An

ANNOUNCEMENT OF A CHANGE IN OWNERSHIP OF THE AMERICAN ARCHITECT

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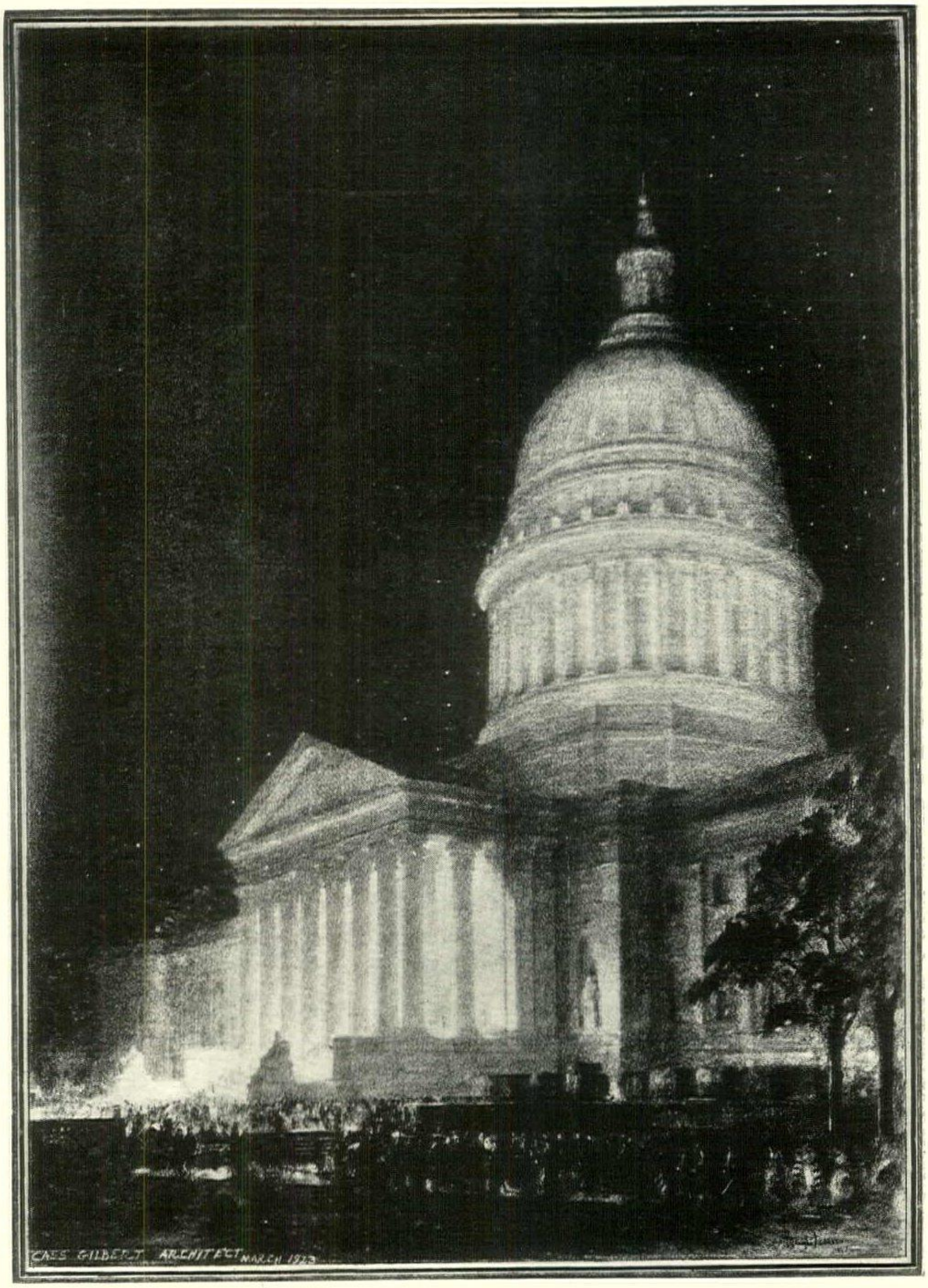
The next issue of THE AMERICAN ARCHITECT, which will appear August 20, will be the September issue and thereafter the magazine will appear as a monthly. Subscriptions will be adjusted on an equitable basis.

In the next issue will be made an announcement of future plans, which include the preservation of the best features and traditions of the publication with a widened editorial scope and a standard of reader interest comparable to that obtaining in the other Hearst magazines.

August 5, 1929 — *The Publishers*



WEST VIRGINIA STATE CAPITOL, CHARLESTON, W. VA.
CASS GILBERT, ARCHITECT
From a drawing by Hugh Ferriss

THE AMERICAN ARCHITECT
August 5, 1929

The AMERICAN ARCHITECT

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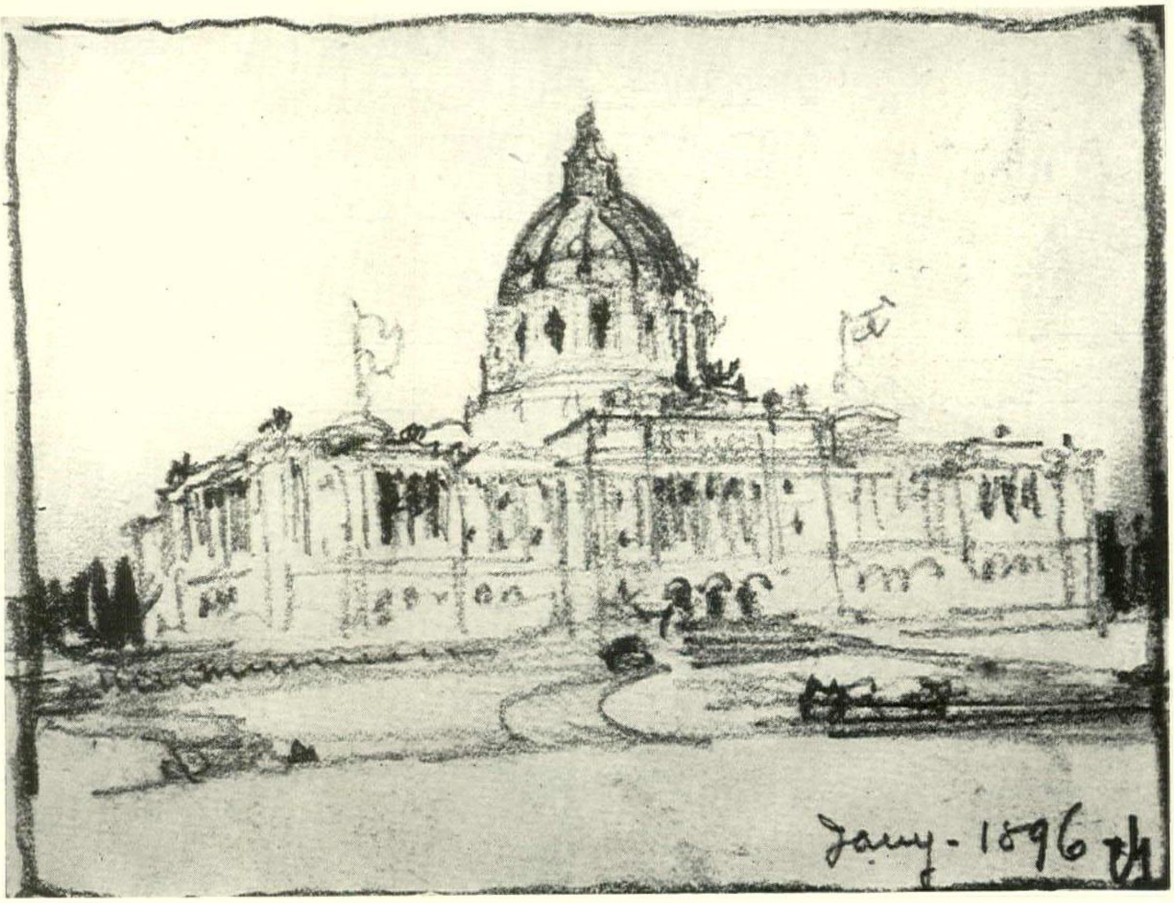
THE GREATEST ELEMENT OF MONUMENTAL ARCHITECTURE

By CASS GILBERT

IT goes without saying that sound construction, good planning, adaptability to needs and proper economy are all essentials of a properly organized and well managed building—but, speaking purely from the standpoint of design, the greatest element of monumental architecture is good proportion. No matter how ornate or how simple and plain a structure may be, in the last analysis, its principal claim to beauty lies in its proportions, not in its adornment. The proportions of a facade or the proportions of the composition or mass of a great building convey the impression of beauty or majesty or power, of strength or grace or charm, as nothing else can do.

It is the proportions of the Parthenon at Athens that have made it supreme among the works of

WEST VIRGINIA STATE CAPITOL, CHARLESTON, W. VA.
CASS GILBERT, ARCHITECT
From a drawing by Chesley Bonestell



MINNESOTA STATE CAPITOL, ST. PAUL, MINN.
CASS GILBERT, ARCHITECT
Preliminary thumbnail sketch by Cass Gilbert

the Greeks, the most refined nation the world has ever known in matters of art.

It is the proportion of width to height that makes a column, a doorway or an arch beautiful or ugly. It is so with every moulding, panel, cornice or detail of a building. Too coarse and heavy and it is clumsy—too thin and attenuated and it is weak and ineffective. However beautiful a detail of a building may be in itself, it is ineffective and unsatisfactory if not proportioned to the wall or surface of which it is a part.

When it comes to great masses such as may be composed of a group of buildings or a vast structure crowned by a dome or tower rising above surrounding structures and taking its place as a landscape feature, then the art of composition of great masses is called into play and the outline of a silhouette must be most carefully studied with a view to the proportions of the several parts of the group as well as that of the whole mass, if success is to be attained and the eye is to be satisfied.

This requires the highest skill of the architect, as it is one of the most difficult of all the arts, and its complete success is only achieved when the proportions and disposition of the plan are such as to permit the fullest and finest development of the mass of the building. Hence the plan (by which we mean the disposition and arrangement of the main subdivisions of the structure or its outline on the ground) is the primary condition of a well proportioned building.

In the study of architecture the serious student soon comes to understand that the proportions of the plan are vital to the proportions of the exterior of the building, and that the proportions of rotunda, nave, corridors or rooms—i.e., length to width and height—are of essential value.

This is difficult enough when one thinks in terms of only two dimensions—width and length—but when one must also think in terms of a third dimension height, or even of a fourth dimension thickness, it becomes difficult indeed. Add to this perspective, i.e., the vista disclosing the relation of one part to another, and you have an art that challenges the highest training and skill.

I have said enough perhaps to point out that, however the eye may be beguiled by beautiful color or beautiful material used in a building which no doubt add greatly to the beauty of the architecture, the greatest quality is proportion.

It may be assumed of course that any people that is sufficiently interested in erecting a fine building to wish it to be beautiful in the sense of fine proportions would also wish it to be of permanent and beautiful material and to be embellished with beautiful and appropriate color decoration and sculpture. Here again the word "proportion" applies, though in a somewhat different sense. The ornamentation would be disproportionate, and in bad taste if too abundant, misplaced in its location, or over accented.

The great masters of painting understood this when they emphasized some focal point by a high-light. The dramatist understands it who makes his play not a series of major climaxes, but leads up to one grand effective climax.

In other words, take the great corridors or the rotunda of a great building. They are not made finer or more beautiful by the lavish use of glittering polished marbles or bronze, but by the restrained and quiet use of material accented at focal points by more precious material like a rich panel of marble or bronze, or a splendid mural painting, which stands out with the greater splendor by the quiet and restrained surroundings that make it a prominent focal point in the design.

The interior of the Pantheon in Paris is lined with a quiet, warm grey stone in which great historic pictures are set. The Rotunda of the Capitol in Washington is lined with stone. The corridor in which John Sargent's pictures in the Boston Public Library are placed is of grey limestone—many examples could be quoted, but these will suffice.

In other words, when we speak of a fine building, a noble building, we do not mean an elaborate or an ornate building; and when we say we do not mean an elaborate or an ornate building, we do not mean that we prefer one that is built of, or finished in, inferior or unsuitable material that looks cheap or mean or impoverished, or that has imitation marble, imitation bronze or inferior mural painting. There is nothing more worthless than bad art. Let us consider therefore only those things that are genuine and real and honestly what they pretend to be, avoiding the ostentatious glitter and extravagance of excess of ornamentation on the one hand, and the impoverished look of over-strained parsimony on the other.

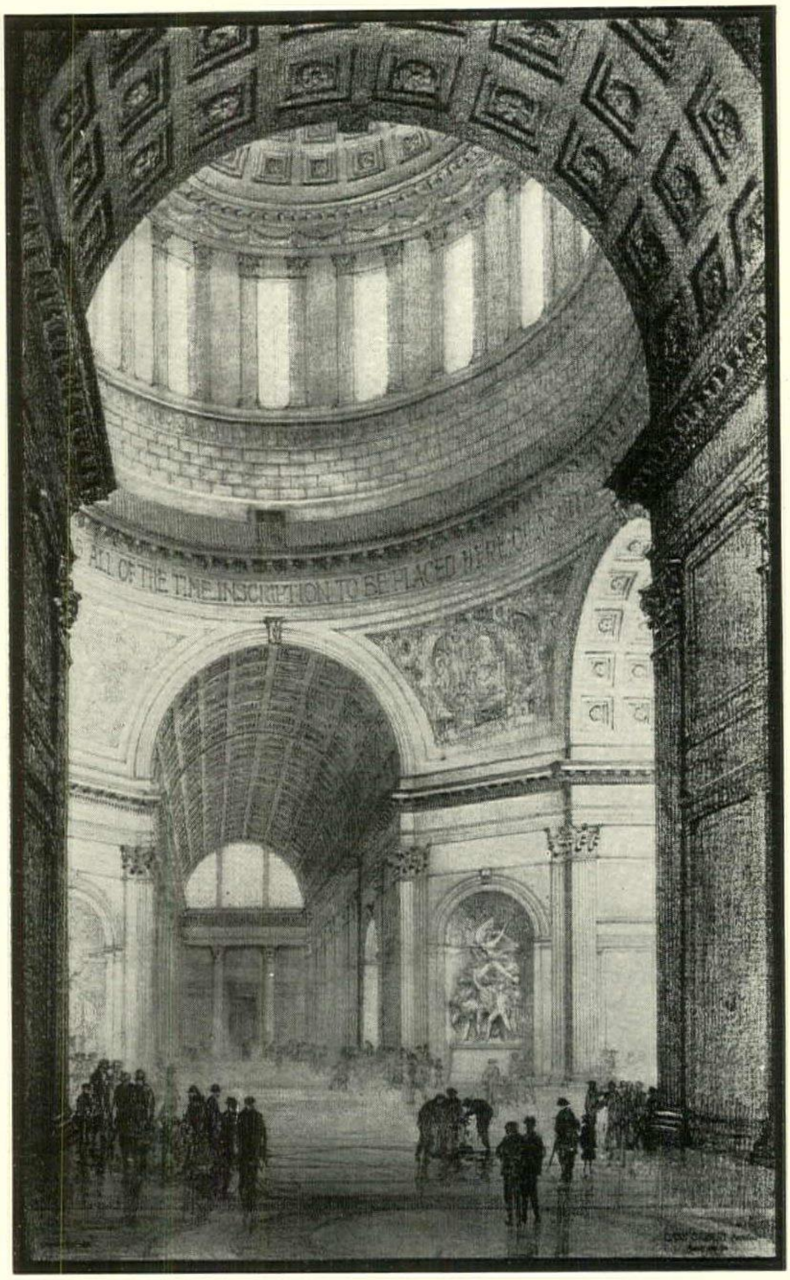
The poor man can not fill his home with works of art. The State can, however, satisfy his natural craving for such things in the enjoyment of which

Photo by Kammerdiener

MINNESOTA STATE CAPITOL, ST. PAUL, MINN.
CASS GILBERT, ARCHITECT

all may freely share, by properly embellishing its public buildings, and particularly its state capitol. There the rich and the poor alike may find the history of the state and the ideals of its government set forth in an orderly and appropriate way in noble inscriptions, beautiful mural paintings and sculpture and in the fine proportions and good taste of the whole design.

It is an inspiration toward patriotism and good citizenship, it encourages just pride in the state, and is an education to on-coming generations to see these things, imponderable elements of life and character, set before the people for their enjoyment and betterment. The educational value alone is worth to the state far more than its cost—it supplements the education furnished by the public school and the university—it is a symbol of the civilization, culture and ideals of our country.



ROTUNDA, WEST VIRGINIA STATE CAPITOL, CHARLESTON, W. VA.

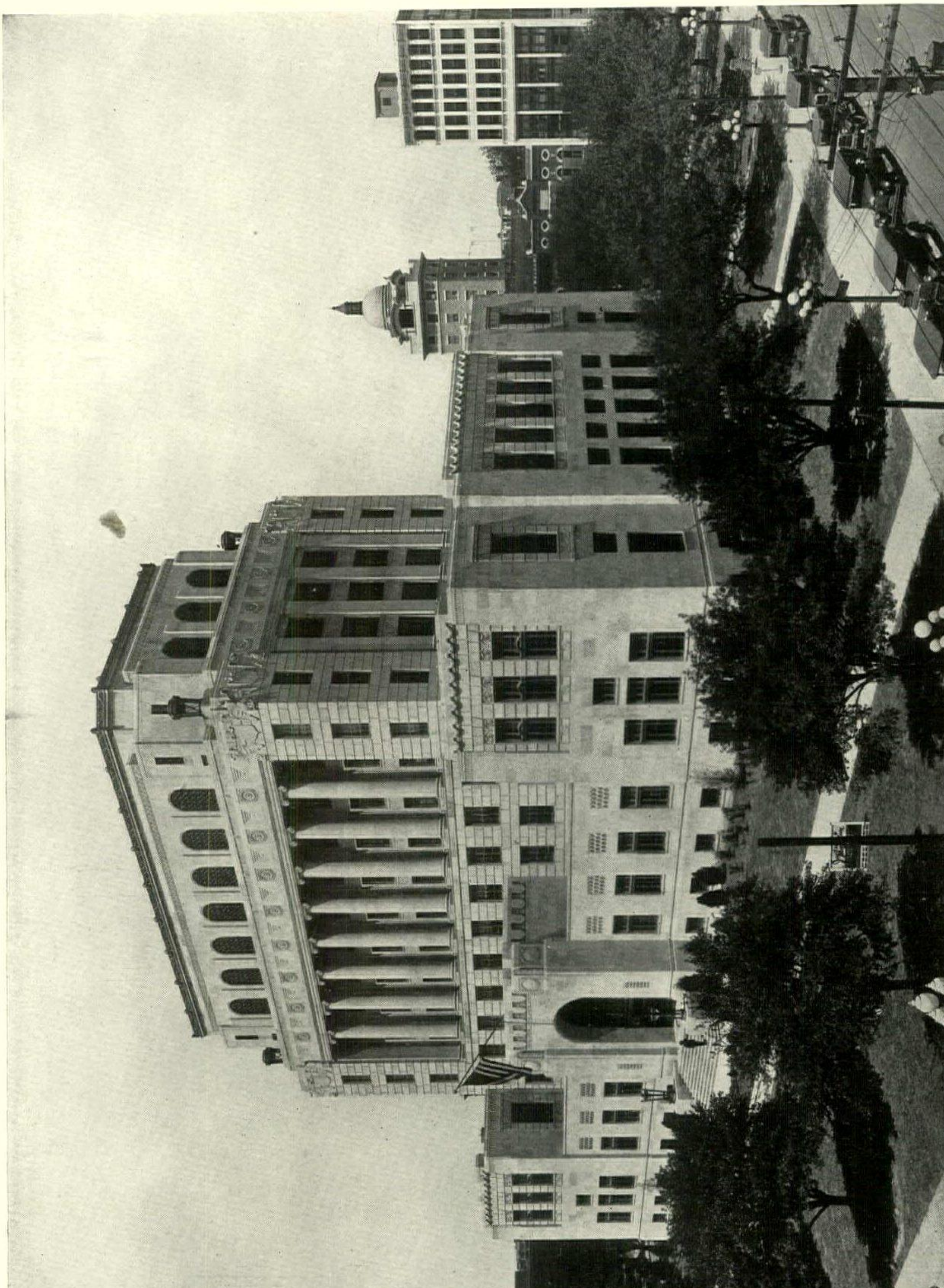
CASS GILBERT, ARCHITECT

From a drawing by Chesley Bonestell

Photo by Film Arbor Studios

MAIN ENTRANCE, CADDO PARISH COURT HOUSE, SHREVEPORT, LA.

EDWARD F. NEILD, ARCHITECT



CADDO PARISH COURT HOUSE, SHREVEPORT, LA.—EDWARD F. NEILD, ARCHITECT

SAINT FLORIAN CHURCH, DETROIT, MICH.

CRAM & FERGUSON

Architects

Photo by Thomas Ellison

Photo by Thomas Ellison

SAINT FLORIAN CHURCH, DETROIT, MICH.

CRAM & FERGUSON, ARCHITECTS

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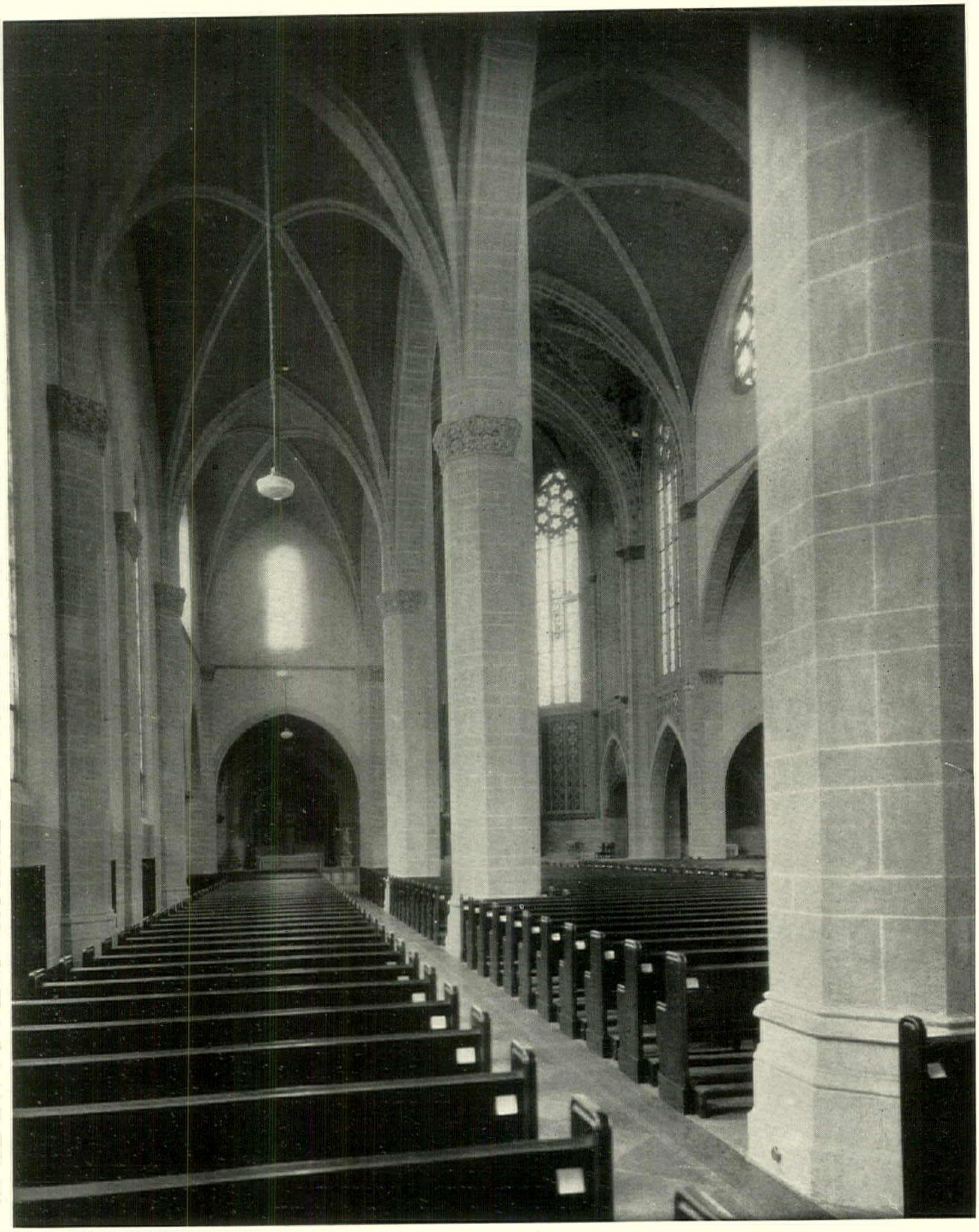

Photo by Thomas Ellison

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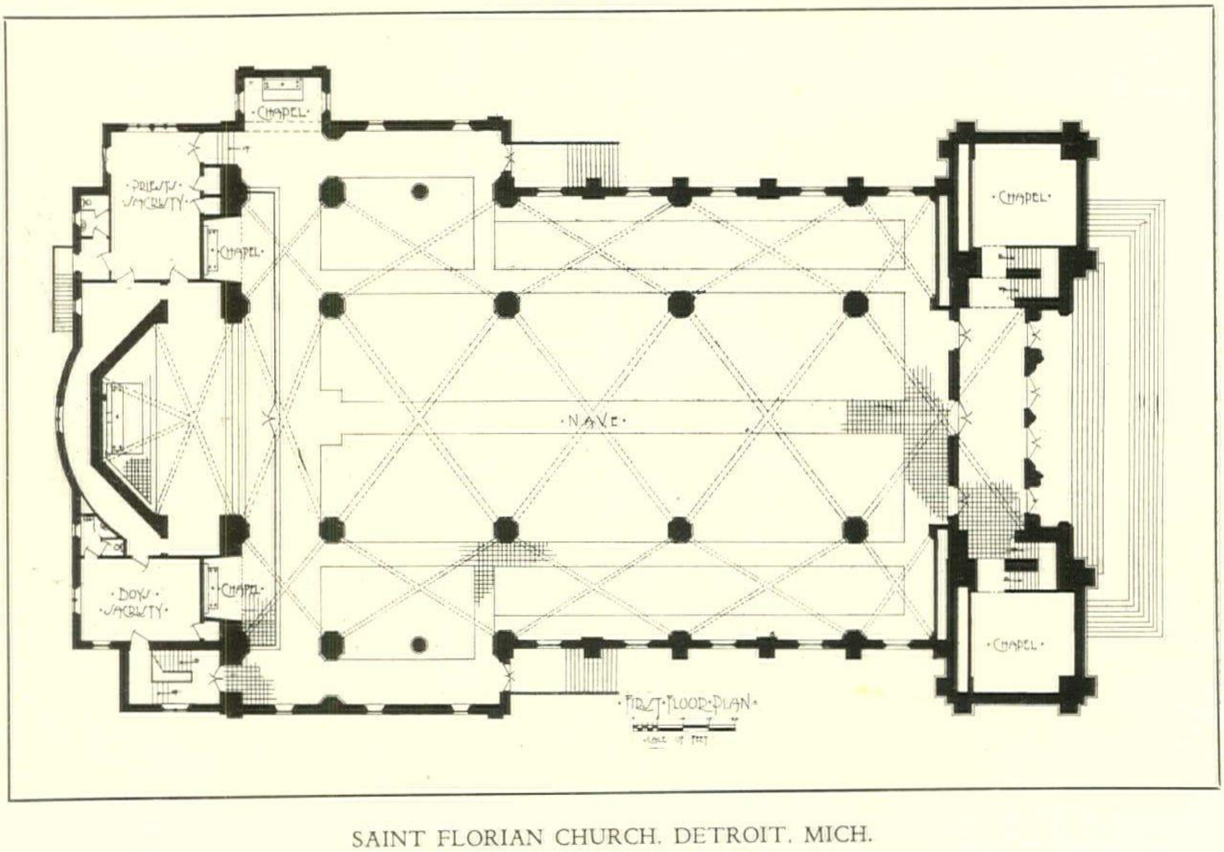


SAINT FLORIAN CHURCH, DETROIT, MICH.

CRAM & FERGUSON, ARCHITECTS

Photo by Longley

THE AMERICAN BUILDING, CINCINNATI, OHIO

JOS. G. STEINKAMP & BROTHER, ARCHITECTS

Photo by Longley

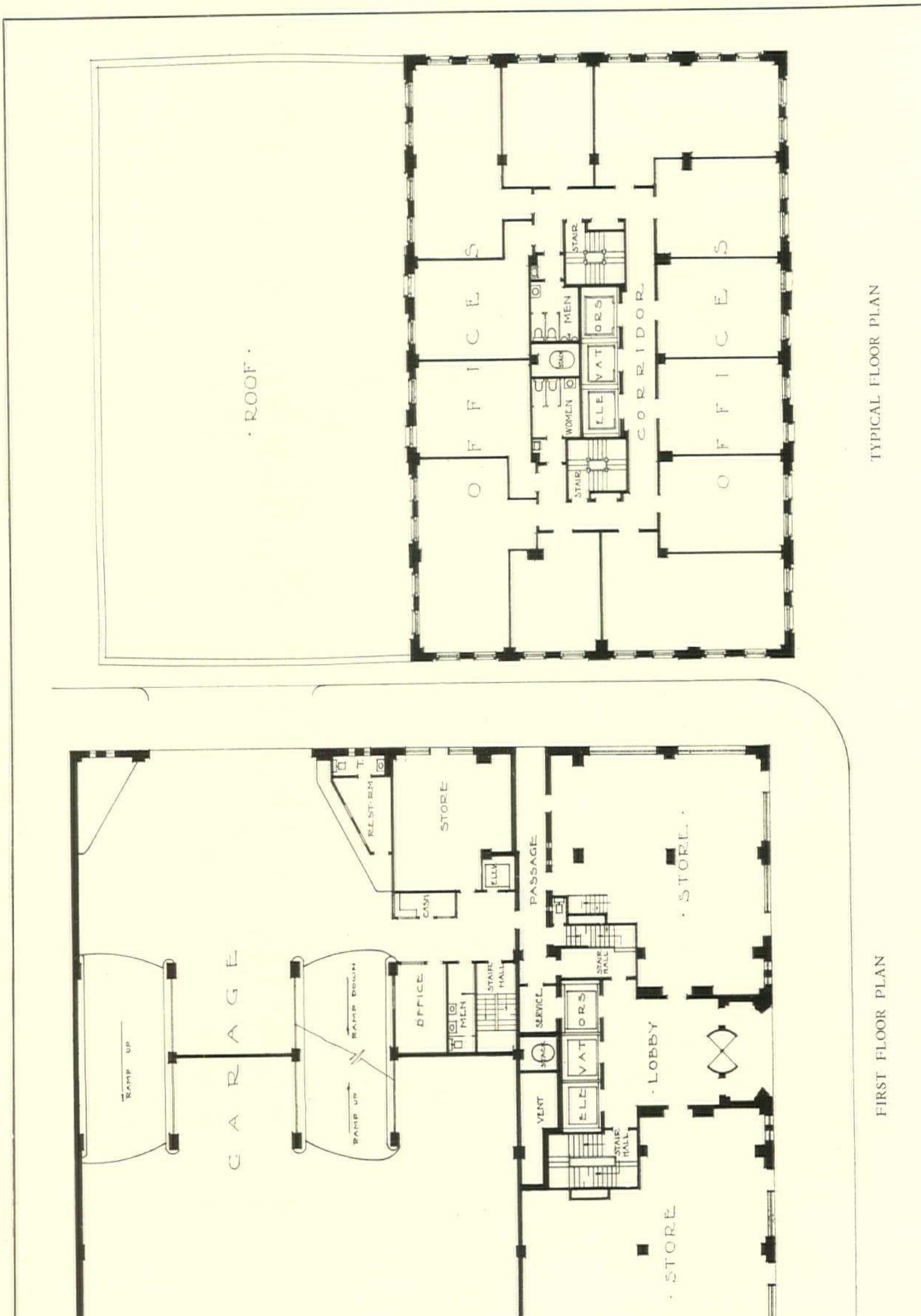
DETAIL UPPER STORIES—THE AMERICAN BUILDING, CINCINNATI, OHIO

JOS. G. STEINKAMP & BROTHER, ARCHITECTS

Photo by Longley

ENTRANCE DETAIL—THE AMERICAN BUILDING, CINCINNATI, OHIO

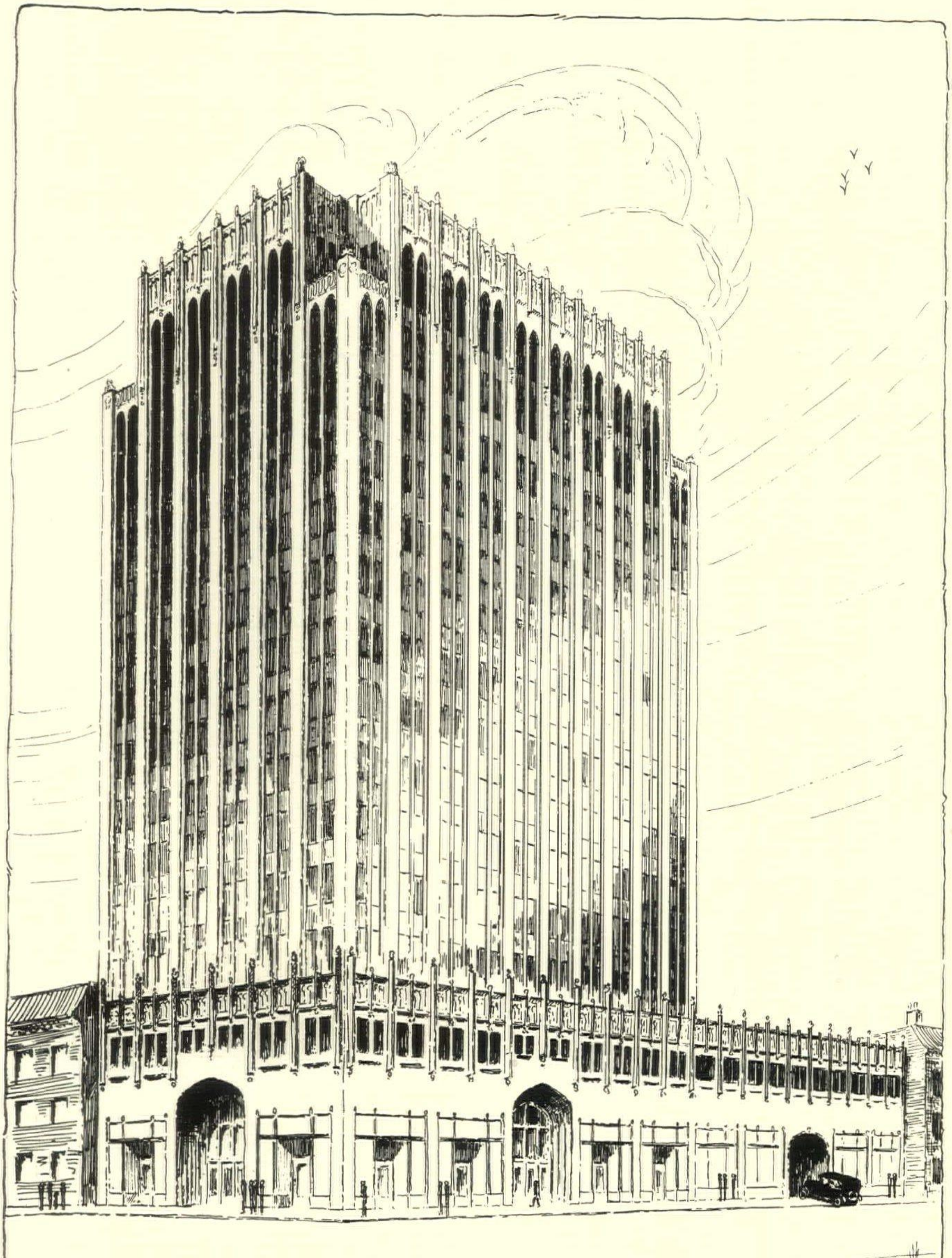
JOS. G. STEINKAMP & BROTHER, ARCHITECTS



TYPICAL FLOOR PLAN

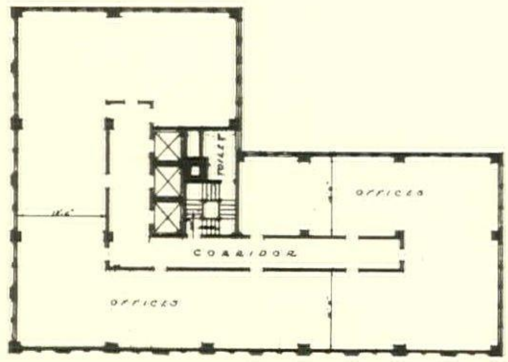
FIRST FLOOR PLAN

THE AMERICAN BUILDING, CINCINNATI, OHIO—JOS. G. STEINKAMP & BROTHER, ARCHITECTS

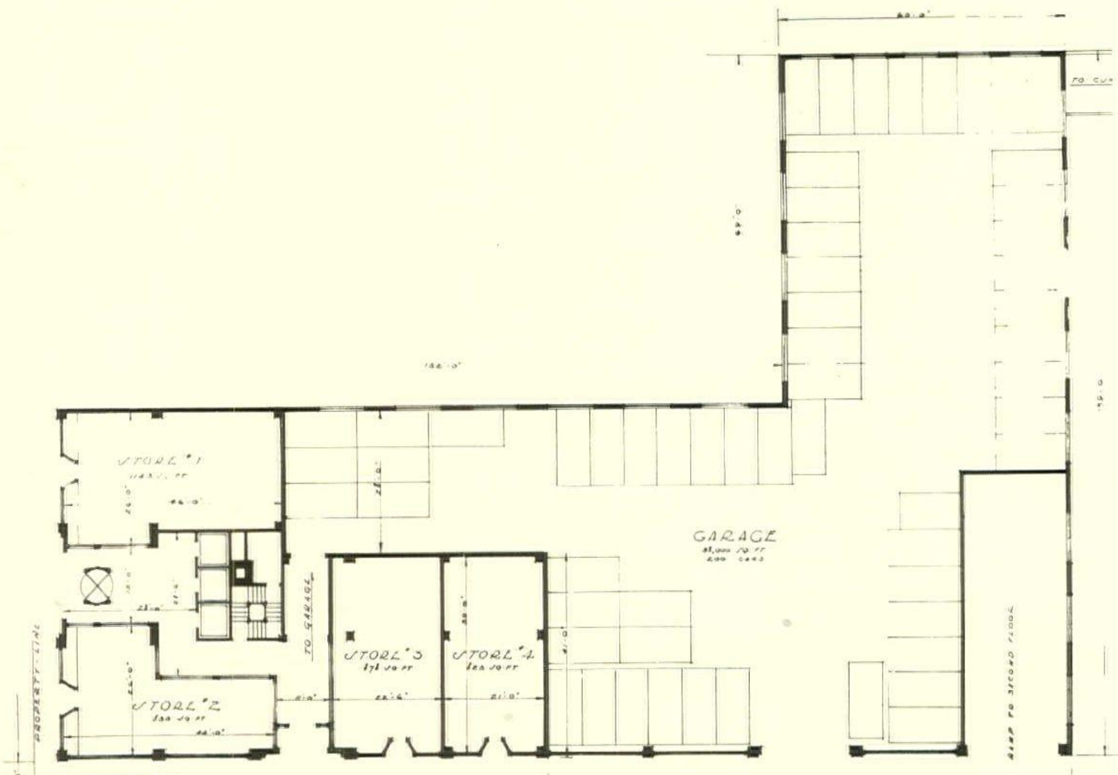


PROPOSED MEDICAL ARTS BUILDING, KNOXVILLE, TENN.

MANLEY & YOUNG, ARCHITECTS



TYPICAL OFFICE FLOOR PLAN



FIRST FLOOR PLAN

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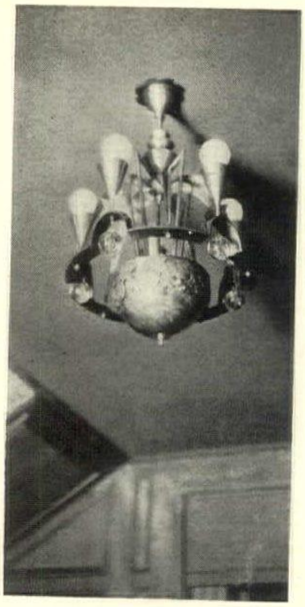


INTERIOR ARCHITECTURE

SPECIALLY DESIGNED STUDIO VISUALIZES GOOD ARCHITECTURAL WOODWORK

△ △

DISPLAY STUDIO OF THE DODDINGTON COMPANY COLUMBUS, OHIO

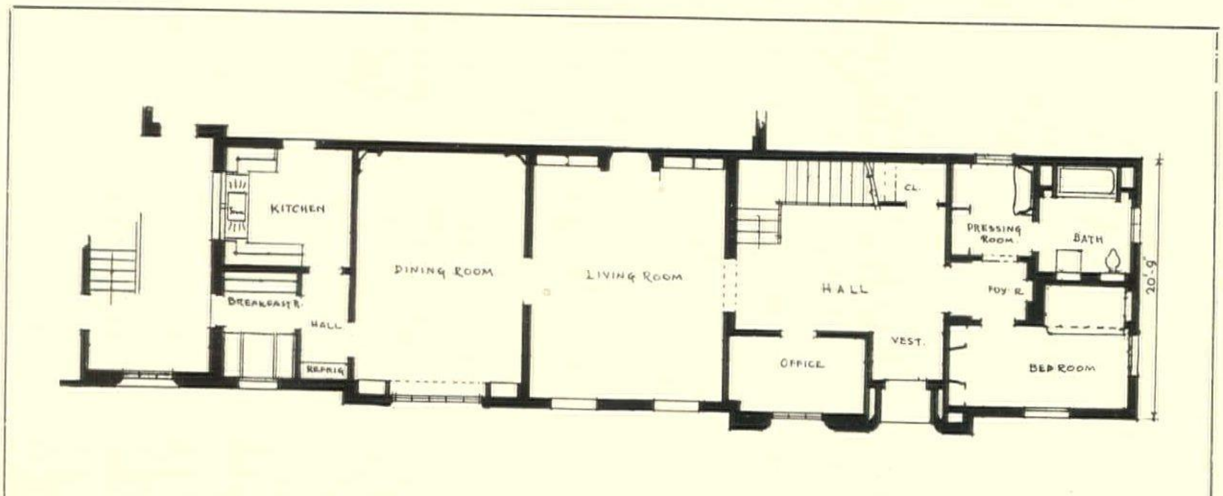
Miller & Reeves, Architects

Lighting fixtures designed by Donn Jefferson Sheets

THE question of a suitable plan for displaying the products of lumber and millwork organizations in the proper manner to arouse the interest of the builder or the building public has been one of long discussion. Many solutions have been tried and found helpful. The display installed by the Doddington Company, illustrated and described herewith, offers many practical suggestions.

This exhibition of fine woods and beautiful millwork is a distinct innovation in the fact that it is housed in a separate building or "studio," as it may rightly be called, where the prospective builder may view the work in the atmosphere in which it may ultimately be placed. Realizing that a display in an office is nothing but an isolated display in the wrong setting, the building has been worked out so that the visitor will get the feeling of a fine home immediately upon entering. In the event that explanation or information is desired, an attendant is on hand, but it is understood that anyone may inspect the building without obligation.

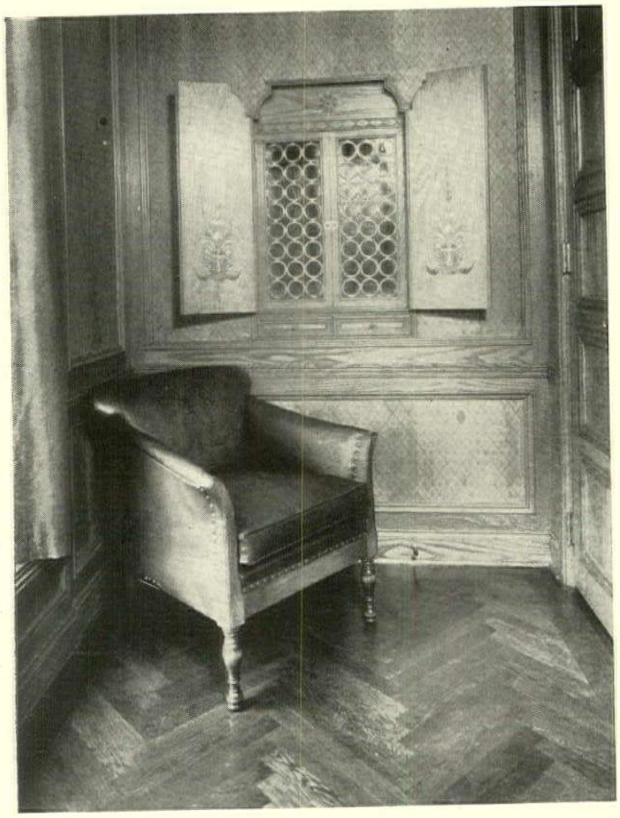
The exterior elevation might be termed "of modern design with a French flavor." The walls are of stucco trowelled smooth and painted a warm gray, with simple ornamentation at the gable over the entrance. Wrought iron lanterns of a unique design hang at the doorway. Large windows are used both for the admission of light and for the attraction of the passerby, but care was used in not allowing them to appear as the ordinary storeroom show window. The sash being painted green



DISPLAY BUILDING, THE DODDINGTON COMPANY, COLUMBUS, OHIO
MILLER & REEVES, ARCHITECTS

makes an attractive contrast, while the frames, cornice and shutters in tan add to the picture.

A roof of asbestos shingles, pierced by two interesting dormer widows of clever detail, with flower boxes, finishes the elevation, which is one



OFFICE—DISPLAY BUILDING
THE DODDINGTON COMPANY, COLUMBUS, OHIO
MILLER & REEVES, ARCHITECTS

of both show room and dwelling house combined.

The entrance door is in a panelled recess, in which oak and black walnut have been ingeniously inlaid in a flush pattern of unique design. The plan of the building, naturally being of the dwelling house type, includes all of the rooms found in the well designed house, executed and finished along the latest accepted methods.

The visitor first steps into the large hall, panelled from floor to ceiling with knotty white Appalachian oak, done in both flush and moulded design, reminiscent of 17th century Tyrolese work, and finished with an antique stain, which brings out the natural beauty of the wood. The stairway, with a massive leaded glass window, half way up, is probably the main feature of this room. Hand carved balusters, and intervening lace work with carved stringboards make an impressive display of the possibilities of wood craftsmanship. A small office, or den, is placed adjacent to the hall and is done in chestnut, with a decorated beam ceiling similar to many found particularly in Southern France and also in Italy.

The living room presents the ultimate in walnut panelling. Large and comfortable, this room contains the necessary features, a mantle, bookcases and window seats all executed from the age-old favorite black walnut, its charm and dignity being accentuated by carvings over the openings, and the finish which reveals the satin texture. The precedent for this room is also drawn from old French examples.

Antique finished white pine, including the knots, was used in the dining room which is characteristic of the early Georgian period in England and the Colonial period in America. Panelled wainscot and cornice, with decorative panels of rich wall paper, make this a very cheery interior. Corner cupboards and china closets, with a long window seat covering the radiator, will be of interest to the housewife. Kitchen and breakfast room of unique de-

BEDROOM—DISPLAY BUILDING
THE DODDINGTON COMPANY, COLUMBUS, OHIO
MILLER & REEVES, ARCHITECTS

sign, containing cabinets and accessories, both beautiful and practical, are also of interest. In these rooms all the necessary equipment is placed in the most compact and usable manner, without neglecting considerations of appearance.

For purposes of complete display, the sleeping quarters of the house are placed on the ground floor, but the plan is not without its merits for a one-floor home. Entirely separated from the rest of the house, the bedroom, bath and dressing rooms are foremost in a convenient group, entered through a small foyer, off the main hall. Each room, complete in itself and finished in warm ivory, contains many ideas to please the home builder.

The main feature in the bedroom is the "bed alcove" built as an integral part of the room, with convenient book shelves and reading light, and decorative wood valance above, while the full length hanging closets, with mirror doors and writing desk between, offer another usable suggestion. A spacious wardrobe with drawers below and a dressing table with swinging mirrors furnish the dressing closet, and the bath adjacent is the last

BATH ROOM—DISPLAY BUILDING
THE DODDINGTON COMPANY, COLUMBUS, OHIO
MILLER & REEVES, ARCHITECTS

word in convenience. Teakwood, of beautiful color and texture and unaffected by water, is used for the flooring, laid in a pattern with white maple centerpiece and border. Other interesting features are linen closets and medicine cabinet of the latest design, and fixtures of a fawn color, with French marble on the walls of the tub recess.

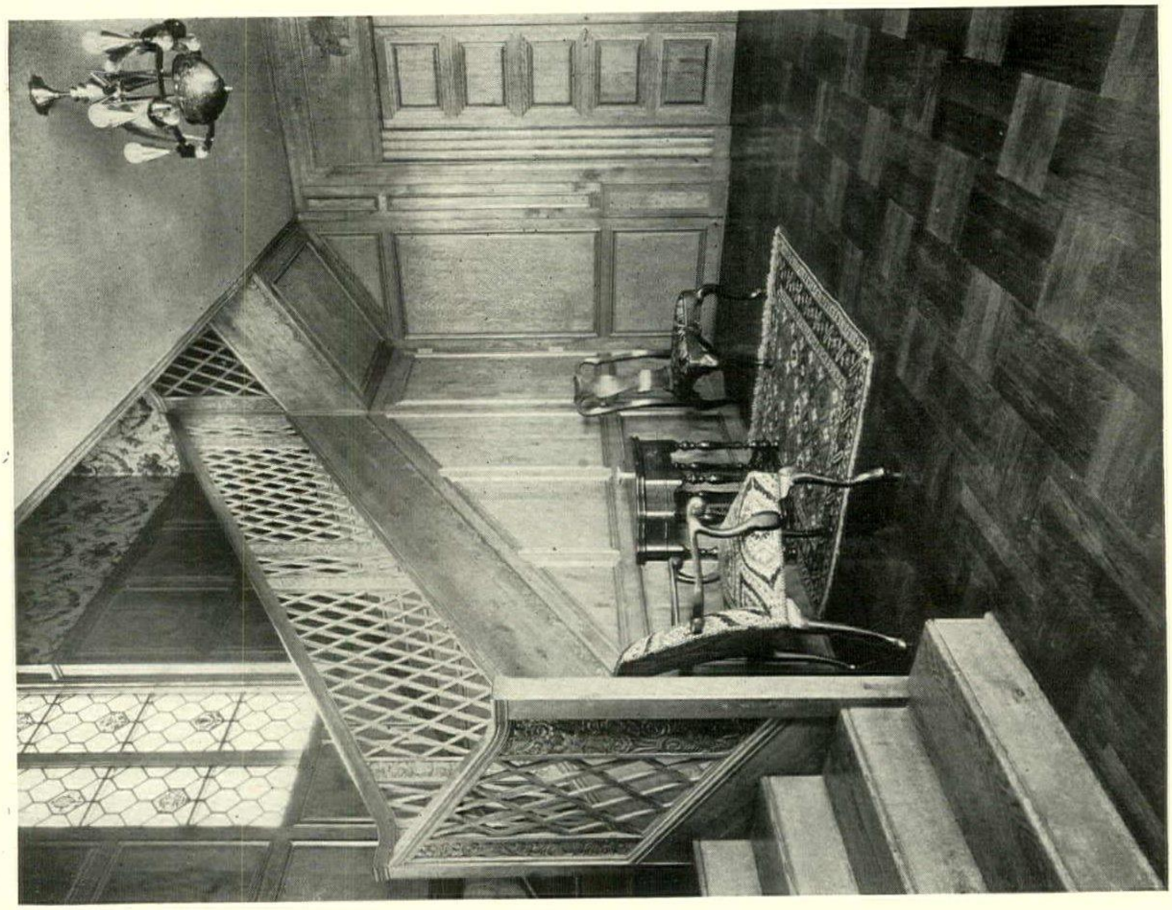
The second floor contains the upper continuation of the oak stair hall and panelling, which is reduced here to a wainscot height, with the same

DINING ROOM—DISPLAY BUILDING
THE DODDINGTON COMPANY, COLUMBUS, OHIO
MILLER & REEVES, ARCHITECTS

finish as that below. Another room, suggesting a den or upstairs living room, containing a panelled wainscot of red gum, with hooded fireplace and book cases, is on this floor, as are also two rooms, showing the possibilities of wallboard as a pleasing room finish.

Parquetry floors of many patterns, and also plank oak flooring of random width boards, are used on the first floor, while the commoner strip pattern is laid upstairs.

The building was furnished by a decorator to give it the "homey" atmosphere, and many of the accessories, such as hardware and lighting fixtures, are of special handmade design. Local merchants, and dealers in the equipment needed to complete the charm of the "studio," have co-operated in making this the finest display possible, and the sponsors and builders are confident that the display studio will be of great use and help to all those interested in building and interior design.



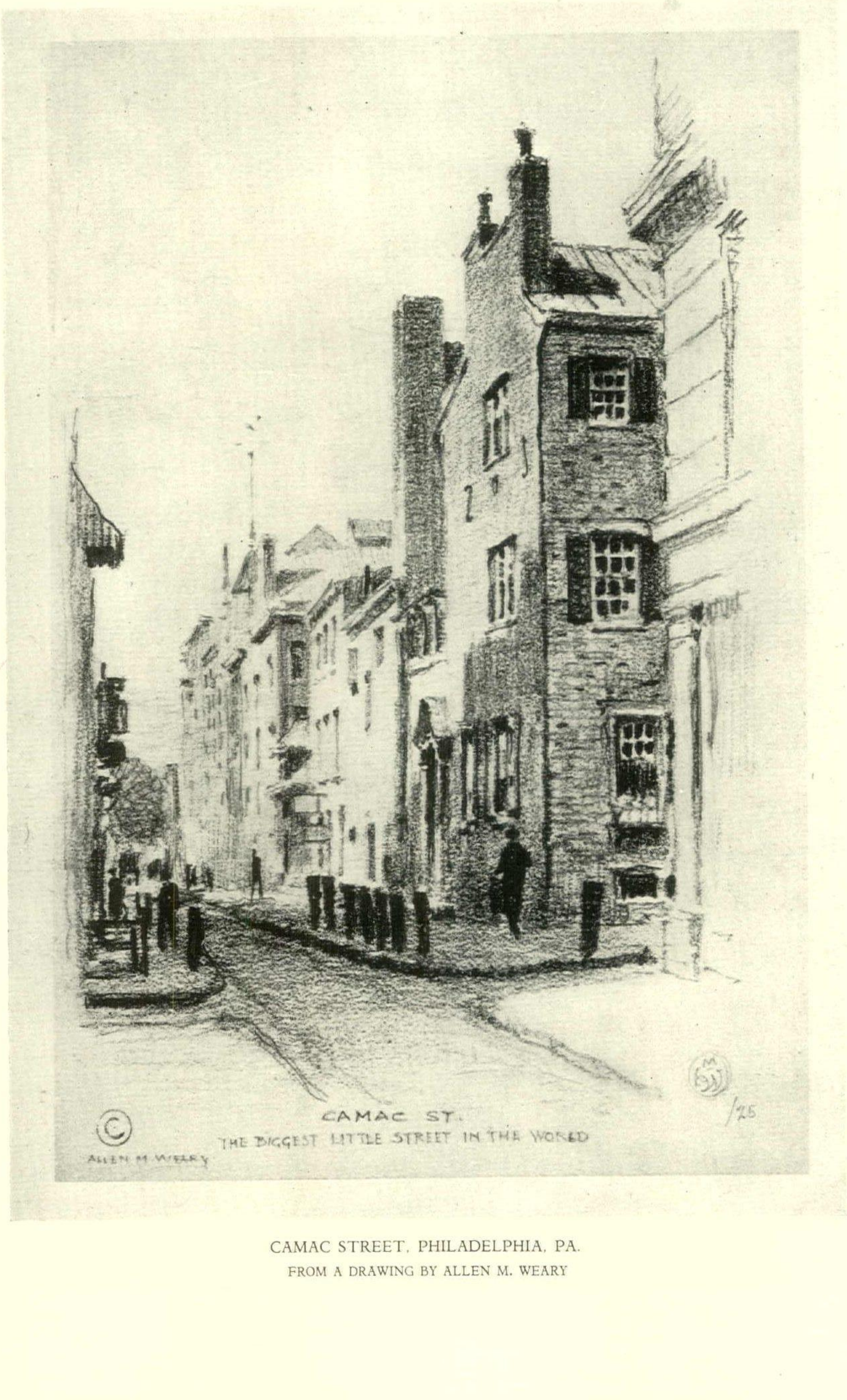
HALL, DISPLAY BUILDING—THE DODDINGTON COMPANY, COLUMBUS, OHIO

MILLER & REEVES, ARCHITECTS

LIVING ROOM—DISPLAY BUILDING

DINING ROOM—DISPLAY BUILDING

THE DODDINGTON COMPANY, COLUMBUS, OHIO— MILLER & REEVES, ARCHITECTS



CAMAC STREET, PHILADELPHIA, PA.
FROM A DRAWING BY ALLEN M. WEARY

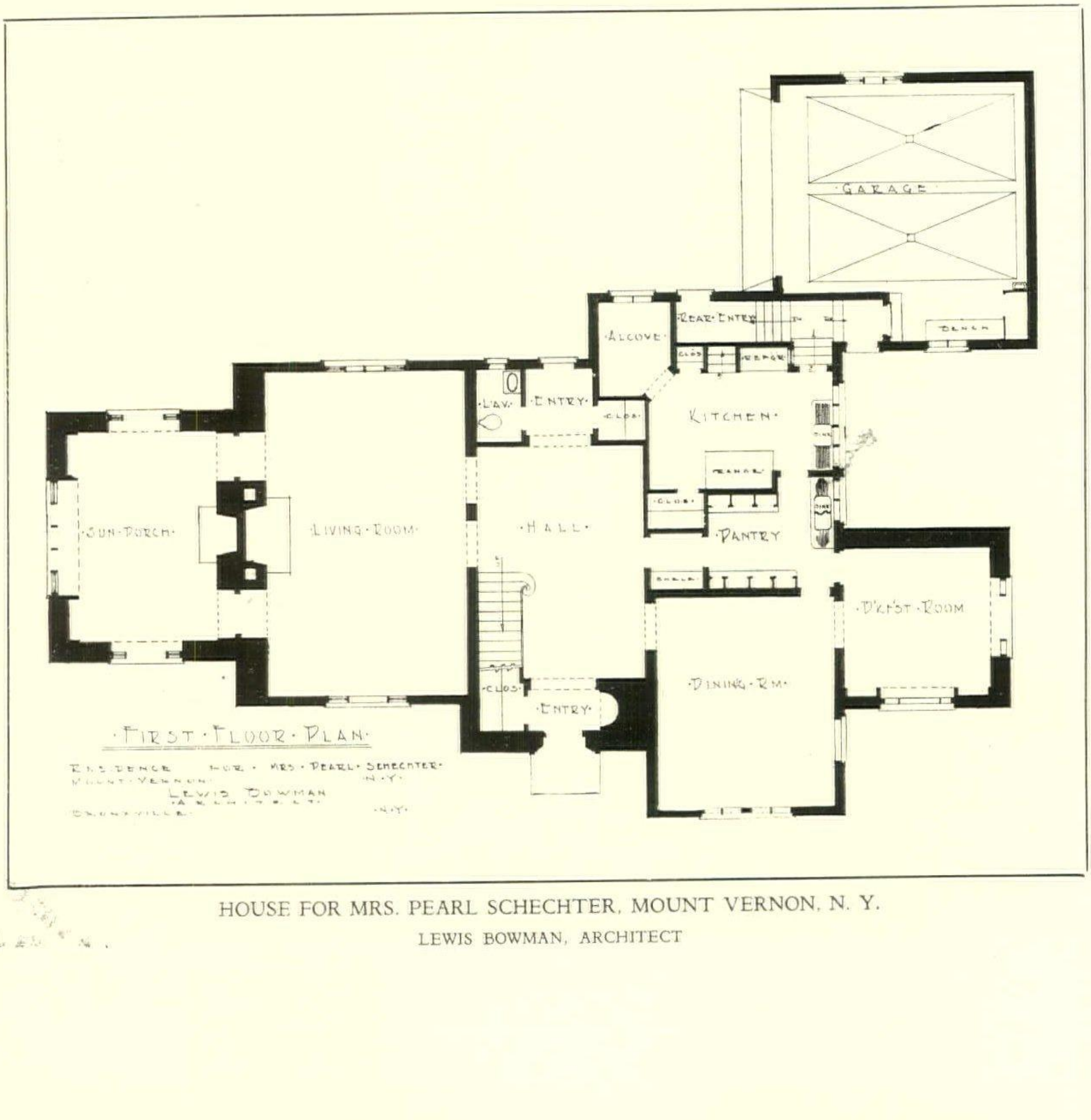
A GROUP OF ILLUSTRATIONS OF THE

HOUSE FOR MRS. PEARL SCHECHTER MOUNT VERNON, N. Y.

Lewis Bowman, Architect

Photo by John Wallace Gillies, Inc.

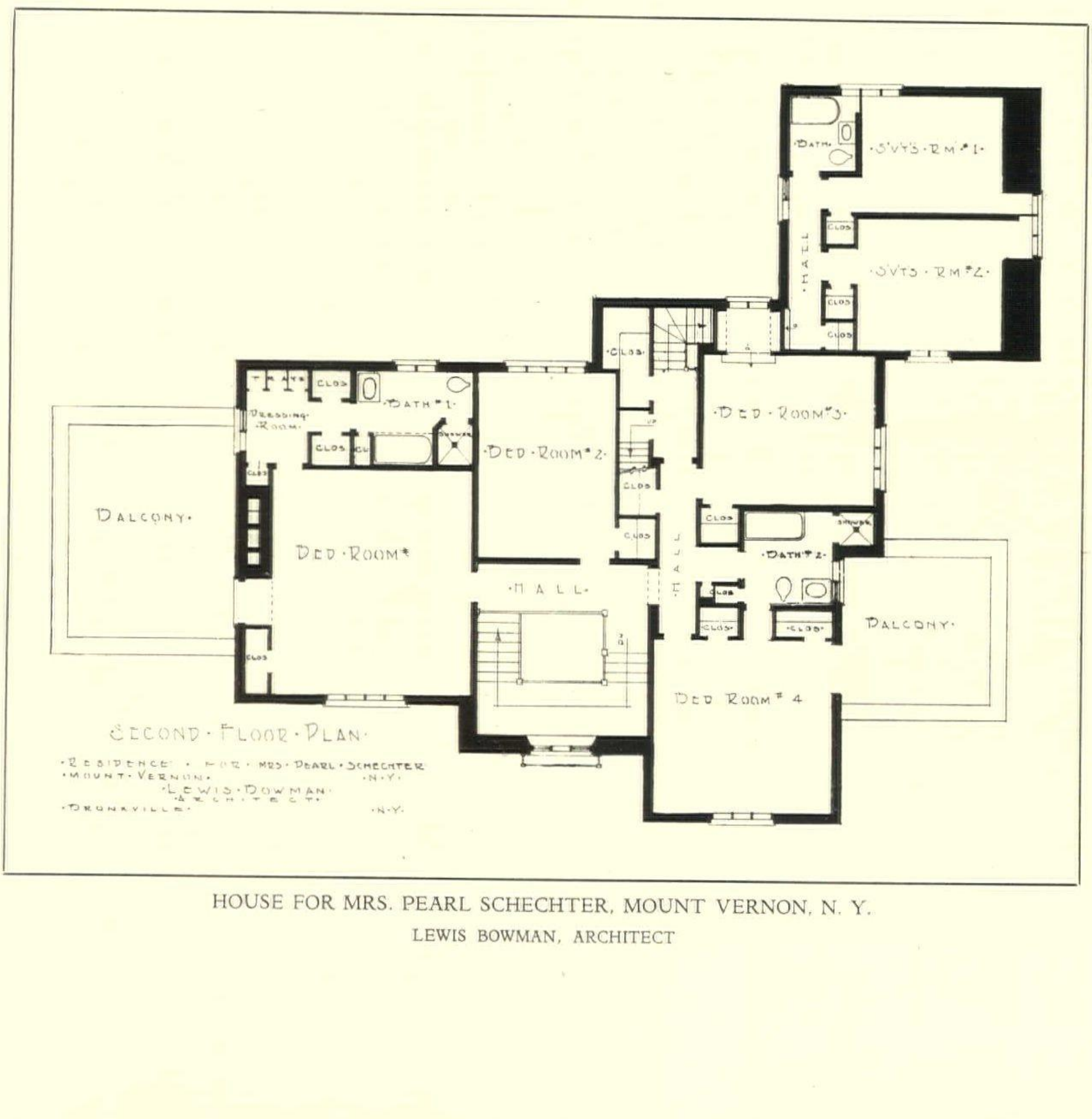
Photo by John Wallace Gillies, Inc.



HOUSE FOR MRS. PEARL SCHECHTER, MOUNT VERNON, N. Y.

LEWIS BOWMAN, ARCHITECT

Photo by John Wallace Gillies, Inc.



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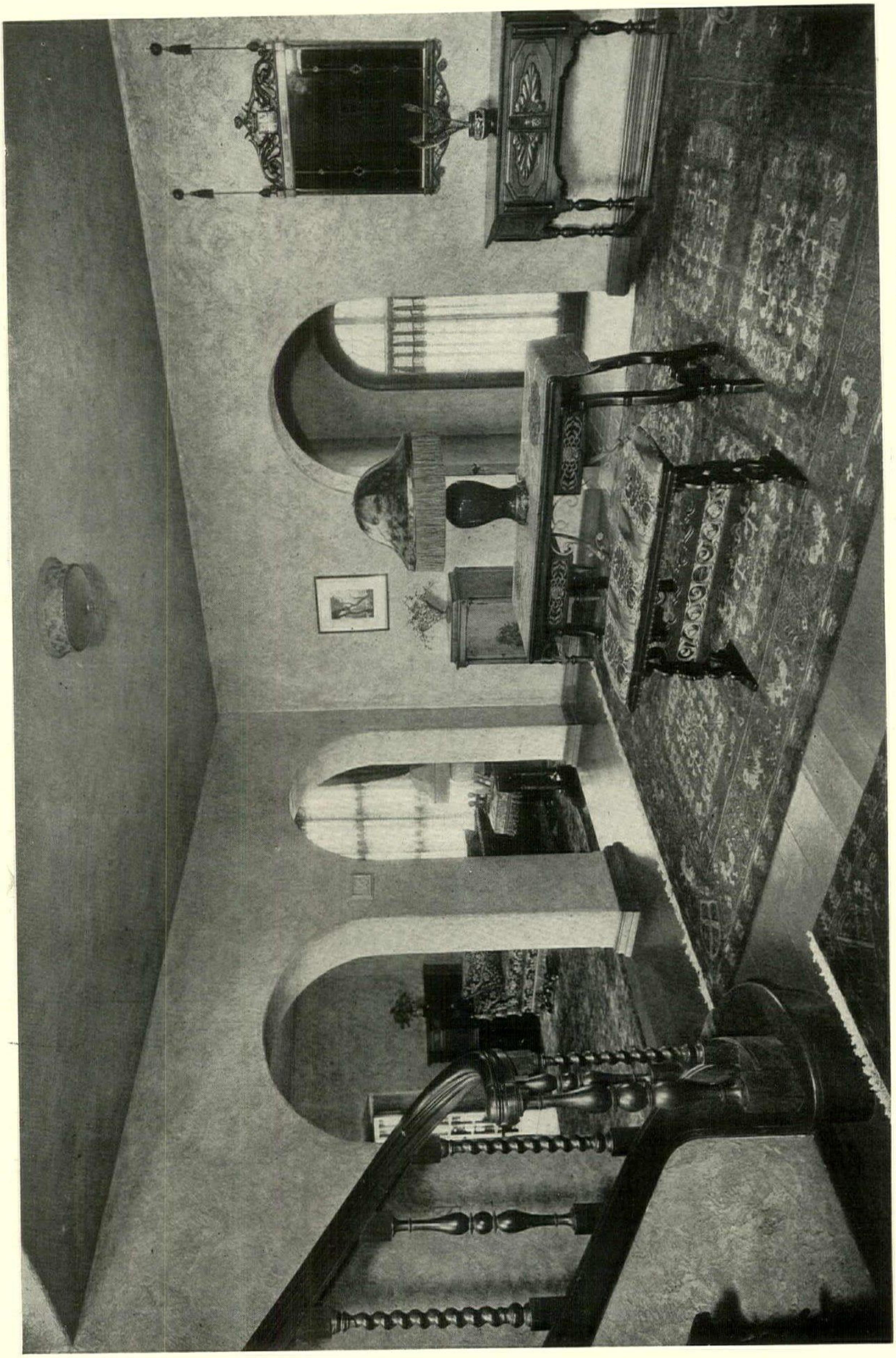


Photo by John Wallace Gillies, Inc.

HOUSE FOR MRS. PEARL SCHECHTER, MOUNT VERNON, N. Y.—LEWIS BOWMAN, ARCHITECT

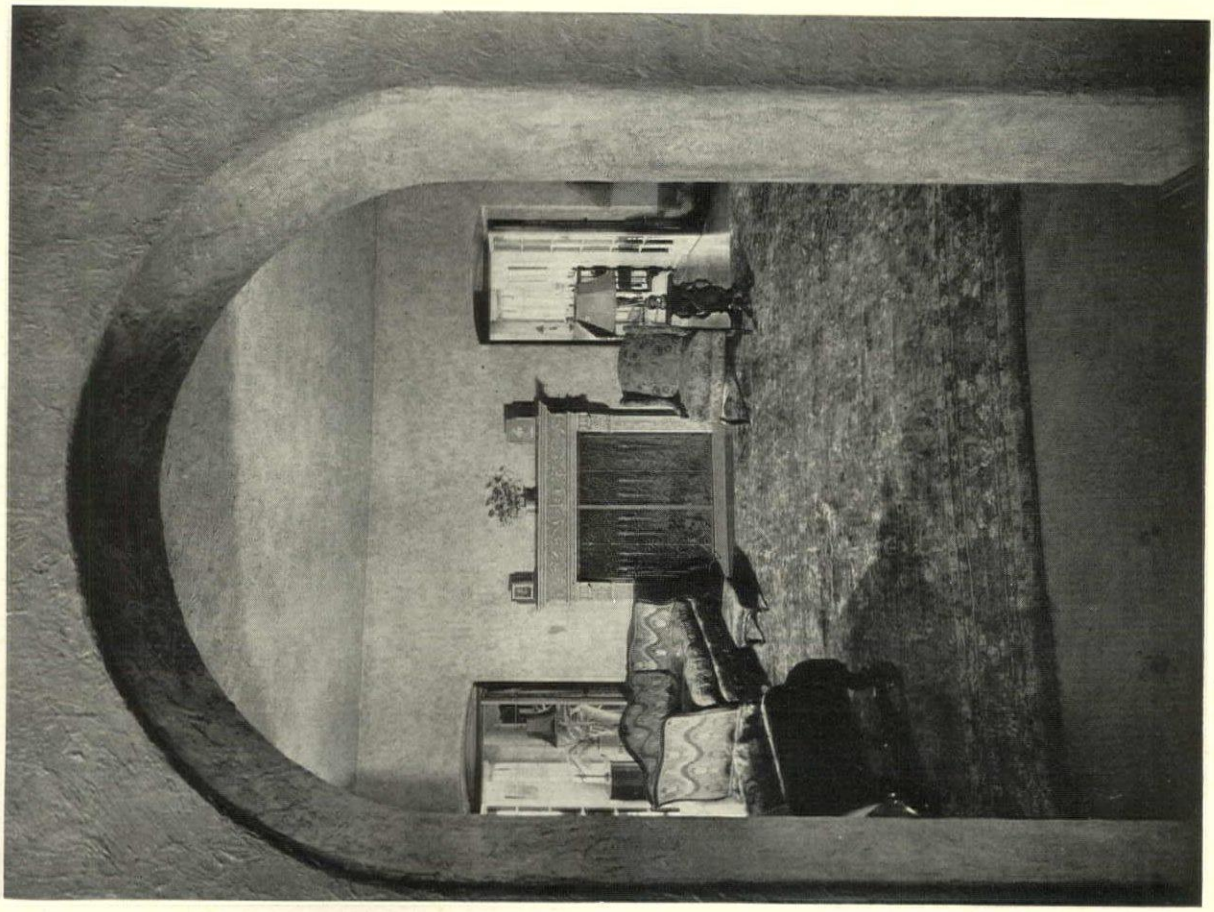


Photo by John Wallace Gillies, Inc.

HOUSE FOR MRS. PEARL SCHECHTER, MOUNT VERNON, N. Y.—LEWIS BOWMAN, ARCHITECT

EDITORIAL COMMENT

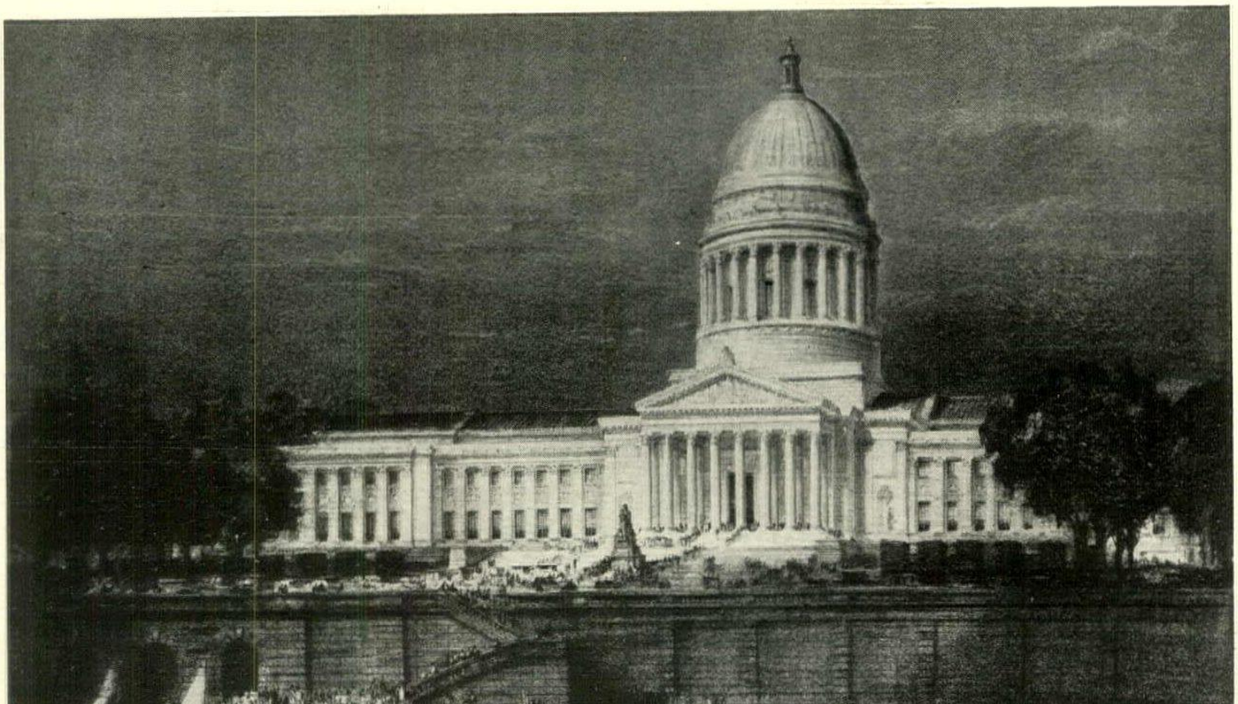
THE NECESSITY FOR PUBLIC INFORMATION

FOR some time the Committee on Public Information of the American Institute of Architects has been active in furnishing the daily press with publicity items of interest to the general public. These are intended to make the architectural profession more widely known and better understood. It is patent that the public needs be correctly informed as to the function of the architect. If there is any doubt of this, the following extracts from a news item sent to this office for publication should be enlightening.

> "Architects of New York City and State are invited to enter into competition for the compilation of plans for the construction of a million-dollar hospital plant . . ., it was announced by Dr. ——, chairman of the building committee and consultant in charge of plans. Details of the desires of the board and advice and suggestions as to procedure, will be given architects interested in the contest. . . . The building . . . will be a ten-story structure, ultra-modern in design. . . . Construction will begin as soon as possible after the acceptance of the successful plan. . . . A special prize will probably be awarded for the successful set of plans. . . . but the board cannot, now, pledge itself to employ the successful architect."

Inquiry at the source of the publicity item disclosed that no thought had evidently been given to conducting the competition in accordance with the recommendations of the American Institute of Architects. As a matter of fact, the existence of such recommendations was apparently unknown to those sponsoring the "invitation."

That an announcement of this sort should come from one in the medical profession is well nigh unbelievable. That it should, under the conditions outlined, attract architects capable of designing a million-dollar hospital plant is likewise unthinkable. Assuming that the hospital board is serious, a building will be erected that has been planned by some one. The board will do well to ponder whether the building will be well designed in appearance, and for efficient and economical operation. To be charitable, we must assume that the proposal is made through ignorance of the correct procedure that should be followed in selecting an architect. In this matter the public is apparently sadly in need of education or rather information.



WEST VIRGINIA STATE CAPITOL, CHARLESTON, W. VA.—CASS GILBERT, ARCHITECT

FROM A DRAWING BY HUGH FERRISS

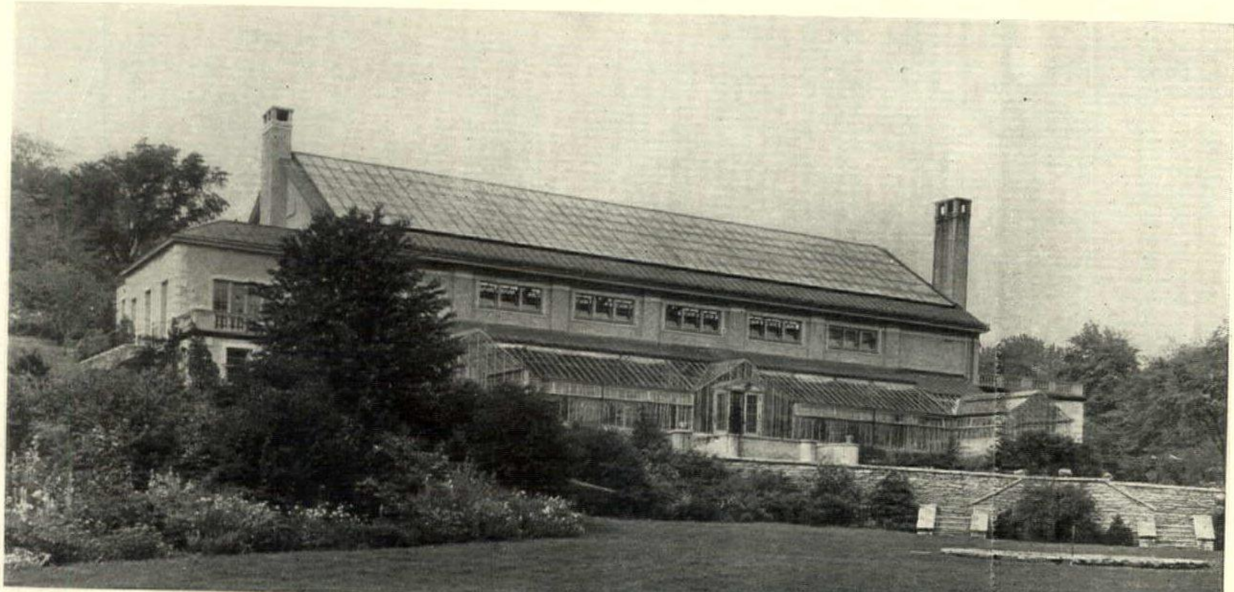
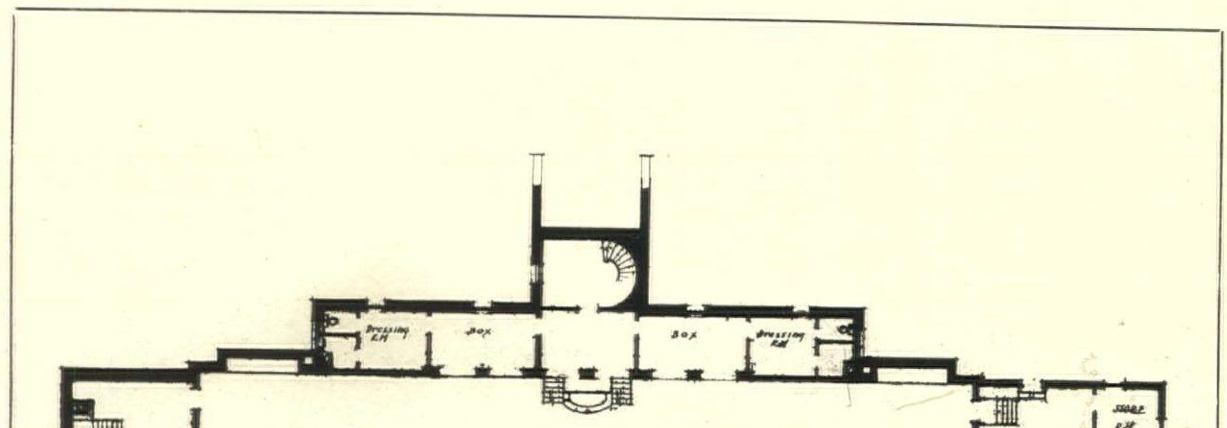
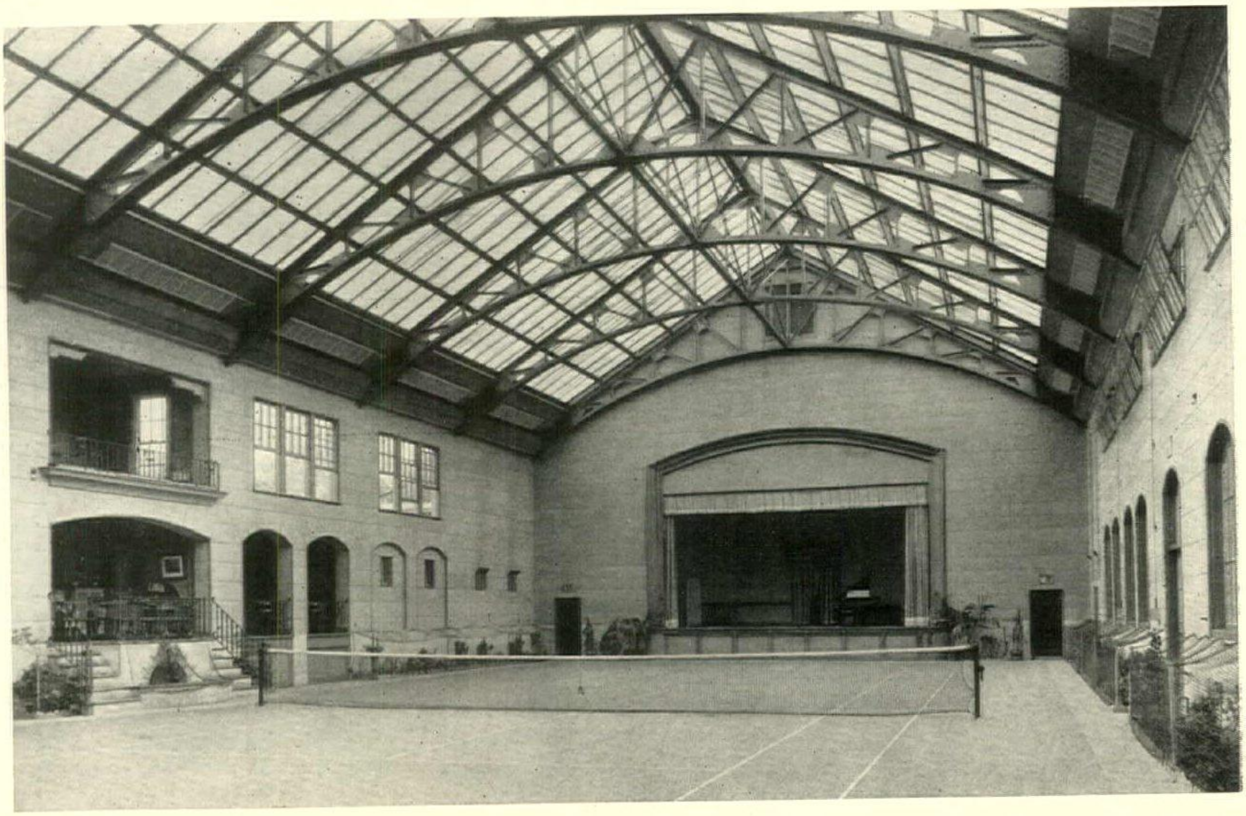


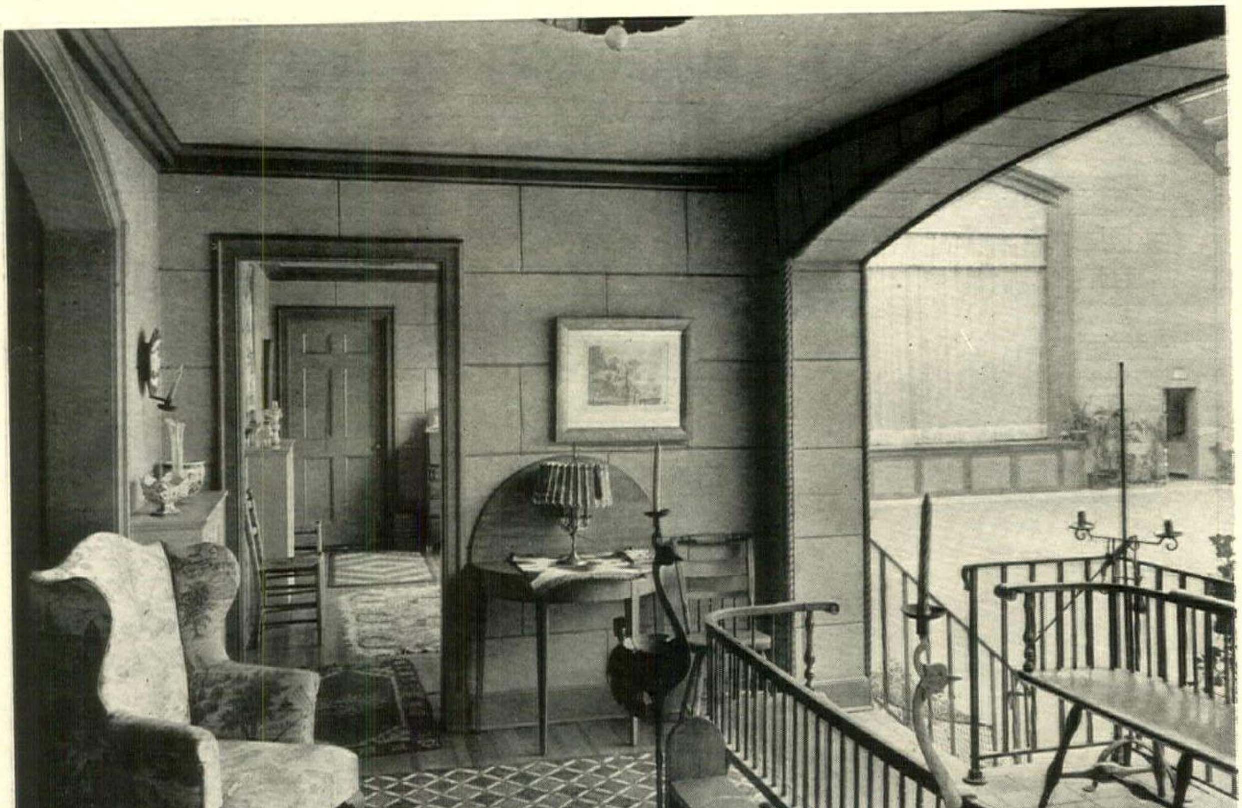
Photo by S. H. Gottscho



RUNNYMEDE PLAYHOUSE, ESTATE OF MRS. H. E. TALBOTT, DAYTON, OHIO

PEABODY, WILSON & BROWN, ARCHITECTS





Photos by S. H. Gottscho

RUNNYMEDE PLAYHOUSE, ESTATE OF MRS. H. E. TALBOTT, DAYTON, OHIO

PEABODY, WILSON & BROWN, ARCHITECTS

ICE STORAGE BUILDINGS

By C. LESLIE WEIR

ICE Storage Buildings, — how prosaic, and yet it requires no no distant flight of imagination to readily mistake the interior for a setting of a Maeterlinck play. One experiences an unusual sensation when standing in one of these buildings, entirely devoid of intermediate floors, columns, or supports, other than the exterior walls, and gazes upward to a ceiling, 70, 80 or 100 feet overhead. In such an enclosure, with exterior openings eliminated entirely, and with small "eyrie like" lights above, it is almost impossible to discern the ceiling, and a most mysterious atmosphere is created.

The purpose of these particular buildings being the storage of ice in suitable form for redistribution at the period and time when the demand is the greatest, is entirely utilitarian.

Ice storage buildings are usually connected with a manufacturing plant, although this is not always the case, as it is possible and often desirable to locate them several miles from the ice manufacturing plant from which the supply of ice for filling is secured. The scheme, under certain local conditions, gives a maximum operating efficiency, and provides a location in an expanding territory for a future manufacturing plant in connection with the storage building.

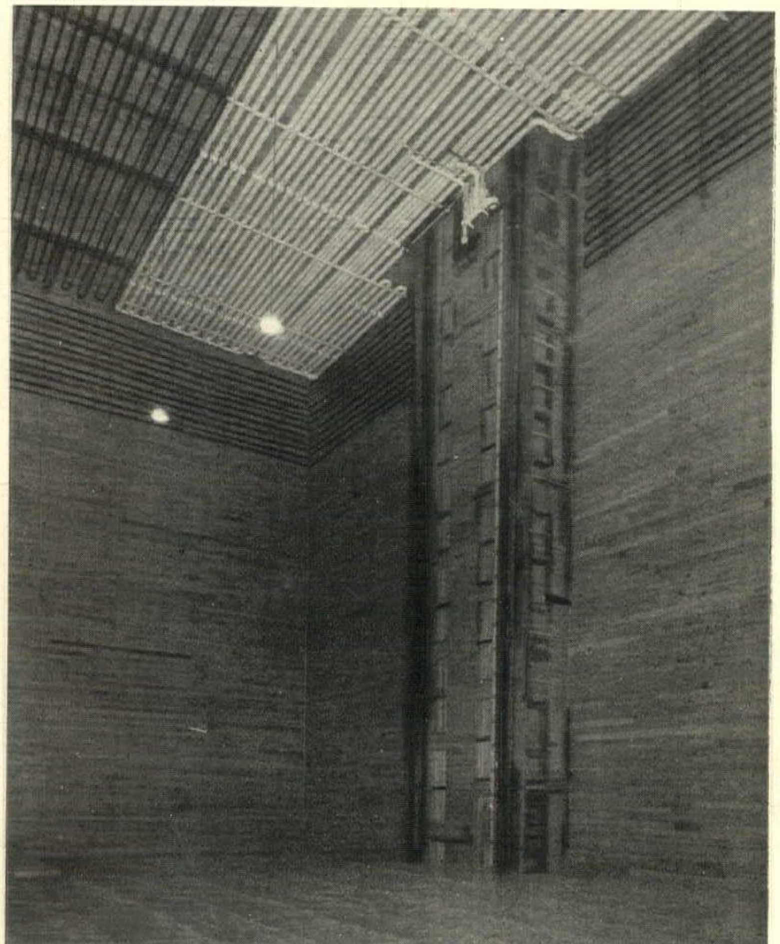
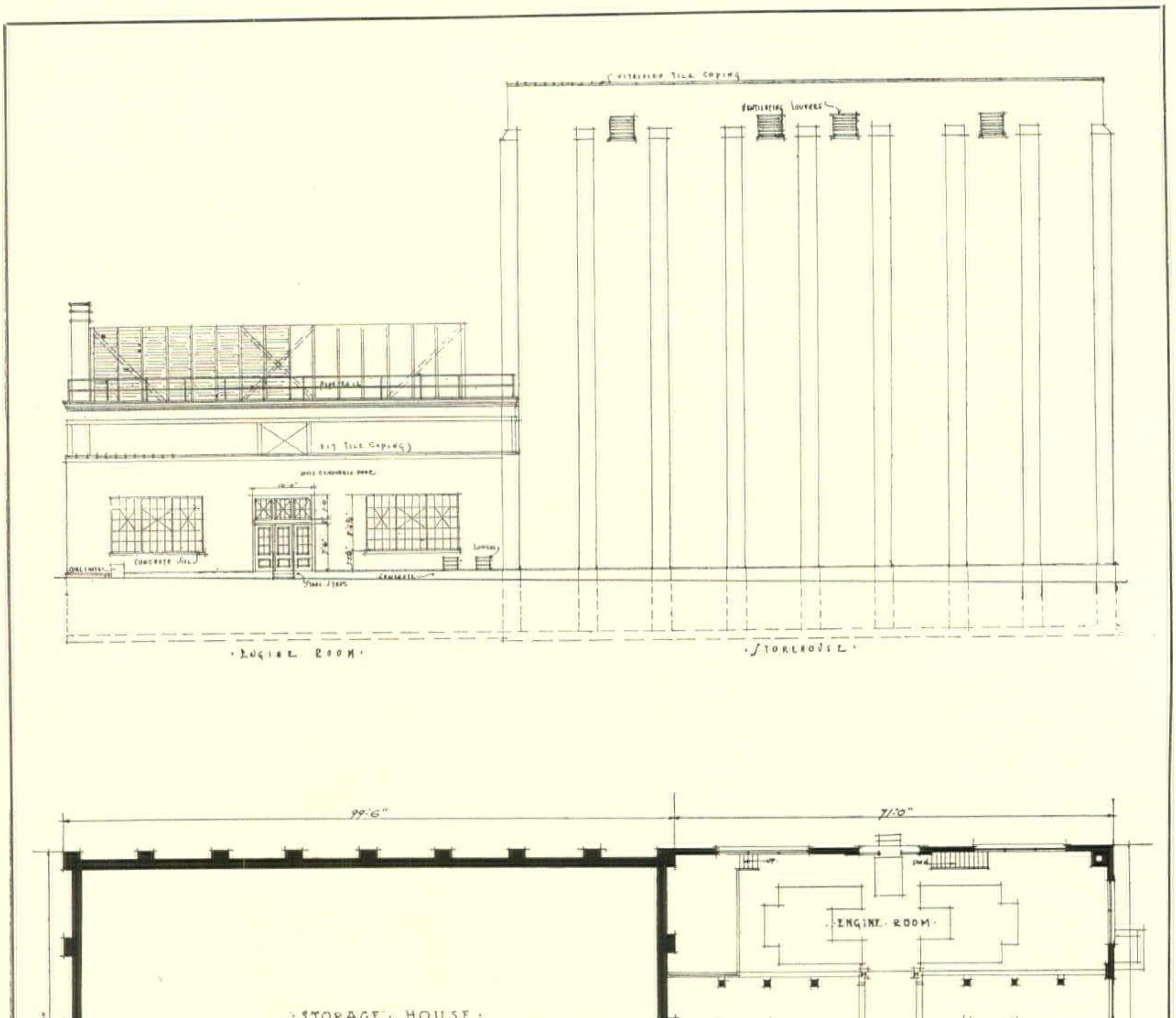


Photo by Hughes Co.

LOADING GIG AND TOP OF ICE COLUMN
ICE STORAGE BUILDING, AMERICAN ICE COMPANY, BALTIMORE, MD.
C. LESLIE WEIR, ARCHITECT

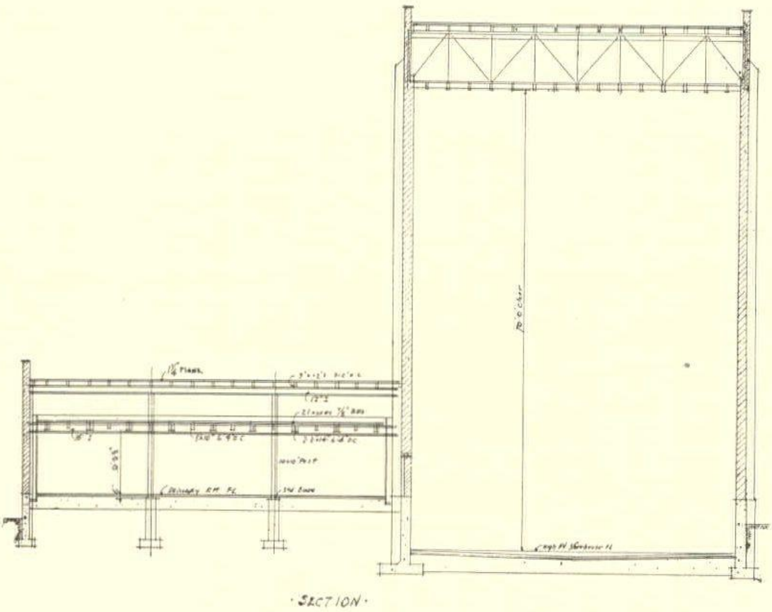
These buildings are constructed of various materials, again depending upon the location and conditions. In outlying districts where the fire laws do not prohibit, the structures generally consist of heavy timber framing, and wood sheathing on both the interior and exterior. In large cities where the building codes prescribe, the walls and roof are generally of concrete or other fire-resisting construction with an additional requirement that the high cost of land imposes a condition of greater height of building. This is a serious factor in the cost, for the walls must be entirely self-supporting, and secure no lateral bracing or stiffness from any intermediate floors, since there are none.

The depth of foundations must be carefully considered, in connection with the floor placed on the ground, and on which the ice is stored. All deleterious, spongy or other soft materials must necessarily be removed, in which case the

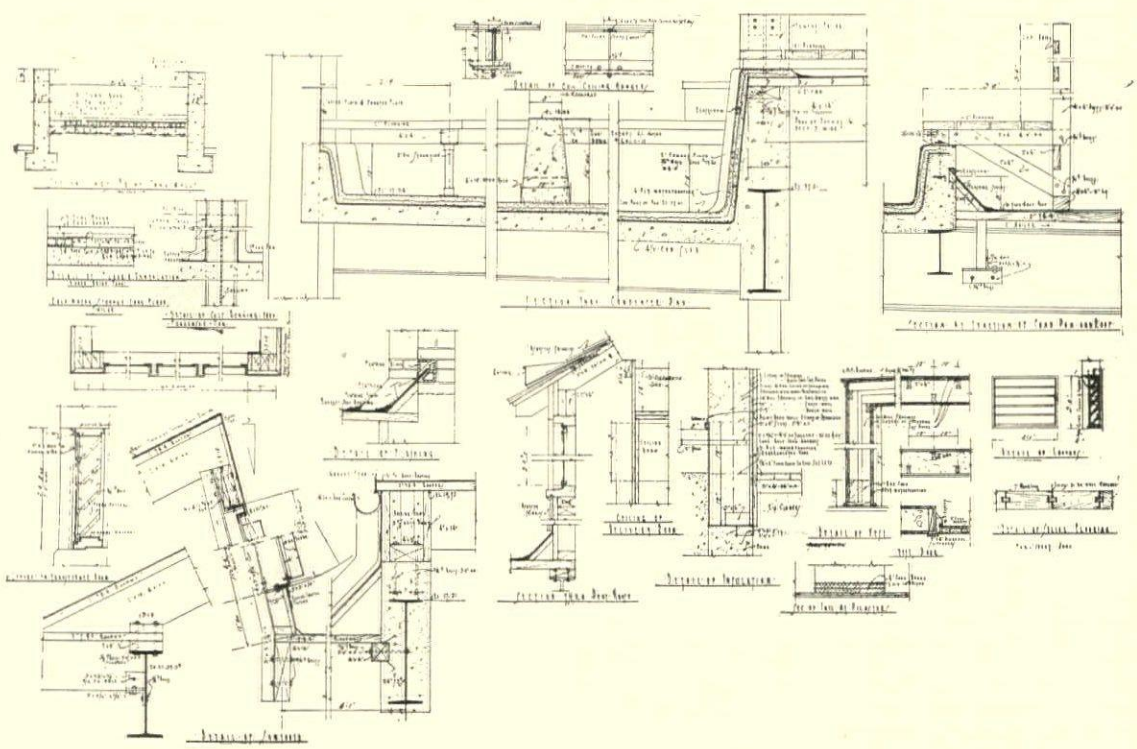


ICE STORAGE BUILDING, AMERICAN ICE COMPANY, BALTIMORE, MD.

C. LESLIE WEIR, ARCHITECT



SECTION THROUGH DELIVERY ROOM AND ICE STORAGE HOUSE



CONSTRUCTION DETAILS

ICE STORAGE BUILDING, AMERICAN ICE COMPANY, BALTIMORE, MD.

C. LESLIE WEIR, ARCHITECT

excavated portion provides for that much additional ice storage space and the foundations become retaining walls to withstand the exterior thrust.

This depth will also vary, depending upon the cost of excavation, as against solidifying the bottom by means of piles or other method. The material of the foundation walls is generally reinforced concrete, and all back-filling and re-filling must be very carefully performed, since any serious settlement in material under the ice column may cause it to deflect and create pressure on the wall of the building, which, of course, it is not designed to withstand.

The load that the ice imposes on the soil or the floor under it varies, of course, with the height of the ice stack. In the highest buildings, in the writer's experience, this pressure has amounted to 5,800 pounds per square foot. It is readily observed that, in yielding soil, efforts to solidify it must be made. At times the soil conditions may require piles or open type caissons under the foundation walls, in which case the latter are designed as reinforced concrete grade beams.

The exterior walls, as previously stated, may be of frame or masonry, but, regardless of which type is adopted, the air-proofing of the insulation is the most important item to be considered. Carelessness, or lack of appreciation of the difficulty arising from the omission of such attention, will impose a continuous expense against the economical operation of the business for the entire life of the structure.

The design of the exterior walls when of frame construction, is comparatively simple, and presents no unusual difficulties. However, that of a brick wall is somewhat different, and depends largely upon the requirements of the building bureau in the locality where the work is being performed. Some cities specify consideration of a wind load from the grade level to the roof, whereas others do not take cognizance of this,

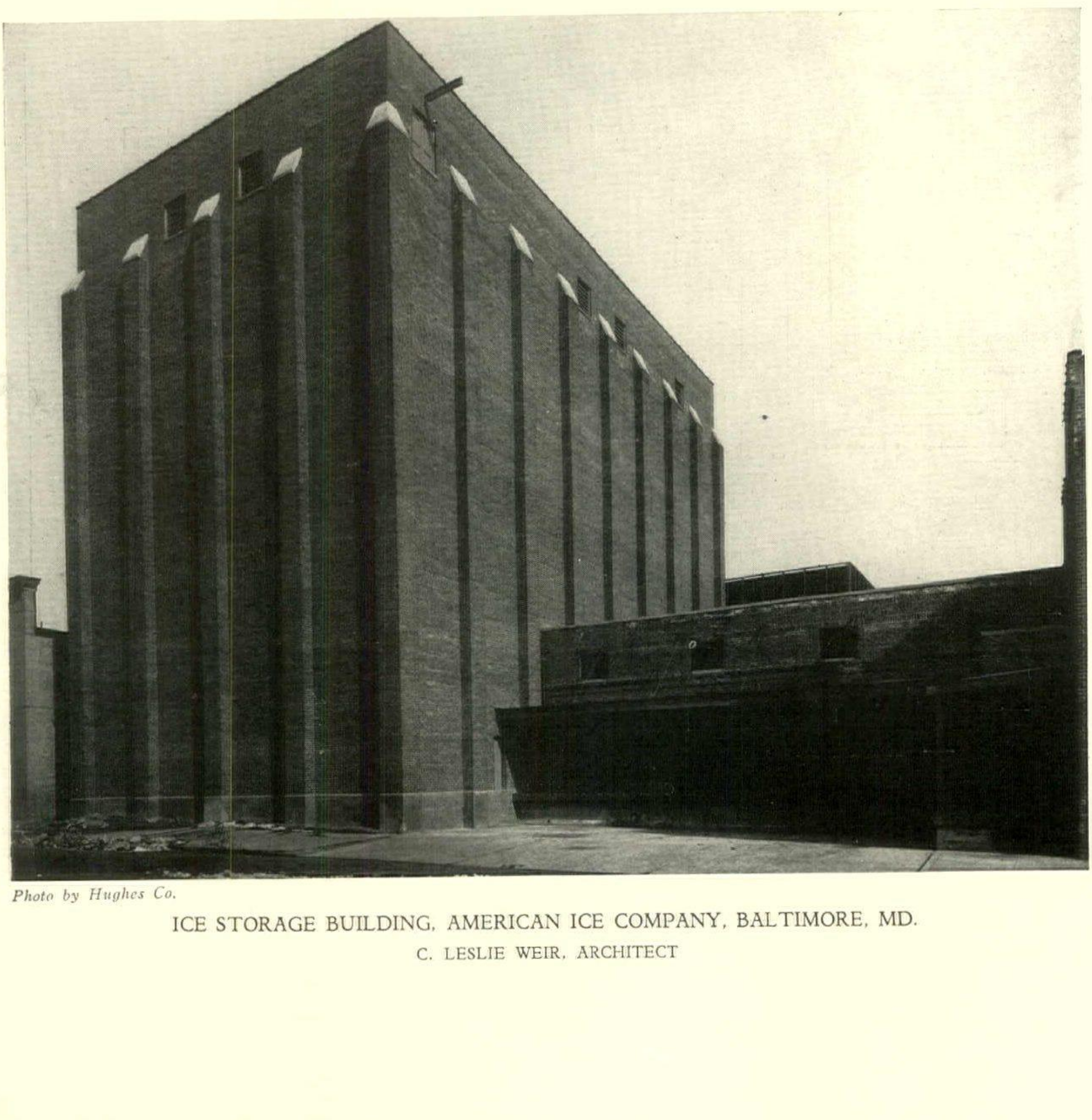


Photo by Hughes Co.

ICE STORAGE BUILDING, AMERICAN ICE COMPANY, BALTIMORE, MD.

C. LESLIE WEIR, ARCHITECT

unless the building height exceeds one hundred and fifty feet.

It has been the writer's practice to design these walls as simple beams, in which case there is some slight tension (less than 10 pounds on the inside face of the wall; but, since the compression on the exterior face is less than 150 pounds, and Portland Cement Mortar is used throughout, it is clearly demonstrated that the tension stress will cause no ill effect until the compression side has been stressed to its yielding point. This method of design has been accepted by a number of building departments in large cities throughout the East, and a great number of structures successfully erected are based on this method of design.

In the case of a masonry building, the exterior walls must be waterproofed. One of the clear waterproofing compounds, if properly applied, is usually sufficient. The interior of the masonry wall must also have a damp-proofing material sprayed upon its entire surface to protect it.

The ice must under no condition ever touch or come in contact with the exterior walls. This is important for two reasons: first, it is impossible to design these walls, without involving excessive construction costs, to withstand the pressure of the ice against them; second, an air space of not less than 6" is necessary on the sides of the ice column to provide for a circulation of air. The ice is placed in courses, and laid up and bonded similarly to a brick wall. The various layers of ice are tied in with "joints broken" to bind the entire ice column.

Roof construction presents nothing out of the ordinary, except, perhaps, that for operation of the business the elimination of as many interior columns as possible is desirable, and single span girder is preferable. The framing must, in addition to the snow load and the dead load, also carry the load imposed by the refrigerated pipe coils. These roofs are sometimes constructed with trusses, the upper cord forming the roof, and the lower cord supporting the ceiling and the pipe coils, with a loft in between for ventilation. The

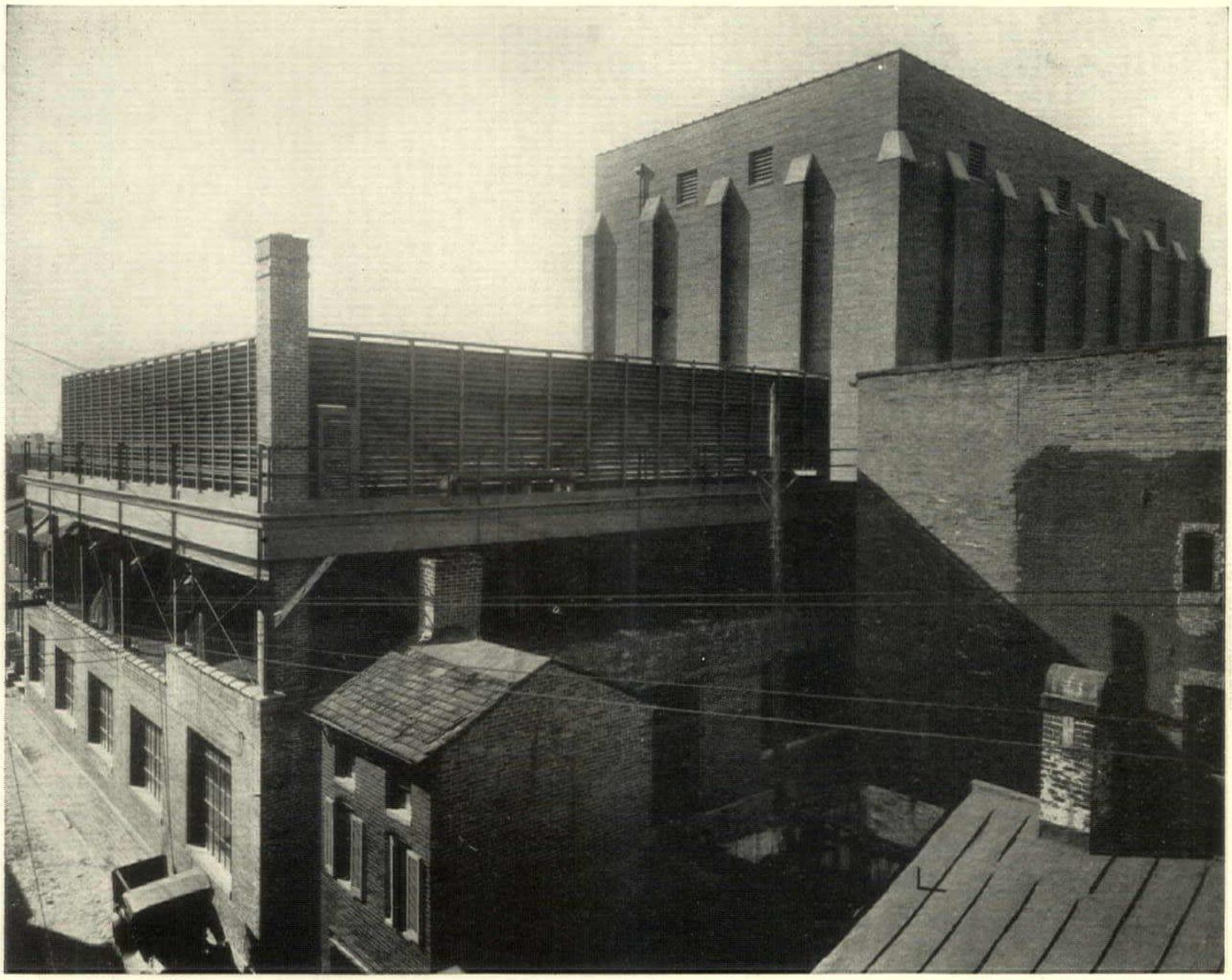
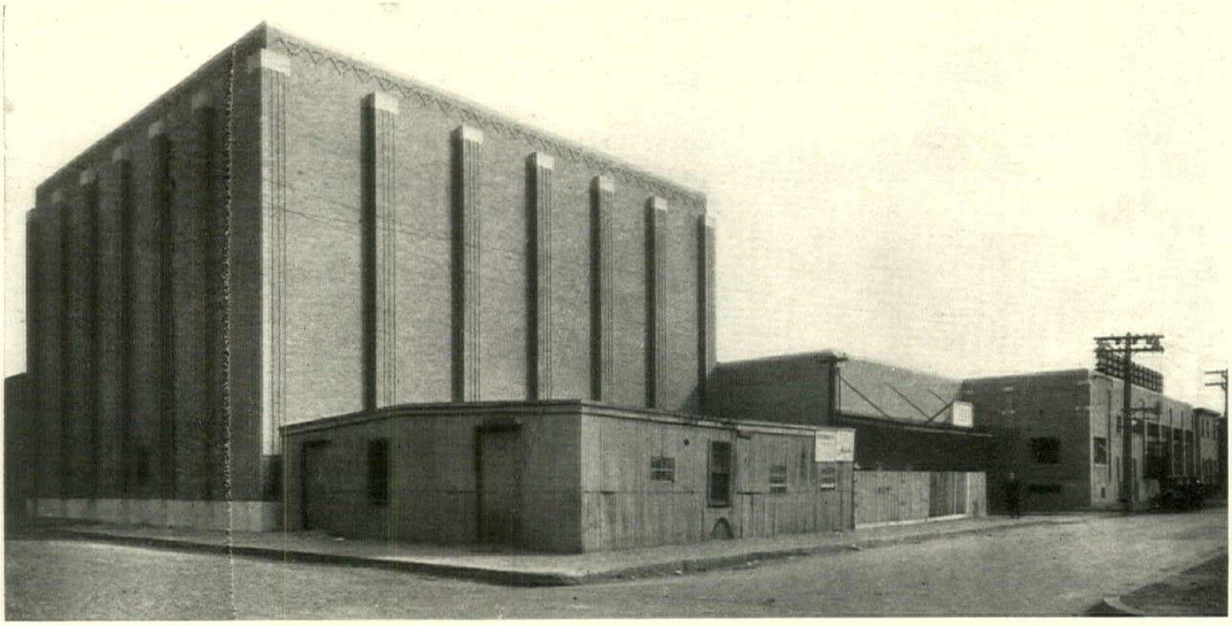
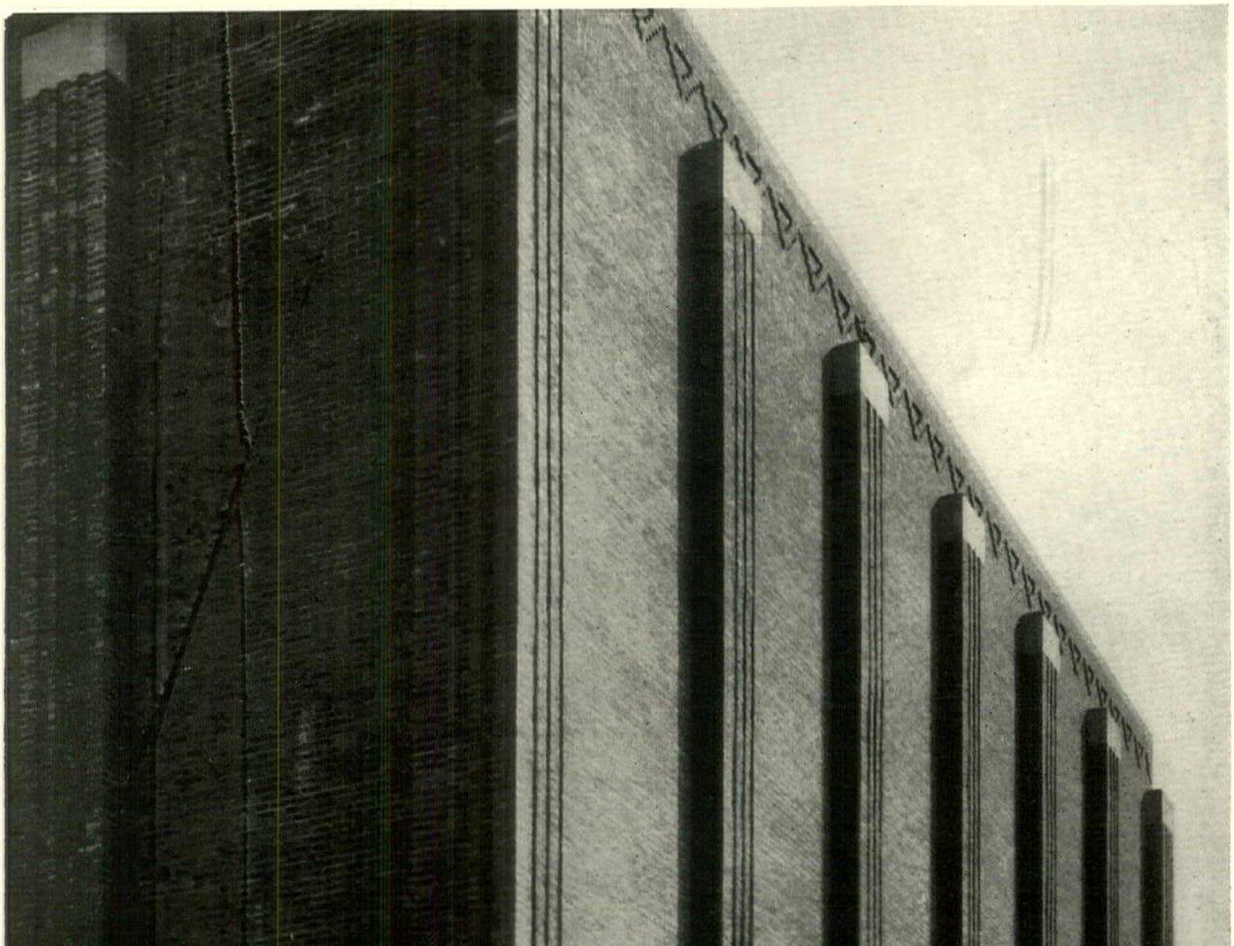


Photo by Hughes Co.

ICE STORAGE BUILDING, AMERICAN ICE COMPANY, BALTIMORE, MD.

C. LESLIE WEIR, ARCHITECT





Photos by Paul J. Weber

ICE STORAGE BUILDING, BOSTON ICE COMPANY, CHELSEA, MASS.

C. LESLIE WEIR, ARCHITECT

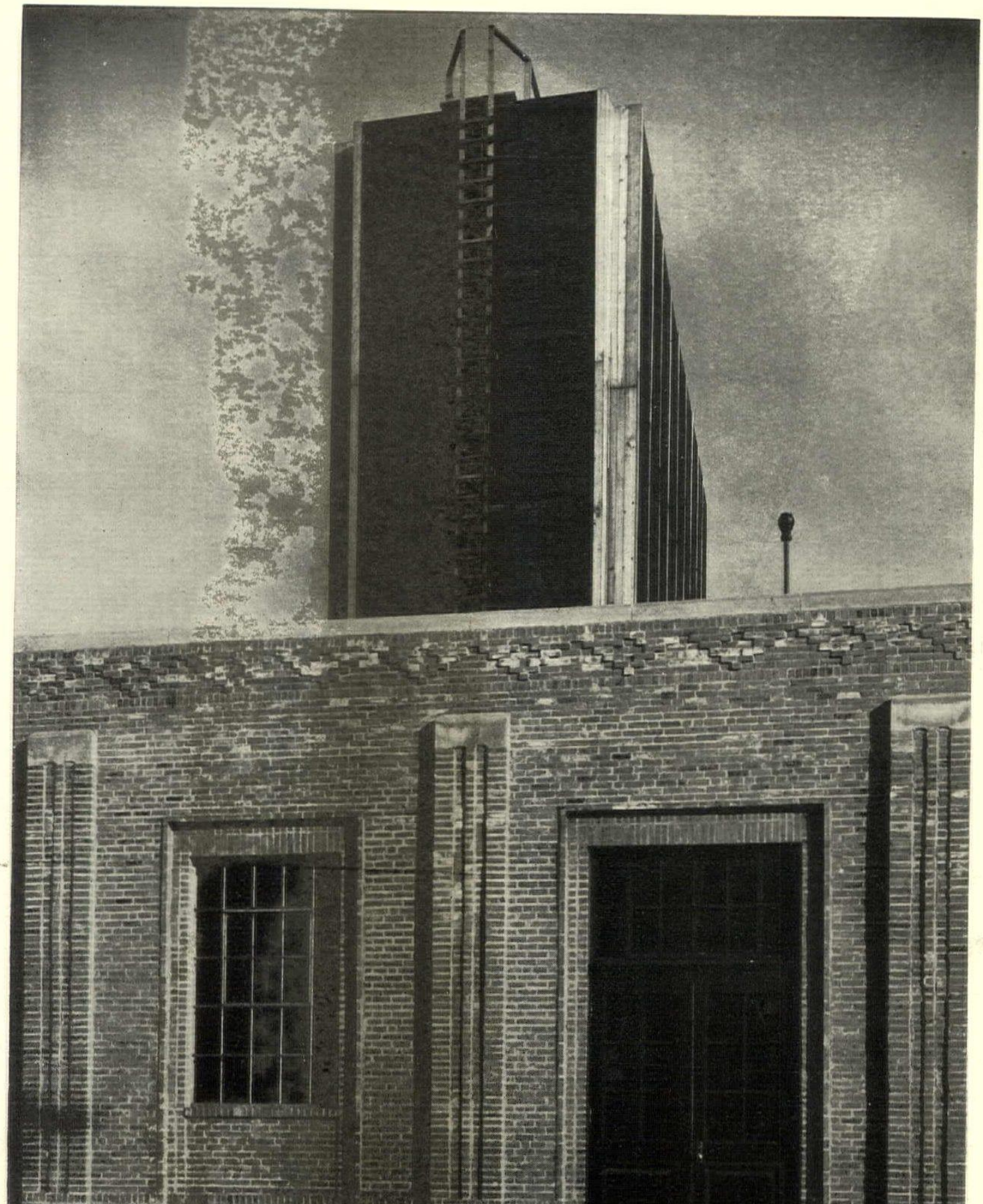


Photo by Paul J. Weber

WINTER HILL ICE COMPANY PLANT, CAMBRIDGE, MASS.

C. LESLIE WEIR, ARCHITECT

Photo by Paul J. Weber

BOSTON ICE COMPANY PLANT, DORCHESTER, MASS.

C. LESLIE WEIR, ARCHITECT

tendency of recent construction, however, has been away from that type to a simple framed roof, consisting of joists and girders, with cork insulation on the deck. It would seem needless to say that in this type of construction the best workmanship and grade of roofing must be obtained.

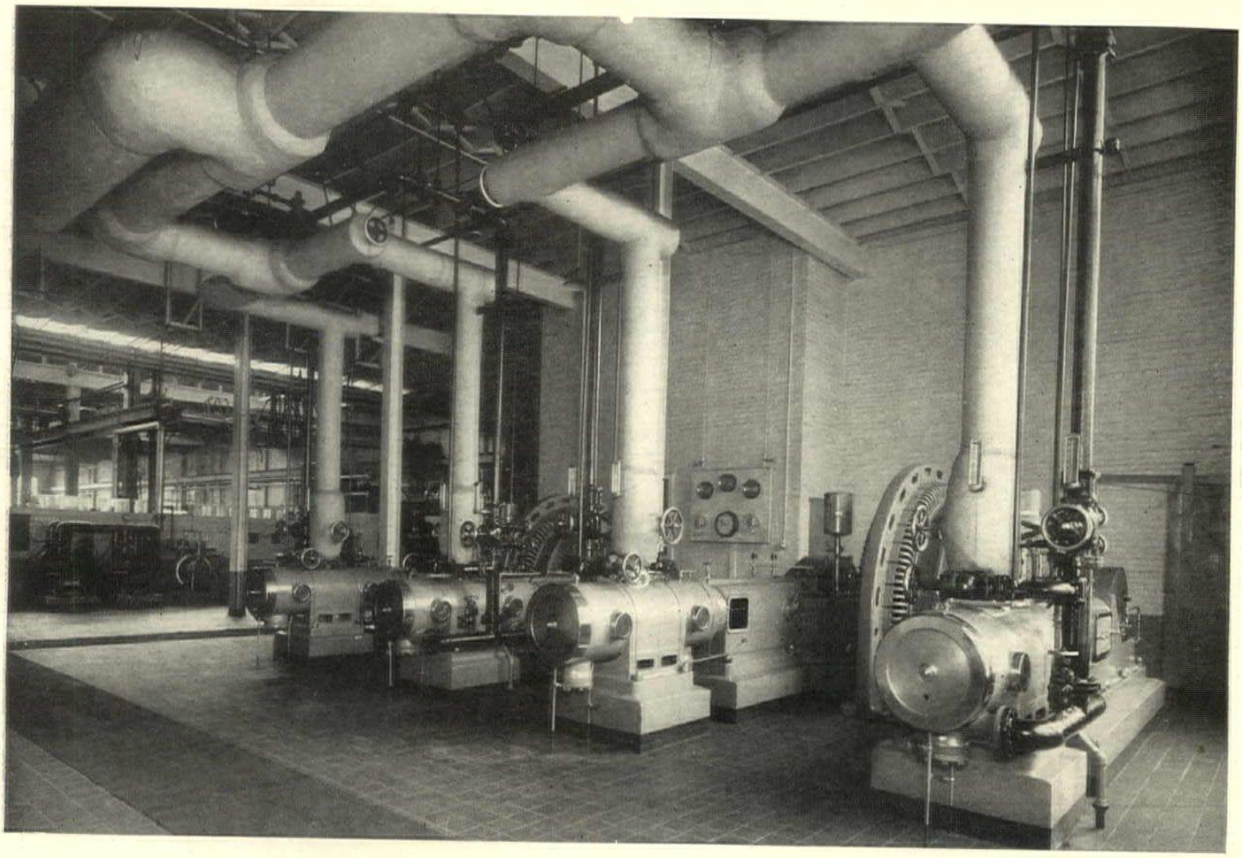
The insulation for the floor, in general, consists of sheet cork, or similar material, thoroughly waterproofed and laid on a concrete sub-base, with an additional protection of concrete over it, and a wood "working floor" on top of the concrete. The walls are insulated either with wood shavings, regranulated cork, or sheet cork. The type selected depends entirely on local conditions, and those under which the plant must operate. The ceiling insulation is invariably of cork, although shavings are frequently used in the loft type of building.

If we visualize the ice column or pack, inside these buildings, the height of which may be 100 ft., the question arises as to how the ice is placed, and stored, at this great elevation. It is not by means of a platform or freight elevator, which has been tried and found very unsatisfactory; on the contrary, it is a very simple counterbalanced gig, which operates with more precision than a human being, and with greater reliability, lifting cake after cake to a predetermined height, and automatically shooting it to its position. Unloading the house is simply the reverse operation, the ice being placed on the gig, which then operates by means of a counterweight, and discharges the ice into an ante or delivery room, the floor of which is at the level of the trucks that are to be loaded.

Adjacent, and forming a part of the gig-well, a stairway must be provided for getting on to the ice at the different levels, as the house is being filled or emptied. This stairway is usually of simple frame construction, but the framing must be carefully performed in order to avoid accident, due to disintegration and rotting of lumber.

The openings in the Cold Storage Rooms are provided with cold storage type doors filled with regranulated or sheet cork, and with double seals or gaskets, in order to avoid air leaks.

It is needless to say that in this type of work, as in mostly all others, it is a case of experience and expert advice, versus the novice, in that the lack of foresight and careful study of special requirements of the problem will introduce conditions which remain, and for which the owner must pay, throughout the entire life of the structure, causing a handicap to him in times of severe competition and newer equipment. The elimination of two or more men in the filling and emptying of these buildings, is a very considerable item, as is also the amount of insulation. In this way it is possible to a considerable extent to reduce production costs, which especially in the summer reach a maximum and become a serious factor.



ENGINE ROOM, ALBANY STREET PLANT, BOSTON ICE COMPANY, BOSTON, MASS.
C. LESLIE WEIR, ARCHITECT

GEORGE ROGERS CLARK MEMORIAL COMPETITION

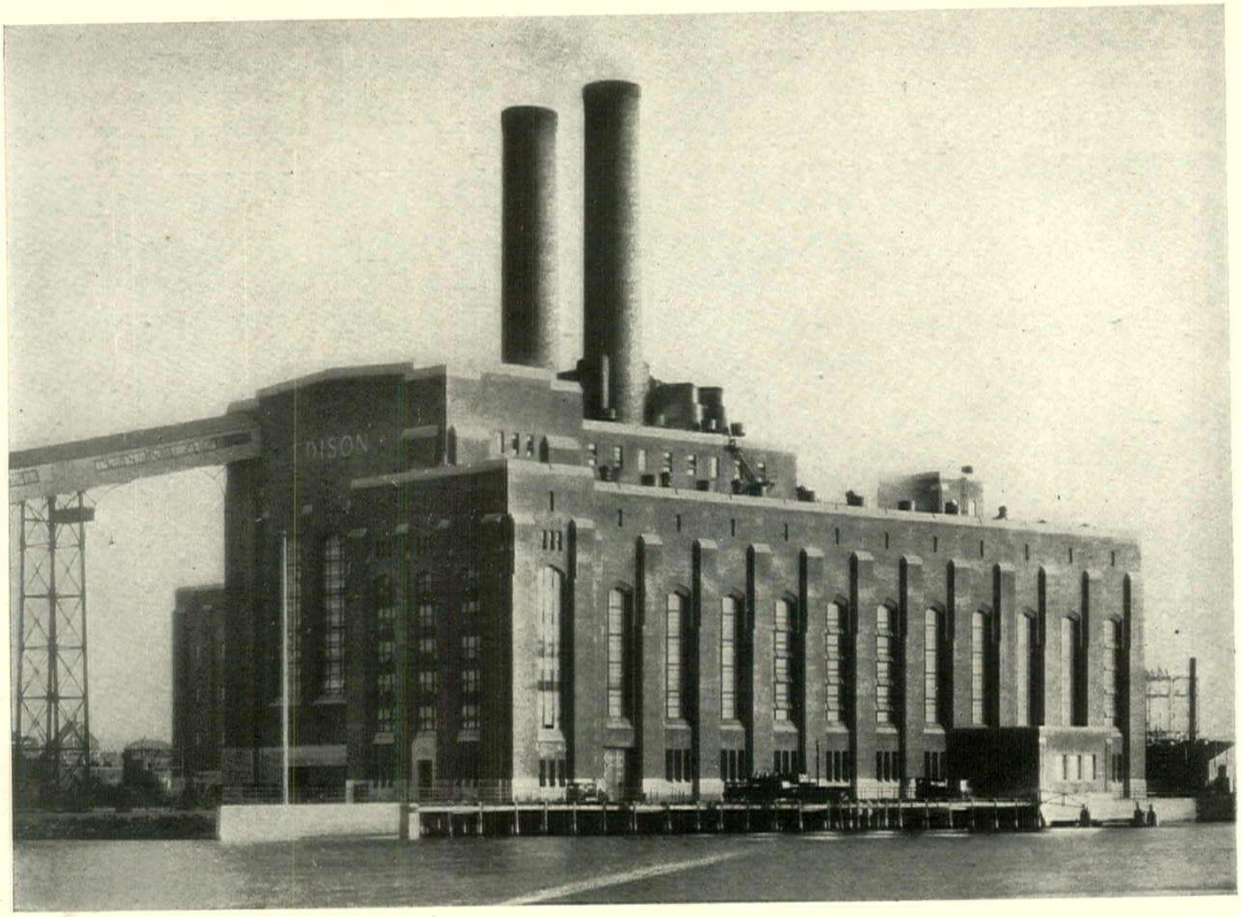
THE George Rogers Clark Sesquicentennial Commission has been established by resolution of Congress to erect at or near the site of Fort Sackville, in Vincennes, Indiana, a permanent memorial commemorating the winning of the Old Northwest and the achievements of George Rogers Clark and his associates in the War of the American Revolution.

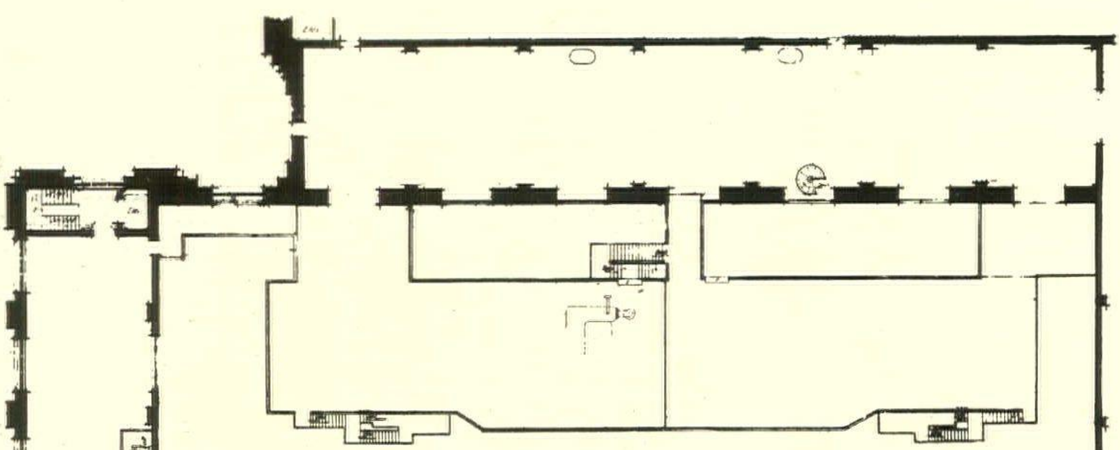
Funds for the design and erection of the Memorial have been authorized by Congress, sufficient funds to carry on the designing of the Memorial and to start its construction have been appropriated, and its site has been acquired.

The Commission desires to erect such a memorial as will have an aesthetic value comparable with its historic importance. To this end it proposes to institute an architectural competition for the design of the memorial structure and for the selection of an architect.

The competition will be open to all qualified architects who are citizens of the United States of America in addition to several architects who will be invited to enter the competition. Applications for entrance into this competition are to be addressed to William E. Parsons, 80 East Jackson Boulevard, Chicago, Ill., who has been appointed by the Commission as their architectural advisor for conducting the competition. These applications are to be made by letter stating the applicant's name, address and his associates if in a partnership or corporation. The applicant shall state his education, training and experience, together with a list of his most important architectural works, his affiliations with professional societies and business references. No application will be accepted after September 15, 1929.

The program of this competition will be subject to conditions of the American Institute of Architects. Copies will be forwarded to those architects whose applications have been approved by the Qualifications Committee on or about the first of October, 1929.

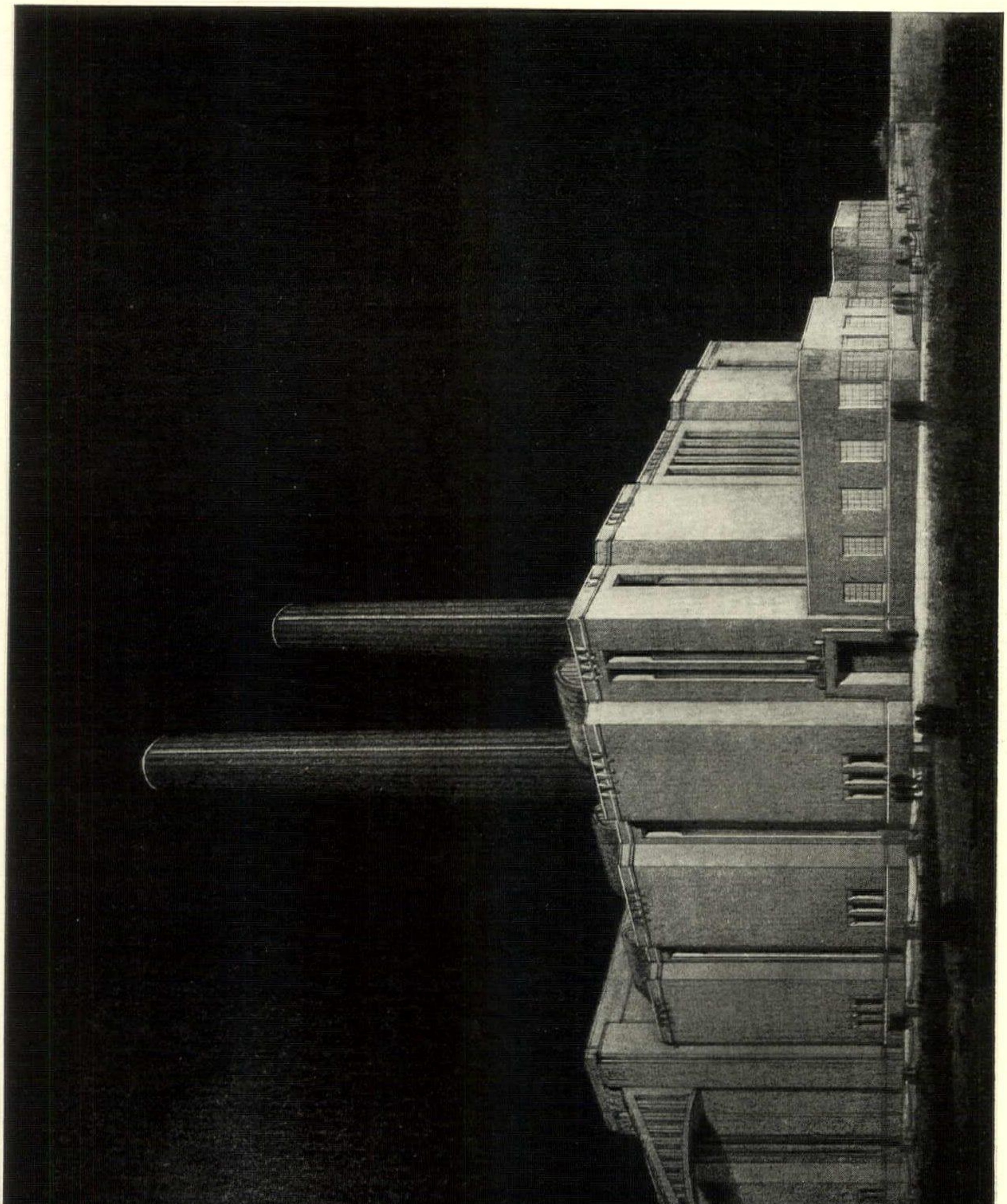




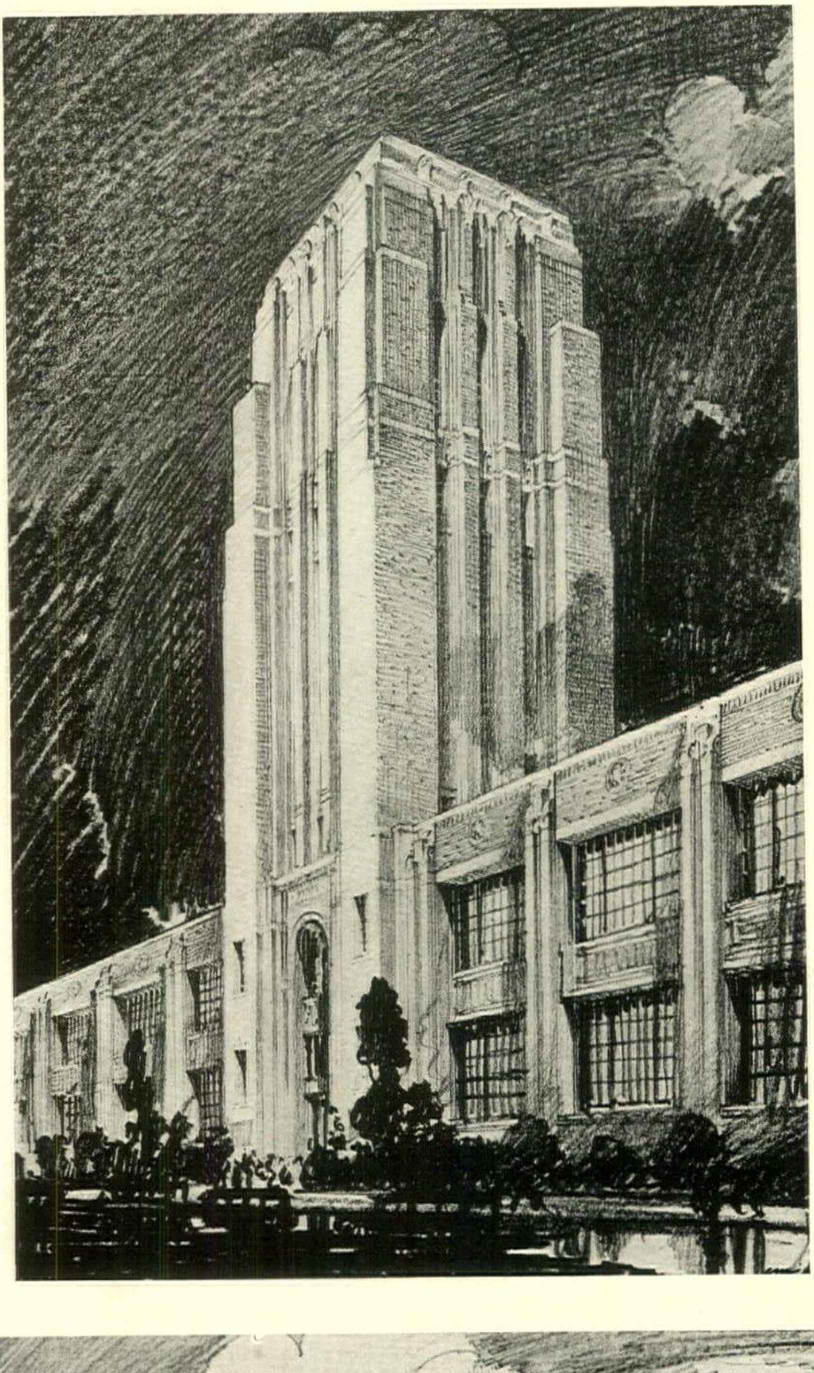
CHARLES LEAVITT EDGAR STATION, WEYMOUTH, MASS.

EDISON ELECTRIC ILLUMINATING COMPANY OF BOSTON

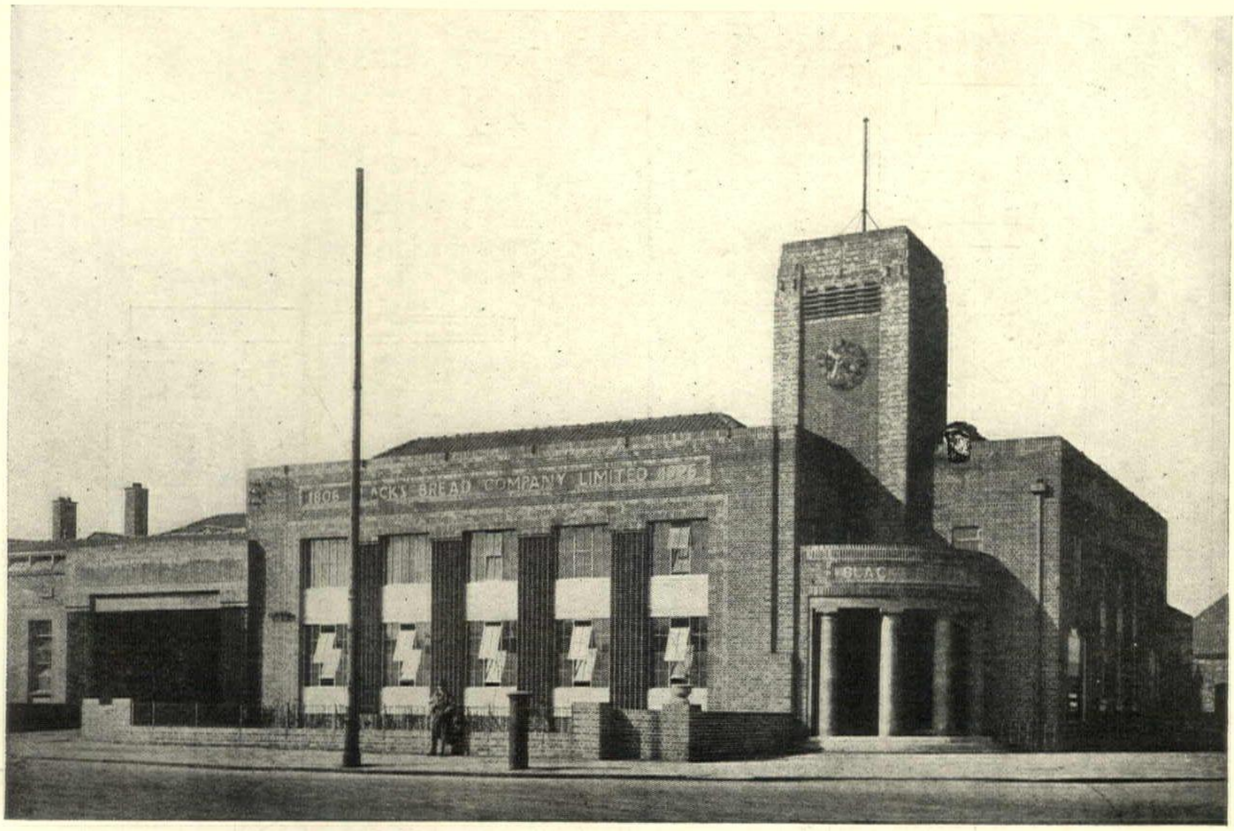
STONE & WEBSTER ENGINEERING CORP., DESIGNERS

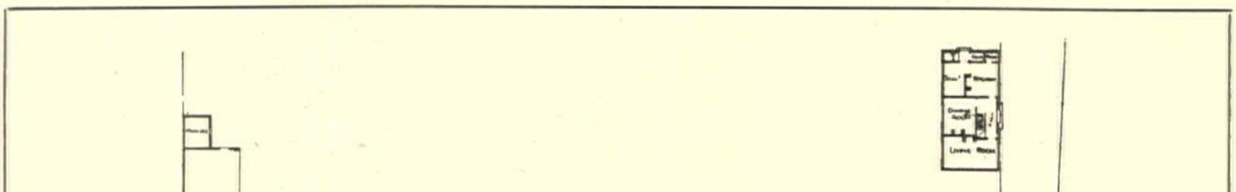


STUDY FOR A POWER HOUSE—HOLABIRD & ROOT, ARCHITECTS
From a rendering by Gilbert P. Hall



PINES WINTERFRONT BUILDING, CHICAGO, ILL.
MUNDIE & JENSEN, ARCHITECTS

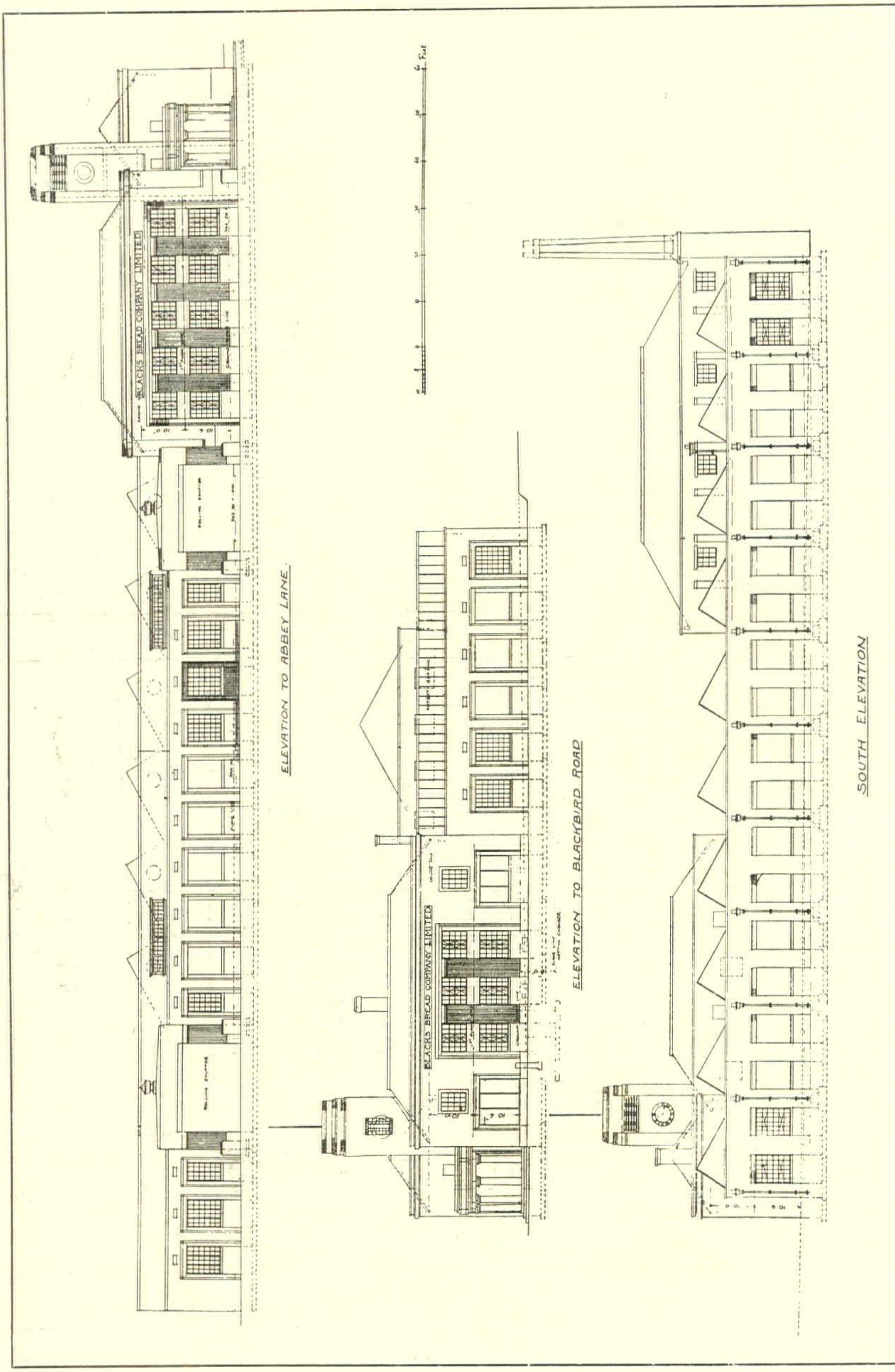




Courtesy The Architect & Building News

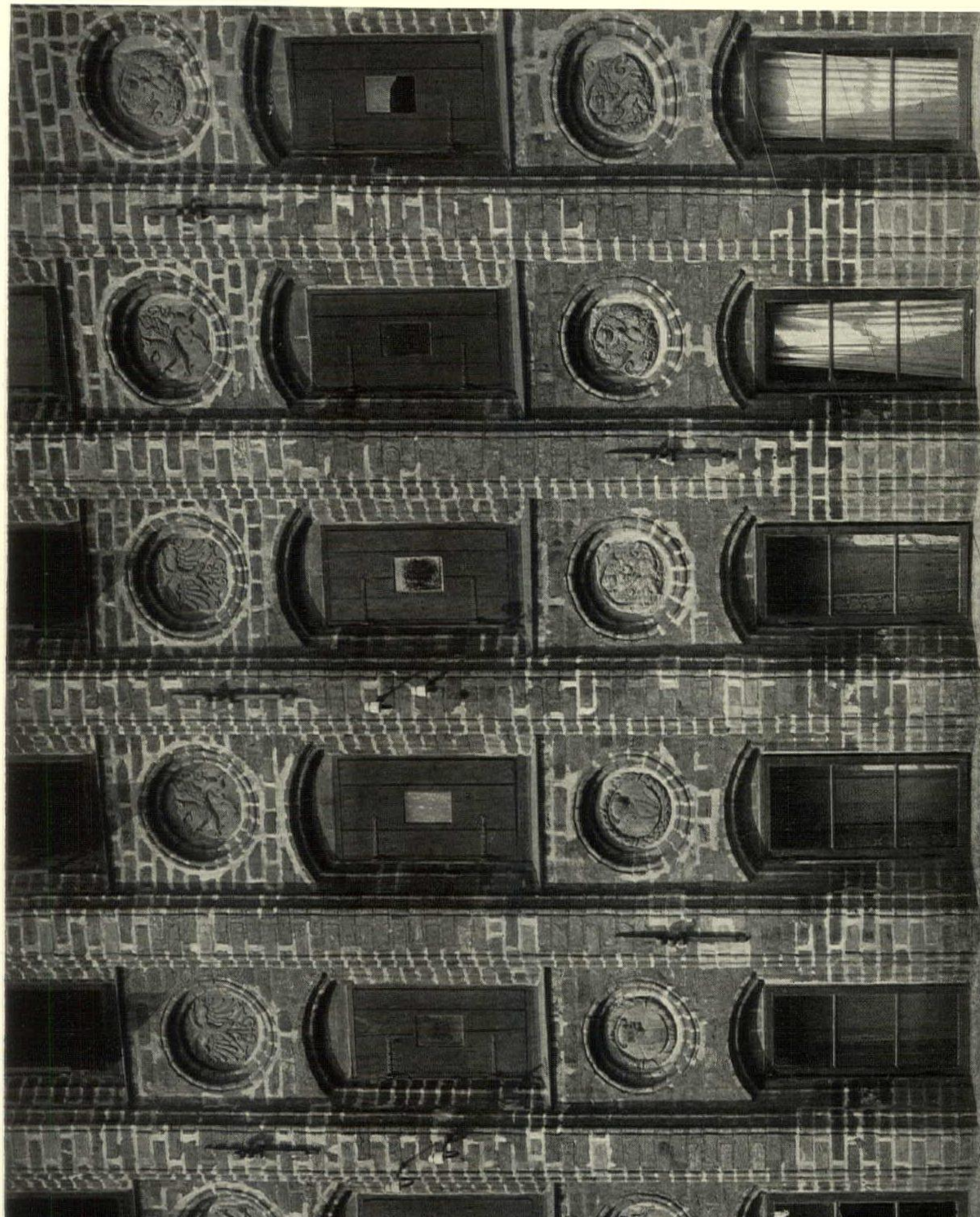
BAKERY, LEICESTER, ENGLAND

STOCKDALE HARRISON & SONS, ARCHITECTS



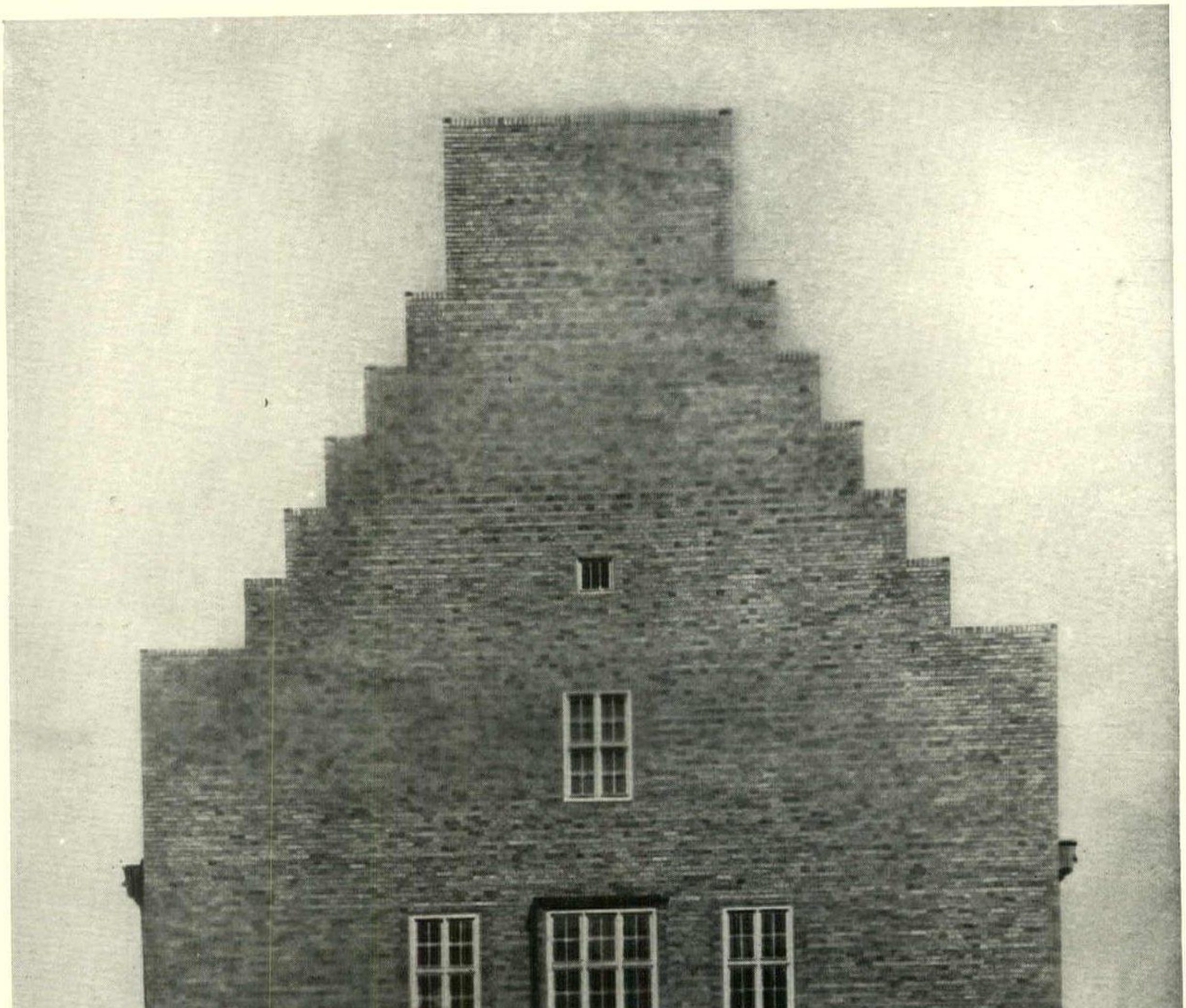
BAKERY, LEICESTER, ENGLAND—STOCKDALE HARRISON & SONS, ARCHITECTS

Courtesy The Architect & Building News



Courtesy Staatliche-Bildstelle

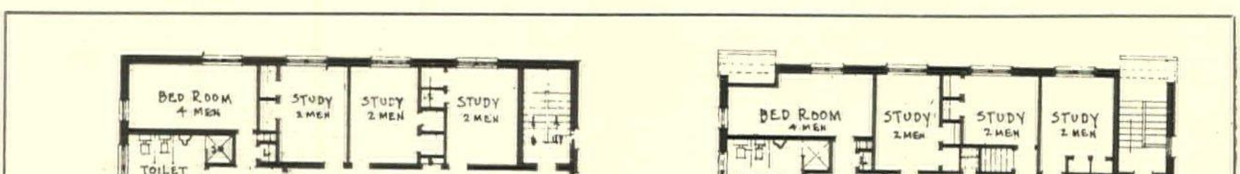
OLD BREW HOUSE, LUEBECK, GERMANY



Courtesy Staatliche-Bildstelle

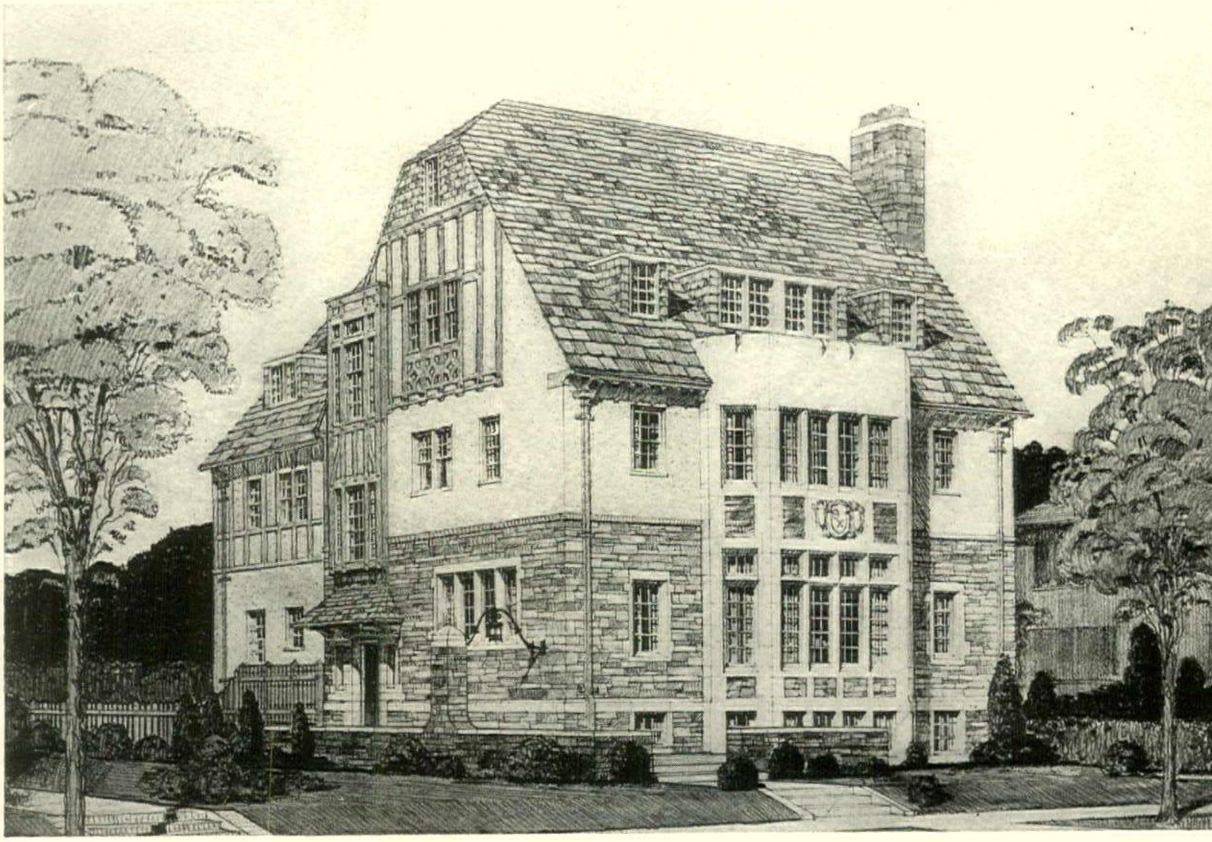
FEDERAL BANK, SPANCHAU, GERMANY

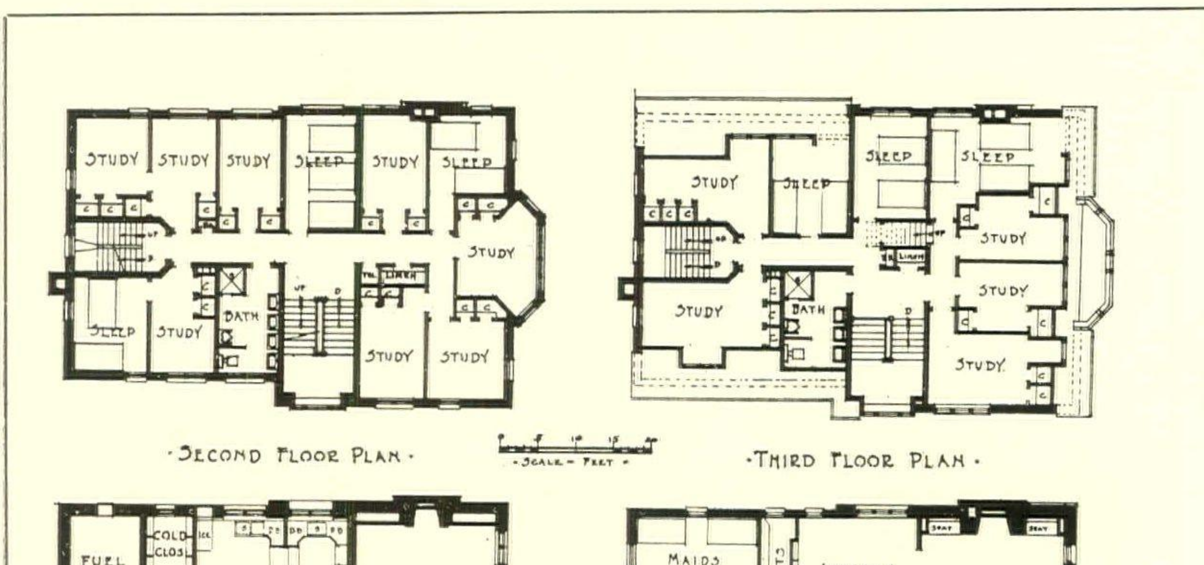
PHILIP NITZE, ARCHITECT



PHI KAPPA SIGMA FRATERNITY HOUSE, UNIVERSITY OF MINNESOTA, MINNEAPOLIS, MINN.

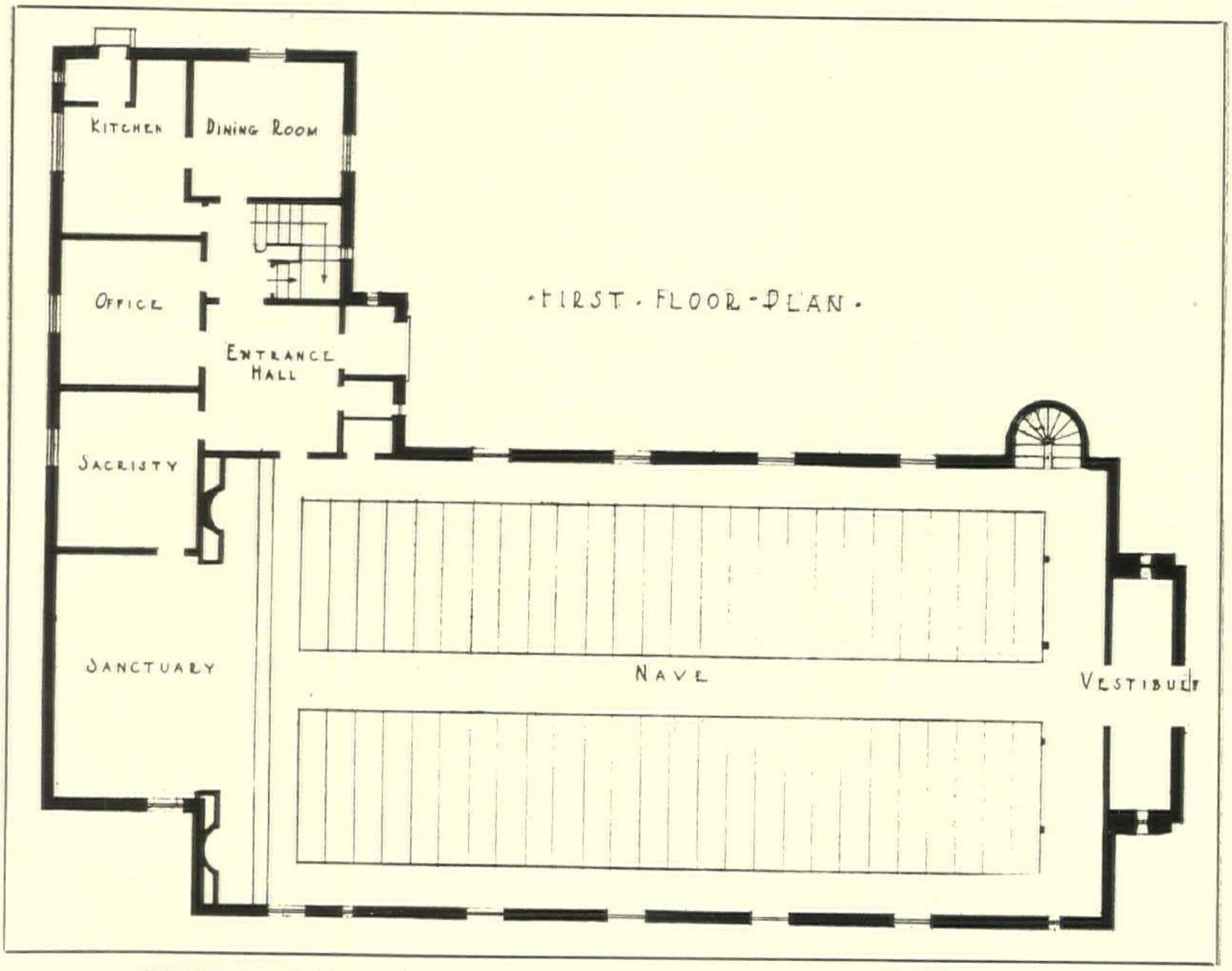
STEBBINS, HAXBY & BISSELL, ARCHITECTS





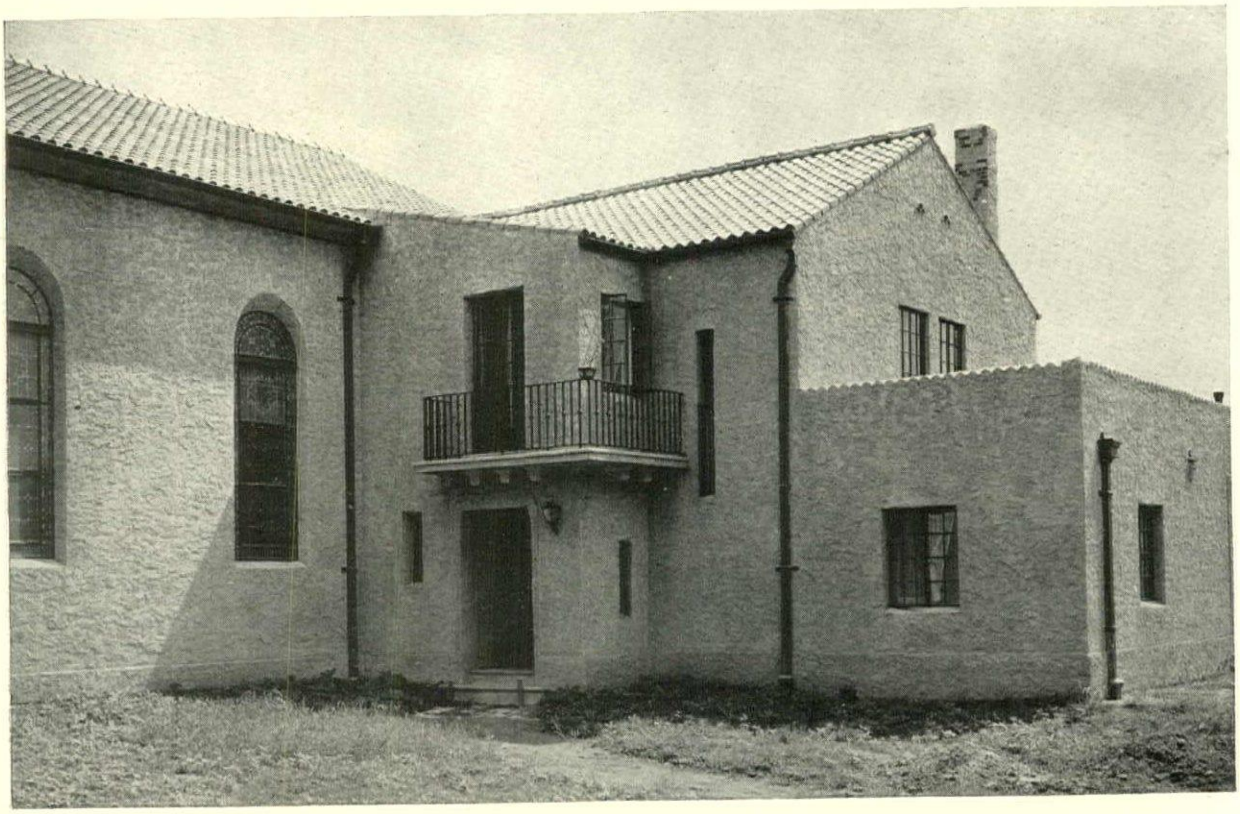
THETA CHI FRATERNITY HOUSE, UNIVERSITY OF MINNESOTA, MINNEAPOLIS, MINN.

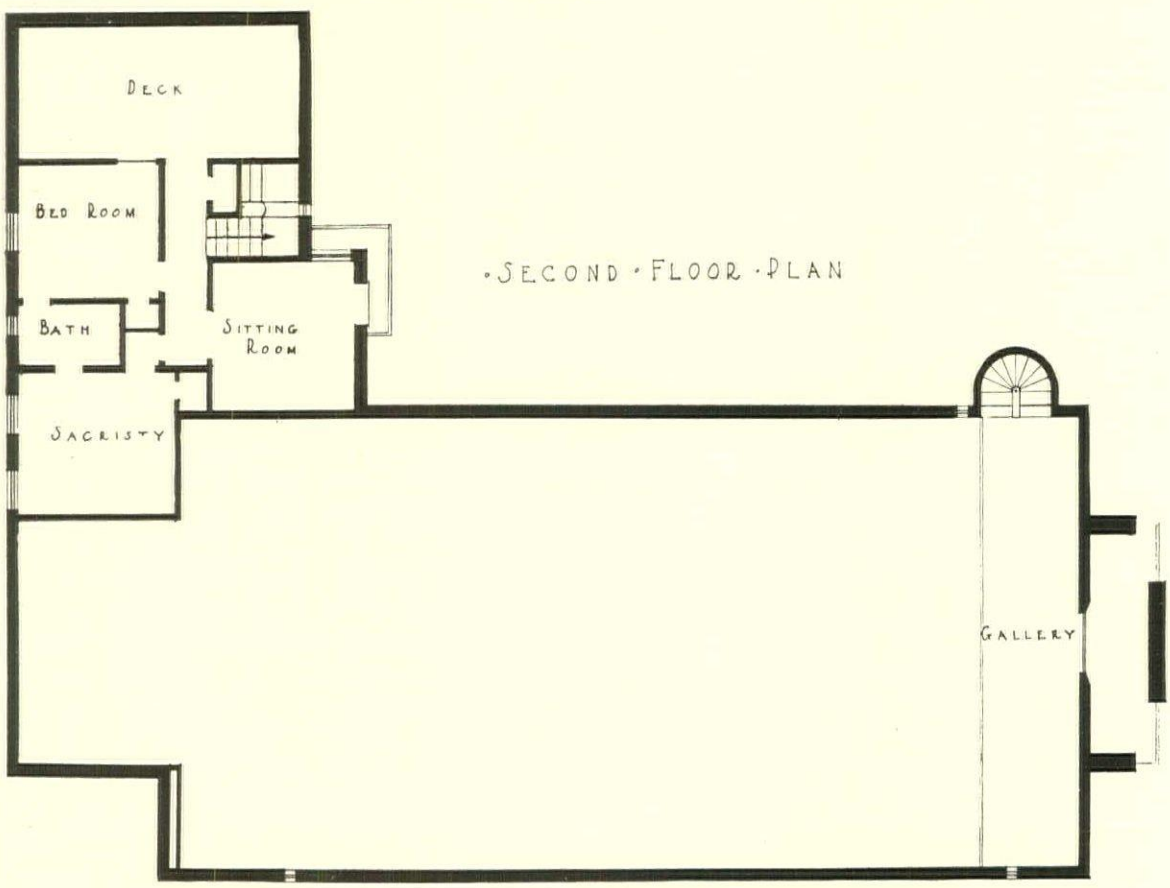
STEBBINS, HAXBY & BISSELL, ARCHITECTS



CATHOLIC CHAPEL, SEAVIEW HOSPITAL, BOROUGH OF RICHMOND, NEW YORK

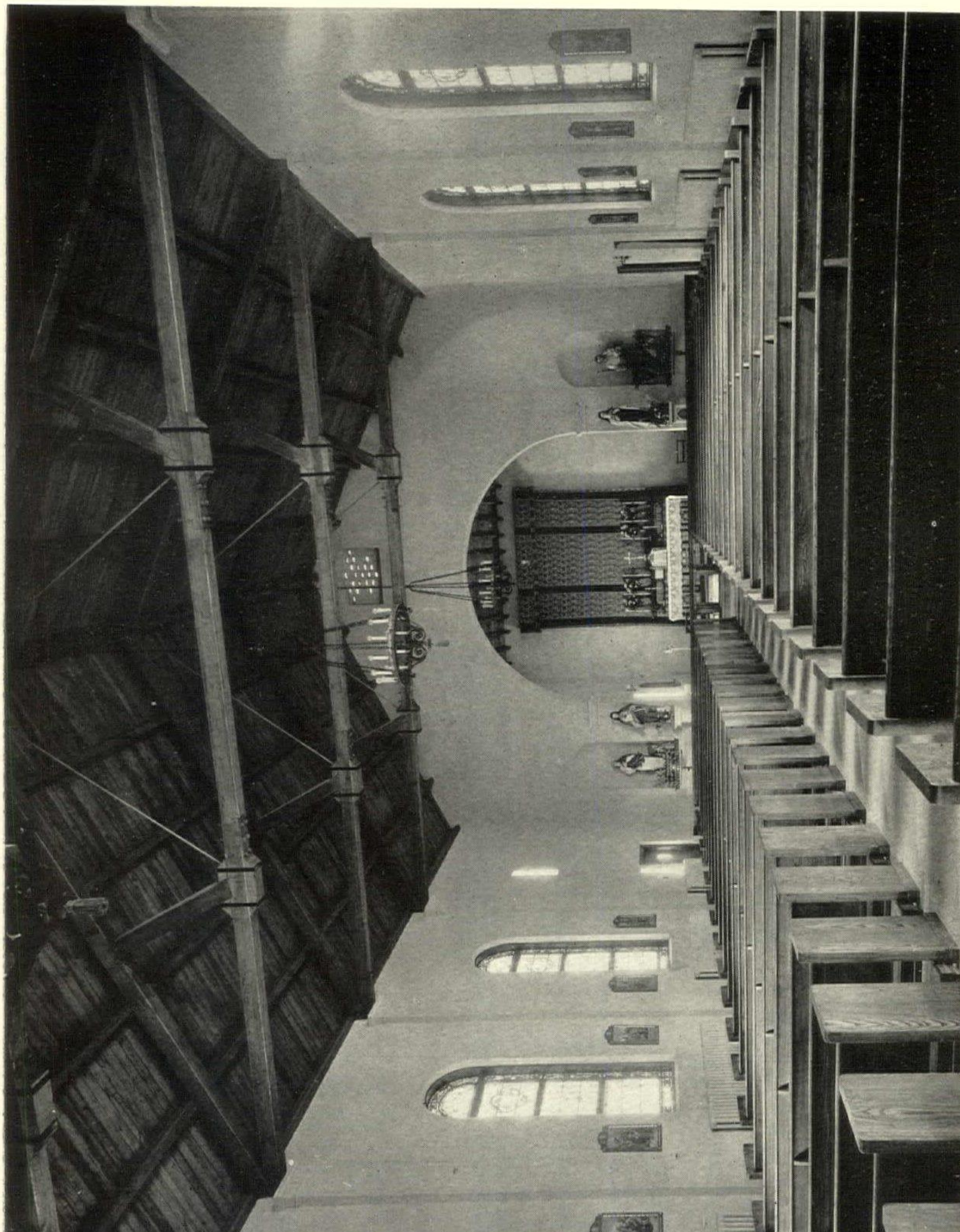
ROBERT J. REILEY, ARCHITECT





CATHOLIC CHAPEL, SEAVIEW HOSPITAL, BOROUGH OF RICHMOND, NEW YORK

ROBERT J. REILEY, ARCHITECT



CATHOLIC CHAPEL, SEAVIEW HOSPITAL, BOROUGH OF RICHMOND, NEW YORK—ROBERT J. REILEY, ARCHITECT

WEST TOWN STATE BANK BUILDING, CHICAGO, ILL.

MUNDIE & JENSEN, ARCHITECTS

SPECIFICATIONS

Communications relative to specifications addressed to THE AMERICAN ARCHITECT *will be answered, in the pages of this department, by H. R. Dowswell, of the office of Shreve, Lamb & Harmon, Architects.*

THE New York Building Congress Standard Specifications for Roofing and Sheet Metal Work, presented in this issue, represents the accumulated experience of the foremost men in New York City in this branch of the Building Industry. The Standards Committee recognizes that there may be other methods which will produce satisfactory results, but they also know that all of the methods specified have produced lasting jobs and therefore recommend them for use.

The gauges specified for various metals are those in general use, but if the Architect desires to increase or decrease them, Paragraph 5 provides for such variation in writing Part A.

Roofing tile of many kinds is obtainable. The selection must therefore be stated under Part A, as noted under Paragraphs 15 and 16. This applies also to the selection of slate.

Base and counter flashings vary with the location and type of roof. Part A should enumerate which of Paragraphs 24 to 33 apply to the work in hand. The specification writer must always keep in mind that the successful use of these standard specifications depends upon the study given to the various paragraphs and the careful listing by number in Part A.

Paragraphs 34, 36, 43 and 44 have been written to provide a satisfactory method of flashing pipes passing through roof and roof drainage outlets. If a standard manufactured product is desired these paragraphs should be ignored and only Paragraphs 35 and 45 included in Part A together with the type number and manufacturer.

Valley flashings should be specified "open" or "closed" under Part A and the corresponding paragraph listed.

The skylight construction described is the old "Hayes" type which can be made up by any good sheet metal worker. If one of the patented types is preferred Part A must state the type and manufacturer.

Ventilation must be shown on the drawings or listed under Part A, also the kind of glass. If samples of skylight construction are desired these must be called for.

Metal roofs must be specified under Part A as to type with reference to the standard paragraphs describing the type desired.

The specifications for composition roofs describe the best accepted practice. Here, too, the Architect may elect to specify the product of a particular manufacturer, in which case Part A should only carry a reference to Paragraph 66.

Several of the leading manufacturers furnish a bonded guarantee covering their product. These guarantees, however, while very desirable, usually apply only to the roofing material. If the Owner is to be fully protected the guarantee should cover both roofing and sheet metal work and Paragraph 89 has been written for this purpose. Paragraph 90 requires that the period of the guarantee be specified under Part A.

A.I.A. DIVISION 12.

New York Building Congress Standard Specifications for ROOFING AND SHEET METAL WORK

PART B.

General Conditions.

1. GENERAL CONDITIONS OF THE CONTRACT of the American Institute of Architects, current edition, shall form a part of this Division, together with the Special Conditions, to which this Contractor is referred. **General Conditions**

Arbitration Clause.

2. Any dispute or claim arising out of or relating to this Contract, or for the breach thereof, shall be settled by arbitration. Arbitration shall proceed under the requirements specified in the General Conditions, current edition, of the **Arbitration Clause**

New York Building Congress Standard Specifications—

ROOFING AND SHEET METAL WORK—*Continued.*

American Institute of Architects; or under the Rules of the Arbitration Court of the New York Building Congress, or of the American Arbitration Association, and judgment upon an award may be entered in the court having jurisdiction. One of these methods of arbitration shall be chosen at the time of the signing of the Contract, or, if not then determined, the choice of these methods shall be at the option of the party asking for arbitration.

Scope.

3. The following requirements in regard to materials and workmanship specify the required standards for the furnishing of all labor, material and appliances necessary for the furnishing and placing of all Roofing and Sheet Metal work. **Scope**
4. These requirements, however, form a part of the Contract only insofar as they describe items mentioned in Part A of this specification or as indicated on the Contract drawings.

Sheet Metal Materials.

5. The materials for work in this Division shall be of the kinds, brands, weights and gauges specified under Part A. **Sheet Metal Materials**
6. Where the weights and gauges of metal are not specifically stated under Part A, the material shall conform to the following requirements:
7. Copper sheets shall be rolled from copper conforming to the Standard Specifications of the American Society for Testing Materials.
8. Copper shall be 16 ounce (soft) roofing temper, except for cornices, leaders, eave troughs, or skylights, which shall be 16 ounce hard copper.
9. Nails, rivets and similar fastenings used throughout, in connection with copper work, shall be of the best grade hard copper or brass.
10. Galvanized iron and metal of a like character shall, for various parts of the work, be furnished in the following gauges:

Roofing	26 gauge
Cornices and moulded work	24 gauge
Gutters and leaders	24 gauge
Flashings	26 gauge

11. Lead for roofing, flashing, cornices or other moulded work shall, unless otherwise specified under Part A, weigh 3 pounds per square foot. Where used for cornices or moulded work, hard lead shall be used, formed to the required contours over wood cores.
12. Material used for tinning and soldering shall consist of one-half pig lead and one-half block tin, using as a flux—dilute muriatic acid for copper, rosin for lead, and raw muriatic acid for galvanized iron.
13. Felt for use under metal shall be asphalt saturated felt or asbestos building paper, weighing not less than fourteen (14) pounds per 100 square feet.
14. Felt for use under tile (other than promenade) and slate shall consist of asphalt roofing felt weighing not less than thirty (30) pounds per 100 square feet.

Roofing Tile.

15. Tiles shall be of the kinds, sizes and color specified under Part A. **Roofing Tile**
16. Where promenade tiles are specified, they shall be of shade and quality specified under Part A, square edged, free from warps, cracks, chips or other defects.
17. Typical samples, in duplicate, of each kind and grade of tile proposed for use on the work shall be submitted to the Architect for approval. Each sample shall be clearly marked with the grade of tile, name of the manufacturer and name of the building. When approved, one sample of each tile will be returned to the Contractor, the other retained by the Architect for comparison with the work as executed. Any material falling below the approved samples will be rejected and must be replaced with approved materials.

Slate.

18. Slate shall be of the sizes, thicknesses, grade and colors specified under Part A. **Slate**
19. Nails for securing slate shall be copper slaters' nails of length sufficient in all cases to penetrate the roofboarding not less than one (1″) inch.

New York Building Congress Standard Specifications—

ROOFING AND SHEET METAL WORK—*Continued.*

Workmanship.

20. All roofing and sheet metal work shall be executed in accordance with the best methods known to the craft. **Workmanship**

Flashings.

21. All intersections of roofs with vertical surfaces of every nature shall be flashed and counter flashed. **Flashings**
22. Flashings around all skylights shall extend up the full height of the curb, and turn two (2) inches over top of curb.
23. Where metal base flashings are specified under Part A, they shall be installed in accordance with the following requirements for the various types of roofs.
24. Base flashings shall extend out onto the roof, over the felt, a full four (4") inches, be securely nailed at not less than four (4") inch centers at outer edge, extend up onto vertical surfaces at least eight (8") inches above the finished roof surface and be left free.
25. Base step flashings shall be laid with every course of roofing material, extend four (4") inches out onto roof, lap one another four (4") inches and extend up onto vertical surfaces a full three (3") inches under counter flashing; the minimum height to be six (6") inches above finished roof.
26. Base flashings at door and low window sill adjacent to roofing shall extend vertically to bottom edge of sill, inward to form a pan under the sill, and be formed with head at ends, and turned up at back of sill.
27. Base flashings shall be full length pieces and, except on sloping roofs, shall be locked and soldered. Where base flashing occurs in connection with metal roofs, the flashing shall be locked and soldered to roofing sheets. On sloping shingle, slate or tile roofs the flashing sheets shall lap at least four (4") inches.
28. Counter flashings generally shall be turned into the first joint above the high point of base flashing and, except for parapet walls, carried in for the depth of one brick, turned up one brick course and then carried through to the inside face of the wall, turned up one (1") inch. On parapet walls the flashing shall extend through to within one (1") inch of outside finished face, and formed up and down over a course of brick in the center of wall.
29. Where counter flashings are required, at approximately the same level on two sides of a firewall, the flashing shall be carried through the wall from each side, at least one brick course apart, overlap horizontally four (4") inches and turn up the height of one (1") inch.
30. Where counter flashing occurs on a sloping surface against stone or terra cotta
31. Where flashing is let down into horizontal surfaces of stone or terra cotta an (cut under another division), not less than one (1") inch and be caulked with lead wool.

    the sheets shall have a $\frac{1}{8}$" or $\frac{1}{4}$" bend on the edge, be turned into reglets edge shall be turned as above specified and the reglet filled with an approved caulking compound.
32. Counter flashings shall extend down over base flashings at least three (3") inches, lapped six (6") inches.
33. Counter flashings on sloping roofs shall be stepped. They shall be built and soldered together in suitable lengths and set as complete units. Unless otherwise specified under Part A, flashings shall extend completely through the wall, except on chimneys where they shall turn up two (2") inches against the flues.

Vent or Other Piping.

34. Where vent or other piping passes through flat roofs they shall, except where "Special" vent connections are specified under Part A, be flashed and counter flashed. The base flashing shall extend at least four (4") inches onto the roof and turn up against pipes not less than eight (8") inches. The counter flashing will be caulked into hubs of pipes by the plumber or embedded in white lead and held with brass clamps; or, for threaded pipe, will be covered one (1") inch by plumber's reamed out coupling. **Vent or Other Piping**
35. Where "Special" connections are specified, they shall be set strictly in accordance with the manufacturer's specifications.
36. Where vent or other piping passes through sloping roofs the base flashing shall extend, laterally, out onto the roof surface sufficiently to insure water

New York Building Congress Standard Specifications—

ROOFING AND SHEET METAL WORK—*Continued.*

tightness. Vertically, the base flashing shall extend eight (8″) inches above the finished roof surface.

Flag Poles.

37. Where flag poles pass through roofs they shall be provided with base flashing and flashing collar. The base flashing shall turn up one (1″) inch free of the pole to a height of eight (8″) inches and extend up under the flashing collar. The flashing collar, unless specified under Part A, to be furnished under this Division, will be furnished and placed on the pole by the Contractor for the flag pole. **Flag Poles**

Struts or Braces.

38. Where struts, braces or other steel or iron supports pass through flat roofs, a pan, approximately two (2″) inches high and extending out onto roof at least four (4″) inches from all sides under the two upper layers of felt and well mopped, shall be placed around the member. The pan shall then be filled with pitch or asphalt and the top sloped in all directions so as to drain freely. **Struts or Braces**

Gutters.

39. Gutters shall be of hanging, moulded or built-in type, as indicated on drawings, and of sizes and material noted or specified under Part A. **Gutters**

40. When hanging gutters are called for, they shall be constructed in long lengths with one (1″) inch lapped and soldered joints or slip joints all made in the direction of flow. They shall be supported at intervals of not more than thirty-six (36″) inches by hangers or braces of an approved type secured by screws or bolts, constructed of materials as specified under Part A.

41. Moulded gutters shall be constructed with a flange extending up onto the roof sheathing to the first row of nailing and nailed to roof sheathing at 4″ centers. The outer edge of the gutter shall be stiffened with a rod or rectangular bar and be provided with a drip. Heavy twisted braces, spaced not more than 36″ apart shall be locked, riveted or bolted to the outer edge and secured to roof sheathing above the gutter flange. Joints shall be lapped and soldered as specified for hanging gutters.

42. Built-in gutters shall consist of linings built to fit into gutters formed, under another division, in wood, stone, terra cotta or concrete. Such lining shall fit loosely and shall have the back edge at least one (1″) inch higher than the front edge. The back edges shall lock with metal roof coverings or in the case shingles, slate or tile, extend up onto the roof to the first row of nailing and be nailed at intervals of not more than four (4″) inches.

Roof Outlets.

43. Roof outlets on flat roofs shall be fitted with special make connections when specified under Part A. Where special connections are not called for, the roof outlets shall be constructed of sheets of metal specified under Part A, about twenty-four (24″) inches square with the outlet hole cut at center. For built-up roofs, furnish separate, five-eighths (⅝″) of an inch high gravel guards of same metal, solder-tacked about six (6″) inches from center of outlet. For promenade tile roofs, furnish guards reinforced with one-eighth (⅛″) of an inch iron, painted with a heavy coat of asphaltum before covering; these guards to be of height to finish flush with the tile surface. The roof outlet sheets are to be embedded four (4″) inches in the roof waterproofing. The lead connection to leader, furnished and installed by Contractor for Plumbing, shall be cut off, turned over, beaten down and soldered to the outlet by this Contractor. All outlets, unless otherwise specified under Part A, shall be provided with removable cast brass strainers of the beehive type. **Roof Outlets**

44. Roof outlets receiving drainage from gutters shall, unless special connections are specified, be provided with sleeve soldered to gutter, connecting to interior or exterior leaders as indicated and equipped with No. 12 gauge copper wire strainer.

45. Where special connections are specified, they shall be set strictly in accordance with the manufacturer's specifications.

Leaders.

46. Where sheet metal leaders are required, they shall be of the sizes specified **Leaders**

New York Building Congress Standard Specifications—

ROOFING AND SHEET METAL WORK—*Continued.*

under Part A and in locations indicated on the drawings. They shall be constructed in long lengths, lapped and soldered, except at slip joints, which shall be provided approximately every 24 feet; vertical seams to be soldered.

47. Leaders shall be held in position, clear of walls, either by hooks spaced not more than 8 feet apart, or heavy straps of sizes, design and spacing indicated on drawings. Where leaders connect with underground drains, they shall be inserted in the drain pipes and have the joint neatly cemented. Leaders discharging onto grade shall be provided with elbows at the bottom with reinforced ends.

48. Where leader heads are called for, they shall be as shown on Contract drawings or specified under Part A.

Valleys.

49. Flashing for open valleys in connection with slate, tile or shingle roofs shall consist of sheets of sufficient width to expose not less than five (5″) inches on each slope and so cut that the valley may increase in width from top to bottom at the rate of ½″ in 8′-0″ and extend under the slate tile or shingles not less than five (5″) inches. The sheets shall be nailed at the top only. **Valleys**

50. Valley flashings occurring in connection with metal roofs shall lock with the roof sheets so as to form a watertight joint.

51. Where closed valleys are called for under Part A, flashings shall be built in with each course of roofing material, extend eight (8″) inches under the roofing on each side, be entirely covered by roofing and secured with nails at top edge only. Joints shall be lapped at least four (4″) inches.

Skylights.

52. Where, under Part A, the product of a particular manufacturer is specified, this shall be furnished. **Skylights**

Where a particular product is not specified, skylights shall conform to the following requirements:

53. Skylights shall be of a design to allow for free expansion and contraction of the glass. The ribs shall be shaped to form condensation gutters. Where the span of the ribs and length of the ridge require additional stiffness this shall be obtained by the use of steel cores which shall be painted with an asphaltum paint before enclosing.

54. The ribs shall be capped with caps, of design and material specified under Part A. These caps shall be secured to the ribs with brass bolts and nuts or other device for maintaining contact with the glass approved by the Architect.

55. Each skylight shall be provided with ventilators of the size and type noted under Part A or where indicated on Contract drawings.

56. Where, under Part A, samples of skylight construction are called for, this Contractor, before the work is proceeded with, shall prepare and submit to the Architect, for approval, a sample illustrating the rib and ridge construction proposed. When the sample is approved, all work shall be executed in accordance therewith.

57. Glass for skylights shall be of the kinds specified under Part A, and shall be furnished and installed by this Contractor. Glass shall be set in putty or felt cushions as specified under Part A.

Shop Drawings.

58. This Contractor shall prepare and submit to the Architect in duplicate, shop drawings illustrating, in detail, the construction of such features as skylights, ventilators, louvres, and other sheet metal work of a special character. These drawings shall be revised and corrected until satisfactory to the Architect. After approval, these drawings shall govern the execution of the work. **Shop Drawings**

Metal Roof.

59. Metal roofs shall be laid with ribbed seam, standing seam or flat seam as specified under Part A. **Metal Roofs**

Ribbed Seam:

60. Where ribbed seam roofs are called for, wood ribs will be furnished and placed under another division. This Contractor, however, shall see that the ribs are evenly spaced, truly lined, firmly secured and nails well set.

New York Building Congress Standard Specifications—

ROOFING AND SHEET METAL WORK—*Continued.*

61. The metal sheets shall be laid in long lengths with the turned up edge free from sides of wood ribs, be secured with ½″ x 3″ cleats, spaced not more than eight (8″) inches apart, nailed to side of ribs and locked to the sheets. The ribs shall be covered with a metal cap locked over the cleats and edges of roofing sheets.

Standing Seam:

62. Standing seam roofs shall consist of long sheets laid with the long edges turned up 1¼″ on one side and 1½″ on the other secured in place with cleats spaced not more than eight (8″) inches apart. The abutting (standing) edges of sheets shall be locked to the cleats and to each other. Cross seams shall be staggered, locked and flattened in the direction of the roof slope and soldered. Standing seams shall not be soldered.

Flat Seam:

63. Flat seam roofing shall have the joints staggered, each sheet secured with 1½″ x 1½″ cleats evenly spaced along the edges at approximately eight (8″) inch centers. The cleats and adjoining edges of sheets shall be locked together and the seams flattened and soldered. All seams shall be tinned back two (2″) inches from the edge before soldering.

Metal Covered Walls.

64. Where walls or surfaces, other than roof, are specified to be covered with metal, the work shall be executed with ribbed, flat seam, standing seam or panelled surfaces as indicated on Contract drawings or noted under Part A. Ribbed, flat seam or standing seam work shall be executed using methods specified under "Metal Roofs." **Metal Covered Walls**

Cornices.

65. Cornice and other ornamental metal work shall be accurately bent to the profiles shown on detail drawings and reinforced with the necessary straps and angles. Joins and seams shall be interlocked, riveted, soldered and reinforced on the back. Where ornament is indicated it shall be stamped with dies made to conform to the detail drawings or to models, approved by the Architect. **Cornices**

Composition Roofs.

66. Where the products of a specific manufacturer are specified under Part A, the materials shall be applied strictly in accordance with the manufacturer's specification. **Composition Roofs**

67. Where specific products are not specified, the materials shall be subject to the Architect's approval and shall conform to the following requirements both for materials and workmanship:

68. Unsaturated felt shall weigh at least five (5) pounds per 100 square feet of roof surface. Saturated felts, either coal tar or asphalt, shall weigh not less than fourteen (14) pounds per 100 square feet of roof surface, single ply.

69. Pitch shall be either straight run coal tar pitch or asphalt.

70. The number of plies shall be as specified under Part A.

Laying Composition Roofs.

Over Wood:

71. Where composition roofs are to be laid over boards: **Laying Ccmposition Roofs**

First: Lay one (1) thickness of sheathing paper or unsaturated felt, weighing not less than five (5) pounds per one hundred (100) square feet, lapping the sheets at least four (4″) inches.

Second: Over the entire surface lay two (2) plies of felt, lapping each sheet seventeen (17″) inches over preceding one, and nail as often as is necessary to hold in place, mopping the laps as far back as the nailing will permit.

Third: Coat the entire surface with pitch.

Fourth: Over the entire surface lay the additional plies necessary to bring the plies of the "second" and "fourth" operation to the number specified under Part A, lapping each sheet seventeen (17″) inches for four (4) ply roof and twenty-

New York Building Congress Standard Specifications—

ROOFING AND SHEET METAL WORK—*Continued.*

two (22") inches for five (5) ply roof, mopping with pitch the full seventeen (17") inches or twenty-two (22") inches on each sheet, so that in no case shall felt touch felt. Any nailing required shall be done so that in all locations every nail will be covered by not less than two (2) plies of felt.

Fifth: Over the entire surface, for roofs having two (2") inches or less pitch per foot, pour from a dipper a uniform coating of pitch. Where roofs are over two (2") inches pitch, a mop may be used. Embed in pitch, while hot, not less than four hundred (400) pounds of gravel or three hundred (300) pounds of slag for each one hundred (100) square feet of roof surface. The gravel or slag shall be dry, free from dirt, and be graded from one-quarter (¼") of an inch to five-eighths (⅝") of an inch in size.

72. Not less than one hundred and twenty-five (125) pounds of pitch to one hundred (100) square feet of roof surface shall be used for "four ply" roofs and one hundred and fifty (150) pounds for "five ply" roofs.

Over Concrete, Etc., Poured on Place:

73. Where composition roofs are to be laid over concrete, gypsum or similar material poured in place or concrete or gypsum fill finished with cement levelling coat, precast concrete or gypsum finished with cement levelling coat furnished under another division:

First: Coat the entire surface with pitch.

Second: Over the entire surface lay the number of plies of felt specified under Part A, lapping each sheet twenty-two (22") inches for three (3) ply, twenty-four and one-half (24½") inches for four (4) ply over the preceding one, mopping with pitch the full width of lap on each sheet, so that in no case shall felt touch felt.

Third: Over the entire surface of roofs under two (2") inch pitch per foot, pour from a dipper a uniform coating of pitch. Where roofs are over two (2") inch pitch, a mop may be used. Embed into the pitch, while hot, not less than four hundred (400) pounds of gravel or three hundred pounds of slag for each one hundred (100) square feet of roof surface. The gravel or slag shall be dry, free from dirt, and be graded from one quarter (¼") inch to five-eighths (⅝") of an inch in size.

74. Not less than one hundred and seventy-five (175) of pitch, per one hundred (100) square feet of roof surface shall be used for "three ply" roofs and two hundred (200) pounds for "four ply" roofs.

Over Precast Slabs:

75. Where composition roofs are to be laid over precast slabs without a cement levelling coat, the first coating of pitch shall be omitted and each slab shall be spot or strip mopped with pitch, care being taken that pitch moppings are held back to within four (4") inches from the edge of each joint.

Follow with "Second" and "Third" operations as specified above for use over cement levelling coats.

Under Promenade Tile:

76. Where composition roofs are to be laid under promenade tile and over concrete, gypsum or similar material poured in place, or concrete or gypsum fill, finished with cement levelling coat, furnished under another division.

First: Coat the entire surface with pitch.

Second: Over the entire surfacelay two (2) plies of felt lapping each sheet seventeen (17") inches over preceding one, mopping with pitch the full seventeen (17") inches on each sheet, so that in no case shall felt touch felt.

Third: Coat the entire surface with pitch.

Fourth: Over the entire surface lay three (3) plies of felt, lapping each sheet twenty-two (22") inches over preceding one, mopping with pitch the full twenty-two (22") inches on each sheet, so that in no case shall felt touch felt.

Fifth: Coat the entire surface with pitch.

77. Not less than two hundred and twenty-five (225) pounds of pitch per one hundred (100) square feet of roof surface shall be used.

New York Building Congress Standard Specifications—

ROOFING AND SHEET METAL WORK—*Continued.*

Laying Slate Roofs.

78. All surfaces to be covered with slate shall first be covered with 30 pound asphalt saturated felt well lapped and laid to shed water. **Laying Slate Roofs**

79. Slate shall be laid with joints well broken and with a head lap of not less than 3″ under second course above and secured with at least two nails to each slate.

80. Ridges and hips shall be plain type or "Boston" as specified under Part A, and shall be made tight with elastic cement and where so specified, under Part A, with slip flashings as well.

81. Where special thicknesses, graduation, color and character of laying is called for under Part A, a layout shall be prepared by the roofer and submitted to the Architect for approval before any of the work is proceeded with.

Tile Roofs—Promenade Tile.

82. Promenade tiles shall be set in a bed of Portland Cement mortar composed of one (1) part of cement and three (3) parts of sand. **Tile Roofs**

83. Tiles, other than square, shall be laid with points broken, the long dimension of the tile paralleling the long dimension of the space.

84. The tiles shall be laid on a full bed of mortar, trued up and joints grouted. Grout shall consist of one (1) part of Portland Cement and two (2) parts of sand.

85. Materials for setting shall conform to the requirements of the Specifications describing Masonry and Concrete Materials, Part B, A.I.A. Division 3.

86. Bituminous expansion joints shall be provided at junction of tile with all vertical surfaces, where roofs are over twelve (12′) feet wide. Longitudinal and cross expansion joints shall also be provided at intervals not exceeding twenty-five (25′) feet. Unless otherwise specified under Part A, these shall be bituminous joints.

87. Where copper expansion joints are specified under Part A, they shall consist of 16 ounce hard copper, filled with bituminous compound, laid flush with top of tiles. The copper shall extend through the setting bed and the tiles be laid against it. The expansion joints to be one and one-half (1½″) inches wide at top, one and three-quarters (1¾″) inches deep, with sides one (1″) inch apart at bottom, with flanges three-quarters (¾″) of an inch wide right and left, and turned up one-quarter (¼″) of an inch to form clinch with the mortar. The copper shell to be filled before installation with a bituminous compound that will not run with the heat of the sun and that will be mobile in the coldest weather.

Flat or Mission Tile.

88. Where mission tiles are specified, wood strips of sizes required by tile manufacturer will be furnished and placed by the Contractor for Carpentry. This Contractor, however, will be required, as a part of his Contract, to furnish correct information regarding their extent and spacing. **Flat or Mission Tile**

Guarantee.

89. This Contractor shall furnish, as part of this Contract, a written guarantee, warranting all roofing and sheet metal work installed under this Division and binding himself to repair, without additional compensation beyond the Contract amount, any and all portions of his work which may prove defective within the life of the guarantee, due to faulty material or workmanship. **Guarantee**

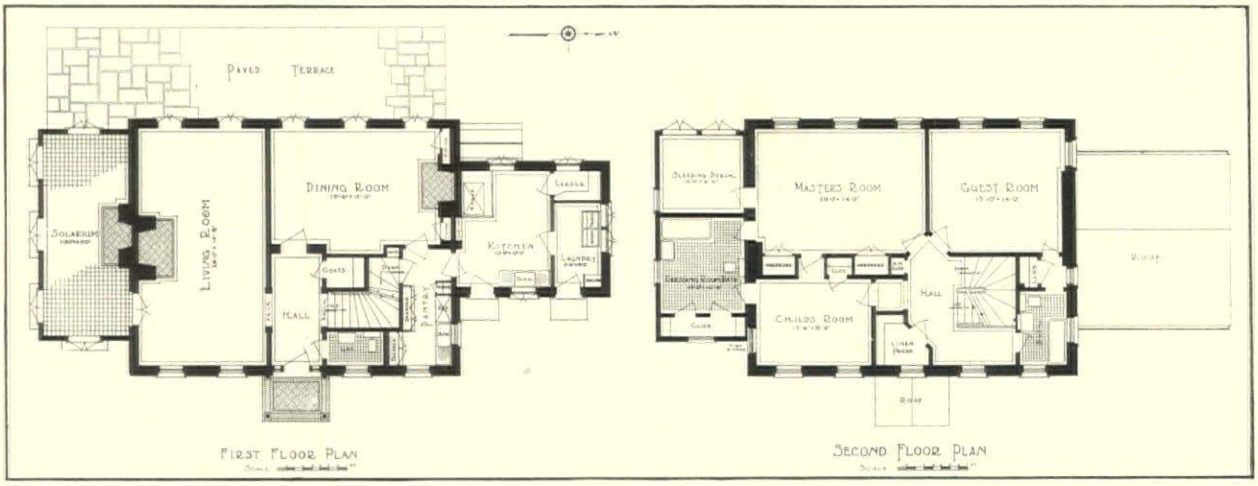
90. This guarantee shall cover the period specified under Part A, starting at date of acceptance as evidenced by date of final payment.

A GROUP OF HOUSES OF MODERATE COST

Photo by Boise

HOUSE OF DOUGLAS ANDERSON, NORTH PLAINFIELD, N. J.

SIMPSON & ROLSTON, INC., ARCHITECTS



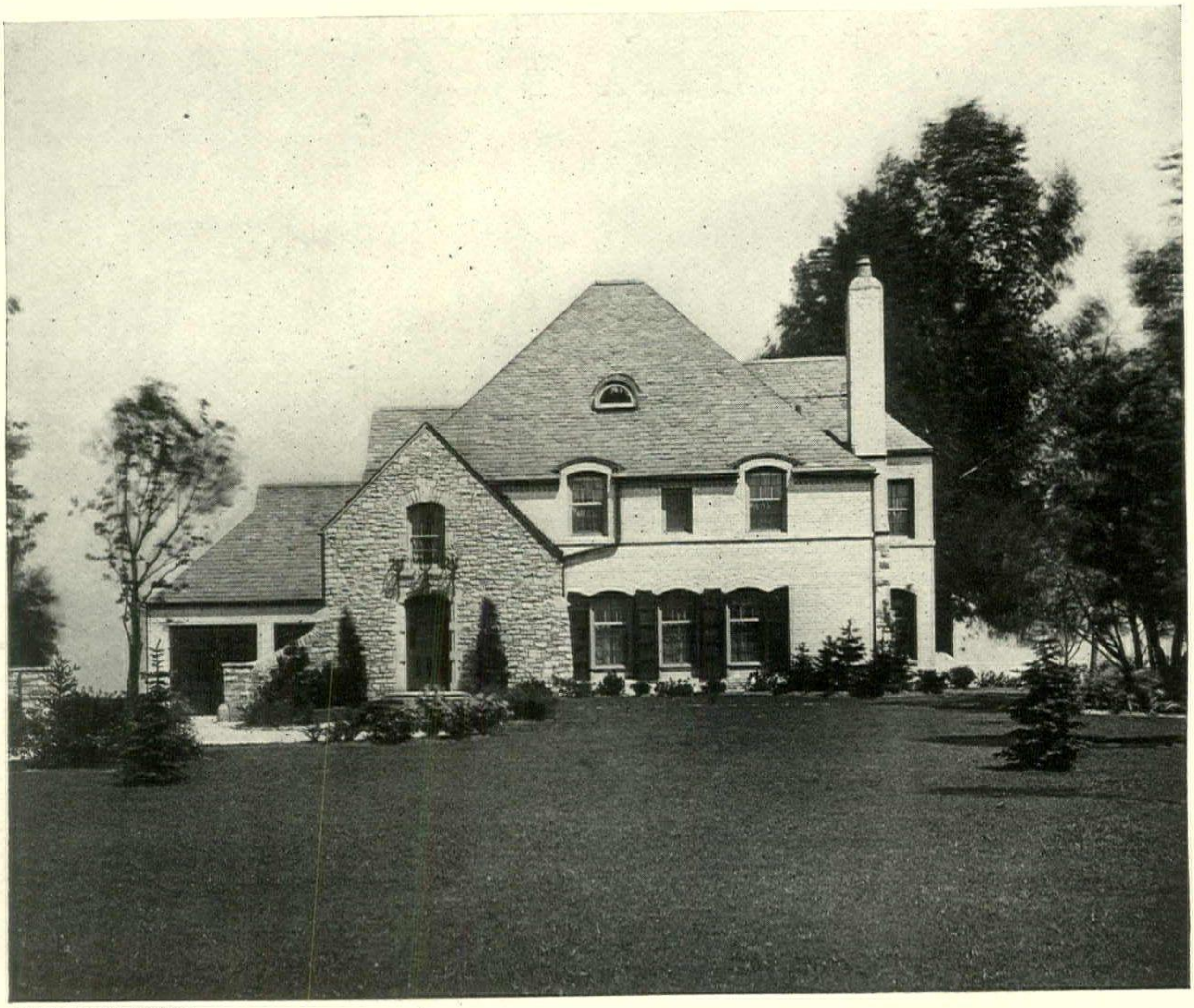
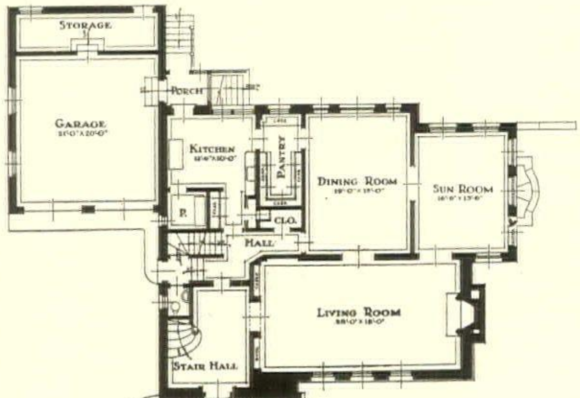
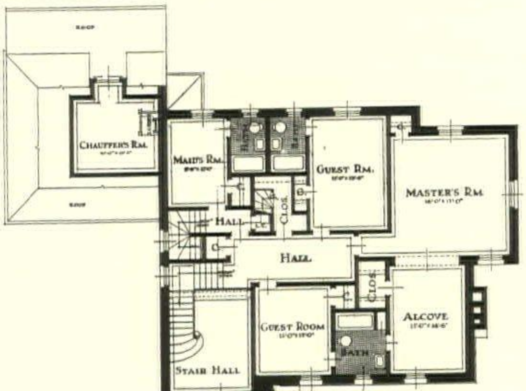


Photo by Trowbridge

HOUSE OF MRS. HENRIETTA HUSZAGH
WINNETKA, ILL.
HUSZAGH & HILL, ARCHITECTS

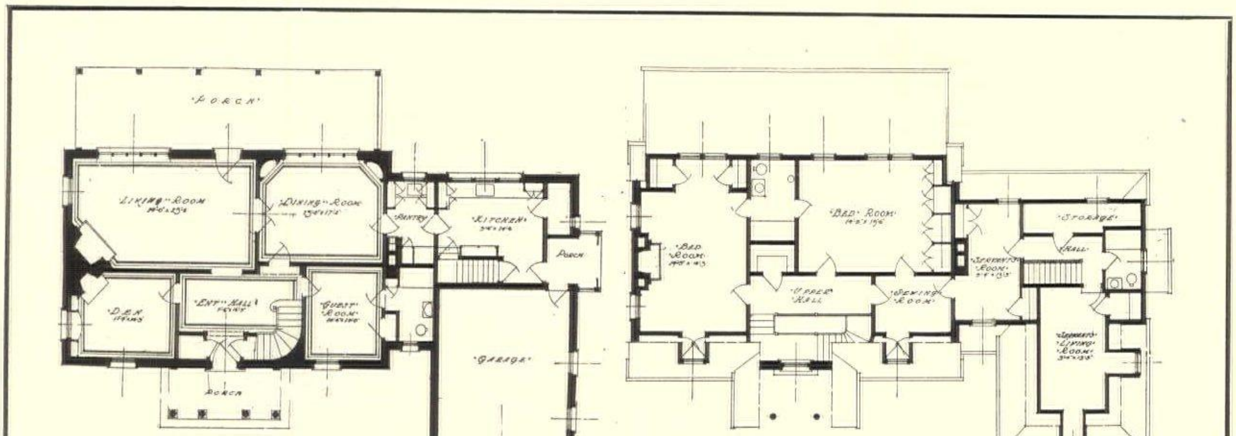


FIRST FLOOR PLAN

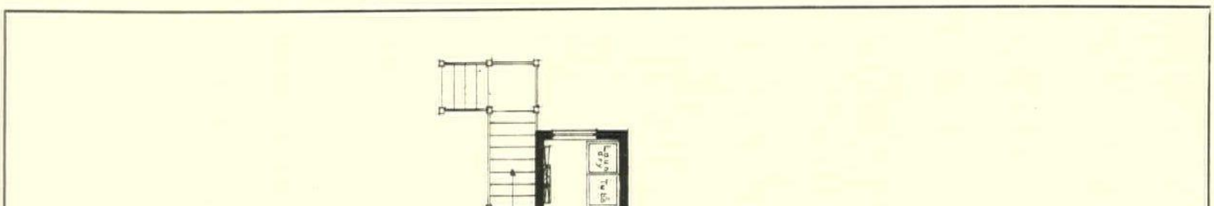


SECOND FLOOR PLAN

HOUSE OF COL. GRATZ B. STRICKLER
WASHINGTON, D. C.
ARTHUR B. HEATON, ARCHITECT



THE LOUIS WENIGER HOUSE FOR PAYNE WHITNEY, MANHASSET, LONG ISLAND, N. Y.
LA FARGE, WARREN & CLARK, ARCHITECTS



THE LOUIS WENIGER HOUSE FOR PAYNE WHITNEY, MANHASSET, LONG ISLAND, N. Y.

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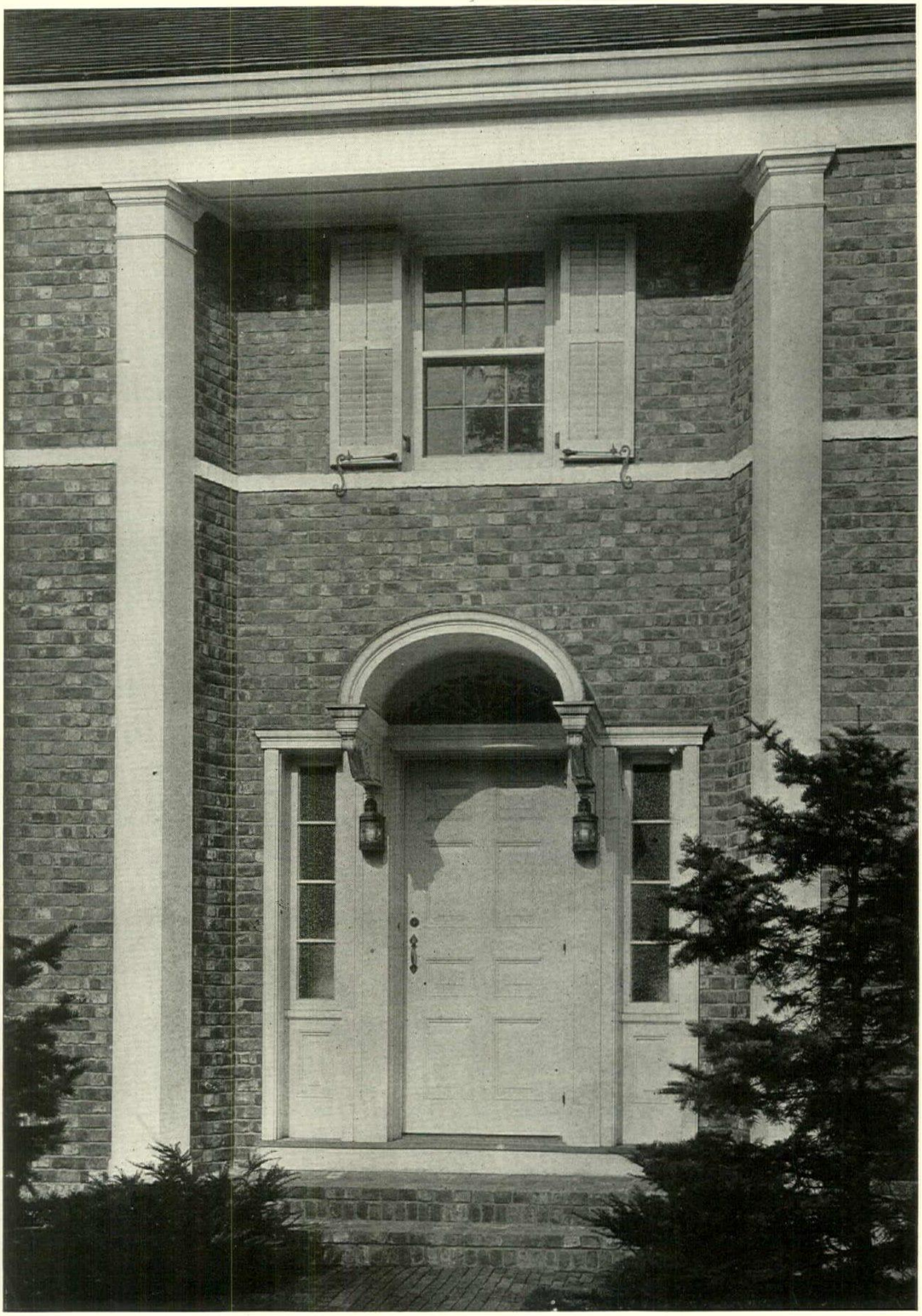


THE LOUIS WENIGER HOUSE FOR PAYNE WHITNEY, MANHASSET, LONG ISLAND, N. Y.

LA FARGE, WARREN & CLARK, ARCHITECTS

BOOK REVIEWS

CODE OF MINIMUM REQUIREMENTS FOR THE HEATING AND VENTILATING OF BUILDINGS

THE American Society of Heating and Ventilating Engineers, New York, has recently issued a Code of Minimum Requirements for the Heating and Ventilation of Buildings. The Code, fourteen separate pamphlets contained in a loose-leaf binder, is the result of many years of effort by L. A. Harding and his Committee. Each section was prepared by a sub-committee. The following subjects are among others covered:

Minimum Requirements for Estimating the Heat Required to Warm Buildings; Minimum Requirements for the Determination of the Amount of Direct Steam and Hot Water Radiating Surface to Be Installed in Steam and Hot Water Heating System; Minimum Requirements for the Design and Installation of Warm Air Furnace Heating Plants; and Standard Symbols for Heating and Ventilating Drawings.

The Code of Minimum Requirements was developed, it is stated, as a result of numerous requests made to the Society, and its purpose is to standardize as far as practical the installation of heating and ventilation equipment. The Code represents minimum requirements as called for by good engineering practice.

Code of Minimum Requirements for the Heating and Ventilating of Buildings. American Society of Heating and Ventilating Engineers, 29 *West* 39*th Street, New York, N. Y.* 158 *pages, loose-leaf binder, flexible cover, size* 6 *x* 9. $5.00.

METAL CRAFTS IN ARCHITECTURE

BRONZE, brass, cast iron, copper, lead, zinc and tin—metals that stir the architect's imagination and serve him well in the design and construction of the products of his art—metals about which one may assume he knows much, only to discover with actual contact his limitations.

Most of our readers are familiar with the detail drawings of metal work that have been made by Mr. Geerlings and published from time to time in the architectural press. The dash and intelligent handling of these details have proclaimed not only the author's ability as a draftsman, but his intelligent interest in his metals as well.

The present volume is divided into sections, each being devoted to a different metal. Each division discusses in turn the history of the metal; its metallic properties and architectural usages, its scope and limitations in the hands of the craftsman, care of the metal, shop practice and characteristics affecting design, together with photographic reproductions of numerous examples showing the practical use of the metal discussed.

The present volume differs in one important respect, at least, from other books that have been written on metals, in that it treats the subject from a purely architectural point of view. Wrought iron has not been included. We learn that a separate volume will shortly be issued devoted entirely to the history, craftsmanship and examples of the uses of wrought iron.

The subject has been handled in a most interesting way. Our only regret is that the author has not seen fit to include some of his excellent drawings of details. Architects, however, will find this volume helpful in acquiring a correct knowledge of the various metals that should lead to a more reasonable handling of these materials in design and execution.

Metal Crafts in Architecture, by Gerald K. Geerlings. New York: Charles Scribner's Sons. 200 *pages, illustrated, cloth binding, size* 8½ *x* 11¾. $7.50.

CONTEMPORARY AMERICAN SCULPTURE

WHILE this volume has been published primarily for the Exhibition of Contemporary American Sculpture held by the National Sculpture Society in San Francisco, April to October, 1929, it is a book worth possessing as an outline of the various phases of American sculpture today. Authentic information of each of the 300 sculptors exhibiting at the California Palace of the Legion of Honor is given as well as illustrations of typical works of these sculptors. The biographical sketches include date and place of birth, education, society membership and a list of important works of each sculptor.

Contemporary American Sculpture. The National Sculpture Society, 115 *East* 40th *Street, New York, N. Y.* 352 *pages, illustrated, size* 8 x 11. $1.75.

CURRENT NOTES

THE CONSTRUCTION SURVEY CONTRACT

By G. Szmak

A GOOD deal has been said and written about the irresponsible buyer and seller of construction. This not only indicates a problem but also demonstrates the urgent need of a solution. While it is impossible entirely to eliminate unfair practices, yet it is easy to encourage fairness. Catch phrases, slogans and coöperative movements to improve ethics, however, will not increase fairness as long as inefficient or outworn methods of transacting business remain in use.

Research in the field of contracting better methods is continually being developed to improve the equity between buyer and seller. The cause of better methods is advanced by utilizing the merits and scrapping the demerits of the present forms of contract.

Although the practice is generally followed, it is an established fact that lump-sum contracts do not protect either buyer or seller. Which one gains or loses is more or less a matter of conscience, as the information upon which lump-sum contracts are usually based is not sufficient to afford full protection. Thus, under this form of contract, extras are the rule rather than the exception.

The cost-plus contract is another form that has been used by some of the larger buyers of construction. This method has at least one distinct advantage. It eliminates the situation in which the seller is forced to carry the entire risk while the buyer assumes payment for all material and labor required to erect the structure plus a definite percentage fee for contractor's management and profit. The seller's risk having been eliminated, the contractor is free to concentrate upon producing a good piece of work. However, not every buyer is willing or able to pay for construction at an indefinite price.

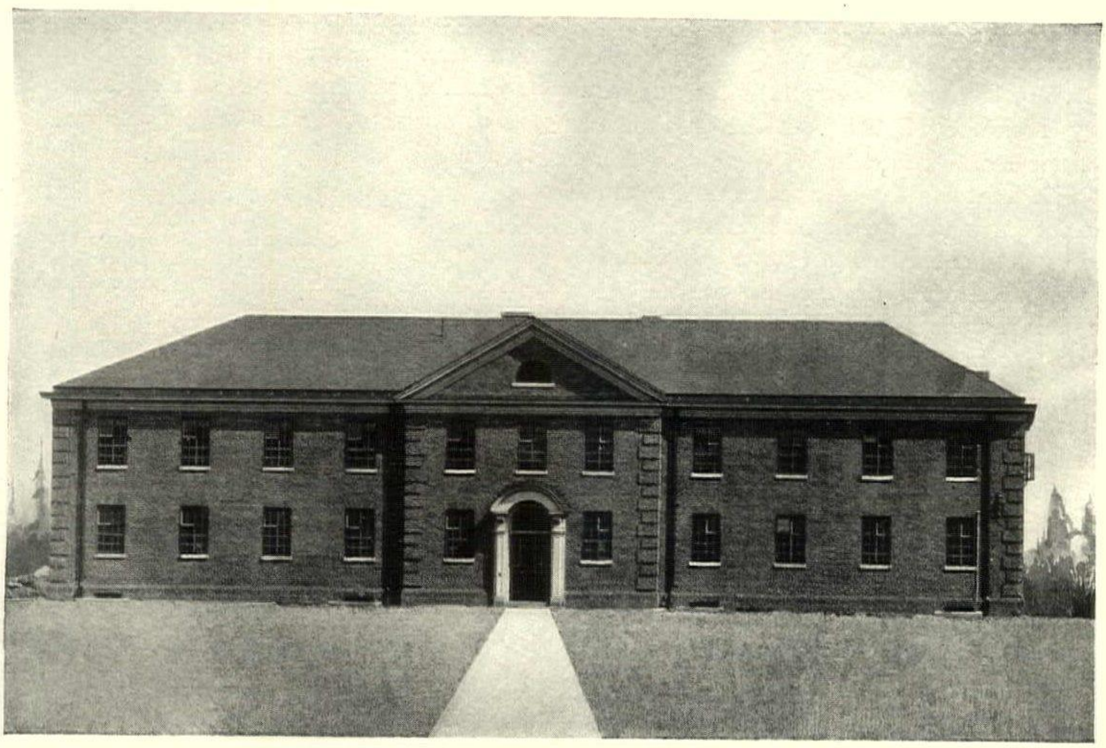
A third form is the construction survey contract, which is in universal use for the reason that it eliminates the risk of both buyer and seller. This form of contract is based upon a construction survey which reveals in advance the exact quantity, quality and price of each part of the structure so that the entire transaction is open for examination at all times. By this method the buyer is enabled to know precisely the cost of each item in advance, compare the cost of a certain item by different bidders and also the cost of one item against another to determine the most economical construction suitable.

The total actual cost of the project is determined more accurately by this method than any other because every survey contract is supported by a preliminary estimate prepared by the construction surveyor as well as by the contractors' final estimates.

ARCHITECTURAL ALUMINUM

ALUMINUM is a modern metal, the uses of which are more or less well known. Light in weight, yet strong and durable are characteristics readily observed. However, we are more likely to think of the use of this important metal in connection with cooking utensils, airplane manufacture, engine castings and other industrial purposes than its use in building construction. It is, therefore, interesting to learn in a booklet, entitled "Architectural Aluminum," published by the Aluminum Company of America, that this metal has been extensively used in building construction for decorative castings of spandrels, grilles, crestings, finials, railings, and other similar purposes, and that it is being developed for roofing purposes. Many who have been fortunate enough to see the sun gleaming on the very tip of the Washington Monument have not realized that the glistening apex is of aluminum used to cover the cap stone of the monument in 1884. The aluminum cap is a small pyramid about five and a half inches at its base and nearly nine inches high. It weighs 100 ounces and a statement was made in 1884 that this was the largest piece of aluminum ever cast in the United States. In contrast with this an engine casting was recently made that weighed over 3800 pounds.

The booklet contains much of interest and not only illustrates the extensive use of aluminum on many important buildings recently constructed but suggests numerous possible uses and other data relative to this metal. The cover of the booklet is printed in aluminum and black on a red background. There are thirty-two pages of text and illustrations, size 8½ x 11 inches. Copies may be obtained by addressing the Aluminum Company of America, Pittsburgh, or THE AMERICAN ARCHITECT, Service Department.



An Orthopedic Hospital Building, Haverstraw, New York
One of the many New York State buildings covered with Monson Lustre slate

WOODEN LABORATORY TABLE FIRE HAZARD

FIRE hazard tests on a wooden laboratory table, according to the U. S. Bureau of Standards, were made by the Bureau at the request of the Board of Education and the Fire Department of the District of Columbia.

In selecting laboratory equipment for the new McKinley Technical High School the question of the fire hazard of wooden tables was brought up by the Fire Department and a complete table which had been in use for several years in one of the schools was submitted for test. A Bunsen burner was overturned on the top of the table and the flames were allowed to spread or burn themselves out without interference. Five separate tests were made under conditions as nearly representative as possible of those that might occur in actual use. The entire table was consumed by the flames during the last test. Flame penetration tests were made on several small specimens of yellow pine and maple to determine the relative rate of burning of the two woods.

The fire hazard of wooden laboratory tables is dependent upon the design and the conditions of use. The least hazardous type of table would be one without reagent rack or drawers. In the tests made representative of this type flames from the burner charred a hole in the top, but did not spread to any appreciable extent beyond the edge of the burner flames. When books and papers were placed on the top and the flames allowed to impinge against them, the spread of the fire was greater, and a considerable portion of the corner of the table was burned. Several embers of a size sufficient to ignite a combustible floor dropped from the table.

The most hazardous type of table would be one with a reagent rack and a stack of drawers underneath. While tests representative of the one with a reagent rack were not made, one was made in which the burner flame was directed downward on the table top directly above a stack of drawers. After the flames had burned through the top, the light wood of the drawers ignited and the flames continued to spread until the table was completely consumed.

The flame penetration tests indicated that pine table tops did not constitute a greater hazard than maple table tops.

The tests showed that wooden laboratory tables without drawers beneath or reagent rack, books or other combustible materials on top, do not present a serious fire hazard, particularly where placed on incombustible floors.

ANOTHER BENT TOMB STONE

MENTION was made in the May 5th and July 5th issues of this journal of tomb stones that had attracted attention due to their having bent to a noticeable extent without rupture. The following letter has been received recording a third stone slab that apparently ranks as a curiosity. Perhaps one of our members can supply the details which were not recorded by Mr. Radey.

Editor, THE AMERICAN ARCHITECT:

In regard to the comments on stone slabs bending, I am sending you the following information for what it is worth, since I am not at all certain whether the condition exists at the present time:

While sight-seeing in 1919 at the Church in Alexandria, Virginia, which was once worshiped in by George Washington, my attention was called to a tomb stone approximately 5′6″ high and 2″ thick which was resting vertically against the rear of this building and pointed out as a curiosity due to the excessive bend in the material.

With this information you can perhaps have some local architect see if this slab still exists and further add to this interesting subject.

Yours very truly,
F. H. RADEY.
Camden, N. J.

PERSONALS

The new address of R. E. Hall & Co., Inc., is in the Canadian Pacific Building, 342 Madison Avenue, New York City.

Victor G. Farrar, architect, formerly located at 1 Park Avenue, New York, has moved his offices to 10 East 40th Street, New York City.

Charles E. Choate, architect—formerly of Atlanta, Ga., more recently (since 1926) of Orlando, Fla.—has now opened an office at 222 First National Bank Building, Montgomery, Ala.

Nichols & Fritzsche, architects, is the new name under which the partnership of T. V. Nichols and W. N. Fritzsche will practice, the offices to be at 1720 Euclid Avenue, Cleveland, Ohio. Manufacturers' catalogues and samples will be appreciated.

The partnership of George Howe and William E. Lescaze for the practice of architecture has been announced. The new name and address are Howe & Lescaze, 337 East 42nd Street, New York City.

Clarence W. Doll and Walter L. Olson, architects, announce the dissolution of their partnership, by mutual agreement, effective March 25th, 1929. Mr. Doll will continue the practice of architecture under the name of Clarence W. Doll, at 118 East 26th Street, Chicago, Ill.

PERSONALS

The partnership of Van F. Pruitt and Louis A. Brown, Jr., has been announced. The official name is Pruitt & Brown, Architects, and the address is 342 Madison Avenue, New York.

Carl C. Tallman, architect, has changed his address from 29 West Third Street to 733 West Edwin Street, Williamsport, Pa.

I. S. Stern, architect, announces that he has moved his office from 35 So. Dearborn Street to 185 North Wabash Avenue, Chicago, Ill.

The new office of E. Charles Parke, architect, is located at Room 407, Katz Building, San Bernardino, Calif., where he wishes to receive manufacturers' catalogues from now on. His former address was the Fuller Building of the same city.

John Stafford White, architect, announces the completion of his work for the Floridale Townsite Corporation, Suite 2310 Graybar Building, New York, at Floridale, Fla., and writes that he is returning to his former address at the office of Building Trades, 521 Irving Avenue, Glendale, Calif.

An announcement has been received saying that Arthur J. Widmer & Associates, Inc., architects, have opened offices at 201, Roosevelt Building, 4903 Delmar Boulevard, St. Louis, Mo.

The opening of an office for the practice of landscape architecture and town planning has been announced under the name of Roland Schultheis, Landscape Architect, 1476 Broadway, New York, the Studio address to be Flushing, Long Island, N. Y

The partnership of Smart and Scheuneman has been dissolved and Paul Richard Scheuneman, architect, has opened an office at 304 Magee Building, Pittsburgh, Pa. He would appreciate receiving manufacturers' catalogues and samples at that address.

The partnership of Purdy & Davis, architects, was dissolved January 31, 1929. William H. Davis, architect, will continue to practice architecture in association with Charles R. Goddard, formerly construction manager for Purdy & Davis, at 350 Madison Avenue, New York City.

William C. Jones, architect, and Lynn C. Jones, associate, formerly at 19 South La Salle Street, Chicago, announce that their new address is 11 South La Salle Street, Room 3005, Chicago, Ill.

The offices of Frank McCandless Crooks, architect, are now located at 508 Third Avenue, Pittsburgh, Pa.

Atlee B. Ayres and Robert M. Ayres, architects, request that Manufacturers' catalogues and samples be sent them to their new offices on the 30th floor of the Smith-Young Tower Building, San Antonio, Texas.

An announcement has been received to the effect that Rolland C. Buckley, architect; Henrique G. Arango, engineer; and Emanuel Lyons, Jr., engineer of Panama, have formed a partnership under the firm name of Buckley, Arango & Lyons, Arquitectos e Ingenieros, for the practice of architecture and engineering, with offices at 27 Avenida Central, Panama, Republic de Panama. This firm has acquired the architectural and engineering departments of Wright, Haw y Compania Ltd., and Grebien & Martinz Inc., who will continue as constructors. It is requested that manufacturers' catalogues and samples be addressed to Buckley, Arango & Lyons to Apartado 851, Panama, Republic de Panama.

The offices of Fred B. O'Connor, architect of Syracuse, N. Y., have been moved to Room 319, Chimes Building, of the same city.

Meanor & Handloser, architects, of Huntington, W. Va., have established their Charleston, W. Va., office in the Payne Building, Hale and Lee Streets, and would like to receive catalogues for an A. I. A. file at that address.

Thomas E. Murray, Inc., designing and consulting engineers, of 88 Lexington Avenue, New York, will open a branch office at 2702 Eaton Tower, Detroit, Mich. Mr. G. H. Kuechler will have charge of the office.

At the Annual Meeting of the Colorado Chapter of the American Institute of Architects, George P. Heinz, founder of the Heinz Roofing Tile Company, was elected an honorary member.