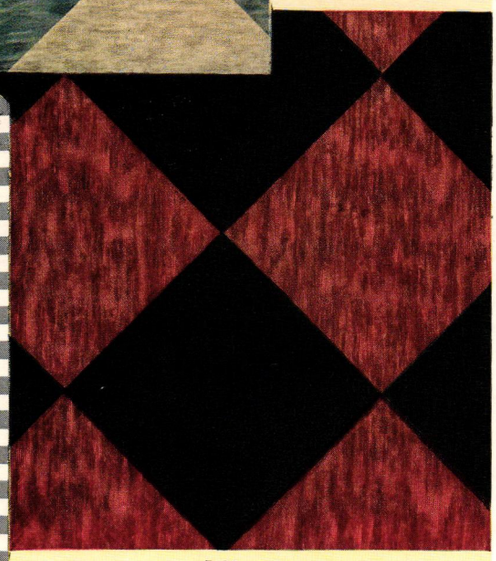
{See other page}

NAIRN *INLAID* LINOLEUM



Newark Inlaid
Design No. 1047/1

Belflor Inlaid
Design No. 2047/1



Belflor Inlaid
Design No. 2047/6

Floors that add beauty —and keep down cost

HOW to achieve beauty yet keep within the appropriation—that's a dilemma the architect faces in almost every home he designs. Nairn Inlaids for the floors help solve the problem.

Belflor Inlaid is a new achievement of Nairn. Prismatic effects in subtly harmonious colors make it a floor that can't be equalled for distinctive sun-parlors, breakfast rooms and halls—for living and dining-rooms.

The clear-toned colors and sharply defined patterns that so many women like for kitchens and bathrooms are found in a wide variety of designs, in *Newark Inlaid* and *Universal Inlaid*—two other popular types of Nairn Linoleum.

Nairn Inlaids are made in different weights: Heavy Weight and Household Weight. The Heavy Weight is recommended for those rooms where the traffic is severe and constant. Under ordinary wear the Household Weight gives long and satisfactory service.

CONGOLEUM-NAIRN INC.

Philadelphia New York Boston Chicago Kansas City
San Francisco Atlanta Minneapolis Cleveland
Dallas Pittsburgh New Orleans

Write for
The Linoleum Data Book

This handbook on Nairn Linoleum is of convenient size, sturdily bound in Manila. It's all ready to slip into the file cabinet—even has the A.I.A. Classification number 28 i l, on it. We will gladly send you a copy *free*.

{*See other page*}

NAIRN *INLAID* LINOLEUM

Beauty Also Goes With Bigness

TEN car loads of Hood Riviera Roofing Tile made the roof of this Atlanta Girls' High School one in beauty and spirit with the building. Every tile delivered on time and every one a perfect tile.

"Above all things" use Hood Roofing Tiles

Requests for particulars or quotations promptly and thankfully serviced

Address Roofing Tile Dept. "A"
DAISY, TENNESSEE

Famous Hood Roofing Tiles

"RIVIERA"
True Spanish Mission Style

"HABANA"
(Straight barrel) Old Cuban Style

"HABANA"
(Tapered) Old Cuban Hand-Made Style

"SUSSEX"
English Broad Shingle Style

"NORMANDY"
French Narrow Shingle Style

B. Mifflin Hood Brick Company

Burned Clay Products

Atlanta Ga.

Columns of Beauty and Character

Shown above is ballroom of the Atlanta-Biltmore. Shultz & Weaver, Architects

Contributing to the beauty of a fast-predominating number of fine interiors, are to be found Koll Columns — the columns with the interlocking joints that cannot come apart.

Always correct in entasis . . . perfect in fluting . . . and with the stability which only years of specialization can build into wood columns . . . what wonder that Koll's have won preference!

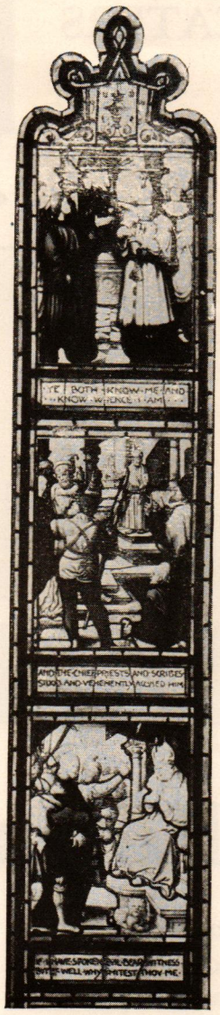
Koll's Columns are used also in Hartmann-Sanders Colonial Entrances, manufactured from our own models or to the architect's specifications, and shipped ready to erect. Send for details. Address Hartmann-Sanders Co., 2187 Elston Ave., Chicago, Illinois. (Eastern office and Showroom: 6 E. 39th St., New York City.)

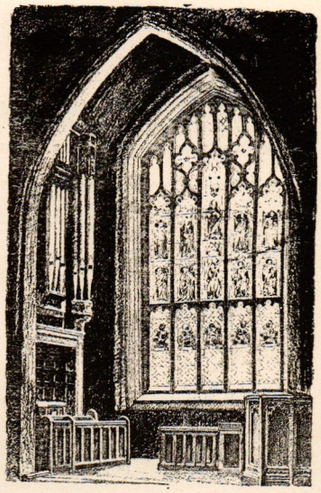
Our new catalog, "Colonial Entrances of Beauty and Distinctiveness," explains. Write for copy B-51.

HARTMANN-SANDERS

Colonial KOLL LOCK-JOINT COLUMN *Entrances*

THEY CANNOT COME APART





Old Gems In New Settings

IN the reredos of the Sanctuary in the Park Avenue Baptist Church, New York, is an antique colored window set directly against a brick wall.
Natural sunlight never reaches it.
Yet the simulation of sunlight produced by our method and equipment is so nearly perfect that this window is comparable to surrounding windows exposed to natural light.

This is but one example of how we have furnished artificial sunlight to windows, that will shine 24 hours a day, and brings out the true value of the colors in the glass by concentrating light where it is most needed.

In church lighting of any kind our half century experience can be of assistance to you.
You are welcome to our service or catalogue at any time.

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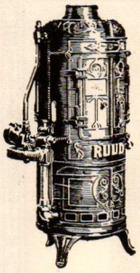
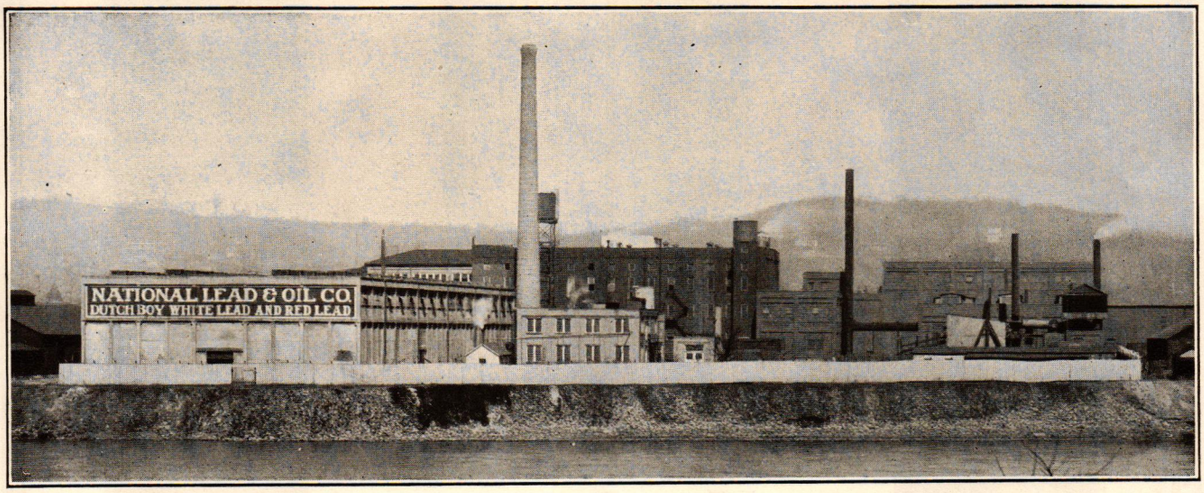


RUUD AUTOMATIC GAS WATER HEATERS

THE NATIONAL LEAD & OIL COMPANY
New Kensington, Pa.
Ruud Heats Water for Workmen's Showers and Lavatories.



A Safety First Bulletin

JUST as certainly as carelessness is recognized as the frequent cause of accidents in industrial plants, uncleanliness is regarded as the source of disease—and time off that hampers production.

In the plant of the National Lead & Oil Company, New Kensington, Pa., every possible sanitary precaution is exercised.

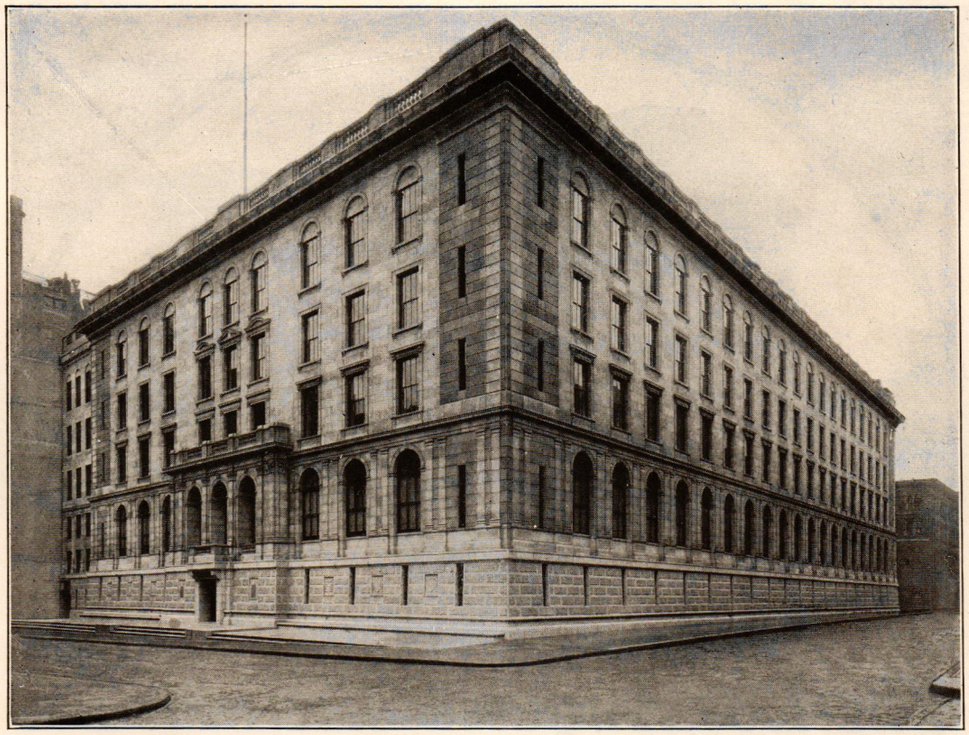
The ever-ready Ruud Automatic Gas Water Heater supplies instant, plentiful, steaming hot water, making it easy for workmen to keep clean without loss of time on the job.

The RUUD Architect's Specification Folder, compiled in compact and workable form, assures Perfect Hot Water Service recommendations for buildings of all types, large or small. It fits your file—and is free upon request.

Ruud Manufacturing Company

Factories in Pittsburgh, Pa., and Toronto, Ont.

BRANCH OFFICES IN ALL LARGE CITIES
Permanent Exhibit—739 Boardwalk, Atlantic City, N. J.



Federal Reserve Bank
Boston, Mass.

R. Clipston Sturgis
Architect

METAL DOORS AND TRIM

COMPLETE ELEVATOR INCLOSURES AND CABS

UNI-TRE FRAMES

ADJUSTABLE PARTITIONS

CONDUO-BASE

A RECENT installation of Dahlstrom elevator inclosures is to be seen in the new home of the Federal Reserve Bank in Boston.

The specifications called for elevator inclosures, metal doors and trim finished in Gray Enamel, and give to the building one of its most attractive as well as most practical features.

We shall be pleased to put your name on our list to receive our architectural literature.

DAHLSTROM

DAHLSTROM METALLIC DOOR COMPANY
INCORPORATED 1904
JAMESTOWN, NEW YORK

NEW YORK · 25 Broadway · CHICAGO · 19 So. LaSalle Street · DETROIT · 1331 Dime Bank Bldg.

Schultz & Weaver
Architects

Thomas Haverty Company
Sanitary Engineering Contractors

The Los Angeles Biltmore— Another Reading Installation

COMMON SENSE prompts most architects to *specify* Reading Genuine Wrought Iron Pipe; but there are times when the client's objection to Reading's slightly higher price forces the substitution of cheap pipe.

In the plans for the plumbing and steam lines of the Los Angeles Biltmore, Reading Genuine Wrought Iron Pipe was specified because of its greater resistance to corrosion and consequent longer life.

READING IRON COMPANY, Reading, Penna.

World's Largest Manufacturers of Genuine Wrought Iron Pipe

BOSTON	NEW YORK	PHILADELPHIA	BALTIMORE
PITTSBURGH	CINCINNATI	CHICAGO	SEATTLE
ST. LOUIS	LOS ANGELES	HOUSTON	TULSA

READING PIPE

GENUINE WROUGHT IRON

Whether It is to Cost $7,000 or $70,000—

Include this Paragraph in the Specifications

"The Heating Plant shall be equipped with the Minneapolis Heat Regulator Model 77 AC with 8-day 7-jewel clock thermostat and electric motor."

YEARS ago, when big homes with high ceilings were in vogue, automatic heat regulation was thought to be a luxury, only for the rich.

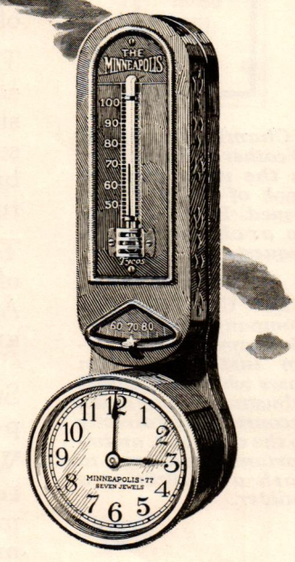
Today those homes—and those ideas—are both out of style. Many architects are now specifying the Minneapolis for every home they plan. And why not? The Minneapolis seldom adds as much as 1 per cent to the cost—and it is a true economy feature.

The "MINNEAPOLIS" HEAT REGULATOR

"The Heart of the Heating Plant"

Offers the home-owner far more today than ever. The new Model 77, with 8-day, 7-jewel clock is a distinct achievement. Simple as the one-day model, thoroughly reliable, beautiful in design and finish, and very moderate in price.

The new electric motor, completely enclosed, is likewise an important step forward—simple and still more dependable. Both of these new Minneapolis models are fully described in the new catalog which will fit your files. Copy on request.



MINNEAPOLIS HEAT REGULATOR CO.

Established 1885

406 East 28th St. *Minneapolis, Minn.*

Factory Service Branches in principal cities render complete installation service. Elsewhere specify installation by the heating contractor.

MODEL 77

8-day Clock—Seven Jewels

Chamberlin Strip in Use 19 Years Proves Value on Congress Hotel

Congress Hotel, Chicago, Equipped in 1906 with Chamberlin Metal Weather Strips

"Chamberlin Metal Weather Strip Details" is the most complete book of its kind ever issued. Free copy sent to architects upon request.

The Chamberlin Company, itself, is behind every Chamberlin installation. In cases where occasional adjustments may arise, recourse is had directly to the company, an important advantage to both architect and builder.

Exposed to the full force of Lake Michigan gales, the Congress Hotel, Chicago, early sought the protection of Chamberlin Metal Weather Strips for its hundreds of guest rooms.

That the initial Chamberlin equipment, installed in 1906 is still giving thoroughly adequate service after 19 years' use, was brought out in a test made February 11, 1925.

This test conducted on the lines of those recently made by the American Society of Heating and Ventilating Engineers, showed that the Chamberlin Strip was keeping out 93.7% of possible in-leakage of air. Wind velocity against tested sash was 15 miles per hour. Actual measured in-leakage included air coming through cracks in frame and through pulley holes. Windows were tested without any special preparation.

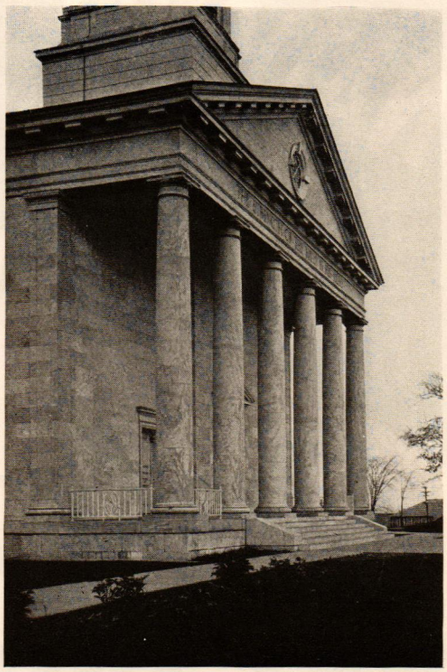
As demonstrated above, Chamberlin Weather Strip installed for a long period of years invariably shows a high degree of efficiency. Yet Chamberlin is constantly improving both its product and its installation.

A recent improvement is the new shoulder bearing corrugated strip which has been adopted after careful test proving it to be 3% more efficient. By specifying Chamberlin, architects and home owners are assured of weather-stripping installed by experts and guaranteed to last the life of the building.

CHAMBERLIN METAL WEATHER STRIPS
"SINCE 1893-THE STANDARD"

CHAMBERLIN METAL WEATHER STRIP COMPANY, DETROIT, MICHIGAN

Sales and Service Branches in 80 Cities throughout the United States



GOOD FOR ALL TIME · VERMONT MARBLE ·

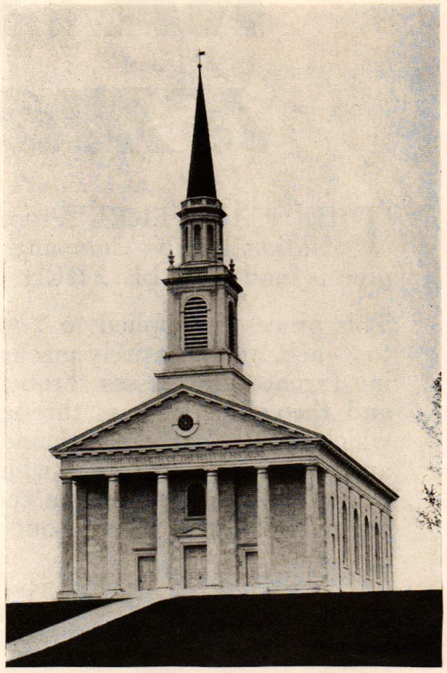
Mead Memorial Chapel on the college campus at Middlebury, Vt.

Allen & Collens, Boston, Architects.

Bringing Back the Old Meeting House

THE time is soon coming when the Colonial church, with its quiet dignity and its cherished associations, will be nothing but a memory. The task of perpetuating it belongs to the architects of today. Theirs is the problem of adapting the idea to modern needs.

That is the motive which prompted the building of the Mead Memorial Chapel. The architects have endowed the structure with true Colonial spirit. It is nothing less than an old New England tradition preserved in marble — marble which was raised from the Florence Quarries only a score of miles away.



VERMONT MARBLE COMPANY - PROCTOR, VERMONT

BRANCHES IN THE LARGER CITIES

See Sweet's Catalog for Specifications and Other Data

"NATIONAL" PIPE *is made Scale Free*

THE SCALE FREE Process was invented and developed by National Tube Company and is exclusive—therefore, no other pipe is made SCALE FREE.

This process is applied to "NATIONAL" Butt-weld Pipe, sizes ½ to 3-inch, and is entirely mechanical. After the pipe leaves the welding furnace and passes through the sizing rolls, it is slightly cooled and then given a pass through a series of specially designed rolls which slightly reduce the diameter and increase the length of the pipe, and in doing so, the scale, which has become brittle while cooling, is worked loose and falls from the pipe walls. It is later blown out by compressed air or washed out with water.

The clean, smooth surfaces of SCALE FREE Pipe mean—better galvanized coatings—minimized corrosion, particularly pitting—less chance of damaged valve seats and clogging of small orifices—decreased friction loss—and greater delivery capacity. For details of this process and its advantages, write for a copy of "NATIONAL" Bulletin No. 7.

NATIONAL TUBE COMPANY, PITTSBURGH, PA.

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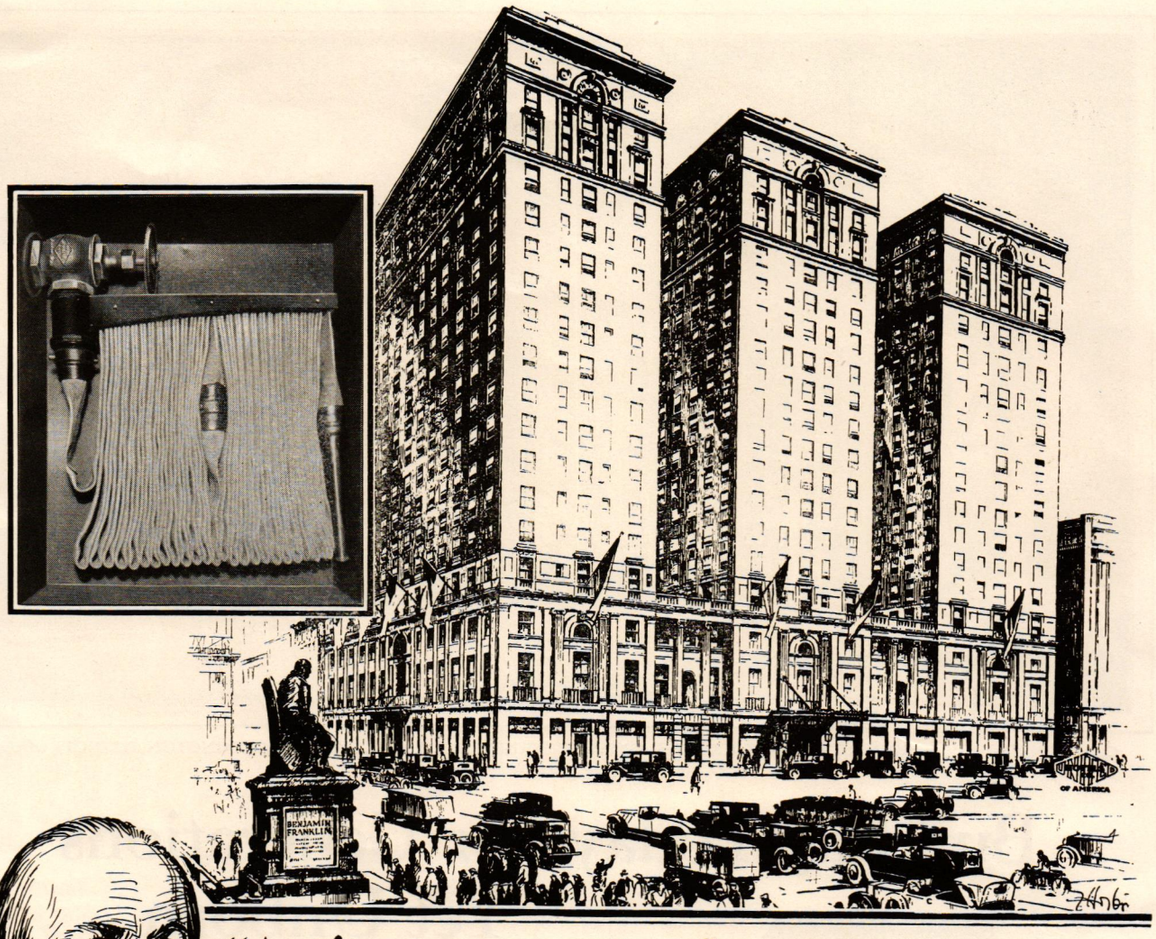
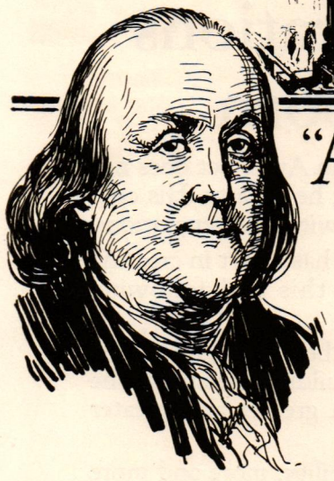




"A little Neglect may breed great Mischief"

Poor Richard's Almanack, 1758.

Time merely serves to uphold the wisdom of Benjamin Franklin.

In Philadelphia, the builders of the new hotel which bears Franklin's name have heeded his advice. Nothing has been left undone to provide for the safety of the 1800 guests.

Safety demands adequate fire protection equipment, and throughout the Benjamin Franklin, Jenkins Fire Line Valves are used.

These valves hold pressure without leakage, and when opened, instantly allow an unobstructed flow. Fitted with Jenkins Renewable Discs, they neither corrode nor stick at the seat. They are suitable for 250 pounds pressure, 500 pounds test. The hand wheel is extra large, and enamelled a bright red for greater visibility.

Jenkins Valves at supply houses everywhere.

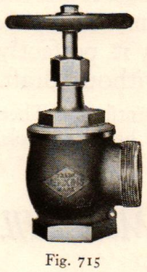


Fig. 715
Jenkins Bronze Fire Line Angle Valve

JENKINS BROS.

80 *White Street*.....*New York, N. Y.*
524 *Atlantic Avenue*.....*Boston, Mass.*
133 *No. Seventh Street*.....*Philadelphia, Pa.*
646 *Washington Boulevard*.....*Chicago, Ill.*

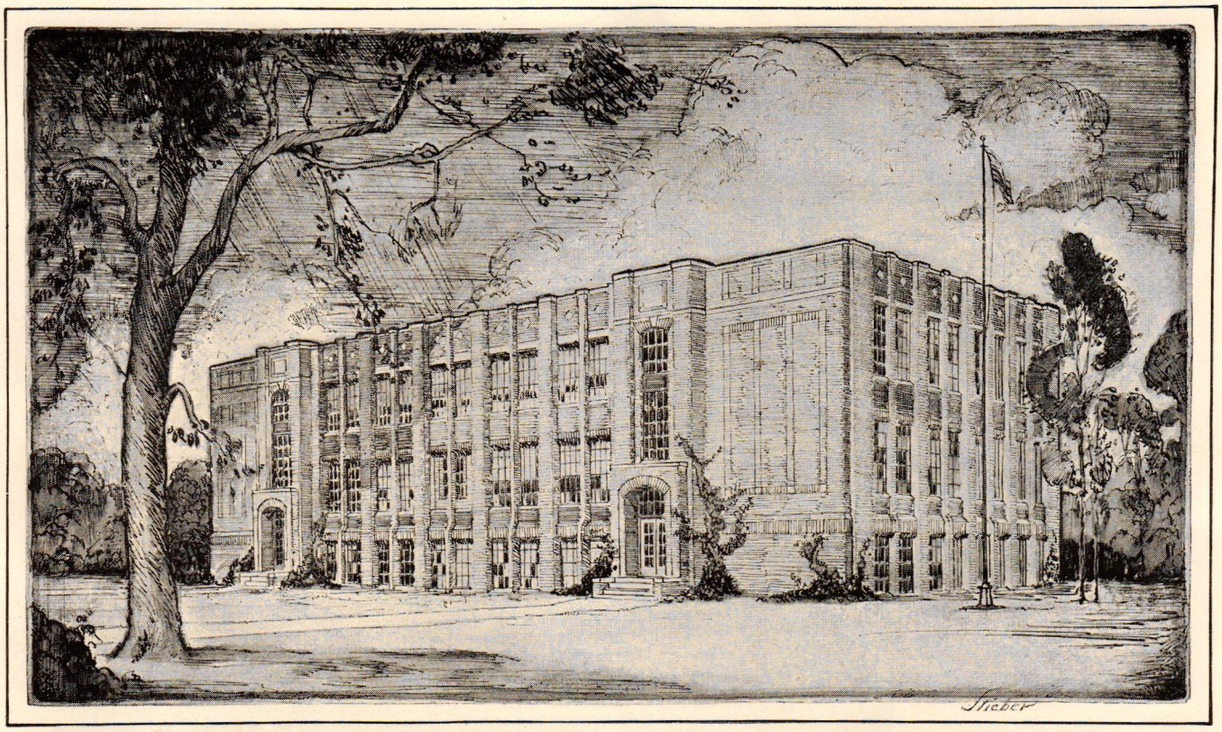
JENKINS BROS., Limited
Montreal, Canada *London, England*

FACTORIES
Bridgeport, Conn. *Elizabeth, N. J.*
Montreal, Canada

Always marked with the "Diamond"

Jenkins Valves

SINCE 1864



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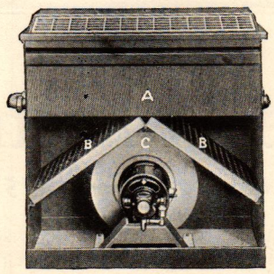

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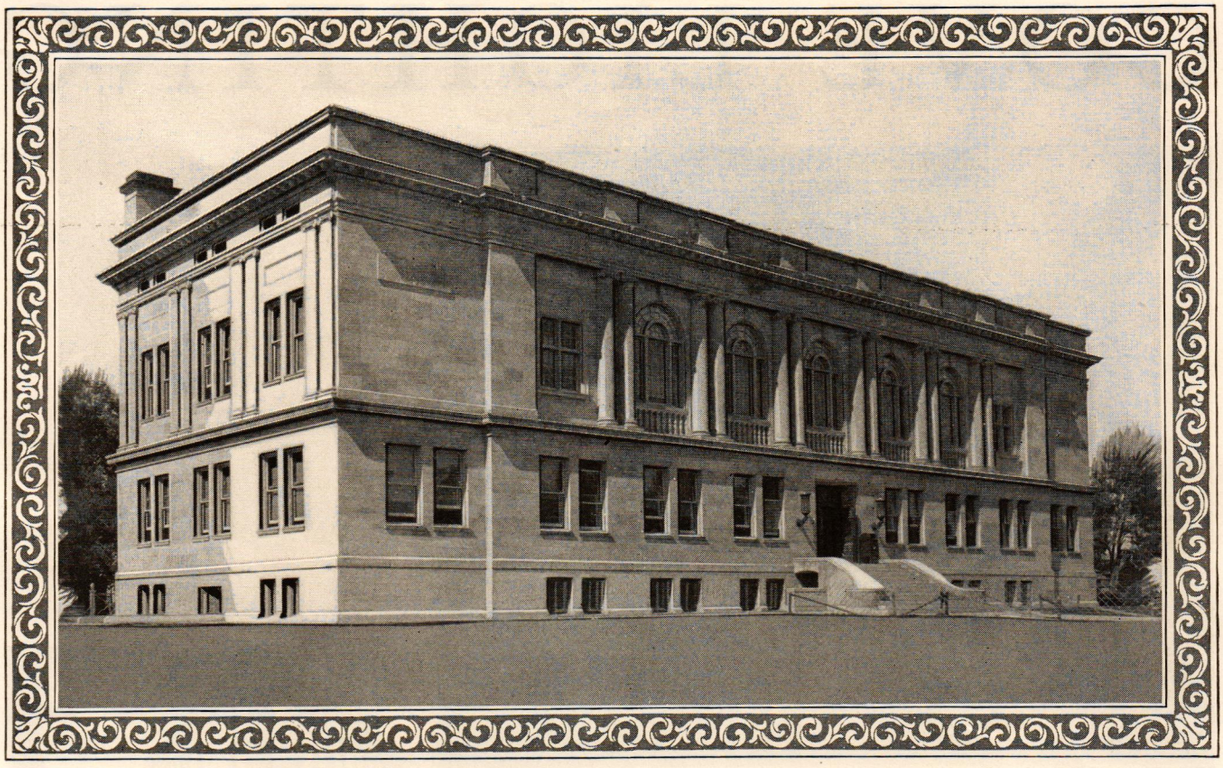

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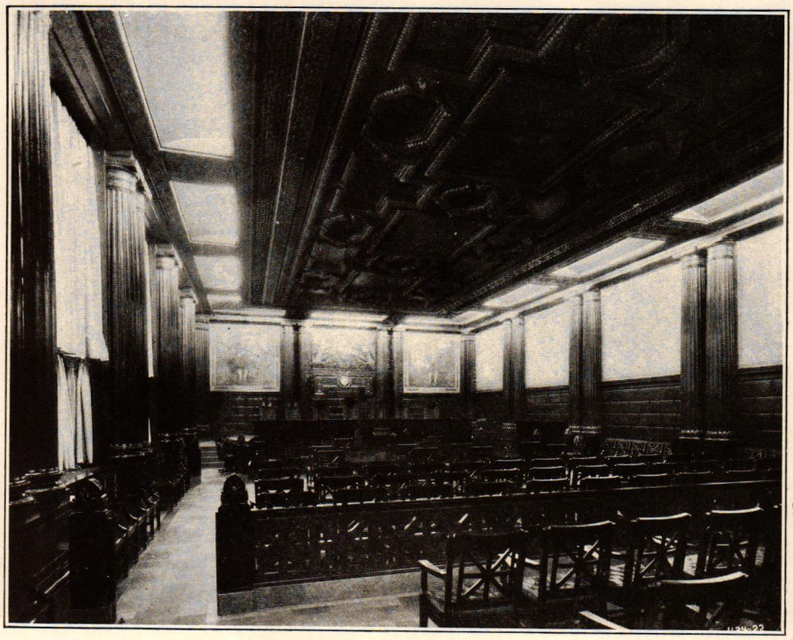

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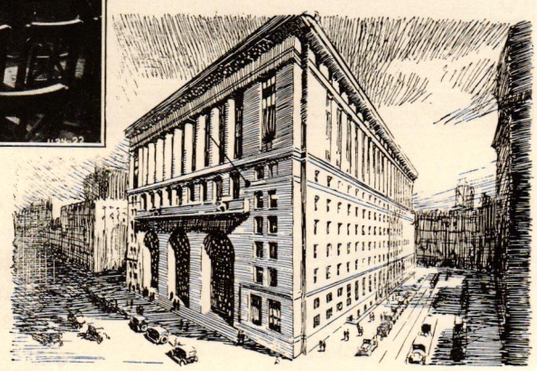

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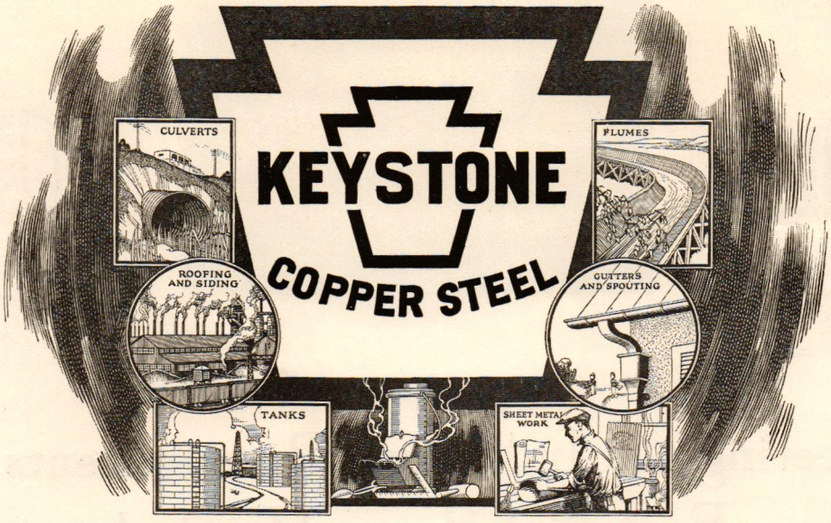

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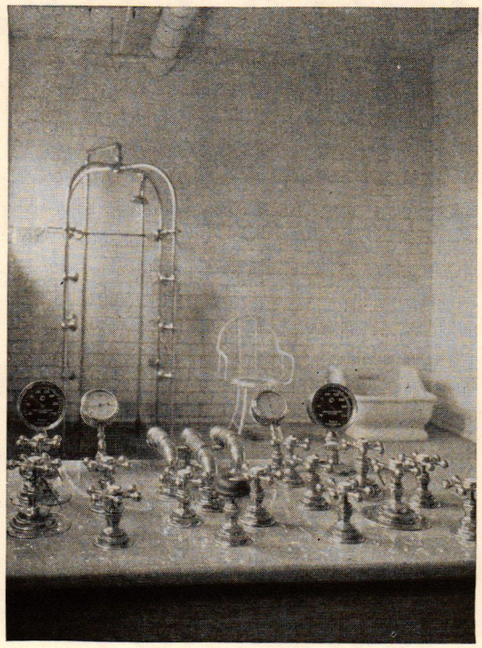

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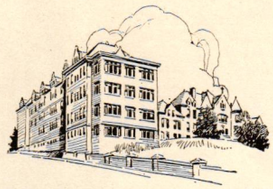
Poughkeepsie, New York

Mercy Hospital
Janesville, Wisconsin
Architect:
Backus & Pfaller
Plumber:
H. E. Hathorne



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THE PROFESSIONAL ARCHITECTVRAL MONTHLY

VOL. LI. CONTENTS No. 6

JUNE 1925

TEXT PAGES

PÆSTUM REVISITED. (Illustrated)	*By Ralph Fanning*	Frontispiece, Pages 197–200
THE FIFTY-EIGHTH ANNUAL CONVENTION OF THE AMERICAN INSTITUTE OF ARCHITECTS. (Illustrated)		Pages 204–206, 213, 214
EDITORIAL AND OTHER COMMENT: "The Grow-as-You-Please City Will Soon Be a Thing of the Past," "We Shall Miss Her," "Architectural Associations and Small House Bureaus," "Many Women in English Architects' Offices," "Bertram Grosvenor Goodhue"		Pages 207, 208
CEMENT WAS DISCOVERED BY THE ROMANS		Page 214
COMMUNICATIONS		Pages 221–224
AN ARCHITECT'S SIMPLE ENGINEERING PROBLEMS. Eighth Article	*By DeWitt Clinton Pond*	Pages 224–226
STONE	*By David B. Emerson*	Pages 231, 232
THE PROBLEM OF COLOR IN HOUSE PAINTING		Page 233
BOOK REVIEWS		Page 233
PHILADELPHIA'S NOTABLE ARCHITECTURAL AND CITY PLANNING EXHIBITION		Page 234
SAN FRANCISCO'S CODE OF ETHICS FOR THE BUILDING INDUSTRY		Page 234
A VISIT TO REMEMBER		Page 235
THE HOUSE SHORTAGE IS STILL ACUTE FOR PEOPLE OF MODERATE MEANS		Page 235
ANNOUNCEMENTS		Page 235

PLATES AND ILLUSTRATIONS

TEMPLES AT PÆSTUM		Frontispiece, Pages 197–200
FACULTY HOUSES FOR PRINCETON UNIVERSITY, PRINCETON, N. J.	*Park & Morgan, Architects*	Pages 201–203
RESIDENCE, A. G. TERRY, EVANSTON, ILLS.	*Granger, Lowe & Bollenbacher, Architects*	Plates LXXXI–LXXXIII
RESIDENCE, WALTER NEILSON, WINNETKA, ILLS.	*Granger, Lowe & Bollenbacher, Architects*	Plates LXXXIV–LXXXVI
MEASURED DETAILS. ENGLISH SERIES, No. 5. LINCOLN, S. CHOIR AISLE, CATHEDRAL, DOUBLE ARCADE	*Measured and Drawn by E. Pickering*	Plate LXXXVII
RESIDENCE, A. M. GAINES, KNOXVILLE, TENN.	*Barber & McMurry, Architects*	Plates LXXXVIII, LXXXIX
RESIDENCE, CHARLES H. HODGES, JR., GROSSE POINTE, MICH.	*Robert O. Derrick, Architect*	Plates XC, XCI
MEASURED DETAILS. MAINE COLONIAL SERIES. DOORWAY OF THE GENERAL VEAZIE HOUSE, TOPSHAM, MAINE	*Measured and Drawn by A. J. Harriman*	Plate XCII
INSTITUTE FOR THE EDUCATION OF THE BLIND OF NEW YORK CITY	*McKim, Mead & White, Architects*	Plates XCIII–XCVI, Pages 209–212
SIX-FAMILY CO-OPERATIVE APARTMENT-HOUSE, HAVERFORD, PA.	*Roy G. Pratt, Architect*	Page 215
EIGHT-FAMILY CO-OPERATIVE APARTMENT-HOUSE, GERMANTOWN, PA.	*Roy G. Pratt, Architect*	Page 216
ROOSEVELT SCHOOL BUILDING, NEW ROCHELLE, N. Y.	*Frederick G. Frost, Architect*	Pages 217, 218
HOUSE, HAMDEN, CONN.	*Dwight E. Smith, Architect*	Pages 219, 220
HARVARD BUSINESS SCHOOL, HARVARD UNIVERSITY. Competitive Designs:		
Parker, Thomas & Rice, Architects		Page 227
Egerton Swartwout, Architect		Page 228
Benj. W. Morris and Eric Gugler, Architects		Page 229
Hewitt & Brown, Architects		Page 230

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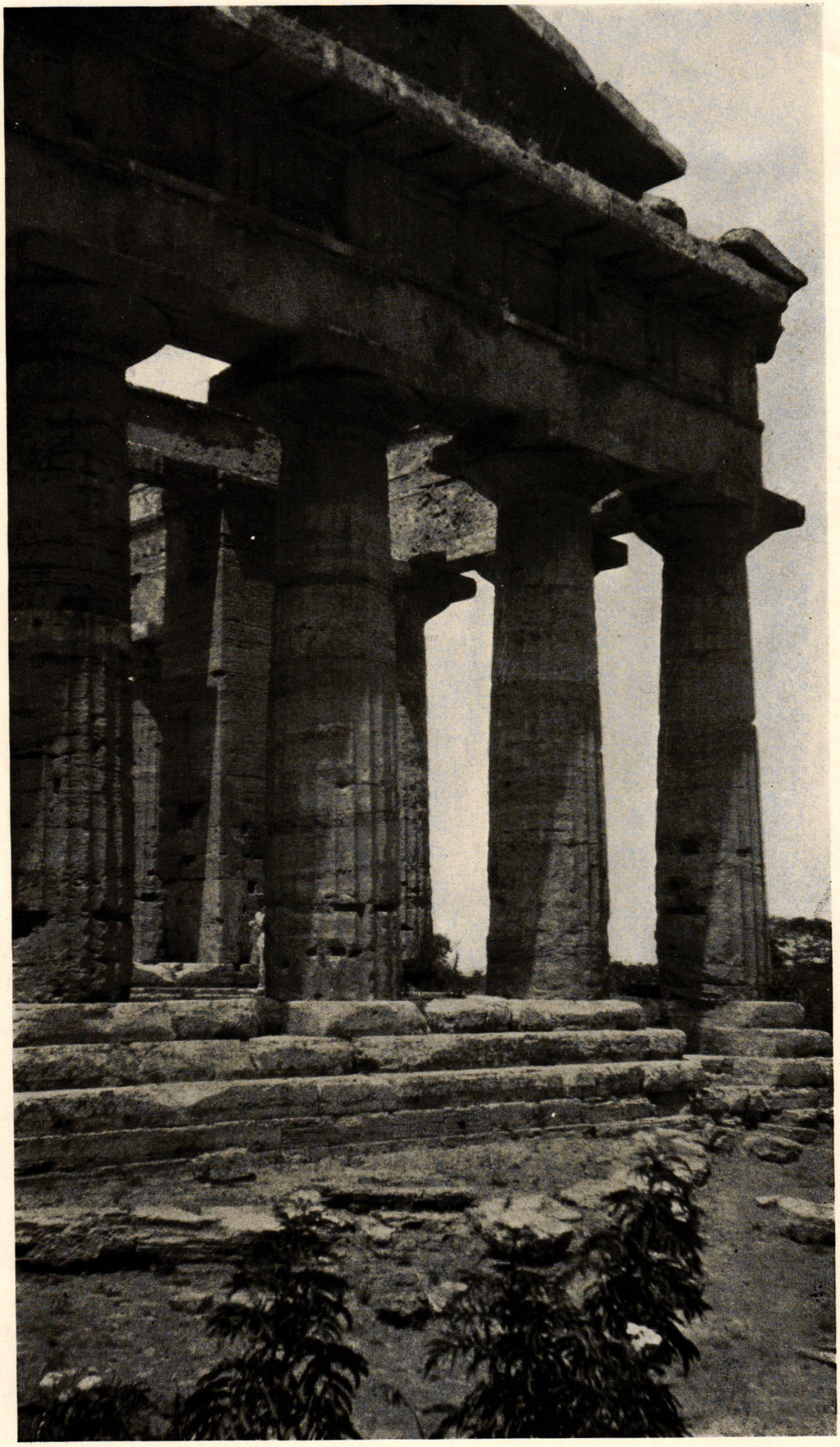

DETAIL, TEMPLE OF POSEIDON, PÆSTUM.

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ARCHITECTVRE *

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THE PROFESSIONAL ARCHITECTVRAL MONTHLY

VOL. LI JUNE, 1925 NO. 6

Pæstum Revisited

By Ralph Fanning

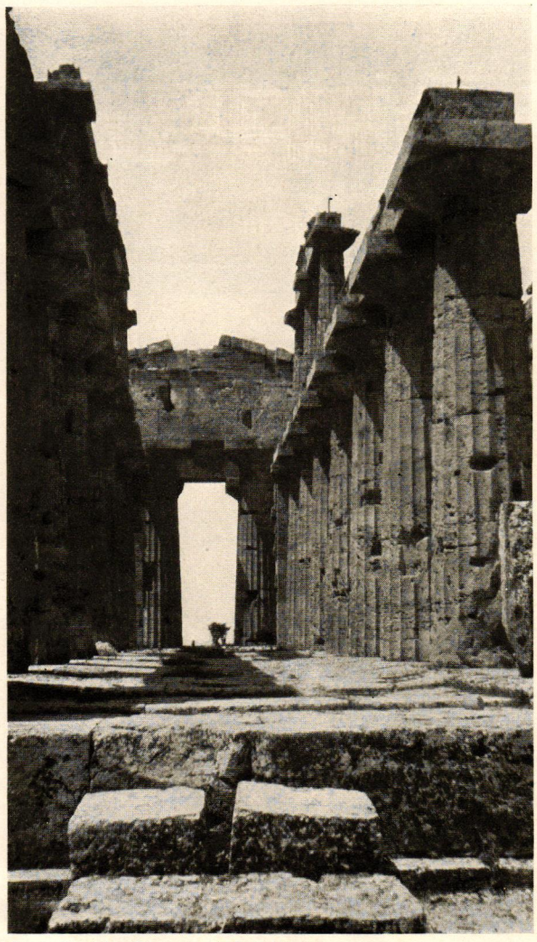
Illustrations from Photographs by the Author

IF one has felt the call of ancient Hellas and cannot yield to its summons by a trip to Greece, a goodly substitute may be enjoyed by the visitor in southern Italy by buying a ticket for Paesto in the crowded station of noisy Naples. Before boarding the train it is well to be equipped with food and drink of a sanitary and substantial nature lest the physical discomforts of modern Paesto succeed in counteracting the spell of beauty and splendor that the ruins of ancient Pæstum must hold for every Greek enthusiast. Equipped with a moderate supply of luncheon and a bottle of drinking water, one can set out assured of a day of classic thrills, and not too great discomfort.

One must have lived long within the shadow of great Vesuvius to become callous or inattentive to the beauty of that smoking mound that rises so majestically out of the turquoise Bay of Naples with the little whitewashed towns and pink villas, crowded farmlets and stately gardens, climbing up as if to defy the monster that within the earth puffs forth his threatening breath at regular moments. Nor does the life of to-day seem to heed the fate of other peoples who have trusted too implicitly in Vesuvius, and lie buried at its base until the modern excavator removes the blankets of solidified cinders that have so well preserved a record of ancient life. Herculaneum and Pompeii need not detain us any more than they seem to worry the peasant folk who tend their patches of tomatoes and pump the little streams of water over the fertile pumice soil. We are in search of older ruins more closely connected with that indefinable art age that is so generally passed by as Hellenic. It is easy to travel back into the historical realms as one attempts to forget the heat and discomforts of physical travel of to-day as the golden horses of Phœbus mount higher and higher in their daily course toward the distant Sicilian islands whereon the strong Hæphæstus forged the thunder bolts of Father Zeus. It is easy to connect the pagan lore and ancient culture as the feeble little train passes into more isolated districts where Italian modernity has not yet trespassed. By Nocera and Cava and Vietri-sul-Mare, where the blue of the sea lures one to turn toward the famed Amalfi drive and the delights of the picturesque monastery with its hillside hospitality; by the ancient Salernum, in the mediæval period the seat of the greatest medical school in all Europe; by the ruins of the Lombard castle, once captured by Robert Guiscard. Scenic admiration and historic meditations are interrupted by the necessity of a change of carriages at Battipaglia as the main train goes on to Brindisi, but, before one knows it, Paesto is announced.

Superimposed Doric colonnade within Temple of Poseidon.

There are few signs as one descends from the train that would even faintly suggest the imposing title of the Greek Poseidonia, or the Roman city of Neptune, which tradition tells was founded by the Greeks from Sybaris about six hundred years before Christ. Tradition also tells that two hundred years after its founding it fell under the sway of the Lucanians, from whom it passed under the control of the Romans. The drowsy station-master merely grunts a greeting with not a sign of recognition, although a former acquaintance, forced, it is true, had led to a description of this worthy being as the most unwashed person of all the Italian peninsula, only to be contradicted by a mutual acquaintance, who said that it was not the worthy station-master but the daughter of the official who deserved this distinction of utter disdain for the rites of Poseidon's realms. Since Signorina Station-Master it is who runs the buffet, a most unpalatable and desolate-looking room, it is with no tarrying that one shoulders the Neapolitan lunch-bag and starts up the dusty road, en route for fourth-century B. C. Greece. Wad-



Central aisle, Temple of Poseidon.

ing through the thick dust of the narrow road with its stagnant ditches and scurrying lizards, one travels over some twenty-three centuries—back to the time when this was the site of a prosperous Grecian colony. Even in the time of Augustus, however, the town had become notorious for its bad air. It is believed that it was gradually deserted, and then, as trade routes changed, it was, curiously enough, forgotten for centuries. While we may deplore the conditions that have made this such an untenantable place, yet it is these very conditions that have served as a protection to the ancient remains, keeping them from the hands of the destroyers and saving them for the inspection of the inquisitive student of to-day.

The ancient town may still be traced by the remains of an aqueduct, probably of Roman times, and the ancient pavements that appear at various places. The town proper was enclosed by massive walls about three miles in circuit. The irregular rectangle thus enclosed was quadrated by two bisecting streets as was the common plan in the Roman camp, a logical inheritance of still earlier schemes of city planning. Four gateways formed by the piercing of the surrounding wall by these major axial streets may once have been busy spots in the ancient commercial town. The so-called Porta della Sirena is still standing in its Roman garb. It is within this gate that one is brought back to the real purpose of the pilgrimage by a startling view of the remaining temples, startling though expected and well remembered from former visits.

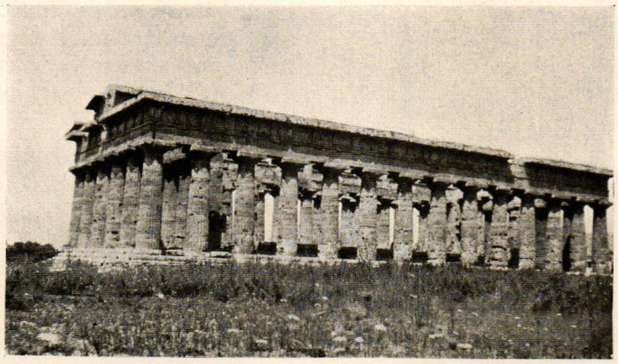
Three great temples still stand in brilliant golden-brown silhouette against the background of sapphire and torquoise sea and sky. In the gala days of Greek commercial power, these temples were probably surrounded by many other imposing structures. Traces of at least two other temples of imposing proportions have been easily found, not to mention the mass of less-important structures that must have made up a busy maritime town. The three remaining ruins have come to be known, with little authority for appellation beyond that of convenience, as the Temple of Poseidon and the Basilica, on the left as we stand by the Porta della Sirena, and, a little further off to the right, the Temple of Ceres.

The Temple of Poseidon as the centre of the group and as the largest and by far the most imposing invites the first inspection, seeming ever more massive and imposing as we approach it along the dusty way. Even the interruption of the custodian, who demands a fee, and the pack of dogs, so poor and mangy appearing that they seem like the ghostly scavengers of immortal affliction who have been guarding an abandoned city of pestilence from a forgotten age, cannot detract from the imposing beauty of the great mass of carved stone. This great Doric temple is a noble example of the austere structural art of building during the fifth century before the Christian era. At the time of its completion it was probably coated with marble stucco in imitation of the great home temples where white marble was available from convenient quarries. Magna Græcia did not provide the convenient marble quarries of the Grecian peninsula, but the porous limestone made feasible the more massive building and, coated with the white stucco, must have been a monumental source of pride and glory to a provincial town.

Detail, Temple of Poseidon.

We wonder, however, if the coloring, even if polychromatic decoration were applied to the white stucco, could possibly have been more satisfactory than the warmth of gold and sienna that the palette of Time, mellowing with the medium of age, has given to the great structure. Closer inspection shows the stone to be coarse and corklike in texture, even with fossil reeds and aquatic plants visible upon close scrutinizat on.

Before climbing upon the great stylobate to wander between the peristyle that still stands complete with all its thirty-six great columns, a stone base in front of the east façade offers a good vantage point for photographs as well as a safe refuge from the too-familiar canines. The appropriated pedestal is doubtless the ancient altar upon which sacrifices were made to great Poseidon himself, if we are to credit the designation given the temple, and no other god seems as appropriate as the azure blue shows between the thickly spaced columns. The dogs clamoring to get up the sides of this photographically desecrated altar may be sniffing the ghostly odors of ancient sacrifices, the sleek white bulls in which Poseidon delighted, or the fatted sheep and oxen whose skulls might have adorned the metope between the lofty triglyphs.



Temple of Poseidon from side.

The old measurement across the front of the Temple of Poseidon was seventy-eight feet, and the six massive fluted columns appear regularly spaced, the coarseness of the material and the ravages of time not permitting of the detection of the more subtle niceties of intercolumnation and inclinations now definitely attributed by the Parthenon authorities. According to Doric peripteral conventions, this would mean that there should be two times six plus one, or thirteen, columns on each side of the temple. In reality, there are fourteen columns on each side, twelve in addition to the two corner columns; in all, thirty-six well-preserved columns in the exterior colonnade, making the proportions of the plan rather long (one hundred and ninety-five feet) for its width (seventy-eight feet). The columns are twenty-eight feet high, the lower diameter of six and three-quarters feet, in happy relationship to the upper diameter of four and three-quarters feet. The caps are of fine Doric character, the great square abacus block resting upon a beautiful echinus mould, more cushionlike than the subtle curve of the Parthenon moulding, but with little suggestion of the bulging quality that typifies the older Doric. Few distinctive features of the entablature above remain, although the great lintel blocks of the architrave and even weathered sections of the frieze, cornice, and pediment are still in place.

The cella walls are left standing, but about three-quarters of their original height, and with them has naturally gone the roof. The ample space within the cella enclosure is divided into three aisles, like the well-known Roman basilica plan, by two rows of seven columns each. These interior columns were of somewhat slighter diameter than the exterior shafts, being on the average of six feet and one-half in lower dimension. These columns have contributed much to the general knowledge of the scheme of the Doric temple, for they bore above them a second-story row of smaller columns, which, in turn, supported the roof. This is the best evidence of the use of the superimposed order and the consequent gallery arrangement such as was supposed to have existed both in the great temple of Zeus at Olympia and in the Parthenon. Five of these second-story columns are still standing on the south side and three on the north. All are made of the same material and have the same character as the exterior columns —simple, massive, and gracefully tapering.

Within a stone's throw of the Temple of Poseidon rises the second temple, known for no reason whatever by architectural historians as the "Basilica." Obviously this is an older temple than the Temple of Poseidon. The unusual tapering of the shafts and the bulging mass of the capitals would immediately bespeak of the archaic period. Conservative it may be to date it from the sixth century before Christ. It is of most unusual plan, and except for the unifying trabeated system, conforms to no Greek temple plan. Nine columns are across each end, the unusual placing of a column on central axis being justified by the row of columns that divide the temple lengthwise into two halves. This would lead to the belief that the temple was dedicated to two separate deities. The earliest temple within the sacred precincts of Olympia contained the shrines of both Zeus and Hera before the great temple to Zeus was erected. Perhaps the colonists, believing more in the discord which mythology ever records as existing between the parent deities, thought it better to divide their shrines by a substantial barrier of sturdy columns. Perhaps Athena and Hera were both worshipped by these crafty merchants, who hesitated to slight

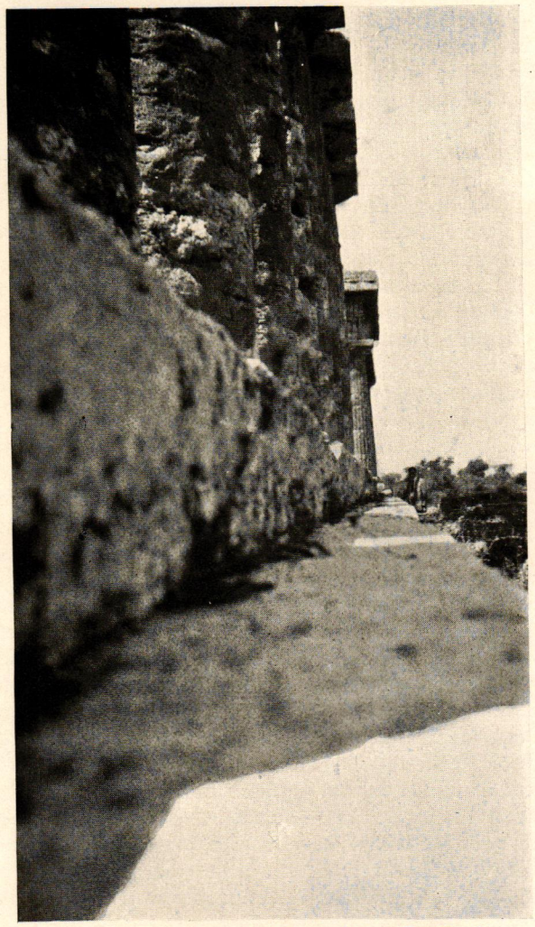
Temple of Ceres.

The "Basilica."

The corner column of the "Basilica."

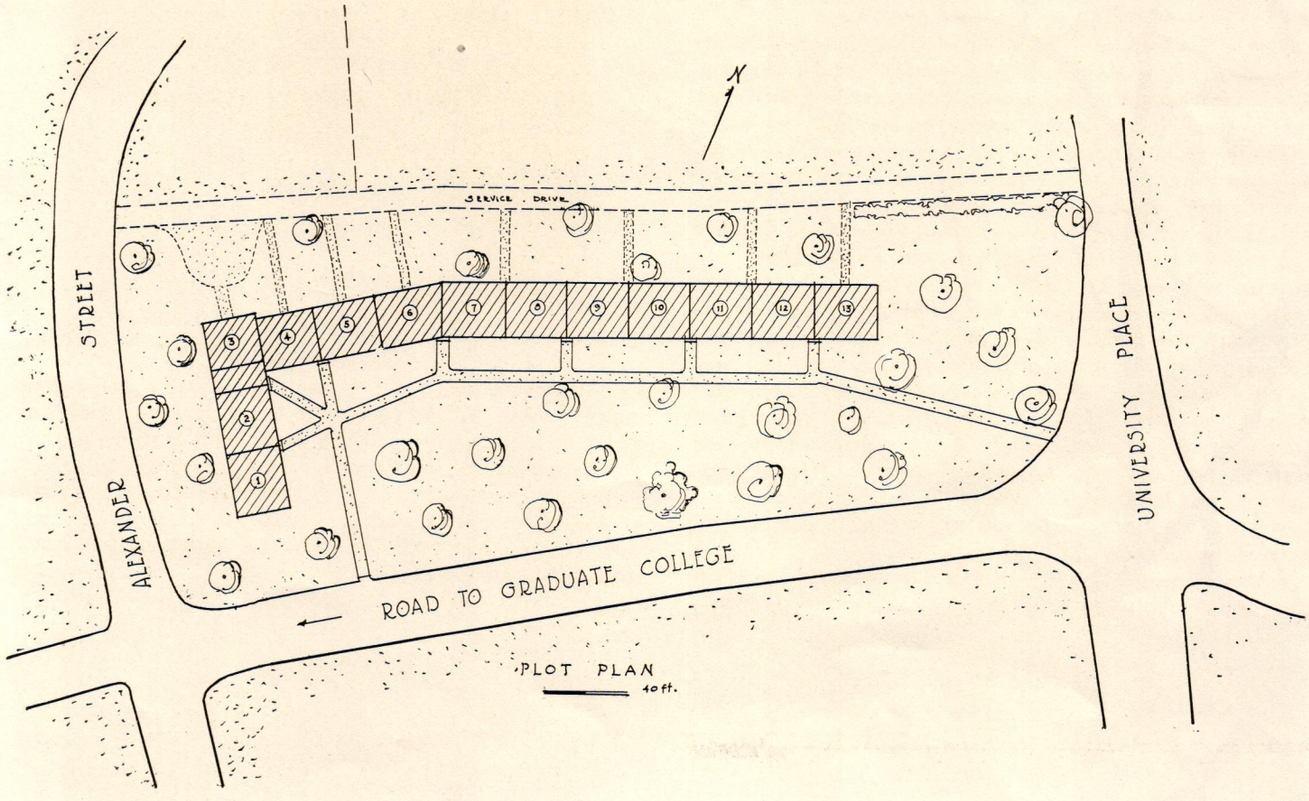
either the Goddess of Wisdom or of Wealth, yet could not trust alone in the shrine of the powerful ruler of the seas. Be that as it may, the dual temple must have lacked in mass and in detail much of the beauty of line and proportion seen in the grander neighbor. On the fifty external columns, nine on each end and sixteen on each side, the taper is uncomfortably emphatic. It is made more obvious by the fat, swelling echinus moulding of each cap. Of the entablature, which we can imagine as being thick and coarse, little remains. Although this temple may suffer in comparison to its splendid Doric neighbor except for antiquity, even at this early time the builders were evidently considering those niceties of line that have made Greek architecture of nonparalleled excellence. There is a curvature in the apparent straight lines of the stylobate to such a degree that a straw hat placed on one corner of the step disappears from view when level-sighted from the opposite corner. The very fact that the early builders ever curved the enthasis on the shafts shows that they were experimenting to make possible the perfected work of the fifth century.

Across the fields to the north a considerable distance over drainage ditches and the tangled haunts of shiny lizards and tiny snakes, one comes to the third of the Pæstum temples, still standing in isolated dignity. This is smaller than either of the other, and may date in between the two. Like the Temple of Poseidon, it is hexastylar, peripteral in plan, but measures only about one hundred and six feet by forty-six feet. The columns are very tapering but make a simple and majestic composition unspoiled by the overgrowth of fern and acanthus. Even less is known about this smaller temple than has been surmised of the other two. A temple dedicated to Ceres or to Demeter, it has been called, while according to others it is the temple to Vesta.



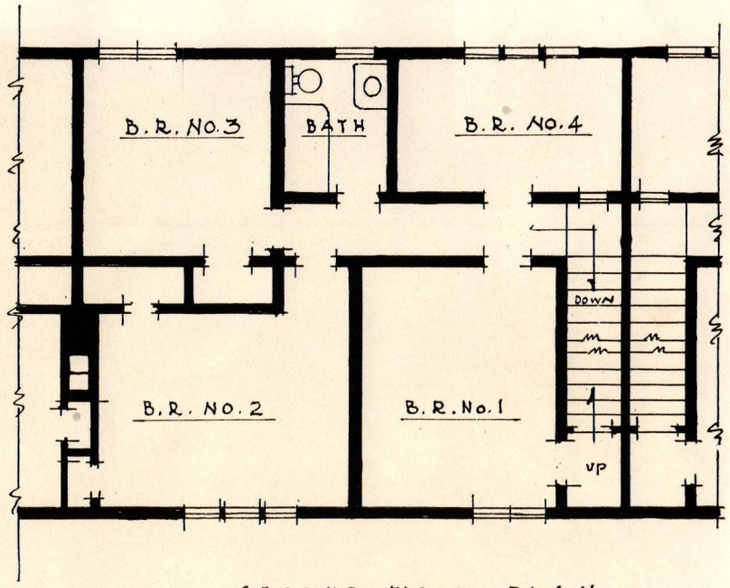
The curving lines of the stylobate of the "Basilica."

With even the names of the gods to whom these great temples were dedicated obsolete and forgotten, with centuries slipping quietly by, these silent temples still stand like sentinels guarding the secrets of some former age, undisturbed by the frenzied acts of men who scarcely yet, after all the ages of strife and endeavor, have learned to build with the grandeur and simplicity that make these Grecian monuments worthy of visits and revisits, worthy witnesses of the glory that was Greece.

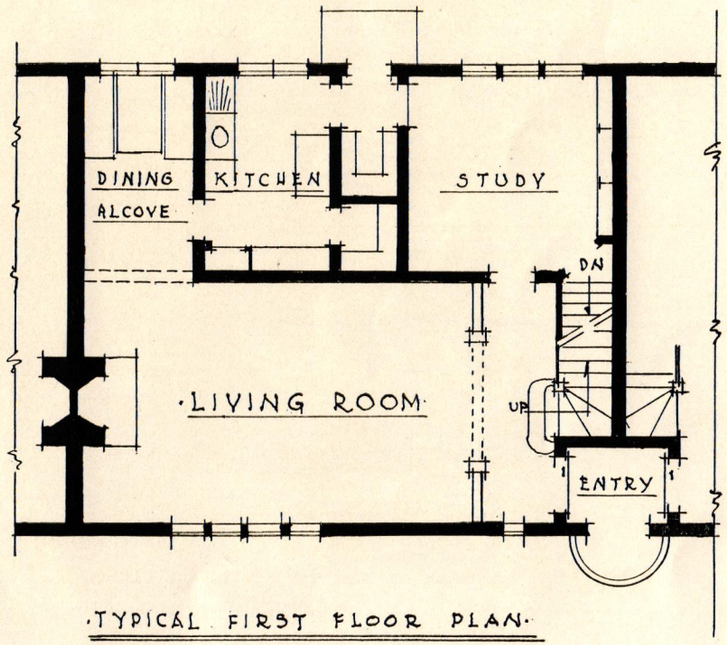


FACULTY HOUSES FOR PRINCETON UNIVERSITY, PRINCETON, N. J. Park & Morgan, Architects.

REAR, GROUP AND END HOUSE.



·SECOND FLOOR PLAN·



·TYPICAL FIRST FLOOR PLAN·

Park & Morgan, Architects.

FACULTY HOUSES FOR PRINCETON UNIVERSITY, PRINCETON, N. J.

DETAIL.

LIVING–ROOM.

FACULTY HOUSES FOR PRINCETON UNIVERSITY, PRINCETON, N. J.

Park & Morgan, Architects.

The Fifty-eighth Annual Convention of the American Institute of Architects

IN his opening address President Waid reminded his audience that it was thirty years since the Institute had called a convention in New York, and we are rather inclined to believe that another considerable period will elapse before another one is called there. This is no reflection upon the

The American Institute of Architects in session in the Court of Honor at the Grand Central Palace.

hospitality and interest of the big town; certainly the local chapter did all that was possible to make the occasion one of pleasure and profit to the visiting delegates, guests, and friends. In many ways the week afforded the greatest, "most stupendous, magnificent, inspiring, colorful, exhilarating," and diverting show of the years.

The meetings were divided between the court of honor in the big Grand Central Palace and the ballroom of the Hotel Roosevelt. The grandiloquently named "palace" was for the occasion of the Architectural Show made as near a palace as possible by the wizardry of Mr. Greenley and his associates.

The big spaces of the Palace were not conducive to really getting together, however, and the environment of the conglomerate, immensely diversified, and labyrinthine exhibition seemed a distraction that had a more or less disturbing effect upon the deliberations of the convention.

In many respects the most interesting, certainly the most entertaining, meeting of the convention was the luncheon and draftsmen's afternoon given at the Hotel Roosevelt. President Waid started things by introducing his eldest son, little Harvey W. Corbett, who presided. The speakers included J. Scott Williams, Professor Beresford Pite, of England, Hugh Ferris, Kenneth M. Murchison, who made the welkin ring with his wit and genial sarcasms, and Mr. Magonigle.

Both the oldsters and the youngsters seemed to have a jolly good time.

The concluding ceremonies of a very busy week were held on Friday evening at the Metropolitan Museum of Art, when gold medals of the Institute were given to Sir Edwin Landseer Lutyens, the noted English architect, and to Mrs. Bertram G. Goodhue in honor of her husband.

We believe all of our readers, members of the Institute, and others will be glad to have President Waid's address. It is a review of the past of value and an appeal for "ideals of professional service in the midst of a commercial age."

The President's Address

"The American Institute of Architects, in convention assembled, welcomes each individual delegate from far and near. It extends a cordial hand to every visiting architect and guest.

"At this Fifty-eighth Convention the American Institute of Architects celebrates the sixty-eighth year since its incorporation. This is the eighty-eighth year since the real beginnings of our organization. We are eighty eight years old, sixty-eight years legally incorporated, and have held fifty-eight conventions.

"It is thirty years since the Institute called a convention in New York.

"That convention thirty years ago in New York was the Twenty-eighth Convention and it seems now a half-way house on the road leading from the beginning of the Institute up to the present moment. You recall that Thomas U. Walter designed the magnificent dome of the Capitol in Washington, D. C. Walter was secretary of the American '*Institution*' of Architects which was formed in 1837. He afterward became president of the 'Institute.'

"That New York convention of the Institute thirty years ago has interest for us when we remember the names of some who were present. There was Richard Upjohn, first president of the Institute in 1837, architect of Trinity Church, and grandfather of one of our members present here to-day. Daniel H. Burnham was president when the

Corridor leading to the Court of Honor. The Boy of the Piave, by Attilio Piccirilli.

last convention was held in New York thirty years ago. There were present also E. H. Kendall, Schofield, VanBrunt, Stone, Bloor, Smithmeyer, Gibson, George B. Post, Andrews, W. L. B. Jenney, and A. W. Brunner, and William R.

Ware, Louis Sullivan, James E. Ware, Charles C. Haight, Napoleon LeBrun, Frank Miles Day, Joseph C. Hornblower, Walter Cook, and John M. Carrère—all of whom have passed the Great Divide.

"It is pleasant to know that a considerable number of those present at that convention thirty years ago are present at this 1925 convention. They include Glenn Brown, R. H. Hunt, Thomas Nolan, Henry Rutgers Marshall, Charles I. Berg, W. L. Plack, F. A. Wright, Jno. H. Coxhead, J. F. Harder, C. H. Blackall, Jno. M. Donaldson, Thomas Hastings, and William B. Ittner.

"One or two more historical items seem interesting.

"The 'Institution' was formed in 1837 by a small group of men. The 'Institute' was incorporated in 1857 by about thirty architects. That Twenty-eighth Convention in New York in 1894 had twenty-six chapters and six hundred members. The Fifty-eighth Convention finds itself representing fifty-five chapters and over three thousand members.

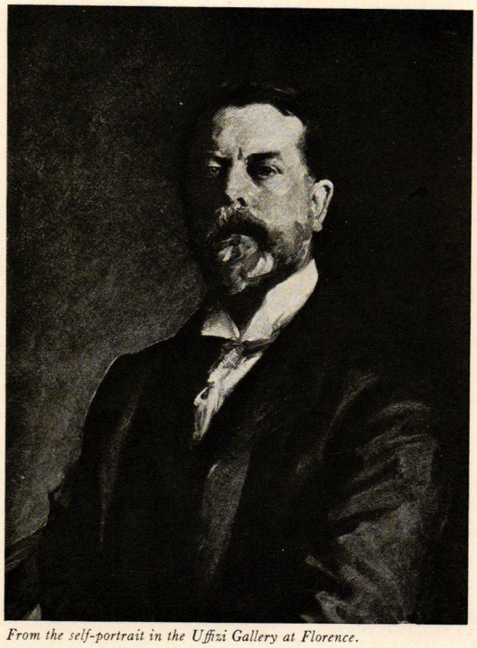
"At the Twenty-eighth Convention it was reported that the Institute had issued charters to three new chapters. So to-day we extend congratulations to those three chapters on having attained their thirtieth birthday; namely, Southern California, Washington State, and Brooklyn.

"If time permitted it would be interesting to outline the history of the Institute down from the Twenty-eighth Convention to the Fifty-eighth Convention to-day. That thirty years would bring forth interesting reminiscences of able architects who served the Institute for the benefit of their successors; architects who either sacrificed much in direct effort for the Institute or who did great creative work which has contributed to the advancement of our art.

"We would recall the virile work of George B. Post and his vigorous personality. He was a steadfast campaigner for the Institute. There was warm-hearted Robert S. Peabody, veteran of exposition projects. The rounding out was taking place in the career of Charles F. McKim, whose influence upon American architecture is still pre-eminent. Those days recall William S. Eames, one of the men of great ability who came out of the West. There was Frank Miles Day, whose devoted work for his fellow architects will be remembered for generations. There was Walter Cook, wise friend and counsellor of many architects more famous than he. And there was splendid, forceful John M. Carrère.

"A review of that thirty years of architectural development would bring before us buildings designed by a large group of present-day leaders of the profession, a group which we are glad to see growing rapidly by the addition of able young men.

"We are too close to get a true perspective of our recent achievements in architecture. We know that the country has been actively erecting buildings trying to overtake the shortage in housing and other construction due to the World War. American architecture has developed so that now it can be recognized as possessing an artistic merit based on a system of construction as distinctive as the Greek or the Gothic. We can esteem it our privilege to be living in an age of many marvels. We stand at a turn in the world's history which staggers the conceptions of the human mind. We know something of the wonders of the past ages. We can only faintly dream of the developments of civilization just ahead of us. In the possession of large territory with vast resources, this nation and the other great nations seem to be entering upon an era to which no limitations can be placed by comparison with the records of the past. Of one thing our profession is sure. The part which architecture must play in this coming age is tremendous. Each architect, however modest, has his part of serious work to contribute. Without exaggerating the responsibility of the profession of architecture, it must be realized that it is the sum of individual contributions which makes up the great aggregate.



From the self-portrait in the Uffizi Gallery at Florence.

John Singer Sargent.

"We have turned our thoughts backward eighty-eight years to the beginning of our organization when our nation was building its capital city. We have thought for a moment of the convention of the Institute in this city thirty years ago. At that meeting thirty years ago Daniel H. Burnham in his presidential address described the Institute as 'useful' and 'conservative though positive and progressive.' He said that through the Institute 'beliefs of architects have been crystallized while each man has been left free to pursue his own course.'

"Let us note the topics which were discussed at the Twenty-eighth Convention in New York. One paper was by W. L. B. Jenney, he who was the first to use skeleton construction for office buildings. His subject was 'Wind Pressure in Tall Buildings of Skeleton Construction.' Another paper was 'High Buildings and Good Architecture.' There were papers on 'Concrete' and 'Acoustics,' and John Carrère made a report on 'Competitions.'

"It was reported at that convention that the Institute's basis of charges for service had been recognized by the courts. The Institute did then, and since, many other things which have helped the profession to become more efficient, to increase the self-respect of its members and their regard for the rights of each other.

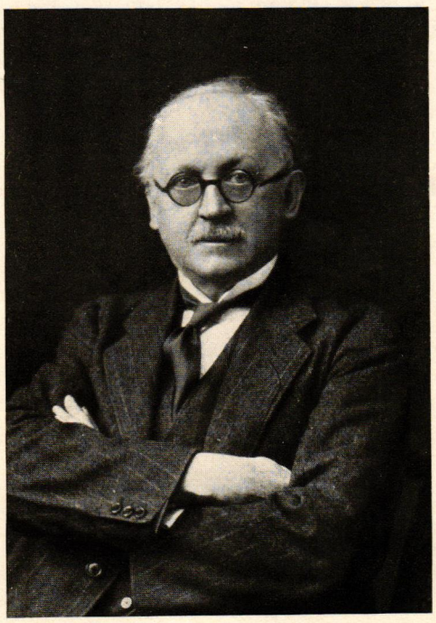
"Many questions of thirty years ago still need consideration. But the profession has gone a long way. Its vision and its work have broadened in a positive and progressive programme. In addition to the contributory work of the fifty-five chapters and their independent local responsibilities, the Institute carries on its numerous activities through some thirty committees manned by three hundred members. The mention merely of the names of these committees suggests the scope of their work. But one word characterizes them all as a group. They are educational. In fact, the principal object and end of the Institute is education. The aims of Institute educational work are three:

"The first aim is the education of our own membership. We are learners striving to the end of our days.

"The second aim is the education of architectural students, qualifying to become the future members of the Institute.

"The third aim is the education of the public. Growing in appreciation of art by the populace is vitally important to the future of architecture.

"These three principal educational objects comprehend many others. For example, the Institute has a duty, co-operative in character, toward mechanics and contractors, the architect's assistant builders, a duty which it has hardly begun to discharge. Our Committee on Education has only made a beginning in its programme. Schools and colleges and books and publications and lectures and moving pictures and the radio are some of the channels of educational work. Registration laws are an effective aid. Regulation of practice by law regarded as a police power has only a fraction of the value which it possesses as an educational instrument. The Institute has been exceedingly slow in recognizing its opportunity and its duty in this direction. Better work should be done by the Institute before the next fifteen States enact registration laws. The attention of the delegates is called again to the fact that it is only a matter of time until every State enacts a registration law for the regulation of the practice of architecture. It is short-sighted policy for a chapter to neglect the matter until put on the defensive by the introduction of a bad law. Far better is it to take the initiative by seeking the passage of a good measure based on the model law approved by the Institute.



Sir Edwin Landseer Lutyens.

"The Institute and the individual chapters should be more efficient helpers in other kinds of legislation. We are not good politicians and hence often hear about proposed laws when too late to give helpful advice and then either make a weak protest against a bad law or else succeed in killing a bill which should have been moulded into a beneficent law.

"The Institute has not funds for such work and therefore the legislative work which it does accomplish must be at a great personal sacrifice on the part of individual members.

"The Institute's educational influence may be seen in another way. The architect is one who writes the history of a nation in its architecture. He should, beyond that, be one who helps to make history. We may not be thinking of him as a statesman. Yet Thomas Jefferson was an architect. Architects to-day are mayors of cities and lawmakers in legislative halls. Architects are grappling with public problems. They are inventors of new construction and improved methods in building. They are studying transportation and community life and city planning.

"If the newspaper headliner writes 'Suburbs Threaten Supremacy of Cities as Apartment Centres,' the architectural profession should know whether that is a true statement or not.

"If it is a fact that great cities in this country are going mad with a craze for lofty buildings and canyon-like streets filled with choking gases; if it is true that masses of great buildings are a maw full of human beings all out of reasonable relation to horizontal transportation, architects should understand the danger and be the first to give sane warnings. If commissions report great masses of poorer people living in out-of-date, unsanitary dwellings left to them by more fortunate people who refuse to live in such places, and pronounce the problem of housing for wage-earners an impossible problem, should our profession sit supinely by and agree that cheap new houses for the laboring class are impossible? No, I believe that architects will make cheap houses for working men entirely possible.

"Architects should be thinking of underlying problems, finding solutions for them and be moulding public sentiment by imparting a knowledge of the best that history and culture and good taste can contribute for the future welfare of the race.

"If civilization is showing a tendency toward concentration in overgrown cities, or any other wrong course, our profession should recognize the danger. It should not blindly drift with the tide but should be steering clear of shoals and rocks. If there is need of a larger international appreciation and more sympathetic understanding, who should be better builders and interpreters of such understanding than architects who find beauty and inspiration and brotherhood in the work of all ages and all peoples?

"The architectural exhibition which the Institute desired to hold in con-

(*Continued on page 213*)

The Scribner book-room at the Architectural Exposition.

ARCHITECTVRE*
Published by Charles Scribner's Sons
THE PROFESSIONAL ARCHITECTVRAL MONTHLY
*Reg. U.S. Pat. Office

Editorial and Other Comment

The Grow-as-You-Please City Will Soon be a Thing of the Past

THE International Town, City, and Regional Planning Conference was held in New York from April 20th to the 25th, the same week as the Convention of the American Institute of Architects, and there were galleries filled at the big architectural show with plans and maps from all over the country.

The pity of it, of course, is that we have begun this essential work so late. Many of our cities are beyond repair, at least beyond making over in accordance with modern and enlightened views of the value of open spaces and freedom of circulation. The time has passed, however, for leaving things to the indifference or greed of the money-getters. If we cannot regulate ourselves with consideration for the general welfare, we must be subject to control by a properly authorized Civic Association.

"Every city in the United States at one time or another must face the problem of determining the machinery by which it shall exercise some degree of control over the physical features of its future development. Public officials and civic leaders frequently request information from the American Civic Association concerning the practices of other cities of similar size.

"It was in response to this demand for accurate information that the American Civic Association sent out a questionnaire to the important cities of the United States. Replies have been received from over two hundred cities and towns, the information in them has been collated, and is now presented in the bulletin of the American Civic Association in the hope that it will be of service to those communities where officials and citizens are seeking new administrative machinery for planning and parks.

"In the most progressive cities there is a distinction in administrative units, as there should be in function, between planning, park, and art commissions. Playgrounds are administered variously under town commissioners, park boards, school boards, departments of health, recreation departments, public welfare divisions, and under separate playground commissions.

"The general trend toward the practice of setting up some responsible body to administer planning, zoning, parks, and playgrounds, and to establish control over the design of public buildings and monuments is unmistakable. It can confidently be predicted that in ten years from now few cities will find themselves without some form of control in each of these important subjects."

We Shall Miss Her

DIANA and her tower have left Madison Square but she will not be forgotten, for she will again stand atop her old resting-place farther uptown and go on shooting her arrow at the winds and stars. We take considerable pride in having contributed our little say in her behalf in an editorial in the September number, 1924, and many will remember Mr. Armstrong's letter advocating the removal of the lady and her tower to a suitable site uptown. Long may her graceful silhouette stand against the blue of clear skies and be revealed even more poignantly when the clouds fly that must inevitably come into the lives of even goddesses.

Architectural Associations and Small House Bureaus

MR. DE GELLEKE'S letter to the editor in the May number has called forth quite a lot of comment. In the pages of this issue we publish other communications bearing on this subject of vital interest to every member of the profession.

This is an age of associations, of combinations, of cooperation in nearly everything, and the old saw about two heads being better than one may be multiplied by any necessary factor, until the heads may be counted as legion.

That selling architecture by quantity production has something menacing in it to the career of the individual architect seems to have entered the minds of a number of practitioners.

The widespread distribution of cheaply bought plans and specifications has done much to depreciate the position and value of the local small-house architect. Why pay a local man for his services when you can turn your picture-books over to the carpenter and builder and duplicate any house that may strike your fancy.

Selling the services of the architect to the man in the street of the small town isn't such an easy matter, and it's going to be a much harder sale if the various centralized associations and bureaus continue to use the expensive pages of the popular family magazines to spread the doctrine that you can build your own house from plans that can be bought for a dollar or two or even less.

Many Women in English Architects' Offices

THERE are comparatively few women in the draughtsmen's ranks in this country. According to Professor Beresford Pite, one of the distinguished English speakers at the recent convention of the American Institute of Architects, the ladies are going into the English offices in considerable numbers. As Professor Pite put it:

"In England we are welcoming into the draughtsmen's ranks a steady flow of charming ladies. I hope that is the condition in America. We find them apt in draughtsmanship, infinitely industrious in application, and delightfully refined executives. Under those circumstances one looks forward in the words of your own poet again:

"And dream how wives of great men all remind us
We can make our wives sublime.
Departing leave behind us
Widows on the sands of time.
Widows which perhaps another life's troubles
May forlorn shipwrecked rather seem.
We take heart again.

Let us then be up and doing,
With heart for any fate.
Still achieving, still pursuing,
Learn to labor and to wait."

Bertram Grosvenor Goodhue

Doctor John H. Finley's Address on the Presentation of the Gold Medal of the American Institute of Architects at the Metropolitan Museum of Art

THE story of Bertram Grosvenor Goodhue as an artist (and I use this generic word deliberately) is the story that has been told in allegory of the hunter who set out in the face of the high mountains of dry facts and actualities to snare the white bird of truth beyond, having seen its reflection one day in a lake by which he stood in his valley, and who, after years of climbing, at times digging out the stones with the bare shuttle of his imagination, mounting one cliff after another, at last lay down in death at a great, bare height, the eternal mountains still rising with walls to the white clouds, but holding in his dying hands a silvery feather that had fluttered down from the pinions of that great white bird of truth, and knowing that when enough of these feathers had been gathered by the hands of men to make a cord and that cord into a net, in *that* net truth would be taken, since nothing but the truth can hold truth.

Not that Bertram Goodhue was a lone hunter out in a mountain solitude. He was the most companionable and lovable of men. He did his struggling to reach the truth (which was to him the perfect expression of the beautiful) in the midst of the city and its crowds, and he sought to share with them his vision. The stones which he digged with his daring imagination for his own feet were built into substantial structures by which the imaginations of others could also mount. I do not suppose that he consciously said, as did the hunter of the allegory: "By the steps I have cut [that is, the buildings I have dreamed, the fonts of type I have designed, the figures I have moulded] they will climb; by the stairs I have built they will mount." He was so intent upon his own high purpose that he thought only of the going on. His feet were still "on the quest," as they used to say of those in the Middle Ages who went to the Holy City and never came back. He was as truly "on the quest" in making *every* city he entered a holy city by the redeeming beauty of his art as ever the crusader was, who sought to redeem Jerusalem from the infidel by scaling or razing its walls.

Bertram Grosvenor Goodhue.

A bookplate of his design, bearing no "*ex libris*," but evidently intended for his own use, shows a mediæval architect at his drafting-board, an hour-glass in sight, the hand of death upon his arm, as in Holbein's "Dance of Death," while in the distance through the window a cathedral is seen against a radiant sky. Beneath is the ominous legend in Latin: "*Ecce appropinquat hora.*" It was as one out of the Middle Ages that he came forth into the heart of this most modern of cities to design churches and cathedrals "thoroughly of our own day," as has been said, but truly Gothic in inspiration and spirit. It is not for me, a layman, to make any appraisement of his architectural work, ranging from St. Thomas's in Fifth Avenue, close to the mediæval type, to the little Spanish church in Guantanamo, Cuba, and from the village hall in a suburban town to the startling architectural creation, the prairie skyscraper, for the Lincoln (Nebraska) Capitol. He has been judged by his peers and has been awarded the palm:

"*Palmam, qui meruit, ferat.*"

But his croix de guerre should bear another palm, because of what he has contributed as a master craftsman to the art of printing, the "conserver of all arts," the "divine art," as a French poet has called it, and the one most needed in a democracy—ally of the art which Mr. Davis has just called "the printing-press of the ages"—for Bertram Goodhue has won distinction in the two fields; and eyes that find more of truth in the printed word will be in debt to him through generations because of the types he has cut for them, as Garamond did for his sovereign, King Francis I. Years ago I addressed these envious lines to a bookworm:

Between the vellum walls of some sweet classic tome
'Mid leaves ink-scented, thou didst have thy cloistered home,
All margined round with virgin fields in which to roam
Whene'er thou caredst to leave thy lettered nook.

And when thou'dst riddled thy last line, O Ptinidus,
What happy destiny was thine, denied to us,
To lay thy sapient bones in such sarcophagus
And be forever buried in a book.

But a happier fate is that of this master of the art of printing, to be entombed in tomes in which his own letters revive the spirit of the reader

"To whom a book is still a book
Wherein a wistful man may look,
Finding something in the whole
Beating like a human soul,"

reviving the spirit of the reader as the bones of the prophet restored to life the Moabite of the Scriptures when thrust into the prophet's tomb.

The custom was in Latin times to say of one who had died after a life of special achievement, not "he has died," but "he has lived"—"*vixit.*" Bertram Grosvenor Goodhue has both lived and conquered—"*vixit et vicit.*" And because he has lived and conquered will live on, for he has not lived to himself. He has given his life to art, and true art is longer than any mortal life. Noble cairns of remembrance which he has built for others will stand for generations in his own memory.

To-night we lay a medal of precious metal at the side of the silver feather of the bird of truth that has fluttered down from the skies upon the breast of this master of two great arts—a man beloved of this city and of our country, which he has made the more beautiful, from his New England birthplace to San Diego, by his passing through it.

RESIDENCE, A. G. TERRY, EVANSTON, ILLS.

Granger, Lowe & Bollenbacher, Architects.

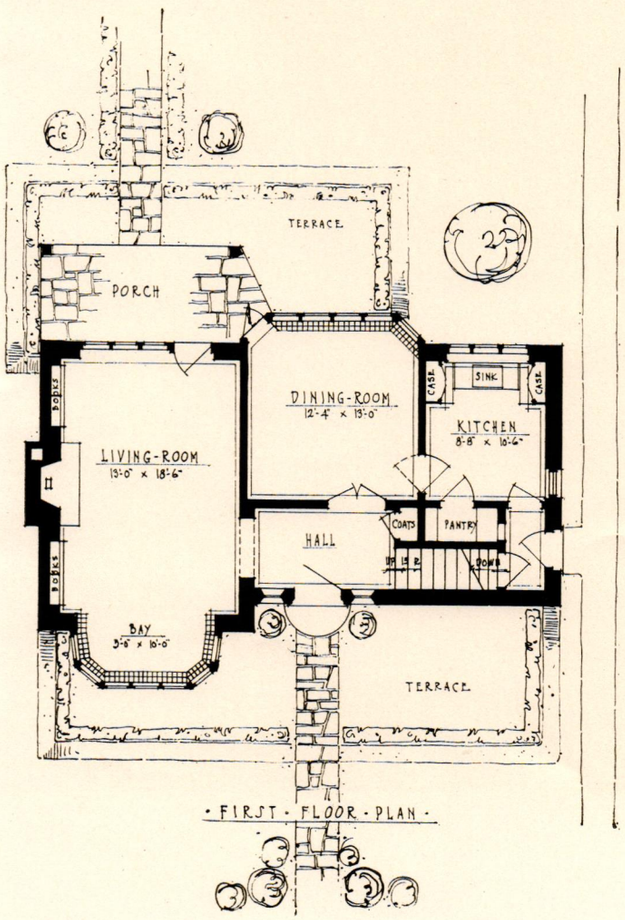
THE GARDEN AND REAR OF HOUSE.

HALL AND STAIRWAY.

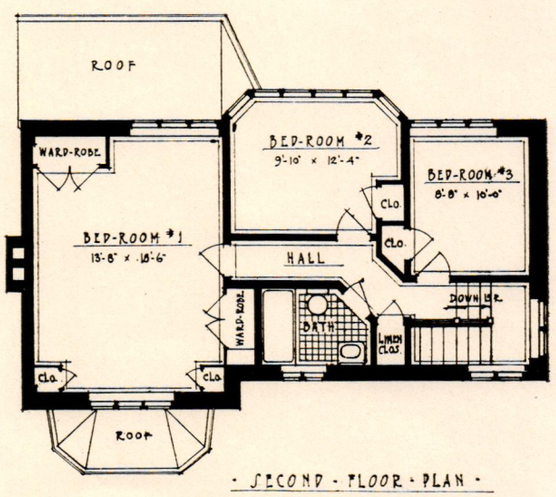
Granger, Lowe & Bollenbacher, Architects.

RESIDENCE, A. G. TERRY, EVANSTON, ILLS.

LIVING–ROOM.



· FIRST · FLOOR · PLAN ·



· SECOND · FLOOR · PLAN ·

RESIDENCE, A. G. TERRY, EVANSTON, ILLS.

Granger, Lowe & Bollenbacher, Architects.

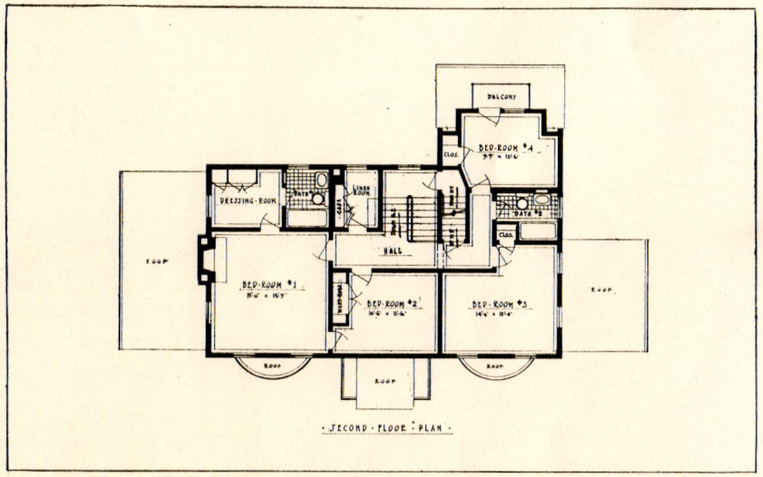
REAR OF HOUSE.

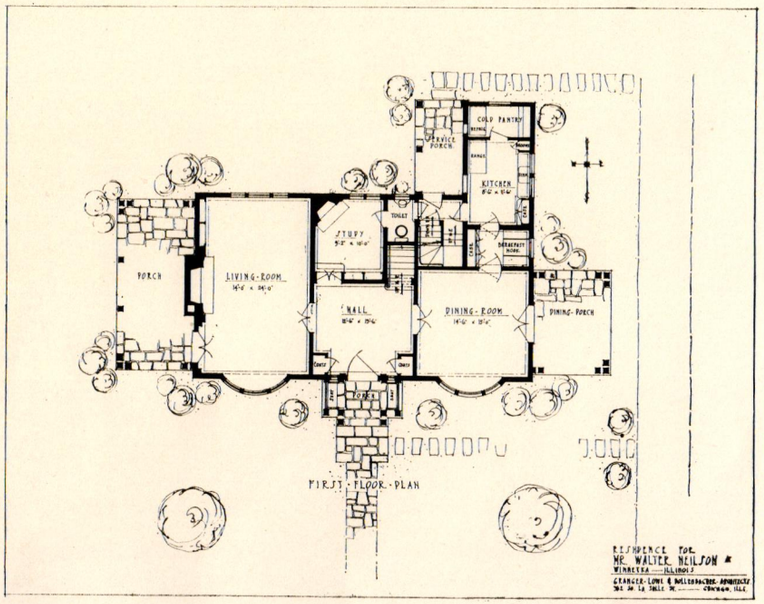
LIVING–ROOM.

Granger, Lowe & Bollenbacher, Architects.

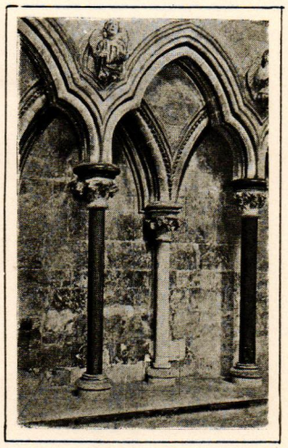
RESIDENCE, WALTER NEILSON, WINNETKA, ILLS.

ENTRANCE HALL, RESIDENCE, WALTER NEILSON, WINNETKA, ILLS.





Granger, Lowe & Bollenbacher, Architects.



BASE AT Ⓓ

CAPITAL AT Ⓒ

MEMBERS WITH CAPITAL

INNER ARCADE OUTER ARCADE

MOULDINGS OF ARCHES

ELEVATION

PLAN

WALL

PURBECK MARBLE

LINCOLN

S. CHOIR AISLE.. CATHEDRAL DOUBLE ARCADE

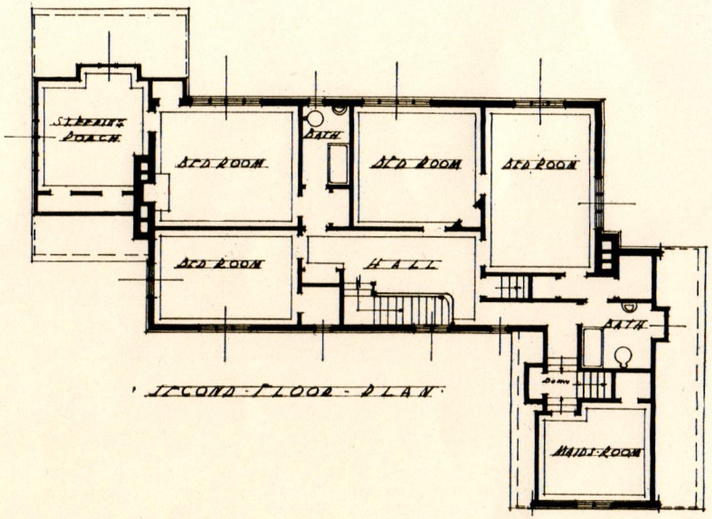
ARCHITECTURAL DETAILS ENGLISH NO. SERIES ⑤

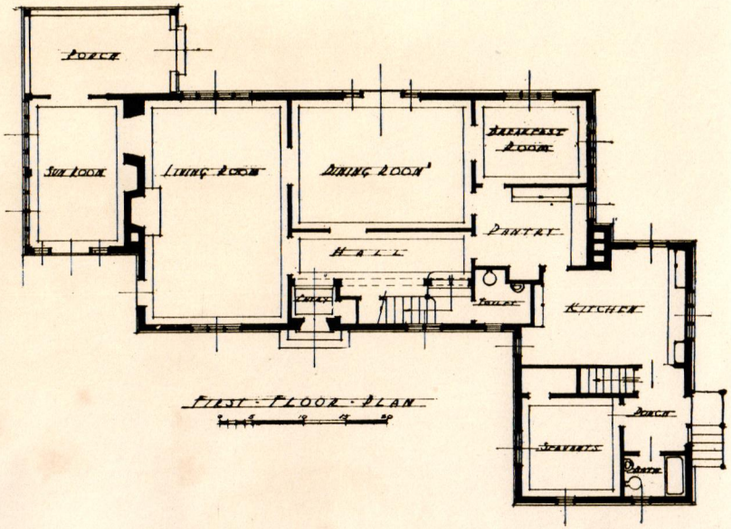
MEASURED AND DRAWN BY E. PICKERING

RESIDENCE, A. M. GAINES, KNOXVILLE, TENN.

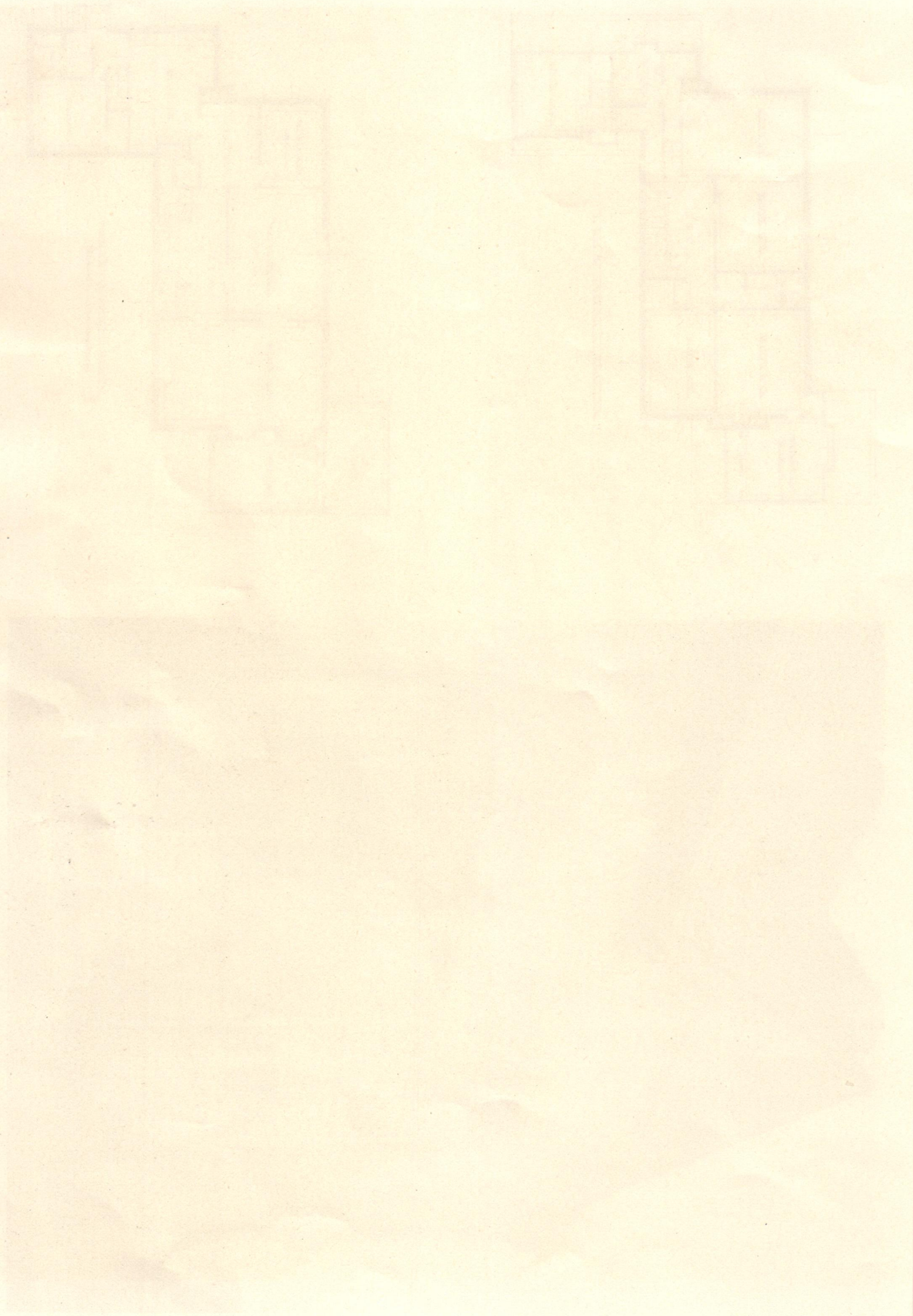
Barber & McMurry, Architects.

DETAIL, RESIDENCE, A. M. GAINES, KNOXVILLE, TENN.



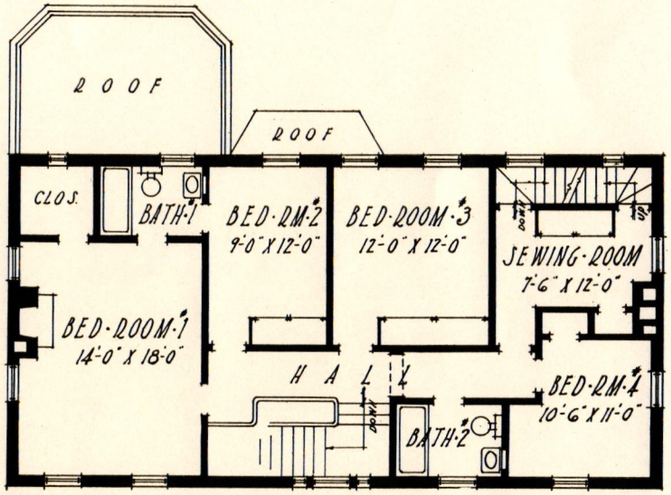


Barber & McMurry, Architects.

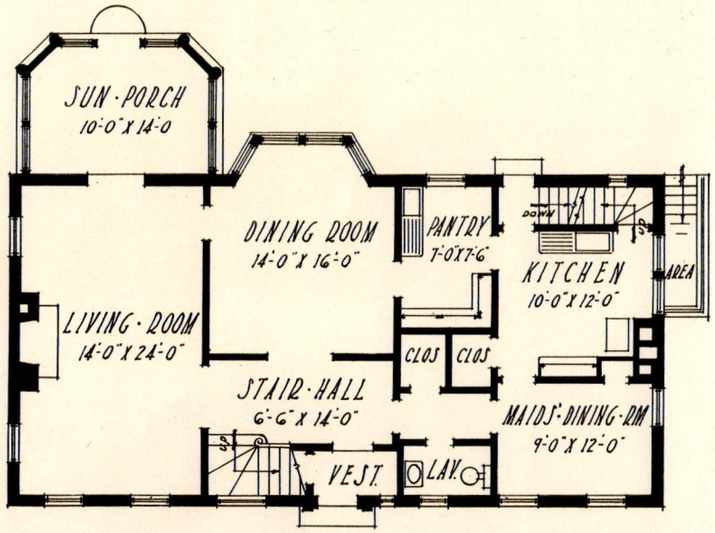


RESIDENCE, CHARLES H. HODGES, JR., GROSSE POINTE, MICH. Robert O. Derrick, Architect.

DETAIL, RESIDENCE, CHARLES H. HODGES, JR., GROSSE POINTE, MICH.



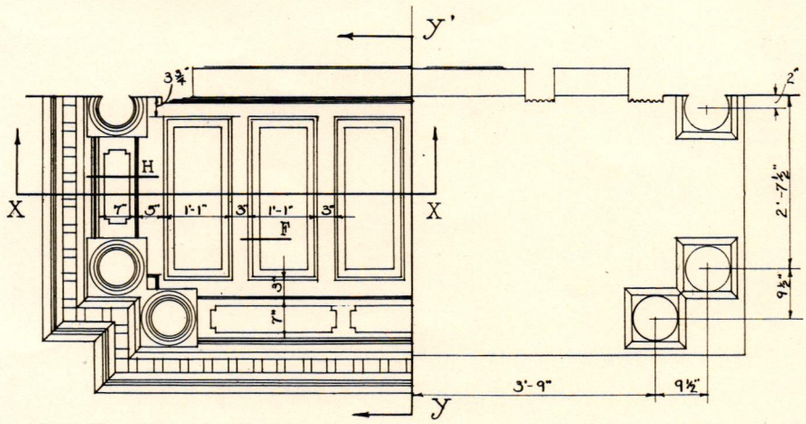
SECOND-FLOOR-PLAN



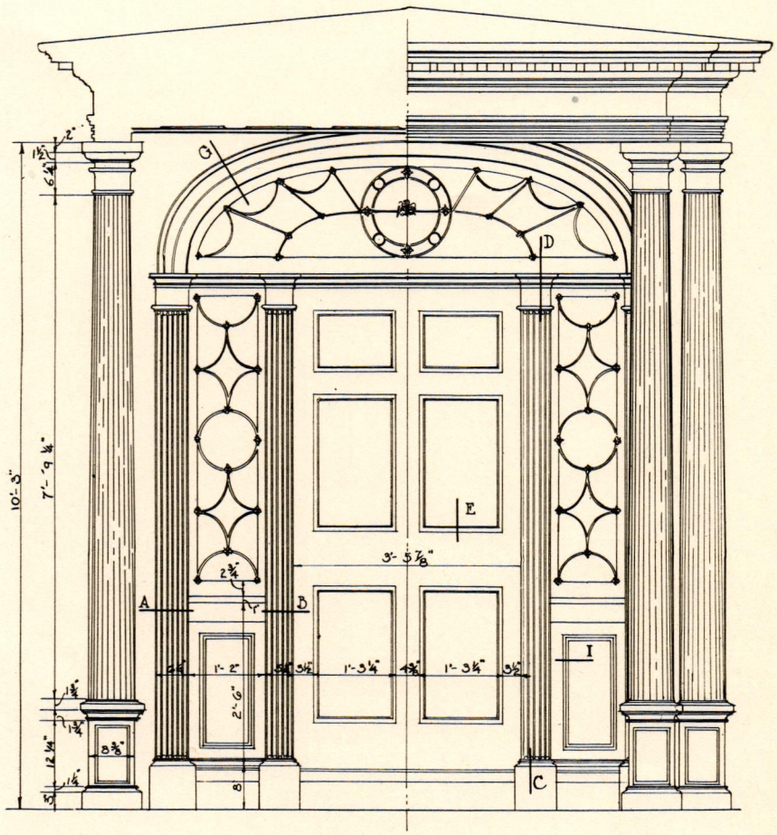
FIRST-FLOOR-PLAN

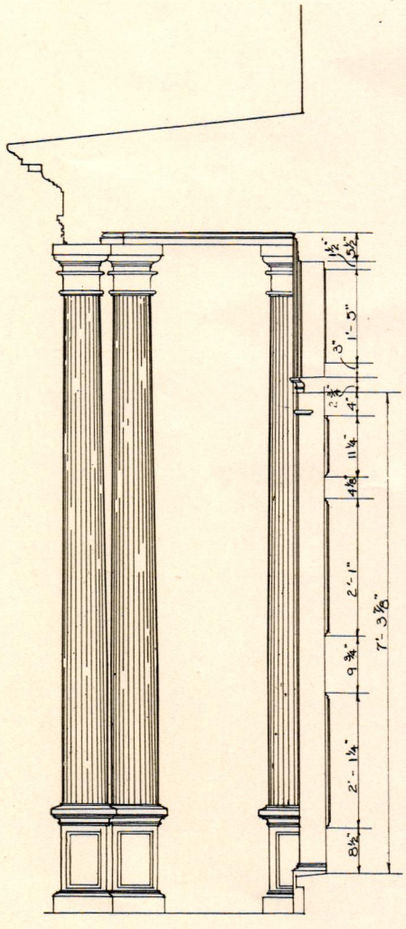
Robert O. Derrick, Architect.

FOR LARGE SIZE DETAILS SEE OTHER PLATE.



HALF CEILING PLAN HALF FLOOR PLAN





SECTION X-X ELEVATION SECTION Y-Y

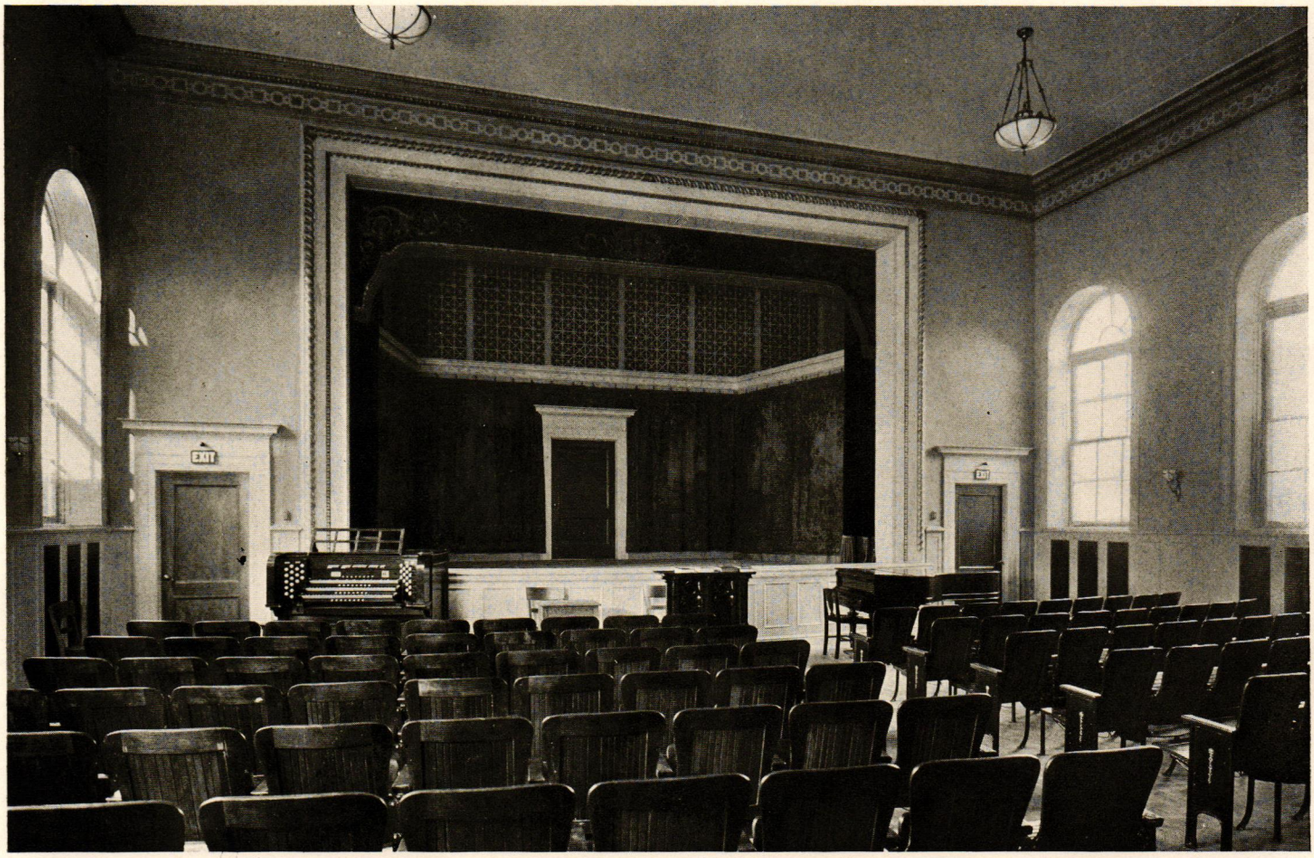
SCALE ⅜"=1'-0"

MAINE COLONIAL SERIES	DOORWAY of the GENERAL VEAZIE HOUSE TOPSHAM MAINE BUILT IN 1800	MEASURED AND DRAWN BY A. J. HARRIMAN.

SCHOOL BUILDING.

McKim, Mead & White, Architects.

INSTITUTE FOR THE EDUCATION OF THE BLIND OF NEW YORK CITY.

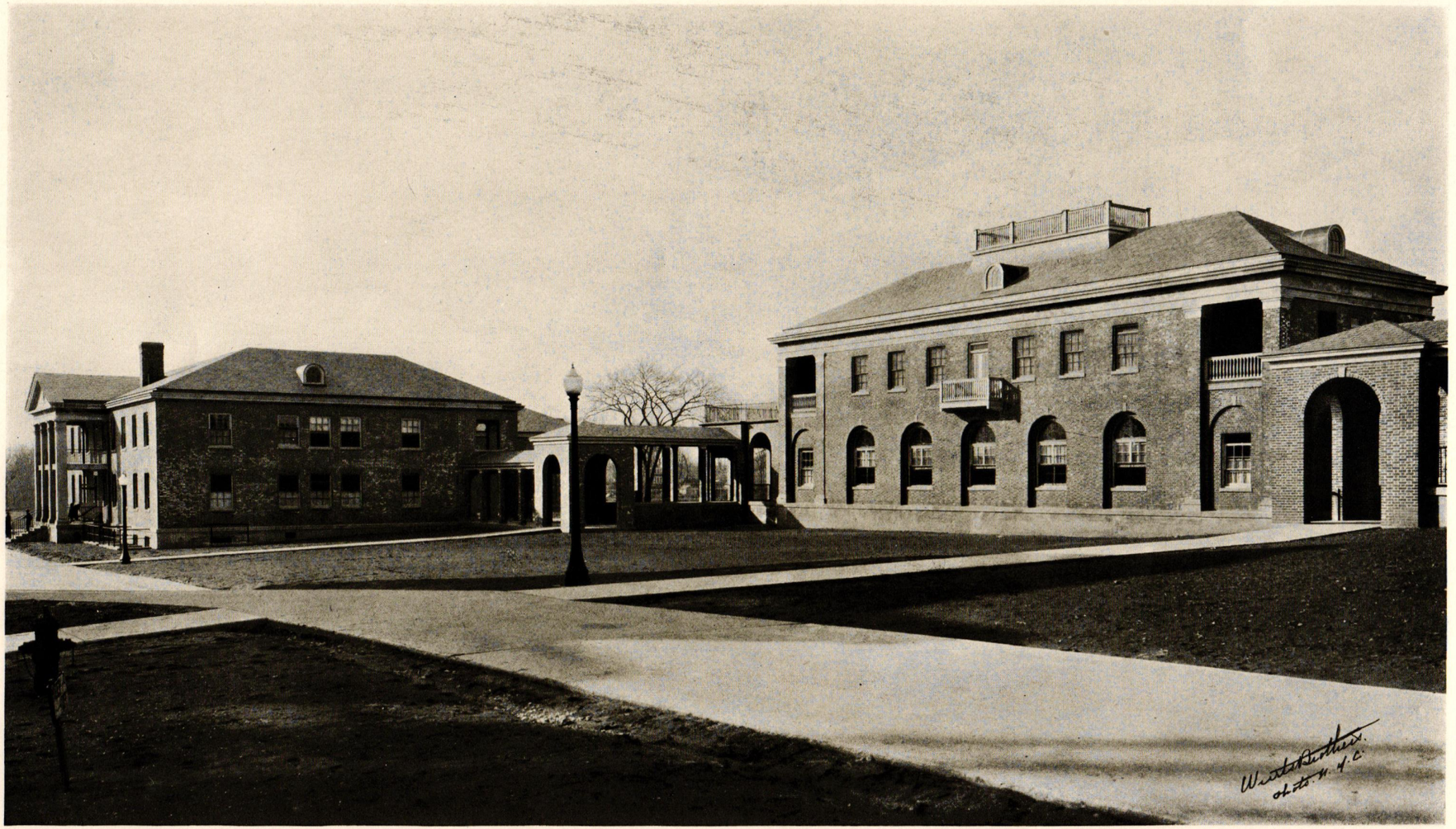


ASSEMBLY HALL.

GYMNASIUM.

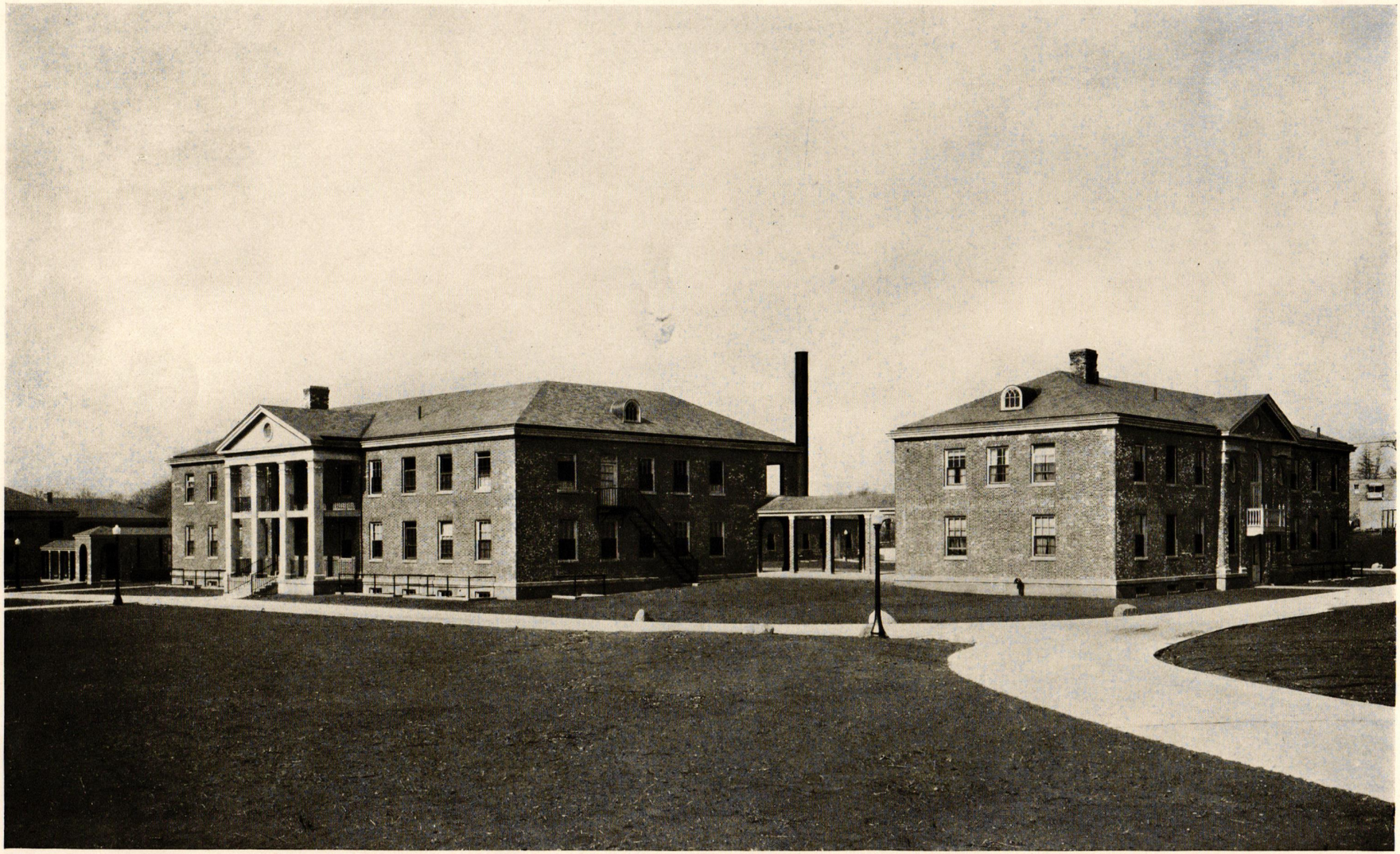
McKim, Mead & White, Architects.

INSTITUTE FOR THE EDUCATION OF THE BLIND OF NEW YORK CITY.



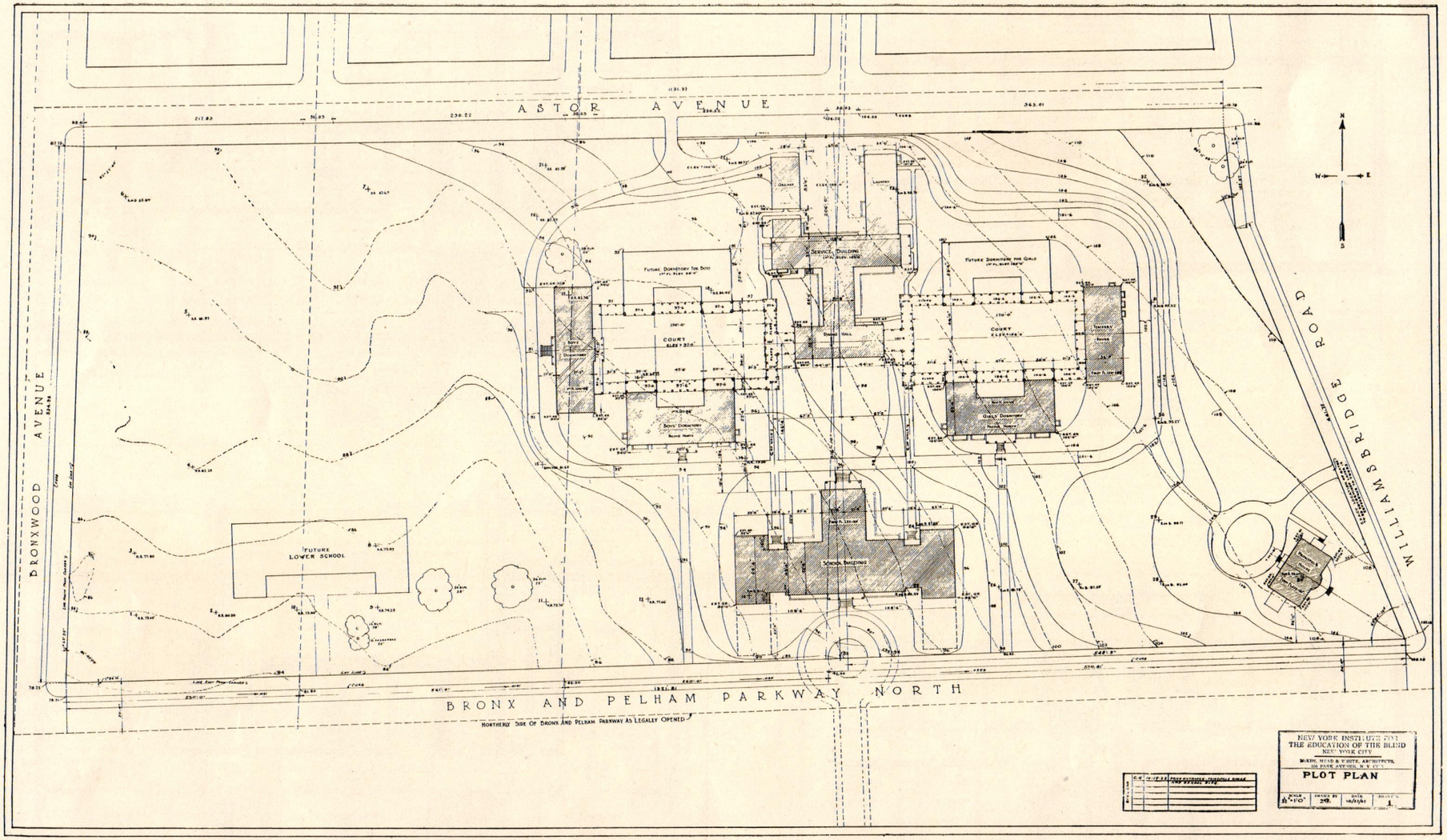
BOYS' DORMITORY AND SERVICE BUILDING. McKim, Mead & White, Architects.

INSTITUTE FOR THE EDUCATION OF THE BLIND OF NEW YORK CITY.



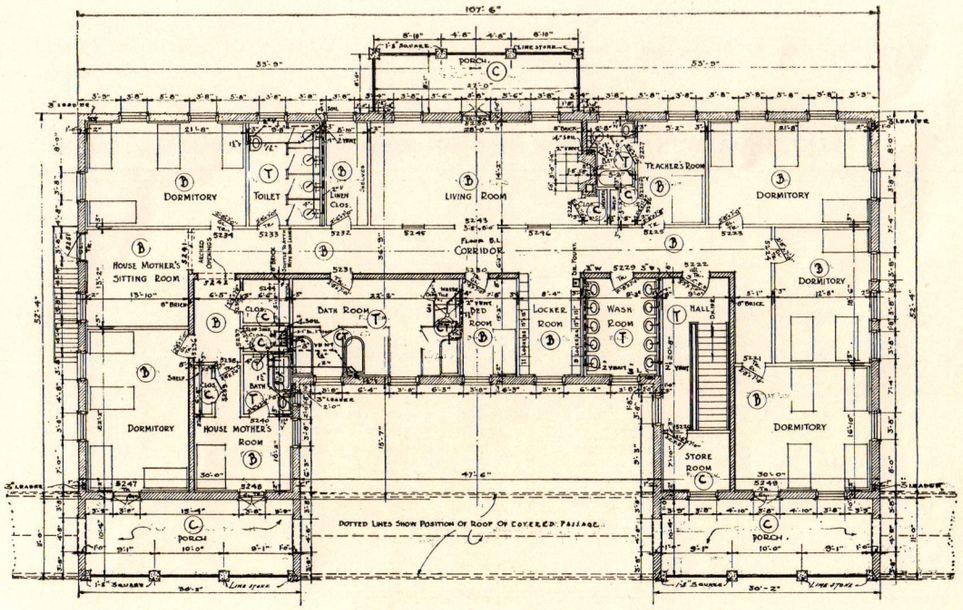
GIRLS' DORMITORY AND TEACHERS' HOUSE. McKim, Mead & White, Architects.

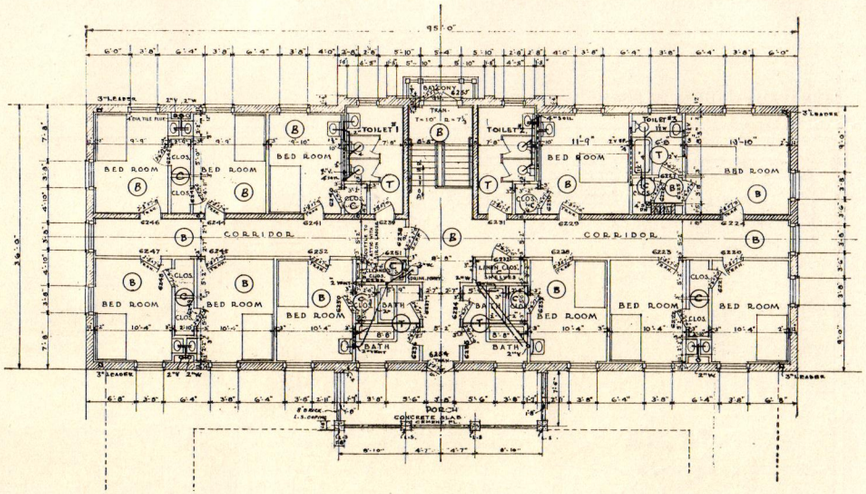
INSTITUTE FOR THE EDUCATION OF THE BLIND OF NEW YORK CITY.

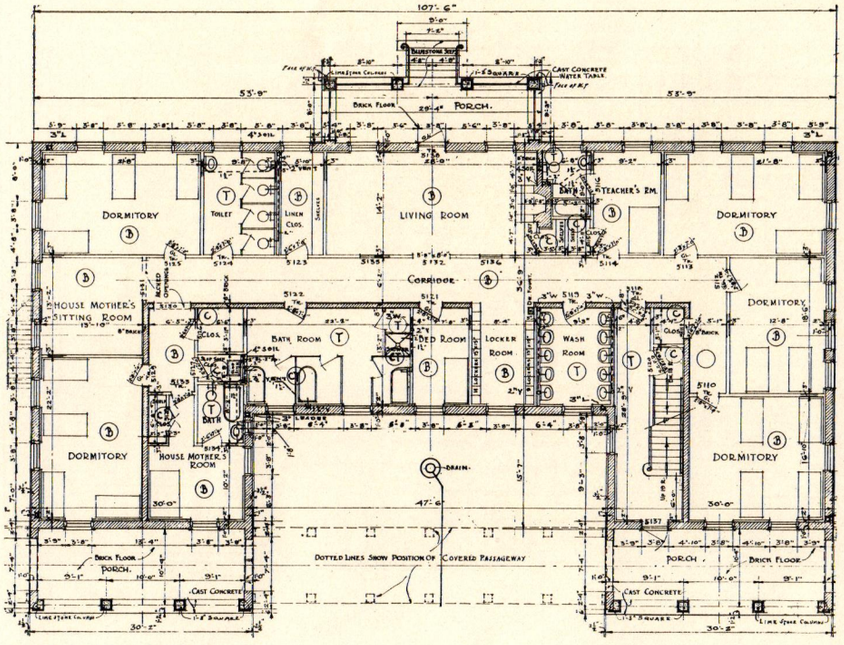


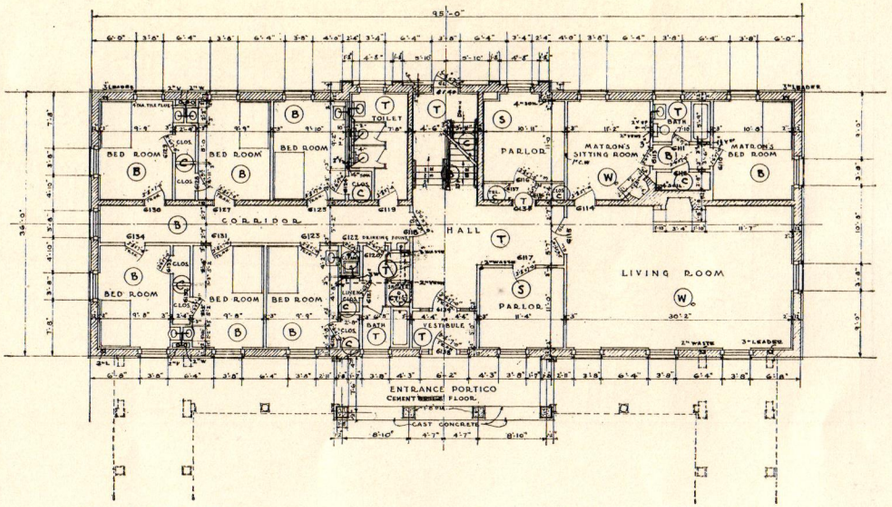
INSTITUTE FOR THE EDUCATION OF THE BLIND OF NEW YORK CITY.

McKim, Mead & White, Architects.







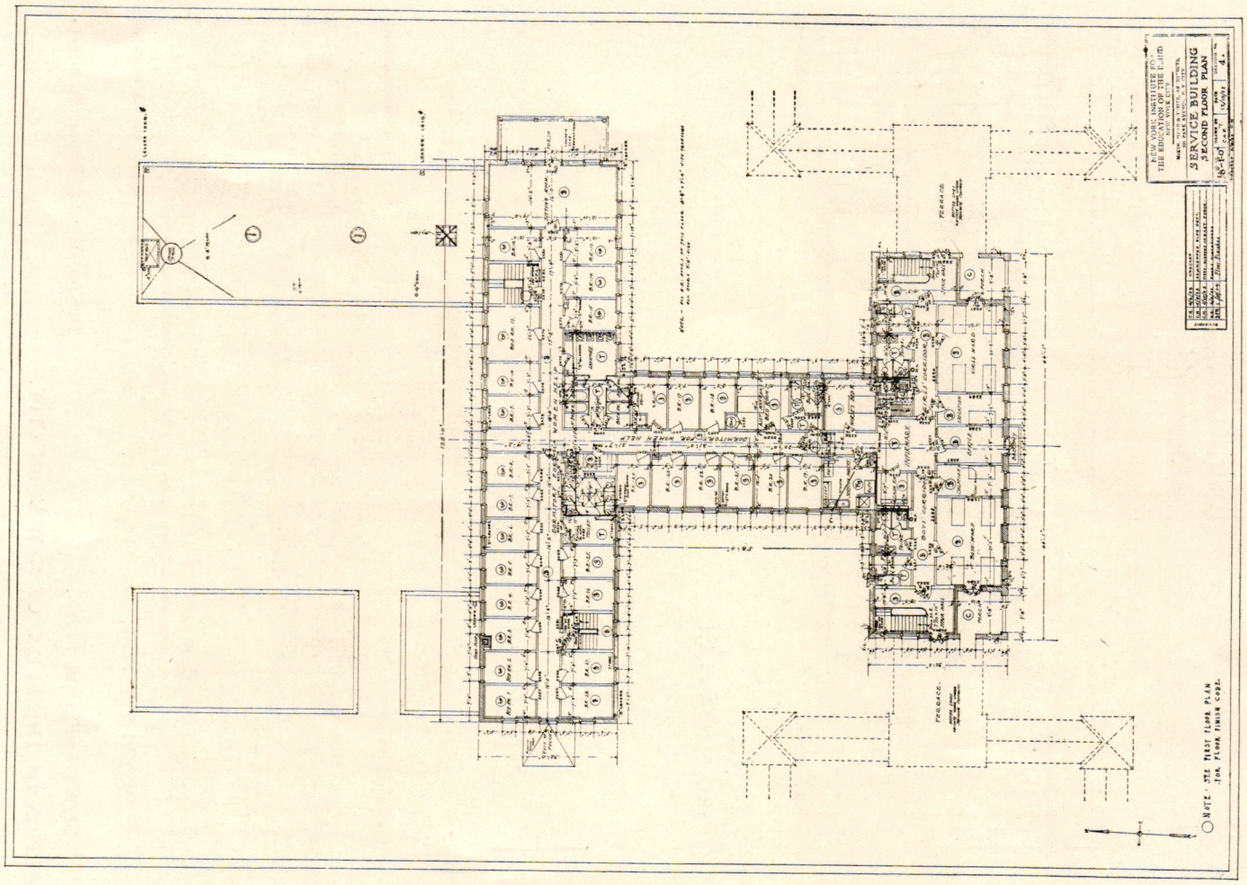


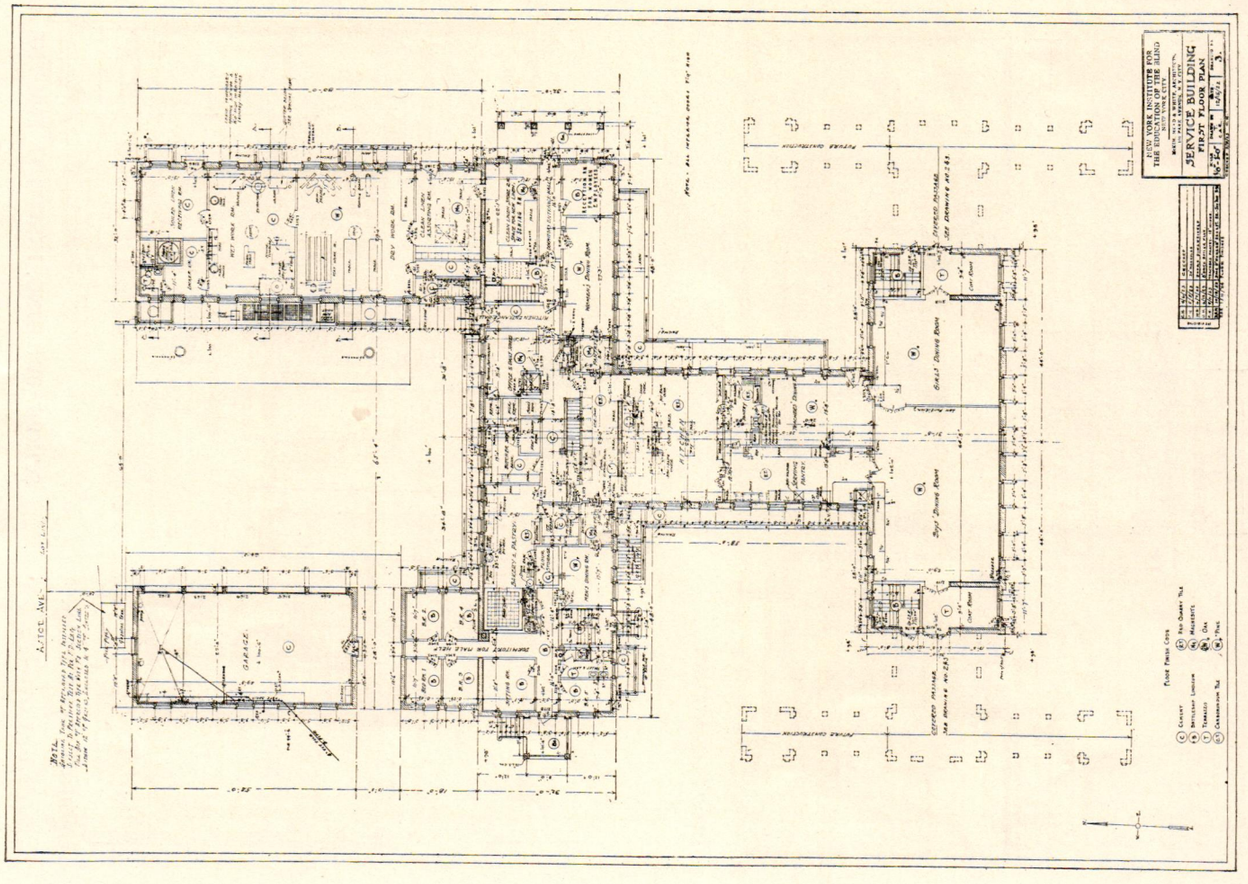
GIRLS' DORMITORY.

TEACHERS' HOUSE.

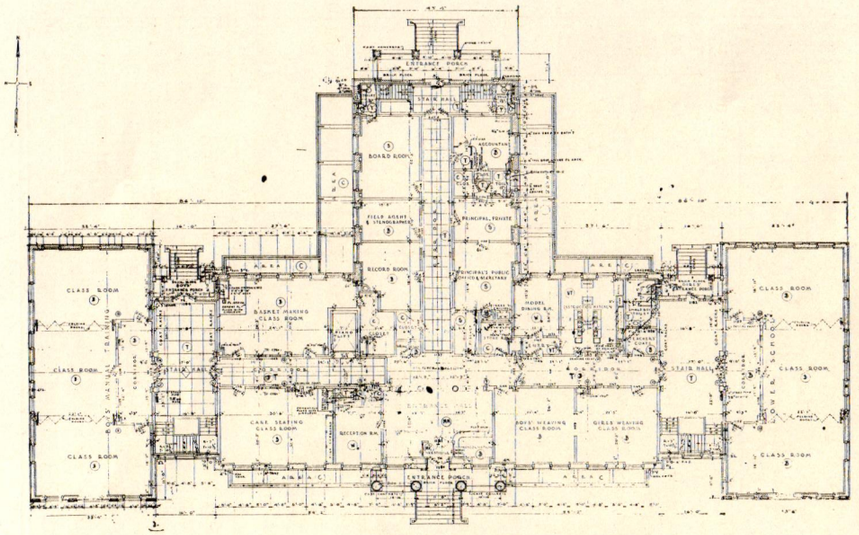
McKim, Mead & White, Architects.

INSTITUTE FOR THE EDUCATION OF THE BLIND OF NEW YORK CITY.

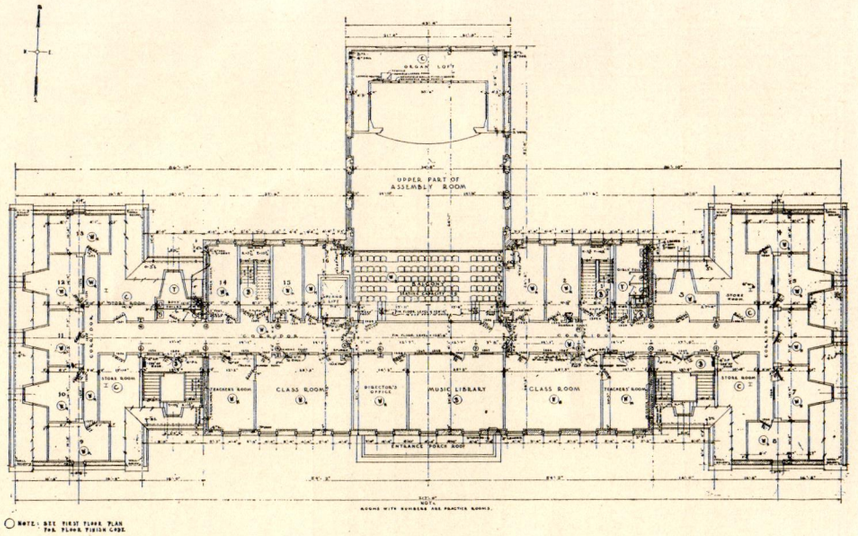




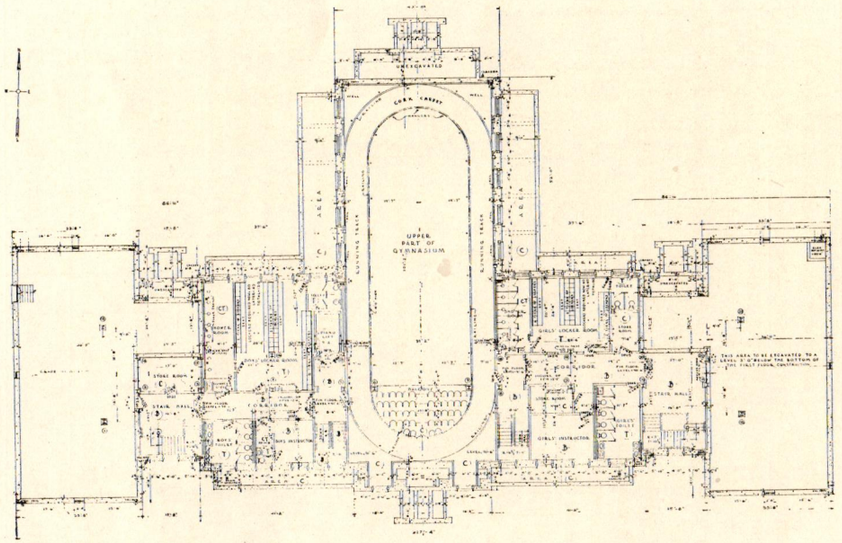
PLANS, SERVICE BUILDING, INSTITUTE FOR THE EDUCATION OF THE BLIND OF NEW YORK CITY. McKim, Mead & White, Architects.



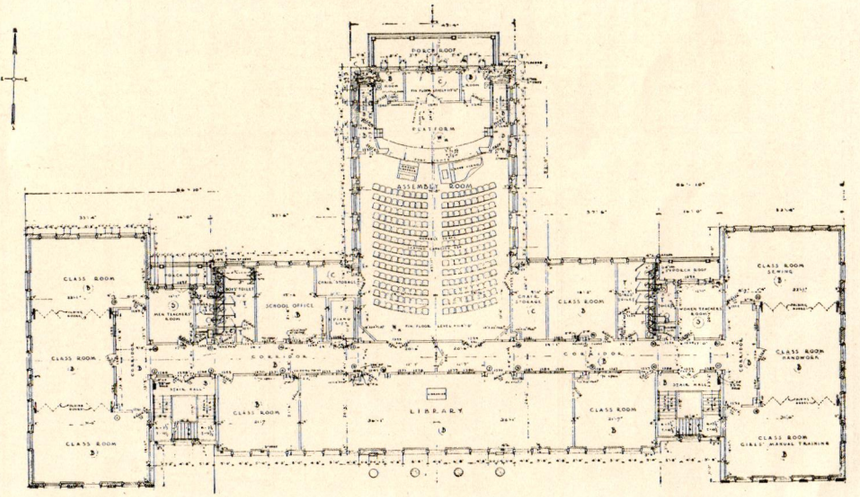
FIRST–FLOOR PLAN.



THIRD–FLOOR PLAN.



GROUND–FLOOR PLAN.



SECOND–FLOOR PLAN.

McKim, Mead & White, Architects.

SCHOOL BUILDING, INSTITUTE FOR THE EDUCATION OF THE BLIND OF NEW YORK CITY.

(*Continued from page 206*)

junction with this convention has with the co-operation of the Architectural League grown into an international exposition of the building industry. You attended its opening last night and will have opportunity within the week to judge whether it makes a showing creditable to all factors in architecture and whether it is of real value to the public.

"We trust that the merely commercial side of that exposition merits your approval. You can pass upon it without prejudice since the Institute has no interest in the financial profits. But this convention is interested in it especially from a professional point of view. It is our earnest desire that this conference in which visiting architects are invited to participate will leave one deep impression if no other. And that is that the architectural profession in the midst of a commercial age must hold fast to its ideals of professional service. It seems true that professional work must always to some extent be a reward in itself and that the professional worker will always be underpaid in other compensation. That seems unjust but I believe it is fundamental. If the professional laborer is not paid the full value of his hire and the love of his work must be his reward, then it follows that he should be allowed freedom in rendering his service. The measure or extent of his freedom from dictation or interference will be determined by his own ability and experience and recognized wisdom in overcoming difficulties.

"The highest form of leadership is not money power but professional service. It is only by keeping free from commercial profit to the utmost possible degree and by making himself pre-eminently qualified to render service that he will retain his right to the meaning of his title 'master builder.'

"We have reviewed the work of thirty years past and realize the debt we owe to our predecessors. We have outlined the positive and progressive programme of the Institute.

"It is your right, members and delegates to the Fifty-eighth Convention, to press the question, 'What is the Institute doing to-day?' If it is your duty to find the answer, you will consider carefully the stewardship of the Board of Directors when their report is placed before you. You will read every committee report. You will review and pass judgment upon all the ways and means and purposes of the Institute's work of to-day.

"The answers you make to that question will constitute a programme for the coming year.

"As delegates representing three thousand members you may well see it devolves upon you to take a thoughtful survey of all the fields of influence in which the Institute is or should be effective."

Officers, Directors, Honorary Members, Corresponding Members, and Fellows Elected

President and Director, D. Everett Waid, New York. *First Vice-President and Director*, Abram Garfield, Cleveland. *Second Vice-President and Director*, William L. Steele, Sioux City, Iowa. *Secretary and Director*, Edwin H. Brown, Minneapolis. *Treasurer and Director*, William B. Ittner, St. Louis. *Director, First District*, F. Ellis Jackson, Providence, R. I. *Director, Second District*, J. Monroe Hewlett, Brooklyn, N. Y. *Director, Sixth District*, Goldwin Goldsmith, Lawrence, Kans.

Honorary Members: Morris Gray, Boston, Mass.; John J. Glessner, Chicago, Ills.; Robert W. DeForest, New York, N. Y.; Mrs. Mary E. Wortman, Port'and, Ore.; Eli Kirk Price, Philadelphia, Pa.; Henry B. Thompson, Wilmington, Del.; Alexander Suss Langsdorf, St. Louis, Mo.

Honorary Corresponding Members: Sir Gilbert Scott, London, England; Arthur Byne, Madrid, Spain; Camille Lafevre, Paris, France, President of the Société des Architectes Diplomes; Señor Horacio Acosta y Lara, Montevideo, Uruguay, President of the Pan-American Congress of Architects.

Fellows elected: Leon Stern, Robert R. McGoodwin, Timothy Walsh, Richard Phillipp, Julius A. Schweinfurth, Charles Morris, Walter L. Ruthmann.

The Institute awarded distinguished medals to Maginnis and Walsh in church architecture; to Tilton and Githens for a monumental building, the beautiful Wilmington Library; to Sprautt and Rolph, of Canada, for educational work; to Arthur Loomis Harmon for his great Shelton Hotel; to Walker and Gillette for residential work; to John S. Sargent for fine arts; to Charles J. Connick in craftsmanship.

Mr. Herbert Adams, the sculptor, spoke on behalf of John S. Sargent, who was expected to be present to receive in person the Fine Arts Medal, and this was followed by the reading of the resolution written by Mr. Cortissoz for the occasion:

"Whereas, In the recent death of John Singer Sargent the art of the world at large and of the United States in particular has suffered one of the greatest losses of a century, and

"Whereas, John Singer Sargent through his labor as a mural decorator gave peculiar emphasis to his belief in the solidarity of the arts, and

"Whereas, His sympathetic co-operation with architecture was one of the liveliest traits in his nobly generous nature, it is hereby

"*Resolved*, By the American Institute of Architects, assembled in the Fifty-eighth Annual Convention, in New York, that it place upon its records an expression of its profound appreciation of his genius and his achievements.

"In his work he aimed successfully at that truth which is one of the highest forms of beauty. He affirmed in it a lifelong devotion to a sterling ideal of craftsmanship. The manliness of his character was matched by his rectitude as an artist. The American Institute of Architects pays unstinted tribute to the qualities which made him great and lovable as a painter and as a man."

We award a medal to Mr. E. C. Kemper, executive secretary of the Institute, for his ever-courteous and efficient help to the minions of the press. His task this year, of trying to be in two places at once, was a difficult one, and the record attendance of delegates and others kept him and his efficient associates busier than a lot of bees we have met.

The Architectural and Allied Arts Exposition — Under the Auspices of the American Institute of Architects and the Architectural League of New York

We have already referred to the magnitude of this show. It was so huge and in the hurry of assembling and cataloguing so mixed up in the character of the exhibits that trying to see it was like trying to see all the acts in a four-ring circus. The only way was to go to several performances. It was the greatest architectural show ever assembled, and if you accepted difficult conditions in a spirit of patience and had the strength to walk the miles of floor space required to get even a casual glance, you were repaid in full. As some one re-

marked in the A. I. A. Convention, it was like an architectural pilgrimage from Maine to California with a short trip to Canada, Mexico, China, Sweden, Spain, Italy, Germany, France, Finland, England, on the side.

It was a wonderful show in many respects and a liberal education in architecture and the allied arts. We wish we could have had more time to study the murals and the sculpture—wish they had been gathered together and not scattered all over the place, but we are willing to forget the things that might have been and say thank you for the enterprise and immense amount of enthusiasm and downright hard work that was manifested on all sides.

Thousands have carried away impressions of good architecture, from the small-house exhibits and from the photographs and drawings of many notable commercial and monumental buildings, and thousands we trust have become familiar with the *names* of the architects who have made American architecture the best in the world.

The Architectural League awarded the following medals: to Arthur Loomis Harmon for the Shelton Hotel; to Arthur Covey for mural painting; to Nicola D'Ascenzo for craftsmanship; to James Earle Fraser for sculpture; to C. C. Simonds for landscape architecture. The Friedsam prize was given to Leon Solon and the Avery prize went to Alfred Lenz for his exquisite small sculpture.

A Matter of Business

It seemed to us that never before have we been so impressed with the good taste and educational value of the exhibits of the various manufacturers of materials and equipment. Several of the newspapers had fun with the idea of luxurious bathrooms and gave more space to new things in building materials and fixings than to architecture. Many of the booths were arranged with admirable architectural backgrounds and there was in general an absence of the easily too-insistent commercial intent. Of course we owe this to the manufacturers themselves as well as to the excellent taste and judgment of the committee in charge.

Cement Was Discovered by the Romans

OF all the much discussed "lost arts" of antiquity, cement-making is the only one which has been rediscovered in modern times.

For centuries scientists—real and pseudo—have puzzled over malleable glass, which was a form of glass said to have existed in the days of Rome's grandeur and which could be bent or worked like metal without breaking.

Early historians had quite a little to say about this substance, alleging that it was introduced to the court of Nero by a Roman who had been held prisoner in Africa. According to the account, the ex-prisoner brought back a glass goblet which could be tossed about freely, and could be straightened easily whenever dented or crushed. Modern glass-makers are skeptical of the existence of such a glass at any time, and all efforts to rediscover the art of making it, if there ever was such an art, have failed completely.

That copper was tempered to the hardness of steel centuries ago is now pretty well established. Copper chisels have been found in Peru of a hardness far greater than any which it is possible to impart in this day, although modern metallurgists have tried diligently to find a method, and in one or two instances it has been possible to harden the metal slightly. Every once in a while some one announces the rediscovery of the lost art, but the fact that such claims are not followed by the appearance of manufactured tempered copper on the market is the best disproof of the assertions. Could copper be tempered to the hardness of steel, there is no doubt that manufacturers would utilize it for some purposes in which iron and steel labor under disadvantages.

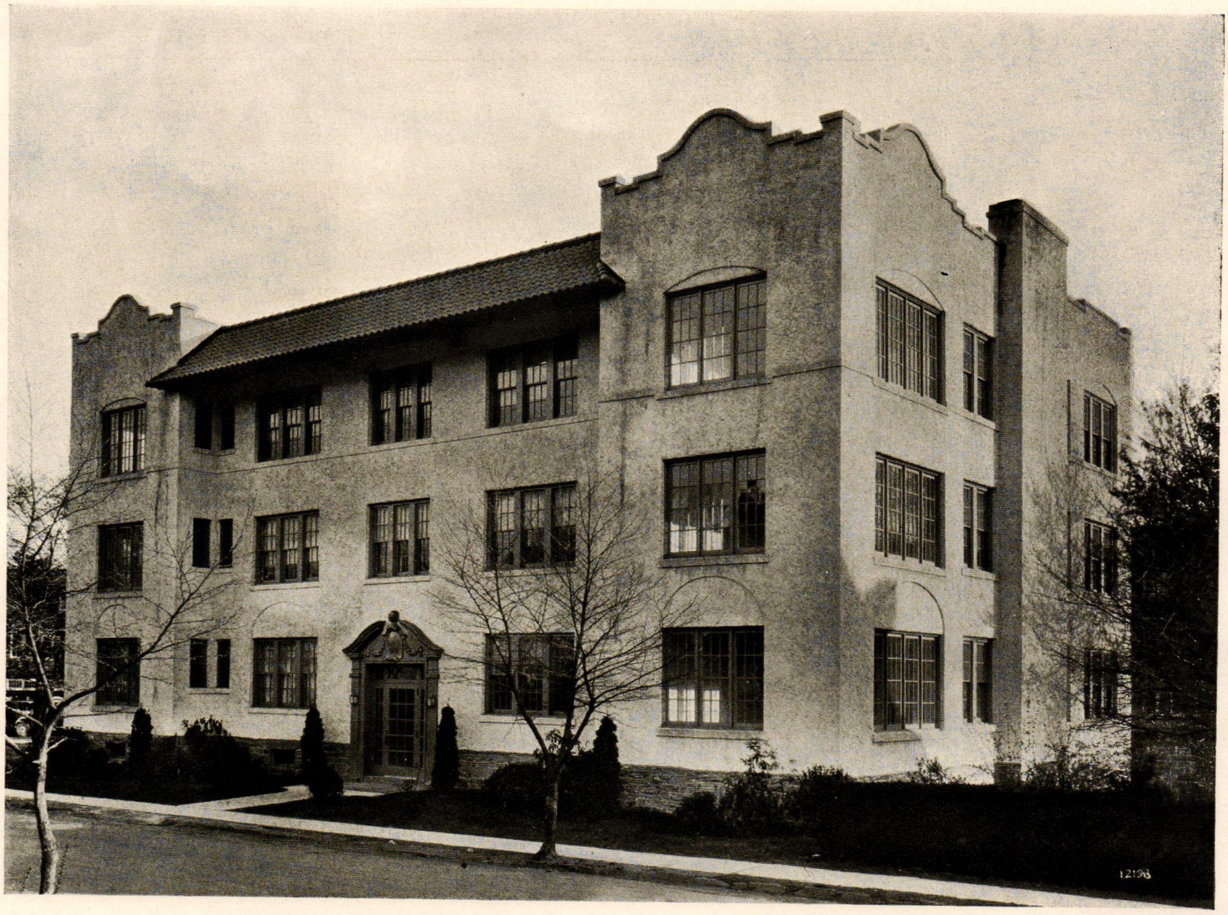
The dyemasters of ancient Tyre are asserted by historians to have evolved a shade of purple so beautiful that it was eagerly sought all over Europe and northern Africa by nations which had themselves progressed well in the art of dyeing. Except that the extraordinary shade was obtained from clams or other mussels, nothing is known of its manufacture, and all efforts to reproduce it failed. With the fall of Tyre the secret was lost and has never been brought to light.

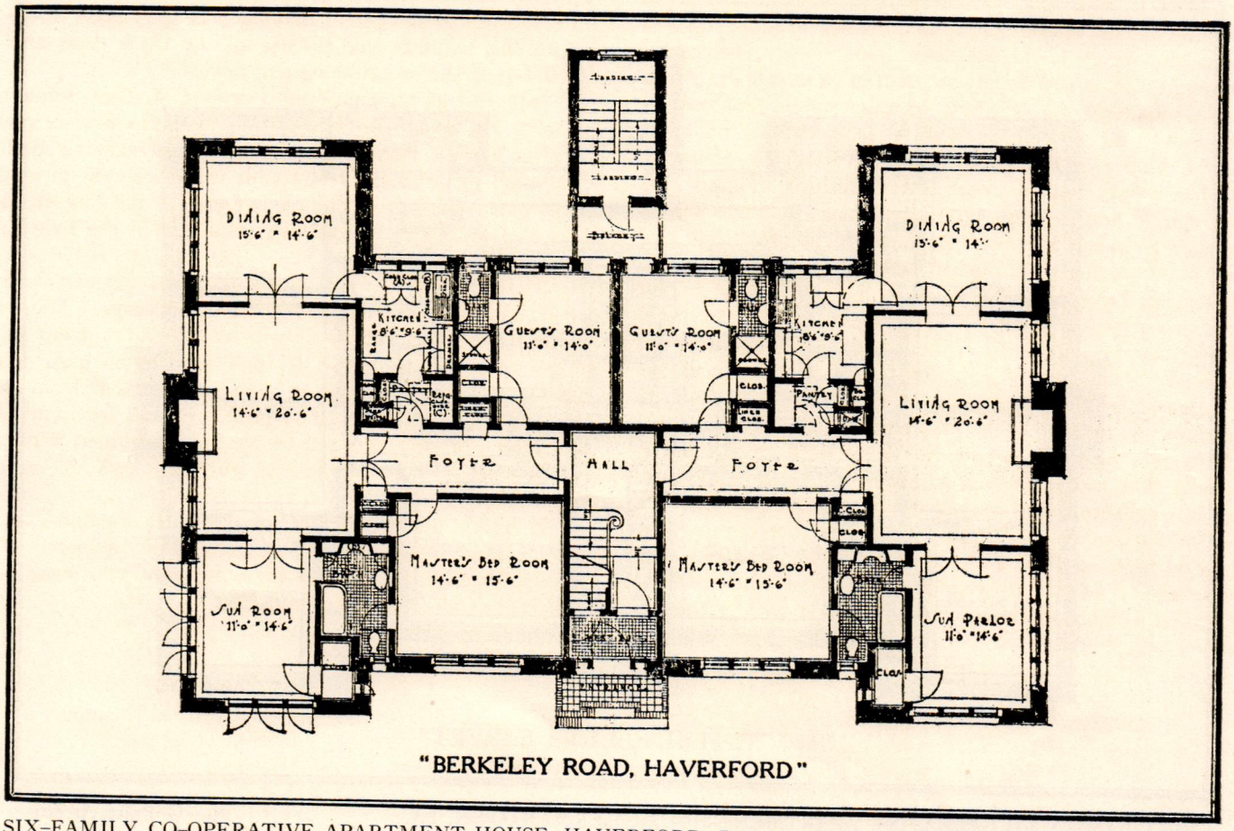
Cement was discovered by the Romans, who used it extensively for the foundations of their triumphal arches and temples. Excavations in the Forum clearly show on the concrete marks of the ancient wooden forms, much as present-day concrete shows the same patterns. As with Tyrian purple, the art of cement-making was lost when Rome fell before the Vandals, and during all the Dark Ages and the Renaissance the secret remained buried.

But enough information remained so that some time prior to the American Revolution investigators in various parts of Europe began to make cement of varying qualities in a small way. The first notable use of cement in modern times was in the Eddystone Lighthouse, off the English coast. This was in 1756. It was also employed in the Erie Canal about 1820.

These cements were much like the Roman variety, which has stood for nearly two thousand years. They were made of materials which nature had already mixed in the proper proportions. But in 1824 an Englishman, Joseph Aspdin, succeeded in making a stronger cement from materials which nature had not already prepared for him. This he called Portland cement, because it resembled a durable building stone from the Isle of Portland, used in building Westminster Abbey.

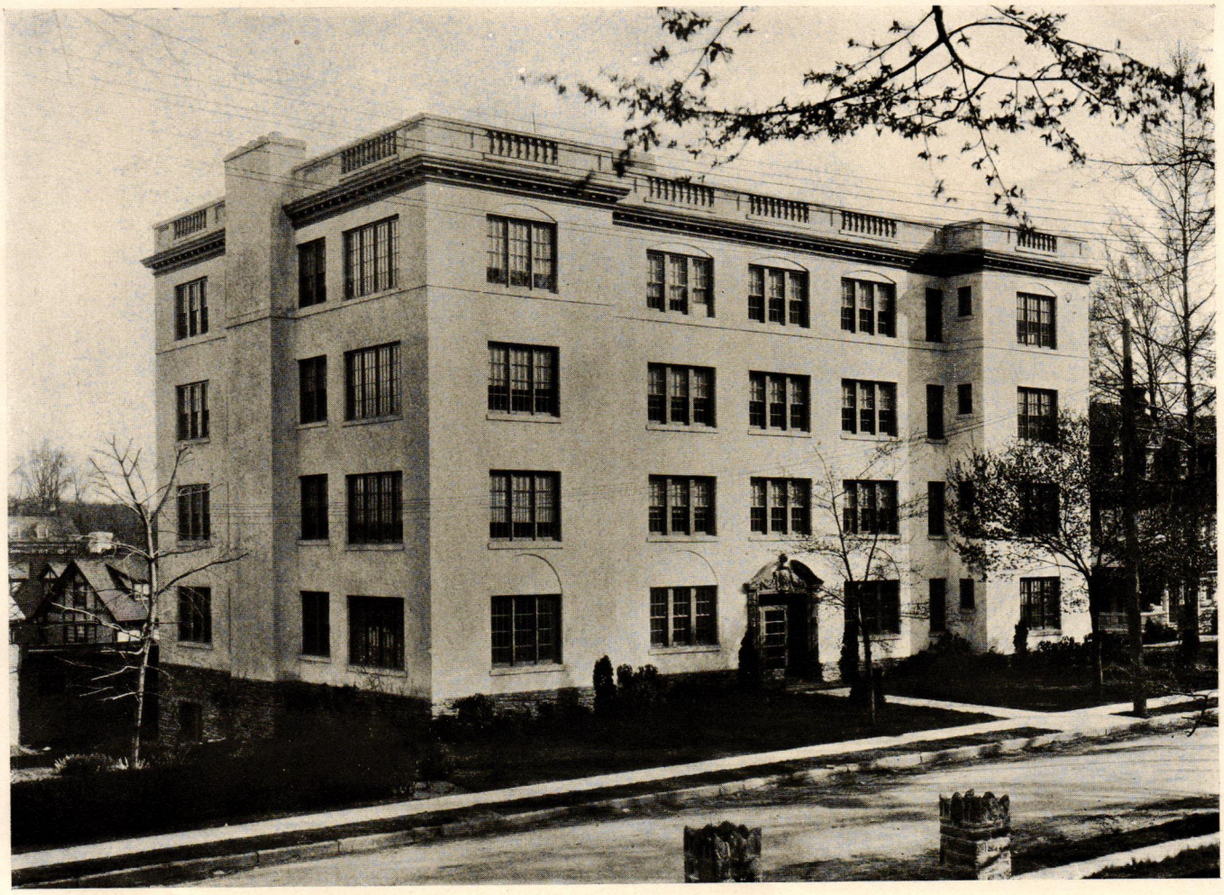
A highly developed form of this early Portland cement is the cement of modern commerce, so that the secret of the ancient Romans in this instance has not only been rediscovered but also has been improved upon.

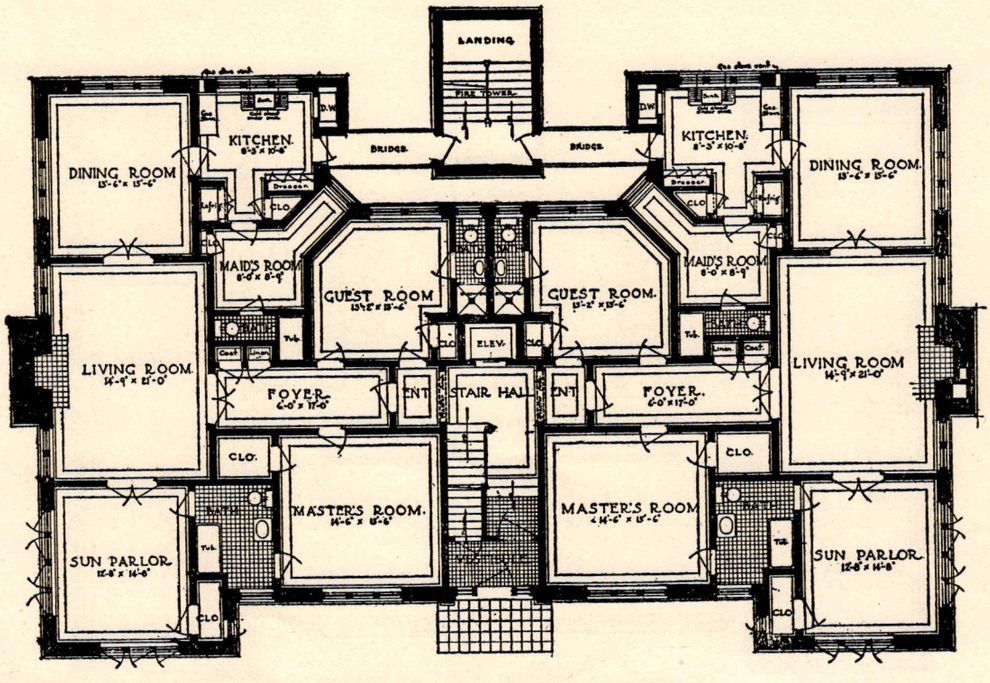




"BERKELEY ROAD, HAVERFORD"

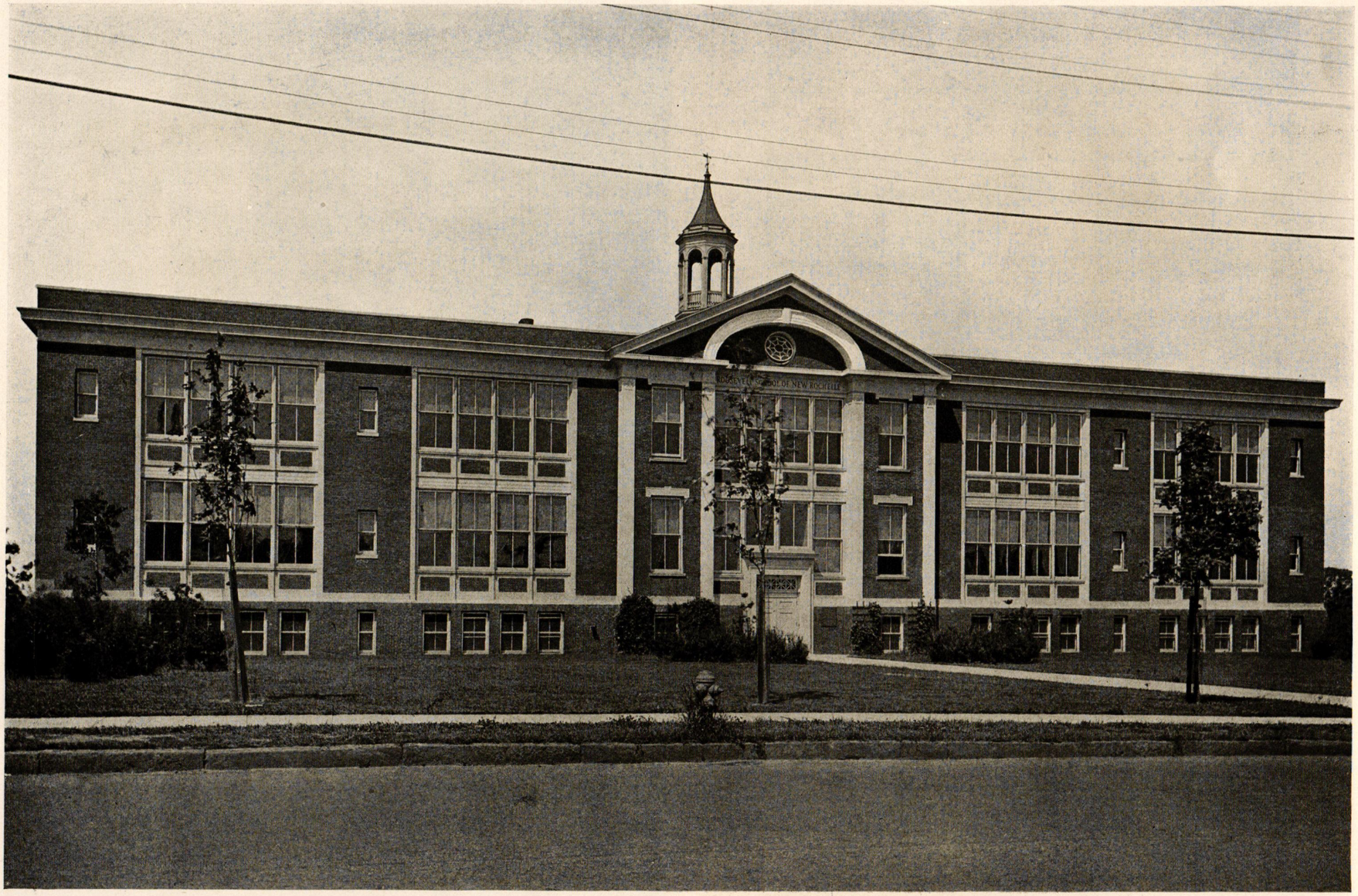
SIX-FAMILY CO-OPERATIVE APARTMENT-HOUSE, HAVERFORD, PA. Roy G. Pratt, Architect.





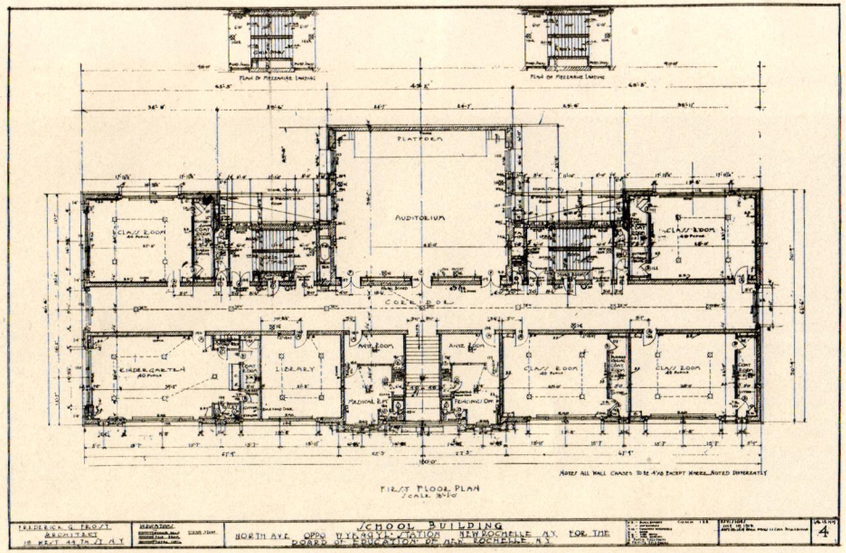
"620 W. PHIL-ELLENA STREET"

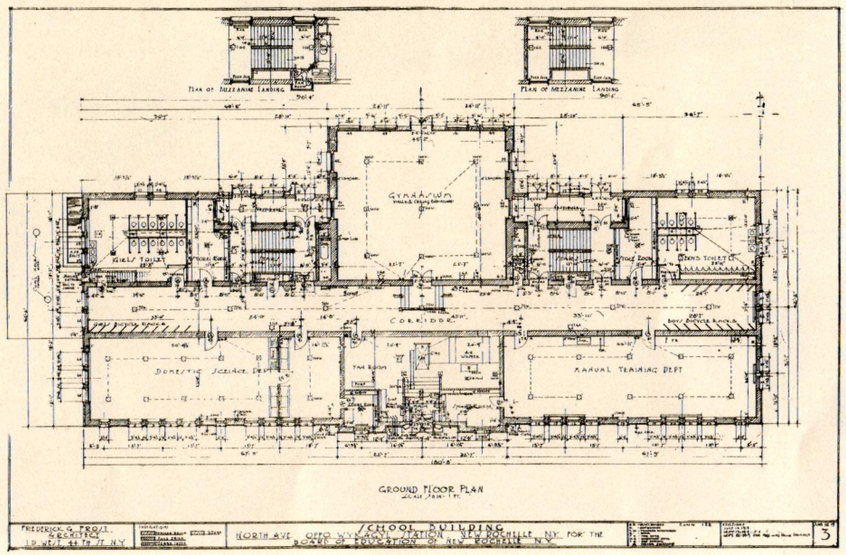
EIGHT-FAMILY CO-OPERATIVE APARTMENT-HOUSE, GERMANTOWN, PA. Roy G. Pratt, Architect.



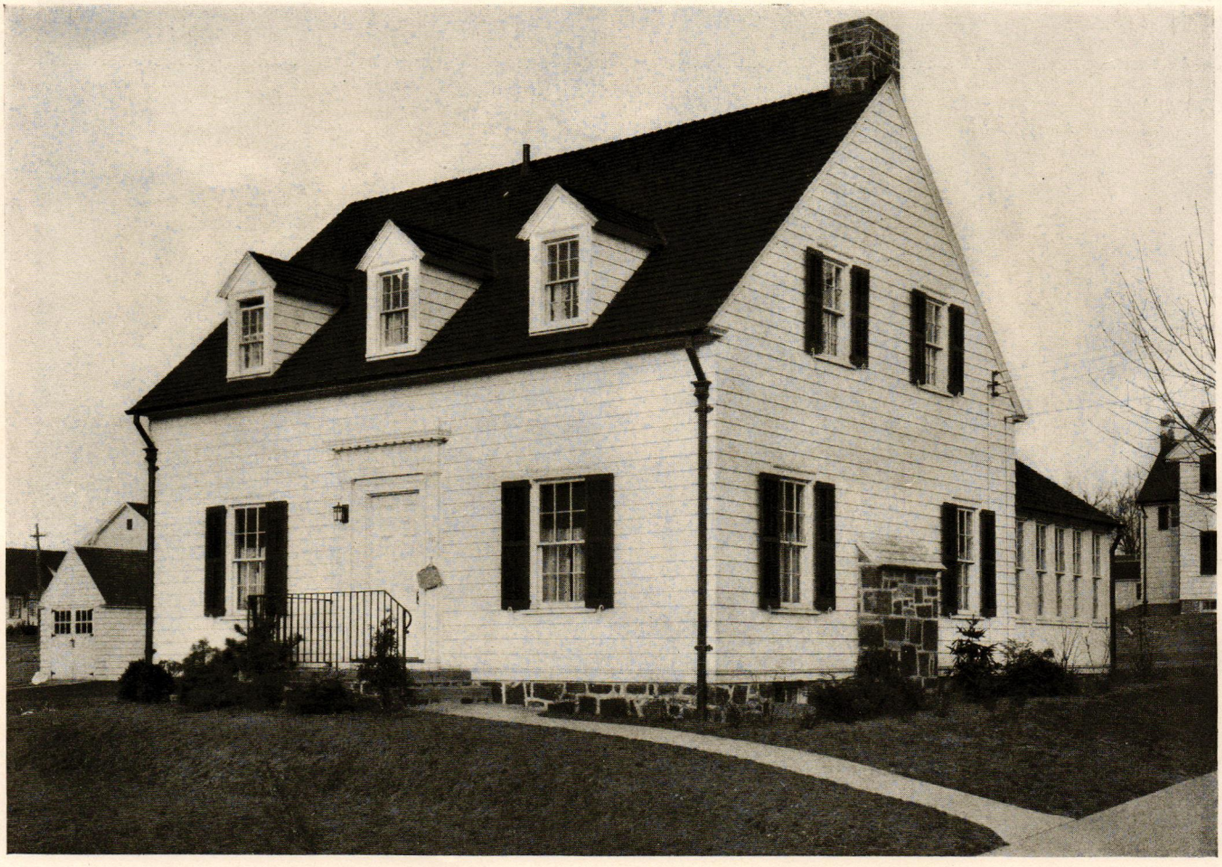
ROOSEVELT SCHOOL BUILDING, NEW ROCHELLE, N. Y. Frederick G. Frost, Architect.

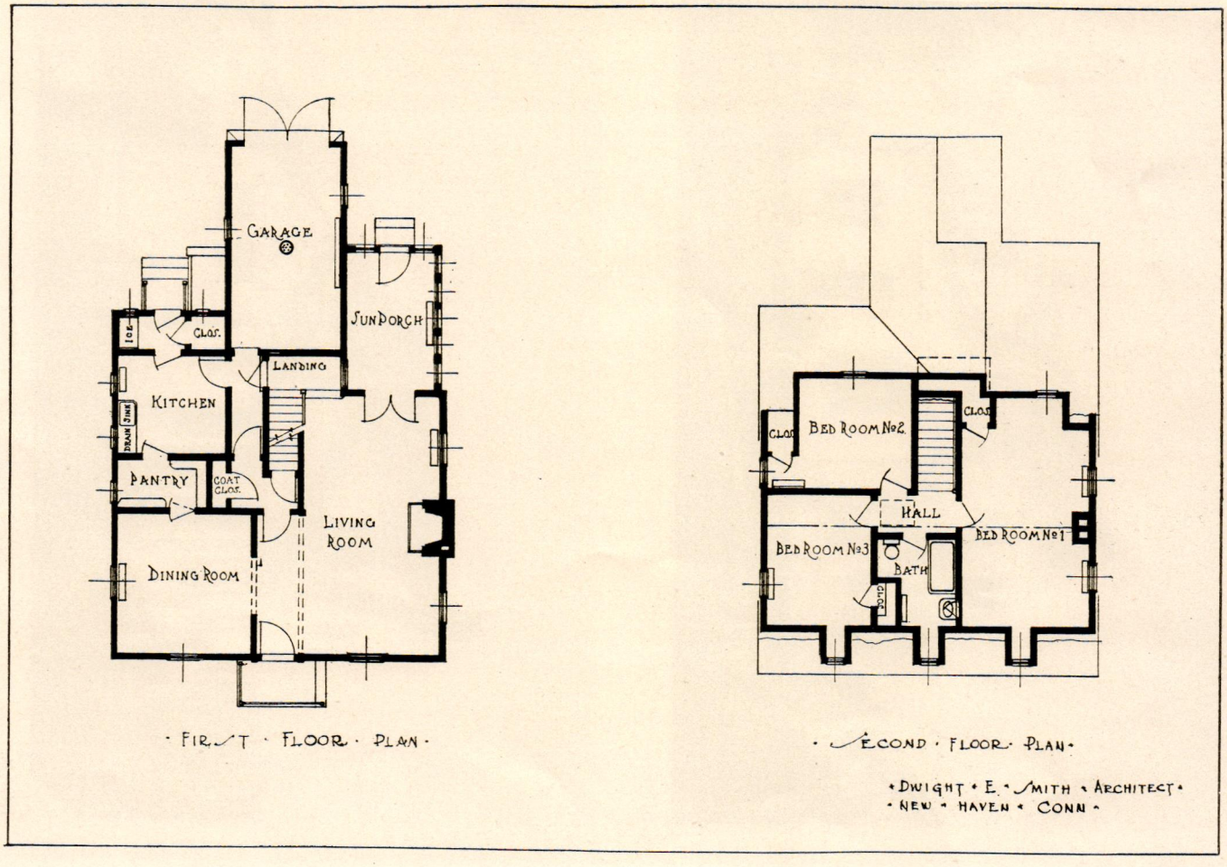
ROOSEVELT SCHOOL BUILDING, NEW ROCHELLE, N. Y.



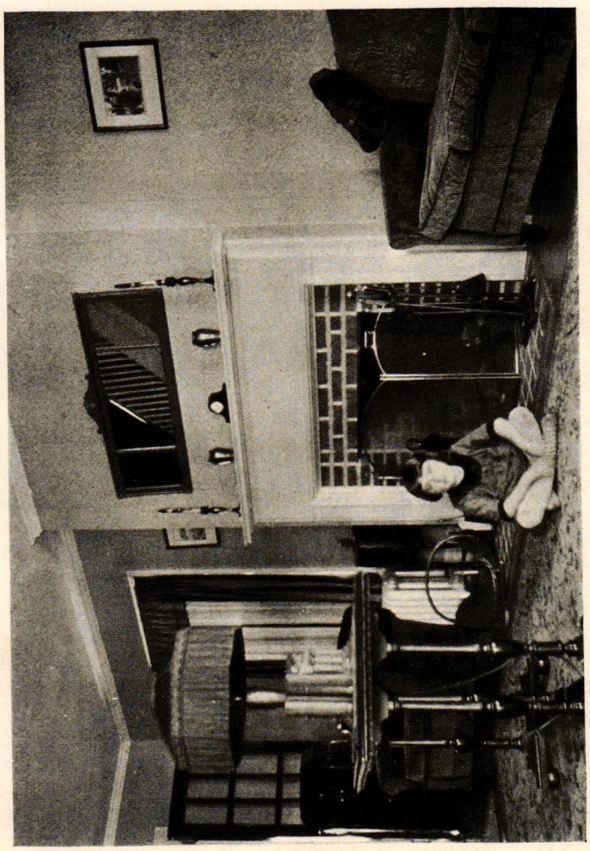


Frederick G. Frost, Architect.

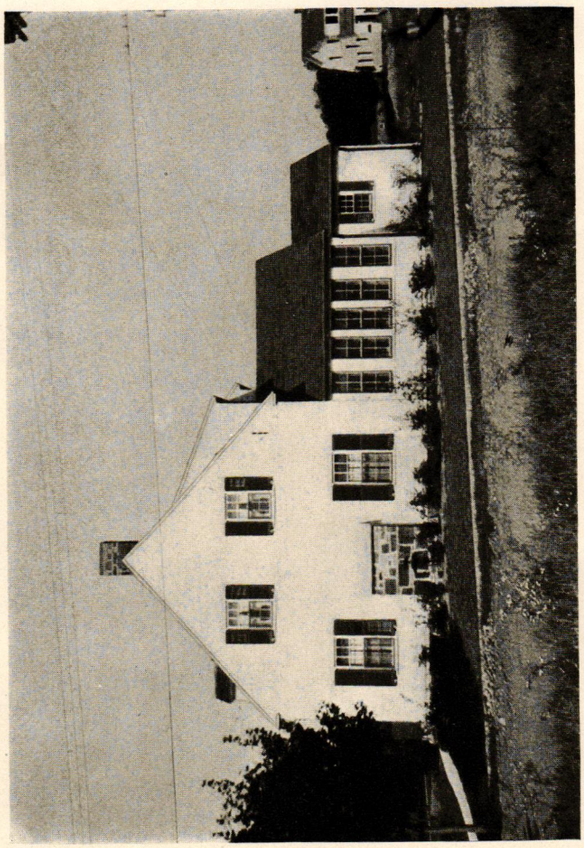




HOUSE, HAMDEN, CONN. Dwight E. Smith, Architect.



LIVING–ROOM.



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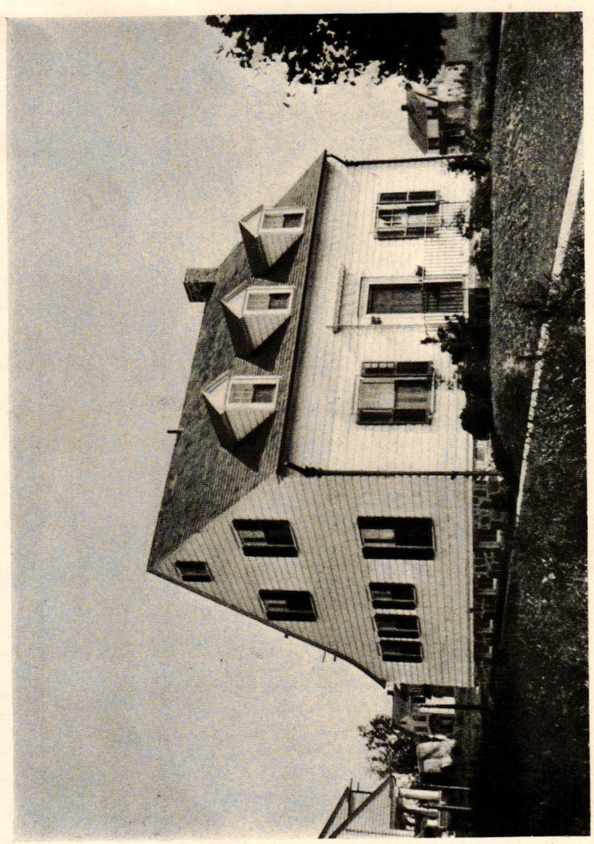
HOUSE, HAMDEN, CONN.

Dwight E. Smith, Architect.



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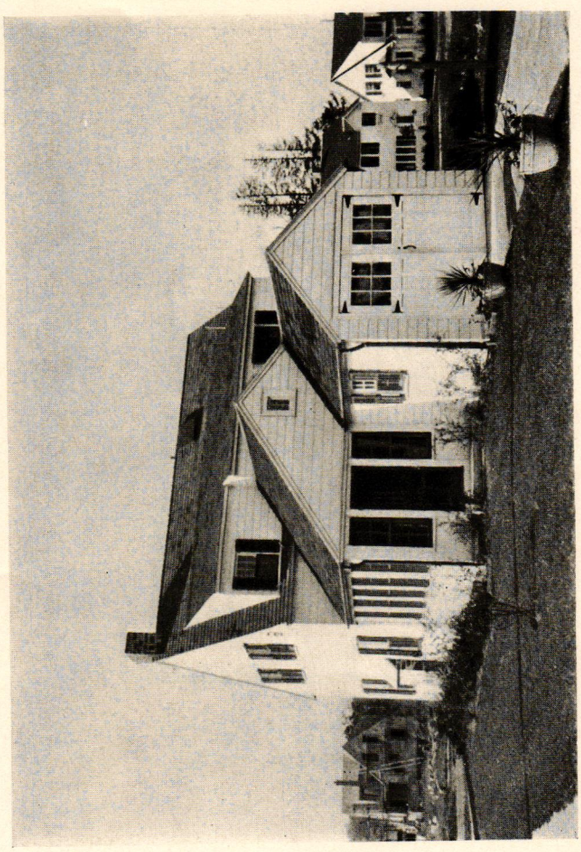


REAR.

Communications

Allied Architects Associations and Plan Service Bureaus

The following communications, bearing on an important topic that is becoming more and more a matter of serious discussion, we believe will be of particular interest to our readers:

EDITOR ARCHITECTURE,
Charles Scribner's Sons,
597–599 Fifth Avenue, New York City.

Dear Sir: In your April issue I noted a letter from Peter De Gelleke, adversely commenting upon associations of architects, briefly referring to the Allied Architects Association of Los Angeles, and evidently not familiar with the purposes, ideals, or "working machinery" of that organization.

As director of publicity for the Allied Architects Association of Los Angeles, I should like to submit an article for your consideration, pointing out the advantages which these architects believe they secure through their association, and particularly showing how their hearty "co-operation," as compared with "competition," benefits authorities who are constructing public buildings.

Mr. De Gelleke is laboring under a misapprehension when he refers to the "competition" method among the architects of such an association. The Los Angeles association has been in existence over three years and has designed and superintended the construction of various public buildings. Its work is limited to buildings of this character. Its membership comprises sixty-nine of the leading architects of Southern California, nearly all, I believe, members of the American Institute. Instead of proving a cumbersome body, in practice the association is able to produce its preliminary sketches and its final plans with speed and particular satisfaction to the employing authorities.

There is another angle which is of public interest, and that is the members of the association in Los Angeles do not work for personal profit. They give their services in a body to co-operate at the different states of the development of plans and they budget those members most capable to supervise the work of draftsmen on the various parts of the plans. After all expenses of the work have been met out of their earnings, they maintain a school of architecture for university students, an atelier for draftsmen studying design, an architectural and fine arts library, etc. Out of their funds earned in the work of the association on public buildings and out of personal subscriptions for the purpose they met the cost (approximately $45,000) of preparing a complete Civic Centre plan for the city and county of Los Angeles. The work required a large force of men beside the constant labor of members of the association for upwards of a year. It was done as a community service, and the complete plans were given to the city and to the county of Los Angeles under definite contract for the sum of $1.00, with no interest retained on the part of the Allied Architects, who as an association will be eligible on the same basis as individual architects might be to design such public buildings as may be located within the limits of the Civic Centre so planned.

Among the commissions now being executed by the A. A. A. at Los Angeles are the plans for a $5,000,000 addition to the Los Angeles County Hospital. It has been interesting to see the remarkable benefit of hearty co-operation on the part of these sixty-nine architects with members of the Board of Supervisors and doctors on the hospital staff in producing the most effective building to meet the requirements of all concerned.

Very truly yours,
S. P. TROOD,
Director Publicity Allied Architects Association.

Allied Architects Association, Los Angeles, California

THE BOARD OF DIRECTORS,
American Institute of Architects,
The Octagon House, Washington, D. C.

Gentlemen: In view of the propaganda which has appeared in the Institute *Journal* during the past year in connection with the Allied Architects Association of Los Angeles, and the somewhat national importance which this idea has assumed, we, the undersigned, practising architects in the City of Los Angeles, and members and associate members of the Institute, wish hereby to call your attention to the following comments on the situation as it now exists in Los Angeles:

1. Out of a total membership of approximately 172, Southern California Chapter, American Institute of Architects, approximately 70 are members of the Allied Architects Association.

2. Practically all officers, members of committees and convention delegates of the Southern California Chapter are members of the Allied Architects.

3. The Allied Architects Association has secured to date from the County of Los Angeles, five contracts for architectural services, involving the expenditure of approximately $19,000,000 and carrying fees of approximately $900,000. These contracts have been secured without any public competition whatsoever. (See Municipal League Bulletins of January 20 and February 16, 1925, herewith enclosed.)

4. The Allied Architects Association contracted to prepare for the City and County of Los Angeles a Civic Centre Plan for the fee of $2.00 (see Municipal League *Bulletin* of January 20, 1925). This plan is alleged to have cost the association approximately $40,000. The plan, when submitted to the city and county about the first of the current year, was unaccompanied by any estimates of cost in whole or in part. It, however, was unofficially estimated to involve expenditures varying from 300 to 500 millions of dollars, or sums entirely beyond the bonding capacity of the city and the county to provide. In view of this situation, no action has been to date taken on the allied scheme by either city or county, and with no immediate prospect of such action.

5. It is understood that the Allied Architects Association will not, as such, enter an architectural competition, and has not done so to date.

6. That the Chamber of Commerce of the City of Los Angeles (membership 12,000) and the Municipal League petitioned the City Council to hold an architectural competition for the new $5,000,000 City Hall, under the auspices of the American Institute of Architects. Every effort to secure the endorsement of this suggestion by the Southern California Chapter of the American Institute of Architects, made by non-allied members of the chapter, has failed.

7. That the Allied Architects Association participated in competitive bidding on the basis of price under provision of the Los Angeles City Charter (see Sec. 207-*a*) in connection with invitations asked for same by the Los Angeles Board of Public Works. (See extract from the Los Angeles *Times* of April 9 herewith enclosed.) The Southern California Chapter was asked to protest this procedure, but failed to take any action. This we understand is contrary to the policy of the American Institute, which does not endorse competition among its members on the basis of price.

8. That the Allied Architects Association is based on a communistic principle, where the individual is required to merge his personality in the collective product. Paradoxical as it may seem, it appears to non-allied observers that whatever success in design which has so far been attained by the Allied Association, bears the almost unmistakable marks of the handiwork of Mr. Jess Stanton, a young man of exceptional ability employed until recently as a designer by the Allied Architects.

9. The Allied Architects movement in Los Angeles has, as we see it, accomplished to date three outstanding results: First, it has divided the Southern California Chapter of the Institute against itself. Second, it has destroyed the rightful opportunities which should exist in all communities for the individual architects, especially the younger men, to aspire to the execution of public works through the medium of properly organized competition. Third, by destroying the united front of the profession as expressed in the local chapter of the institute, it has made it immeasurably more easy for the ever-watchful politician to manipulate great blocks of the public moneys, appropriated for public buildings, along lines of patronage and preferment.

Yours very truly,

(Signed) KENNETH MACDONALD, JR.,
CHARLES S. COBB,
EUGENE WESTON, JR.,
H. DUP. BOUNETHEAU,
P. A. EISEN.

From the Tulsa Architects Association, Tulsa, Oklahoma

THE EDITOR, ARCHITECTURE,
597–599 Fifth Ave., New York, N. Y.

Dear Sir: We have long had a desire to speak out loud in behalf of the ordinary average architect, who subsists upon the average-sized building work, which consists of commercial and residential building, which will run in cost from $5,000 to $15,000.

It is the men who do work in this class that constitute the great numbers who are practising the architectural profession, safely say 80 per cent.

It has now become the custom of various manufacturers of both good and bad building commodities to advertise in various periodicals the country over that, for the small sum of from ten to fifty cents, they will send to any prospective builder not only a plan but a book full from cover to cover with many and various kinds of plans. Of course, we all know that it is impossible to build from these plans, but the man who may become the architect's client does not know it, for the advertiser never makes such a statement, although he is well aware of it, and it is merely a practice of subterfuge, promoting impractical application of his own product and stimulating hard times for Mr. Average Architect, whose good-will and patronage he tries to cater to through all the architectural periodicals that the poor fish supports out of his own shallow pocket-book.

Some of these cut-rate plan systems are advertising seemingly with the sanction of the A. I. A., and this is stressed upon to the fullest extent, and, to the casual observer, puts Mr. Average Architect in the position of one who is out with the one single idea of starving to death, for does not his own greatest organization sanction the idea that plans should be had for small sums or a mere pittance compared with the enormous amount he wishes to charge his client, and which seems in direct conflict with the very teachings of the great A. I. A., who should be his great guiding light, but who in fact is putting him in shackles?

There are also numerous periodicals running so-called plan service bureaus, printing in each issue a house plan which they will furnish to any reader for a sum way below any known architectural fee. All the reader has to do is to imagine that the building will suit his purpose, which, of course, it will not do in most cases, and then the local architect is presented with the picture and small-scale plan to be made over, *IF* he will do it at the same price, which he cannot do. Therefore, in the eyes of the client, even after copious logical explanations, the architect must be crazy, for he has read and knows that entire books of plans can be had for the sum of not over twenty-five cents, and the A. I. A. advocates cheap plans, and nearly every magazine his wife buys also says that this is the case, so of course he cannot be wrong.

Some of these advertisers, after mentioning these various cheap prices on plans, suffer some sort of a pang of pain, for they will insert in the advertisement, in an obscure sort of place, something about seeing your architect, but the damage has already been done, and when he does see him, the architect is merely in for more trouble by having to explain again the great reason *why*.

The hard part of it is this, every one publishing this kind of matter knows better than to do it, and should come out truthfully and state why the architect should be patronized first-hand and in person, and state the benefits of personal service and the benefits of a knowledge of local conditions and the benefits of having the owner's own individuality correctly enshrined in his own home, and many, many other reasons that cannot be stated here.

This great 80 per cent of men in the architectural profession is likewise the 80 per cent of all the subscribers to the various architectural magazines, all of which they like and, as a rule, they subscribe to more of them than they can afford. It would seem that it would be just and proper for these periodicals to reciprocate and to aid Mr. Average Architect, who for years has paid his good, *hard-earned* money to these various publications, and to take up the cudgels in his defense, for at the present rate 80 per cent of the subscribers will vanish into the great unknown and the only architects left will be the ones who design and plan the great structures and the twenty-five-cent plan will reign supreme.

This communication has its origin from the discussion at a recent meeting of the Tulsa Architects Association, following the reading of a letter published in the March 11 issue of *The American Architect*, page 218, written by H. Lucht and H. G. Anderson, architects, which we consider both appropriate and timely.

Yours truly,

H. H. MAHLER,
President.
A. T. THORNE,
Secretary.
W. D. BLACKER,
Chairman Public Action Comm.

Unionism and Communism in Architecture

GENTLEMEN:

There is in Los Angeles, Cal., a corporation of architects recruited from the membership of the institute. The avowed purpose of this corporation is believed to be philanthropic to the extent that it aims to execute commissions for public work which otherwise might fall prey to "political influence" and thus be let out to members of the profession deemed unfit for such commissions. A sense of loyalty to the interests of the institute at large and the high aim—good architecture for the City of Los Angeles—have characterized the motives of the individual members of this organization. So intelligent a body engaged in such a noble programme enjoys, by reason of its personnel, a certain tacit confidence as to its ultimate course and by the force of its prestige seems to be absolved from even the critical gaze. If one found time to question the propriety or value to the profession of this phenomenon he might arrive at the conclusion that perhaps a new and valuable scheme had been devised. How true that it is difficult for the individual architect to always have at hand the necessary organization for large and important work—the pooling of the interests of many architects suggests a certain opulence by the employment of experts for this and that and savors of a general cut-down in overhead and beyond all has an air of modern business acumen. What is more simple or altogether understandable than that this architect should design—and that construct—and that decorate—and that write specifications—and the other do the politics.

And so without a deep or keen analysis perhaps some have accepted this organization as the sign of the dawn of a new era in which perhaps the ancient guild idea might be revived—or at least have received it as the progenitor of another and better class of professional service. And here why not observe that the critical gaze should be allowed to rest upon this adventure only because we find that the activities of this corporation affect the destinies of others, perhaps deleteriously.

There are a number of architects in good standing in the Los Angeles Chapter who do not belong to this corporation—approximately one hundred. Some of them are accredited with the belief that they are actually carrying out commissions to which this corporation has aspired—the Public Library at Los Angeles is an instance—Messrs. Goodhue and Winslow being the successful competitors. It will thus be seen that competition in the fullest sense of the term has provided the necessity as well as the inspiration for this movement.

To attempt to estimate the effect of the activities of this corporation on the destiny of the Los Angeles Chapter is difficult and involves considerable available data, but requires lengthy digestion.

It is entirely proper to point out, however, that there must be some effects of some sort resulting from this new form of architectural corporation. Frankly, we have to consider here a considerable body of chapter members banded together with the incidental result that the individual architects find themselves competitors on a very unusual basis. The idea of competition or no competition for such work (public work) may or may not be desirable, but this is not the question. The effect upon the chapter and the general situation of the architects in reference to the public work is what we are analyzing.

First, as to the chapter: All has happened and is happening which any architect could assume to be the logical outcome of such a unique division of personal interests within the chapter, *i. e.*, a bloc on one side—and separate individuals on the other. The roll-call of the meetings chronicling the continuous and continual absence of certain members—the subjects discussed—and those which are taboo—are in themselves proof of the fact and theory upon which this article is based. As to the charm and good fellowship of the past and of the present—one would naturally have to be at the meetings to judge.

But if these evidences of disaffection were wanting—the tacit manner in which primary interests to the chapter are neglected is noticeable. Civic-centre matters, the proposed City Hall, and the County Building are left, so far as any action of the Institute of Architects is concerned, untethered in the open for this corporation to corral, cinch, and ride off with. This is a sign, in my opinion, of the abdication of the power of the Los Angeles Chapter. In matters affecting all of the members, is not the Institute the bulwark of all, or should the course of the Institute be so steered as to conform to the wishes of a bloc of the members? This corporation, holding as it does in its membership the balance of power of the chapter, automatically, without even the suggestion of guile, without planning and without programme, wields its sway. By its very existence proclaiming an indifference to the principles of democratic institutions and to the axioms of the institute.

(I refer above to the axiom covering "harm to a fellow architect.")

This corporation declares, by its very existence, that a collective service is to be preferred to a unit service, seventy architects working together can produce better than an individual architect. In the same language it is declared that the laws of contract and of professional ethics, as between owners and contractors, and which are premised on the individual, personal, professional services of an architect, shall be abrogated in favor of some new, unformed, and untried code.

Let us dwell on the word "ethics"—for how may a client obtain his ideal as to professional service from a corporation of this sort? The ideal for professional service of an architect has been formed by custom [illegible] centuries of precedent. Can a corporation qualify as [illegible]rue, honest-to-God architect, and if not, how may a client [illegible]such a corporation, obtain that which he has ass[illegible]e the services of an architect? Does it not seem something like charlatanism to advocate a corporation as a proper substitute for a real architect?

The prejudice that architecture is a profession and not a business is still strong, and in connection with this thought let us examine the effect of this new movement upon the professional destinies of young architects and draftsmen, who may be under the spell of its power, for nothing is easier to understand than that seventy architects in a corporation can do many things impossible for one lone architect, and there are naturally visions of experts in the employ of such a corporation, and, as said before, one architect may design, and one construct, and one superintend, and one write specifications, and still another do the politics—or all can do politics—or all can do politics except one, and he can do the job in the old-fashioned way. There are obvious advantages.

And we find, therefore, young architects taking their projects to this "mill." And undoubtedly it saves time and trouble, but what of the effect on the "esprit de corps" of the office of that architect who avails himself of this privilege. What of the draftsman who has worked through miles of routine with the hope that this particular job will avail him something of experience and inspiration? What

of the client who purchased an artist's dream and possesses a machine-made product?

But aside from the professional aspect, is there not an element of humor and a pinch of depravity in the angle which we, as a professional society, present to the building trade and to the business men of the community? Trade-unionism, which we have been fighting in California, is nothing more or less than an effort to restrict certain types of work to members of certain unions. The corporation to which we refer occupies exactly the same position.

The inalienable right of a group of architects to create a union is unquestioned. The issue remains—does the union presage good or ill for the American Institute of Architects? The contention may be made, "this movement has nothing to do with the institute; it is a separate matter affecting only those immediately concerned." On the other hand, is it not true that legal rights and professional ethics may not necessarily be in accord? And may it not well be that what would be considered good ethics for two or three or more, might not be good ethics for a very large number of architects, *i. e.*, sufficiently large to constitute a "moral bloc" of the architects of the community? Sufficiently large to impress the public with the representative character of the organization?—sufficiently large to force an issue of preference before the public, as between a corporation of "leading architects" and a mere individual—or even the institute itself?

Therefore the number or number and quality, if you please, make the difference in that professional men ordinarily acting separately are, when acting collectively, ordinarily supposed to impress an impersonal and ethical phase. Here is the kernel of the whole matter—for the public so understands the attitude of professional bodies. May we not ask, then, should a number of architects armored by years of prominence as officials in the chapter, flanked by cohorts of juniors and associates and younger members of the chapter, see in the prestige of a corporation of architects an opportunity to obtain commissions and thus protect the city from the architecture of their confrères—or would a little poor architecture be better than a principle of ethics lost? Do means justify the ends when it comes to principles of equity and justice? Are the rights of minority the most sacred prerogatives of democratic institutions? Is special privilege, such as this situation develops for this corporation, the acme of professional eminence?

Also, when the power and prestige of a corporation of architects come into conflict with and supersede the power and prestige of the local chapter, it may well be inquired of what use is the chapter? To be sure, contact with the present body is preserved—for the benefit of whom most? May it not be questioned whether, when the local chapter has, as a chapter, voted down this idea of collective service, as it has in Los Angeles, that the idea should be abandoned? By what right have some to make of no avail the ethics of the profession?

A clear understanding by the public of what architectural service means has always been the "bête noir" of the profession of architecture. Has this movement a tendency to befuddle and bedevil the understanding of the public, or is it more clear "each day in every way" that an architect should be, if he isn't, a master mind to control every item and function in a building operation? Have, indeed, the labors of the architect become so complicated, so diversified, so far to exceed the capabilities of the present generation of architects that we abrogate the ancient principle of unit service and lend ourselves to this communistic idea? A corporation whose combined talents will suffice to sell itself, whose combined influence will enable it to take the place of him who dares to assume single-handed the rôle of architect!

That age-old profession which combines so subtly the builder and the artist, the engineer and the wielder of men, the sculptor and the painter in rhythmic power.

Rather would I see another generation of ugly public buildings built by wire-pullers and brick masons—than to witness the fabric of professional ethics torn and its ideals of single service prostituted. Should architects hunt in packs?

It is not necessary that any man or set of men save the city of Los Angeles from bad architecture. The city can and will take care of itself in this respect, as it did in the case of the Public Library, when it employed Goodhue & Winslow. But it is necessary that the institute here in convention assembled begin to save itself from the naïve and guileless gentlemen who are, without realizing it, unionizing the profession in Los Angeles.

A broad tolerance suggests that if this movement has in itself the germs of advancement and benefit to the institute, there should be allowed ample time for the development of the powers of this union. If, on the other hand, the seeds of dissolution of professional ethics and of precedent are here germinating, it would at least be desirable to investigate the entire situation with a friendly and impartial mind.

I respectfully submit this epistle to the Board of Directors of the American Institute of Architects, with the conviction that it will receive their earnest consideration.

Yours truly,

WM. LEE WOOLLETT,
Architect.

An Architect's Simple Engineering Problems

By DeWitt Clinton Pond

EIGHTH ARTICLE

IN the first articles of this series, slabs of concrete and beams of steel were designed as the basis of formulas which have been developed for beams carrying uniformly distributed loads. There was no particular difficulty in determining the sizes of beams and slabs once the conditions were understood, but in the light of the information given in the last two articles it might be of interest to investigate how the formula for bending was derived.

Suppose there was a load concentrated at the centre of a simple beam, as shown in Fig. 18. It is evident that one-half of the load will be carried at each support, or R_2 and R_1 will each equal $\frac{1}{2} W$.

If the span is denoted by the letter L and the load is located directly in the centre of the beam, then the distance from R or R_2 to W is $\frac{1}{2} L$.

The greatest tendency toward bending will be found at

the centre, and the forces which cause the bending are the two reactions acting at a distance of $\frac{1}{2}L$ from W. As each reaction equals $\frac{1}{2}W$ and the distance is $\frac{1}{2}L$, the maximum moment caused by a concentrated load at the centre of a beam is found by multiplying the load by the distance or

$$\tfrac{1}{2}W \times \tfrac{1}{2}L = \tfrac{1}{4}WL$$

Where uniform loads are distributed over the entire span, the formula is found in a similar manner, but as in the case of any uniform load, the downward pressure of the weight itself must be taken into account.

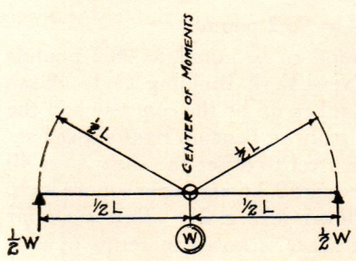


FIGURE 18

The upward moment due to the reaction is the same as in the case of the concentrated load, as each reaction is equal to $\frac{1}{2}W$ and the lever arm is $\frac{1}{2}L$. However, over one-half of the beam at the left or right of the centre there is a downward load equal to $\frac{1}{2}W$ and the distance from the centre of the beam to the centre of this part of the load is $\frac{1}{4}L$. The downward moment caused by the load equals

$$\tfrac{1}{2}W \times \tfrac{1}{4}L = \tfrac{1}{8}WL$$

The upward moment due to the reaction is the same as in the case of the concentrated load or $\frac{1}{4}WL$.

Subtracting the downward from the upward moment, the total moment is found to be

$$\tfrac{1}{4}WL - \tfrac{1}{8}WL = \tfrac{1}{8}WL$$

This is the formula given in the first articles and the reader can see how easily it is developed by means of such information as he now has at his disposal.

The shear diagram for a single load in the centre of a simple beam is shown in Fig. 19, as well as the shear diagram for a uniform load over the entire beam.

In the seventh article there was a problem in which the moment was found to be 11,225 foot-pounds, at a point 10 feet from the left reaction. It was also determined that the greatest tendency to bend the beams was to be found at a point 11.42 feet from the left reaction. The moment at this point can be found to be 11,375 foot-pounds—slightly greater than at the point where the 200-pound load is concentrated.

Now, in the first articles it was pointed out in the case of selecting a beam to carry a given load it was necessary simply to divide the maximum moment, in inch-pounds, by the allowable unit stress of the material out of which the beam is made in order to find the section modulus. If the beam is of steel, the allowable unit stress is 16,000 pounds per square inch and the section modulus becomes $(12 \times 11{,}375) \div 16{,}000 = 8.52$.

A 7-inch, 15.3-pound I-beam would carry such a load, but as the span is long and the depth of the beam small in proportion to its length, the chances are that a 10-inch beam would be used in order to avoid excessive deflection. The loads in the problem were selected for the purpose of reducing the calculations to fairly simple terms, and if steel beams are to be used, it is probable that the loads would be much larger than those in the last two articles.

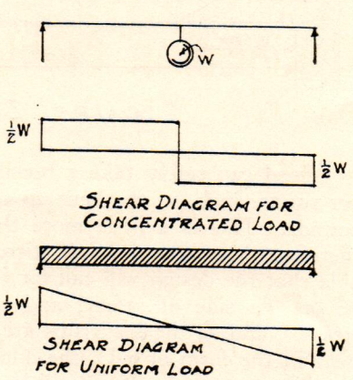


FIGURE 19

Loads of this kind might be supported on wood beams, in which case the allowable unit stress might be taken as 800 pounds.

In this case the section modulus becomes $(11{,}375 \times 12) \div 800 = 171$ or twenty times greater than in the case of a steel beam.

In order to design a wood beam that will carry the loads it is necessary to assume one of the dimensions; either the depth or thickness. If it is assumed that a four-inch beam is to be used, then the depth only remains to be determined.

The formula is $S = \frac{1}{6}bd^2$, and by substituting the known values in it the equation becomes

$$171 = \tfrac{4}{6}d^2$$
$$d^2 = 342$$
$$d = 16 \text{ inches}$$

The beam that would carry the load would be a 4 × 16-inch spruce girder. It can be seen that the calculations are very simple.

With the design of wood or steel beams to carry loads of the kind referred to, there is very little that can be considered complicated, once the maximum tendency toward bending has been determined.

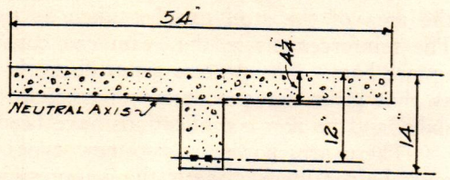


FIGURE 20

So far practically every condition that an architect might encounter has been investigated. Uniform loads are usually imposed upon floor beams and concentrated loads on girders, and the methods used to design steel or wood beams for either condition have been given, as well as the method of designing concrete floor slabs.

However, nothing has been said regarding the design of concrete beams, such as might be used in place of the steel beams where concrete floor slabs are used.

Assuming a condition in which beams are set 8 feet on centres and span between masonry walls 18 feet apart in a residence where it is desirable to have a concrete floor over a two-car garage, the method of designing the beams is given below.

As is usual in any beam design, the first step is the determination of the floor load, and it is safe to assume that the slab will be 4 inches thick and will weigh 48 pounds per square foot. If wood flooring on sleepers is to be installed, the additional weight of the finish can be taken as 20 pounds, making a total of 68 pounds as the dead load. The live load being 40 pounds, the total of dead and live loads is 108 pounds. The beams are spaced 8 feet on centres and span 18 feet, so there will be 144 square feet of floor carried by each beam, and this area will weigh $144 \times 108 = 15{,}552$ pounds. The beam can be assumed to be 6 inches wide and 12 inches deep, and each foot of length will weigh 48 pounds, if only that part of the beam below the slab is considered. The total additional load due to the beam will

be 48 × 18 = 864 pounds, so that the load on the beam will be approximately 16,500 pounds.

This, unlike the average concrete beam, is a simple

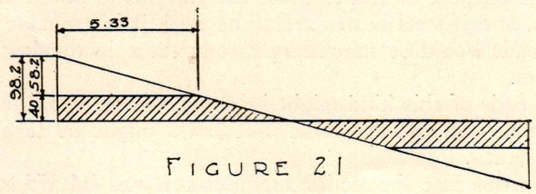


FIGURE 21

beam between two supports, so the maximum bending moment is determined by means of the formula found above, or

$$M = \tfrac{1}{8} W L = \frac{16{,}500 \times 18 \times 12}{8} = 218{,}000 \text{ inch pounds.}$$

In the second article the formula for finding the stress in the reinforcing steel was given as

$$M = f_s jd$$

In this f_s is the stress in the steel; j is a co-efficient usually taken as seven-eighths; and d is the depth of the steel below the top of the beam or, in this case, 12 inches. By substituting in the formula the following results can be obtained:

$$218{,}000 = f_s \times \tfrac{7}{8} \times 12$$

$$f_s = \frac{218{,}000 \times 8}{7 \times 12} = 31{,}133 \text{ pounds}$$

Steel can be stressed 16,000 pounds per square inch, so the area of the steel can be taken as two square inches. The reinforcement in the beam can consist of two 1-inch square bars. The process given above is exactly the same as that given for the design of steel for reinforcement in slabs, and no new complications have been encountered.

There are, however, two new types of failure which must be considered: one is the compression of the concrete in the top of the beam and the other is the possible failure by shear at the ends of the beams. Concrete beams are regarded as T-beams; that is, a part of the slab on either side is considered as acting with the beam and forming a kind of upper flange. The dimensions of this part of the slab that acts as the cross for the T are usually determined by the local building code. In New York the projecting sections of slab on either side of the beam can be taken as the thickness of the slab multiplied by 6—in this case 24 inches, or the span divided by 6—18 feet ÷ 6 = 3 feet. The first consideration gives the minimum length of arm and must be the one to be used. The total length of the arm is 54 inches, as shown in Fig. 20. The concrete in the upper part of the beam is in compression, and the steel in the lower part is in tension. At a certain plane somewhere between the centre of the steel and the upper surface of the beam, there is neither compression nor tension, and this plane is noted in the figure by a line known as the neutral axis, which is located below the top three-eighths of the distance to the centre of the steel. This distance is $\frac{3}{8} \times 12$ inches, or $4\frac{1}{4}$ inches, or practically the thickness of the slab.

Above the neutral axis the compression in the concrete is assumed to be equal to the tension in the steel, and, as this tension, or f_s, was found to be 31,133 pounds, if the allowable compression is more than this, the beam is safe.

The concrete in the uppermost part of the beam is supposed to be stressed to the limit allowed by law, or 650 pounds per square inch. At the neutral axis there is no stress, so the average stress over the parts of the beam that are in compression is 325 pounds per square inch. If it is assumed that the area of concrete is simply that part of the slab which forms the cross of the T, then the allowable compression is found by the following simple calculation:

$$54 \times 4 \times 325 = 70{,}200 \text{ pounds}$$

As this is almost twice the actual compression in the concrete, the beam is undoubtedly safe.

The other manner by which the beam might fail would be by shearing. The actual area of a cross-section of the beam is 6 × 14 = 84 square inches. The load on the beam is 16,500 pounds and the reaction is 8,250 pounds.

$$8{,}250 \div 84 = 98.2 \text{ pounds}$$

The shear has been found to be equal to 98.2 pounds per square inch, and the New York Building Code allows 150 pounds, 40 of which are taken up by the concrete and the remainder by the steel. Stirrups or bent-up reinforcing bars must be used to provide the steel to offset the shear over 40 pounds. In this case this shear is 58.2 pounds per square inch.

The shear diagram is shown in Fig. 21. This is similar to that in Fig. 19, but the shear is noted in terms of unit shear rather than the total reactions, as was the case in the first figure. There is also noted in Fig. 21 the shear allowed to the concrete, and the unshaded triangles represent that which must be taken up by the steel. The vertical leg of each triangle represents 58.2 pounds per square inch, the horizontal leg represents one-half of the result of the following calculation:

$$58.2/98.2 \times 18 = 10.66 \text{ feet}$$

This is shown graphically in the figure, and as the average unit shear, or 58.2 ÷ 2 = 29.1 pounds, extends over 10.66 feet of the beam, which is 6 inches wide, the total horizontal shear is found by multiplying 10.66 by 12 and by 6, and by the average unit shear of 29.1 pounds per square inch.

$$10.66 \times 12 \times 29.1 = 22{,}332 \text{ pounds}$$

Now there are two bars, each 1 inch square, used to reinforce the beam. These are both needed at the point of maximum bending, but as soon as the bending decreases to one-half of the maximum, then one of the bars may be bent up, as shown in Fig. 22. This bending usually is done so that the bent-up steel passes through the "one-fifth point," or one-fifth of the span from the support. The angle is 30 degrees for shallow beams and 45 degrees for deep ones. On simple beams the bent-up bar is hooked 1 foot to provide bond at the end.

According to general practice, seven-tenths of the area of the bar is considered as acting to offset the shear, and as the bar is bent up at each end, the total area of steel is 1.4 square inches.

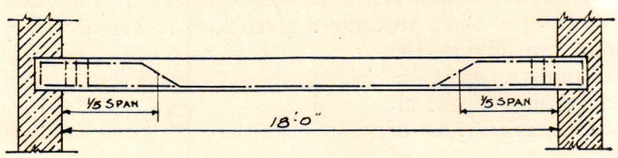
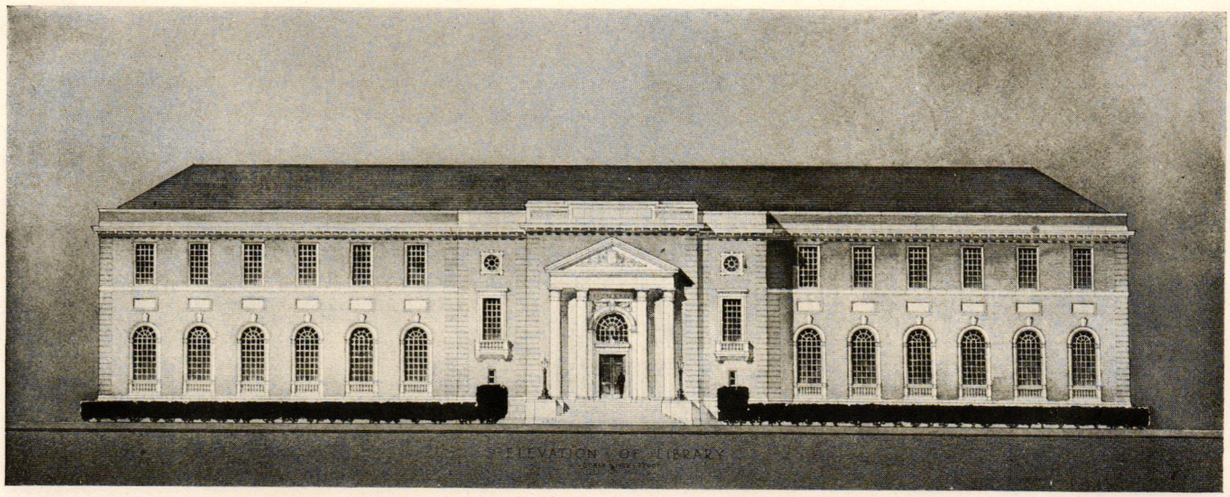
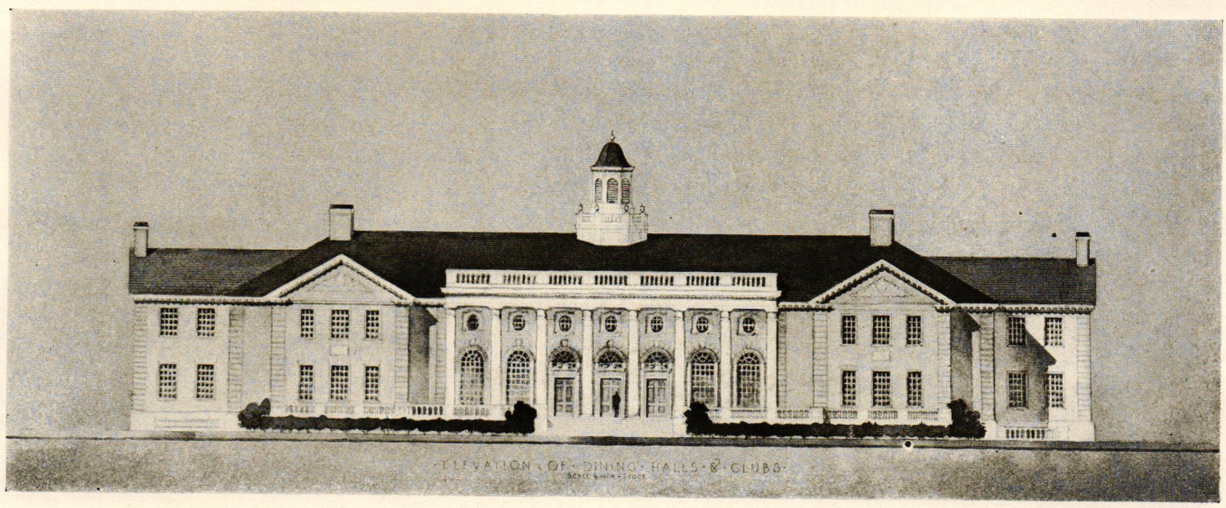


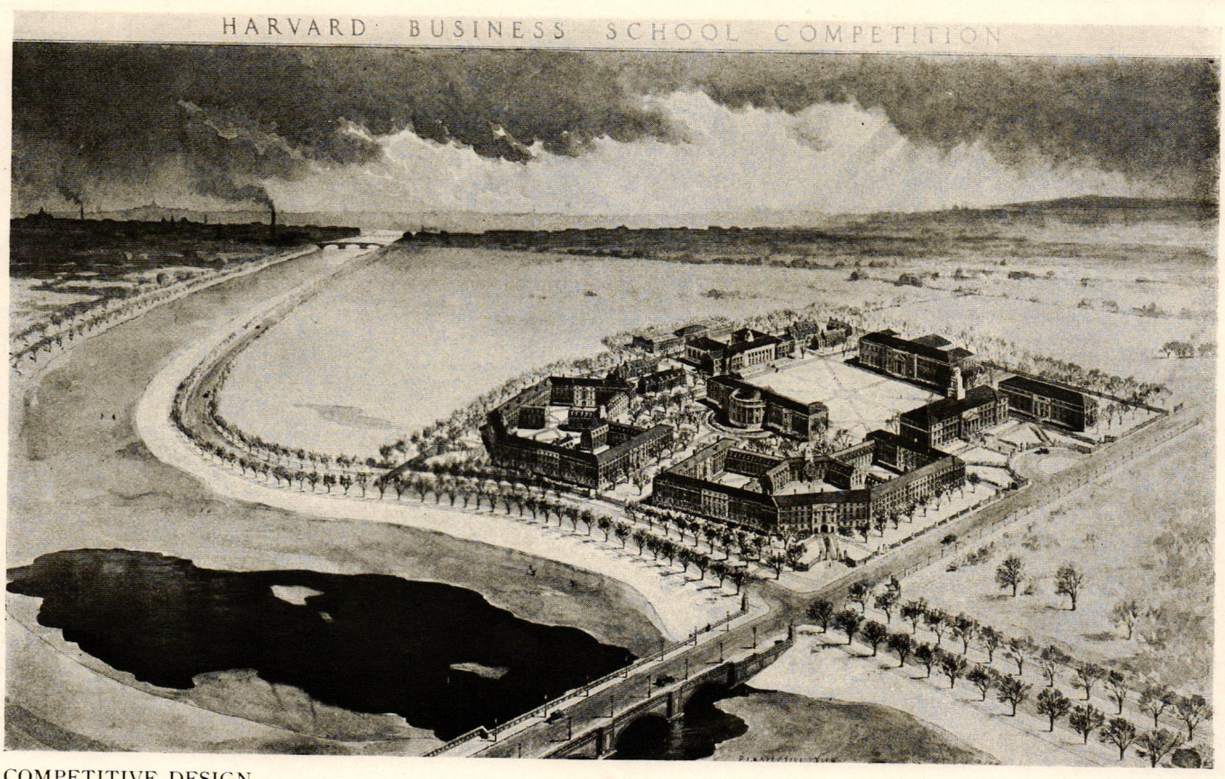
FIGURE 22

Steel can safely take a tensile stress of 16,000 pounds per square inch, so the bent-up steel will withstand 22,400 pounds. This is a little more than the actual shear, and therefore there is no need of stirrups. However, it is probable that the design will call for the stirrups at each end to be on the side of safety, and to distribute the shearing stresses, and as these stirrups are simply $\frac{3}{8}$-inch round bars bent in the form of a U, the additional cost is very small.

The beams, therefore, will be 6-inch × 14-inch concrete beams, reinforced with two 1-inch square bars, one straight and one double-bent and hooked, and with six $\frac{3}{8}$-inch stirrups.



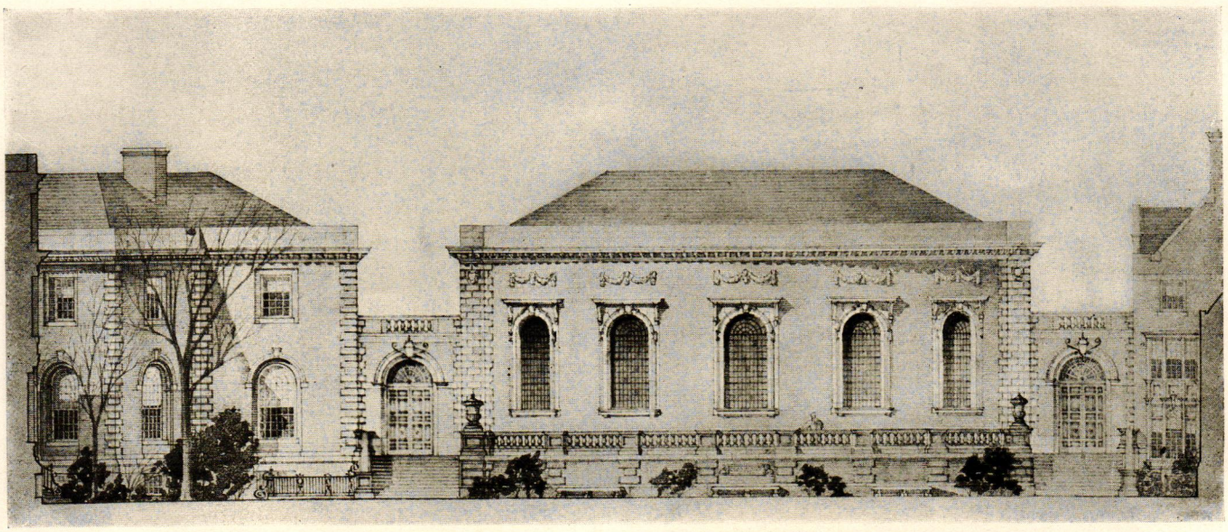


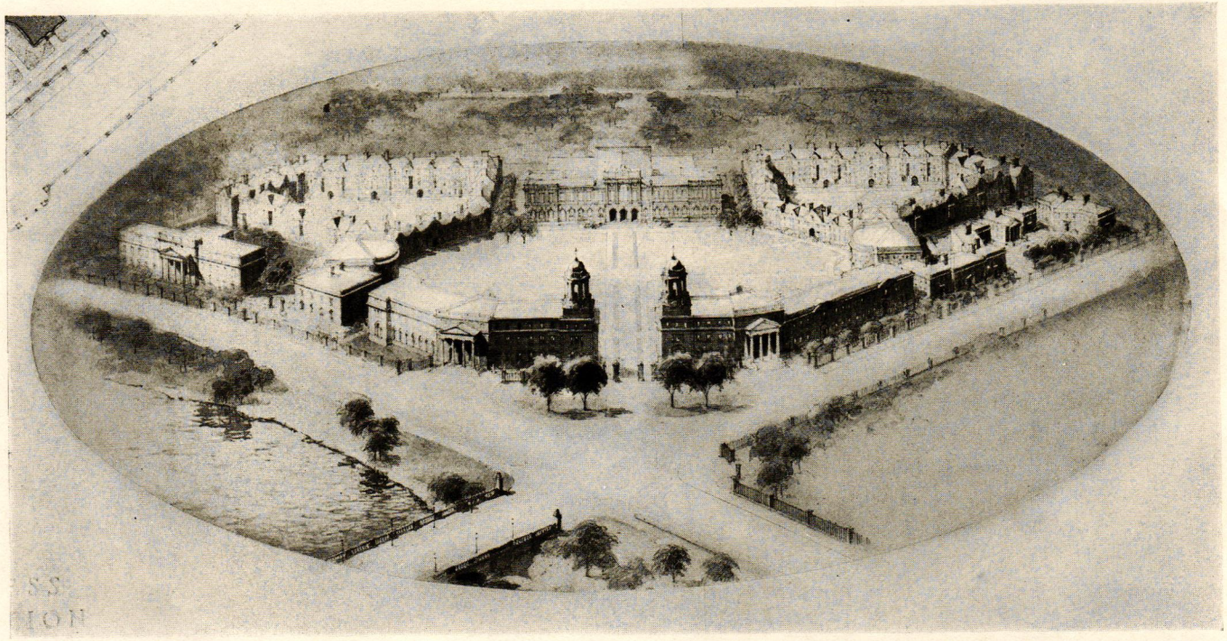


COMPETITIVE DESIGN.

HARVARD BUSINESS SCHOOL COMPETITION.

Parker, Thomas & Rice, Architects.

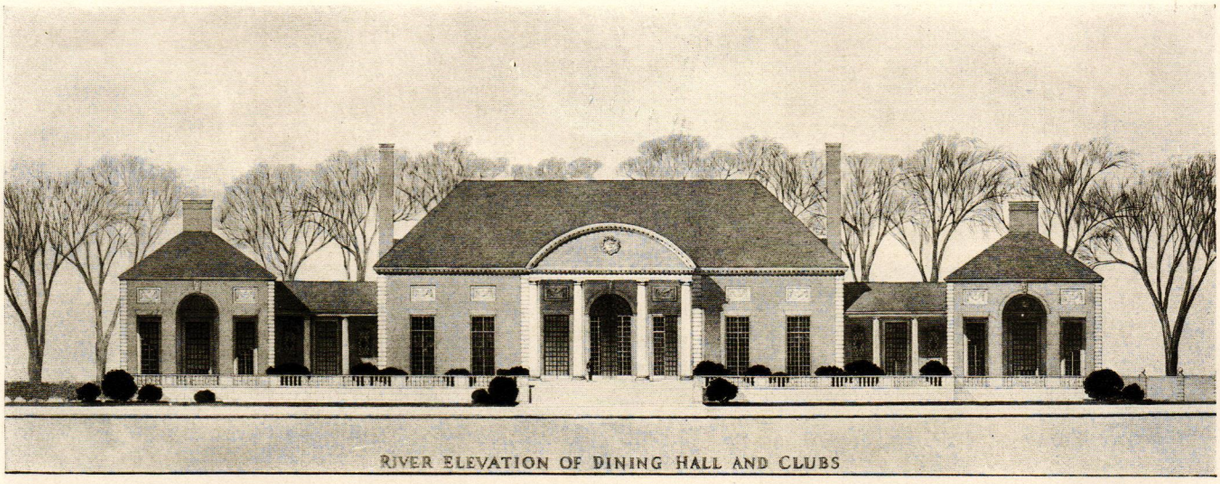




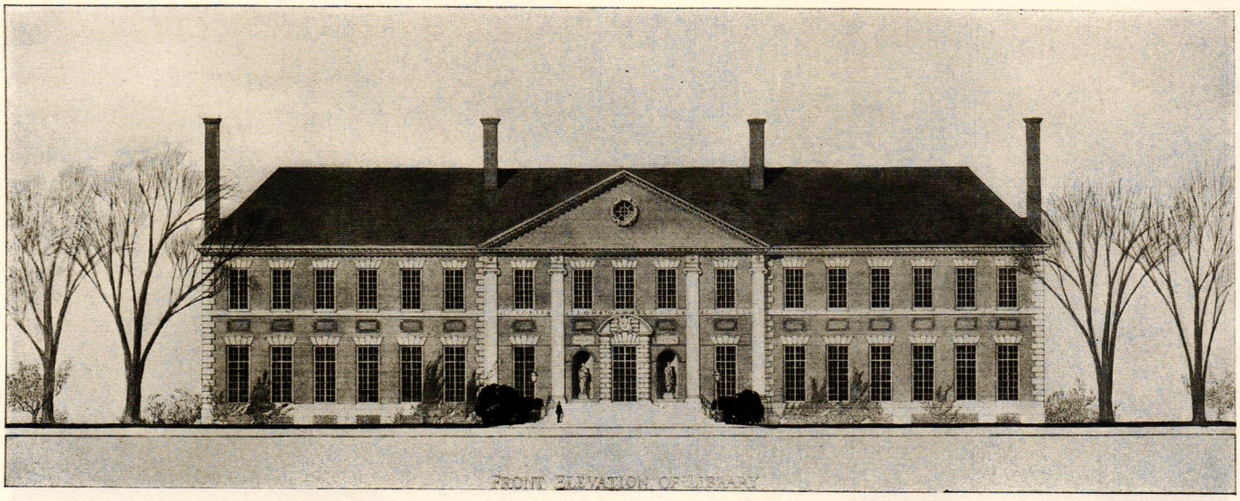
COMPETITIVE DESIGN.

Egerton Swartwout, Architect.

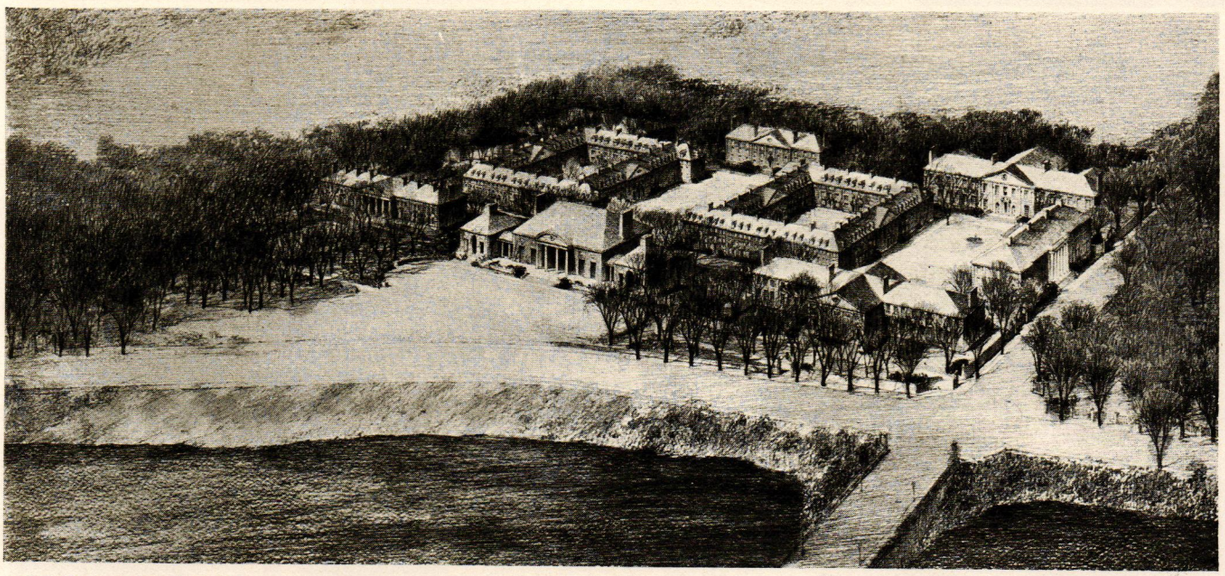
HARVARD BUSINESS SCHOOL COMPETITION.



RIVER ELEVATION OF DINING HALL AND CLUBS



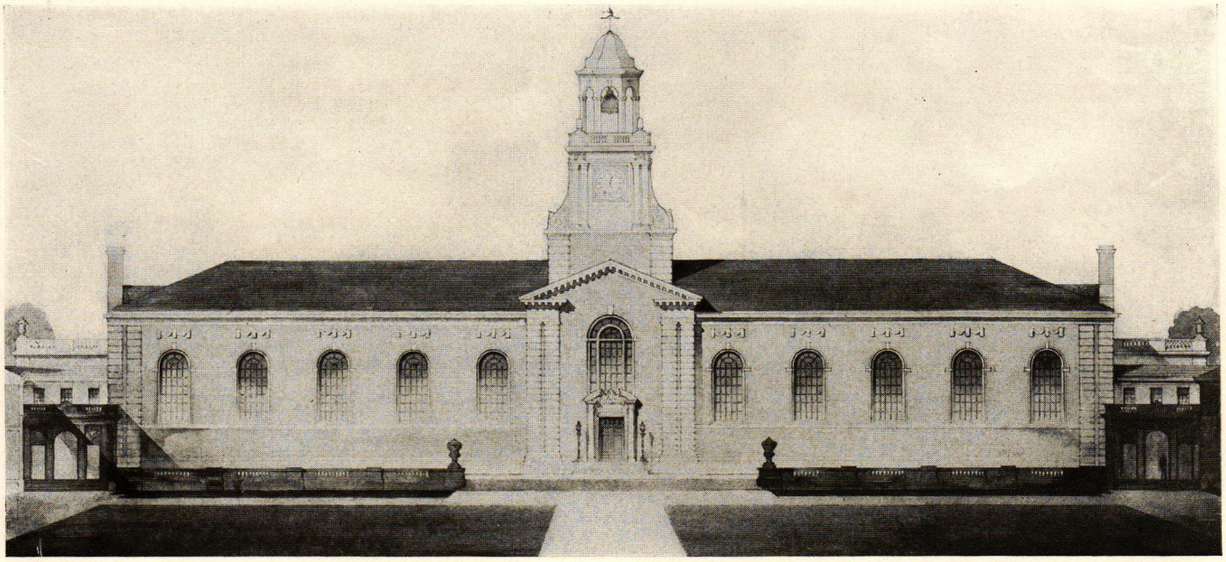
FRONT ELEVATION OF LIBRARY

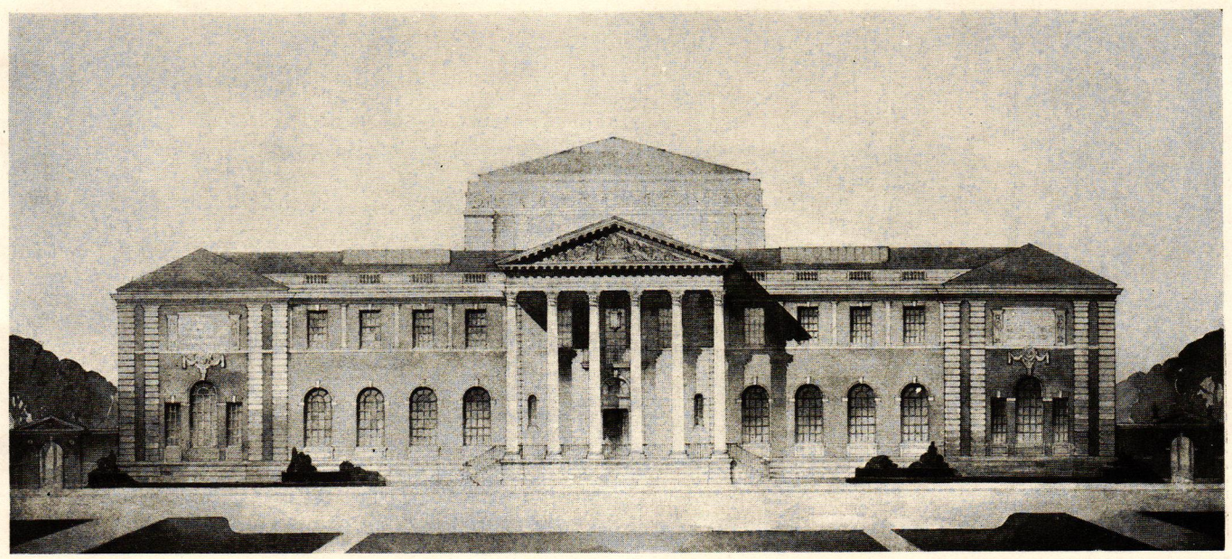


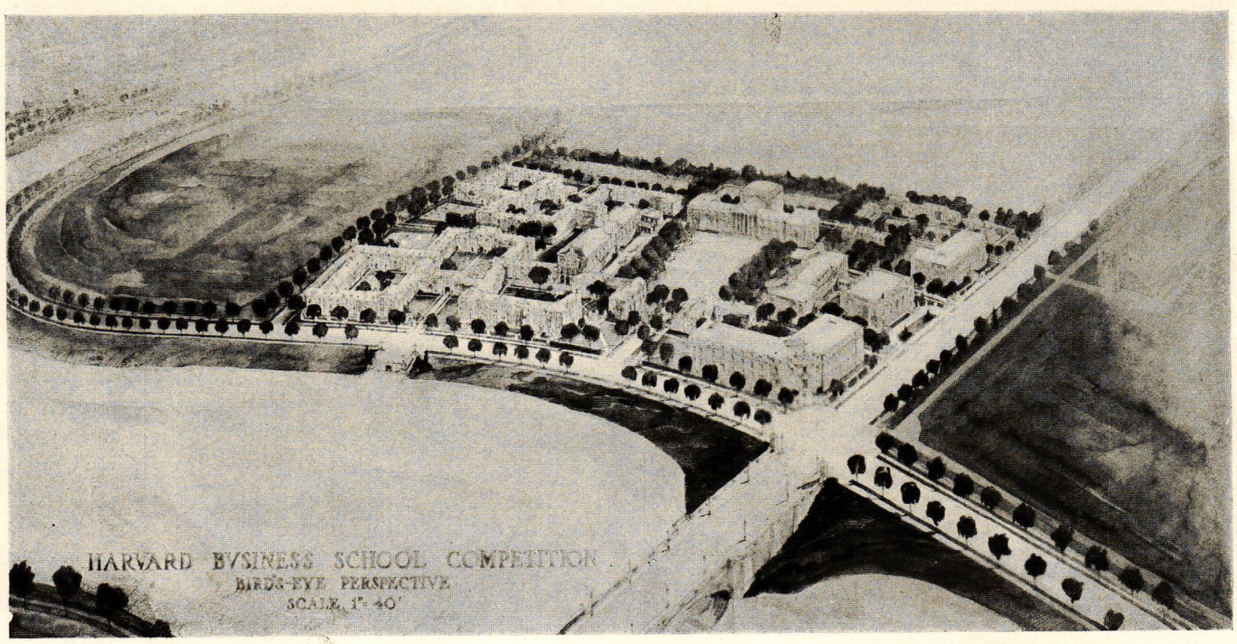
COMPETITIVE DESIGN.

Benj. W. Morris and Eric Gugler, Architects.

HARVARD BUSINESS SCHOOL COMPETITION.







COMPETITIVE DESIGN.

HARVARD BUSINESS SCHOOL COMPETITION.

Hewitt & Brown, Architects.

Stone

By David B. Emerson

ONE can be very safe in saying that stone is, without a doubt, the earliest material used by man for permanent building. It was to be found on every hand in practically every country, and with the dawn of civilization man naturally began to build more permanent structures to withstand the elements and the attacks of his enemies. The first stone buildings were nothing but loose rocks piled together to form walls, laid up without mortar, and of these structures nothing remains.

The purpose of this article is not, however, to write the history of stone as a building material, which would be to write the entire history of architecture, but to tell briefly something of the various kinds of stone which are available at the present time, their characteristics, and their uses.

The principal stones which are used in building are granites, gneisses, limestones, sandstones, marbles, conglomerates, diabases, serpentines, and slates.

Granite is the hardest and the most durable of all building stones. It is an igneous rock that is produced by the action of heat. It is of holocrystalline, granular structure, composed principally of quartz and potash feldspar, the accessory minerals being either mica or hornblende. The texture of granite varies from very fine to very coarse, and the colors include white, light, medium, dark, and bluish-grays, buff, lavender, pink, green, and red. Granite is found in practically all of the Eastern States, from Maine to Georgia, in Texas, and several of the Western States.

Granite can be used for all purposes for which stone is used, and for some purposes it excels all other stones, such as for steps and door-sills, where excessive wear is sure to occur; for base courses on city buildings, where any of the softer stones would be damaged.

Granite, on account of its extreme hardness and its structure, takes a very high polish, and the polished surface is more impervious to dirt and grime than the unpolished surface, so that for base courses on city buildings it is far better from the purely practical standpoint to use polished granite. Granite has been used for buildings in this country for a great many years. Probably the earliest example is King's Chapel, Boston, built between 1749 and 1754, of granite quarried from boulders on Boston Common. Post-offices, custom-houses, city halls, state capitols, and innumerable other public and private buildings throughout the country have been built of granite. Probably the largest granite building which was ever erected in this country is the Pennsylvania Railroad Station, in New York, which was built of pink Milford granite, quarried in Massachusetts. Polished granite column shafts have frequently been used in conjunction with terra-cotta or limestone bases and capitals. Amongst the well-known examples of this use of granite are the arcade around Madison Square Garden, soon to be a thing of the past; the Madison Square Presbyterian Church, recently transplanted in Hartford, Conn.; the New York Herald Building, and the Gorham Building. Granite, on account of its extreme hardness and durability, has been used extensively for monumental work, which class of work includes gravestones, mausoleums, and the pedestals for statues.

Seam-faced granite might, for lack of a better classification, be called a freak granite. It is, so far as I know, only found in Plymouth County, Mass., in the vicinity of Plymouth and Weymouth. It is unlike all other granites, as it stands in perpendicular sheets of varying thicknesses, and requires no splitting to get it out of the ledge. The faces of the sheets vary in texture from quite smooth to fairly rough, and the color of the stone varies from light gray to dark brown and purple, golden gray being a predominating color. These faces of the sheets form the surface which is exposed in the walls, the stone never being dressed. It is a very beautiful stone, particularly when used in larger wall surfaces. This stone was used for the ashlar work in the Harkness Quadrangle at Yale University, for several very charming churches built by Cram, Goodhue and Ferguson, and for several residences.

Aside from the general uses of granite in building construction, crushed granite makes a most excellent concrete aggregate; in fact, it is rated by engineers as one of the best, and granite screenings, on account of their extreme hardness, make a most excellent wearing surface for cement-finished floors.

In addition to the many granites which are quarried in this country, quite a considerable amount of granite has been imported in the past from other countries, particularly from Scotland. The best known of these Scotch granites being a particularly brilliant red granite from Peterhead, and a gray granite from Aberdeen. So far as is known, there are no granites similar to these stones quarried on this continent.

Although granite is the hardest of all building stones, some readers may be greatly surprised to learn that it is not the strongest, as the crushing strength of Quincy granite only averages around 10,000 pounds to the square inch; Vermont marbles around 13,500 pounds to the square inch, and some blue stones (a sandstone) average as high as 19,000 pounds to the square inch. These figures are absolutely no cause for alarm, as in any ordinary building operation it would be a physical impossibility to load over 700 tons on a square foot of superficial area. The only reason for calling attention to them is to call attention to the fact that hardness in materials is not an evidence of strength, as in the case of wood, steel, and other materials.

Gneiss is frequently called bastard granite, or stratified granite. It has identically the same chemical composition as granite, and differs from it only in its stratified formation. This formation, on account of the layers, renders the stone very difficult to work, so it is best fitted for rock-faced ashlar and rough work. Gneiss is quarried in Maine, Massachusetts, Connecticut, in the vicinity of New York City, and around Baltimore. The most prominent buildings in which it has been used are St. Joseph's Seminary at Dunwoodie, on the Hudson, and the Catholic Cathedral in Baltimore.

Limestones, on account of their availability, excellent working quality, and durability are, at the present time, the most generally used of all building stones. They are aqueous rocks, that is, they are produced by the action of water, and are of calcareous formation, being, in most cases, the product of vast shell deposits in areas which were once under water. They are non-crystalline and are composed of practically pure carbonate of lime, the average of some of the Indiana limestones being over 97 per cent calcium carbonate. The

greater part of the limestones quarried for building purposes are what is known as oolitic limestones, that is, they are made up of small concretionary grains, closely resembling the roe of a fish, hence the name, which is derived from the Greek work "oon," or egg. The best known and most extensively used of all the limestones quarried in this country is the so-called Indiana limestone, which is quarried in Lawrence and Monroe Counties, Indiana, the deposits covering a belt extending about sixty-five miles north and south, and about twenty-five miles east and west, and having an average depth of about forty feet.

The stone varies in texture from a fine statuary grade, to a coarse, almost crystalline stone, with a high shelly composition, in some instances almost duplicating in appearance the Italian Travertine. In color it ranges from an almost whitish buff to a deep blue, including tones with an orange cast, the most common colors being buff and gray. This is an exceptionally good working stone, being sound, with a very good grain, and it can be carved quite as well as some of the statuary marbles. It has an average crushing strength of about 8,000 pounds to the square inch. The durability of Indiana limestone is unquestioned, it having been used long enough to prove that absolutely. The court-house at New Albany, Ind., was built in 1861, and the stone is in excellent condition at the present time. The William K. Vanderbilt house, on Fifth Avenue, New York City, was built about 1883, and on examination, during the summer of 1924, the carving was found to be as crisp and sharp as when first executed, nearly if not quite forty-one years before. To enumerate the buildings in which Indiana limestone has been used would be an impossibility as it has entered into the construction of state capitols, city halls, court-houses, cathedrals, churches, libraries, banks, office-buildings, club houses, residences, and various other buildings in all of the larger cities throughout the country. Perhaps the largest building, or group of buildings, built of Indiana limestone is the Grand Central Terminal Building, in New York City.

A most excellent limestone is quarried at Memphis, Junction, Ky., known as Bowling Green limestone. In composition this stone is almost identical with the famous English Portland stone. In color it is light-gray, and it has the peculiarity of bleaching out under exposure to the atmosphere, turning almost white. This stone has been used quite a little in Louisville, Ky., and Nashville, Tenn., and St. Thomas's Church, New York City, was built of it. I know of no more beautiful sight in the entire city of New York, than to stand on Madison Avenue or Park Avenue on a clear, sunny morning, preferably in the late spring or the early fall, and look west at the creamy white tower of St. Thomas's, sparkling in the sunshine. It is a picture one cannot easily forget.

Another limestone which is beginning to come into favor is Kasota stone, a magnesium limestone, quarried at Kasota, Minn. This stone comes in yellow and pink, and is sawn either with the bed or across the bed. In texture it somewhat resembles Italian Travertine. The Links Club, New York City, is a most pleasing example of the use of this stone.

In addition to the native limestones quite a number of different limestones are imported from France, England, and Italy, all three of which countries have large deposits of exceptionally fine limestones and marbles. First among the French limestones to be imported into this country is Caen stone, a soft, almost white oolitic limestone, quarried in the vicinity of Caen, in Normandy. This stone is so soft that when it is first quarried it can easily be cut with a pen-knife, but it soon hardens with exposure to the air. This stone cannot be used successfully for exterior work in this climate, but it has been used extensively for altars, fonts, pulpits, and mantels.

Among the other French limestones which have been used in this country is Lens stone, a cream-colored oolitic limestone, which was used to some extent about twenty years ago. The Altman Building, on Fifth Avenue, New York City, was built of this stone, and it is in good condition to-day, except that too constant scrubbing of the bases of the pilasters and columns, near the sidewalk level, has destroyed the surface of the stone. Cautarnoux Anteor is a hard, golden-yellow oolitic limestone, which was used for the Presbyterian Ministers' Fund Building, in Philadelphia, and the Barnes Memorial Building, at Merion, Pa. St. Même Anteor is a rich cream buff oolitic limestone, which was used for the American Piano Company's Building, and the Brummer Building in New York. St. Quentin is a deep, golden-buff stone, showing a slightly pitted surface. It was used in the Otto Kahn residence, and the 550 Seventh Avenue Building in New York City. Pouillenay Brun is a light sienna yellow stone, formed almost entirely of crystallized fossil fragments. It is a particularly sound stone, and it was used on three large apartment-houses, and on the Schiff residence in New York City.

The famous Bath stone, quarried in Somersetshire, England, and used in that country for centuries, is now being used to some extent in this country. It is a cream buff oolitic limestone, it works well, and takes carving exceptionally well, a characteristic of practically all limestones. Among the buildings which have been built of this stone are a bank building at Asbury Park, N. J., which has been built for four years and has stood very well; the interior of the Lindsey Memorial Chapel, Boston; and the interior of the Church of the Holy Innocents, Brooklyn.

The principal limestone imported from Italy is Roman Travertine, which is a deposit formed by running water. It is a deep buff in color, with a pitted surface. This stone has never to my knowledge been used in this country except for interiors, the best example being the rotunda of the Pennsylvania Railroad Station, in New York City. It is a particularly hard, sound stone and, used for stair treads, has stood the enormous traffic through the station for now over thirteen years and shows comparatively little wear. There seems to be no good reason why this stone cannot be used for exterior work in this country, as it was used for the external walls of the Colosseum in Rome and has stood the climate of northern Italy very well for now nearly nineteen centuries, and it would undoubtedly stand the climate of the United States.

Travertines are also imported from Austria and Germany, a black travertine coming from Germany. American travertine is quarried at Winona, Wis., but whether this stone is a deposited stone or not, I do not know.

Book Reviews

A MONOGRAPH OF THE WILLIAM K. VANDERBILT HOUSE. Richard Morris Hunt, Architect. By John Vredenbrugh Van Pelt. Published by John Vredenbrugh Van Pelt. New York City. Large folio.

Mr. Van Pelt has done the profession, and we would like to say the public, a valuable service in preserving for us in this handsome volume a brief record of the salient points in the life of Richard Morris Hunt, and in text and illustrations a record of his most distinguished achievement. It is a pity to have to realize that the beautiful house on the northwest corner of Fifth Avenue and 52d Street is to be destroyed. Vacant now for a long time, thousands go by it without ever giving it more than a passing glance, and yet it is beyond doubt one of the loveliest buildings that has ever graced Fifth Avenue. It was built at a time, 1879, when the street was still famous as the thoroughfare of wealth and fashion, when the horse was yet king, and the glitter and rattle of harness and the sound of rolling carriage-wheels were a part of the human spectacle.

Hunt wanted Mr. Vanderbilt to purchase the whole block, from 52d to 53d Streets, and let him place the house in the middle of the property.

The architect's French training—he was one of the first American architects to be thoroughly equipped educationally for his profession—naturally directed his mind along French lines, and the result was the beautiful Francis I palace that now seems doomed to go the way of so many other architectural landmarks. Commerce is the god of the day, and neither beauty nor traditions, mere matters of sentiment, can arrest its progress.

Very few indeed who by chance happen to look up at the picturesque roof-lines of the house discover the sculptured figure that is really a portrait study of the architect.

"It appears that the senior Hunt, busied as always with an infinite amount of work and an endless mass of detail, had failed to furnish instructions as to the identity or character of the figure which was to grace the highest pinnacle of the Vanderbilt mansion. The stone contractors, Ellen & Kitson, asked again and again for information on this salient point, but the architect, with the absent-mindedness of the great, kept putting them off.

"Questions ceased after a time, and the work went forward with the architect busying himself with innumerable other matters. In the meantime, however, the mansion was fast nearing completion. In the great Banquet Hall, where much of the work was being done, there appeared a little, cloth-enclosed booth. Mr. Hunt, preoccupied, paid little heed to it. He did notice, after a time, however, that there was frequent talking and laughing there, and at last he grew impatient.

"'That thing must go,' was his ultimatum, for he felt that any work that was going on in this little, secret corner might just as well be done in the open. Then, at last, upon his insistence, the mystery of the little booth was disclosed. The stone contractors had employed a sculptor to create a portrait of the architect himself, to fill the place for which he had failed to designate an occupant. The sculptor had worked cozily and busily away in his little nook, catching glimpses of Mr. Hunt as he came and went, through a peep-hole cut in the cloth. He had pictured the famous architect as a real workman and the humor of the entire incident was, says his son, fully appreciated by his father. Richard Morris saw the amusing side of the episode, and—possibly thinking that no one would pay much attention to it at the top of the building—allowed the portrait to be used. The plaster model of the statue bears the name of G. Bubert, who was, presumably, the sculptor. At the time of this writing it stands in the office of Hunt & Hunt, and we have included a reproduction of it as a tail-piece on the title-page to the photo-engraved plates in this volume."

The plates include working drawings, many admirable photographic views showing exterior and interior details. Exquisite is a much-abused word, but we venture to say that it can be applied to many of the details of carving and ornament that are here shown.

We are fortunate in the possession of this beautiful record of a house that has so long been accepted as the finest work of one of the most distinguished architects our country has known. Its value will increase with the passing of the building. We all owe Mr. Van Pelt our thanks for the admirable good taste with which the book is written and presented. It is worthy of the subject.

POLYCHROMY ARCHITECTURAL AND STRUCTURAL THEORY AND PRACTICE. By Leon V. Solon. With Introduction by Ralph Adams Cram. *The Architectural Record*, New York.

In giving his reasons for taking the Greek system of polychromy for analysis, Mr. Solon says: "The Greeks subordinated and co-related color with architectural effect. In the Greek type of design the reaction of color emphasis upon structural properties is discernible. In the Greek system we find all our serious problems encountered and overcome in so simple and logical a fashion that it is possible to form basic rules with which to regulate practice, merely by making obvious deductions."

Mr. Solon knows his subject as few know it, and writes with both knowledge and authority. We are more inclined to use color in our architecture than formerly, and only by using it with judgment and good taste can it be made generally acceptable. The author has given the profession a significantly useful volume, one that deals with historic facts, but as well with those fundamental principles of color-work that should govern all use of color. The many illustrations, a number of them in color, add greatly to the practical value of the book as a reference in considering present-day work.

THE ART OF TOWN PLANNING. By Henry Vaughan Lanchester, F. R. I. B. A., M. T. P. I. Illustrated. Universal Art Series. Charles Scribner's Sons, New York.

We have had nearly a week's discussion of town planning in New York recently, and among the exhibits at the great architectural show, recently held at the Grand Central Palace, were plans and projects for town planning in both this country and Europe. Mr. Lanchester, an Englishman, looks at this subject from his native point of view, and be it said England has taught us some mighty valuable lessons in this field.

The author reviews the ancient civilizations, and tells about "Greco-Roman Town Planning," "Mediæval Cities," etc., and dwells with some particularity upon "Present-Day" developments.

The interest in town planning has developed tremendously within the past few years, and a systematized and orderly plan for even a small town is becoming an important consideration. The subject is one that vitally relates to public welfare, and town planning has become an essential part of the modern architect's education.

THE WHITE PINE SERIES.

We are all indebted to Mr. Whitehead and the White Pine Bureau for the admirably edited series of monographs that have presented so many enticing and helpful colonial subjects. Hereafter the series will be published by Mr. Whitehead as an independent venture. No one who has been receiving the series will begrudge the very modest subscription price for the new series. Mr. Kenneth Clark, whose photographs are always such an artistic treat, will hereafter give all of his time to the discovery and photographing of hitherto unknown work.

YEAR BOOK, NEW YORK SOCIETY OF ARCHITECTS, 1925. Fourteenth Edition. The New York Society of Architects, 29 West 39th Street, New York.

Contains a list of members and a fund of valuable and useful information on the practice of architecture, a schedule of charges, various laws, the New York Building Code, the Tenement House Law, Plumbing Rules, and some especially helpful information with regard to the new zoning laws, with outline drawings explaining their application. It should prove a useful book in the architect's reference library.

THE ITALIAN ORDERS OF ARCHITECTURE. By Charles Gourlay, Professor of Architecture in the Royal Technical College, Glasgow. Second Edition, Revised. Longmans, Green & Co., 55 Fifth Avenue, New York.

This is a standard reference and a helpful one for students. There is a chapter on "How to Draw the Orders," and a series of plates with detailed descriptions of the various orders.

The Problem of Color in House Painting

THE problem of color is of no insignificant importance in city planning in the opinion of Professor Sverre Pederson, chief architect of Trondhjem, Norway, who recently addressed the International City and Regional Planning Conference, held at the Hotel Pennsylvania.

In Norway, the distinguished visitor said, considerable progress has been made toward controlling the painting even of private houses. This is especially true in the villages and smaller towns, he said.

"It is particularly the love of white paint," Professor Pederson said, "which creates difficulties. Small white houses lying on a rough and steep land against a dark background of fields or forests are very conspicuous, and often have a discouraging effect. Their lack of color seems hard against the soft blues of the background.

"The problem of house painting is a study which is making progress in Norway. It is the landscape which is determining this. On the coast, where the houses are on rocks and islands, without any vegetation worth mentioning, the white paint may even be good. But against a somewhat darker background it does not always do well.

"A certain moderation in color seems to be favorable. Too dark colors, as dark brown, people do not like, though it holds well to many kinds of landscapes. But the intermediate tones have a rich scale of tan, gray, green, and red. The window-frames, the cornices and the barge boards are emphasized by another color, darker or brighter."

Philadelphia's Notable Architectural and City Planning Exhibition

BY arrangement with the city administration and the Fairmount Park Commissioners, the Twenty-eighth Architectural Exhibition of Philadelphia will be not only the largest but the finest ever shown in the city.

It will be held by the Philadelphia Chapter of the American Institute of Architects and the T-Square Club of Philadelphia, at the Philadelphia Museum of Art, the Parkway, from May 15 until June 13, 1925.

In addition to the Architectural Exhibition, which will include a large part of the display recently on view at the Grand Central Palace, New York, the exhibit of the City Planning Institute and New York Regional Plan of the Sage Foundation will be brought to Philadelphia and hung as a part of this year's exhibition. Through arrangements with Mayor Kendrick and the City Hall authorities, a specially selected City Planning Exhibit will be hung in the corridors of the City Hall simultaneously with the combined Architectural and City Planning Exhibit at the Art Museum.

The exhibits will consist of drawings, models, and photographs of proposed or executed work; of structural, decorative, and landscape architecture, academic drawings; sketches and paintings of decorative subjects. Sculpture and paintings architectural in character will also be exhibited. Groups consisting of drawings, models, and cartoons, illustrating in collaboration the architectural, sculptural, and decorative scheme of a single work, will be particularly featured.

The jury of selection will consist of Paul P. Cret, F. A. I. A., Doctor R. Tait McKenzie, George Howe, A. I. A., Wm. Pope Barney, A. I. A.

The exhibitions will be open free to the public during the day time.

San Francisco's Code of Ethics for the Building Industry

THE Code of Ethics, agreed upon by the Industrial Association of San Francisco, the San Francisco Chapter of the American Institute of Architects and the Builders' Exchange, for the building industry of San Francisco and the Bay region, has been prepared in printed form and is now being distributed amongst the architects, contractors, owners, and others interested throughout the community. The full text of the code is as follows:

"I. The owner or architect should not call for unnecessary or full estimates on tentative projects, without advising those asked for estimates that the project is tentative.

"II. The owner or architect should not call for an excessive number of bids. It is recommended that not to exceed six bids be called for.

"III. Collusion in the preparation of bids should not be tolerated or practised by contractors or subcontractors, and if discovered shall be a just cause for the rejection of all bids.

"IV. When the owner has determined to build he should first decide whether he is to let a general contract, segregated contracts, or a percentage contract.

"V. If the decision is to let a general contract, the owner or architect should call into competition only general contractors to whom he is willing to award the contract. He should then award the contract to the low bidder on the plans and specifications sent out for bids, having required him to file with his bid the list of subcontractors whose figures he has used. He should then insist that the general contractor let his contracts to the subcontractors whose figures he used in making his bid, provided such subcontractors are satisfactory to the architect.

"VI. If it is decided to let the job by segregated contracts, the owner or architect should only call in as bidders subcontractors to whom he is willing to award the work. Then he should award the segregated contracts to the low bidders on the plans and specifications sent out for bids.

"VII. If it is decided to do the work upon the percentage contract plan, the owner or architect should insist that the percentage contractor, when taking bids, should only call in as bidders contractors to whom he and the architect are willing to award the work. Then the owner or architect should insist that the percentage contractor award the job to the low bidders on the plans and specifications sent out for bids.

"VIII. In case a general contractor or percentage contractor figures or estimates the total job himself when taking it from the owner, the owner or architect should insist that if, thereafter, the general contractor or percentage contractor decides to let subcontracts for any portion of the work, that he take bids only from subcontractors to whom he and the architect are willing to award the work. Then the owner or architect should insist that the jobs be awarded to the low bidders on the plans and specifications sent out for bids.

"IX. All bids should be opened in public at a set time and place, except where the architect or owner deems it impossible.

"X. All owners should instruct their architects to write into all plans, specifications and contracts, a clause requiring all work to be done on the American Plan, and then the owner and architect should insist on the strict observance of this clause.

Obligations of the Architect, the Contractor, and Labor

"XI. The architect should always act entirely in a judicial capacity in determining contract obligations, insisting upon full performance by owner and contractor; he should not engage in work in the building trades, except in his capacity as an architect; he should write into his specifications clauses providing for the observance by the contractor of all building ordinances, safety and sanitary codes; he should never require a contractor to perform any part of the service which is generally recognized as the work of the architect; he should not attempt to cover possible oversights or errors by indefinite clauses in the contract or specifications.

"XII. The contractor should insist on enforcement of building ordinances and safety and sanitary codes; he should carry compensation insurance; he should not engage independently in any service which is generally recognized as the work of the architect, either in the preparation of plans and specifications or the supervision of the work; he should refuse to deal directly with the owner where an architect has been employed for supervision, and should never submit to the owner directly, without the architect's approval and knowledge, any proposals or estimates; he should never improperly increase the cost of work or produce work inferior to that contracted for; he should deal fairly and justly with the labor employed by him and make every effort to afford opportunity to apprentices to learn the building trades.

"XIII. Labor employed in the building trades should never endeavor improperly to increase the cost of the work or to produce inferior work; labor should never endeavor to restrict the quantity or quality of the output of the individual; labor should co-operate in affording every opportunity to apprentices to learn the building trades and, when qualified, to practise their trades."

A Visit to Remember

THE great organization of the electrical art is spread out before your eyes as the train pulls into Schenectady. Here is the huge plant of the General Electric Company, whose history has been closely linked with that of the development of electricity. Since the formation of the General Electric Company from the old Thomson-Houston International Electric Company, it has grown until it is established in the principal cities of this country, and all over the world.

We recently spent a magical day going through the Schenectady plant from one building to another: from the giant stator castings for a generator to the minute manufacture of small electrical parts, from the WGY Broadcasting Station to the experimenting-room where all the wonders of artificial lighting were flashing around us. In one building the steam turbine generators, ranging from 2,500 to 50,000 kilowatts, are assembled and tested; in another is a complete research laboratory, and here we came to a room where even moving-pictures are made!

The hottest spot we found (and it was a warm day) was in the laboratory where an electrical furnace develops a temperature of 4,500 degrees F. A whole building is devoted to the construction, assembly and experimental work on large oil-circuit breakers; and in the next bay, almost as far down as we could see, were machines used in the production of insulated cables.

We wonder how many of us who switch on our comforts stop to think what is back of it all.

The House Shortage Is Still Acute for People of Moderate Means

BECAUSE a large proportion of the new dwellings erected in the United States during the last few years have been for the well-to-do, people of small means are still living in badly cramped quarters, in some instances worse than ever before, says a statement issued to-day by the Civic Development Department of the Chamber of Commerce of the United States. The civic and social effects resulting from cramped living accommodations are serious, it is stated by the department.

"The evil effects of the housing shortage," the statement continues, "are evident to every one who has looked into the subject at all. America is fortunate in that the shortage here has not been so great as in some of the European countries, where it has become a political issue, but it is serious enough to call for hard thinking and constructive action. Four or five years ago every element in the community felt the pinch. Since then there has been considerable relief due to the unprecedented amount of house-building. But the new dwellings have been in large proportion for the well-to-do. People of small means are still badly cramped, in some places worse cramped than ever, because houses wear out, are demolished or converted to other uses, and so the supply is steadily diminished. Meanwhile new, inexpensive houses have not been erected in any considerable number, though the population requiring such houses constantly increases. The value of adequate, comfortable, attractive dwellings in terms of citizenship can scarcely be overestimated."

Announcements

Carl M. Lindner, architect, announces the removal of his offices from American National Bank Building to Suite 915–916, State and City Bank Building, Richmond, Va.

R. F. Schirmer & J. W. Schmidt, architects, announce the removal of their office on April 23, 1925, to 1440 Broadway at 40th Street, New York City.

Edwin E. Cull, architect, announces the removal of his office from 17 Exchange Street to 75 Westminster Street, Room 15, Providence, R. I., April 6, 1925.

Ralph Bryan, A. I. A., and Walter C. Sharp, A. I. A., formerly associates in the firm of Herbert M. Greene Company, Dallas, announce the forming of the partnership of Bryan & Sharp for the general practice of architecture, with offices in the Dallas Athletic Club Building, Dallas, Texas.

Adams & Adams, architects, have moved their offices from 517 Gibbs Building to 701–2–3 Builders Exchange Building, San Antonio, Texas.

The partnership of McLanahan & Bencker will be terminated May 31, 1925. M. Hawley McLanahan and Ralph B. Bencker will continue the practice of architecture individually at their present offices, Bellevue Court Building, 1418 Walnut Street, Philadelphia.

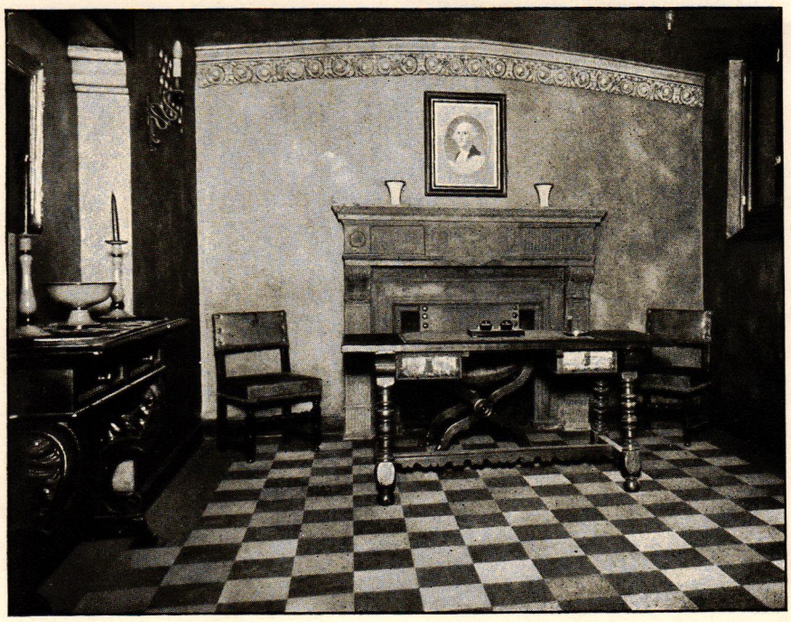
Manufacturers may send catalogues and other literature to J. A. Lohman & Son, architects, 203 High Street, Warren, Ohio.

H. V. von Holst, architect, announces the removal of his office from 72 West Adams Street to 79 West Monroe Street, Suite 914, Chicago.

Eric F. Reeves, landscape architect, member of American Society of Landscape Architects, and Karl W. Kranz, associate, take pleasure in announcing the removal of their office, on May 1, 1925, to 505 Delaware Avenue, Buffalo, N. Y.

Francis C. Pinto, architect, Room 406 Proctor Building, Mount Vernon, N. Y., is now located in his new office in Mount Vernon, and requests manufacturers' new catalogues.

Harry G. Bach, architect, announces the opening of offices at 63 Schureman Street, New Brunswick, N. J., for the general practice of architecture. Catalogues will be appreciated.



A corner of the Directors' Room, Federal Trust and Savings Bank, Hollywood, Calif.
Architects — Morgan, Wall & Clements. Floor of resilient tile installed by Bonded Floors Co.

Floors of harmonious dignity

Contrasting but soft tones of brown cork tile, quiet and comfortable underfoot, heighten the effect of dignity and financial responsibility in this Directors' Room. As always, the well-chosen Bonded Floor harmonizes with the decorative scheme and enhances the beauty of the furnishings.

Several beautiful and durable floors are available to the architect through the Bonded Floors organization. There are types and patterns of Bonded Floors suitable for every interior and every building—solid-colored floors of *Gold-Seal* Battleship Linoleum where economy is essential; where more elaborate effects are desirable, colorful floors of *Gold-Seal* Treadlite Tile, or natural cork tile.

Descriptive literature, specifications and details will be forwarded on request.

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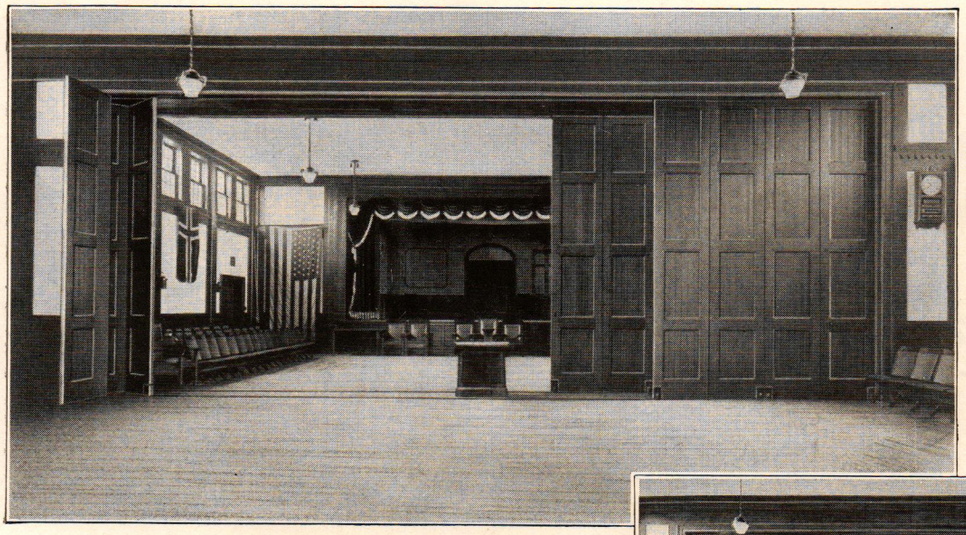
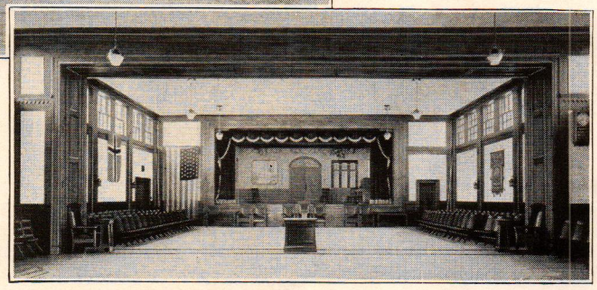


A double row of doors are provided in this installation — when closed off each room is soundproof.

When opened each row of doors folds inside of pockets at either side of opening, which in turn are concealed by paneled doors.



Economy in double duty floor space

Lodge rooms, churches, hotels and schools are logical points for foregathering. Space is an important item. Equipped with R-W Folding Partition Door Hardware it is but the matter of a moment to convert any number of small rooms into one, and with equal facility to re-convert this big room into snug, cosy little rooms. The doors are hinged together in pairs and each pair is operated as a separate unit. All doors are made to open in one direction or, the doors may be divided in the center and half of the doors folded to the right and half to the left. Double duty from floor space, making it twice as valuable, a vital consideration with mounting land values. Write for full particulars.

RICHARDS-WILCOX R-W AURORA TRADE MARK

"Quality leaves its imprint"

A Symbol of Advanced Ideas

The R-W trademark signifies that the product that bears it is made according to the most advanced ideas of service joined to highest quality in material and workmanship. The great plants of R-W are fussy about detail. Unless perfect, a product is rejected. Note how splendidly this works out in all R-W hangers, as well as Folding Partition Door Hardware. How barn, house, elevator, industrial and garage doors equipped the R-W way never give trouble. Let the R-W Engineering Dept. advise with you without cost or obligation.

Richards-Wilcox Mfg. Co.

"A Hanger for any Door that Slides."

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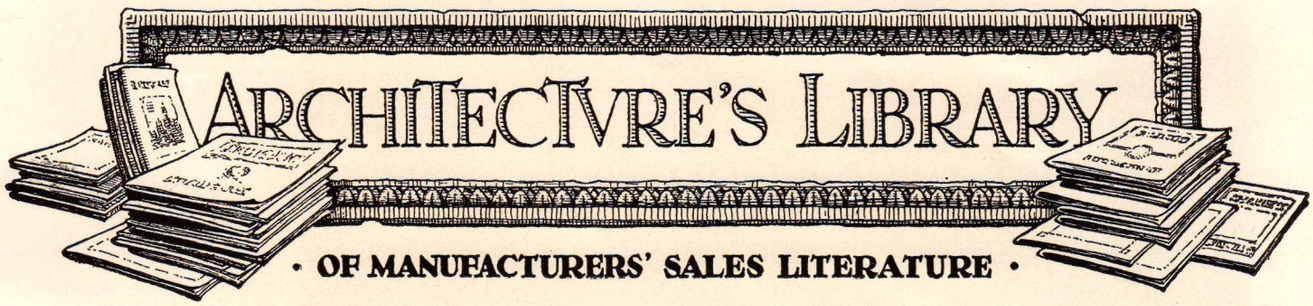


For the service of every person in every architect's office, ARCHITECTURE announces important publications issued by manufacturers of building material and equipment. These publications may be had by addressing SERVICE DEPARTMENT, ARCHITECTURE, 597 Fifth Avenue, New York, or by addressing the companies listed below, in which case please mention ARCHITECTURE

VERMONT MARBLE CO.
Proctor, Vt.

"The Book of Vermont Marble: A Reference Book for the Architectural Profession," is a new and decidedly valuable book issued by this concern. Detail drawings, illustrations of installations, and descriptions of manufacture are included in its contents.

For nearly a century Vermont marble has been on the market for building purposes, and during that time has been used for the construction and decoration of many notable buildings. The beauty and durability of its many varieties will continue to commend it for any type of structure where the idea of permanence and utility must be maintained without any sacrifice of artistic effect.

To translate his wishes and those of his clients into terms that may be understood by the marble producer is the architect's problem. To help in the solution of that problem the book was prepared.

GENERAL ELECTRIC CO.
Schenectady, N. Y.

The G. E. *Monogram* for May contains an article by Owen D. Young on "Farm Electrification in New York State."

The General Electric Co. is now joining with various groups interested —farmers, central stations, agricultural schools, and others—in trying to solve the problem of rural electrification. It set its hand to this undertaking many years ago, and did pioneer work. But the time was not then ripe for it. Conditions have now changed. The major problems of applying electric drive to industry and transportation in general have been solved. Attention once more is swinging back to the farm and its needs. The article by Mr. Young is a clear and informative setting forth of the subject in its various aspects as it affects the farmer, the central station, and the manufacturer.

ARMSTRONG CORK CO.
Pittsburgh, Pa.

"Nonpareil Cork Covering" is a very complete treatment of the subject of cold-pipe insulation. It takes up such subjects as insulation, ease of applying covering, durability, service details, spacing and hanging lines, and specifications.

THE KAWNEER CO.
Niles, Mich.

"Kawneer Windows in Solid Nickel-Silver" is an interesting catalogue published by this company.

RUUD MANUFACTURING CO.
Pittsburgh, Pa.

A new book has been issued as the Ruud "Trade Catalogue." It gives all the essential information about Ruud Automatic Gas Water Heaters. An attempt has been made to avoid technicality and to devote the book to sound, useful information.

MINNEAPOLIS HEAT REGULATOR CO.
Minneapolis, Minn.

A bulletin is being sent to the profession on the Minneapolis Motor Program Switch, the latest addition to the Minneapolis line.

"Walls and Their Decoration," by Major Arthur De Bles, with pen drawings by the author, is a very interesting treatise on the subject, published in booklet form by the Wallpaper Guild of America. Major De Bles has given several series of lectures during the past five seasons at the Metropolitan Museum of Art, and in Paris he published the "Weekly Critical Review."

Two interesting booklets recently issued by the Chamberlin Metal Weather Strip Co. are: "Chamberlin Metal Weather Strip Details," including complete specifications and details, and "Excluding Cold and Dust with Chamberlin," which illustrates the application of Chamberlin equipment.

The Frank Adam Electric Company Panelboard Catalogue No. 35 has recently been issued. The catalogue shows all of this concern's safety-type panelboards for two-fuse and single-fuse codes.

How the Chicago, Burlington and Quincy Railroad has successfully constructed structural steel buildings entirely with arc-welded joints is told in the recent publication of the Westinghouse Electric and Manufacturing Company, Folder 4657.

An interesting comparison is made in this folder of the erection costs of arc-welded buildings with those of riveted buildings. It shows the great saving effected by the arc-welded building in the way of material and shop fabrication, and in the elimination of the necessity of reinforcing with gusset plates or butt plates.

The Prometheus Electric Corp. is issuing a very interesting circular concerning Prometheus Electric Radiators, their advantages and conveniences for houses and apartments.

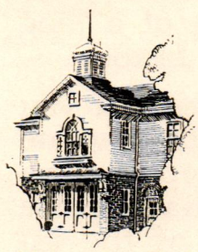
Walsment, as the name indicates, is a mortar material for covering the exterior and interior surfaces of walls. It is a plastic combination of cements that, when applied, is practically impervious to water and may be employed in situations where some plasters are not efficient, for dampness does not cause it to scale or disintegrate. It is manufactured by the Louisville Cement Co.

"Fire Resistance of Concrete Columns," by W. A. Hull and S. H. Ingberg, is an investigation that covers one phase of the work of the Bureau of Standards in the investigation of the fire-resistive properties of building materials. This publication of the Department of Commerce is of immense value to any one interested in concrete construction.

The Department of Commerce has also issued a pamphlet on Steel Reinforcing Bars in its campaign on the elimination of waste. In an introduction the booklet says:

"A survey made in 1921 by the Hoover Committee on the Elimination of Waste, covering six typical American industries, including the building industry, showed the average loss due to waste to be almost 50 per cent of the total value of the annual production. Nearly half of this waste is due to unnecessary varieties in our products.

"Over $10,000,000 worth of concrete reinforcing bars were produced in 1921. If waste conditions in this industry, caused by too many varieties, are average, the avoidable annual loss runs into millions of dollars."



Kohler Village Hall

The beautiful, livable village of Kohler is an inspiration to ever higher quality in Kohler products—enameled plumbing ware and private electric plants

A KOHLER sink is as fine and beautiful a fixture as ever adorned a kitchen. The grace of line for which Kohler Ware is noted, the superb, immaculately white enamel—these qualities are as marked in every Kohler sink as in the finest Kohler built-in bath or pedestal lavatory.

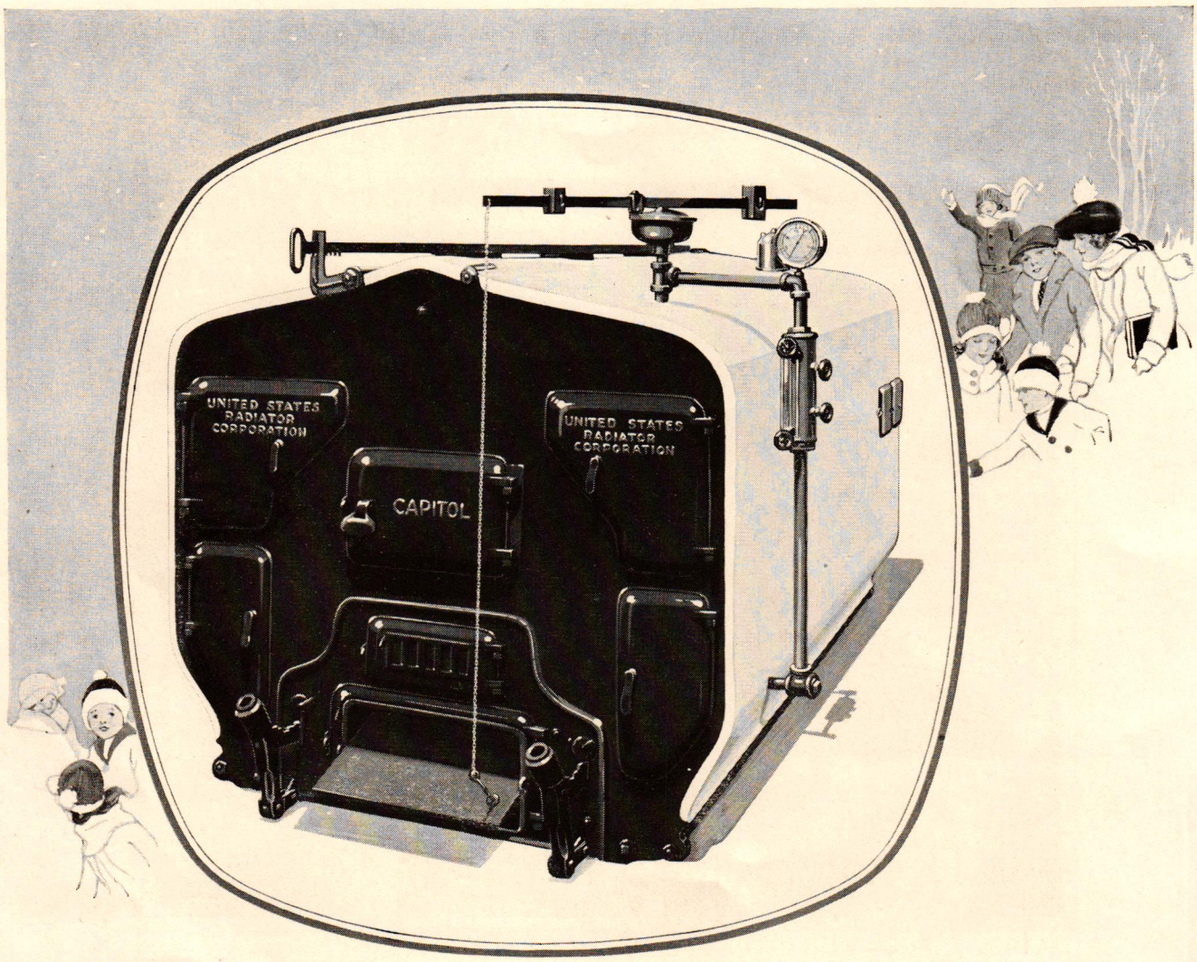
Kohler sinks are made in every desirable style. And now, for the most massive twin-drainboard sink as well as for the smaller models, Kohler offers an improved *concealed sink bracket* which insures a perfect installation *without legs*—the manner most frequently recommended by architects who make a special study of modern kitchen arrangement.

Whatever the fixture selected, your client can instantly identify it as of Kohler quality by looking for the name "Kohler," unobtrusively fused into the enamel.

Kohler Co., *Founded 1873*, Kohler, Wis. · *Shipping Point*, Sheboygan, Wis.
BRANCHES IN PRINCIPAL CITIES

KOHLER OF KOHLER

Enameled Plumbing Ware



Capitol Boilers represent sustained research work covering a period of more than thirty-five years.

They were pioneers of the modern heating principle and are today recognized as unquestioned standards of efficiency.

In the smokeless field, Capitols have lived up to every tradition of a long and honorable history.

They are boilers that you can specify with absolute confidence because we insist upon sharing the responsibility of the investment.

Capitol Boilers

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Your clients will appreciate your suggesting the bidet -- -a special fixture for health and hygiene

WHILE the bidet has long been in universal use in Continental Europe and in other countries, and while many bidets have been installed in American residences and hotels in recent years, the average homebuilder is not yet familiar with this valuable bathroom accessory.

When your clients are informed that a special fixture is available for the needs that the bidet is designed to meet, they will be appreciative of your services in directing their attention to it.

The bidet, when installed in a general bathroom, may, for reasons of delicacy, be designated as a "foot bath," since this use is included among its services. When impracticable to place it in a general bathroom it may be located in a special lavatory opening off a bedroom.

Maddock Bidets represent over twenty years' development of this fixture. They are made of solid white vitreous china and are sanitary, efficient and convenient. Details of the Madval design are given below.

Write us for as many copies as you can use of our new booklet, "Maddock Bathrooms," and our special booklet on bidets. They will help you to "sell" clients on quality fixtures, and make them more appreciative of such fixtures when recommended. There will be no charge for the booklets.

Maddock Bidet

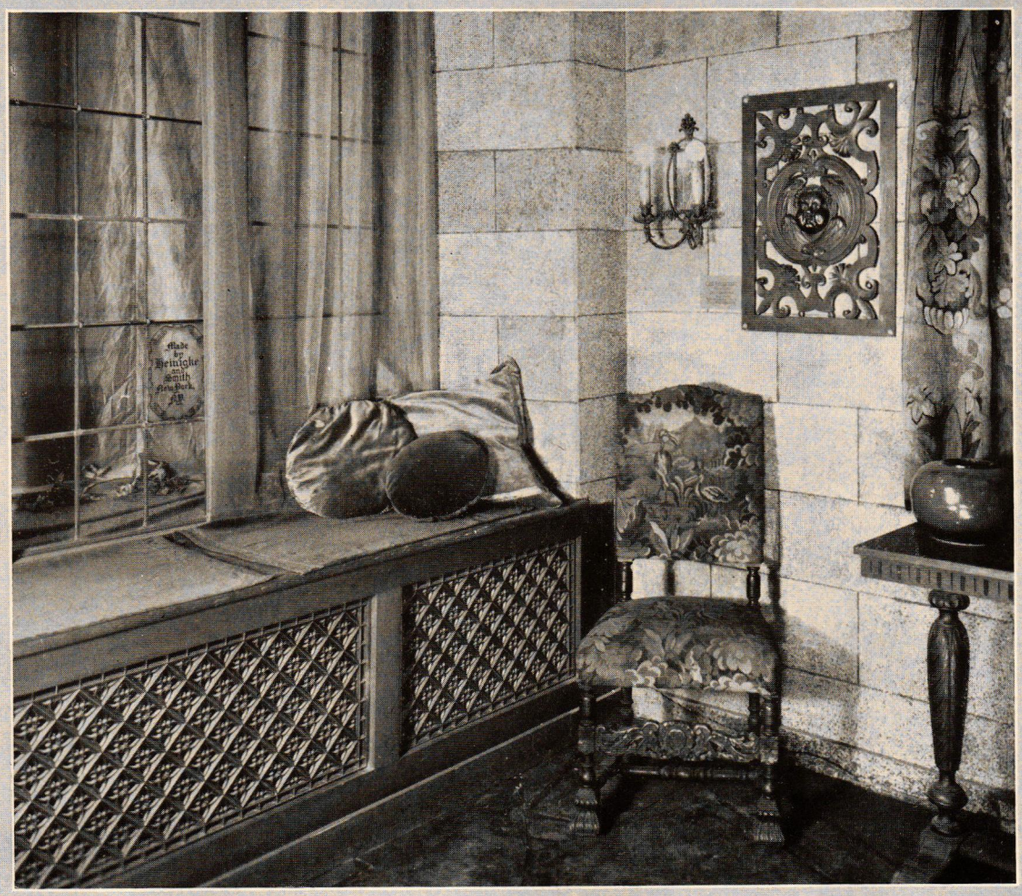
Madval K-2831

All White Vitreous China, including
handles and escutcheons
Flushing Rim
Center Douche
Pop-up Waste
Hot and Cold Water Valves
and Transfer Valve for supplying either
flushing-rim or douche

THOMAS MADDOCK'S SONS COMPANY, *Trenton, N.J.*

MADDOCK

Bathroom Equipment



Detail of Exhibit at Architectural and Allied Arts Exposition, New York,
showing Window Seat with Cast Ferrocraft Bronze Grilles —
Special Design No. 371

Tuttle & Bailey Mfg. Co.

Lexington Ave. and 44th St., New York

CAST FERROCRAFT GRILLES AND REGISTERS
in both bronze and iron are adapted to all heating and ventilating systems, and if cast in special design to conform to the decorative plan they become objects of beauty as well as utility. They are modeled by Artists and finished by Craftsmen who hand-tool each unit to bring out in perfection the details of the design.

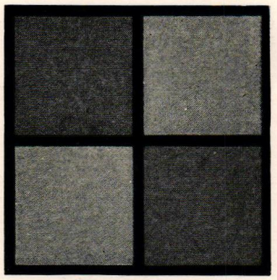
Ferrocraft Products mean more than "ornamental iron" and should not be confounded with the usual foundry castings.

MAKERS OF REGISTERS AND GRILLES FOR SEVENTY-EIGHT YEARS

The present-day swing toward floors of vivid color and appropriate design

How modern linoleum meets that trend and gives you beautiful floors at moderate cost

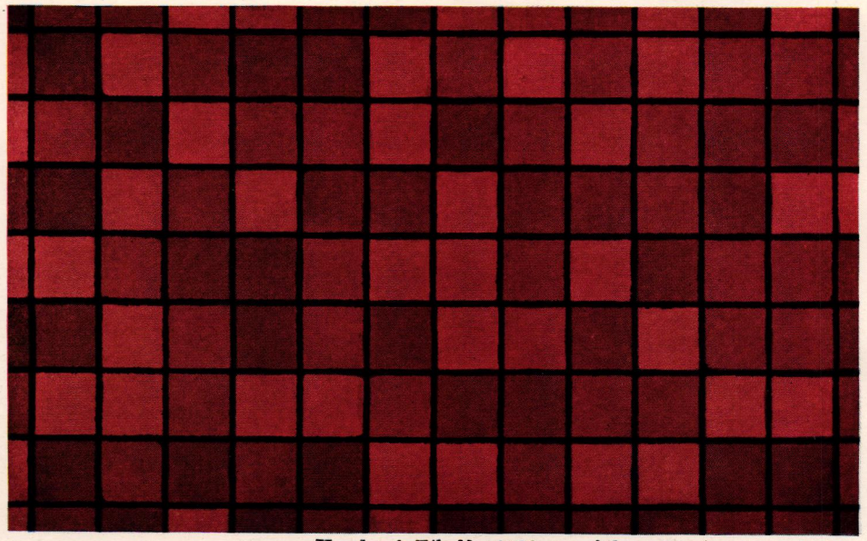
Inset Tile Inlaid No.T48



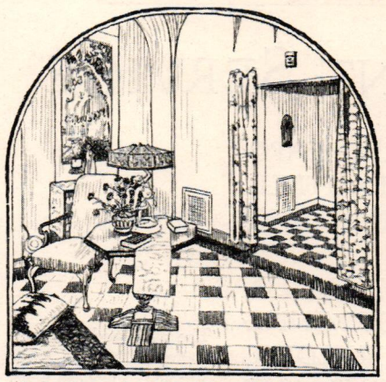
ARCHITECTS and interior decorators have found a new source of inspiration. It is the new freedom in floor design—the swing toward the floor of color and design.

Such a floor—warm, distinctive, truly expressive—forms the decorative keynote of any room. What a stimulus for modern interior design!

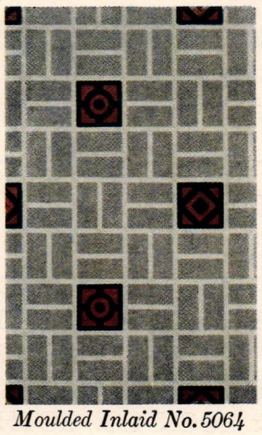
With this modern trend have come many new floor patterns in linoleum, created by the Armstrong expert designers. Today in Armstrong's Linoleum there are hundreds of beautiful colors and patterns to meet every decorative need. There are delicate two-toned jaspés, in gray, green, blue, and brown. There are smart block patterns in black and cream. There are interesting geometric designs, and natural marble effects. There are colorful handcraft tiles. And these are only a few!



Handcraft Tile No. 3132, one of the newer Armstrong designs



A living-room in a San Francisco apartment, floored with Armstrong's Marble Inlaid Linoleum. Lionel H. Pries, Architect



Moulded Inlaid No. 5064

Floors of Armstrong's Linoleum are beautiful floors—floors that bring out the color contrasts of the room, that emphasize harmonious furnishings. These floors are permanent floors. Properly cemented in place, over a layer of heavy deadening felt, Armstrong's Linoleum is a smooth, non-splintering, one-piece floor. Waxed and polished like any fine floor, it keeps its color and sparkle for years on end.

The smart shop, the up-to-date business or professional office, the school or library, the fastidious home—all are given floors of new and permanent beauty once Armstrong's Linoleum is installed.

Fine interiors today are being based on floors of Armstrong's Inlaid Linoleum—because these floors of color and design are beautiful, because they are permanent, because they cost so little to install.

Decorative advice free

Whenever you want suggestions regarding any interior color schemes you may be planning, just drop a line to the Armstrong Bureau of Interior Decoration. This service bureau, in charge of an experienced decorator, is always at your disposal, free of charge or obligation. Ask also for samples of the newer patterns.

Look for the CIRCLE A *trade-mark on the burlap back*

Armstrong Cork Company
Linoleum Division **Lancaster, Pa.**

Armstrong's Linoleum for every floor in the house

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Better Than Marble

VITROLITE IN GOVERNMENT SERVICE

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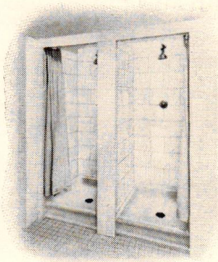
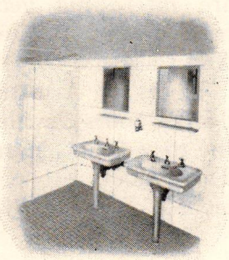
These showers are of the ashlar style of white Vitrolite. Dampness and steam cannot affect these surfaces. They will always look spotless and new.



The walls and toilet partitions are of pure white Vitrolite. They can never become dulled or stained. A damp cloth will clean them thoroughly.



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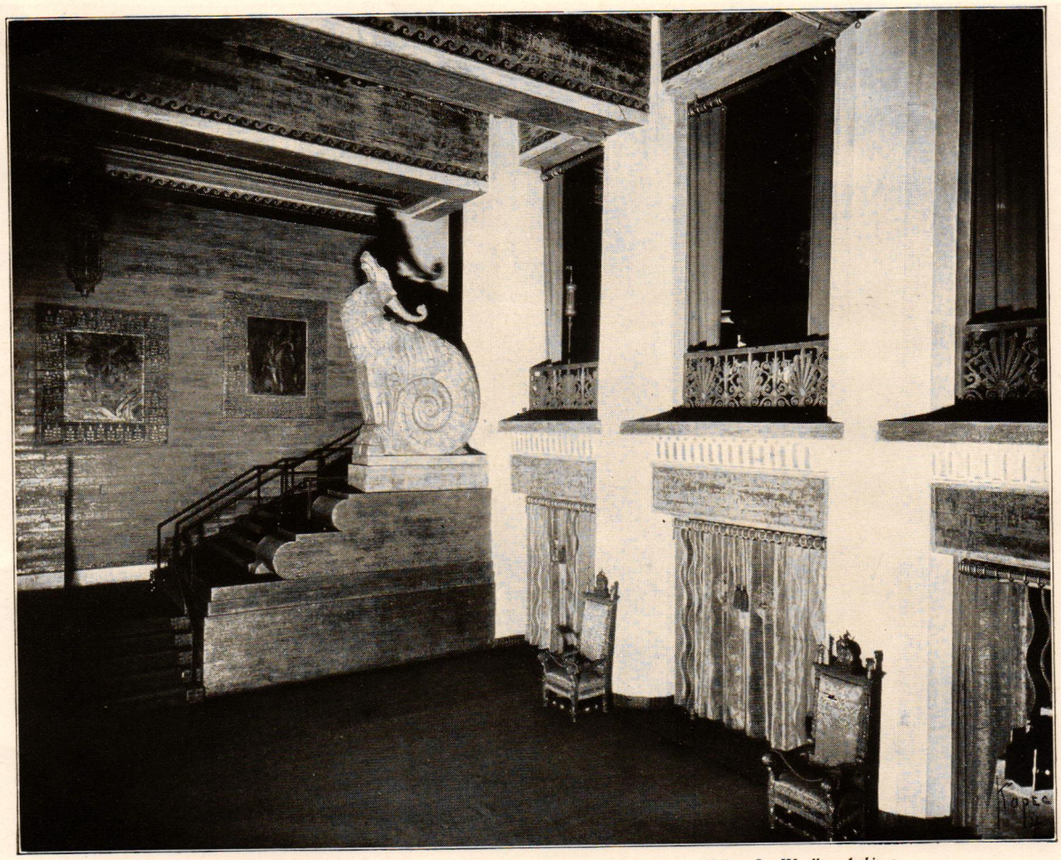

Interior of Grauman Metropolitan Theatre, Los Angeles. Done entirely in Concrete. William Lee Woollett, Architect.

TRULY CREATIVE

AMONG advanced achievements in concrete is the interior of Grauman Metropolitan Theatre, Los Angeles.

From lobby to proscenium the conception has been executed in the same basic material used to insure structural soundness and economy.

Especially worthy of note are the rough, form-marked walls with murals painted on them, the great open trusses and massive beams, the decorated columns and the symbolic statuary—all of concrete.

The result is a daring creation indicating possibilities through the medium of concrete undreamed of a few short years ago. And it may well be that this truly creative work will serve as an inspiration for other individual achievements destined, perhaps, to herald a new era in architecture.

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Competently supervised, modern workmen can produce concrete in any form, texture or color the architect may direct. If you are interested, we shall be most happy to send further information. Simply address the nearest office listed below.

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Erected for F. M. WARBURG, *White Plains, N. Y.*

THIS is a unique combination of a glass enclosed pool and greenhouse. Although free from supporting columns, the steel-framed roof is light and graceful. Dressing rooms are reached from the balcony. Hanging ferns cleverly conceal the lighting. Heating pipes in the pool are recessed behind grilles.

This is number three of a series of studies, each done in lithograph by Vahan Hagopian. Every six months, reprints of the preceding studies will be mailed to all who send their names.

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GLASS ENCLOSURE STUDIES—PLATE N°3

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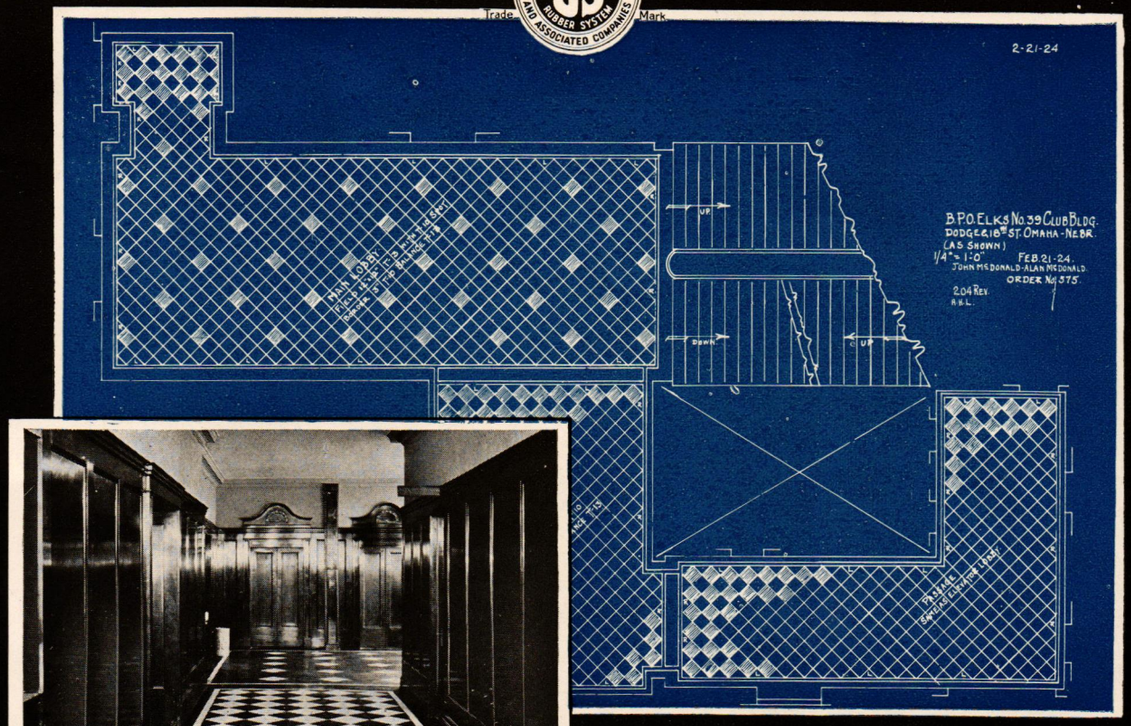


Laying plans and finished installation of "U. S." Tile in B. P. O. Elks Club Building, Omaha, Nebraska

Architect—Alan McDonald

Builders of rubber floors since 1897

The first "U. S." Rubber floor was laid in 1897, when rubber, as a flooring material, was in its pioneer stage. Today, architects and builders are finding that rubber, properly compounded and installed, offers unlimited possibilities in those cases where decorative effect and durability are essential to the specification.

"U. S." Tile is unusually durable. It is noiseless, comfortably resilient, and easily cleaned. Architects have at their disposal a large variety of decorative and plain types, in varying combinations of rich colors. The initial cost is a bit above the average—but the cost over a period of years is far below the average.

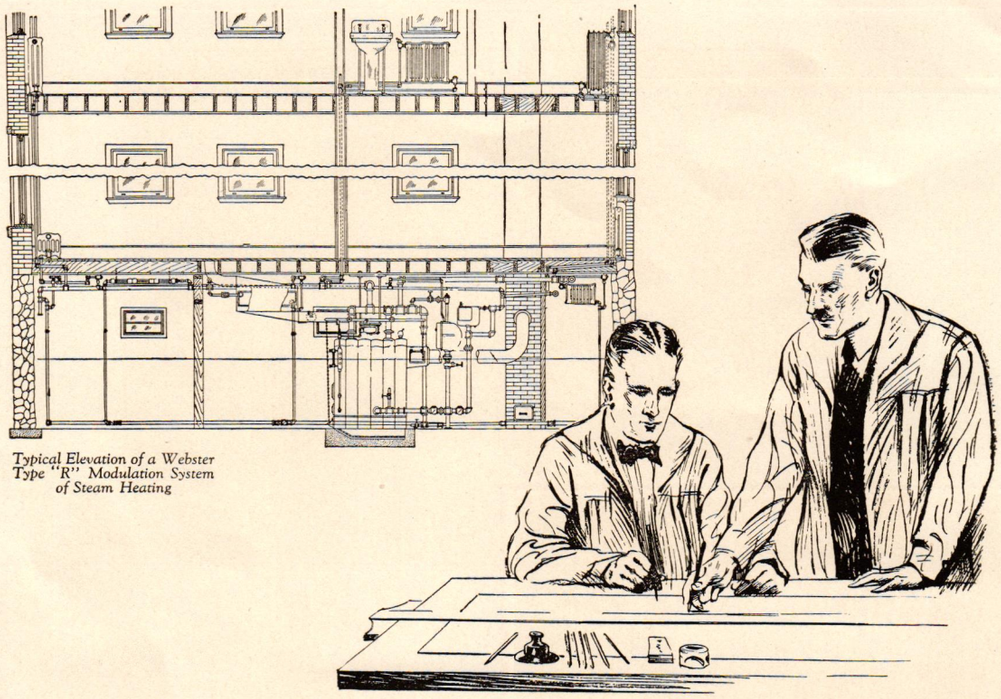
May we send you samples and full data for your files?

United States Rubber Company

Flooring Department

1790 Broadway, New York City

"U.S." Tile Flooring



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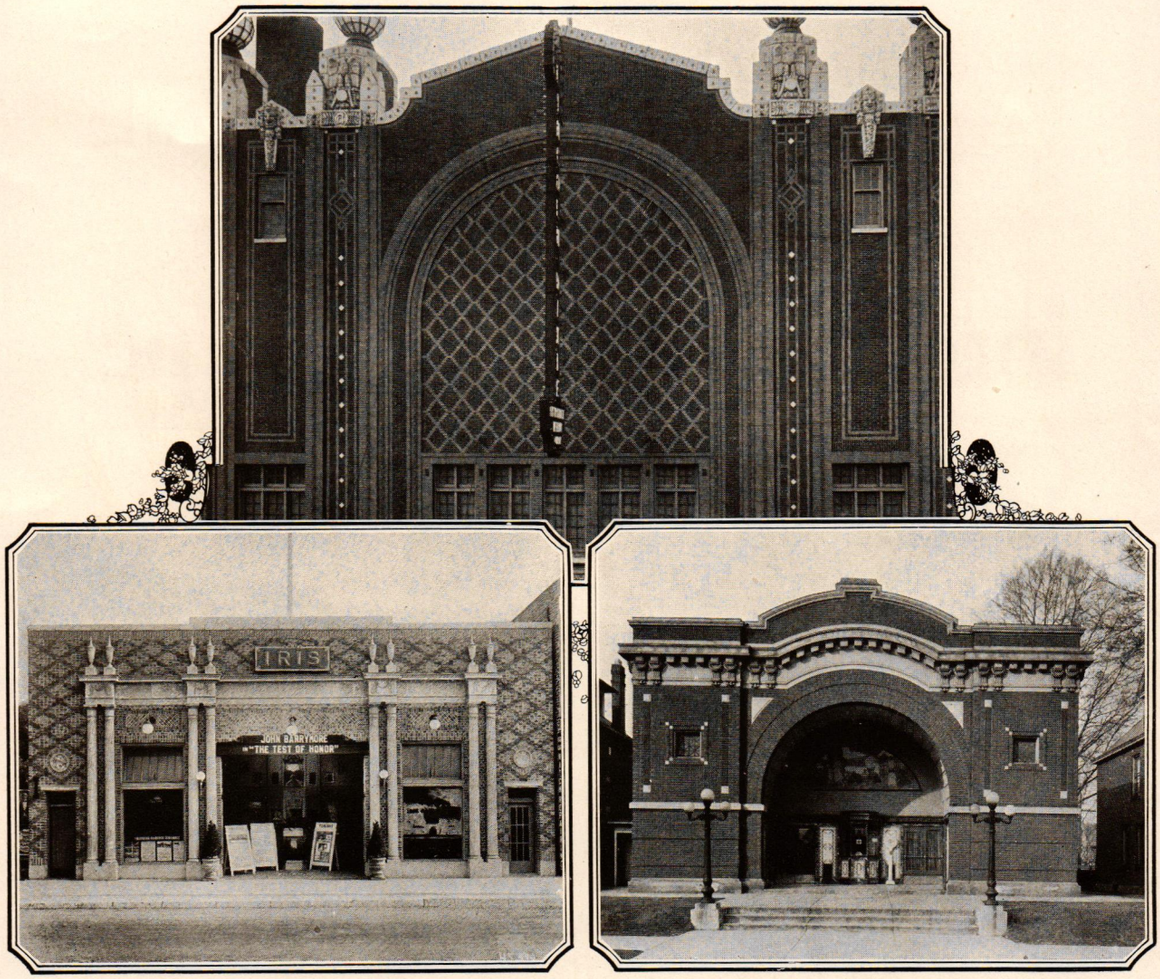

Above, Detail of Motion Picture Theatre, Chicago Heights, Illinois, Henry L. Newhouse, Architect; at left, Iris Motion Picture Theatre, Los Angeles, California, Frank Meline Co., Designers and Builders; at right, Motion Picture Theatre, Columbus, Ohio, Tresselt & Bassett, Architects

Face Brick and "The Movies"

IN ALL parts of the country—in the metropolitan centers, in the cities and in the smaller towns—architects have selected face brick as the most adaptable material for motion picture theatres.

The skill and versatility they have shown in the handling of this plastic material for this purpose is but another evidence of the artistic possibilities of face brick.

You will find many splendid examples of the modern use of face brick in "Architectural Details in Brickwork," a portfolio of more than a hundred halftone plates, issued in three series, each enclosed in a folder ready for filing. This series will be sent, postpaid, to any architect making request on his office stationery.

"English Precedent for Modern Brickwork," a 100-page book, beautifully illustrated with halftones and measured drawings of Tudor and Georgian types and American adaptations, sent postpaid for two dollars.

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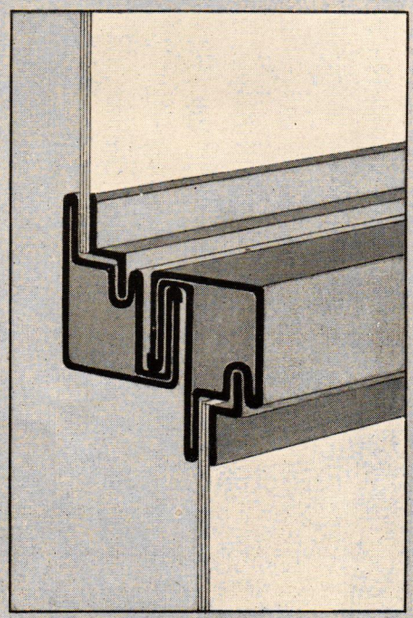

The workability of Ambrac Metal is well illustrated by this view of some of the shapes which it must assume in giving weather-tightness to

Kawneer WINDOWS

Note, for instance, that in the meeting rail alone the Ambrac Metal is turned back flat upon itself in six places. In the entire window this occurs twenty-one times.

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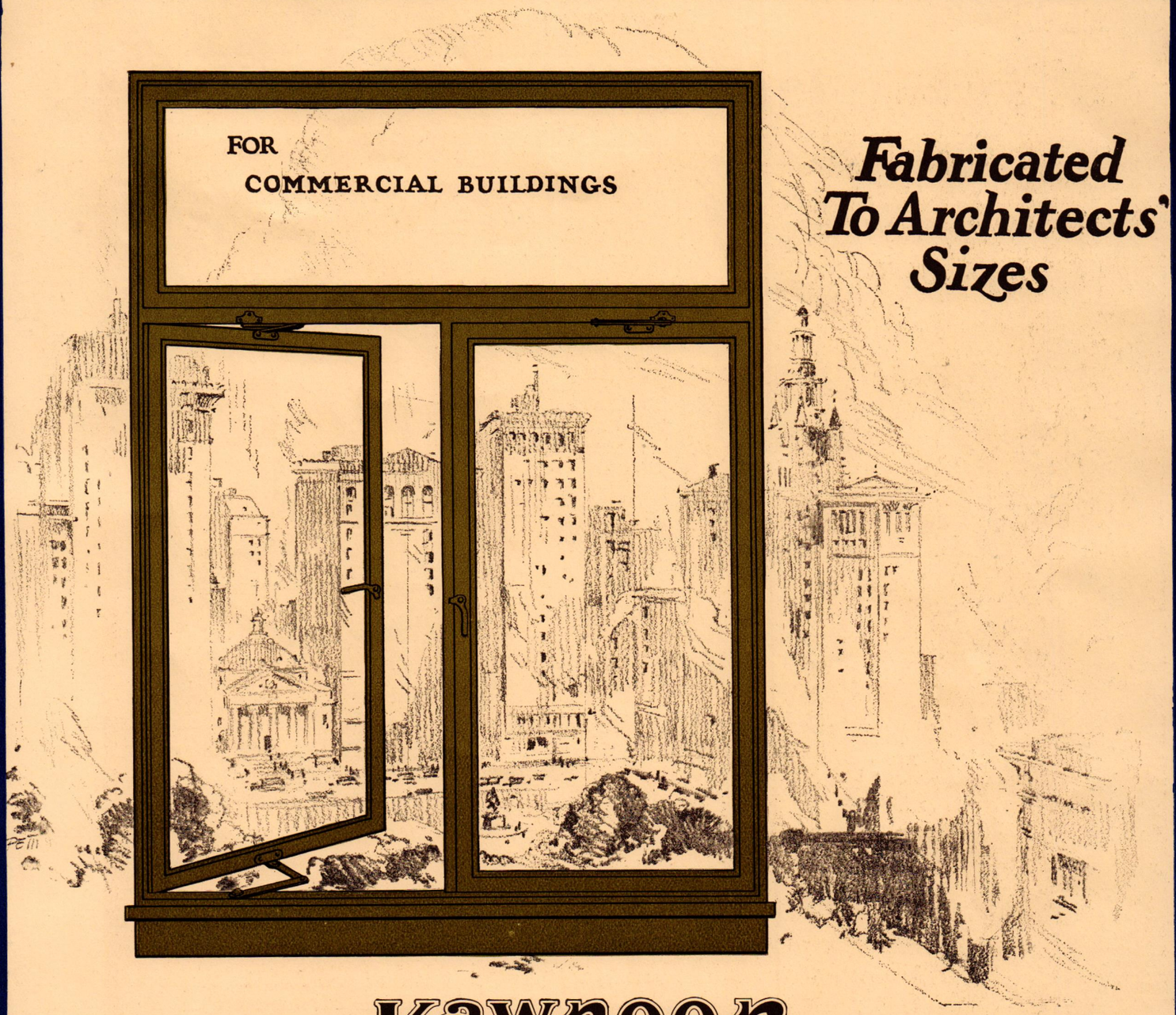

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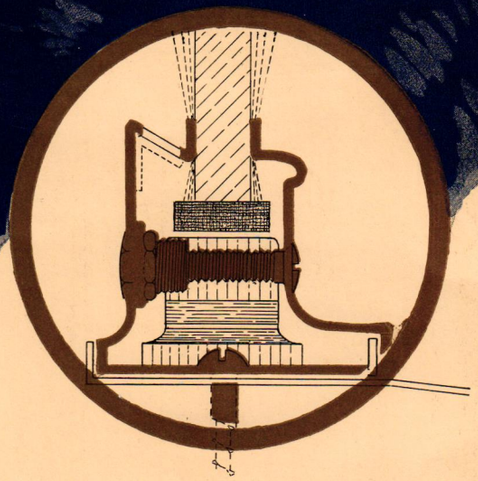

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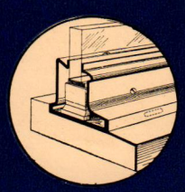
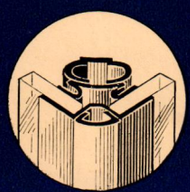
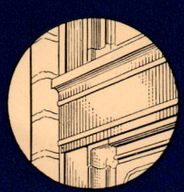
See Kawneer Nickel-Silver Window on preceding page.



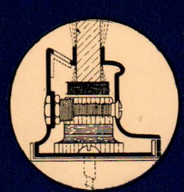
PERMANENCY



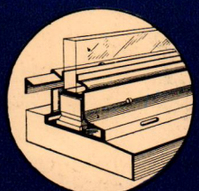
RUGGED STRENGTH



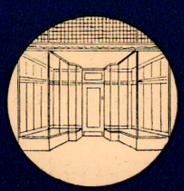
BEAUTY *of* DESIGN



RESILIENCY



VENTILATION



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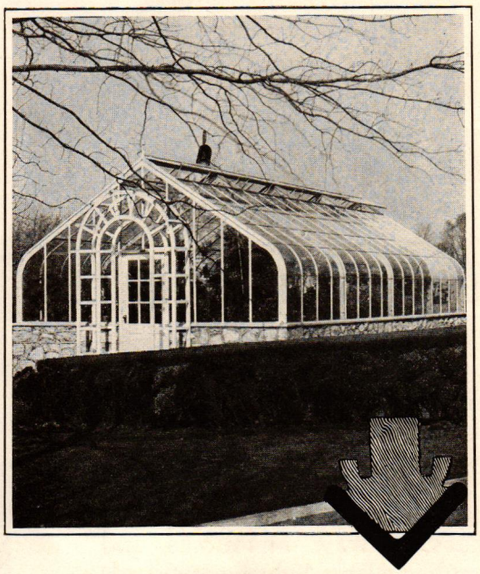

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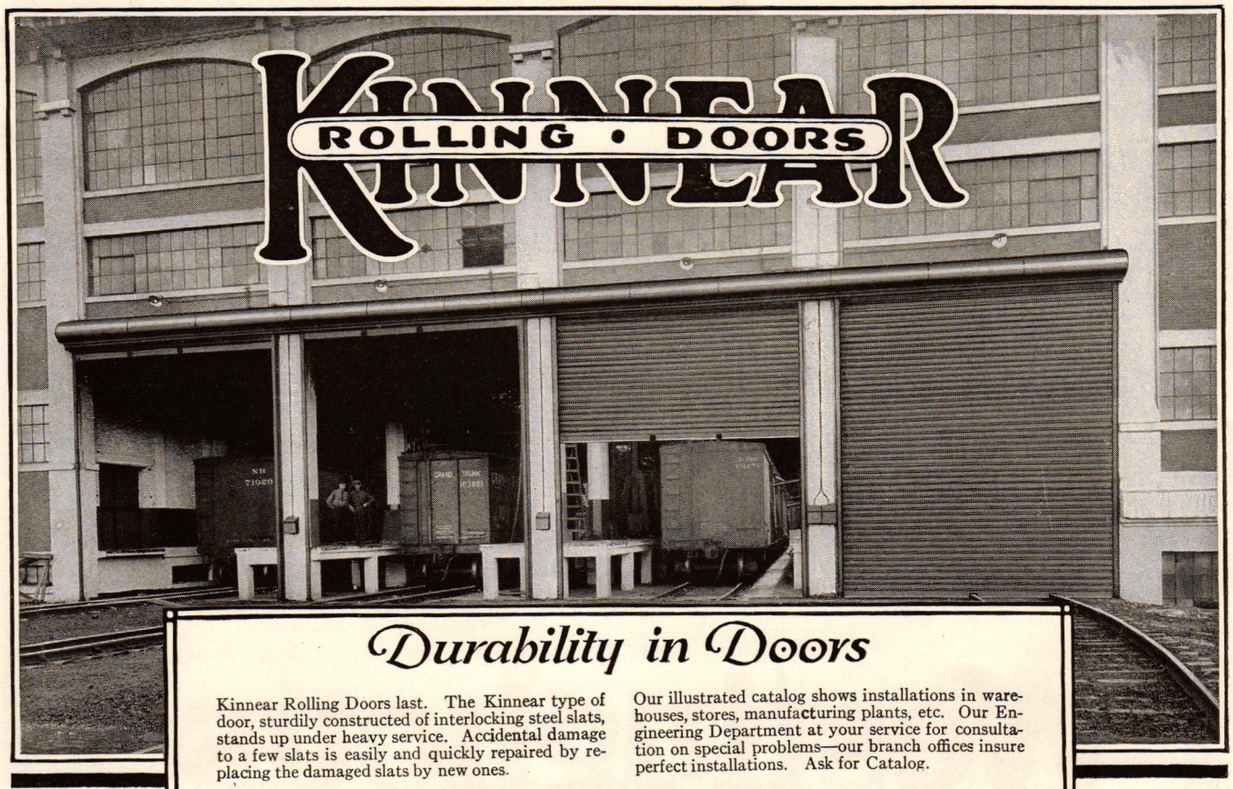

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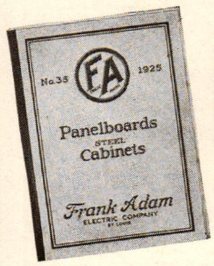

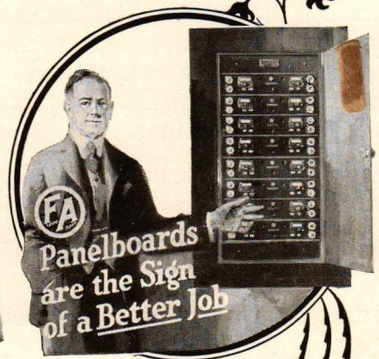

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Built of stone from the Briar Hill Quarry

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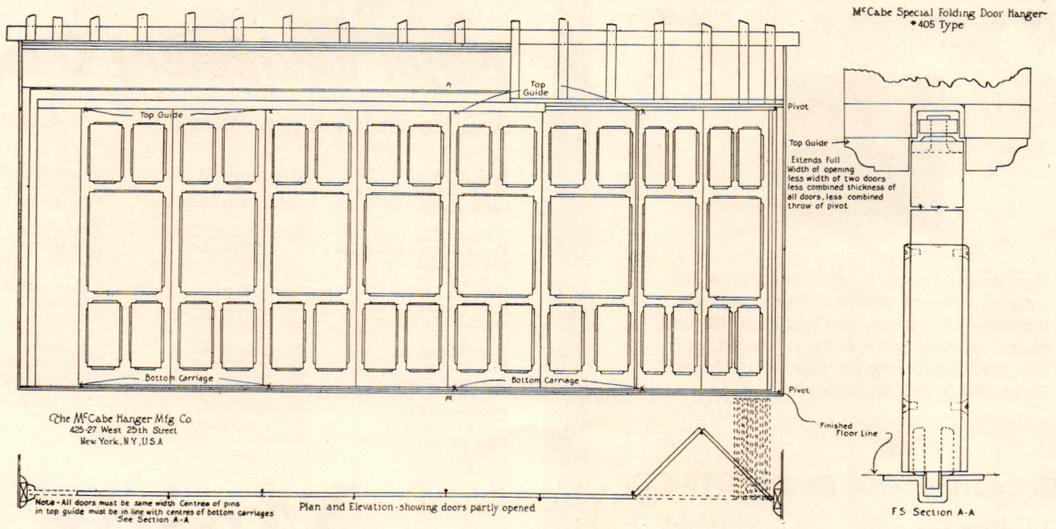

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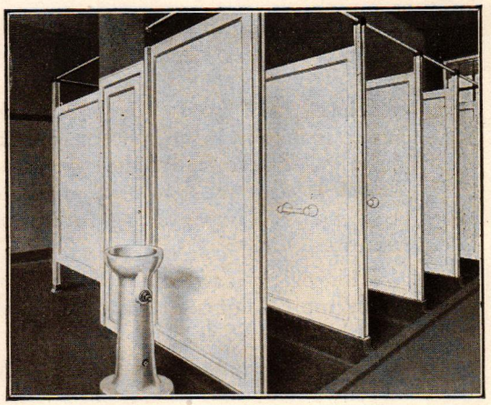

Installation in Spy Run Car House, Fort Wayne, Ind.

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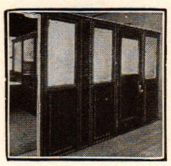

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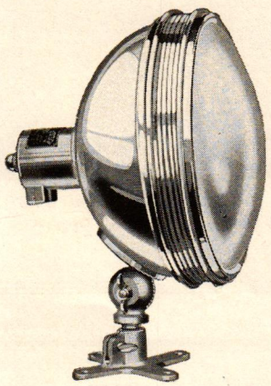

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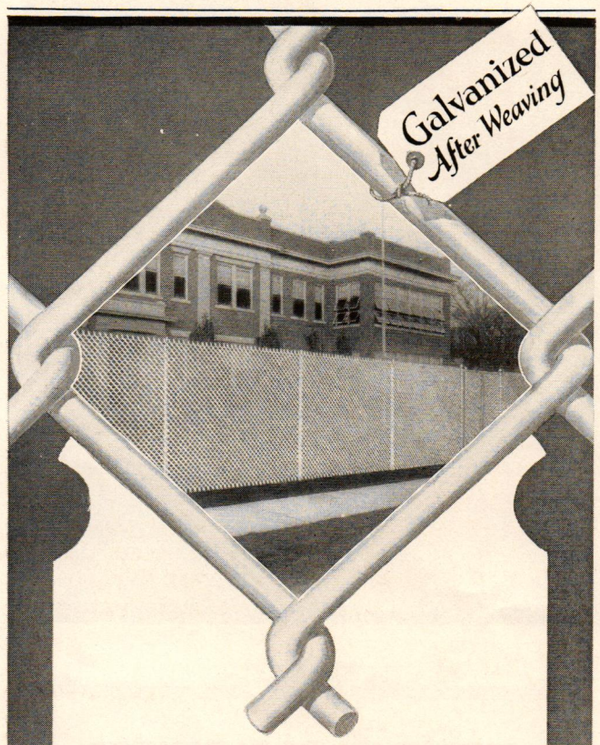

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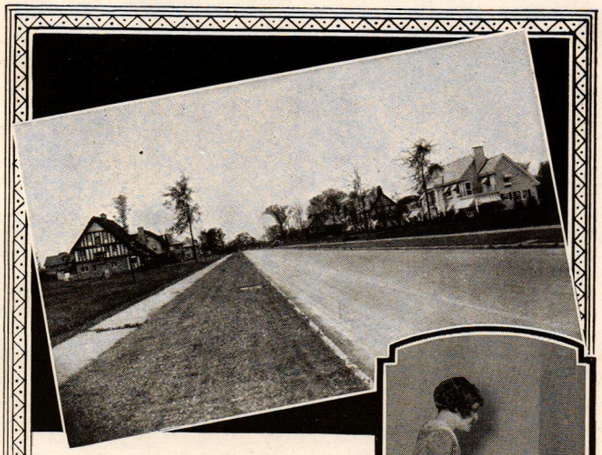
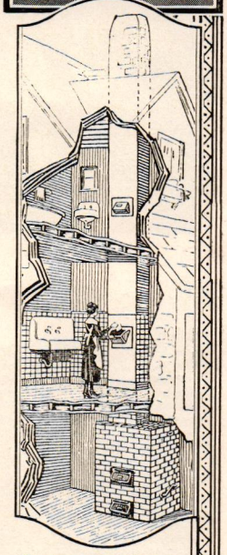


"Kernerator Avenue!"

EVERY one of the more-than-a-dozen homes shown above (Grosvenor Road, Rochester, N. Y.) is Kernerator-equipped. The nuisance of garbage and waste disposal is positively banished in just that many kitchens. There need never be a rubbish pile in any yard or basement. In short, the service a Kernerator renders makes its installation a necessity if a home is to be truly 100% convenient.

Costs Nothing to Operate

The time-tried Kernerator consists of a brick combustion chamber in the basement, with handy hopper doors on floors above. ***All*** waste—garbage, sweepings, tin cans, broken glassware, crockery, papers, magazines and trash—falls to the combustion chamber, where an occasional lighting consumes everything but metallic objects which are flame-sterilized and removed with ashes.



Here is a typical Kernerator installation. It costs no more than a good radio set and rids any home of the garbage nuisance forever.

The Kernerator must be ***built-in****—cannot be installed later. Consult Sweet's (1924) pages 2536-37, or write —*

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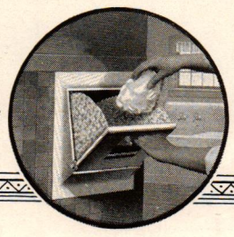

Drop all waste here *—then FORGET it!*

2588-G

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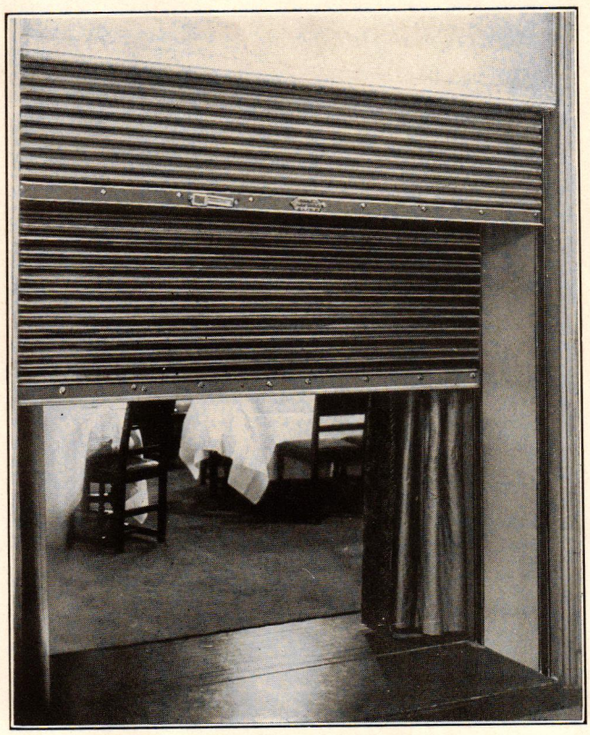

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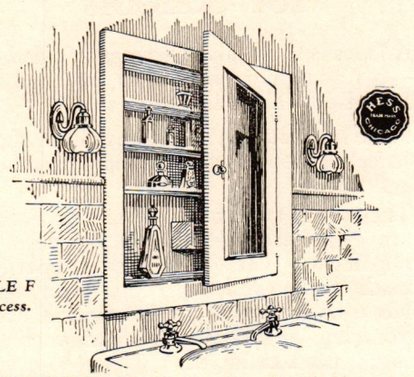

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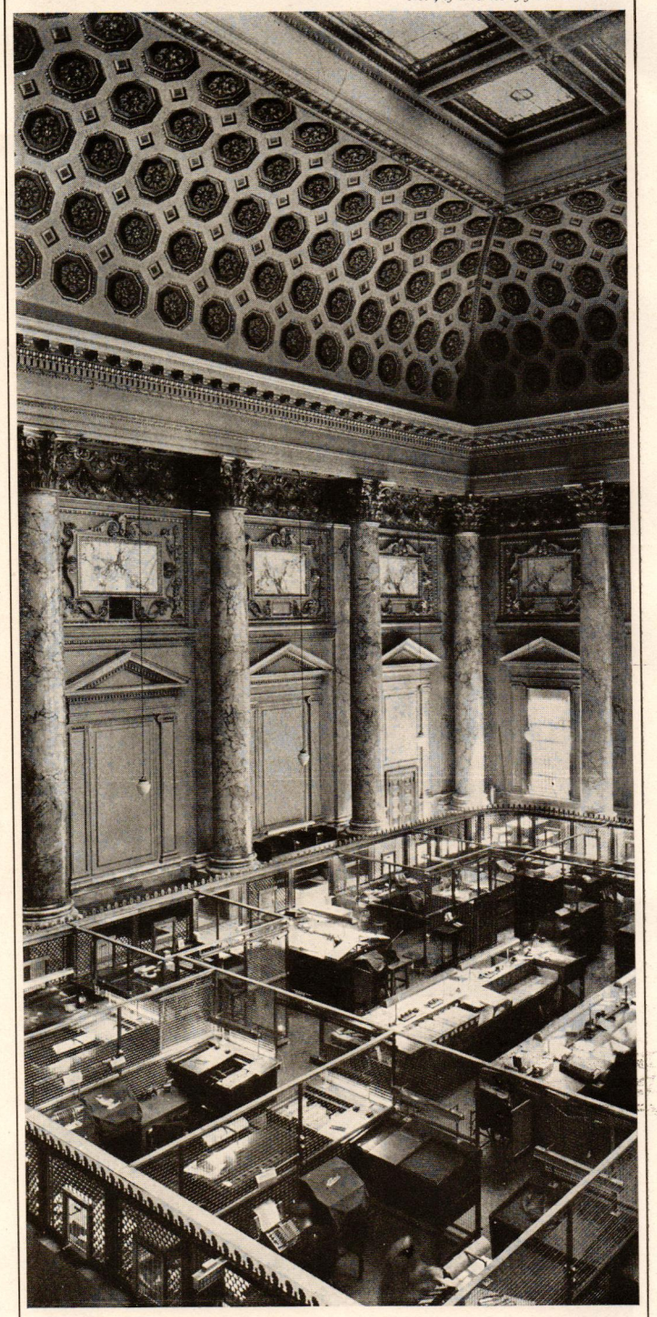

The redecoration of the Bowery Savings Bank at Bowery and Grand Streets, New York, of which McKim, Mead and White were the architects, was executed from top to bottom by ARTHUR BROUNET. This is one of the many buildings of prominence decorated by him.

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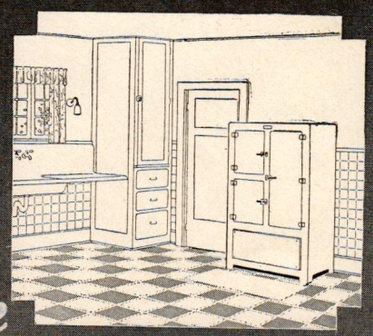

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Entry of contestants' names, and applications for detailed programs of the competition, should be addressed to the Professional Advisor, Mr. H. J. Williams, of the firm of Schenck and Williams, Architects, Mutual Home Building, Dayton, Ohio.

The competition will close on Tuesday, October twenty-seventh, 1925.

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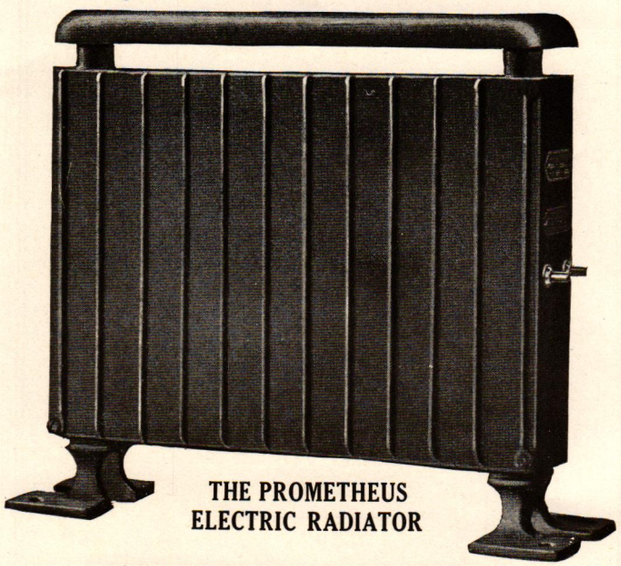

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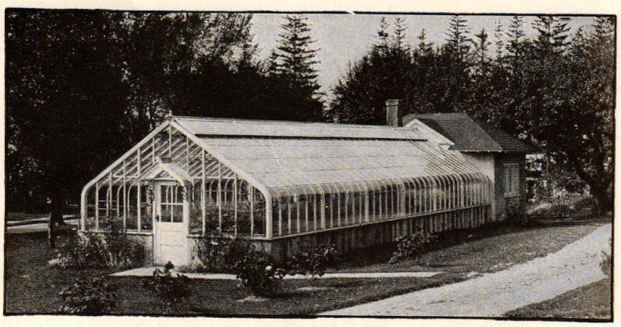

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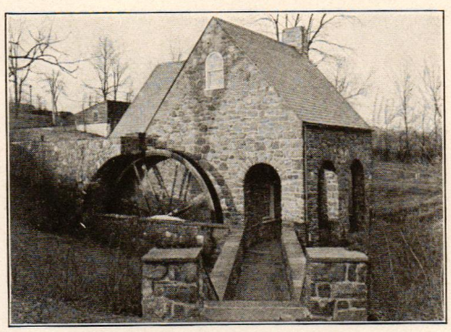

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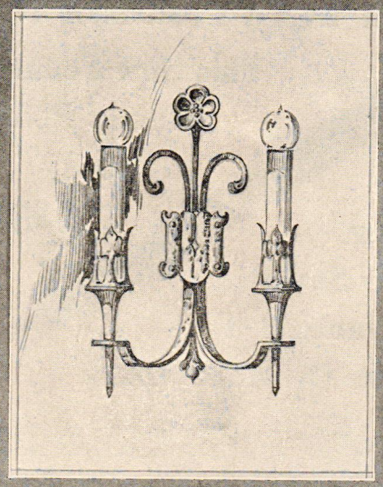

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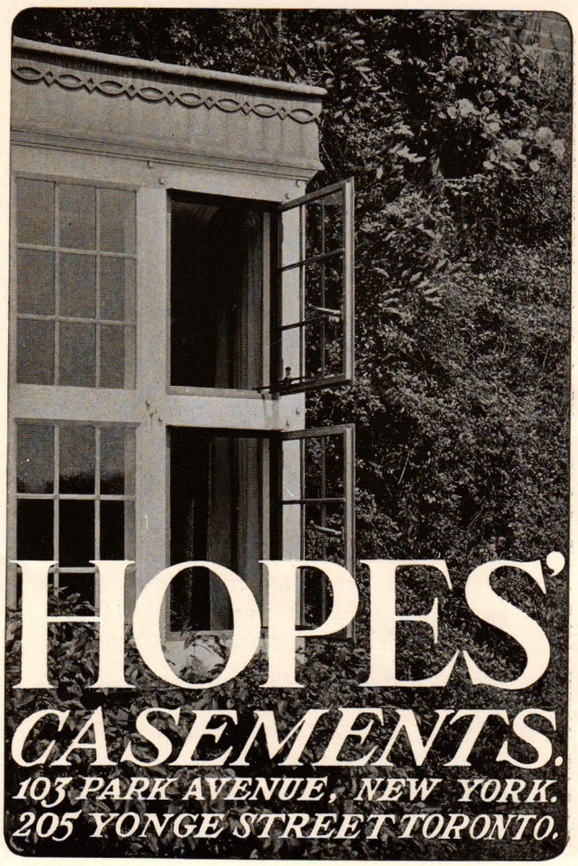

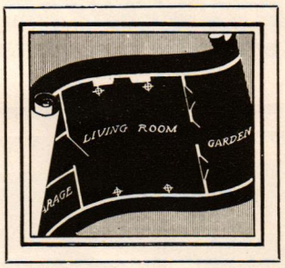

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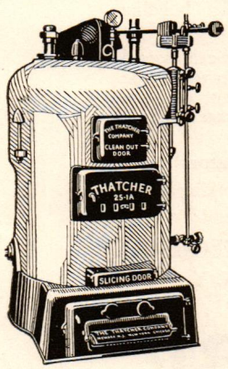

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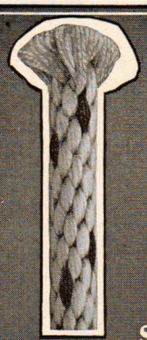

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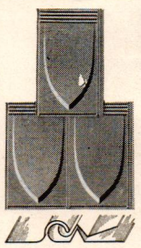

Fig. 157

Note the construction of patent Interlocking Device used on Edwards Metal Shingles and Spanish Tile

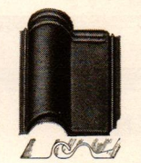

Fig. 367
Metal Spanish Tile for main part of roof.

Edwards "Queen Anne" Metal Shingles

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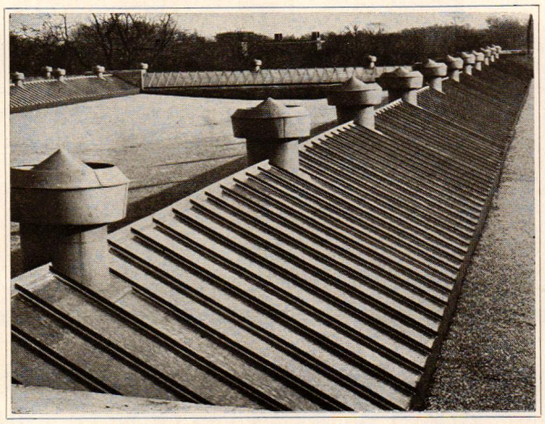

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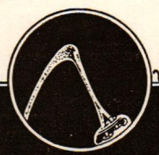

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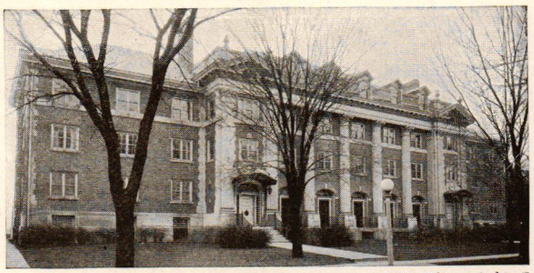

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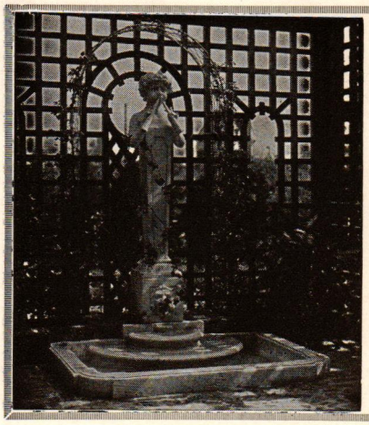

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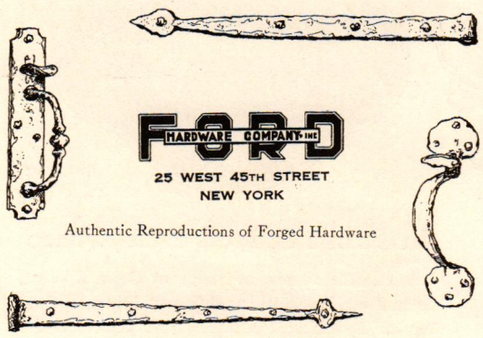

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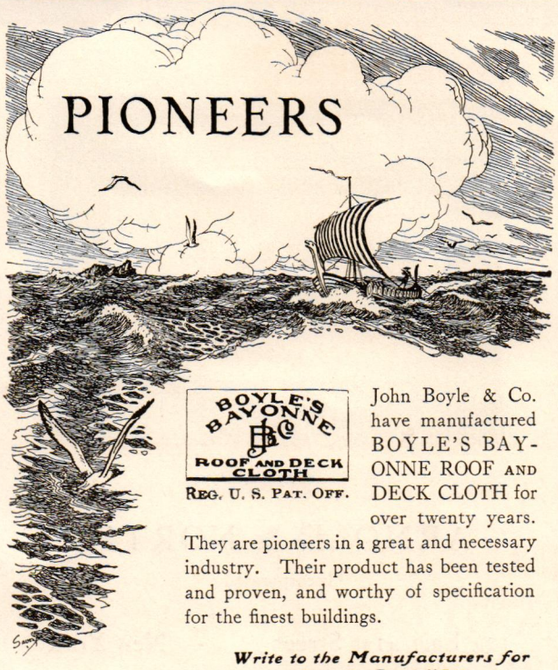

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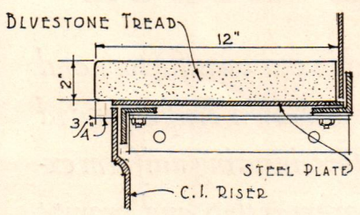

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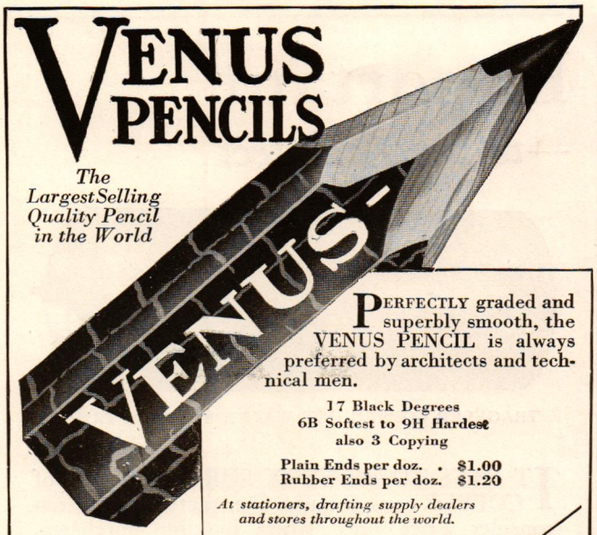

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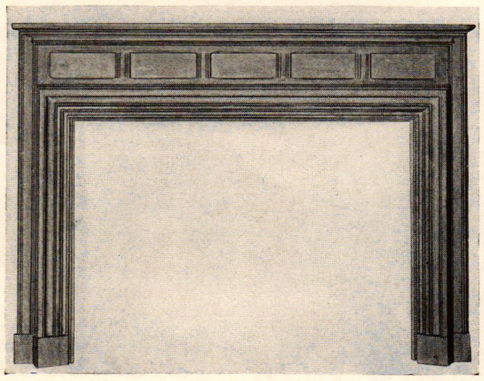

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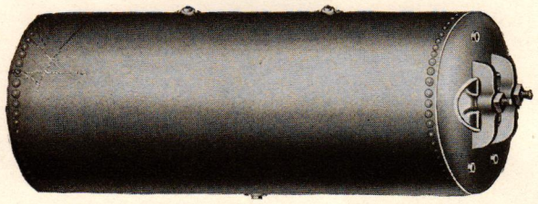

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of ARCHITECTURE, published monthly at New York, N. Y., April 1st, 1925.

State of NEW YORK, County of NEW YORK

Before me, a NOTARY PUBLIC in and for the State and county aforesaid, personally appeared CARROLL B. MERRITT, who, having been duly sworn according to law, deposes and says that he is the BUSINESS MANAGER of ARCHITECTURE, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, to wit:

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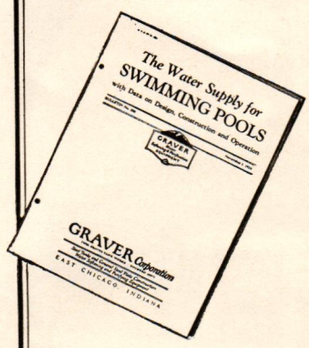

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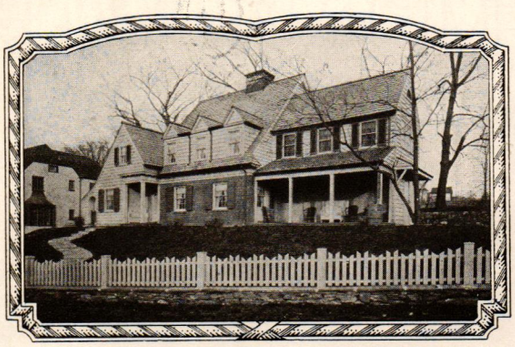

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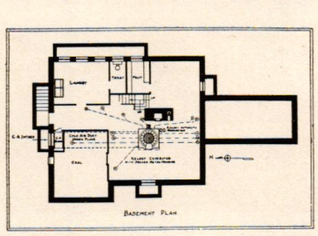

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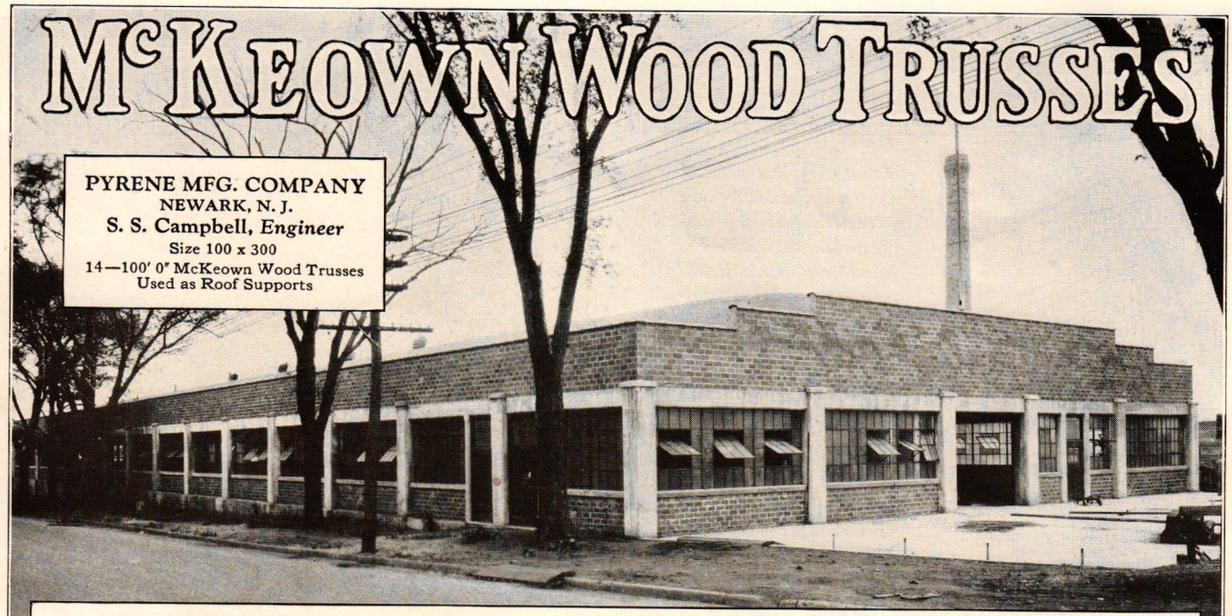

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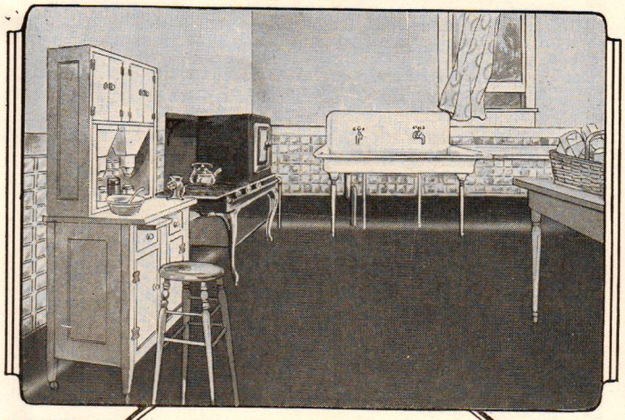

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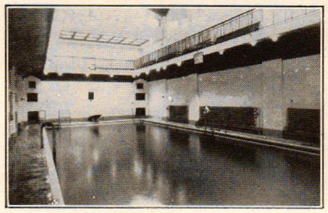

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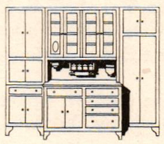

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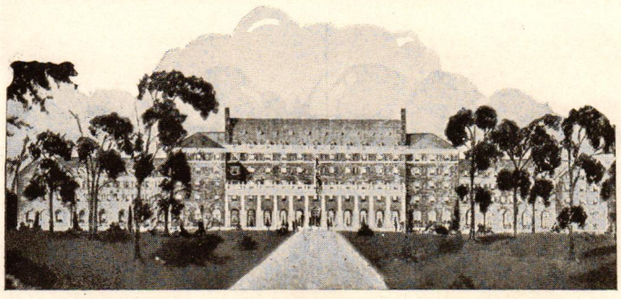

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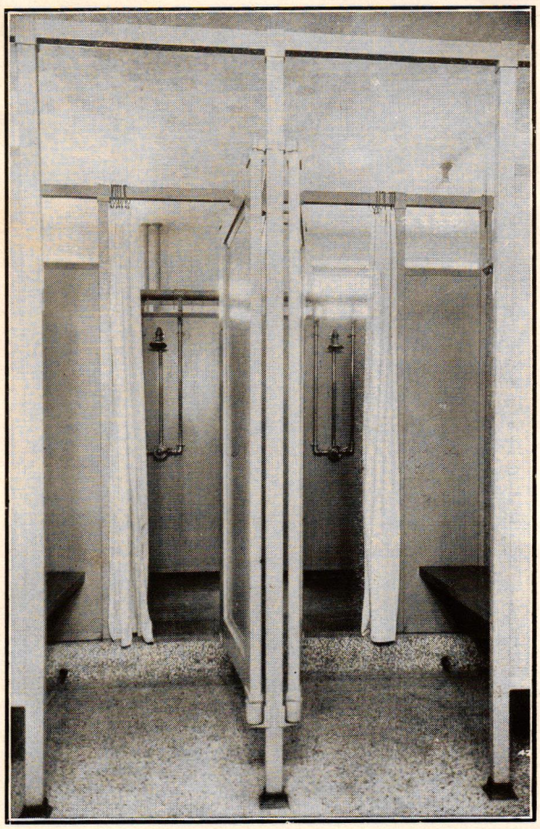

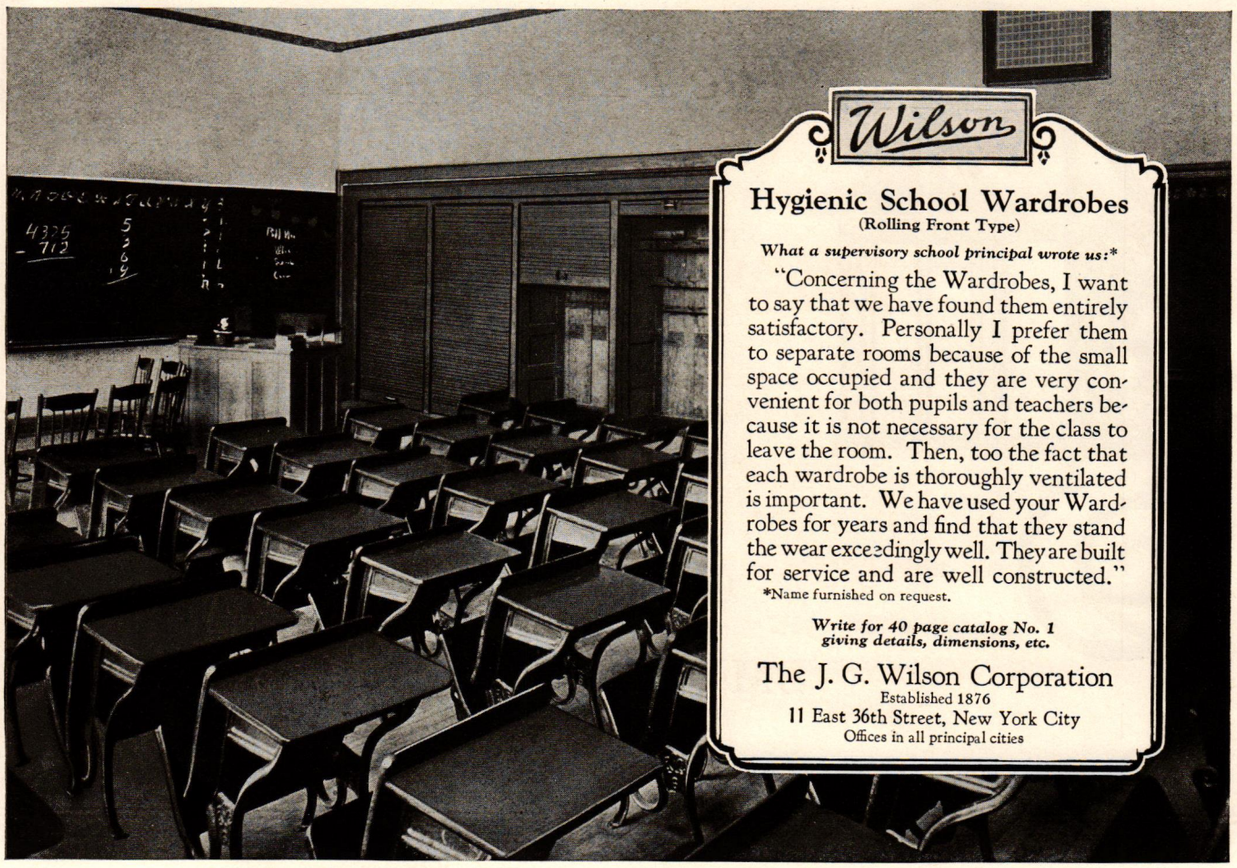

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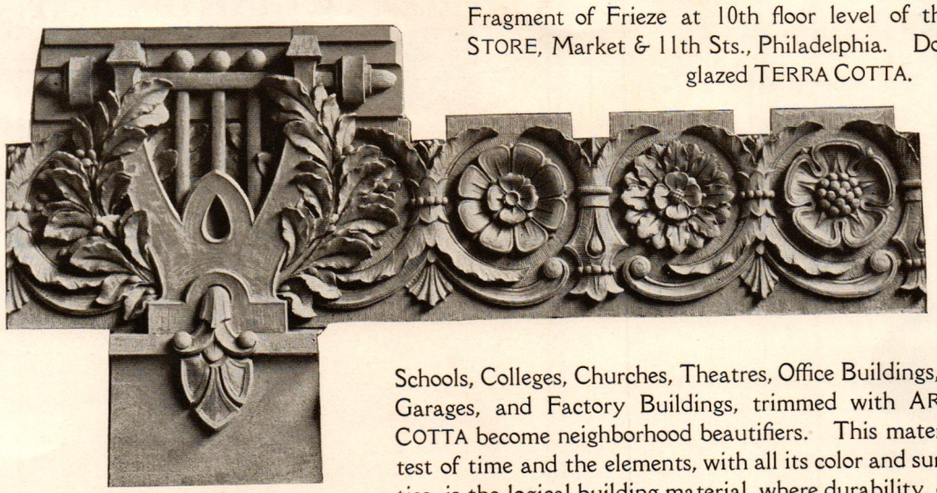

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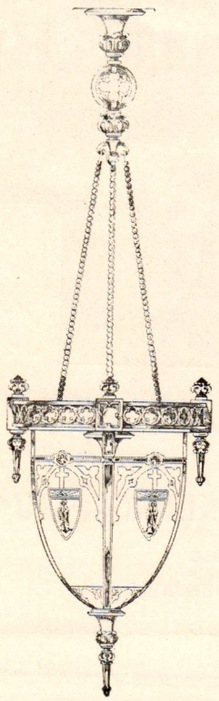

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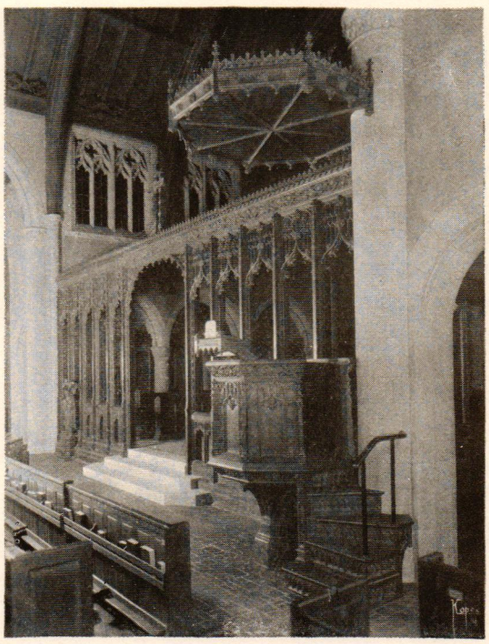

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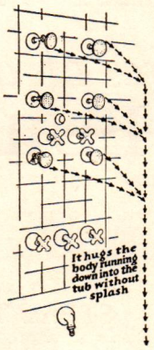

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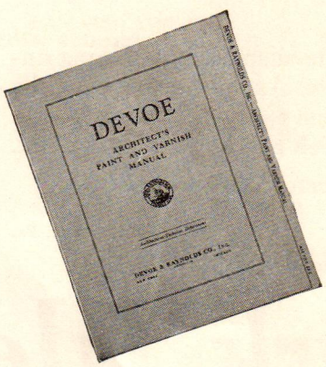

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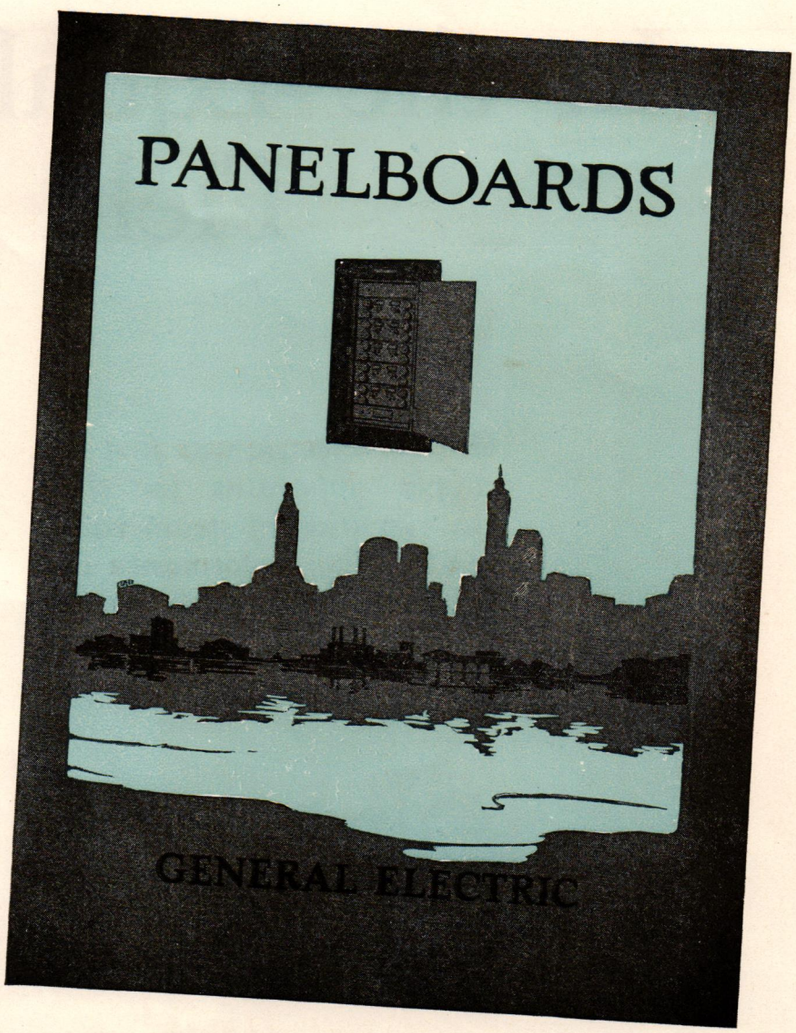

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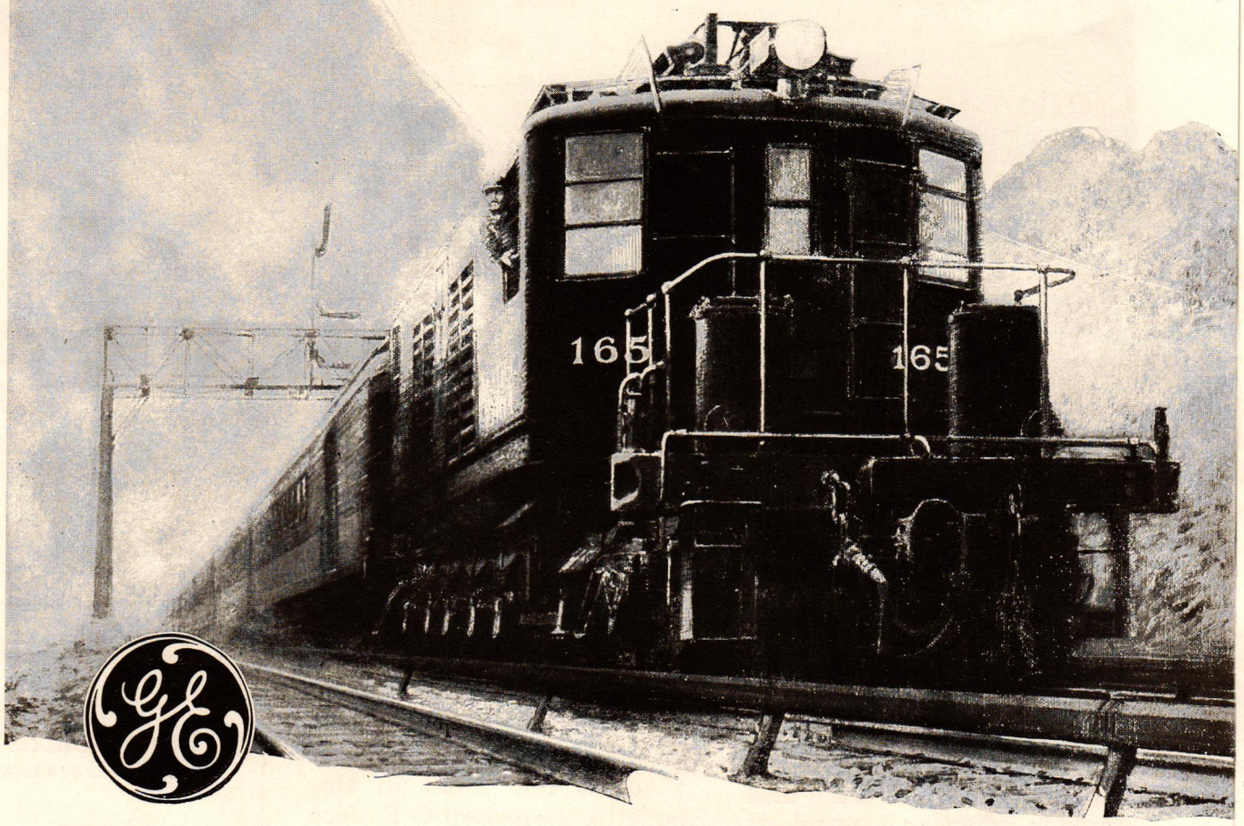

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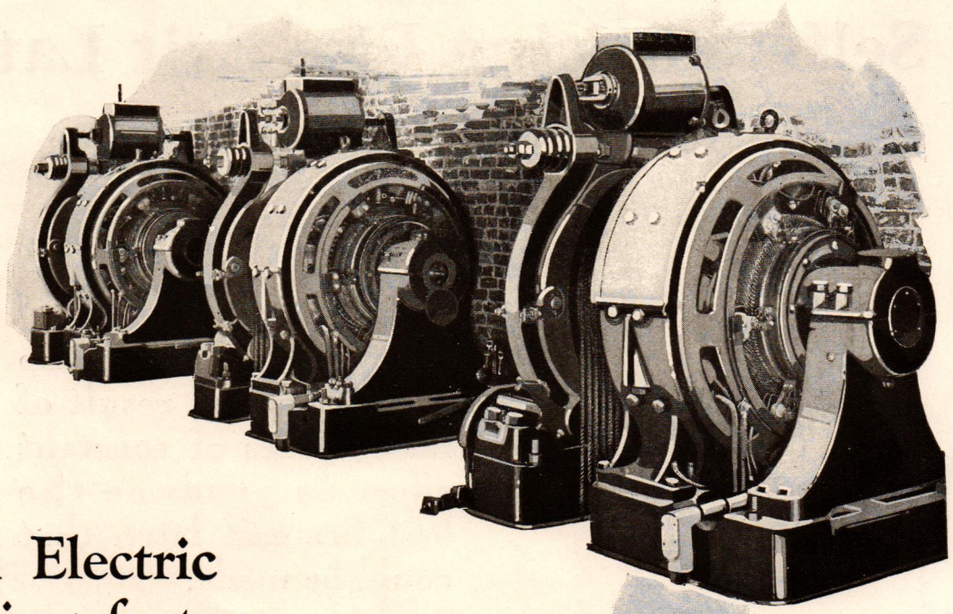

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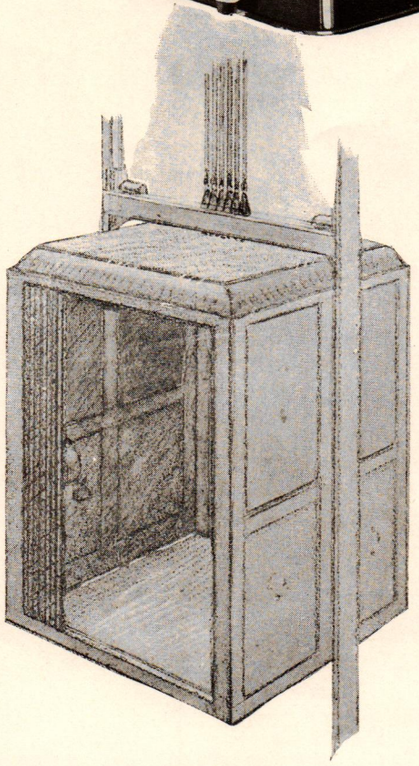

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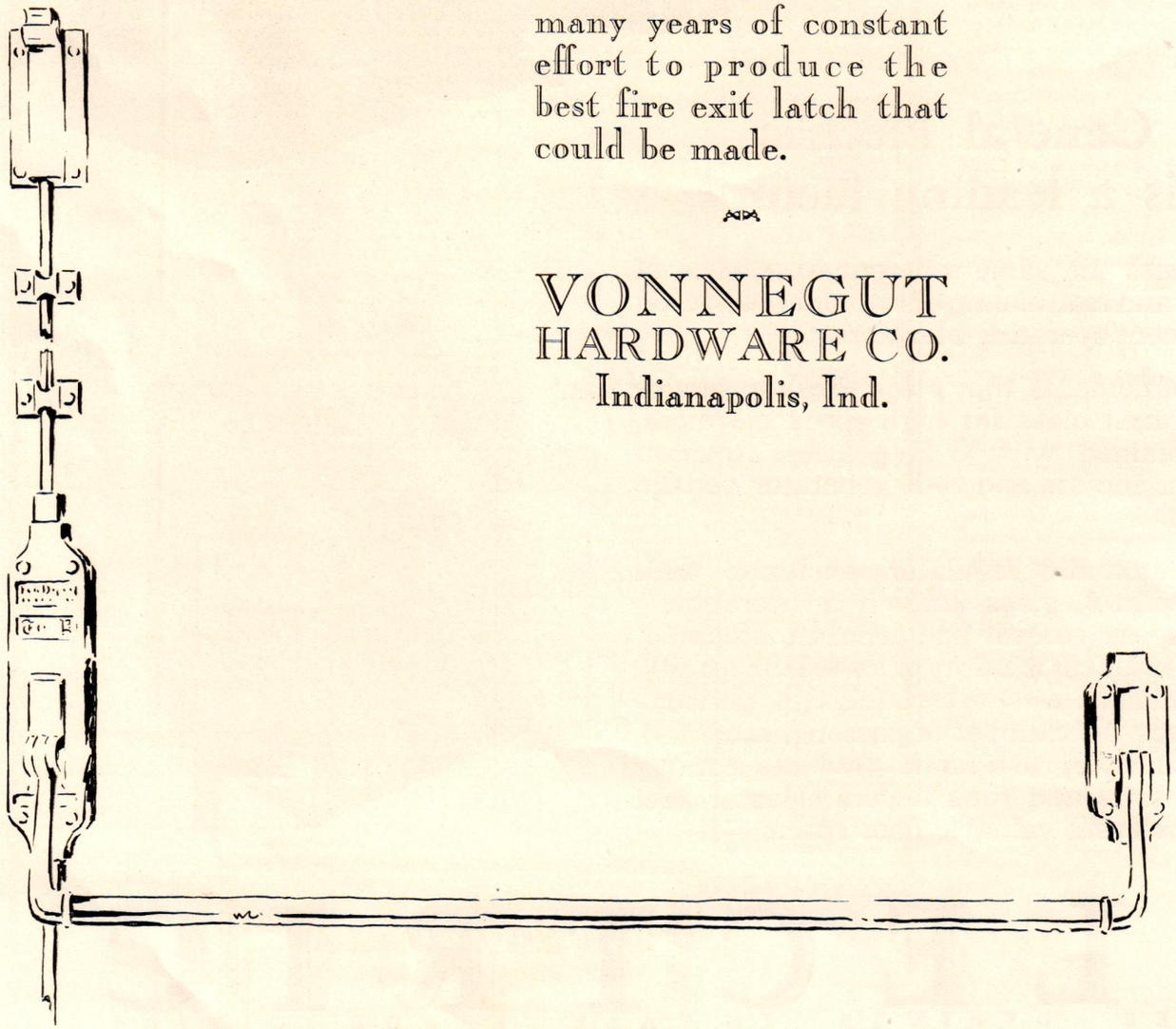

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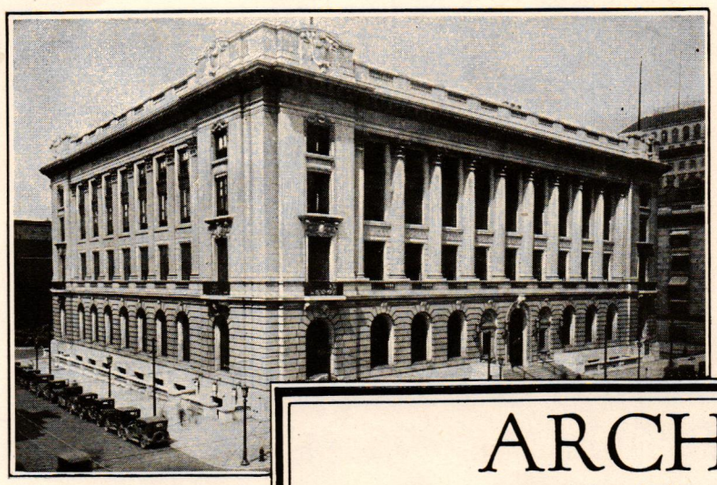

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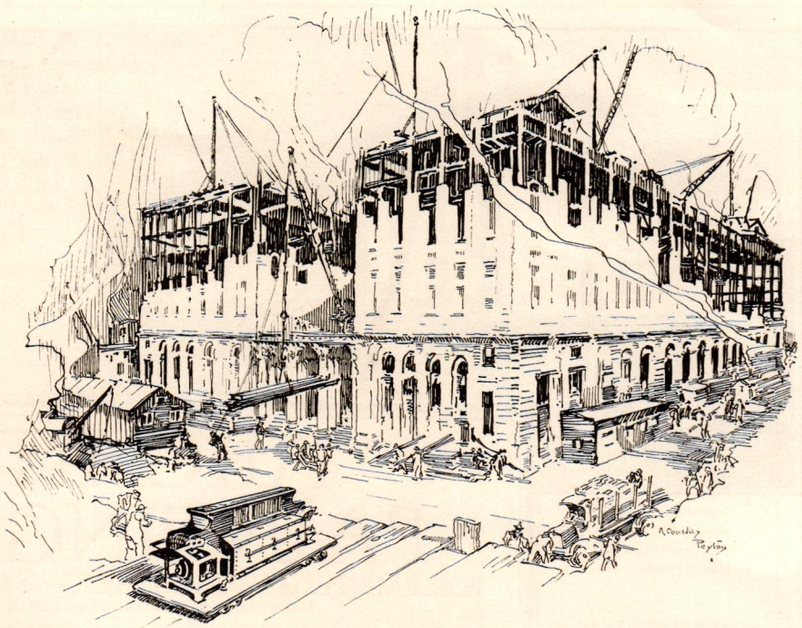

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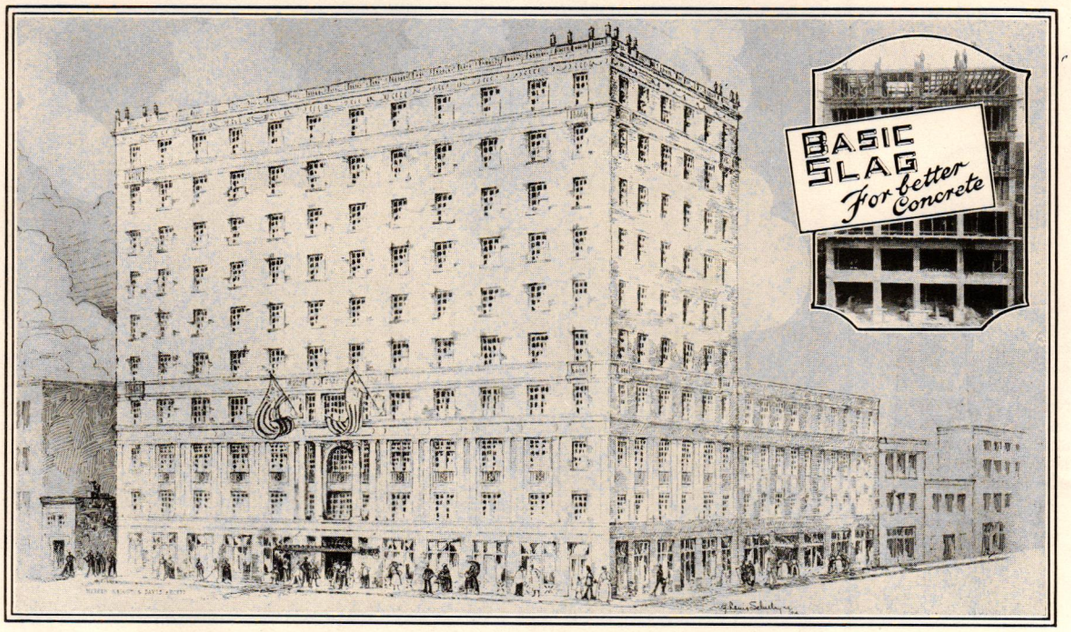

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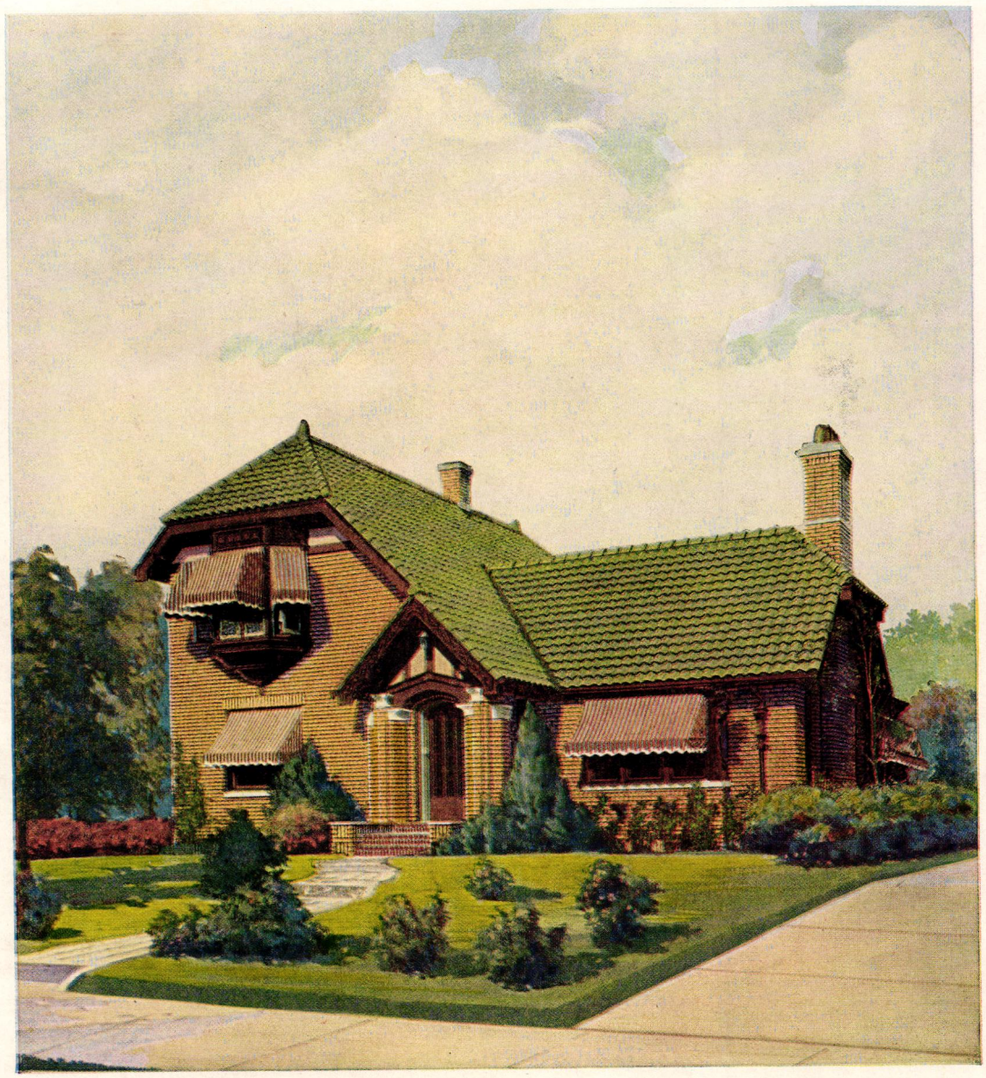

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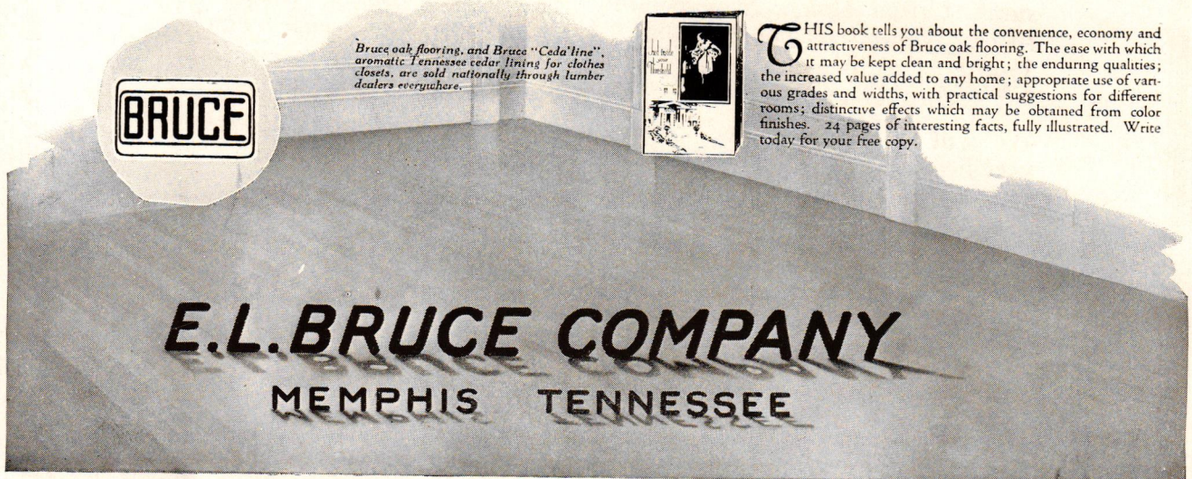

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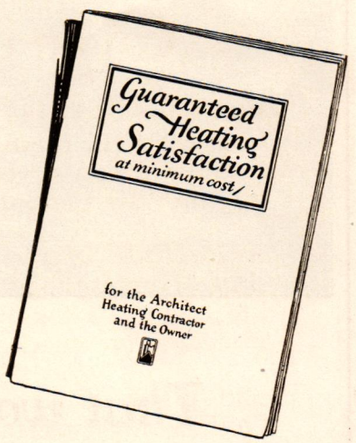

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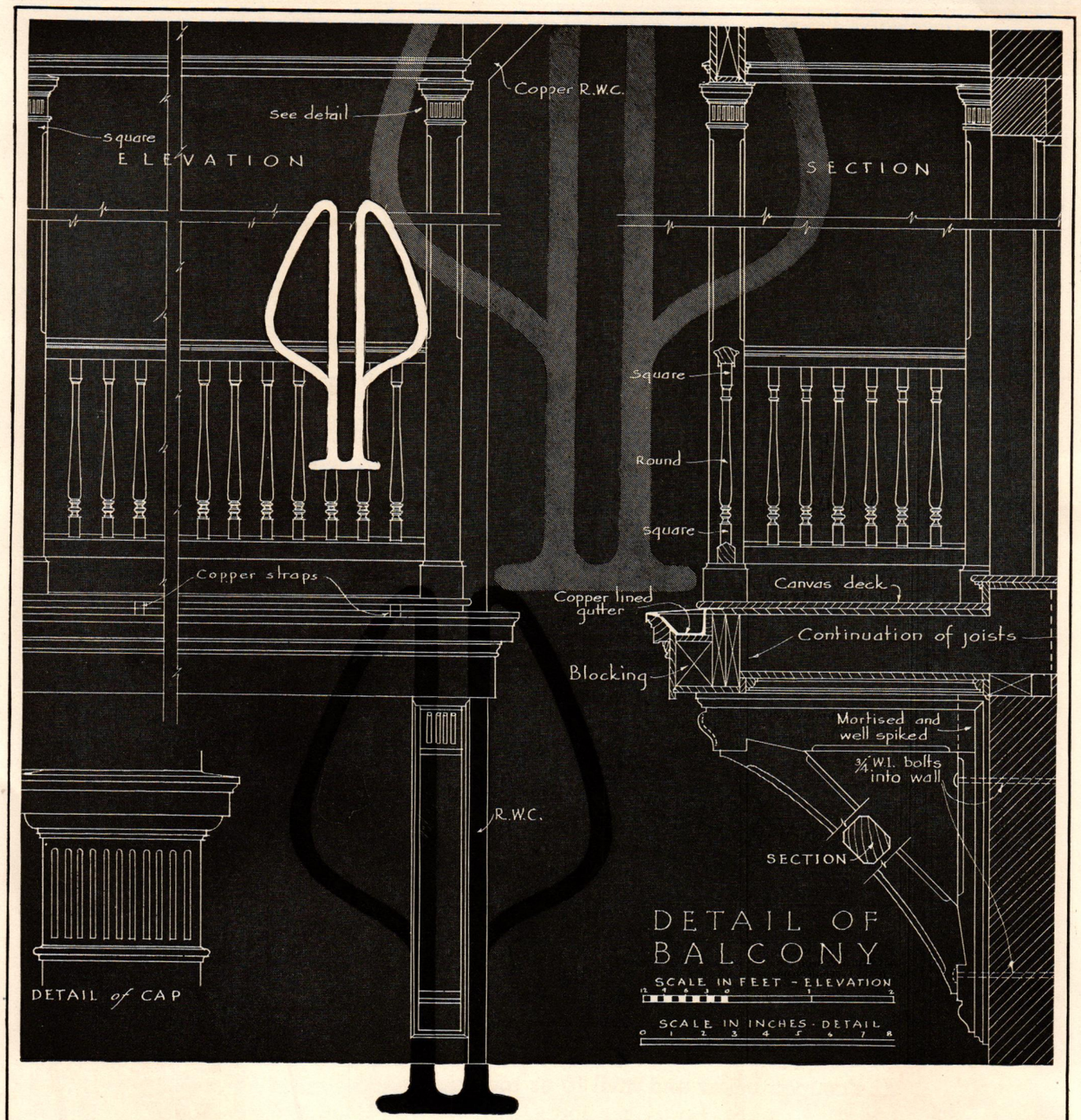

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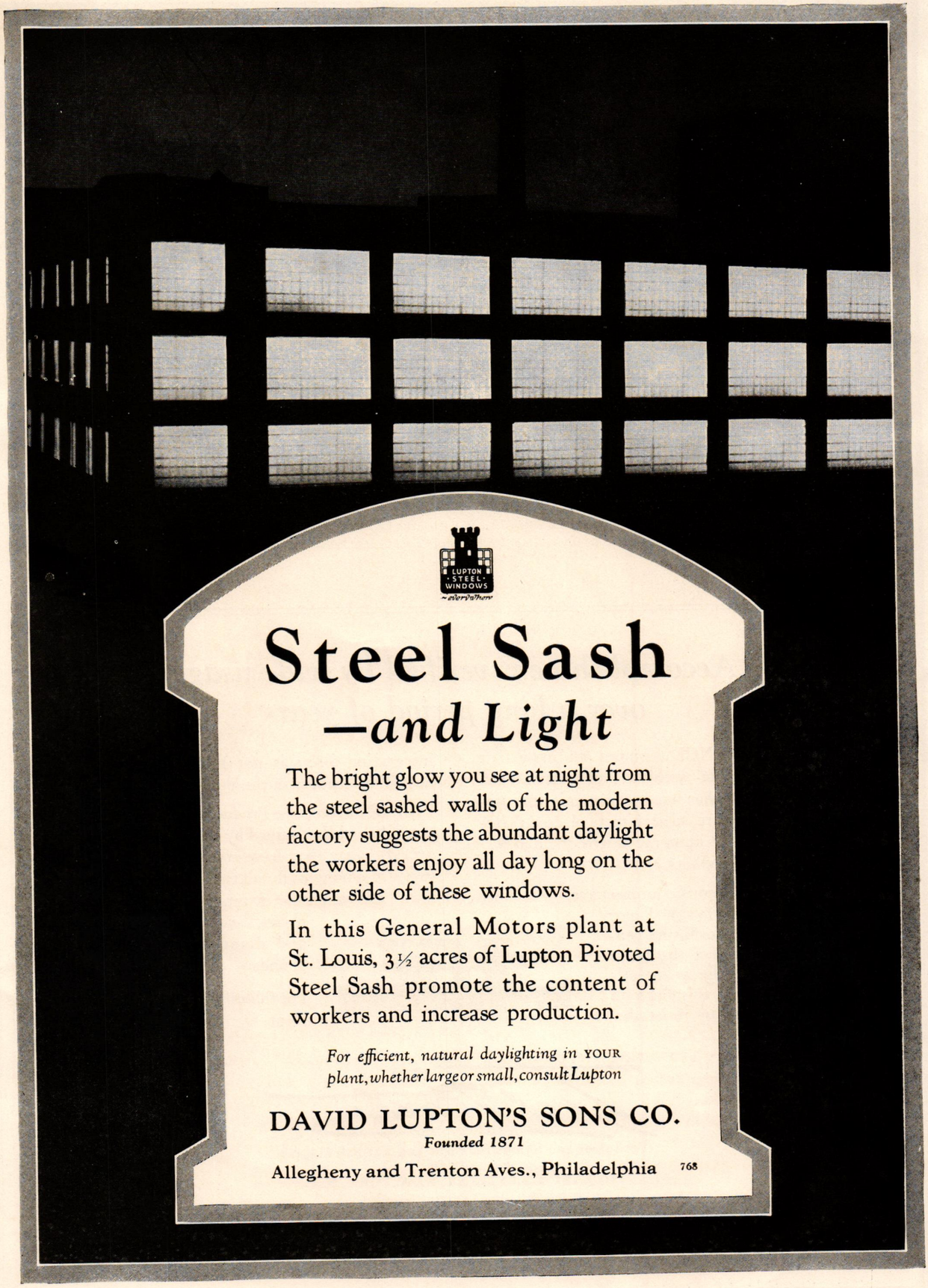

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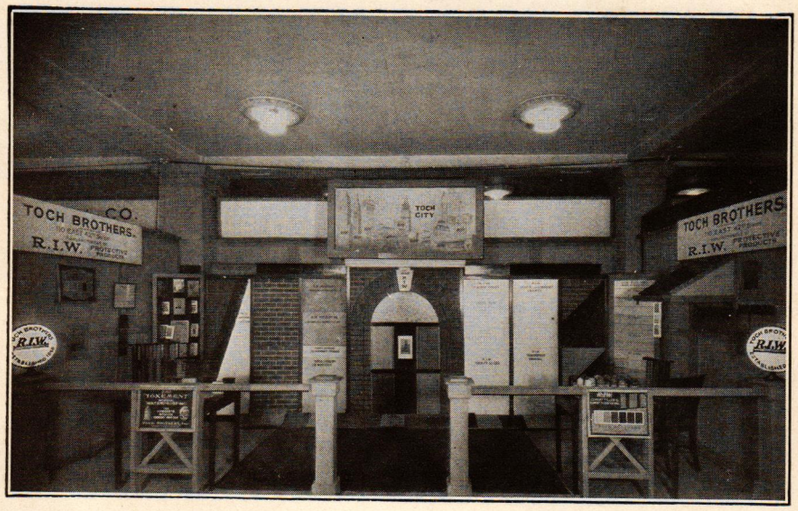

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[THE NUMBERS REFER TO ADVERTISING PAGES ONLY]

	Page
Adam, Frank, Electric Co	64
American Blue Stone Co	75
American Brass Co	38 and 56
American Bridge Co	87
American Face Brick Ass'n	55
American Lead Pencil Co	75
American Pin Co	88
American Seating Co	87
American Sheet and Tin Plate Co	35
Anchor Post Iron Works	65
Architectural Clearing House	71
Armstrong Cork Co. (Linoleum Division)	47
Armstrong Cork & Insulation Co	89
Arnold & North Co	76
Art Metal Construction Co	77
Associated Tile Mfrs	9
Atlas Portland Cement Company	10
Austral Window Co	108
Batchelder-Wilson Co	13
Bauer Supply Company	69
Berry Brothers, Inc	16
Birmingham Slag Co	98
Bonded Floors Co	38a
Boyle, John, & Co	75
Briar Hill Stone Co	63
Brounet, Arthur (Decorator)	67
Bruce, E. L., Co	100
Burnham Boiler Co	4th Cover
Carey, Philip, Co	33
Cassidy & Co	70
Chamberlin Metal Weather Strip Co	28
Chemical Toilet Corp	75
Clow, James B., & Sons	36
Colt's Patent Fire Arms Co	96
Compound & Pyrono Door Co	14
Conkling-Armstrong Terra Cotta Co	85
Copper & Brass Research Ass'n	86
Cornell Iron Works	66
Cutler Mail Chute Co	76
Dahlstrom Metallic Door Company	25
Daunt, William A	17
Delco Light Co	68
Detroit Graphite Co	85
Detroit Steel Products Co	18
Devoe & Raynolds Co., Inc	90
Dixon, Joseph, Crucible Co. (Paint)	80
Durastone Co	81
Duriron Company, The	15
Edwards Mfg. Co	73
Electro-Light Engraving Co	74
Emack, The John D., Co	66
Erkins Studios	74
Fitz Water Wheel Co	69
Ford Hardware Co	74
Frink, The I. P., Co	23
General Electric Co. (Wiring)	91, 92, 93
Globe Ventilator Co	72
Gorton & Lidgerwood Co	80
Graver Corp	77
Guth, Edwin F., Co	86
Hachmeister-Lind Chemical Co., The	78
Hart & Crouse Co	52
Hart & Hegeman Co., The	102
Hartmann-Sanders Company	22
Hess Warming & Ventilating Co	66
Hockenbury System, Inc., The	80
Hood, B. Mifflin, Brick Co	21
Hope, Henry, & Sons	70
Horn, A. C., & Co	81
International Casement Window Co	11
Irving, W., Forge Co	Text 235
Jamison Cold Storage Door Co	6
Janes & Kirtland	79
Jenkins Bros	31
Josam Mfg. Co	61
Kawneer Co	57 and 58
Kelsey Heating Co	77
Kent-Costikyan Co	72
Kerner Incinerator Co	65
Kewanee Boiler Co	3
Kewaunee Mfg. Co	72
King Construction Co	68
Kinnear Mfg. Co	60
Kohler Co	43
Lord & Burnham Co	50
Louisville Cement Co	51
Ludowici-Celadon Co	99
Lupton's, David, Sons Co	105
Lutton, W. H., Co	60
Maddock's, Thomas, Sons Co	45
Major Equipment Co	62
Manhattan Machine & Repair Company	74
McCabe Hanger, The	63
McKeown Bros. Co., The	78
Minneapolis Heat Regulator Co	27
Mississippi Wire Glass Co	62
Moulding Brick Co., The Thos	42
Nairn Linoleum Co	19 and 20
National Floor Tile Co	83
National Lime Ass'n	72
National Radiator Co	5
National Terra Cotta Society	41
National Tube Co	30
Nelson, Herman, Corp	32
New Jersey Wire Cloth Co	4
New Jersey Zinc Co	12
Norton Co	97
Pennsylvania, University of	74
Pittsburgh Reflector Company	34
Portland Cement Ass'n	49
Prometheus Electric Corp	68
Rackle, George, & Sons Co	82
Raymond Concrete Pile Co	77
Read Machinery Co	71
Reading Iron Co	26
Richards-Wilcox Mfg. Co	39
Robinson, Dwight P	2d Cover
Royal Ventilator Co	73
Ruud Mfg. Co	24
Samson Cordage Co	72
Sandusky Cement Co	1
Sanymetal Products Co	64
Sedgwick Machine Works	67
Sherwin-Williams Company	95
Smith, H. B., Co	103
Smyser-Royer Co., The	83
Speakman Co., The	70
Structural Slate Co	101
Taylor, Halsey W., Co	73
Thatcher Co., The	71
Toch Bros	106
Trageser, The John, Steam Copper Works	76
Trenton Potteries Co	8
Tuttle & Bailey Mfg. Co	46
U. G. I. Contracting Co	3d Cover
United States Radiator Corp	44
United States Rubber Company	53
Ventilouvre Co	61
Vermont Marble Company	29
Vitrolite Co	48
Vonnegut Hardware Co	94
Wagner Mfg. Co	69
Wallace & Tiernan Co., Inc	78
Webster, Warren, & Co	54
Weatherbest Stained Shingle Co	79
Weis, Henry, Mfg. Co	84
Western Brick Co	73
Western Pine Mfrs. Ass'n	104
Westinghouse Elec. & Mfg. Company	59
Wilson, The J. G., Corp	84

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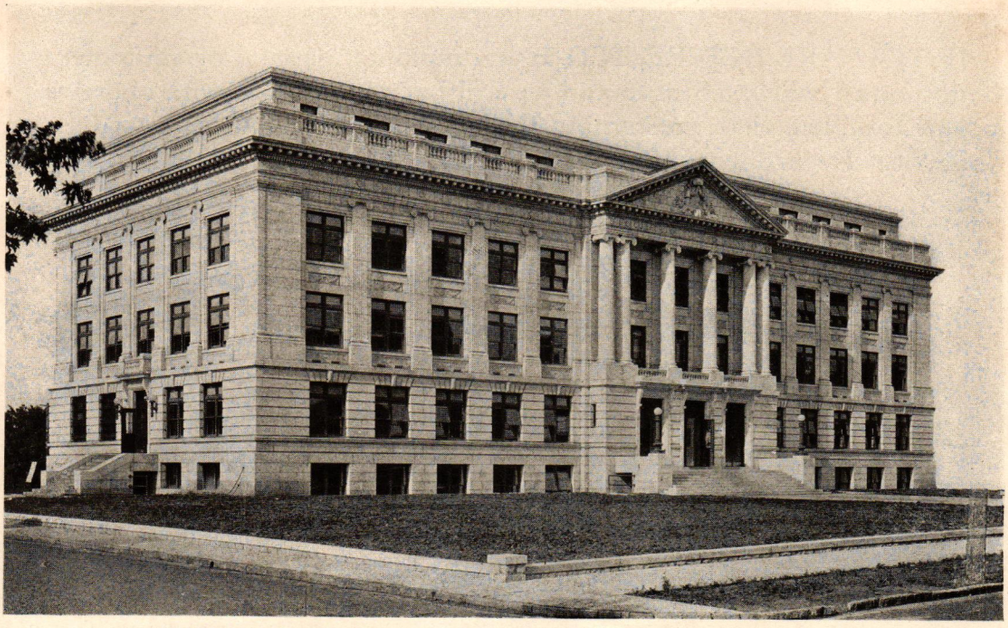

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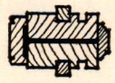

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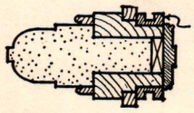

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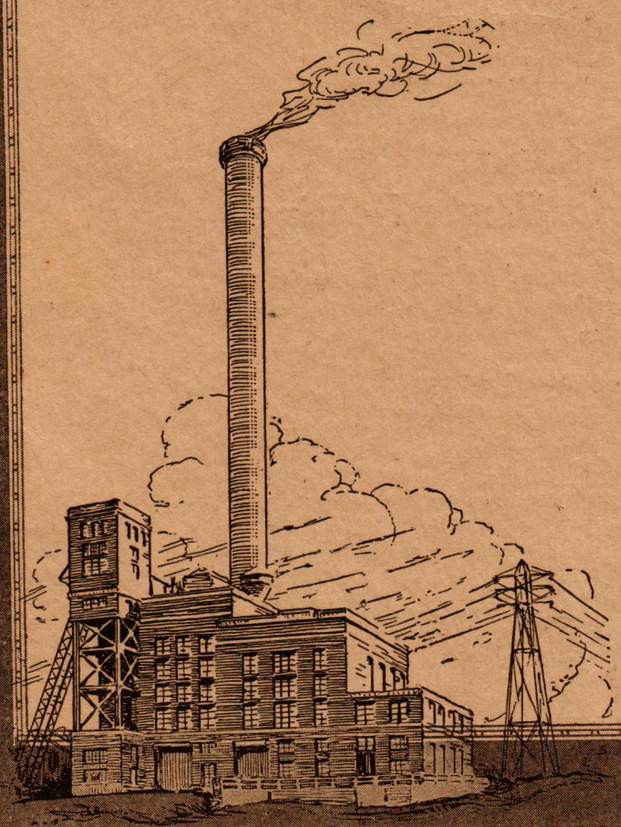

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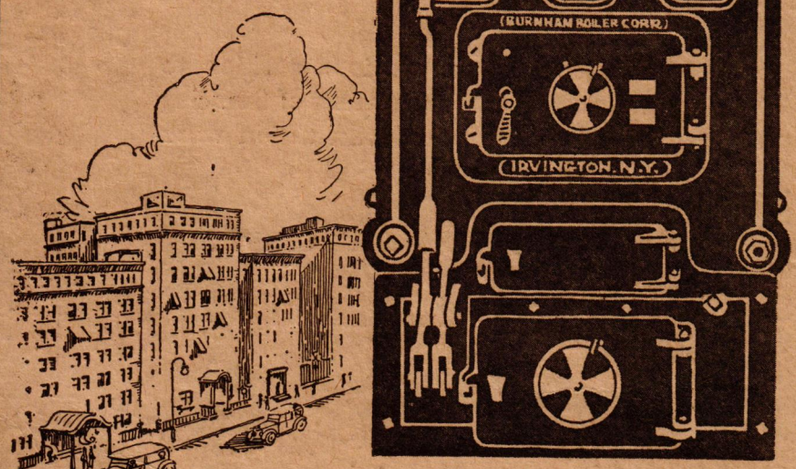

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