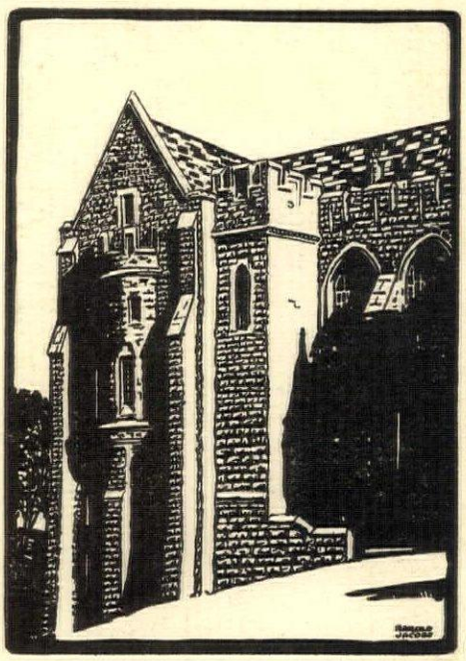
The AMERICAN ARCHITECT



Founded
1876

July 5
1929

IN TWO PARTS

PART ONE

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A BOYS' school in Ohio; a town hall in Connecticut; a city club in Michigan; a store building in the District of Columbia; fraternity houses in Minnesota; a house in Indiana; a courthouse in Louisiana; a country club in Michigan; and an office building in Oklahoma—truely an impressive variety in types of buildings as well as locations, all of which will be found among the plates of the current issue of THE AMERICAN ARCHITECT. * * * And in addition to this variety in plate pages our readers will find an informative article on the space requirements of pipe organs intended for use in auditoriums. This article has been prepared by Leslie N. Leet, Technical Director and Factory Manager of the Organ Department of the Aeolian Company. Mr. Leet's position and frequent contact with architects in connection with the installation of organs in various types of buildings makes him well qualified to discuss a problem that has many perplexing angles at the time preliminary sketches are prepared and may later greatly hamper the installation of a suitable instrument if adequate space and insufficient height has not been provided on the working drawings. * * * In this issue Arthur Peabody, architect, and Leon Pescheret, decorator, have written interesting descriptions of the Memorial Union Building at the Universtiy of Wisconsin, both of which are fully illustrated with plans and reproductions from photographs. * * * The issue of July 20th will be largely given over to the design of airports. This is a thoroughly modern problem that opens up many new angles in contemporary architectural design and affords a marked contrast to the design of tower buildings now a familiar sight in practically all communities.

July 5, 1929 *The Publishers*

Photo by May Mott Smith

POTTERY WORKS, SEVILLE, SPAIN

THE AMERICAN ARCHITECT
July 5, 1929

The AMERICAN ARCHITECT

Founded 1876

VOLUME CXXXVI JULY 5, 1929 NUMBER 2572

THE MEMORIAL UNION BUILDING

UNIVERSITY OF WISCONSIN, MADISON, WIS.

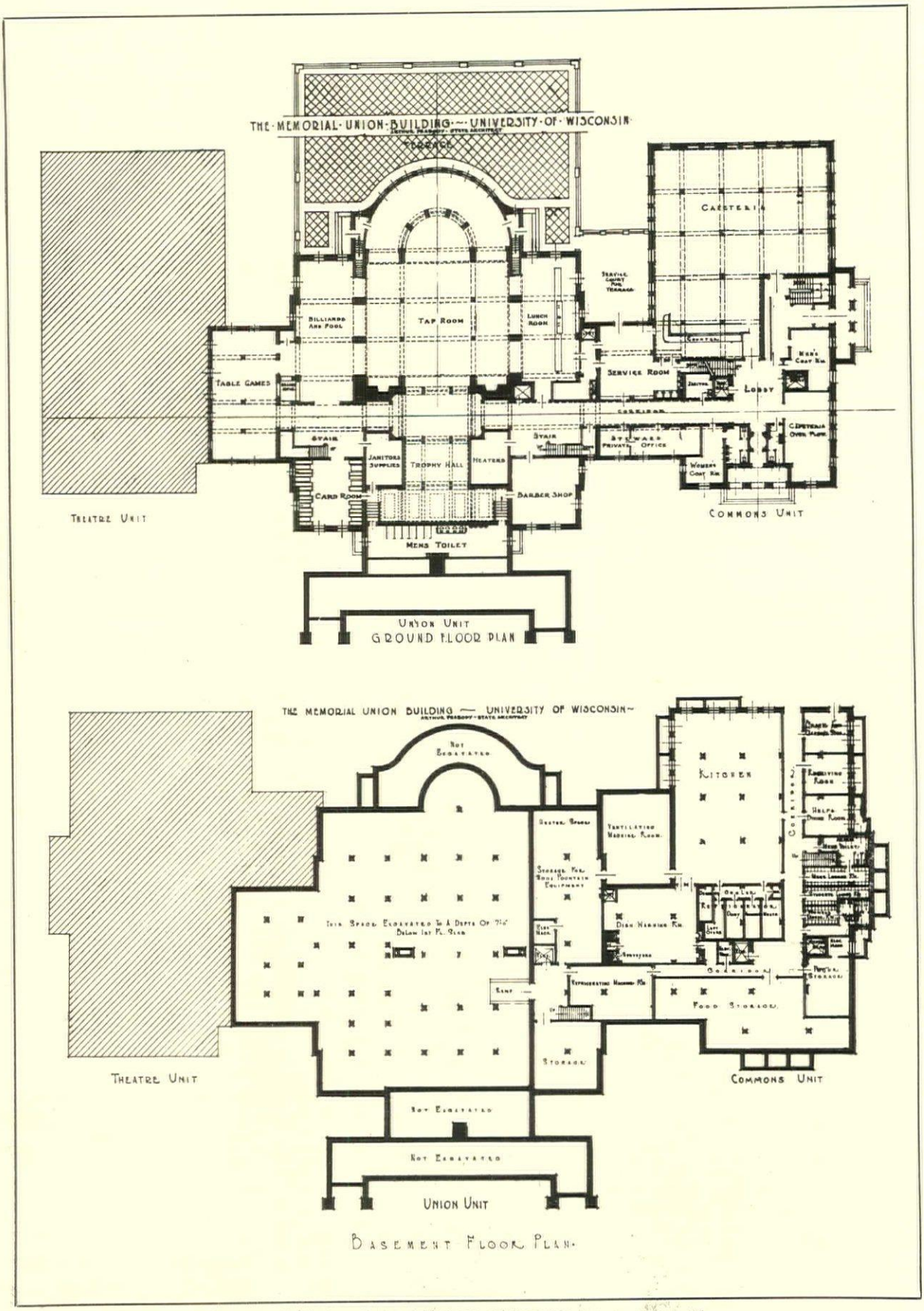
By ARTHUR PEABODY, *Architect*

THE Student Union as a feature of University life has assumed considerable prominence in this country. Notable union buildings are found at universities, of which the Memorial Union of the University of Wisconsin is a late example and represents the development of the union idea in some of its more recent aspects. Like other projects of this nature, it was some time in coming to a reality and was completed and put into operation in September of 1928. From a less ample conception of a building to cost about half a million it grew in dimensions to a total of about one and three-quarter millions for the complete project. The building is composed of three units of which two are now erected at a cost of a million and a quarter, leaving the third to be done at a later date.

Photo by G. H. Nelson Studios

MEMORIAL UNION BUILDING, UNIVERSITY OF WISCONSIN, MADISON, WIS.

ARTHUR PEABODY, ARCHITECT

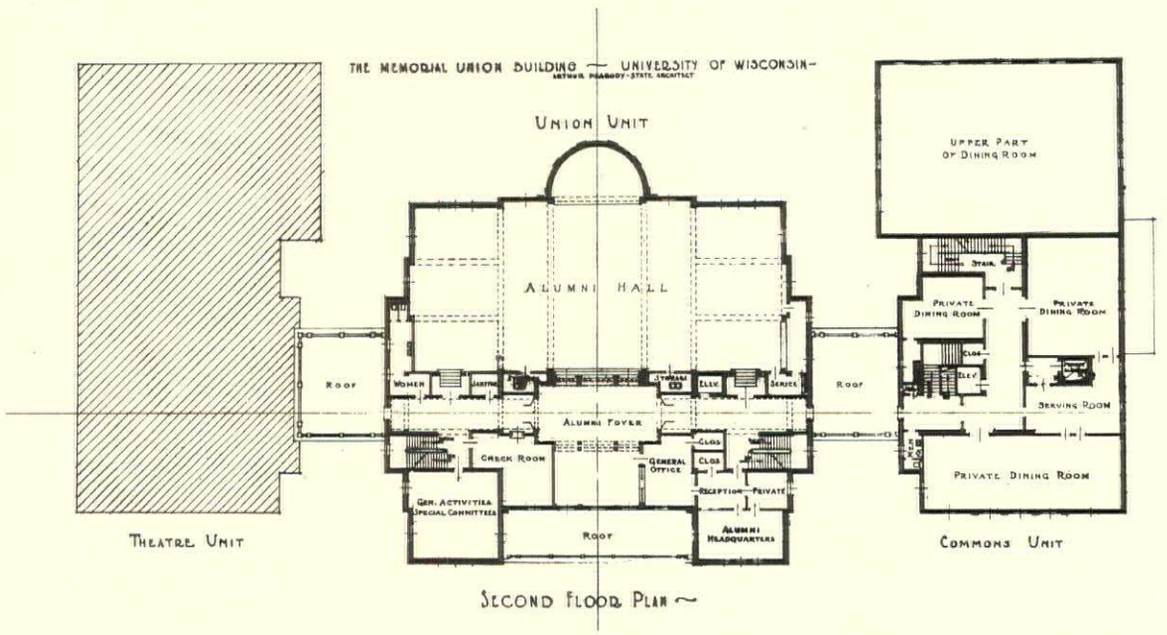


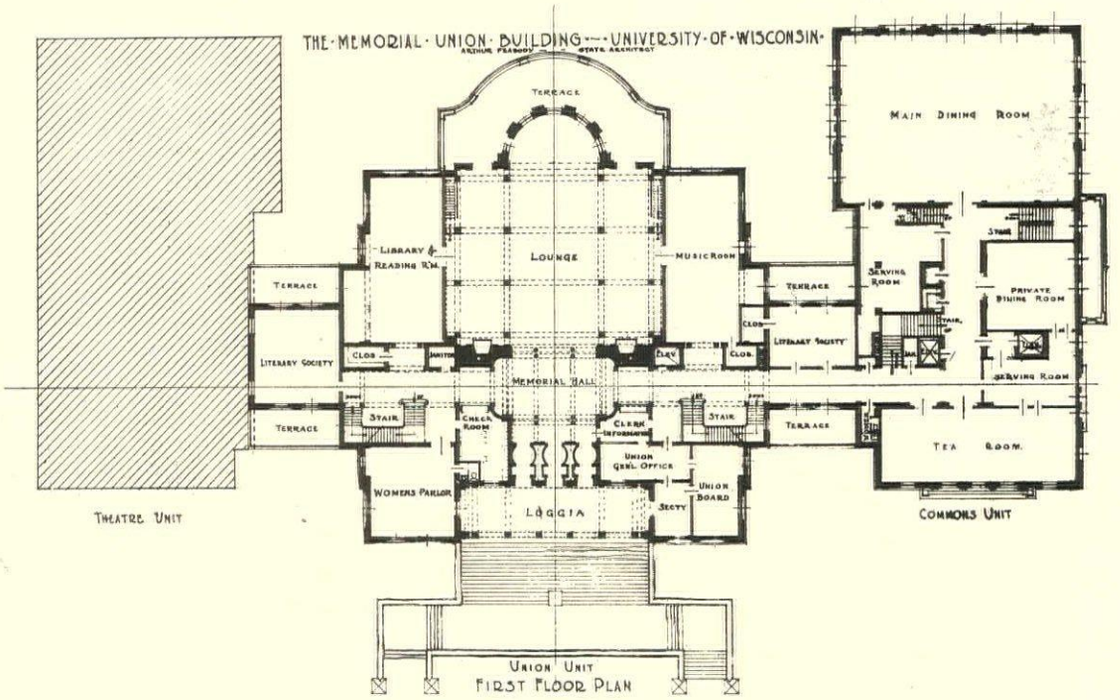
MEMORIAL UNION BUILDING, UNIVERSITY OF WISCONSIN, MADISON, WIS.
ARTHUR PEABODY, ARCHITECT

Photo by G. H. Nelson Studios

MEMORIAL UNION BUILDING, UNIVERSITY OF WISCONSIN, MADISON, WIS.

ARTHUR PEABODY, ARCHITECT

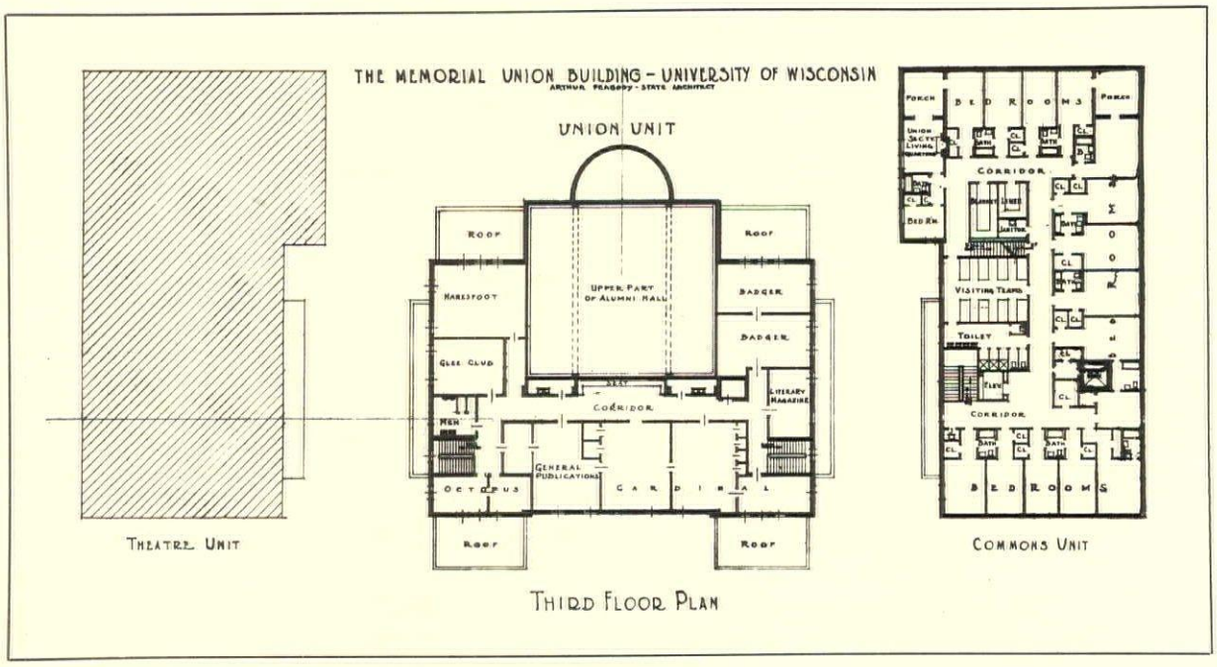




MEMORIAL UNION BUILDING, UNIVERSITY OF WISCONSIN, MADISON, WIS.
ARTHUR PEABODY, ARCHITECT

MEMORIAL UNION BUILDING, UNIVERSITY OF WISCONSIN, MADISON, WIS.
ARTHUR PEABODY, ARCHITECT

Photo by G. H. Nelson Studios



The location on the lower campus, between Langdon Street and one of the lakes for which Madison is famous, and at a point about central to the area occupied by students for living quarters, is particularly fortunate. The building is designed in harmony with the general architectural style of the University and the great library building opposite. The treatment is in the rather light-hearted manner of the palaces erected during the seventeenth century on the Italian Campagna by the wealthy society domiciled in Venice and Padua to which the glorious company of the nobility and their retainers came in houseboats and gondolas during the pleasant season of the year.

Following the plan arrangement of some of these Palazzi, the Memorial Union consists of a dominating central feature connected by corridors to flanking pavilions on each side. The main stairway up to the five arched loggia of the front is of Travertine stone. The remaining parts of the building are of Missouri grey marble and Bedford limestone with panels of Madison sandstone of a grey buff color. The grey green tile roof completes the color scheme of the exterior. The lake facade of the building is accentuated by a half round bay with a domical roof of green tile.

The great lounge, central upon the memorial foyer, is the gathering place for students entering from the front. It is of good height and has an area of three thousand square feet. The room ends in a half round bay, outside of which is the uncovered balcony overlooking the ground terraces leading down to the lake.

The great hall or ball room is the principal feature on the second story. The room is sixty-five feet wide by one hundred and six feet long and twenty-five feet high in the central portion. The architectural style of the room is quite restrained, following the Georgian period. The room serves incidentally for banquets, concerts and the like and affords space for a secondary lounge particularly assigned to the women of the University. The ground floor of the Union is a busy section, comprising the tap room or rathskeller, the billiard and pool rooms, lunch room, card room and the trophy hall. The tap room with its vaulted and groined ceiling and slate paved floor and the Alte Deutsche color decoration suggests a period now become more or less legendary but none the less intimate and masculine. The cartoons on the walls, the solid oak benches and tables, where sandwiches and the softest kind of drinks are served, harmonize with the character of the room. It has proved to be a most popular resort for students during the leisure time of day. The billiard and pool rooms are ample and well patronized.

The large dining room on the second floor contains some thirty-seven hundred square feet area and seats about three hundred persons. The room is two stories high and is treated with high panelled wainscoting. The decoration of the room is rather brilliant as becoming to the intention of the place. Beside this there are several minor dining rooms, for private or special parties. The tea room, on the same floor, is quite feminine in aspect, with flat marble pilasters against a sea green wall. Another place of refreshment is the refectory or cafeteria on

Photo by G. H. Nelson Studios

TRIPP COMMONS, OR MAIN DINING ROOM, MEMORIAL UNION BUILDING, UNIVERSITY OF WISCONSIN
ARTHUR PEABODY, ARCHITECT; LEON PESCHERET, CONSULTING DECORATOR

the ground floor, with an area equal to the large dining room, and an overflow space adjacent of considerable size. This room is made to illustrate in its decoration the characteristics of the Indian tribes once resident along Lake Mendota. The room is in fact an attractive place for hungry people.

The description of the building cannot end without reference to the garden between it and the lake. The grounds are moulded to slope gently to the water in two terraces, the first paved with flagstones and enclosed with low stone walls. From this a broad pathway leads to the lower terrace, which, being close to the shore, is appropriately strewn with gravel to the point where it pitches down to the water. Here the landing stages for pleasure boats and canoes will float during the summer season and skating parties in the winter time will find convenient access to the ice. The terraces afford space for viewing such events as boat races, water carnivals and the like.

The west pavilion will complete the ensemble and will be assigned to the purposes most needed as experience will show. It may contain a student theatre or become simply an extension of the present activities of the Union. A patronage of ten thousand students requires considerable spaces for the social life of the university and the indications are that this wing will be soon forthcoming.

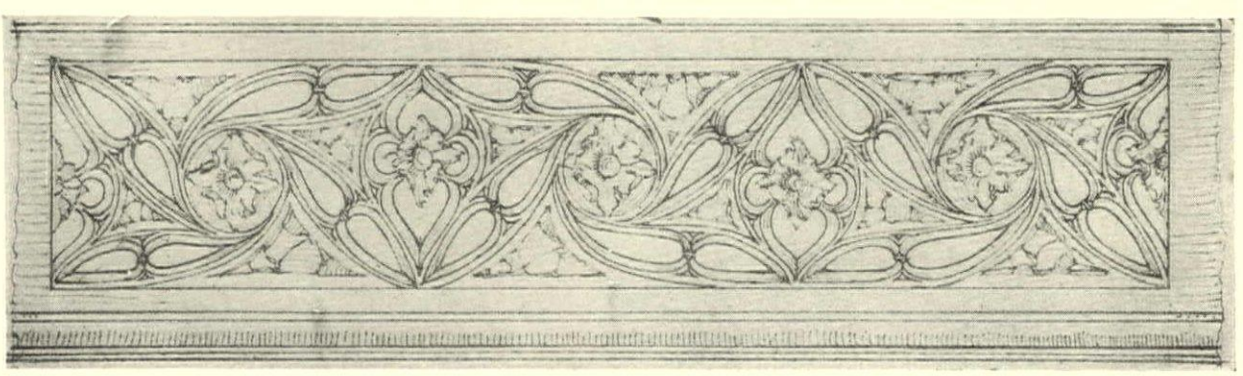


Photo by G. H. Nelson Studios

MEMORIAL HALL, MEMORIAL UNION BUILDING, UNIVERSITY OF WISCONSIN, MADISON, WIS.

ARTHUR PEABODY, ARCHITECT; LEON PESCHERET, CONSULTING DECORATOR

DECORATIONS IN THE MEMORIAL UNION BUILDING
UNIVERSITY OF WISCONSIN, MADISON, WIS.

By LEON PESCHERET, Consulting Decorator

FURNISHING the interior of any public building is usually governed by the architectural details and composition of the building itself. The major problem in this instance was to create an atmosphere of congenial comfort introducing ornamentation of significant importance to the tradition and folklore of the University.

This institution, situated on the banks of Lake Mendota, surrounded by wooded hills, furnishes a setting unequalled in pictorial grandeur, especially in the fall of the year when the countryside acquires every imaginable color yet conceived on an artist's palette. It was this riot of autumn colors that devised the entire color note for the interior of this building, thereby bringing into the building the very atmosphere for which Madison itself is well known.

I shall not bore you with a detailed description of each room, for the rooms are, as in most of the exclusive clubs, furnished according to the specific demands of the various spaces. By many conferences between the Furnishing Committee and the Decorator it was decided that certain spaces would represent definite phases of Wisconsin tradition; and it is the way in which this was accomplished that will form the gist of this article.

We find the Game Room on the ground floor created in an atmosphere of the crude cabin of the lumber camps and named after that mythical giant of the northern woods, Paul Bunyan. The walls are rough plaster, timbered with sand blasted oak boards pegged to the walls, with a rough flagstone flooring. The furniture, consisting mostly of benches all specially designed and made, are decorated with bandsaw perforated designs depicting characteristic symbols in the life of this

Photo by G. H. Nelson Studios

GREAT HALL, OR LADIES' LOUNGE, MEMORIAL UNION BUILDING, UNIVERSITY OF WISCONSIN
ARTHUR PEABODY, ARCHITECT; LEON PESCHERET, CONSULTING DECORATOR

Photo by G. H. Nelson Studios

OLD MADISON ROOM, MEMORIAL UNION BUILDING, UNIVERSITY OF WISCONSIN, MADISON, WIS.
ARTHUR PEABODY, ARCHITECT; LEON PESCHERET, CONSULTING DECORATOR

man, such as the bean pot, the reversible dog, the blue ox and log cabin, which are all a part of the lumber camp lore of the State.

In the Billiard Room stands an old table reputed once to have been the possession of Ole Bull, the famous Norwegian violinist, but used by every Governor of Wisconsin since 1860 with the exception of La Follette, who, instead of playing billiards on it, used it as a stack for his law books.

The Rathskeller and Lunch Room adjoining are planned and furnished after the famous cellars of old Germany and therefore decorated in Alte Deutsche painted frescoes. These designs depict in satire and humor the activities of the campus, such as "Law and Order," "Publications," "Music," "Athletics," "Poetry, Comedy and Drama," and "Oratory." Above each of the two fireplaces are designs showing the two sides to all student life, one the social goodfellowship and the other the serious business of study. The furniture is of tavern type and stands on a slate floor. In the lunch room is the resurrected Hausman Bar, patronized until the brewery was destroyed in 1924. The piece is productive even today in its new surroundings of good fellowship and brings "happy days" to the minds of the Alumni.

In the Cafeteria, also on the ground floor, we find a distinctive scheme of decoration, the motif being adapted from the ornaments and designs used by the Winnebago Redskins who were natives of that section of the middle west.

On the first floor in the Great Memorial Hall is, again, ornamentation of particular significance to Wisconsin. This room is the Memorial space of the building and is dedicated to all Wisconsin warriors and this is emphasized by four huge walnut panels listing the names of all Alumni who fell in battle since the Civil War. The vaulted ceiling is decorated in fresco, the gold star being used on the soffits of the beams while the large panels are decorated in a Florentine style of design incorporating the Redskin, thus bringing to mind the first warriors of the State.

In the Council Room, which is the central lounge, the general theme of ornamentation is a composition for friezes of the wild flowers of the state, rendered in conventional form in a tapestry effect. The furniture, all of the luxurious lounging type, is covered in tapestries, friezes and mohairs.

The Library, which is to contain a collection of ten thousand books when completely equipped, is furnished like the room of a private mansion with lounging settees, chairs, reading tables and lamps. The distinctive feature of this room is its atmosphere of "chuminess." This is largely due to the reflection from the ceiling by the cove lighting.

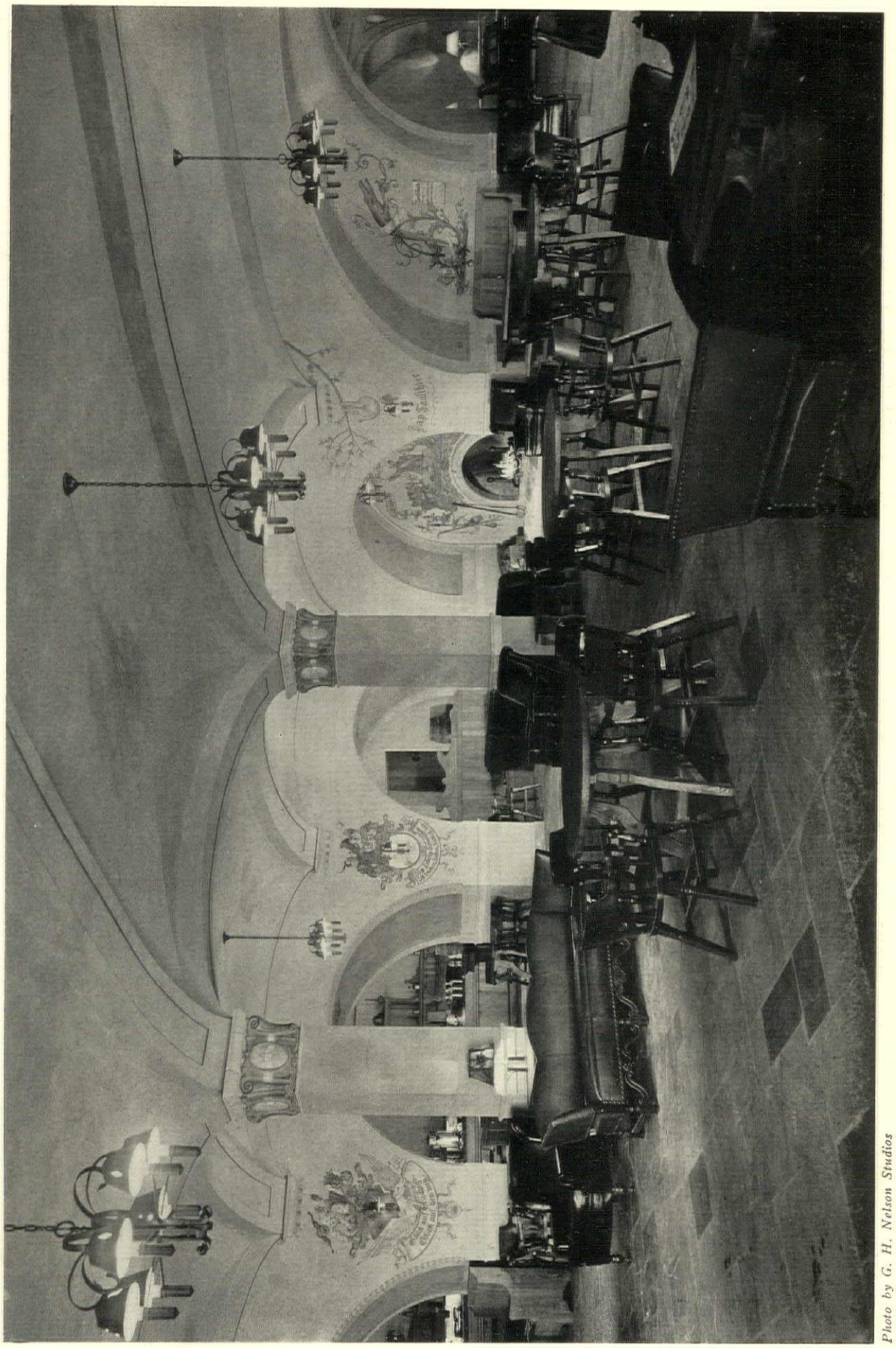


Photo by G. H. Nelson Studios

RATHSKELLER, MEMORIAL UNION BUILDING, UNIVERSITY OF WISCONSIN, MADISON, WIS.
ARTHUR PEABODY, ARCHITECT; LEON PESCHERET, CONSULTING DECORATOR

The ceiling was painted with pure English vermillion and then overglazed with rotten stone.

Tripp Commons, at the opposite end of the long corridor, serves as the main dining room. It is a room of heroic proportions, being eighty by eighty and twenty-two feet high. All lighting is produced from the cove of the oak panel wainscoting that stands twelve feet high and completely encircles the room. The beamed ceiling is richly decorated in English manuscript style, incorporating shields representing the departments of the University. In the corners of the five huge ceiling panels and throughout the center are the seals of thirty well-known universities, including the Big Ten, of which group Wisconsin is a member. At the eastern end of the ceiling are crests of Oxford and Cambridge, where the Union first originated in 1815; in the center are the shields of Williams which gave to Wisconsin President Bascom, President Birge and others, and the University of Toronto at which is located Hart House, the Canadian Union which has given great inspiration for the development of other Unions. Intermingled among these seals is the Union coat-of-arms symbol, the pipe of peace, representing perhaps the hope that peace and fellowship will reign among university departments and among Wisconsin's neighboring universities.

Lex Vobiscum, which means "may the law be with you," is unusually decorated for a private dining room. The walls of this room are papered with the leaves of one of the first printed English law books dated 1681. The pages are arranged numerically on the horizontal levels so that the entire collection of chancery cases may be read. These books are reputed to have been the possession of the late Robert M. LaFollette.

Another room that is of particular interest, especially to the Alumni, is the Old Madison Room, a private dining room on the second floor of the Tripp Commons unit. The wall decorations are exact replicas of old engravings and water colors of Madison and campus scenes in the year 1857 to 1870. The scenes are laid out with reference to their geographical location so that the whole of Madison can be seen in this room.

Besides the rooms already mentioned, there are, of course, many other spaces of importance such as the music and art gallery, the writing room, ladies' waiting rooms, ladies' lounge and the huge cameo ball room, known as the Great Hall. All these spaces are tastefully furnished, care having been taken in each case to accentuate the architectural features of the room.

Photo by G. H. Nelson Studios

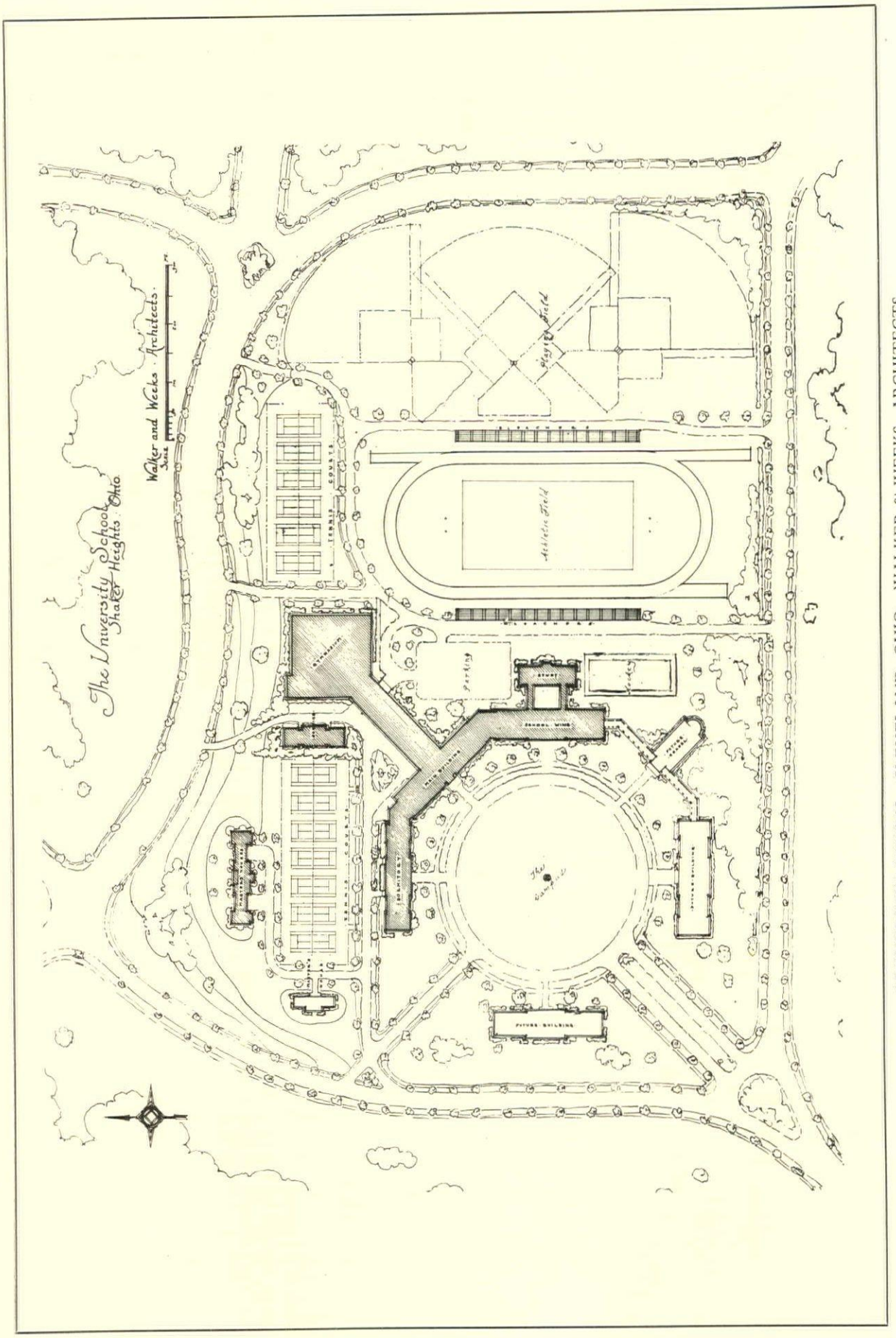
COUNCIL ROOM, OR MAIN LOUNGE, MEMORIAL UNION BUILDING, UNIVERSITY OF WISCONSIN

ARTHUR PEABODY, ARCHITECT; LEON PESCHERET, CONSULTING DECORATOR

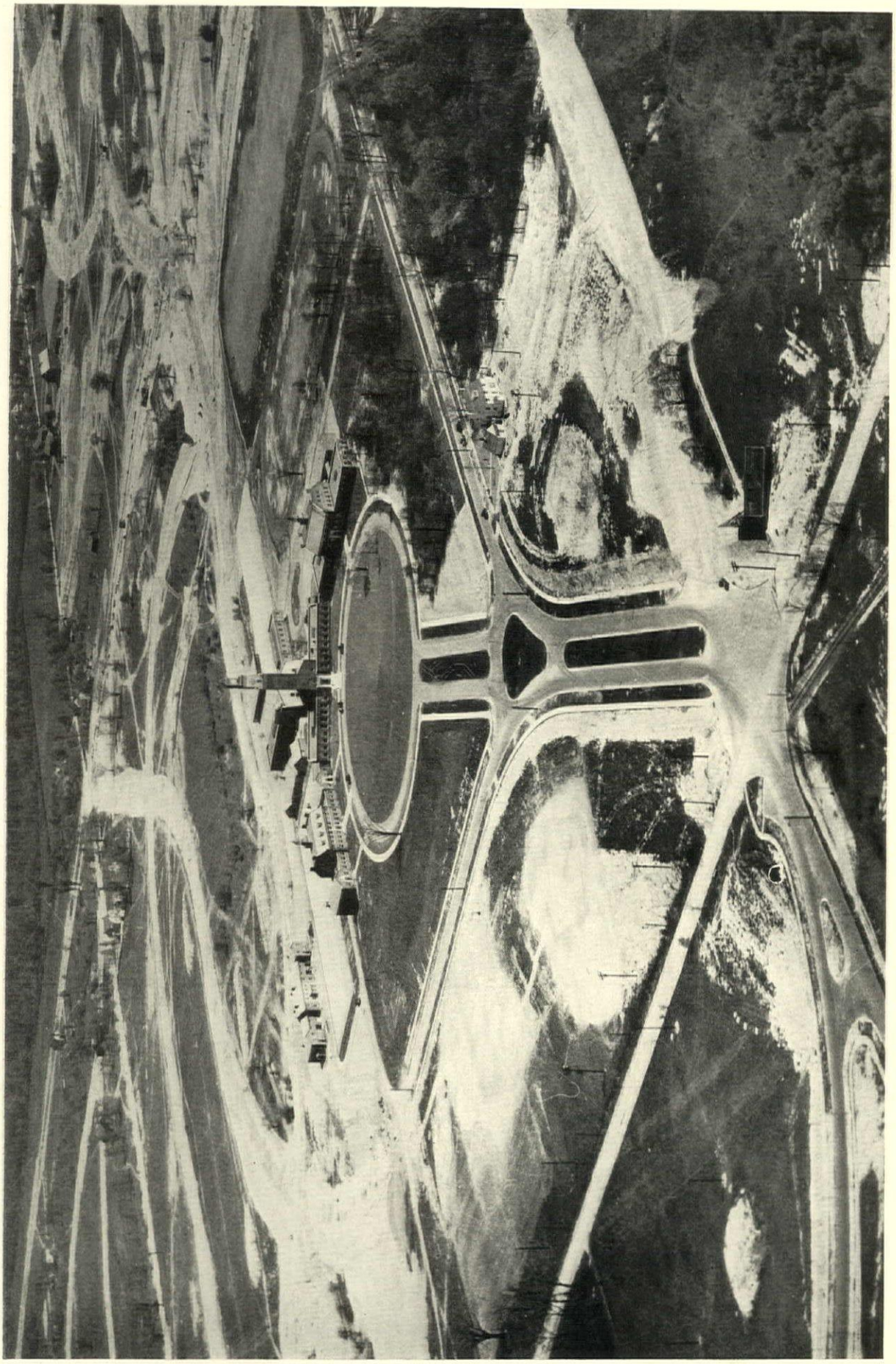
UNIVERSITY SCHOOL FOR BOYS

CLEVELAND, OHIO

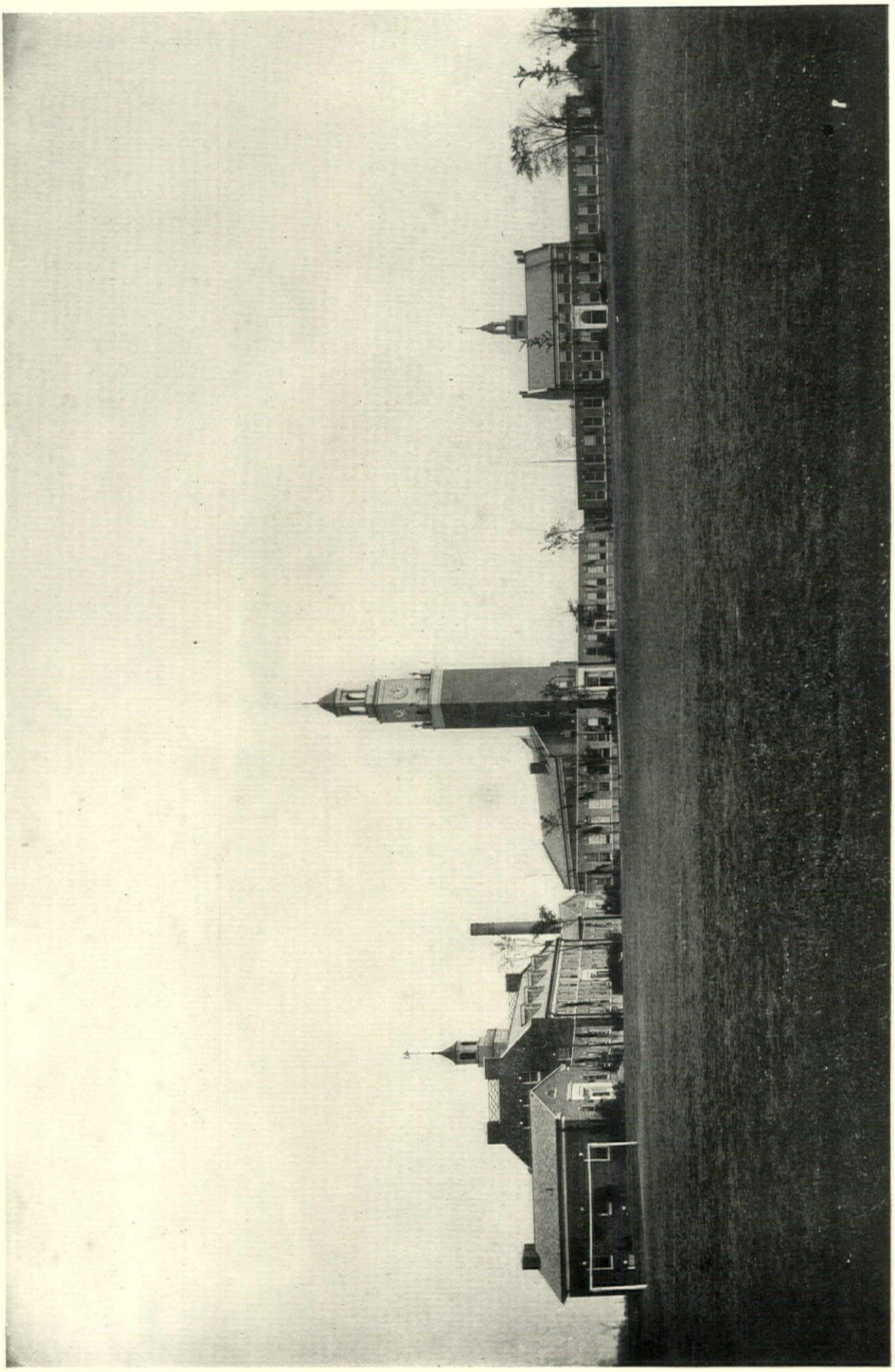
Walker & Weeks, Architects



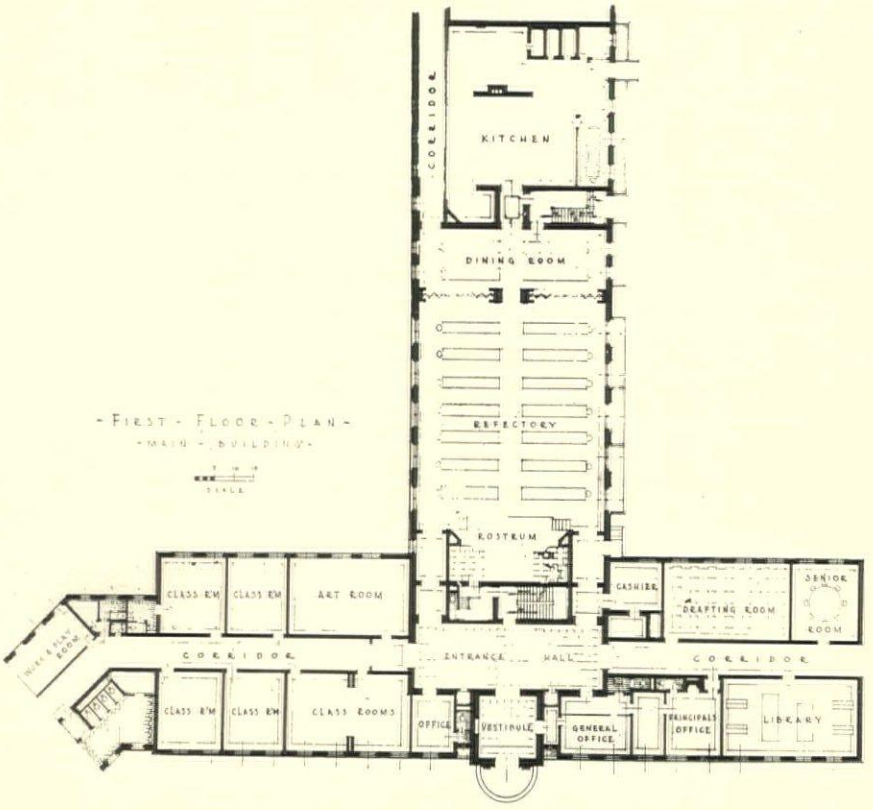
UNIVERSITY SCHOOL, CLEVELAND, OHIO—WALKER & WEEKS, ARCHITECTS



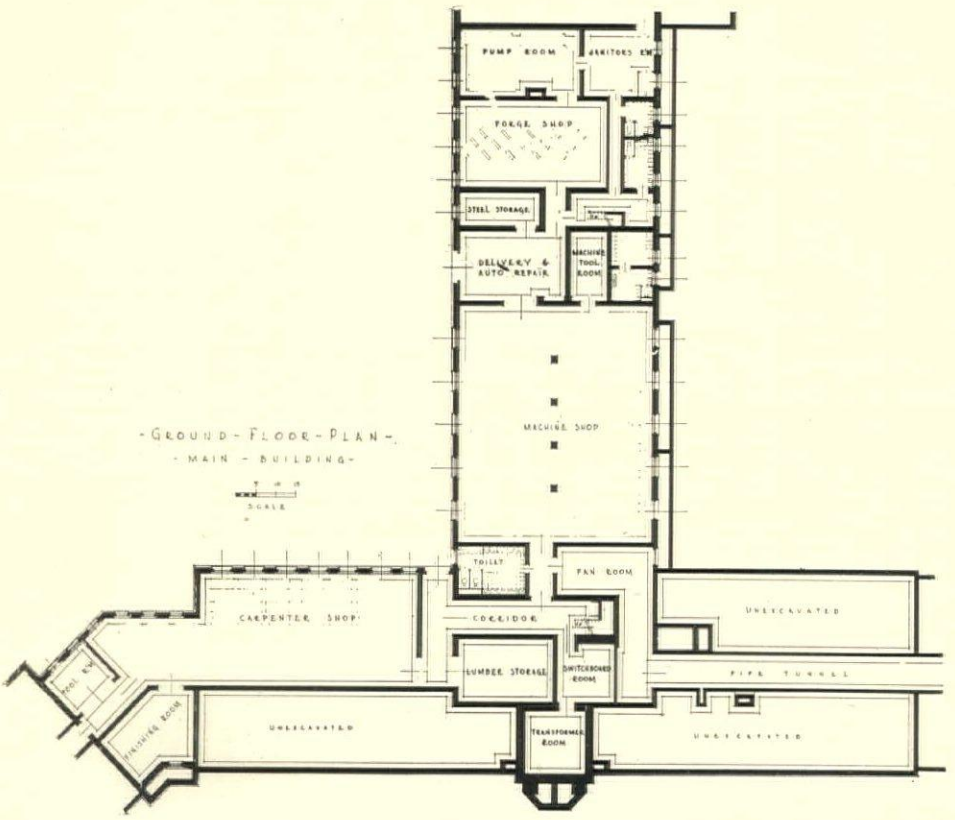
AIRPLANE VIEW, UNIVERSITY SCHOOL, CLEVELAND, OHIO—WALKER & WEEKS, ARCHITECTS



GENERAL VIEW, UNIVERSITY SCHOOL, CLEVELAND, OHIO— WALKER & WEEKS, ARCHITECTS



- First - Floor - Plan -
- Main - Building -



- Ground - Floor - Plan -
- Main - Building -

UNIVERSITY SCHOOL, CLEVELAND, OHIO

WALKER & WEEKS, ARCHITECTS

LIVING ROOM AND REFECTORY STUDY—UNIVERSITY SCHOOL, CLEVELAND, OHIO

WALKER & WEEKS, ARCHITECTS

MAIN ENTRANCE AND CLOCK TOWER—UNIVERSITY SCHOOL, CLEVELAND, OHIO

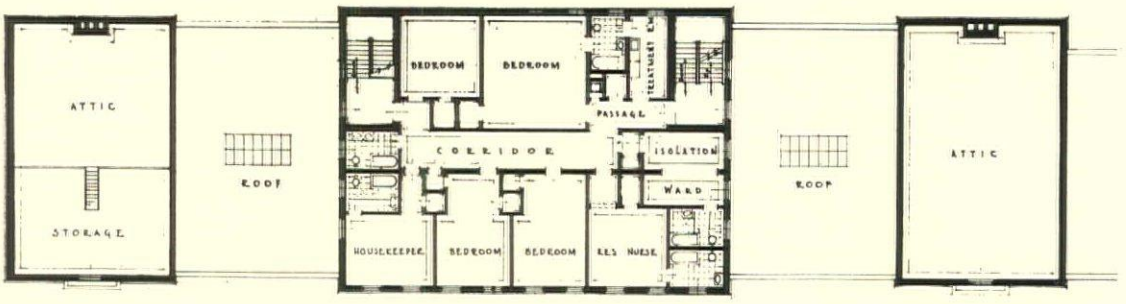
WALKER & WEEKS, ARCHITECTS

BROWN HALL—UNIVERSITY SCHOOL, CLEVELAND, OHIO

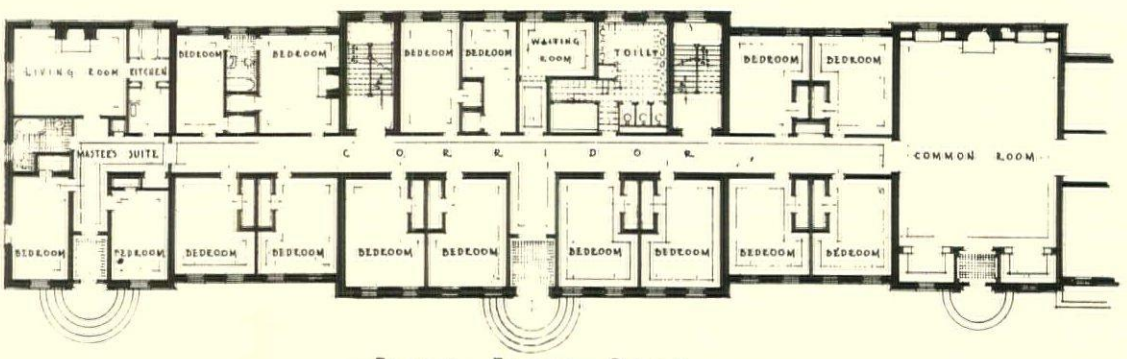
WALKER & WEEKS, ARCHITECTS

PICKANDS HALL—UNIVERSITY SCHOOL, CLEVELAND, OHIO

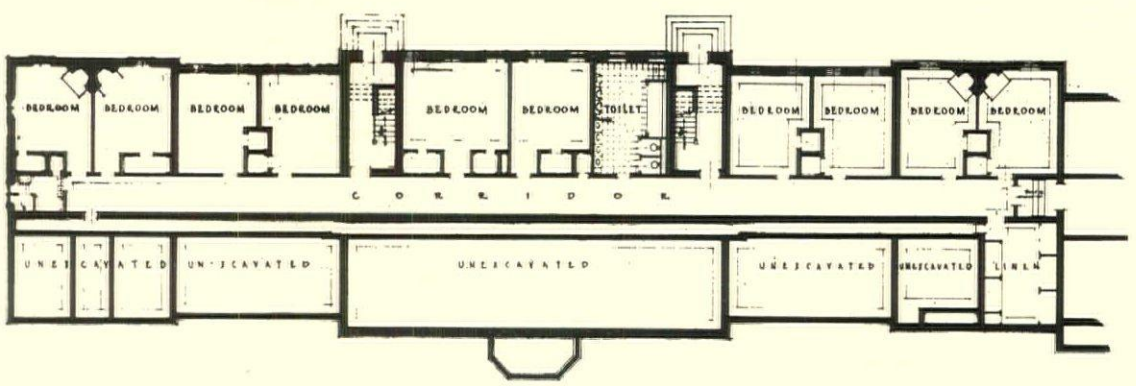
WALKER & WEEKS, ARCHITECTS



- SECOND - FLOOR - PLAN -
DORMITORY WING



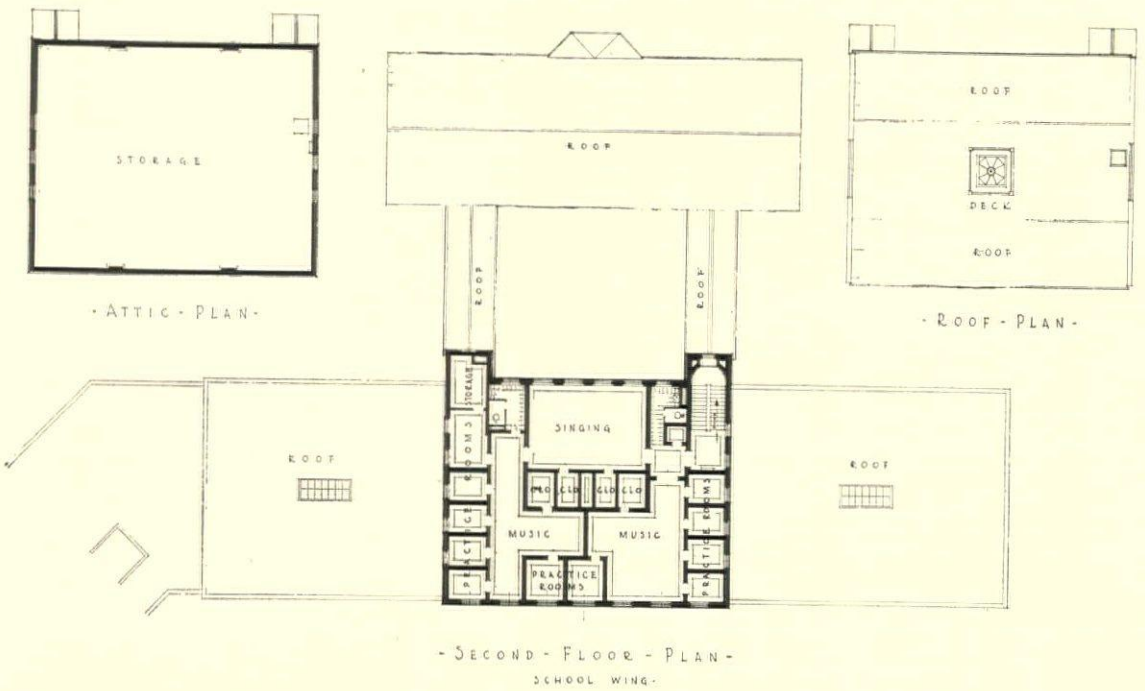
- FIRST - FLOOR - PLAN -
- DORMITORY - WING -



- GROUND - FLOOR - PLAN -
- DORMITORY - WING

SCALE

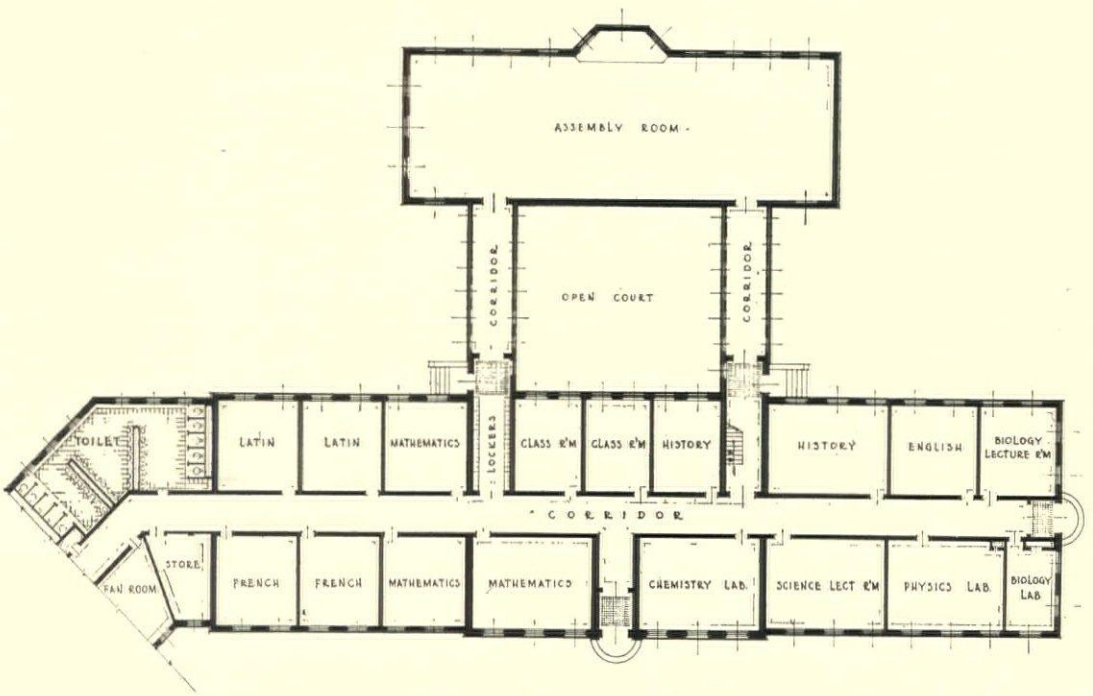
UNIVERSITY SCHOOL, CLEVELAND, OHIO
WALKER & WEEKS, ARCHITECTS



- ATTIC - PLAN -

- ROOF - PLAN -

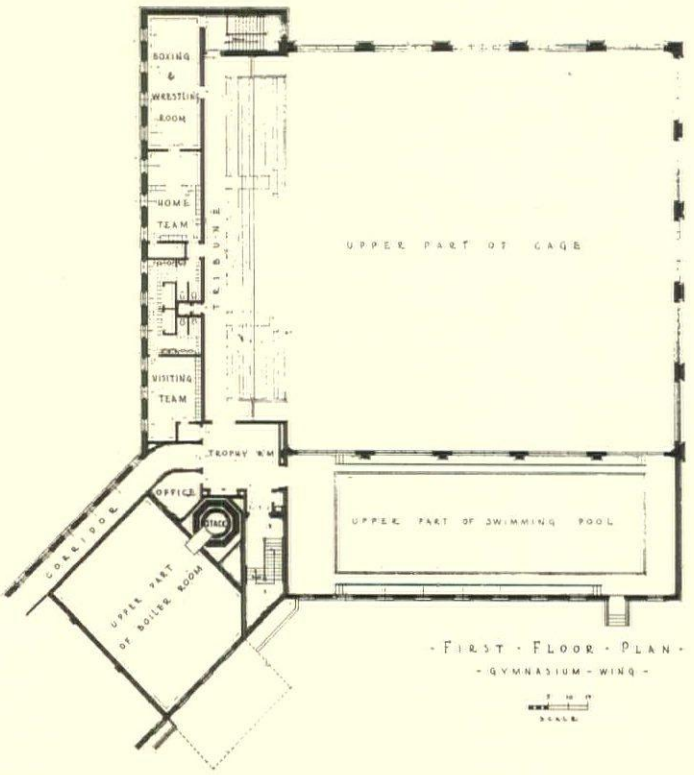
- SECOND - FLOOR - PLAN -
SCHOOL WING

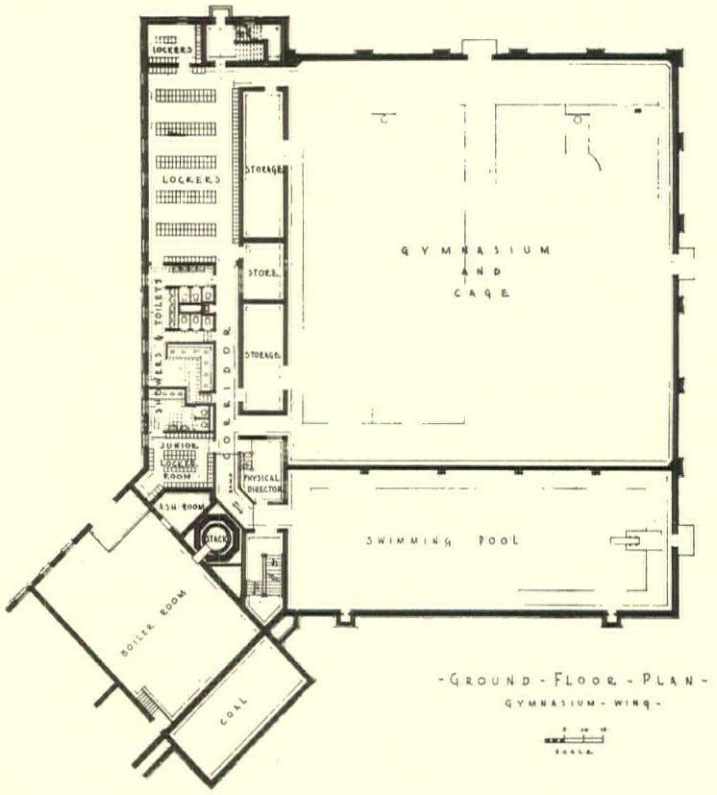


- FIRST - FLOOR - PLAN -
- SCHOOL - WING -

SCALE

UNIVERSITY SCHOOL, CLEVELAND, OHIO
WALKER & WEEKS, ARCHITECTS





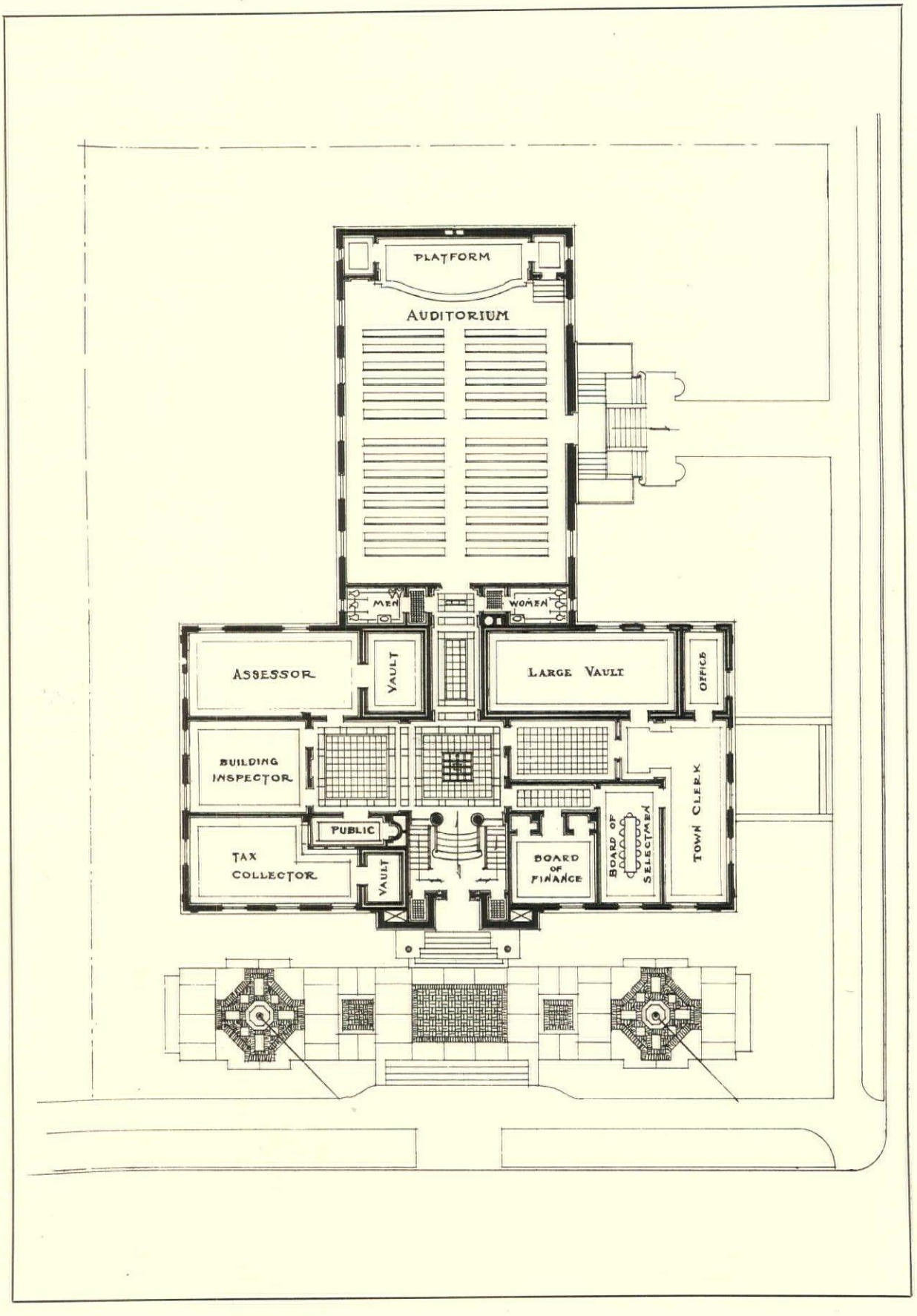
UNIVERSITY SCHOOL, CLEVELAND, OHIO

WALKER & WEEKS, ARCHITECTS

Photo by Amemya

TOWN HALL, EAST HAVEN, CONNECTICUT

DOUGLAS ORR, ARCHITECT



TOWN HALL, EAST HAVEN, CONNECTICUT

DOUGLAS ORR, ARCHITECT

Photo by Amemya

TOWN HALL, EAST HAVEN, CONNECTICUT

DOUGLAS ORR, ARCHITECT

Photos by Amemya

TOWN HALL, EAST HAVEN, CONNECTICUT

DOUGLAS ORR, ARCHITECT

EDITORIAL COMMENT

ENGLISH ARCHITECTS DISCUSS MODERN TENDENCIES

WE have given much thought and consideration of late to ideas of various architects in this country on modern tendencies in architecture. We have heard some state that to break away from precedent and tradition is actually sacreligious; while others have just as emphatically claimed that old ideas are not applicable to the solution of our present-day problems. At a meeting of the Architectural Association of London, England, a report of which was published in a recent issue of "The Architect & Building News" (London), this vital subject was discussed and many interesting and illuminating ideas were presented by various members present. We call particular attention to certain views expressed by a student, E. J. Carter. He stated that architects today were in an extremely difficult position because so much of their business was concerned with function pure and simple. They had to plan their houses so that these would accord with the desires of their clients. But when we thought of architecture as an art and of value to posterity, function was absolutely lost sight of. Nobody cared in the least whether the Parthenon was efficient, or Coleshill or any great house which students were taught to study. Perhaps they were told it was not efficient, but still they were taught good architecture. Most architects seemed to design in a manner which would be in accord not with the future, and not essentially with the past, but with whatever was likely to receive commendation from the people of the day. But did it really matter if they designed in a way which received present approbation? He did not think it did any more than it ultimately mattered from the aesthetic point of view whether they designed functionally. What did matter was that they should design so that they could produce something which, even if it did not accord with the ideas of the present day, or with great buildings of the past, would have that elusive quality of beauty which nobody had effectively defined yet philosophically.

R. A. Duncan, who opened the debate, confined himself to one point—the justification of the existence of modernism. Many regarded modernism as a deliberate breaking of a vital tradition, sensationalism, chaos, revolution in bricks and mortar. The alleged traditionalist implied that the modernist was a sort of fellow who, with malice aforethought, profaned the hallowed past with incongruities. But in any period of history, if you could find experiments and innovators in large numbers, it was a sure sign that the concepts or convictions which had established and vitalized the preceding tradition had at any rate partially broken down. Large numbers of thoughtful men did not deliberately abandon the smooth and easy way of working within the circumscribed limits of existing formulae unless they felt these had ceased to be applicable. Those who wished to perpetuate a system of conscious revivals or conscious traditionalism did not take into account the fact that there was no possible replica of an ancient state of mind, and that therefore there could be no nearer approximation than that which a masquerade bore to real life. The 19th century had witnessed the melancholy spectacle of numberless attempts at revivals, but hardly any of these had lasted a decade. History provided evidence that so long as the concepts of an epoch maintained sufficient vital meaning to enable them to energize or qualify its activities there was general development on established traditional lines. If, however, basic concepts came to be revised, activities must sooner or later answer to the change; and European architecture provided us with the picture of two such changes—from the Classic to the Mediæval and from the Mediæval to the Renaissance. Today we had all the appearance of a third change, and they who had this conviction gropingly sought to give it expression. How could architects expect to further the art of architecture by insisting on ancient processes any more than a manufacturer with an obsolete plant could expect to prosper in his business? It was sometimes said that modern work was stark, and there was some truth in this complaint; but the starkness resulted from the attempt to clear away obscure detail and get down to essentials. Another outcry was that modern work was mechanical, but surely it was right and proper there should be some relationship and harmony of expression between architecture and the increasing mechanical developments in other spheres of life.

Arthur J. Davies said he was entirely in sym-

pathy with the modern movement, but with certain reservations. To begin with, all modern work was not original. In this country especially the architect who did modern work simply looked at things which had been done very cleverly abroad, did something on the same lines and thought it was original. But one could be just as much a copyist when putting up a building in the manner of Le Corbusier, Mallet-Stevens or any modern German architect as when copying Wren. There was nothing new under the sun. Changes in style were simply developments. We could not get away from our age and the spirit of our age whether we designed in a traditional or modern way. Good work would survive, and it did not matter in what style we designed so long as it was good of its kind.

Mr. Townroe said that Mr. Duncan, like many others present, belonged to a generation of interrogation, who asked, "Why is this?" and liked to think there was a logical basis for a style. If we took the modern point of view we must get everything as logical as we could and get buildings like a machine. But architects who did that would be moulding themselves on the engineer, and he did not think there was much fear of that happening. While they were wondering about æsthetic theories, there were certain definite things they could get back to. They could get back to planning and structure, and it would do no harm if for the next twenty years they got down to those things!

The chairman, Gilbert H. Jenkins, past president of the Association, in closing the discussion, said it seemed to him that a good many of the people who had spoken in favor of modernism had a very arid sort of outlook. They talked about function, utility and good construction and said, "We must carry on with those because we can find nothing else. Our whole outlook is a rebellion against what has gone before, but we really do not know what we are going to give you in place of it. Perhaps some day we shall have something better. In the meantime we must carry on." Was not this attitude of mind partly due to the fact that we had just come through a great war? The stark simplicity which some of the modernists prided themselves on was really only the position in which the architect had found himself in the eighteen-twenties and eighteen-thirties when Europe was recovering from the Napoleonic wars. In the work done at that period you would find extremely simple building, with cement used instead of stone, and no architraves round the windows or doors, while cornices were cut down to a mere rag. This had been done because people had not the money for anything more elaborate. If some of the modernists would say, "We have to do these things and would like to do otherwise," it would be more graceful of them, and he did not see why they should make a great virtue of what was undoubtedly a pitiable necessity. Another point was that some of the speakers had spoken of the necessity of individuality, but he thought it would be found that all great art was produced when people were not concerned with being individual but had a sort of team spirit. It was pointed out that the union of creative forces in the field of architecture was as promising as in any of the other arts.

A MIRACLE OF INVENTION

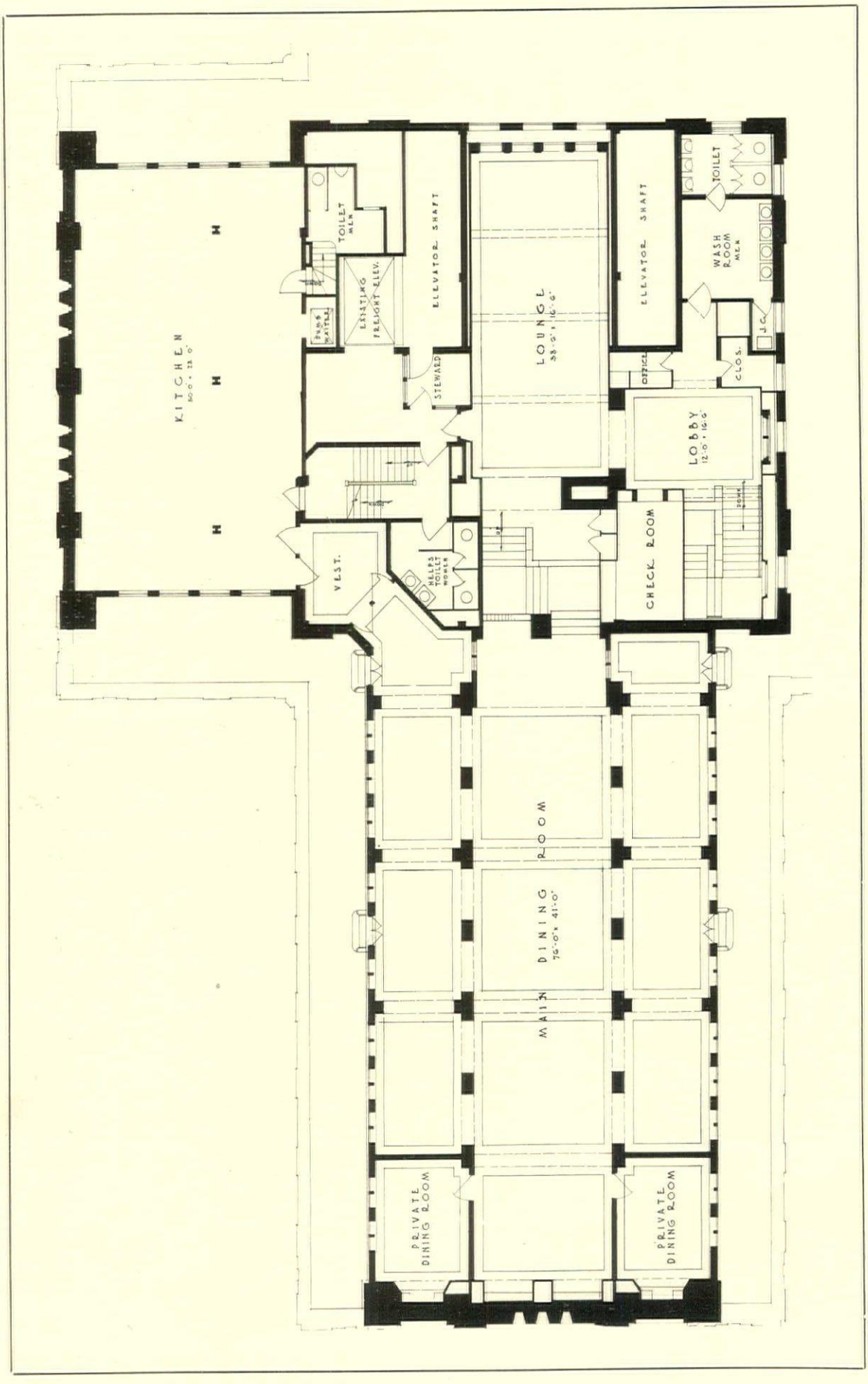
ALL ages have "wondered" at the marvels of "modern invention." We have not ceased to do the same even in this sophisticated age, and we often gaze with amazement at the wonders of electrical and mechanical developments that are constantly taking place. Changes in the science of building and particularly those that tend toward the elimination of waste are of unfailing interest. Closely allied to the latter are those developments which make waste material into useful products.

The commercial development of pressed boards for use on walls and ceilings apparently opened up an almost unlimited field for the utilization of materials that had been heretofore discarded. If we recall correctly, sugar cane was the first of these to be used. Then followed a similar use of wheat straw, flax, wood and even licorice. Now, a recent announcement reads—"By the miracle of invention, farmers of the United States will soon be furnished with a new way to use part of the 100,000,000 tons of waste cornstalks and other materials which it is estimated are now lost each year." The announcement states that through the use of a recent chemical binder which is sprayed over shredded cornstalks and subjected to pressure, a synthetic lumber board in any desired shape or size may be produced, or moulded into any form. Much is claimed for the economical use of the material and its many highly desirable qualities or characteristics. We may yet find a use for the pea vine stems discarded at the cannery, as well as the tin sheared from cans destined to contain this delectable vegetable.

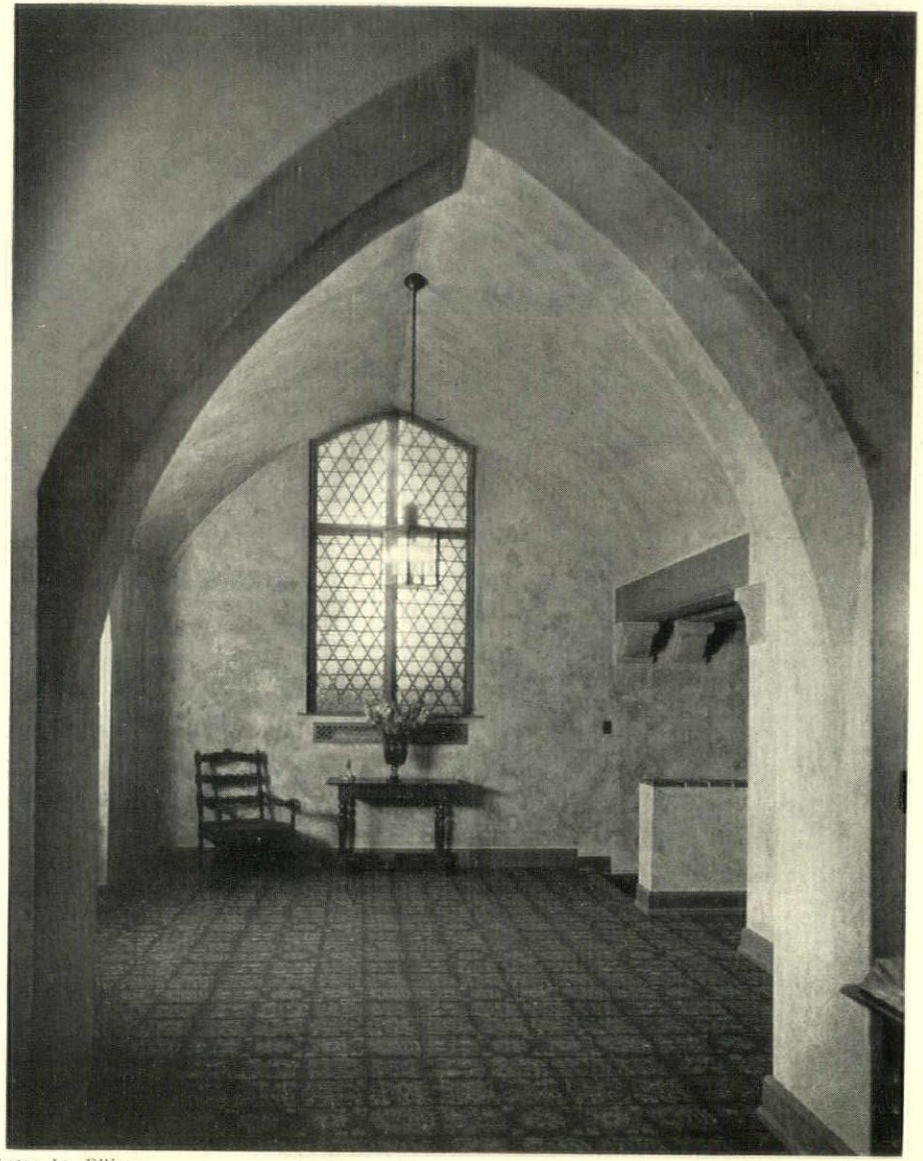
Photos by Ellison

SAVOYARD CLUB, DETROIT, MICHIGAN

SMITH, HINCHMAN & GRYLLS, ARCHITECTS

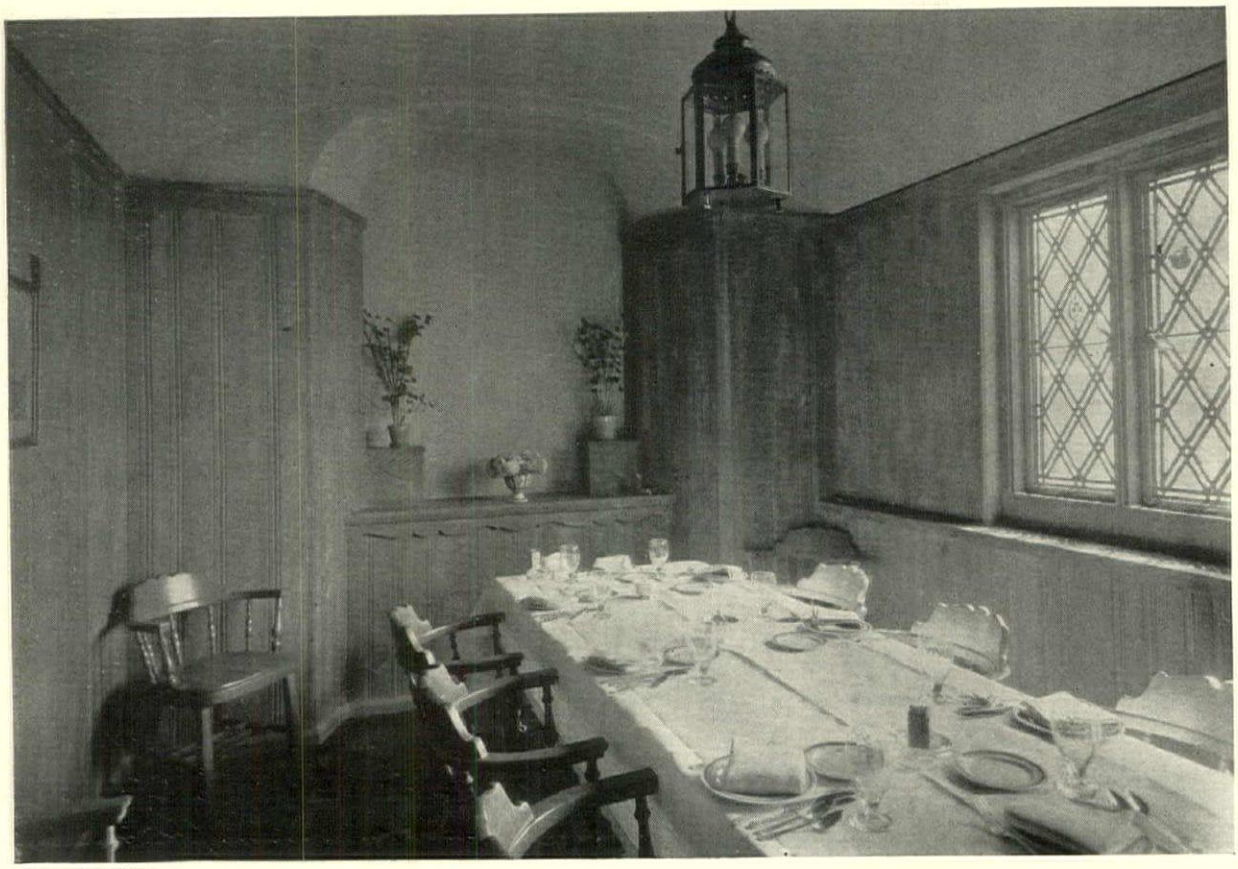


SAVOYARD CLUB DETROIT, MICHIGAN—SMITH, HINCHMAN & GRYLLS, ARCHITECTS



Photos by Ellison

SAVOYARD CLUB, DETROIT, MICHIGAN—SMITH, HINCHMAN & GRYLLS, ARCHITECTS



Photos by Ellison

SAVOYARD CLUB, DETROIT, MICHIGAN

SMITH, HINCHMAN & GRYLLS, ARCHITECTS

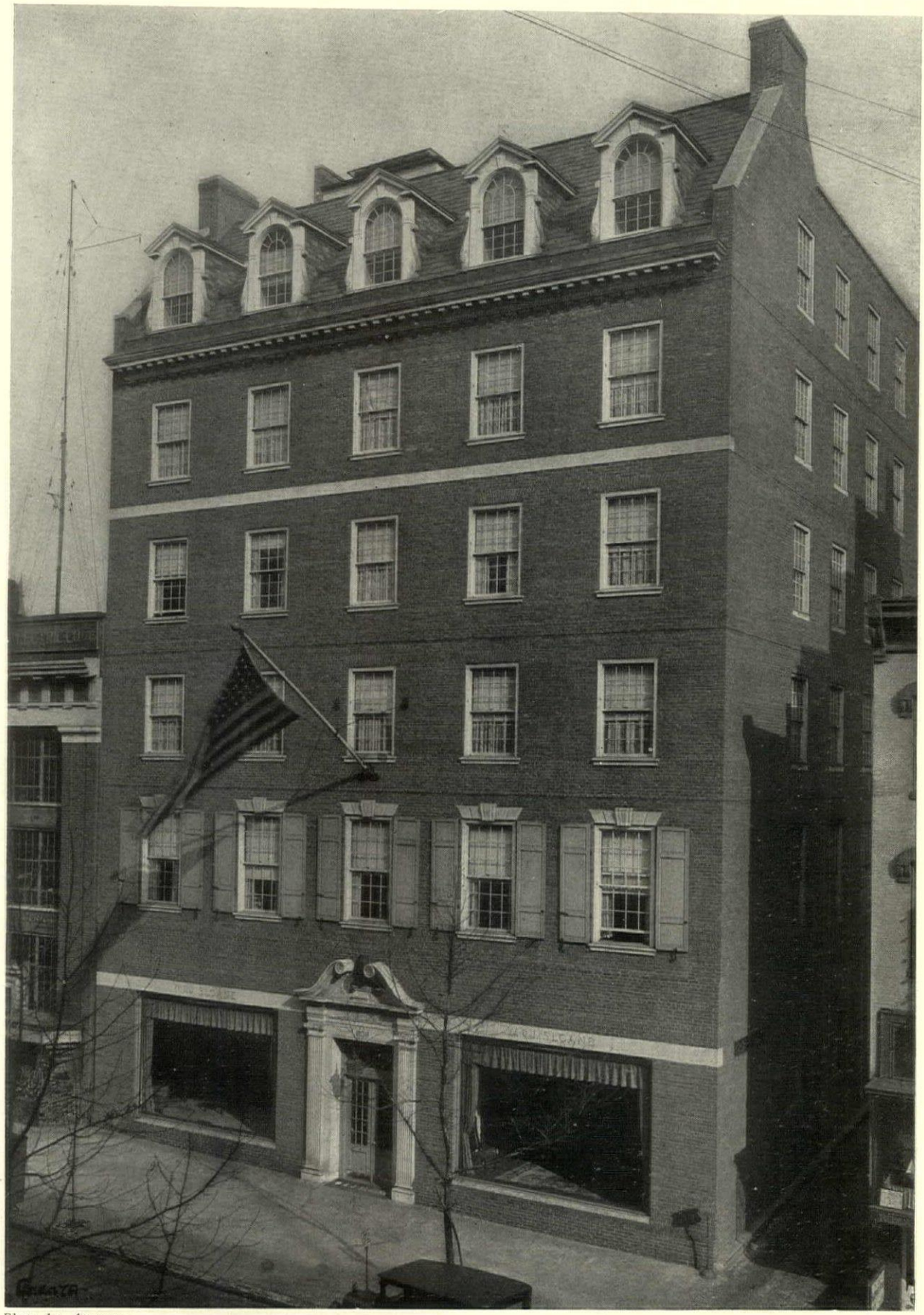
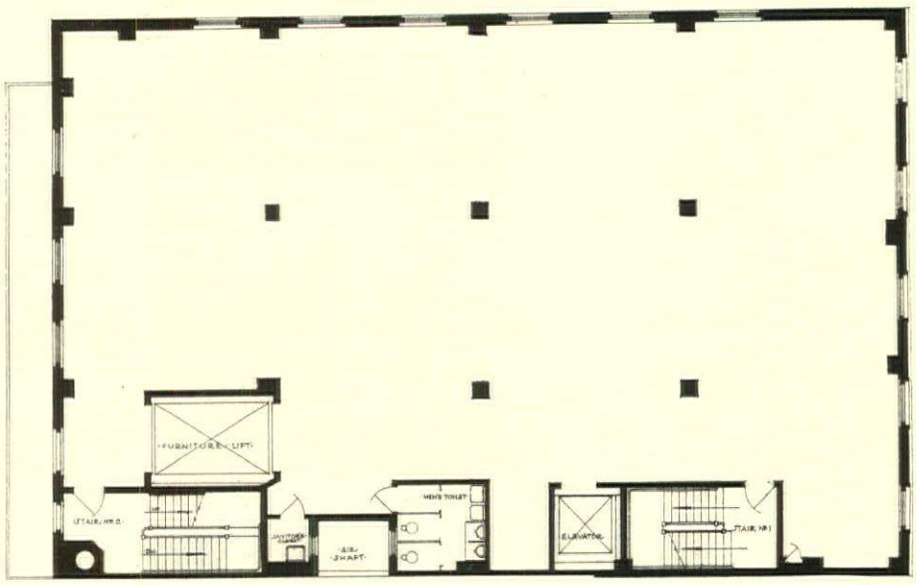


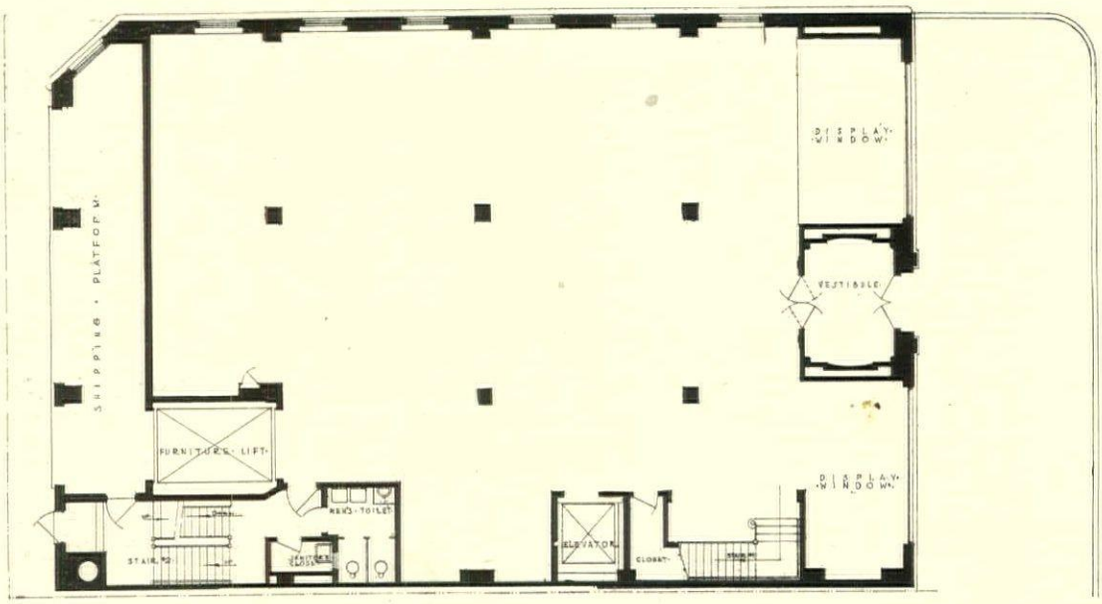
Photo by Amemya

W. & J. SLOANE BUILDING, WASHINGTON, D. C.

VOORHEES, GMELIN & WALKER, ARCHITECTS



SECOND FLOOR



FIRST FLOOR

W. & J. SLOANE BUILDING, WASHINGTON, D. C.
VOORHEES, GMELIN & WALKER, ARCHITECTS

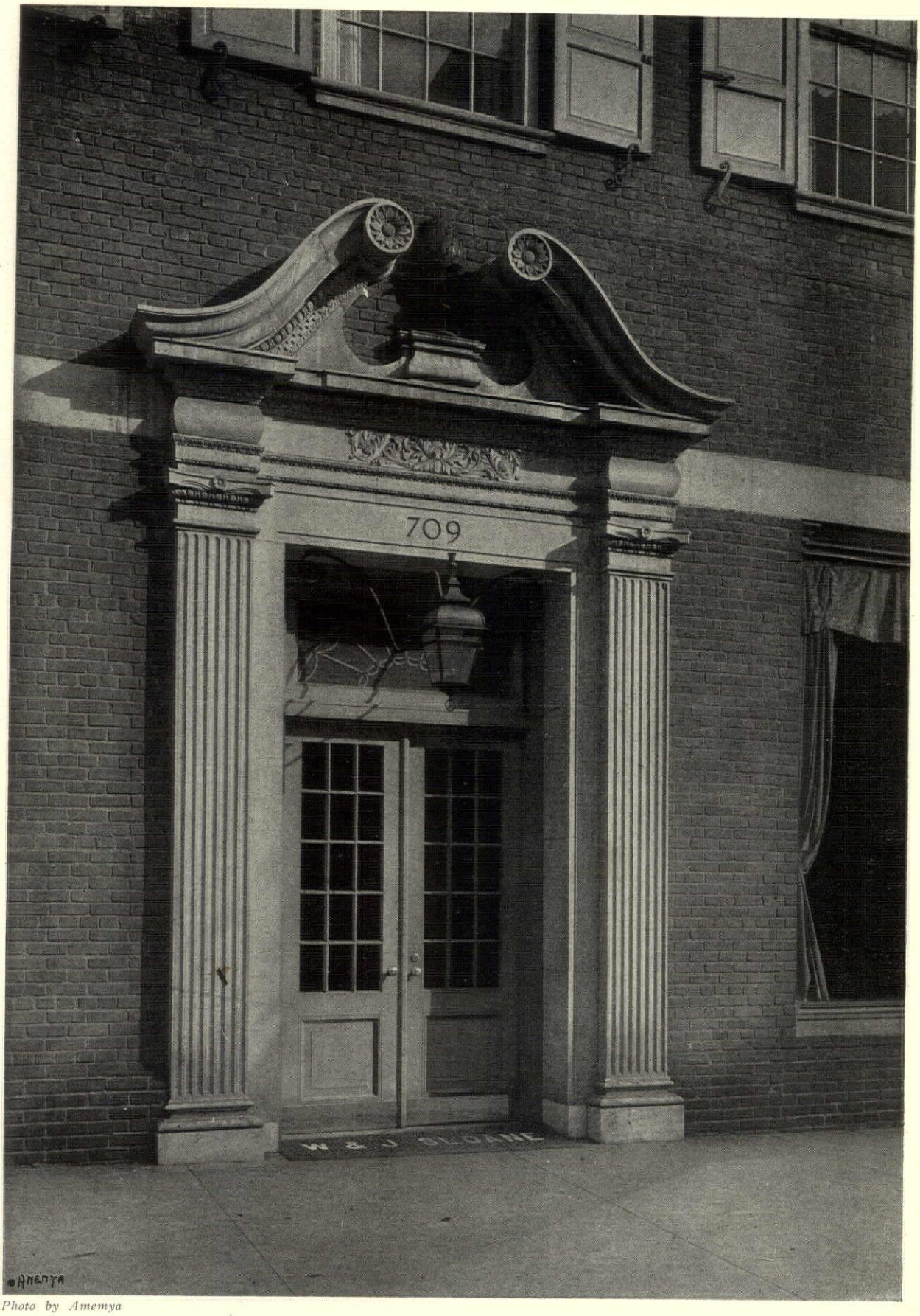


Photo by Amemya

ENTRANCE, W. & J. SLOANE BUILDING, WASHINGTON, D. C.

VOORHEES, GMELIN & WALKER, ARCHITECTS

THE FIRST SOUTHERN ARCHITECTURAL AND INDUSTRIAL ARTS EXPOSITION

By M. H. FURBRINGER
Chairman, Committee of Southern Chapters of A. I. A.

AN architectural and industrial arts exposition affords the means to place before the public in a most pleasing manner the results of the labors of the members of the architectural profession and the progress which has taken place in the building industry, and it makes possible the arousing of keen competition in a friendly way among the architects themselves by affording a method on a comparative basis of an interchange of ideas; nor can we ignore or fail to take account of the opportunity which an undertaking of this kind presents to both architects and allied arts for gaining the proper recognition which is so vital to the practice of architecture; neither can we evade the responsibility which must be met if we wish to carry the message to those we serve and who look to us for guidance in interpreting the spirit of the age in which we live.

The citizen who recognizes the obligations he owes to his government will, if the opportunity is presented, evidence a like interest in the growth of his community and the character of its environments and though apparently oblivious to the influence which the surroundings exert on him will concede the leadership to those who are qualified to guide and direct him, if in so doing he can derive both pleasure and enlightenment. On the other hand the layman who seems to show but little concern with the administration of the affairs of his government or even of the community in which he lives, will often be aroused to a high pitch of enthusiasm when developments are planned for better living conditions, when schools and factories are made more attractive and places of worship or amusement are built for him and his family, and parks and playgrounds are provided for recreation and enjoyment.

It is unfair to assume that the average person can be called upon to display toward the practice of architecture and the building of better homes the same interest which of necessity constitutes but a minor phase of his wellbeing, as he conceives it, and yet, when it is made possible for him to enjoy these advantages by placing them within his grasp, he can be impregnated with a desire which will find expression in an enlightened response and an appreciation encouraging to those who make this possible. It is a gross exaggeration of common sense and reason to suppose that even the magnitude of an industry and one so vital to the progress of the human race as the art of building, touching as it does almost every activity of the daily life of the inhabitants of every community, can be considered of more than passing interest to those most vitally affected unless others who have a knowledge of its deeper significance use the methods of propagating its virtues and resources in a way which will bring the cultural advantages of the study of architecture within the grasp of all.

The growing popularity of expositions, which afford the people a suitable and convenient occasion to see the methods by which the architect and the allied crafts engage to build into enduring and permanent form structures designed to serve the purposes which bring them into being, attests to the opportunity which is within such easy reach if we but avail ourselves of the course of events.

When affairs of this nature attract, as they do, large numbers to the exhibition, it would indeed be cause for regret if we failed to use this privilege to place before the public, eager to learn and sympathetic to our efforts, the progress which is taking place in our cities and in the rural communities and with which the architect is so intimately connected. It may be surprising to those who have not given much consideration to the matter to learn with what keen anticipation the public looks upon the advantages of being able to attend an exposition where, under the same roof and in close proximity, are placed the drawings and photographs illustrating buildings and the materials of which they are built; and, if the attendance itself did not prove this, the very fact that the public press devotes so much space in its columns to featuring the exhibits both by well written articles and illustrations, would alone make this assertion go unchallenged.

Recognizing the obligations imposed upon us and taking advantage of the opportunity presented to place before the public a collection of drawings and photographs illustrating the work of the architects of the South and, at the same time and place, exhibits of the allied arts and crafts, the Southern Chapters of the American Institute of Architects have completed arrangements to hold the first Southern Architectural and Industrial Arts Exposition in Memphis, during the month of November of this year. While surprise has been

expressed in some quarters that this should be attempted on the scale and magnitude which its sponsors have planned, when consideration is given to the development which has taken place in the South during recent years, it is conceded by those who have given both thought and study to the subject that the time is most opportune for an undertaking of this kind. To further dispel any doubts which may linger in the minds of some, it is only necessary to mention the enthusiastic response which has followed the announcement of this undertaking from both the architects and the manufacturers and craftsmen throughout the regions from which the exhibits will be solicited.

A firm of exposition managers of wide experience in like affairs has been engaged to assume the necessary handling of the details of collecting the exhibits and installing them in the Municipal Auditorium which so fittingly lends itself to such an exposition because of the vast size of the arena and because the entire exhibits can be grouped on one floor. To those who have been connected with similar undertakings this must make a strong appeal, in comparison with the disadvantages of an exposition on several floors, as it is easy to observe the reluctance with which the people in attendance go from floor to floor. It is also possible to have an exhibition on so vast a scale that the very object of its purpose would fail in accomplishing the results sought through the endless amount of exertion necessary to view the exhibits which would cause both bodily and mental fatigue. It was, therefore, decided that the better plan would be to limit the scope of the exhibition to the presentation, as far as possible, of the work of Southern architects and for the same reason to solicit only drawings and photographs which would be exhibited after having been selected by a competent jury, and also in this way assuring the quality of the exhibits. The same careful consideration will be given to the display of the allied arts, for there is an obligation imposed upon the sponsors of an undertaking of this kind which must be recognized if the full benefits are to be derived from the efforts expended.

The architectural exhibits will be hung in a series of well planned galleries converging in a Court of Honor. To give proper scale to these galleries, they will be covered overhead with a transparent material through which a soft diffusing light will penetrate, and leading out from the architectural galleries will be the corridors and rooms in which the industrial exhibits will be grouped, forming, as it were, a separate unit.

Realizing the great effort necessary to assemble the architectural exhibits, it was thought best in order to make it possible for even a larger number of people to see these exhibits than will attend the exposition, to send the drawings and photographs on a traveling circuit of several Southern cities where the local chapters wish to have an architectural exhibition and in this way countless others will be enabled to view the work of the architects from all over the South who would not otherwise be able to avail themselves of this privilege.

During the week of the exposition, which will be held in Memphis from the 9th to the 16th of November, 1929, the Board of Directors of the American Institute of Architects and the Producers' Council will hold their meeting here. The Southern Chapters of the A. I. A. will have a regional conference which will make it possible to discuss those problems which from time to time are necessary if the Institute is to function properly in the development of the practice of architecture as it should, and which seems not to be feasible at the annual Institute conventions when matters affecting the whole country are considered and which do not intimately concern different sections of the country. Perhaps the innovation of having a group of chapters from several regions meet for discussing matters of vital interest to their particular territory may produce results as time passes which are not yet apparent to those who have given but little consideration to the possibility of developing the influence of the Institute along these lines.

Although this exposition is to be sponsored by the Southern Chapters of the American Institute of Architects and will be held under their control and auspices, it is, nevertheless, to be national in scope and exhibits of the industrial arts will be solicited from every section of the country. Invitations are, and will be, extended to architects residing near or remote to visit the exposition during the week it is in progress and likewise to attend the meetings and discussions relative to the practice of architecture and the allied arts which will be made both interesting and pleasant to those who avail themselves of the invitation to meet with the Southern Chapters. Success in any enterprise is only attained when the venture merits the coöperation of everyone concerned and when the reasons for its existence are the high ideals which have as a basis the unselfish devotion of those willing and ready to give of their time and talents to the work set before them. Now that

the Chapters of the Institute located in the South have undertaken a task which may be so far reaching in the benefits to be derived from it as to exceed the greatest hopes of its sponsors, no effort will be too great or any sacrifice so willingly made by those charged with the duties which this undertaking may impose upon them so as to make this exposition the best which has ever been held in this country. In order to prove that this is not a vain boast we again extend our invitations, in all sincerity, to the architects of the country, the members of the allied arts, and all who have an interest in the progress which is taking place in the art of building, to visit us and accept our hospitality.

BENDING OF MARBLE SLAB EXCITES INTEREST

IN the May 5th issue of THE AMERICAN ARCHITECT, M. E. Boyer, in a description that accompanied the illustrations of the William R. Davie Memorial at (Old) Waxhaw, North Carolina, stated that an old marble grave marker that was reset had warped 1½ inches in its length of 6 feet, without breaking. The slab was stated to be 1¾ inches thick. James W. Shaw of Wayne, Pa., according to the following now holds the record for discovering marble grave slabs of maximum sag or bending without rupture.

Editors, THE AMERICAN ARCHITECT:

Dear Sirs:

I thought we might go our friend Boyer *one better*, so stopped and measured this curious old grave covering. There is no telling how far it might have gone, if some one had not stepped in its way—with the middle support.

Yours, just in fun,
JAMES WILLIAM SHAW.

Wayne, Pa., May 14, 1929.

* * *

Mr. M. E. Boyer, Jr.,
Architect,

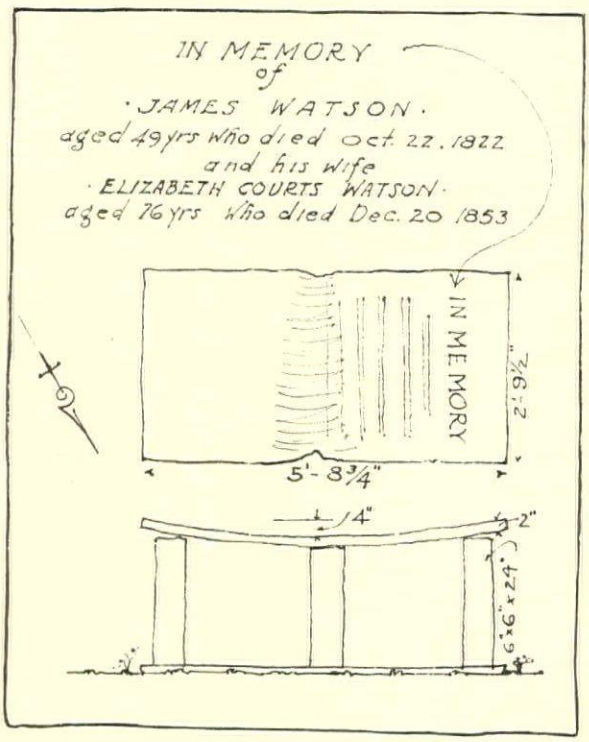
Dear Sir:

As I read your article in the May 5th issue of THE AMERICAN ARCHITECT of the William R. Davie Memorial at (Old) Waxhaw, N. C., I noticed your comment on the bending without rupture of a marble slab six feet in length and 1½" thick.

On a recent trip to Washington, D. C., as I passed through Rock Creek Cemetery on my way to view St. Gauden's Monument of Grief, I passed a tombstone, which attracted my attention just on account of a similar incident. The grave had been finished at the ground line with a marble slab, and on top of this slab four marble posts 6" x 6" x 24" were placed, and then the finished top. The top has moulded edges, was 2 inches thick and had bent four inches, without rupture. At that juncture (in condition) a 6" x 6" marble post had been placed under the lowest part. The inscription was nearly obliterated.

Yours very truly,
JAMES WILLIAM SHAW.

Wayne, Pa., May 21, 1929.



MR. JAMES WILLIAM SHAW

Dear Mr. Shaw:

The Editor of THE AMERICAN ARCHITECT has been so kind as to forward your letter of comment in reference to the Davie Memorial recently published in that magazine, and also the sketch you have made of a bent marble slab found in Rock Creek Cemetery, Washington, D. C.

Your careful recording of this bent slab describing the added supports under the slab after it had apparently sagged 4" has suggested another cause for the bending of slabs other than the cause I had attributed to the one described in the Article.

In case of the Davie slab, it was originally resting all around on four edges of a boxlike tomb and the warp described had caused diagonal corners to rise from their support, giving the characteristic appearance of having been warped or cupped by reason of action of the sun on top complete with dampness on the underside by reason of the enclosed boxlike support. In general the cup, or warp, resembles just what might have happened to a wooden slab.

I have delayed prompt reply to your letter with the hope that I might, through examination of other local and similar tombs, discover another instance which might solve the question as to whether this bending of marble slabs is produced by simple effect of gravity or whether in both cases the effect of dryness and dampness on opposite sides has produced the bend in the marble. Possibly other observers or further observations will determine the cause, or better yet, some marble quarry might be willing to experiment in the bending of marble by the use of intense heat and moisture on opposite sides.

I wish to thank you for your careful description of the Washington tombstone and express the hope that further observations will solve this rather interesting phenomenon.

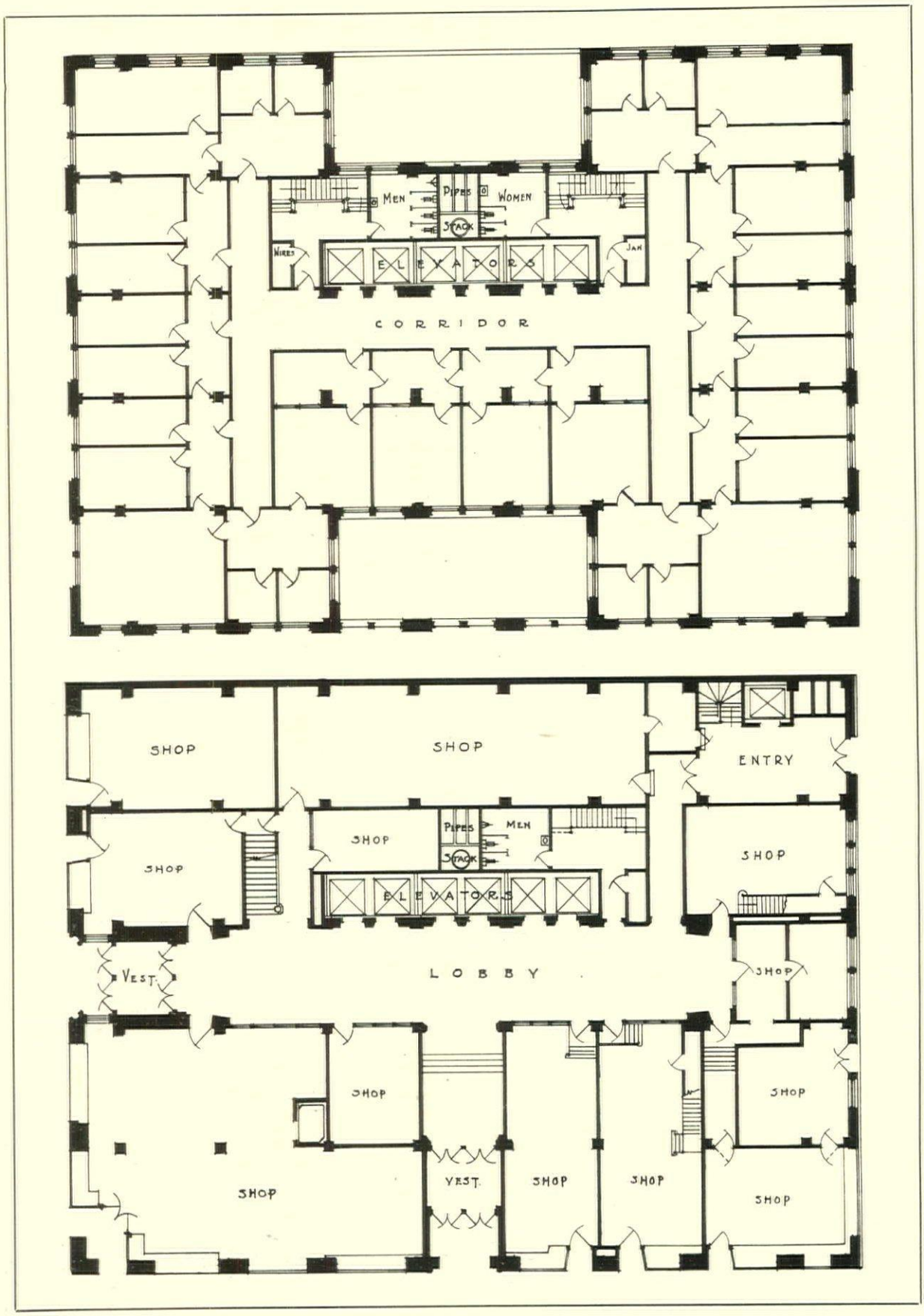
Yours very truly,
M. E. BOYER, JR.

Charlotte, N. C., June 8th, 1929.

The Editors would be glad to have readers, who have found stone slabs that have bent any considerable amount without breaking, send them the facts, or comment on this "phenomenon."

PHILTOWER BUILDING, TULSA, OKLAHOMA

KEENE & SIMPSON, EDWARD BUEHLER DELK, ASSOCIATE ARCHITECTS

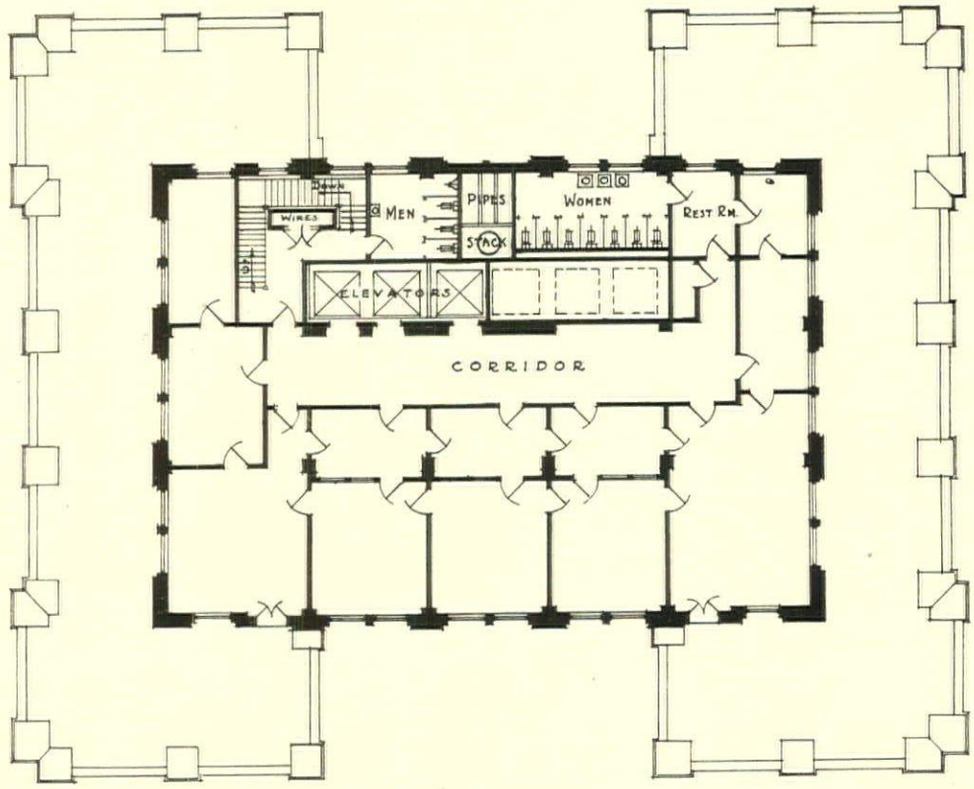


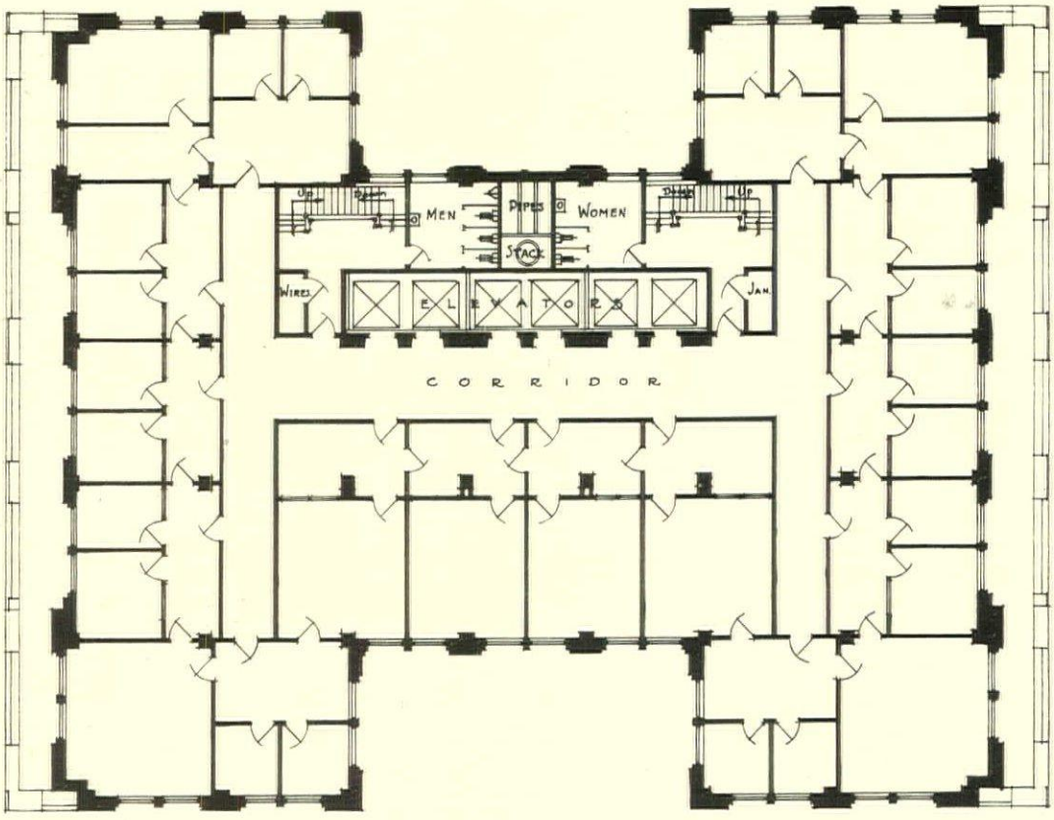
PLAN OF SIXTEENTH AND TWENTY-FIRST FLOORS, PHILTOWER BUILDING, TULSA, OKLAHOMA

KEENE & SIMPSON, EDWARD BUEHLER DELK, ASSOCIATE ARCHITECTS

PHILTOWER BUILDING, TULSA, OKLAHOMA

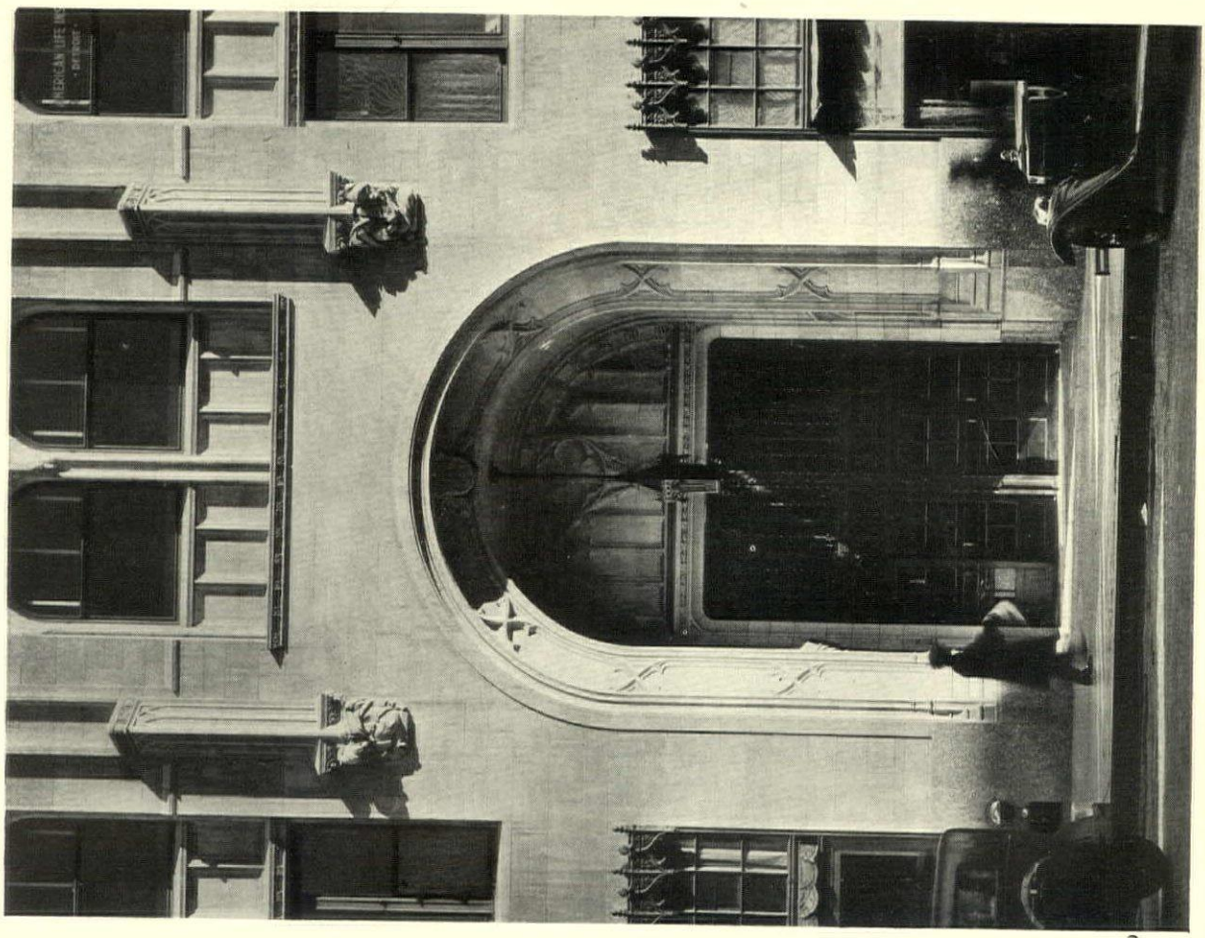
KEENE & SIMPSON, EDWARD BUEHLER DELK, ASSOCIATE ARCHITECTS



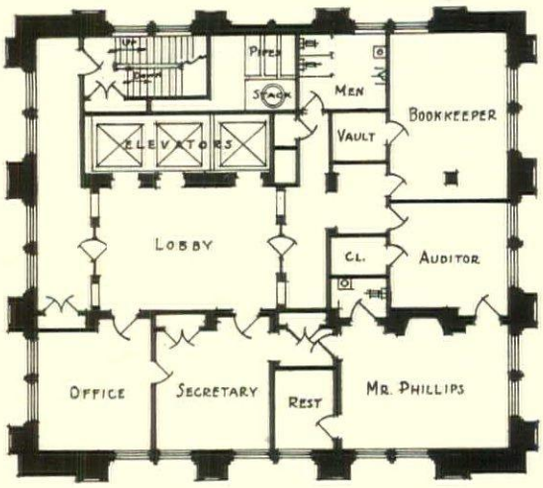


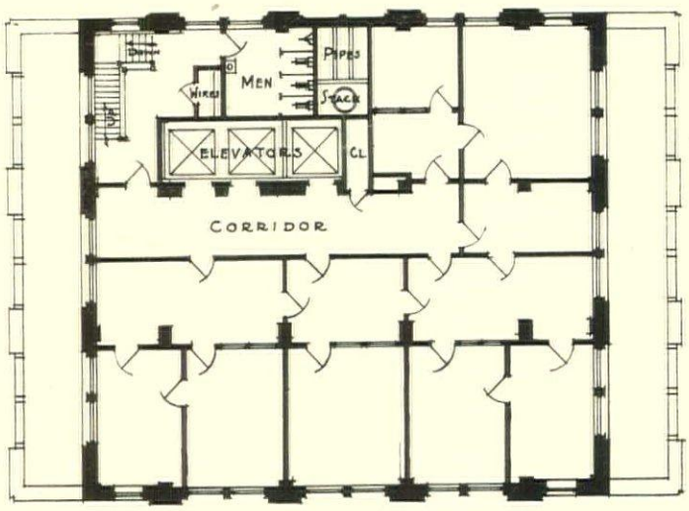
PLAN OF FOURTH AND TWELFTH FLOORS, PHILTOWER BUILDING, TULSA, OKLAHOMA

KEENE & SIMPSON, EDWARD BUEHLER DELK, ASSOCIATE ARCHITECTS



PHIL TOWER BUILDING, TULSA, OKLAHOMA—KEENE & SIMPSON, EDWARD BUEHLER DELK, ASSOCIATE ARCHITECTS





PLAN OF SIXTEENTH AND TWENTY-FIRST FLOORS, PHILTOWER BUILDING, TULSA, OKLAHOMA

KEENE & SIMPSON, EDWARD BUEHLER DELK, ASSOCIATE ARCHITECTS

ORGAN SIZES AND SPACES FOR CHURCHES AND AUDITORIUMS

By LESLIE N. LEET
Technical Director, Organ Department of the Aeolian Company

IN planning a church, auditorium or residence the space that should be allowed for the installation of an organ usually presents a problem to the architect with which he is unfamiliar. To begin with, there is little information available on how large the organ should be tonally and the average organist, when consulted, usually suggests the largest organ possible. His desire for a large instrument is a very natural one, as the larger the organ, the greater its tonal variety, and opportunities for the display of technique in playing are proportionately increased. As most churches are completely planned before the purchase of the organ is seriously considered, it is very important that the architect understand the proper size organ that will be required from a musical standpoint and also how much room it will occupy.

The preparing of specifications of the organ will not be considered in this article. The usual organ specification is a list of the stops contained in the instrument with the number of pipes in each stop shown and a summary of the mechanical appointments of the console. The title "Specification" is but an honorary one, as no attempt is made in the usual organ specification to show the method of manufacture to be followed and, aside from generalities, the details of construction are not mentioned. While to architects accustomed to prepare complete specifications for construction work this practice, which, though general, may appear unsafe, as a matter of fact does not work out so. The organ contract is usually placed with a particular builder on the strength of that company's reputation for tone, materials and workmanship, and the purchasers usually get exactly what is paid for. As there is no practical method to measure or state musical quality that could be understood except by musical scientists, it would be extremely difficult to specify on paper what the tonal result from an organ should be. In this article, however, we can show in a general way the proper size organ for which preparations should be made without becoming involved in the details of the different tonal members or stops that constitute the organ.

To a large extent the size of an organ depends on the amount of money that can be put into it. For instance, in a church seating three hundred and fifty people, an extremely effective instrument could be installed by a good organ builder for, let us say, $12,000. As a church of this size may not have more than half this sum available, the same builder can supply an organ for perhaps $6,000. Either of these instruments can have adequate power for the auditorium. The larger organ will have a larger number of stops and therefore more variety and will be a more interesting organ to which to listen, since many musical effects can be produced on the larger organ that are impossible on the smaller instrument.

With this point in mind, it appears that for an auditorium of any given size there is a wide latitude in the size of the organ that can be installed. Nevertheless, there is a minimum that should be established so that the organ may be proportionate to the building without the necessity of forcing the tone by the use of excess pressure wind; and there should also be an average size established to guard against an organ out of proportion to the building where space and funds are limited.

The smallest organ that should be considered today for any purpose should have at least five stops of pipes. Anything smaller than this, unless built for some unusual purpose, such as a small practice organ, would not come under the modern interpretation of an organ. This size might do for a church seating up to three hundred people, but would be more in keeping with a chapel seating from fifty to seventy-five. In Table A church auditoriums are listed by sizes together with what can normally be accepted as the minimum size organ to be considered and a size with a fair degree of variety. This table may be used as a guide or a starting point in determining the size organ to

be considered. To this table, based upon manual stops, there must be added space for pedal stops and the harp and chimes when these are likely to be included either at the time of the installation of the organ proper or later. For the present purpose the reader can consider that for every six or seven manual stops one pedal stop will be used. Due to the method of constructing modern organs it is possible to use each pedal stop at more than one pitch by so arranging the mechanism. This would mean that using this ratio of pedal to manual stops an organ of 12 to 15 manual stops would have two pedal stops of pipes. By augmenting, which is the accepted name of the system by which a stop is made available at different pitches, it would be possible, and with good musical effects, to obtain from these two stops of pipes, each of 44 pipe compass, four or five stops upon which to play. This is explained in order that it may be understood that this ratio of pedal to manual stops works out far better than it appears at first glance.

TABLE A**
Organ (in manual stops)

No. of Seats*	Min.	Fair	No. of Manuals
100 or less	5	8 to 10	2
250	6	12 to 15	2
400	8	15 to 20	2-3
600	10	20 to 30	2-3
800	12	25 to 35	2-3-4
1000	15	35 to 40	2-3-4
1500	20	40 to 45	3-4
2000	30	50 to 75	3-4

*—For purposes of this table it is expected that the proportions of the building are normal for the number of seats.
**—It is admitted that few organists will agree that this table is of any value.

This table is based on no scientific or musical law. It is a rough guide to an acceptable minimum organ with an instrument of fair size also shown. The size of the maximum organ for each size of auditorium is elastic and governed only by the funds and organ space available. It is a fact that the larger the organ in number of stops, the greater will be the musical possibilities in tonal variety, therefore, the larger the instrument, the more interesting it will be to the listener. The power of an organ, however, is not necessarily a function of its size in number of stops.

With the assistance of Table A, it is possible to determine closely the minimum organ that should be considered and also an average sized organ for a church. Now what will it cost? This is as easy to answer as to say what a suit of clothes or a pair of shoes should cost. Take, for example, an organ of 11 manual stops with one independent pedal stop, a total of 12 stops and, perhaps, a set of chimes. The specification of a typical organ of this size, as it might be quoted on by the different builders, would be something like this:

GREAT ORGAN

Diapason	8′	73 Pipes
Clarabella	8′	73 Pipes
Octave	4′	73 Pipes
Tromba	8′	73 Pipes
Stopped Flute	8′	From Swell
Flute d'Amour	4′	From Swell
Aeoline	8′	From Swell
Chimes		20 Tubes

SWELL ORGAN

Diapason	8′	73 Pipes
Bourdon	16′	97 Pipes Unit Stop
Stopped Flute	8′	97 Pipes Unit Stop
Flute D'Amour	4′	97 Pipes Unit Stop
Flageolet	2′	97 Pipes Unit Stop
Viole d'Orchestre	8′	73 Pipes
Viole Celeste	8′	73 Pipes
Aeoline	8′	73 Pipes
Oboe	8′	73 Pipes
Vox Humana	8′	73 Pipes

PEDAL ORGAN

Bourdon	16′	44 Pipes
Flute	8′	From Bourdon
Gedeckt	16′	From
Stopped Flute	8′	Swell

The quotations are received. Each organ builder assures the committee that he builds organs only of the highest quality and that the materials used and the tone of his organs are unequalled. The following list of quotations is typical, not intended to exaggerate, nor is it intended to be humorous:

Builder A—$5,800.
Builder B— 7,900.
Builder C— 4,200.
Builder D— 9,850.
Builder E—11,500.

In each case, as in the case of most transactions, it will be found that the purchaser would get what was paid for. If, in establishing the approximate figure for the organ allowance, the architect uses the figure of $1,000 per stop of the manual stops shown in Table A, sufficient will have been allowed for pedal stops and other accessories so that it will be possible to place the contract with a good builder. This is not a "price per stop" or anything similar. It is only a quick method of approximating the prices of the organs suggested in Table A.

This discussion, up to this point, has been concerned with how large an organ should be and roughly what it will cost, in relation to church and auditorium organs. Now the question arises, how much, or rather, how little cubage must be lost to the organ? For the benefit of those who are not familiar with organs or how they are composed,

a short description of what is in the organ chamber will be of value.

As an organ is in truth a group of small organs, it must be realized that each one of the divisions of the organ is an organ in itself and has many details that are exactly the same in each division. Each of these divisions can be readily separated from the others without difficulties in construction. To place an organ on each side of a chancel all that is necessary is to decide that certain divisions go on one side and the balance on the other, bearing in mind that each division should be held together as an entity. As a general rule it is not wise to divide a division except under exceptional circumstances and it is also true that divisions that are to be used together frequently should not be too widely separated. In a general way it may be said that to plan the space for an organ it is necessary first to determine the number of divisions that will be included in the complete organ. Again referring to Table A, the number of divisions would usually work out as shown in the column headed Number of Manuals. It should be borne in mind that in every case there will also be a pedal organ division for which allowance must be made.

Each manual division should have a clear height of twelve feet and in large organs this should be increased to at least 16 feet. It is possible to install a division in less height, but to do so considerable mitering of the pipes must be resorted to, and in order to find room for the overhanging portions of the mitred pipes the area of the space required by the divisions must be increased. For purposes of estimating the total amount of space to be allowed, it can be considered that for each foot less in height than 12 feet, fifteen per cent must be added to the area of the plan of that division. A twelve foot height allows opportunity for the wind chests to be placed off the floor sufficiently for them to be conveniently serviced, and the reasonable mitering of pipe work.

A typical section of an organ division enclosed in a swell box is shown in Fig. 2. The section as shown is the preferred arrangement for the pipes on the manual wind chest with the larger pipes at each end. To avoid an irregular ceiling (such as under a pitched roof) the pipes can be arranged so that the longer pipes are all at one end and the pipes diminish in size till the shortest are reached at the other end of the chest. When the tonal egrees from the swell box is from one end and not from either side as in Figure 1, this arrangement is usually resorted to, as by placing the shortest pipes at the end nearest the swell folds no pipe obstructs the top of the other. This arrangement is only used when necessary as the arrangement with the larger pipes at each end distributes the greatest weight at the point of support, and, for the same width, for an equal num-

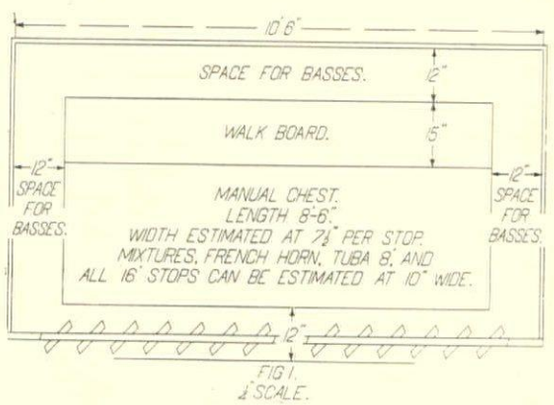


FIG. 1—PLAN OF TYPICAL ORGAN ENCLOSED IN SWELL BOX

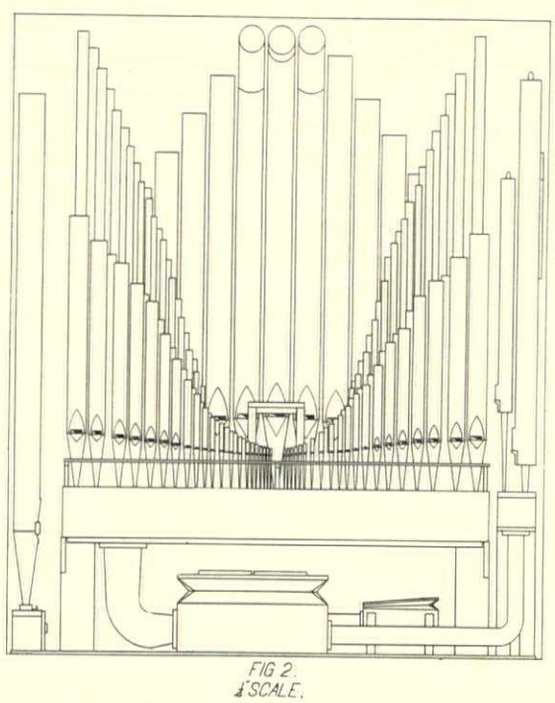


FIG. 2—SECTION THROUGH TYPICAL ORGAN ENCLOSED IN SWELL BOX

ber of stops, there is less crowding in the tenor and bass octaves than is encountered in the arrangement with all the long pipes at one end. Organ builders call this form of chest "semi-tone" as the pipes progress by semi-tone from one end to the other, and the preferred form is called "whole tone" with the pipes progressing by whole tones from each end to the center.

A modern organ contains 73 pipes for each manual stop in the instrument. An occasional stop may be encountered which, due to the fact that it is "unified," will contain more than 73 pipes, as the method of construction of this stop allows it to be played at several pitches. For each additional pitch, pipes must be added in order that the compass of the stop at each pitch may be complete. A pedal stop is of 32 pipes compass to begin with and adds 12 pipes for each additional octave at which it can be played.

The manual pipes of each organ division stand on a wind chest in rows. The longer pipes, of certain stops composed of pipes of large diameter and needing a large quantity of wind, do not stand with the balance of the stop, but are set on separate chests of small size. Separate chests for the large pipes relieve crowding on the manual chest and assist in obtaining a steady wind condition for the smaller pipes.

A manual wind chest, as constructed by practically every major builder in this country, is 8′6″ long. It varies in width as required by the number of stops that must be mounted on it. Allowing for the numerous conditions that must be included in one manual wind chest, it would not be safe to allow less than 9″ per stop in deter-

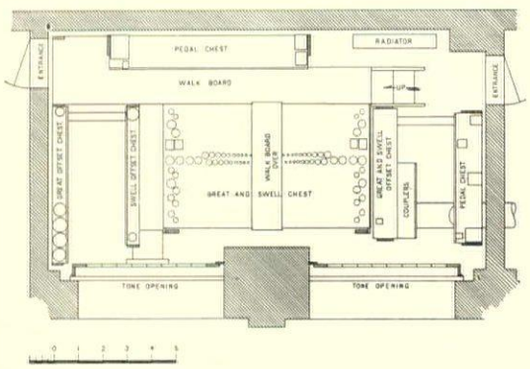


FIG. 3—PLAN SHOWING SMALL ORGAN ENCLOSED IN ORGAN CHAMBER. ENTIRE ORGAN CONSIDERED AS ONE TONAL UNIT
WESTFIELD MASONIC TEMPLE, WESTFIELD, N. J.
JOHN F. JACKSON, ARCHITECT

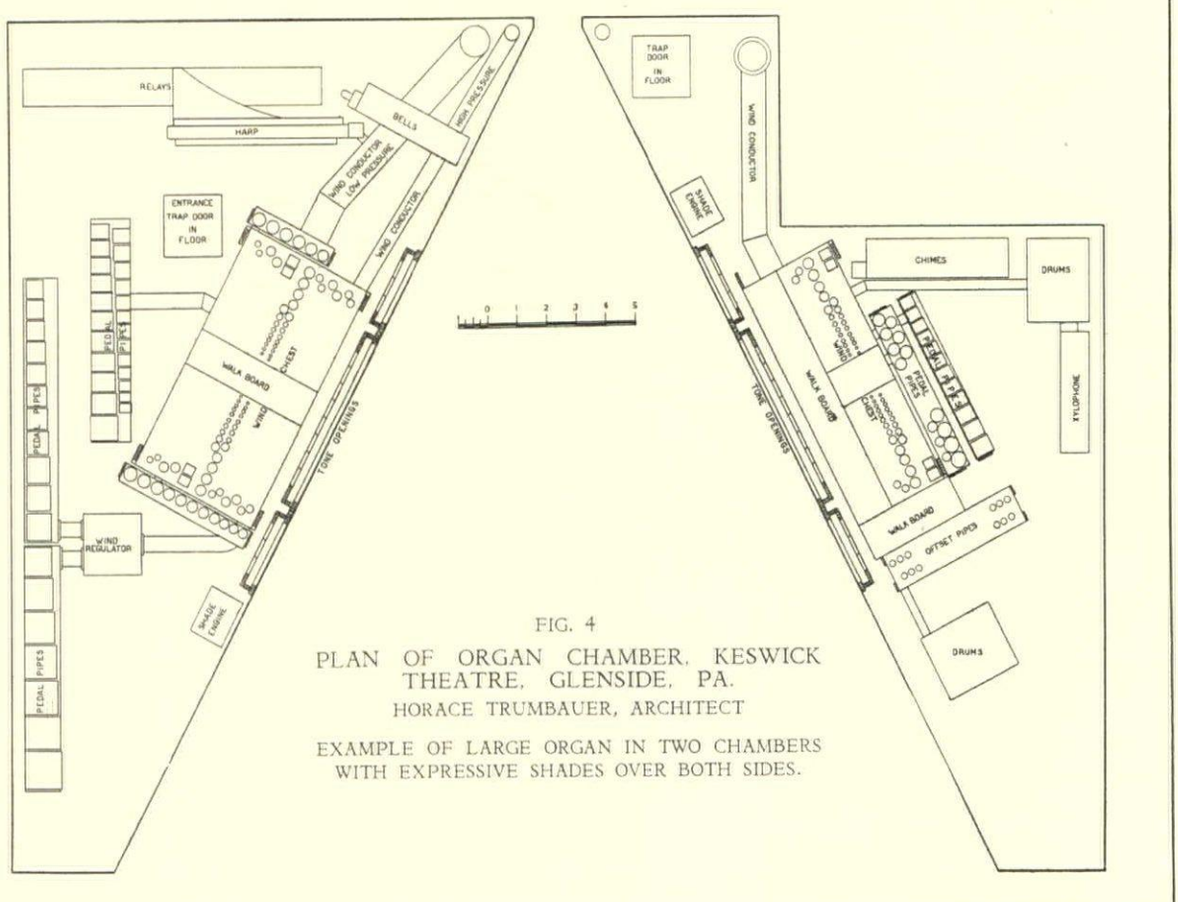


FIG. 4
PLAN OF ORGAN CHAMBER, KESWICK THEATRE, GLENSIDE, PA.
HORACE TRUMBAUER, ARCHITECT

EXAMPLE OF LARGE ORGAN IN TWO CHAMBERS WITH EXPRESSIVE SHADES OVER BOTH SIDES.

mining this width. There are many stops that may need but 5″ or 6″ while others may require up to 11″, but a check over several representative organ layouts has shown that the figure of 9″ per stop will produce safe results. The manual wind chest, as stated above, is 8′6″ long and as wide as required for the number of stops to be included on that chest. In addition to the width of the chest, there should run parallel to it a walkboard for the tuner when servicing the organ. For practical reasons, this board should not be less than 15″ wide. On three sides of the chest one foot is required for space to hold the offset bass pipes which are not placed on the manual wind chest chiefly due to their large size.

A basis has now been established for estimating the space for each manual division of the organ. The length is fixed by the length of the chest plus the extra foot needed at each end, the width by the number of stops multiplied by 9″ plus 15″ for a walkboard and one foot for a bass chest. These figures hold good for a division up to about 12 stops over which it would be well to allow two feet on the three sides of the chests for basses and other large parts that may require extra room.

In Fig. 1, the shades, which look like a Venetian blind on edge, are operated by an electro-pneumatic engine, and open and close, allowing more or less tone to escape from the enclosure that confines that division at the discretion of the organist. In a modern organ all divisions of the organ except the Great Organ and Pedal Organ are always enclosed. It is not unusual at the present time to find the Great Organ enclosed also, but it is unusual to find the Pedal Organ similarly enclosed and expressive. This is due to the fact that the pipes in this last named division are of such large size that an enclosure does not improve their quality but on the contrary may stifle their very grave tones. If the archiect in planning an organ space figures all the divisions enclosed and expressive except the Pedal, he will not be far from correct in 95% of the organs to be encountered. An exception to this is the small organ that is enclosed in the organ chamber and the entire organ is considered as one tonal unit. In such cases, the swell shades are fitted over the tone opening and the entire organ thus becomes expressive. An organ of this type is shown in plan in Fig. 3. This arrangement, which at first appears musically good, has the unfortunate handicap that it is not possible to vary the shading of two contrasted tones individually. For example, if a Solo were being played on the Oboe accompanied by a soft string that would normally be in another division, the organist could not increase the power of the Solo without increasing the accompaniment, and vice-versa. This is a distinct musical handicap and for that reason, except for very small organs (ten to twelve stops or less it should not be considered). Under this limit the number of stops prescribes the opportunities for several expression chambers and the organ takes more kindly to this arrangement from a musical standpoint.

FIG. 5—ORGAN SCREEN IN THE KESWICK THEATRE, GLENDALE, PA.

HORACE TRUMBAUER, ARCHITECT

In the case of a larger organ enclosed in a plurality of chambers, it is possible to fit the expression shades over the tone openings of each division and thus the organ becomes entirely expressive and yet has more than one separate expressive division. In certain cases this arrangement works out very well. It was the plan adopted in the Keswick Theatre, Glenside, Pa., which is shown in Fig. 4. A view of one of the organ screens is shown in Fig. 5.

The above is a guide for establishing the size of the manual divisions and Table A gives the number of such divisions. For the purpose of space calculations it can be assumed that the manual stops are evenly divided between the manual divisions. Should it later develop that the Great Organ will not be expressive and no swell shades

will be required, there will be no regrets, as by assuming that all the manual divisions are expressive there can be no later complications. There remains for consideration the space that will be required for a Pedal Organ. Regarding this very necessary division, it will be recalled that there should be at least one pedal stop for every six or seven manual stops. As each of the different pedal stops occupies an entirely different amount of space than the others, it seems necessary to know which stops are first introduced. The following list gives the pedal stops in their usual order of introduction into an organ. To find which should be used, determine how many pedal stops the manual stops require on the basis of one to six or seven and then take the required number of pedal stops in order, starting from the top of this list.

SCHEDULE B

1.	Bourdon	16′	44 Pipes
2.	Open Diapason	16′	44 Pipes
3.	Trombone	16′	44 Pipes
4.	Violone	16′	44 Pipes
5.	Diapason	32′	12 Pipes
6.	Bombarde	32′	12 Pipes
7.	Second Bourdon	16′	44 Pipes
8.	Metal Diapason	16′	44 Pipes
9.	Bourdon	32′	12 Pipes

(The stops containing 44 pipes are intended to be played at 16 and 8 foot pitch.)

The space required for these pipes with their chest work will be:

				Pipes	Length	Width	Height
1.	Bourdon	16′	44	13′6″	3′6″	10′6″
2.	Open Diapason	16′	44	12′0″	2′6″	19′0″
3.	Trombone	16′	44	10′4″	1′4″	12′0″*
4.	Violone	16′	44	10′4″	1′5″	19′4½″
5.	Diapason	32′	12	18′9″	3′8″	34′9″
6.	Bombarde	32′	12	10′3″	2′4″	23′0″*
7.	Second Bourdon	16′	44	Same as No. 1 approx.		
8.	Metal Diapason	16′	44	8′9″	2′9″	21′0″
9.	Bourdon	32′	12	15′3″	2′0″	18′0″

*—Average mitered length.

As these very deep voices of the organ require space for "speaking room," at least the width given should be allowed in front of the stop throughout its full length. This speaking room should find unobstructed outlet to the tone openings for the organ. The detail of the speaking room and opportunity for the tones to escape is very important.

The heights given are for the pipes, with the exception of the Trombone and Bombarde, unmitered. When height is at a premium and extra space in plan is available, mitering the large pipes can be resorted to. In Fig. 6 some of the usual forms of mitering are shown. A is used when but little height must be gained. B is used where height is restricted but ample room is available in front (or back) of the pipes. C is used where both height and horizontal space are restricted. When the height is such that the mitering as in Form C would bring the end of the pipe near the mouth, it is more usual to place all the large pipes in a horizontal position unmitered. This takes up so much area in plan that it is only resorted to when there is no other manner in which the pipes can be introduced. The tone of the pipes does not suffer from their horizontal position and as a matter of fact the usual amount of mitering does not appreciably injure the tone of pedal pipes.

Having established, in a general way, the sizes

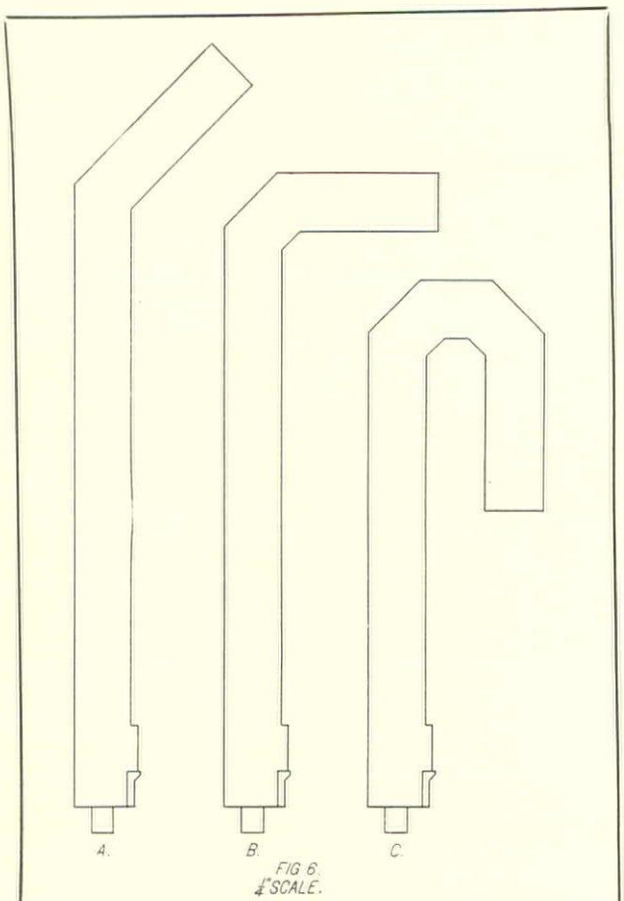


FIG. 6—USUAL METHODS OF MITERING PIPES WHEN HEIGHT OF ORGAN SPACE IS AT A PREMIUM BUT PLAN AFFORDS SUFFICIENT SPACE

of our different manual and pedal divisions the problem remaining is how to arrange them. One must bear in mind that space of the correct proportions for the pedal organ must be allowed and free tone exit for this department of the organ is most important. Poor placing of the pedal stops, or poor provision for tonal egress, or both, may ruin the effect from these costly parts of the organ.

The subject of tone openings is too involved to go into in the present article but in a general way an ideal may be reached when the entire elevation of the organ chamber is open for tonal egress. From an architectural standpoint, however, this is seldom possible, but departure from this maxi-

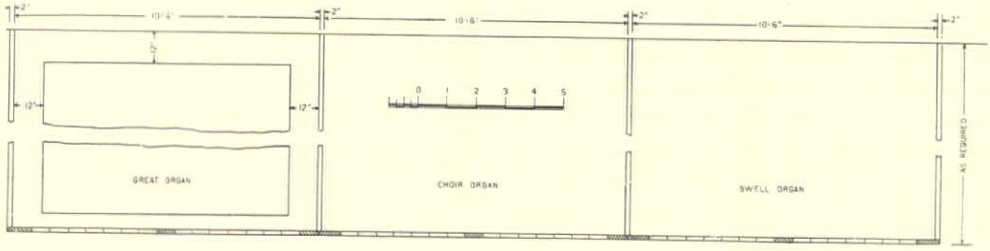
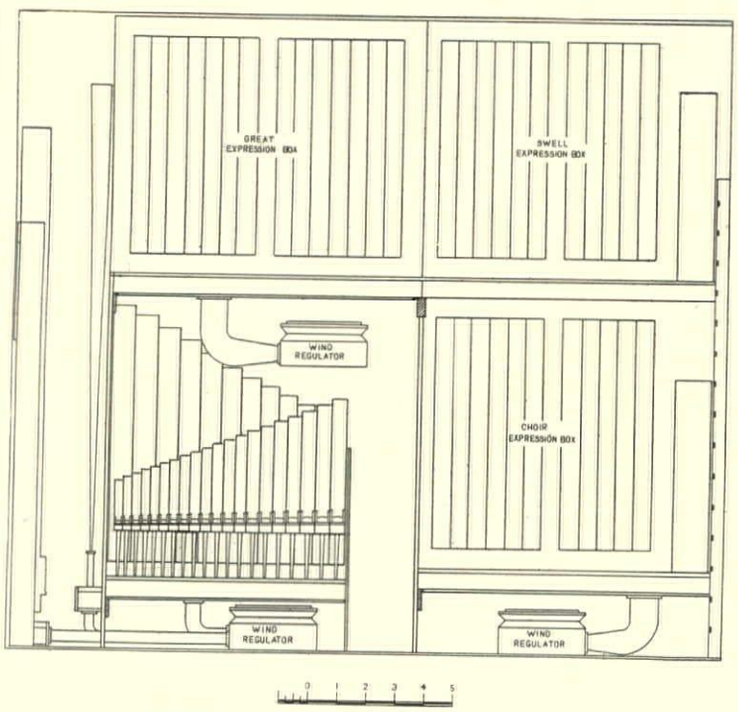


FIG. 7—THREE MANUAL ORGAN IN ONE CHAMBER. TRIAL ARRANGEMENT. PEDALS ARE NOT SHOWN



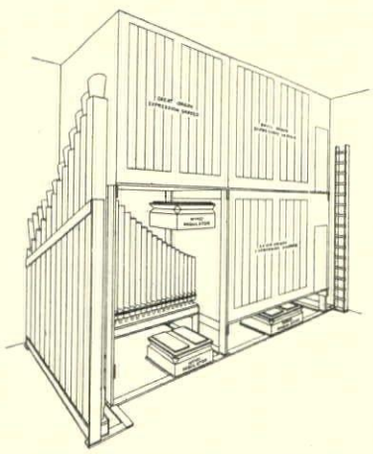


FIG. 8 — THREE MANUAL AND PEDAL ORGAN. THIS IS USUALLY A BETTER ARRANGEMENT AS TO SPACE THAN THAT SHOWN IN FIG. 7

FIG. 10—ELEVATION OF THREE MANUAL AND PEDAL ORGAN SHOWN IN FIG. 8

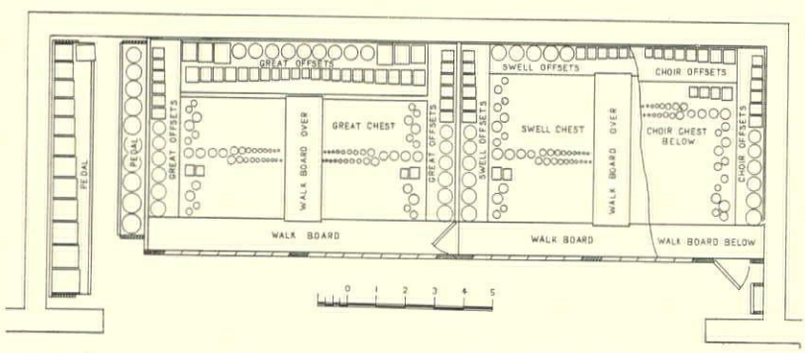


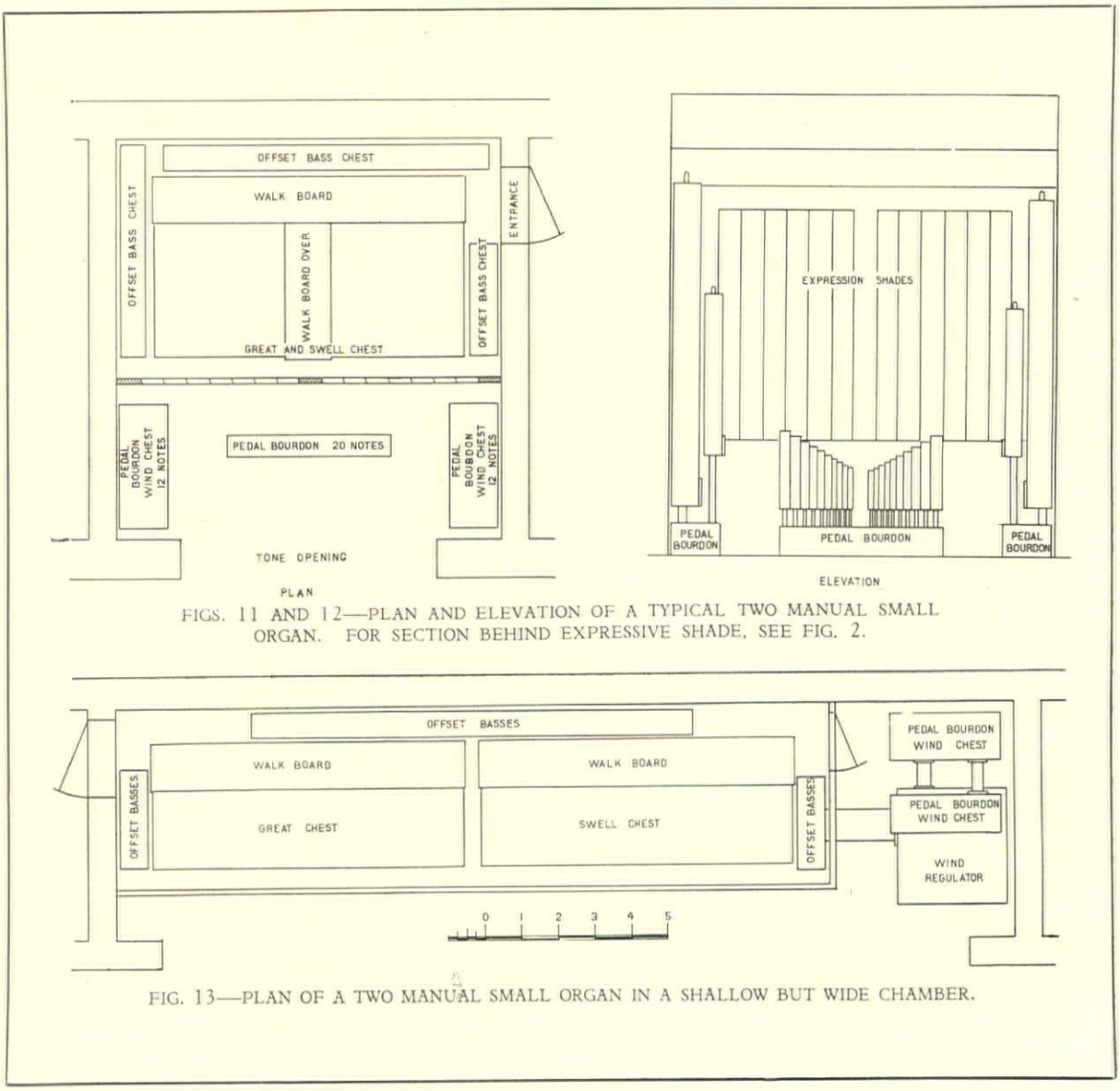
FIG. 9—PLAN OF THREE MANUAL AND PEDAL ORGAN SHOWN IN FIG. 8.

mum should be made with caution. When the openings are covered with grillage it should be as open a pattern as practicable and when display pipes are used, they should be well separated.

As an illustration of how to arrange the divisions assume an arrangement with the organ located in but one chamber. Placing the different divisions side by side, a three manual organ would appear something like Fig. 1. As this takes up so much breadth it is a very difficult type of space to apportion to the organ. Assume another arrangement as shown in perspective, Fig. 8. The space below the great section is available for a portion of the Pedal Organ and the balance of the Pedal, which would be the larger pipes, could go on either side of the manual sections. If they all were placed on the lefthand side of the manual divisions, the plan and elevation of this arrangement would be as shown in Figs. 9 and 10. Proper speaking room has been left for the large pedal pipes and the tone openings are adequate for a proper realization of the deep impressive effect that these pipes carry to the listeners.

Assume as another example an organ chamber for a small church organ of, say, ten manual stops. This is shown on the schedule as a two manual organ with one independent pedal stop. One possible arrangement would be to place it in a chamber deep enough for one division to be in back of the other in Figs. 11 and 12. If the wishes of the builder or the organist suggested one or more of the manual stops to be unexpressive, in other words, outside of the swell folds, this could be provided for in the allotted space without difficulty. The same organ in a shallow but wide chamber would perhaps appear as shown in Fig. 13.

(To be concluded in issue of July 20, 1929)



FIGS. 11 AND 12—PLAN AND ELEVATION OF A TYPICAL TWO MANUAL SMALL ORGAN. FOR SECTION BEHIND EXPRESSIVE SHADE, SEE FIG. 2.

FIG. 13—PLAN OF A TWO MANUAL SMALL ORGAN IN A SHALLOW BUT WIDE CHAMBER.

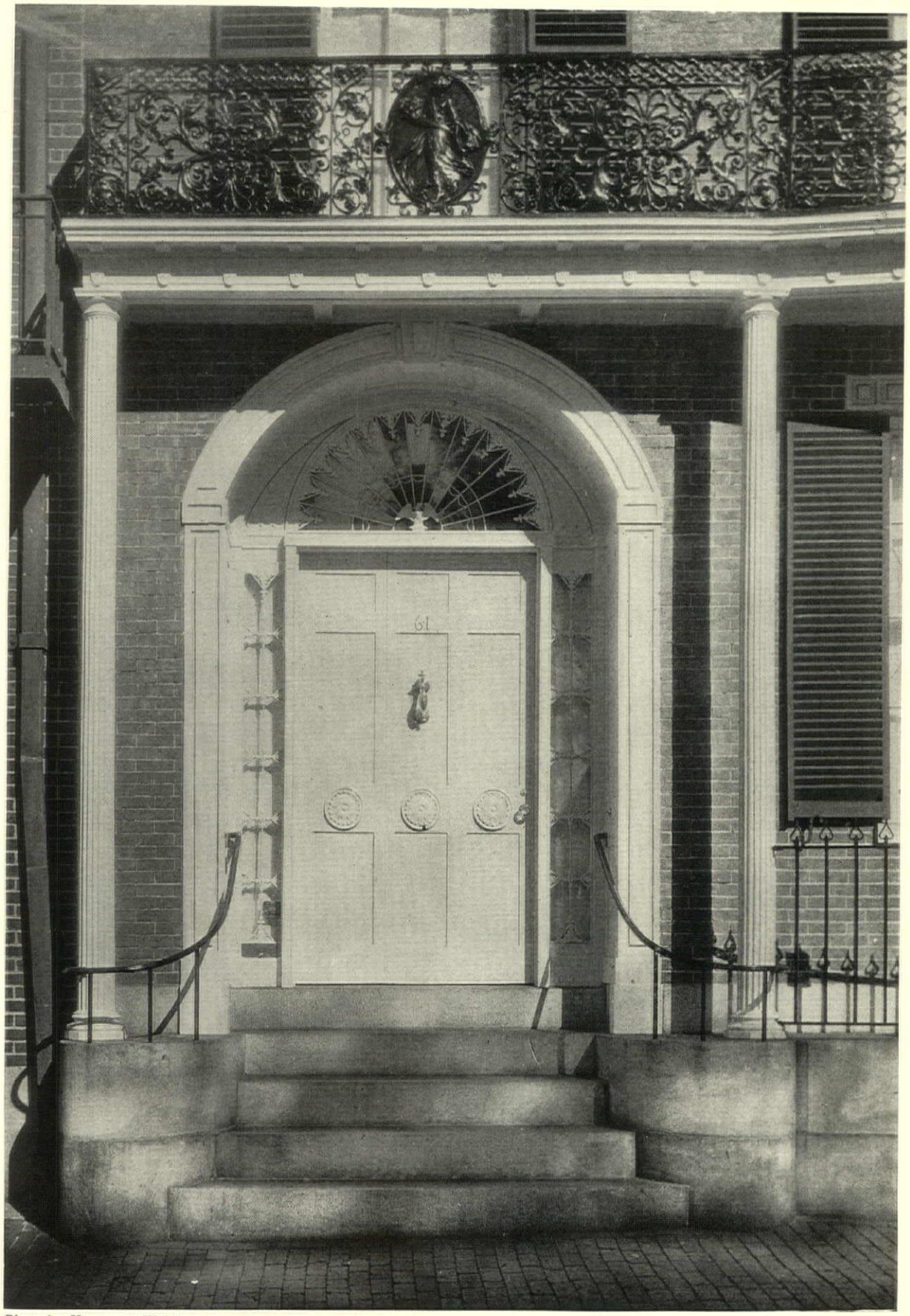
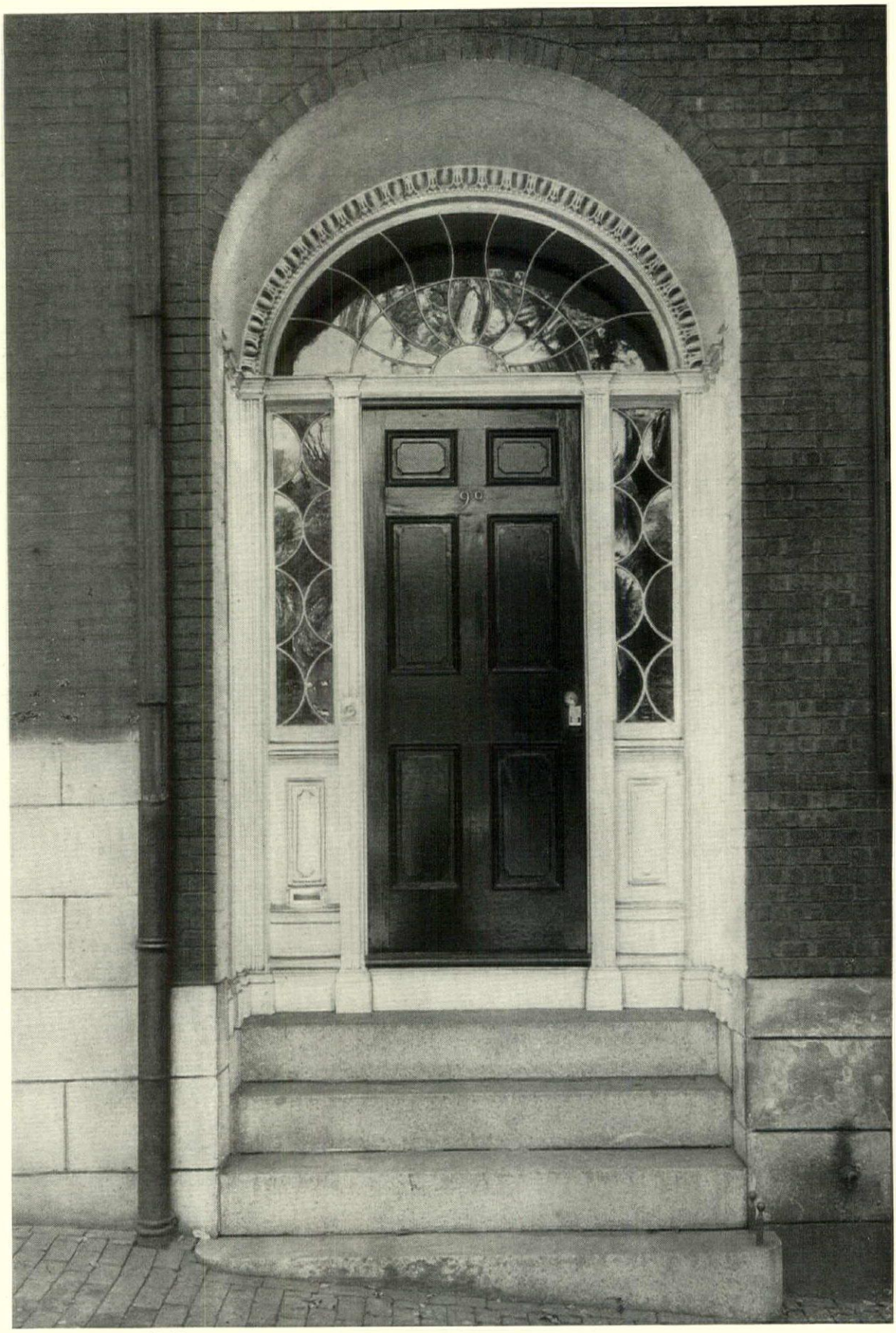


Photo by Hanson & Walsh

NEW ENGLAND DOORWAY

61 BEACON STREET, BOSTON, MASS.



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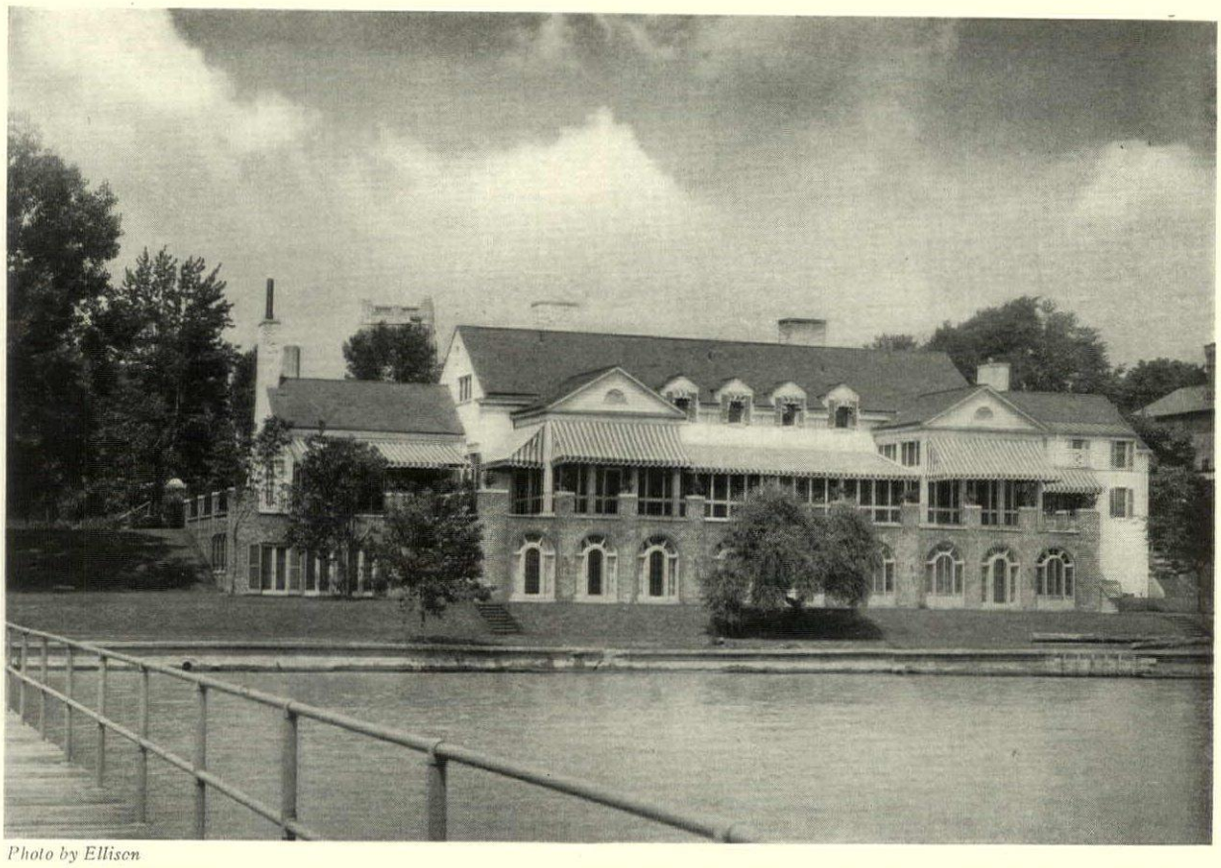
NEW ENGLAND DOORWAY

NO. 90 MT. VERNON STREET, BOSTON, MASS.



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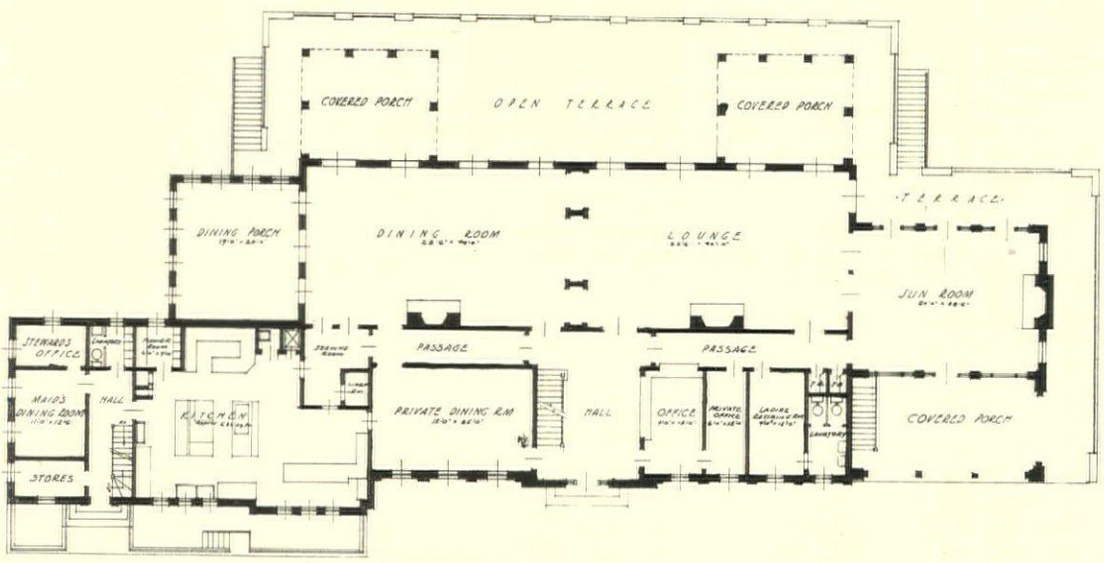
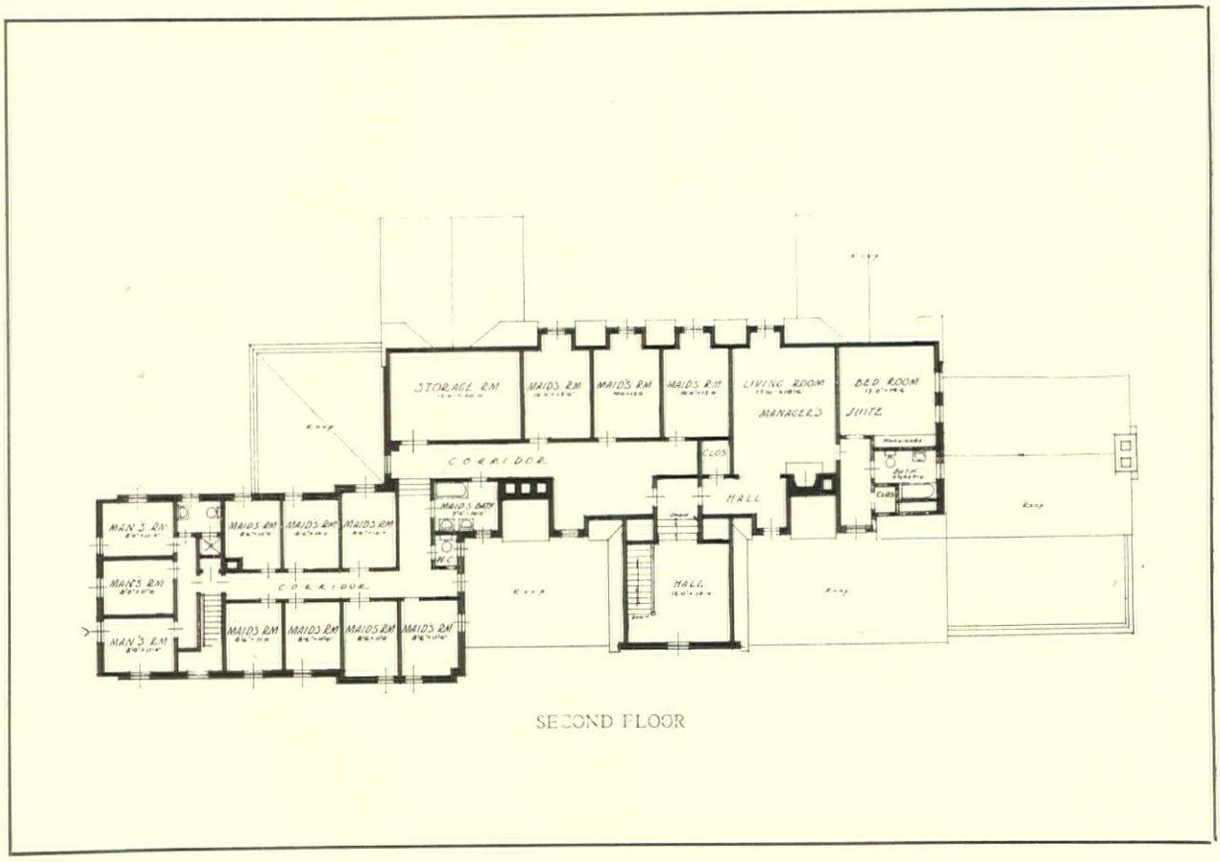


GROUND FLOOR

GROSSE POINTE CLUB, GROSSE POINTE, MICHIGAN

ROBERT O. DERRICK, INC., ARCHITECTS

Photo by Ellison



SECOND FLOOR

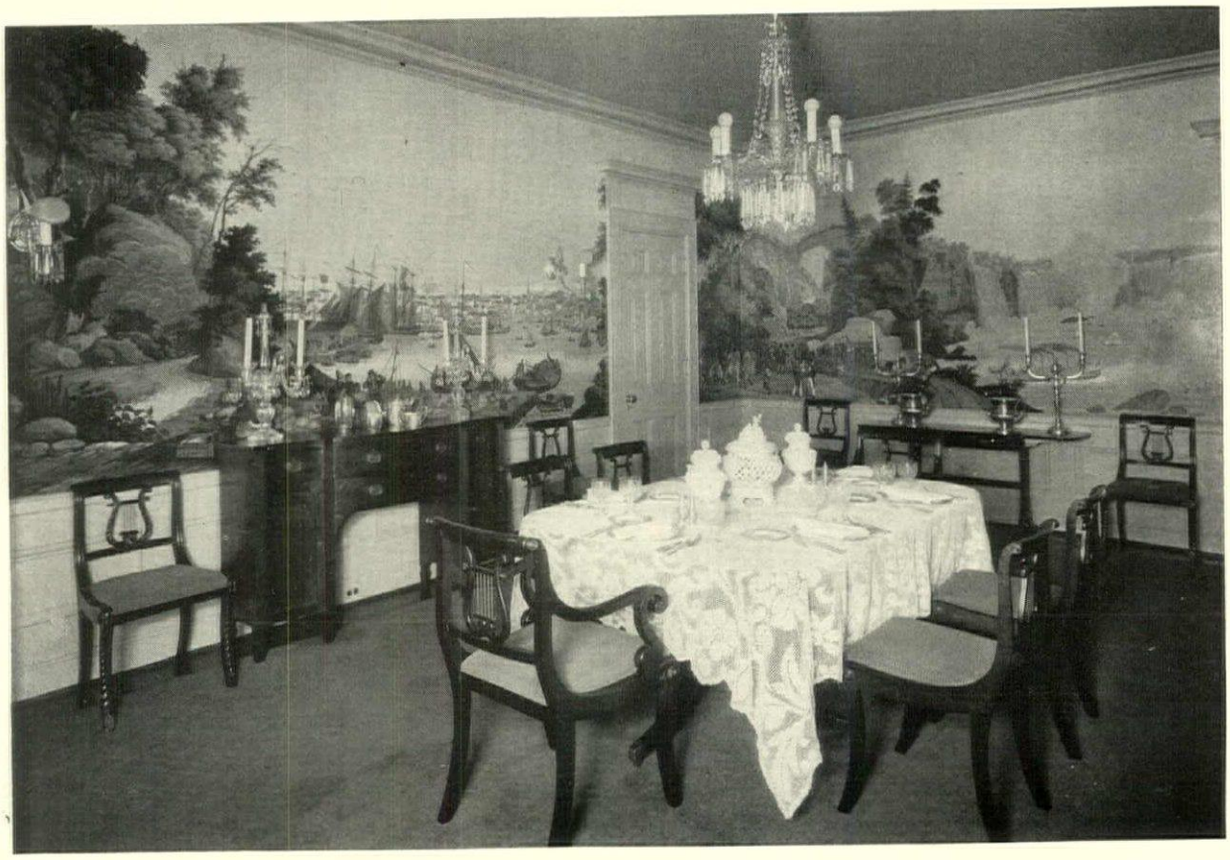
GROSSE POINTE CLUB, GROSSE POINTE, MICHIGAN

ROBERT O. DERRICK, INC., ARCHITECTS

Photos by Ellison

GROSSE POINTE CLUB, GROSSE POINTE, MICHIGAN

ROBERT O. DERRICK, INC., ARCHITECTS



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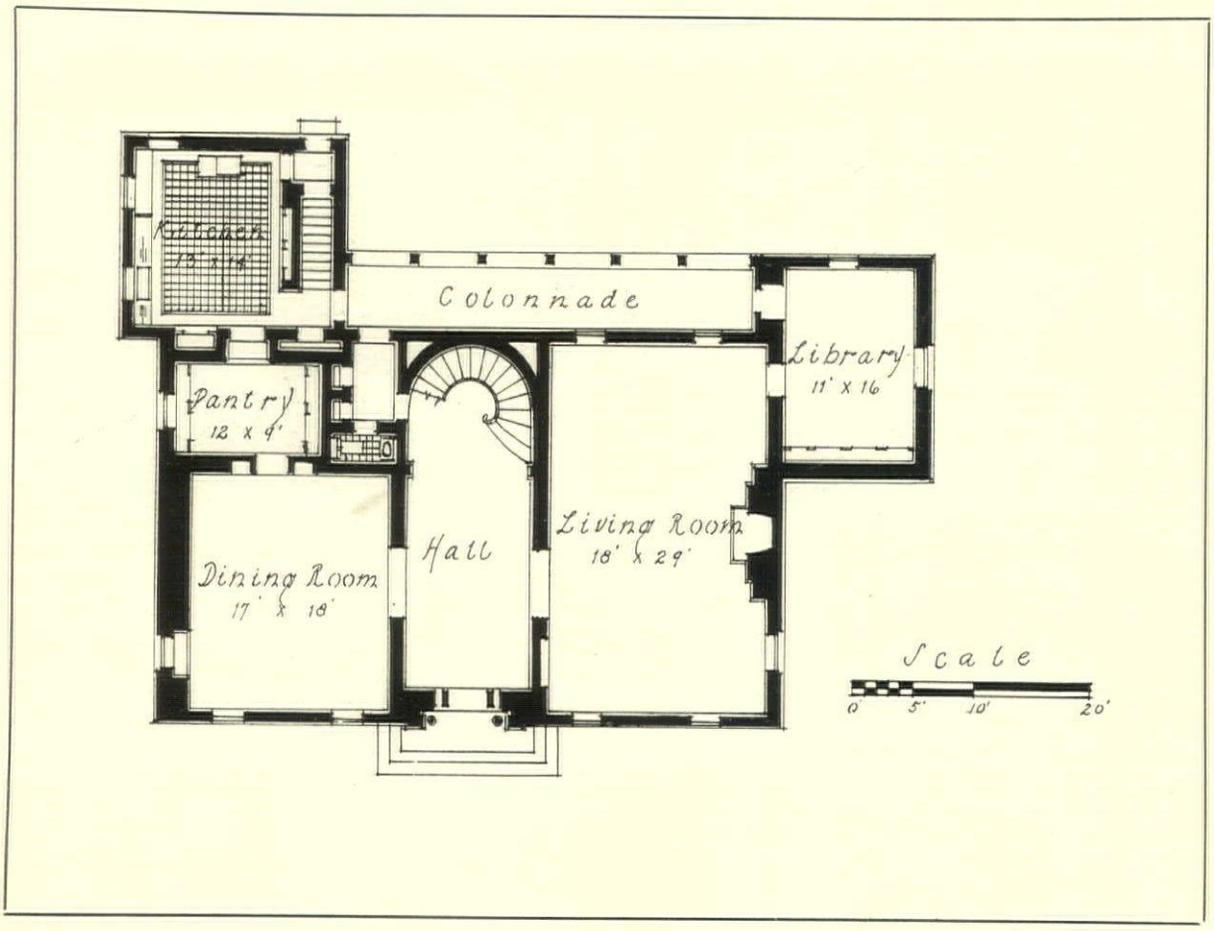
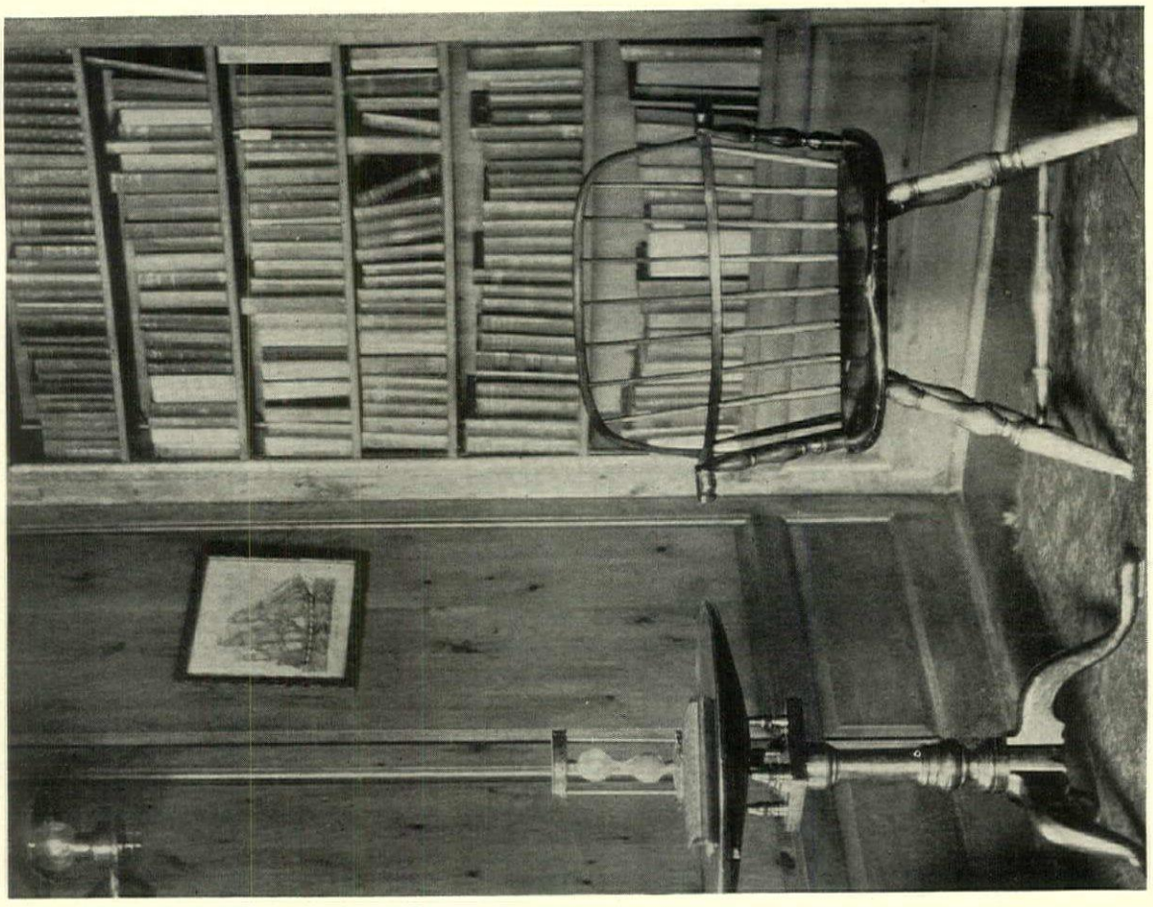
GROSSE POINTE CLUB, GROSSE POINTE, MICHIGAN

ROBERT O. DERRICK, INC., ARCHITECTS

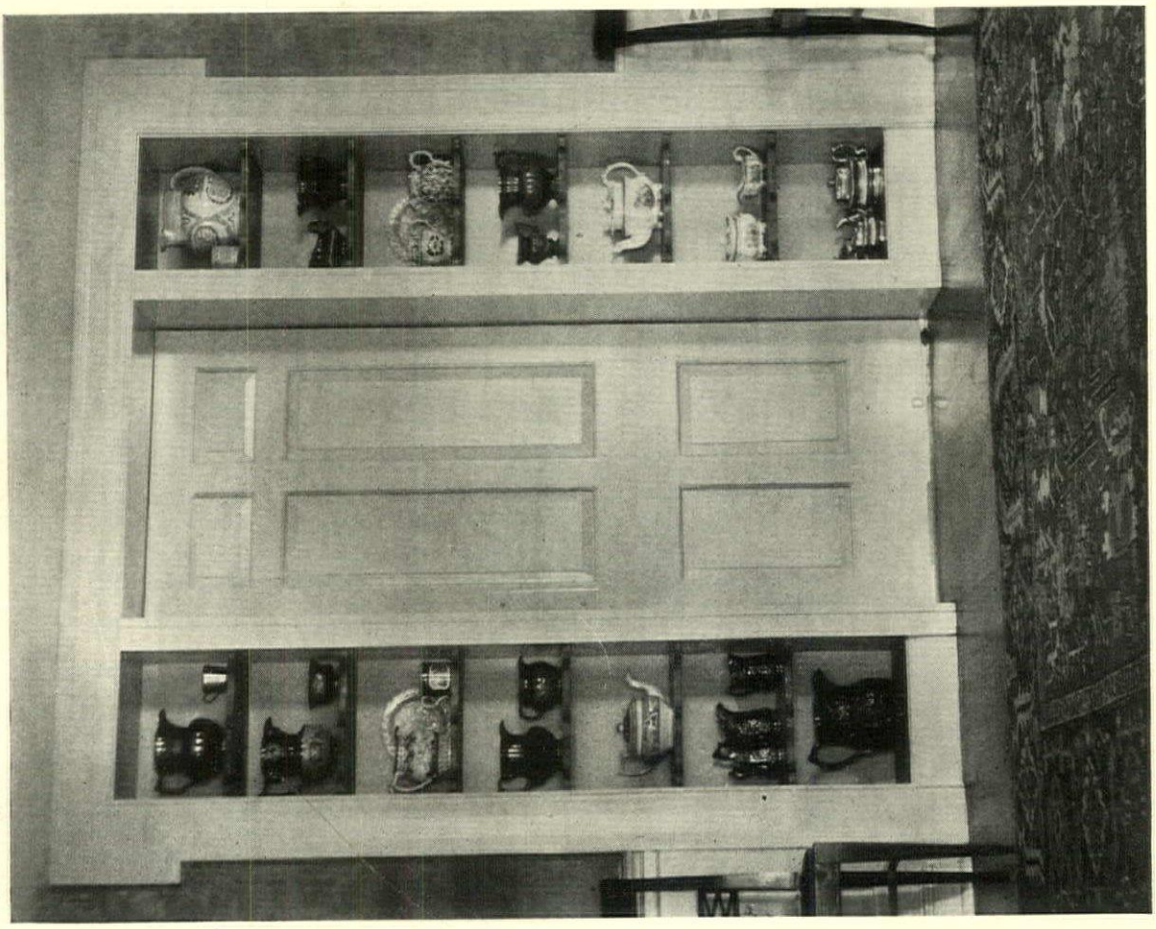


HOUSE OF WILLIAM ROSS TEEL, INDIANAPOLIS, INDIANA

BURNS & JAMES, ARCHITECTS



CORNER LIBRARY



DINING ROOM CUPBOARD

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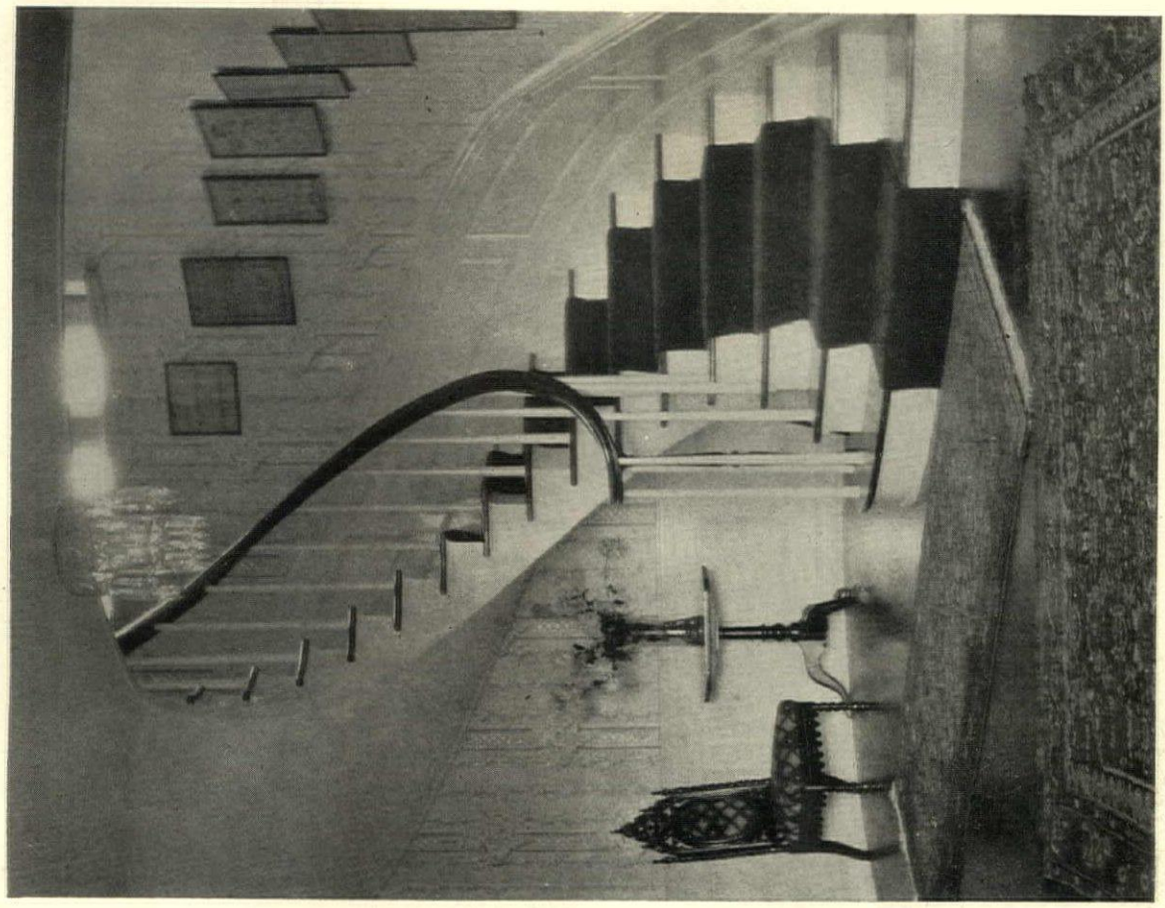
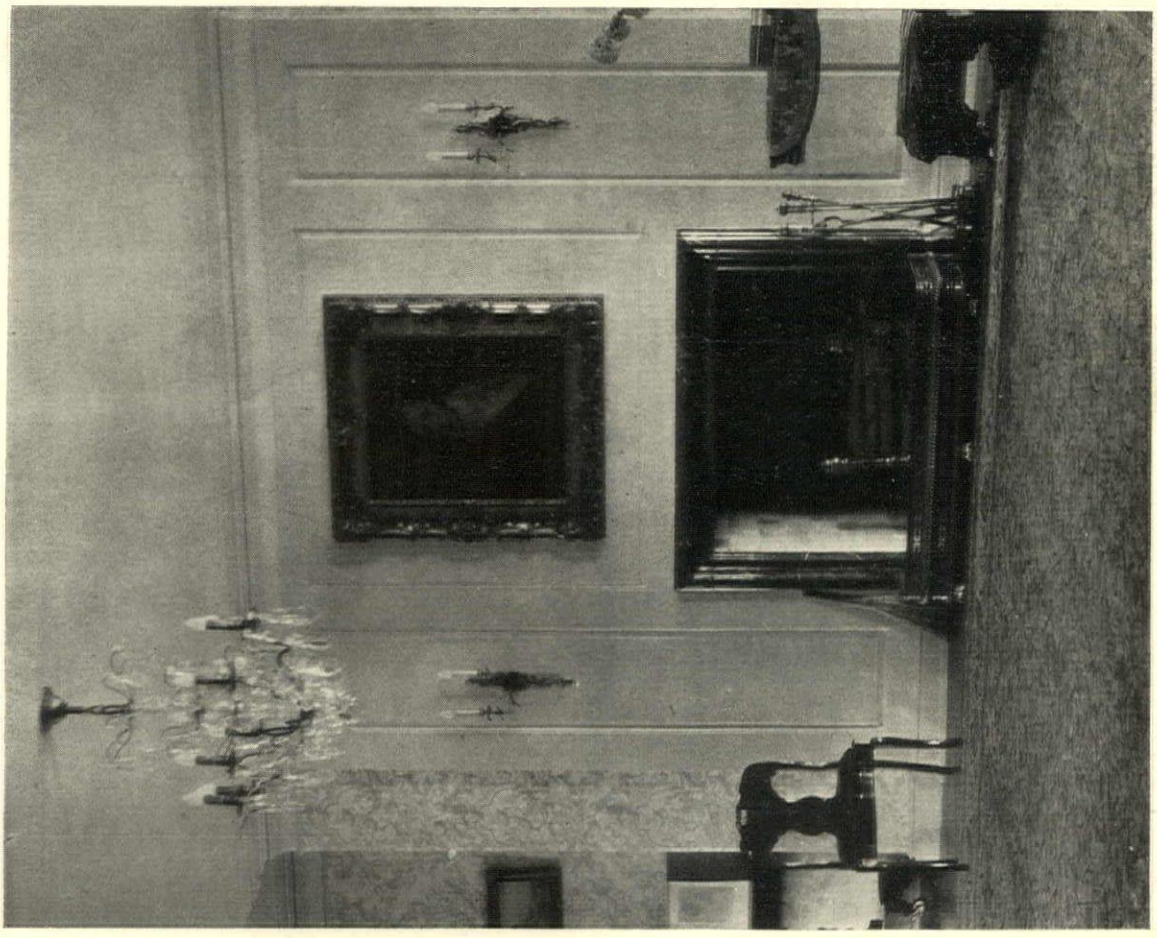


MAIN HALL STAIRCASE



LIVING ROOM—FIREPLACE

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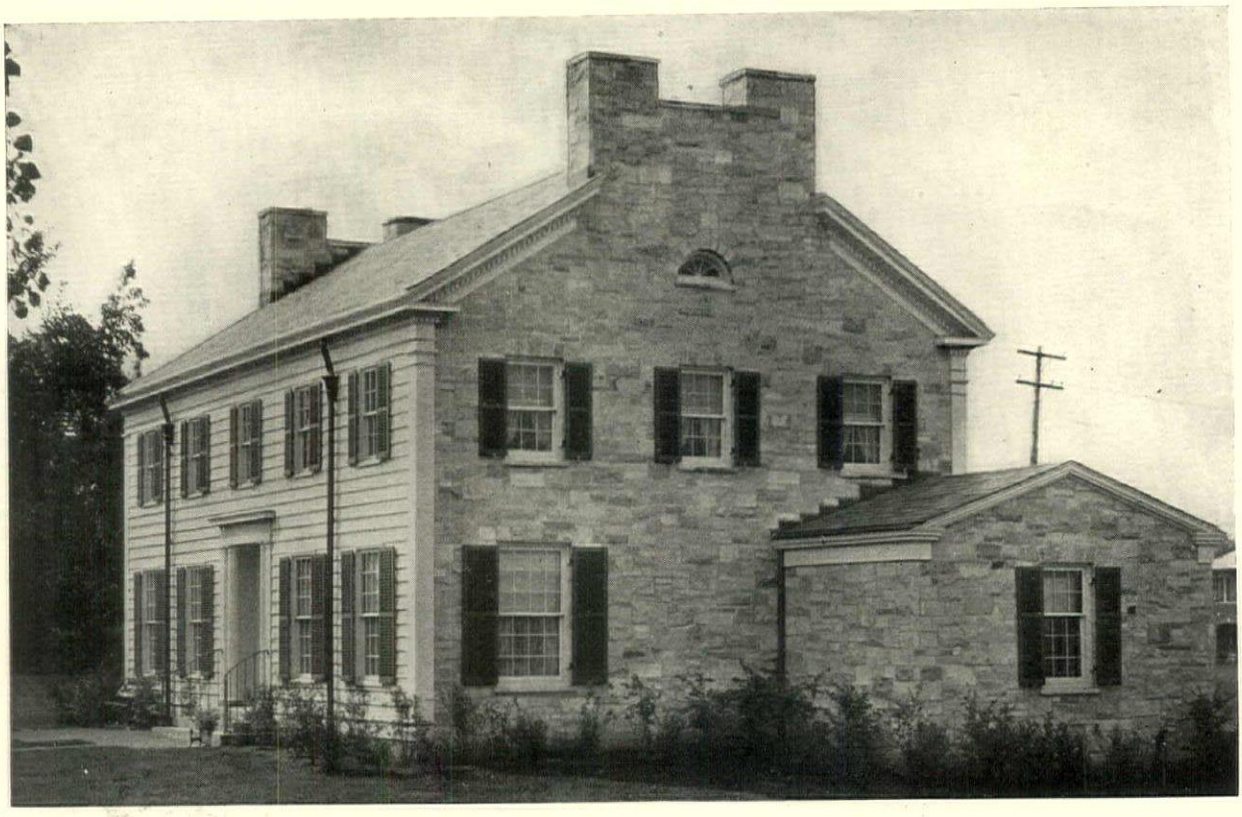

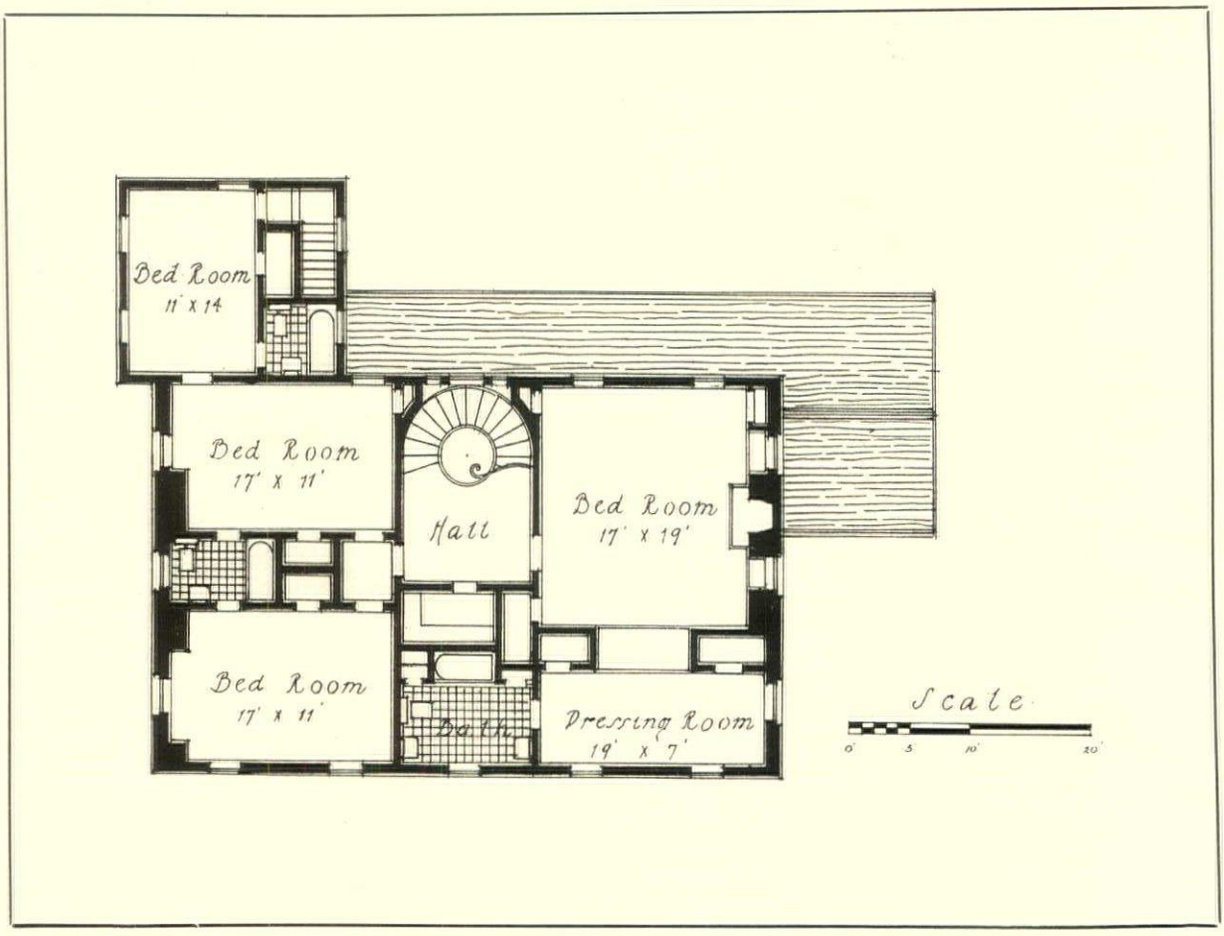

HOUSE OF WILLIAM ROSS TEEL, INDIANAPOLIS, INDIANA

BURNS & JAMES, 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.*

VAULT LIGHTS

IN compiling the New York Building Congress Standard Specifications for Vault Lights an effort has been made to set up standard requirements which can be applied to any of the vault, floor and roof light systems now on the market.

Part A specifications for this division would merely enumerate the location and extent of the work and in accordance with Paragraph 4 list the paragraphs of Part B which apply. This means practically all of the paragraphs unless it is desired to vary from the sizes given under Paragraphs 17, 18 and 19, in which case Part A should give the special sizes required.

MAIL CHUTES

The Specifications for Mail Chutes describe the standard construction of the Cutler Mail Chute Company. The only items to be noted in connection with Part A are (1) variations from standard finish, of the chute proper and (2) special design, finish and construction of the mail box.

CAULKING

It is only in recent years that caulking has become a specialized business. Formerly caulking formed a minor item in either the Masonry or Carpentry division and few offices gave the matter any serious consideration. Today it is recognized that caulking of joints between window and door frames and adjoining masonry is extremely important and the execution of this work is rapidly passing into the hands of specialists. Up to the present there is no trade association among caulking contractors but in compiling the specifications for this division the Standards Committee consulted the foremost men in this division.

The value of caulking depends on the skill and thoroughness with which the work is executed and on the material used. Paragraph 5 provides for limiting the choice of material to a special product if desired, and this should be specified under Part A. Skill and thoroughness can only be secured by selecting a competent contractor.

A.I.A. DIVISION 11j. STANDARD FORM OF THE NEW YORK BUILDING CONGRESS, EDITION OF 1929

New York Building Congress Standard Specifications for VAULT LIGHTS

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 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. **Arbitration Clause**

Scope.

3. The following requirements in regard to materials and workmanship specify the required standards for the furnishing of all labor, materials and appliances necessary for the furnishing and setting of all Vault Lights, including sidewalk, floor and roof lights. **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.

New York Building Congress Standard Specifications—

VAULT LIGHTS—*Continued.*

Relations with Other Trades.

5. This Contractor shall, as a part of his Contract coöperate with contractors for divisions whose work adjoins or comes in contact with work in this Division. **Relations with Other Trades**

Materials.

6. The materials and methods described under Part B Specifications, for Masonry and Concrete Materials, A. I. A. Division 3, paragraphs 5, 6, 8, 9, 10, 12, 15, 16, 18, 19, 20, 21, 22, 23, 25, and Mass and Reinforced Concrete, A. I. A. Division 4, paragraphs 33, 34, 36, 37, 38, 48, 55, 58, 59, 69, 71, 72, 73, 74, shall apply to work in this Division and form part of this specification. **Materials**
7. Where the product of a special manufacturer is specified under Part A, this shall be furnished, unless permission is given by the Architect, in writing, to substitute the product of another manufacturer.
8. All glass, shields, caulking and workmanship shall conform to the following requirements.
9. Glass for sidewalk and floor lights shall be composed of a mixture designed to produce a glass of extreme toughness and shall be fully annealed. Each lense shall be tested with a polariscope and all imperfectly annealed pieces rejected. The wearing surfaces of all lenses shall be even and smooth and of a thickness and design to produce a maximum of lighting efficiency, strength and durability.
10. Glass for roof lights shall consist of a ribbed wire glass approximately ½″ in thickness.

Shop Drawings.

11. This Contractor, before proceeding with any work in this Division, shall prepare and submit to the Architect, for approval, prints of shop drawings, in duplicate, illustrating the general arrangement of lenses and lights, the location of expansion joints, the size and spacing of reinforcing bars and full size details of ribs. **Shop Drawings**
12. The Architect, before approval, may require, within the limits of this specification, and the Contract drawings any changes deemed necessary to make the work conform to conditions at the building. When approved, the shop drawings shall govern the execution of the work.

Samples.

13. Before any material is delivered, this Contractor shall submit to the Architect, for approval duplicate full size samples of lenses, lights and shields proposed for use on the work. When approved, one sample of each will be returned to the Contractor marked with the Architect's approval, the other retained for comparison with the material delivered at the building. Any material falling below the standard established by the approved samples will be rejected and shall be replaced with new and approved material. **Samples**

Construction.

14. Sidewalk and floor lights shall be constructed with carrying members of reinforced concrete designed to safely carry the live loads specified under Part A. Where loads are not specified, sidewalk lights shall be designed for a uniformly distributed live load of 300 pounds per square foot; floor lights for 120 pounds per square foot. **Construction**
15. Each lense shall be set in a galvanized cast iron shield and rendered absolutely watertight by caulking with an elastic caulking compound.
16. The shields shall be constructed for circular or square lenses as specified under Part A or indicated on Contract drawings, with lugs or other satisfactory means for bonding to the concrete carrying members and provided with a continuous seat to receive the lense, designed so as to readily permit the removal of individual lenses and the insertion of new.
17. Sidewalk lights, unless otherwise specified under Part A or indicated on Contract drawings, shall have circular shields approximately 3¼″ in diameter, set on 4¼″ centers; or square shields, 4″ square, set on 5″ centers each way. Glass shall be ¾″ thick.
18. Floor lights, unless otherwise specified under Part A, shall be 4″ x 4″, set on 5″ centers or, 6⅛″ x 6⅛″, set on 7½″ centers, both set without shields. Glass shall be 1″ thick.
19. Roof lights shall consist of construction similar to that specified for sidewalk lights, except that the carrying members, unless otherwise specified under Part A, shall be

New York Building Congress Standard Specifications—

VAULT LIGHTS—*Continued.*

designed to safely carry a live load of forty (40) pounds per square foot with lights 8¼″ x 8¼″ wired glass, set in 8¾″ square galvanized shields on 9⅝″ centers. Glass shall be ½″ thick.

20. All sidewalk and roof lights shall be provided with expansion joints at junction with all adjoining sidewalk, roof or wall surfaces and, in addition, intermediate expansion joints dividing sidewalk and roof lights at intervals of not over ten (10) feet in either direction.

Guarantee.

21. This Contractor shall, as a part of his Contract, furnish a written guarantee warranting all work executed under this Division against defective workmanship and materials and any leakage caused thereby for a peroid of one year from and after completion and acceptance of the work as evidenced by date of final payment, and agreeing to repair or replace, without additional compensation beyond the contract amount, any and all work which becomes in any way defective within that period. **Guarantee**

NOTE.—Sizes noted in Paragraphs Nos. 17, 18 and 19 follow "Simplified Practice Recommendation No. 49," U. S. Department of Commerce on "Sidewalk, Floor and Roof Lights," effective March 1, 1926.

A.I.A. DIVISION 35h1 STANDARD FORM OF THE NEW YORK BUILDING CONGRESS, EDITION OF 1929

New York Building Congress Standard Specifications for
MAIL CHUTES
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 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. **Arbitration Clause**

Scope.

3. The following description of material and workmanship specify the requirements for standard Mail Chute construction. **Scope**
4. These requirements, however, form a part of the Contract only insofar as they describe items mentioned in Part A of this specification. Where special construction, materials and finishes are specified under Part A, these shall be furnished.

Preparatory Work.

5. Rough openings, in floor construction and suspended ceilings, or chases in walls or partitions necessary for the proper installation of mail chutes and mail boxes will be provided under other divisions. After the installation, by this contractor, of thimbles or sleeves, angle frames, mail chutes and mail boxes, the contractors for other divisions will finish their work neatly against or around the work furnished and installed under this Contract. This Contractor, however, shall assist in the location and plumbing of openings and chases. **Preparatory Work**

Construction.

6. Where Standard Mail Chutes are called for under Part A, this Contractor shall furnish and install: **Construction**
   (a) Steel thimbles, extending down from finished floor, through the construction, to finished ceiling.

New York Building Congress Standard Specifications—

MAIL CHUTES—*Continued.*

(b) A frame, consisting of 2″ x 2″ steel angles, starting from the top of the mail box, located in the first (ground) story and extending through each story to be served, to a point four feet eight inches (4′ 8″) above the floor of the last story served. At this point the frame shall be finished by mitering and returning the angle across the top. This frame shall be erected true and plumb throughout its entire height in the relation to structural framing, indicated on the Architect's drawings and be firmly and rigidly secured in place.

The floor sleeves and angle frames shall be installed before plastering.

(c) A chute, consisting of No. 20 gauge cold rolled steel, forming channel sections, extending from the floors to ceilings, the front of which shall consist of special mail chute glass panels set in bronze frames. These panels shall be secured in place by locks acceptable to the United States Post Office Authorities. The chute shall be finished, at the floor, with a neatly designed die-cast sub-base and base and, at the ceiling, with a die-cast ceiling collar.

(d) A mail box, of the size, design, material and finish specified under Part A. Where the type of box is not given under Part A, the estimate shall be based on furnishing and installing a mail box of stock design, subject to the Architect's selection, of size sufficient to accommodate mail matter of the building; the box shall be constructed of sheet steel and cast iron, electro bronze plated, with mouldings of drawn bronze.

Finish.

7. Unless otherwise specified under Part A, the standard for the various parts of the installation shall be as follows: **Finish**

Mail Chute Frame—Two coats of lead and oil finished flat black, unless otherwise directed by the Architect.

Mail Chute Channels and Sub-base—Flat black, baked enamel.

Base and Ceiling Collar—Electro bronze plated.

Mail Box and all Bronze Fittings—Statuary bronze, lacquered.

Post Office Requirements.

8. This Contractor, as a part of his Contract, agrees to execute all work, in connection with the construction and installation of the mail chute, strictly in accordance with the Regulations of the Post Office Department. Before acceptance of the work by the Owner, this Contractor shall obtain the approval of the local Post Master or other Post Office Department Official having jurisdiction. **Post Office Requirements**

Guarantee.

9. This Contractor shall, as a part of his Contract, furnish a written guarantee warranting all workmanship and materials, furnished under this Division, for a period of one year from date of completion and acceptance, as evidenced by date of final payment, and binding himself to repair and replace, without additional compensation, any defective material or part. **Guarantee**

A. I. A. Division 19e16. Standard Form of the New York Building Congress, Edition of 1929
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New York Building Congress Standard Specifications for CAULKING

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 American Institute **Arbitration Clause**

New York Building Congress Standard Specifications—

CAULKING—*Continued.*

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 execution of all work of Caulking. **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.

Materials.

5. Materials for caulking shall consist of a fiber, either oakum or jute, and an elastic caulking compound. The fiber shall be hand picked and free from moisture. Where, under Part A, an elastic caulking compound which is the product of a particular manufacturer is specified, this shall be furnished unless permission is given, by the Architect, in writing, to substitute another product. Where a particular product is not specified, the material used shall consist of an elastic cement which will not harden, crack, or crumble away, and which will receive and retain paint without affecting the color. **Materials**

Preparatory Work.

6. Where weather moulds or staff beads do not form an integral part of the window or door frame, but are removable, they will be removed and, after caulking and pointing by this Contractor, replaced under another division. All caulking shall be done between the solid frame and the masonry or abutting construction. **Preparatory Work**

Caulking of Door and Window Frames.

7. All joints between door and window frames and masonry, or abutting construction, including joints between sill of frame and stone, brick, slate, terra cotta, iron or other sill, between head of frame and steel or iron lintel and between steel angle lintel and masonry, shall be thoroughly cleaned free of mortar by this Contractor. **Caulking of Door and Window Frames**
8. Where the joints at head and jambs, after cleaning, are wider than ¼ inch, they shall be filled to within ½ inch of frame surface with hand picked fiber solidly tamped. The remaining space shall then be filled with an elastic caulking compound. Where spaces back of frames are large, this Contractor shall fill same with Portland cement mortar.
9. Joints, at head and jambs, ¼ inch wide and less, and joints between lintels and masonry, shall have the fiber omitted, and the joints completely filled with the elastic caulking compound.
10. Joints at sills shall be caulked from the back with the elastic caulking compound. Sufficient material shall be used to completely fill the joint and exude through to the exterior for pointing.
11. The elastic caulking compound shall in all cases be forced into the joints under pressure.
12. After the joints have been completely filled they shall be neatly pointed so that the compound forms a surface about ½ inch wide, at an angle of about forty-five degrees between the frame and masonry.
13. Where slip sills are used under window or door frames, the end joints shall be cleaned out to a depth of at least one (1″) inch and then filled with elastic caulking compound and pointed.
14. Where sills, under window or door frames, have intermediate joints, they shall be cleaned out and caulked as specified for slip sills; the caulking, however, at these joints shall be finished flush with the adjoining sill surfaces.

Guarantee.

15. This Contractor will be required, as a part of his Contract, to furnish a written guarantee, warranting all caulking executed under this Contract against leakage, and all elastic caulking compound against hardening, cracking or crumbling away, for a period of two years from date of completion as evidenced by date of final payment, and binding himself to repair or replace, without additional compensation beyond the Contract amount, any and all caulking which leaks or becomes otherwise defective within that period. **Guarantee**

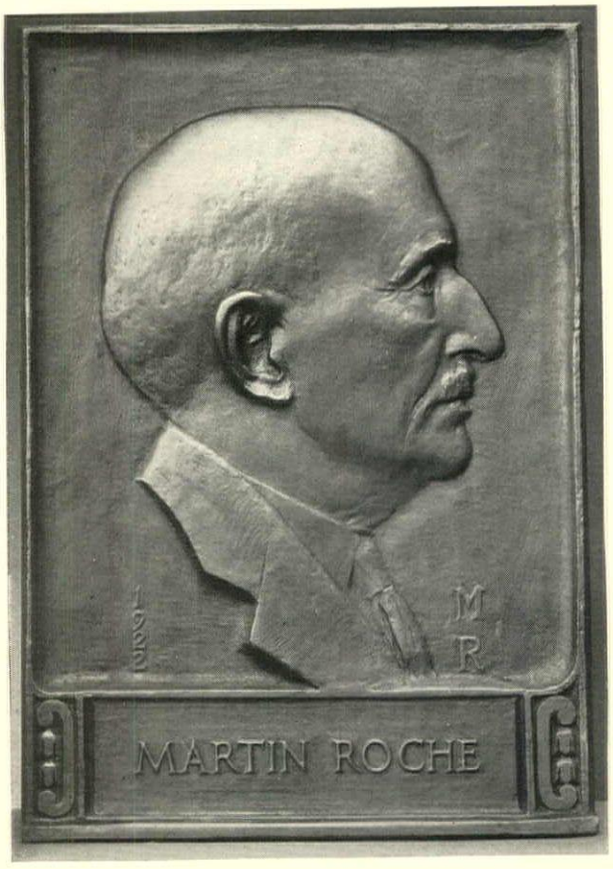
PORTRAIT OF LATE MARTIN ROCHE PRESENTED TO CHICAGO CHAPTER A. I. A.

THE annual meeting and dinner of the Chicago Chapter of the American Institute of Architects was held at the Cliff Dwellers' Club, on June 11th, 1929.

The special feature of the meeting was the presentation of a bronze portrait by Thomas Murphy, portrait sculptor, of the late Martin Roche. The presentation address was made by F. M. Carroll, a nephew and associate of Mr. Roche, whose daughter, Miss Ellinore Carroll, unveiled the portrait. Memorial addresses were delivered by Frank B. Long, an old friend and associate, and by Judge George A. Carpenter and Dr. J. Wendell Clark, two of Mr. Roche's closest friends for many years. Extracts from these addresses follow. They expressed so eloquently and appropriately the appreciation and affection in which Mr. Roche was held by his friends and associates that the necessity of their abbreviation in print to these excerpts is to be regretted.

In presenting the portrait Mr. Carroll said:

Mr. Roche was an extremely reticent man, who almost recoiled from the slightest ostentation, and if he were in the land of the living, I am sure he could never endure all the attention that he is being given, although so well deserved. But I am confident that he is looking down with approbation on being given a place among his colleagues, most of whom were contemporaries and friends, and I am just as certain that his spirit will be eternally gratified by being allowed to rest in an atmosphere so congenial and sympathetic with his life's work. On behalf of his family and associates, this representation of Martin Roche is respectfully presented to the Chicago Chapter of The American Institute of Architects.



BRONZE RELIEF—F. M. CARROLL, SCULPTOR

Judge George A. Carpenter said:

The essence of Martin Roche was his sweet spirit. He rode through the turbulent seas of life with courage, and never during his more than three score and ten years did he falter in his creed: love, justice and mercy toward all men. Sublimer faith than his seldom is vouchsafed to mortal man.

Frank B. Long contributed in essence the following:

One outstanding quality of Mr. Roche was his kindly interest in others. Many young men came to him for advice on what and where to study. To all he pointed out the advantages of education at the best schools, of foreign study and travel, that fired the ambition and made the effort easy. In many cases Mr. Roche made foreign study and travel possible. Very few knew of his sustaining interest in such development, of his pleasure where his efforts brought satisfactory results. His will provided for scholarships and indicated his firm convictions on matters of education and training.

Dr. J. Wendell Clark, referring to Mr. Roche, said in part:

No man ever started life more empty handed or ended life more rightfully claiming its complete fulfillment.

Open minded, open hearted, open handed, no man ever breathed who asked so little and gave so much to every soul who met him on the road, despising naught in all the world save mean and ugly discord and contention.

C. Herrick Hammond, President of The American Institute of Architects, turned aside from the subject assigned him to add a graceful tribute to the man who had first opened to him the door of their mutual profession.

The retiring president of the Chapter, John C. Bollenbacher, reviewed the progress of the Chapter during his two years of administration, and introduced the new president, Howard L. Cheney, who in a brief address pledged his best effort and the fruit of his experience in Institute work to the further upbuilding of the Chapter.

The new officers and directors installed were as follows:

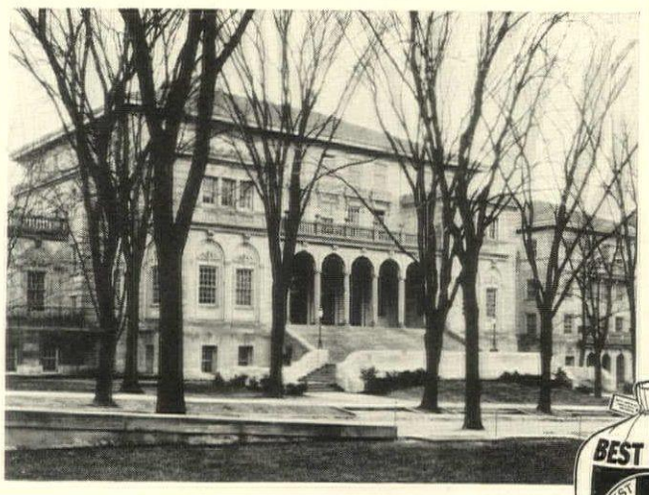
President, Howard L. Cheney; First Vice-President, Clarence W. Farrier; Second Vice-President, Hubert Burnham; Secretary, Bertram A. Weber; Treasurer, E. H. Klaber; Directors for two years, J. C. Bollenbacher and Rudolph Nedved; Director to fill vacancy, Tirrell J. Ferrenz.

MEMORIAL UNION BUILDING

UNIVERSITY OF WISCONSIN MADISON

Architect: Arthur Peabody *Gen. Contractor:* The Pfeffer Construction Co.
Plastering Contractor: George Thill

Again!... Pictures Tell the Story



BEST BROS. KEENE'S CEMENT COMPANY MEDICINE LODGE KANSAS.

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BEST BROS.

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Always "BEST" for Plastering

BOOK REVIEWS

STEEL SQUARE POCKET BOOK

A PRACTICAL treatise giving the best methods of using the carpenter's steel square has been issued by the Scientific Book Corporation. The author is Dwight L. Stoddard. The first edition of this conveniently arranged book was issued twenty-four years ago. The present volume, the fourth edition, represents an enlargement and many revisions of previous volumes. The carpenters' square is a most useful and valuable instrument put to daily use by the trade. The Steel Square Pocket Book covers practically every problem that comes before the practical carpenter and which can be solved by the use of the steel square. Problems covered include the laying out of different geometric figures, layout of common rafters, hipped roof, roof of uneven pitch, towers, stairs, and many unusual cases less frequently encountered.

Steel Square Pocket Book, by Dwight L. Stoddard, 4th Edition, 1929. New York: Scientific Book Corp. (15 East 26th Street). 189 pages, illustrated, size 4 x 6, $1.00.

THE IDEALS OF ENGINEERING ARCHITECTURE

THE subject of Engineering Architecture as one of the arts has seldom been treated by engineering and architectural writers in a comprehensive manner. It is therefore interesting to receive a book on this subject entitled "The Ideals of Engineering Architecture" and written by Charles Evan Fowler, a consulting engineer of wide experience in this field. The aim of the book is, apparently, to set forth some of those things that ought to be done and others that ought not to be done in designing engineering work to make these structures pleasing to the eye.

This volume includes many portraits and short biographies of eminent engineers from Michelangelo Buonarroti to the present time. There is also a bibliography of works relating to the architectural treatment of engineering structures. For nearly twenty years the author lectured at the University of Washington at Seattle, and through these lectures developed a trend of thought tending toward a system for the treatment of engineering work based upon basic architectural principles as against mere architectural decoration.

Various types of engineering structures are treated in the text and illustrated. These include lighthouses, bridges, towers, dams and powerhouses.

The Ideals of Engineering Architecture, by Charles Evan Fowler, Consulting Engineer, Chicago: Gillette Publishing Company (221 East 20th Street). First Edition, 303 pages, illustrated, size 6 x 9. $4.00.

HISTORIC VENICE

STRANGE as it may seem, there has been very little written and published in book form relating to the architecture of Venice. Venetian architecture is full of individuality and peculiar interest. It has long been a favorite retreat for the artist-tourist. The canal city abounds in unusual and fascinating details, and it actually oozes inspiration in its every nook and corner. Samuel G. Wiener, A. I. A., has prepared a book which has just been published entitled "Venetian Houses and Details." It is almost exclusively pictorial, with a short foreword by the author and an introduction by Fiske Kimball. The photographic plates, well selected and skilfully reproduced, are interspersed with occasional sketches by Mr. Wiener. Among the many interesting illustrations are details of ceilings, doorways and iron work. Many of these plates are accompanied by scale drawings.

Venetian Houses and Details, by Samuel G. Wiener. New York: The Architectural Publishing Co. 168 pages, size 9 x 12 inches, board covers. $12.00 net.

CHEMISTRY-PHYSICS MATHEMATICAL TABLES

THE mathematical tables comprising the mathematical section of The Handbook of Chemistry and Physics, compiled and edited by Charles D. Hodgman, M. S., Associate Professor of Physics, and Norbert A. Lange, Ph. D., Assistant Professor of Organic Chemistry, at the Case School of Applied Sciences, have been published as a separate handbook. These tables include Algebraic Formulae, Trigonometric Functions, Differentials and Integrals, Analytical Geometry, four and five place Logarithms, Hyperbolic Functions, Degrees-Radius, Numerical Constants, and Numerical Table.

The volume is convenient in size and arrangement for use by anyone having occasion to refer to mathematical tables.

Mathematical Tables from the Handbook of Chemistry and Physics, edited by Charles D. Hodgman, M. S., and Norbert A. Lange, Ph. D. Published by the Chemical Rubber Company, Cleveland, Ohio. 145 pages, size 4 x 6½. $1.00.

The Invisible Superintendent at the Mortar Box *Produces a Mortar* WITHOUT *Disadvantages*

THE nearest possible approach to a perfect mortar is one that combines the plasticity of lime with the strength of portland cement, *without any of their disadvantages.*

Mortar made of one part BRIXMENT, three parts sand, has both plasticity and strength. It is easy to spread *and sticks to the brick.* It becomes so hard that a nail cannot be driven into the joint; its ultimate strength exceeds that of the brick itself.

Being water-repellent and free from strong acids and alkalies, it helps prevent wet walls, efflorescence and fading of colors. . . Its low price reduces cost of materials. It is easy to mix because it requires no soaking or slaking; it saves the bricklayer's time because of its fine working qualities. It assures the mix you specify, for if oversanded, BRIXMENT mortar works short, and since there is no lime in the mix, the necessary plasticity can be secured only by using the proper amount of BRIXMENT. Louisville Cement Company, *Incorporated,* Louisville, Kentucky.

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BRIXMENT

for Mortar and Stucco

CURRENT NOTES

FRANK E. WALLIS, F. A. I. A.

AS we go to press word has just been received of the death of Frank E. Wallis, F. A. I. A., in Paris on May 24th, 1929, from complications following an attack of pneumonia. He was 67 years of age.

Mr. Wallis began his architectural training in the office of Cabot & Chandler of Boston. At the age of 23 he went to Europe, where he spent several years in the study of architecture. Upon his return to this country he traveled from Maine to Florida making sketches and measured drawings of colonial architecture. Many of Mr. Wallis' sketches and measured drawings are familiar to our readers through the pages of "The Georgian Period" and the architectural press to which he was a generous contributor.

From 1887 to 1897 he was an associate of the late Richard M. Hunt, specializing in designing residences and public buildings. The designs for the doors of Trinity Church and the Astor residence in New York were executed by him. Two years were spent in drawing plans for residences in Asheville and Biltmore, N. C.

After his partner's death Mr. Wallis went into business for himself. Among the office buildings which he designed are those of the National Lamp Works of the General Electric Company in Cleveland. He also designed many buildings in Montclair, N. J.

Retiring eight years before his death, he went to Paris to write "The History of the French Guilds in the Thirteenth Century," which was unfinished at his death.

For his work at the Exposition of 1890, the French Government bestowed a gold medal. The Congressional Medal was awarded in 1893 for his designs for the World's Fair in Chicago. In 1927 he represented this country at the eleventh International Congress of Architects, held at Amsterdam, Holland.

NEW METHOD FOR PREVENTION OF PAINT STAINING IN REDWOOD

THE U. S. Forest Products Laboratory, Madison, Wis., has undertaken to solve the staining problem in the use of redwood lumber, whose properties make it desirable for use as house siding, trim and tank construction.

Chemists at the laboratory have discovered that brush treatment with a 5 or 10 per cent stannous chloride solution effectively fixes the color of redwood against water, acid and weak alkali solutions such as laundry soap. Besides the fixation of color in redwood, the study includes the determination of the nature of the extractives, their distribution and their effect upon the properties of the wood. It is stated that several crystalline chemical compounds from redwood have already been isolated. Two of these compounds have been identified, one known as pinite, and the other being a new compound never before described which may be named "sequoyite."

It is planned to continue the studies at the laboratory on the isolation and identification of chemicals from redwood, and also to investigate the extractive material in red cedar.

NAVY DEPARTMENT CONTEST FOR TRANS-ATLANTIC FLIGHT MEDAL

An announcement has been received from the Navy Department, Washington, D. C., stating that the Navy is conducting a contest which closes August 2nd, 1929, for the original design of a gold medal to be issued to the naval personnel having made the first successful Trans-Atlantic flight in May, 1929, in the United States naval flying boat NC-4.

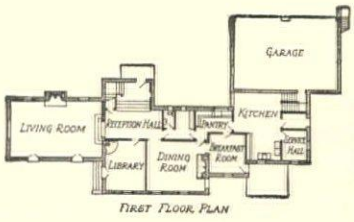
An award of $1,000 will be made to the successful contestant.

Copies of Schedule 1292, outlining the rules for this contest, may be had upon application to the Bureau of Supplies and Accounts, Navy Department, Washington, D. C.

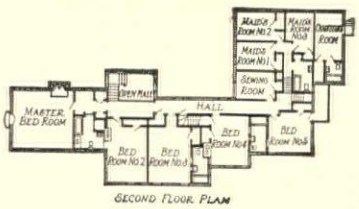
A CREDIT CORRECTION

The Philip Carey Company state, with regard to the advertisement printed in THE AMERICAN ARCHITECT of May 20, 1929, that they have been advised by the Widmer Engineering Company that the St. Louis University High School building was originally designed by Barnett, Haynes & Barnett, Architects, and that the Widmer Engineering Company reconstructed the building in 1927.

It was at this time that the Philip Carey Company made the installation of a new roof over practically the entire roof area.



FIRST FLOOR PLAN

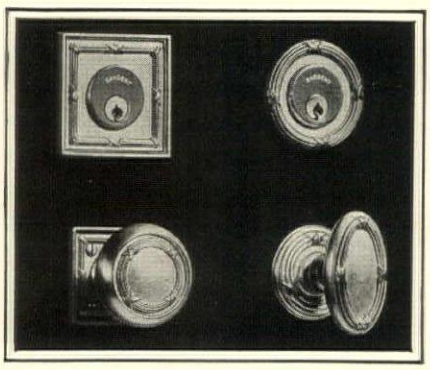


SECOND FLOOR PLAN

Sargent Hardware adds much to the beauty, the service, and the salability of all your building operations

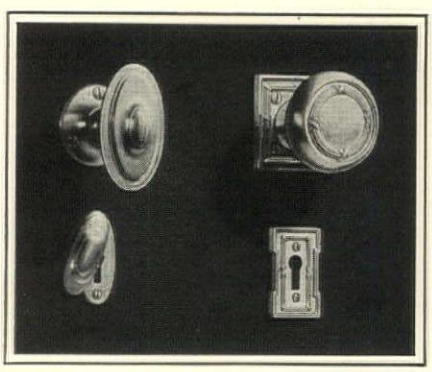
YET IT COSTS LITTLE MORE THAN ORDINARY HARDWARE THAT WILL NOT WEAR WELL

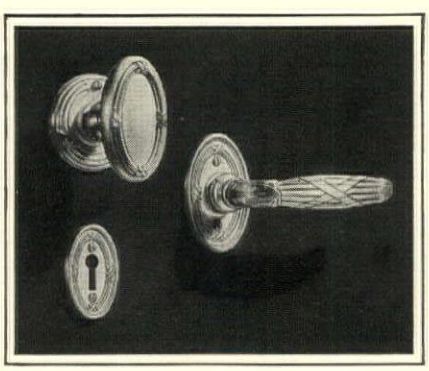
HOME owners, generally, wish the details of their homes to express their individual ideas of convenience and decoration. Many have been convinced of the importance of hardware by experiences with bothersome locks that do not work smoothly, and with rust-streaked woodwork. They are now most anxious to have their new home, whether they buy it or build it, equipped throughout with the best hardware. Sargent Hardware is recognized for its excellent quality, and its smooth, certain operation.


Door Knob No. 1825FA, Rosette No. 1FA; Door Knob No. 1913FD with Rose No. 175FD, Rosette No. 1FD.

For the French-type dwelling pictured above, Sargent prescribes the hardware designs illustrated—each piece perfectly machined of solid brass or bronze, beautifully finished and non-rusting. Many Sargent designs offer a wealth of choice for every type of residence.

Sargent Hardware of brass and bronze costs surprisingly little more than plated steel hardware that will not prove satisfactory. Complete equipment for the dwelling shown is only about 2% of the total building cost—varying somewhat, however, for different sections of the country, and according to design and type of construction. If you do not have on file the interesting illustrated booklet, "Hardware for Utility and Ornamentation," it will be sent you on request. Sargent & Company, 28 Water Street, New Haven, Connecticut.


Door Knob No. 1984, Key Plate No. 584; Door Knob No. 1822FA, Key Plate No. 870FA.


Door Knob No. 1912FD with Rose No. 175FD, Key Plate 870FD, Lever Handle No. 1155FD.

SARGENT

LOCKS AND HARDWARE

PERSONALS

Edwin J. Kraus, architect (formerly with Harvey & Clarke, architects, West Palm Beach, Fla., and Hoffman-Henon, Philadelphia), announces the opening of his office at 201 Arcade Building, Racine, Wis. Manufacturers' samples and literature are requested.

The address of W. Stanwood Phillips, Inc., architects, formerly 137 East 43rd Street, New York, is now 521 Fifth Avenue, New York City.

Shreve and Lamb, architects, and Arthur Loomis Harmon, architect, have merged into one organization and will practice as Shreve, Lamb and Harmon, architects, at 11 East 44th Street, New York City.

The office address of Malcolm G. Simons, architect, has been changed from Suite 601, Builders' Exchange Building, to Suite 405-6, Builders' Exchange Building, San Antonio, Texas. Manufacturers' catalogues and so forth will be appreciated.

The firm of Blackall & Elwell, 29 Central Street, Boston, dissolved partnership on May 1st. Robert M. Blackall, architect, will continue the practice of architecture at 75 State Street, Boston, Mass. S. Bruce Elwell continues his architectural practice at 18 Newbury Street, Boston, Mass.

The new address of Arthur C. Edwards, architect, is 330 Security Bank Building, Toledo, Ohio.

LETTER ON STORAGE OF X-RAY FILM IN HOSPITALS

Editor of THE AMERICAN ARCHITECT:

In your Editorial Comment on the Cleveland tragedy, in the June 5th issue, you point out the difference of opinion that exists as to the proper location in a hospital of the vault for storing nitro-cellulose X-Ray film.

As the question is too important to leave open, the following is offered to clarify the situation. You state that the National Fire Underwriters and others recommend the roof for such storage, while Holzknecht and other prominent European roentgeneologists consider the basement the safest location.

The latter group base their belief on the fact that the gases generated, mostly carbon monoxide and nitrous fumes, are heavier than air and will sink downward. This is correct. Assuming that the temperature of the gases is low, there is no draught and the volume of fumes is small. However, the above conditions are seldom met in practice. Depending on the rate of decomposition or burning of the film, the temperature of the liberated gases may be quite high with resultant lower density. Further, the draught in the various shafts of a modern hospital may easily convey fumes to other floors of the building, especially if the volume generated is great. From the above it will be apparent that the ideal arrangement is a vault that is completely separated from the main buildings of the hospital. If this is not feasible, a vault built *on top* of the roof may offer almost the same degree of safety. Either arrangement has this advantage over the location in the basement: that the possibility of blocking the exits is negligible. That this is an all-important consideration was clearly and most tragically demonstrated in Cleveland.

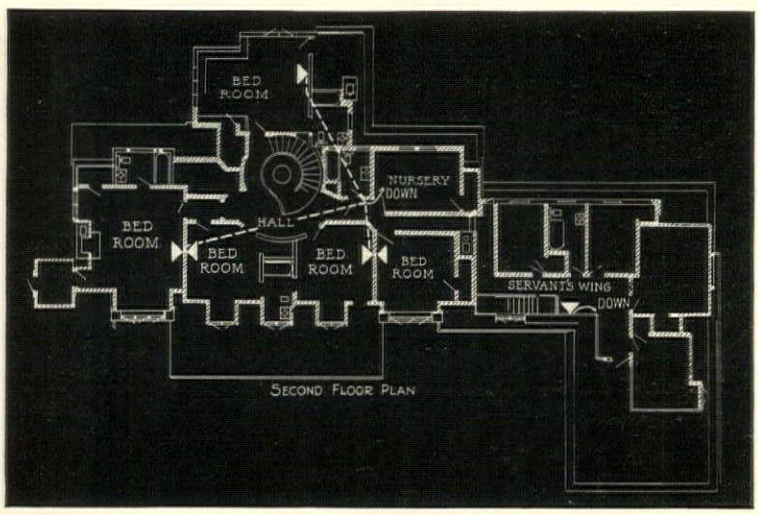
C. B. BRAESTRUP,
New York. Consulting X-Ray Engineer.

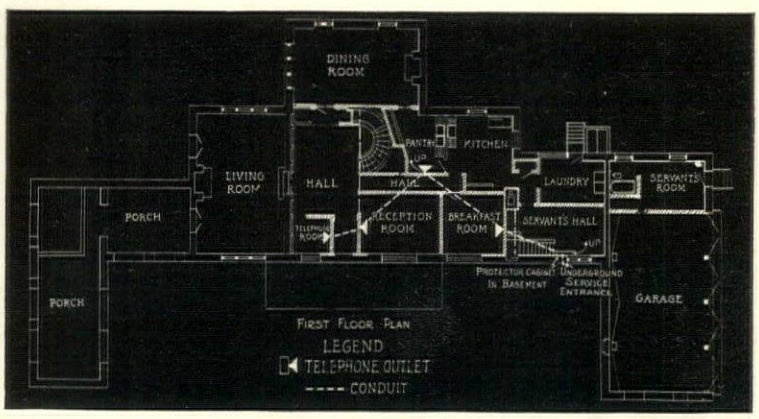
WINNER OF TRAVELING SCHOLARSHIP HERE FROM ENGLAND

THE Society of Arts and Sciences of New York has awarded a traveling scholarship to William Graham Holford, an architectural student from the University of Liverpool, for the purpose of studying American architecture for English needs. Mr. Holford arrived in New York the latter part of April and is at present working with Voorhees, Gmelin & Walker, New York architects. He will remain in this city for two or three months, after which his itinerary will lead him to Washington, Chicago and Boston. Upon completing his six months' stay in the United States, he will prepare a thesis on the general topic of the relationship of American to European architecture.

Mr. Holford is a native of South Africa, born in Johannesburg, and has been a student at the University of Liverpool for the last four years. His appointment to the scholarship is said to be the forerunner of several such scholarships under the auspices of the University of Liverpool for next year, when it may be that an American will go to England and a Frenchman will come to the United States.

Telephone Convenience is an Important Feature in the Planning of Modern Residences



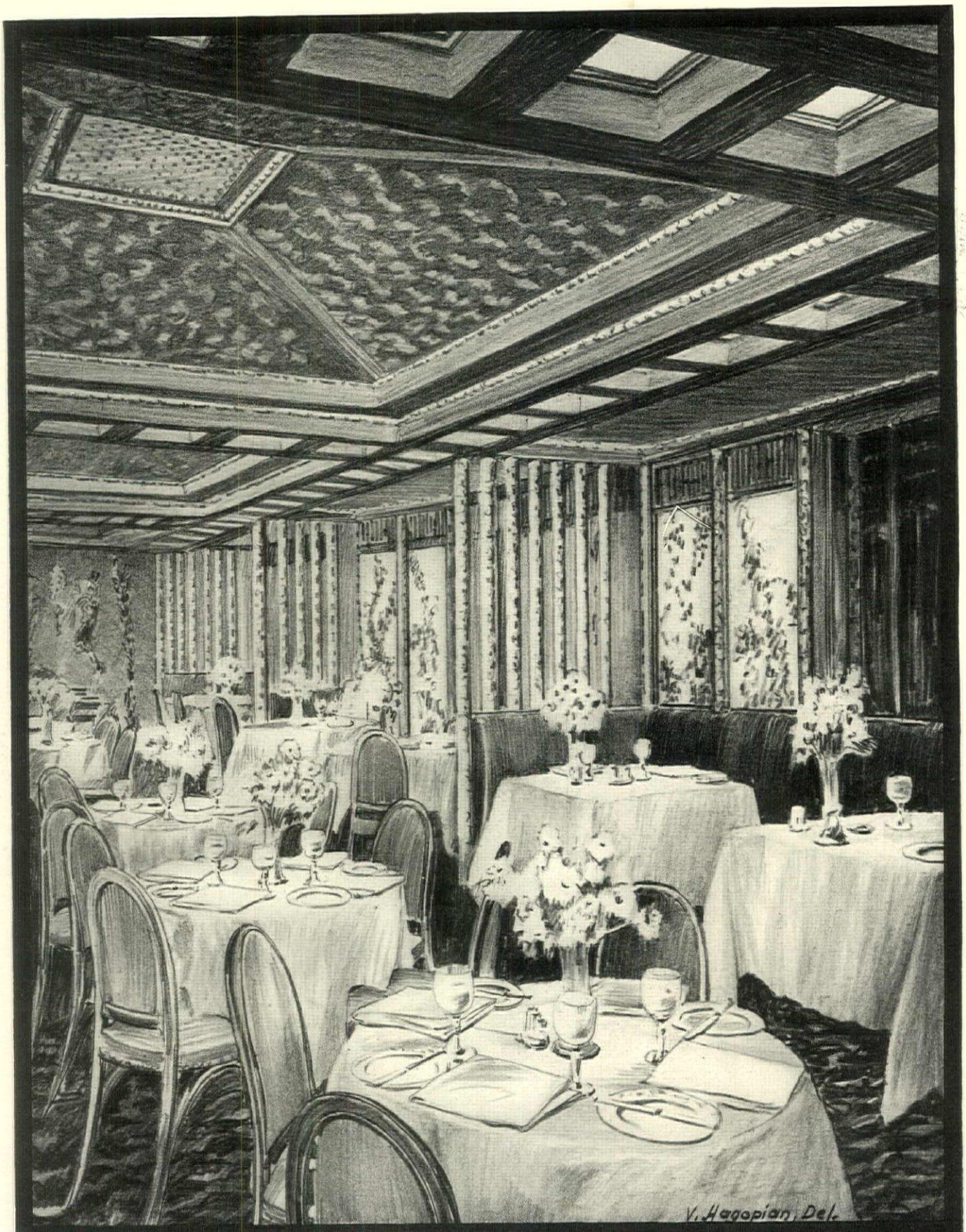


The new residence of Mr. Thomas B. Wanamaker, in the suburbs of Philadelphia, showing the telephone outlets and conduit layout which provide for modern telephone convenience.—McIlvain & Roberts Architects

Increasing attention is being given by architects, in the design of modern residences, to the location of telephones. It is becoming generally recognized that the time to plan for telephone arrangements is when a house is being built or remodeled. In co-operation with telephone company representatives, architects are including provision for telephones in the plans of the house by specifying that conduit be laid within the walls. The necessity of exposed wiring is thus easily avoided.

As each residence presents its own special opportunities for telephone convenience, no general rules can be applied. It is naturally desirable that the telephones should be sufficient in number and so located as to insure the greatest ease in the use of the service. Quite frequently telephone outlets are provided in rooms where the service is not needed immediately, but may be desired in the future.

Your local Bell Company will be glad to explain the additional features which constitute complete telephone convenience, and to help you in planning telephone arrangements for individual building projects. Call them today.



In the Sea Glades of the Hotel St. Regis, New York City, designed by Joseph Urban, Frink illumination has been made part of the decoration.

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