

The ARCHITECTURAL FORUM

Volume XLIII

NOVEMBER 1925

Number 5

Temple Tifereth Israel, Cleveland

CHARLES R. GRECO, Architect

By RICHARD R. STANWOOD

THE last few years have been notable for the great increase in the number and sizes of the new synagogues which have been erected in larger cities all over the country. Among the largest and most costly of these is the new temple of the Tifereth Israel Congregation of Cleveland, having a seating capacity of 2,000, and completed a few months ago at a cost of approximately a million, two hundred and fifty thousand dollars.

In order to understand the planning of this building it is essential to know the peculiarities of its site. The plot chosen for the new temple, on East 105th Street, where it flanks the beautiful Wade Park, in which is the new Art Museum, while offering a prominent and imposing site for a lofty religious edifice, presented also some very unusual problems on account of its shape and topography. Situated in the acute angle (less than 24°) at the junction of 105th Street and Ansel Road, with a frontage of about 550 feet on the former and about 600 feet on the latter, the greatest width being less than 250 feet at the north property line, the difficulty was further complicated by the fact that at the northerly end East 105th Street is fully 20 feet below the grade of Ansel Road. These conditions proved to have far more influence on the ultimate arrangement of the building than is the case with the normal rectangular city lot.

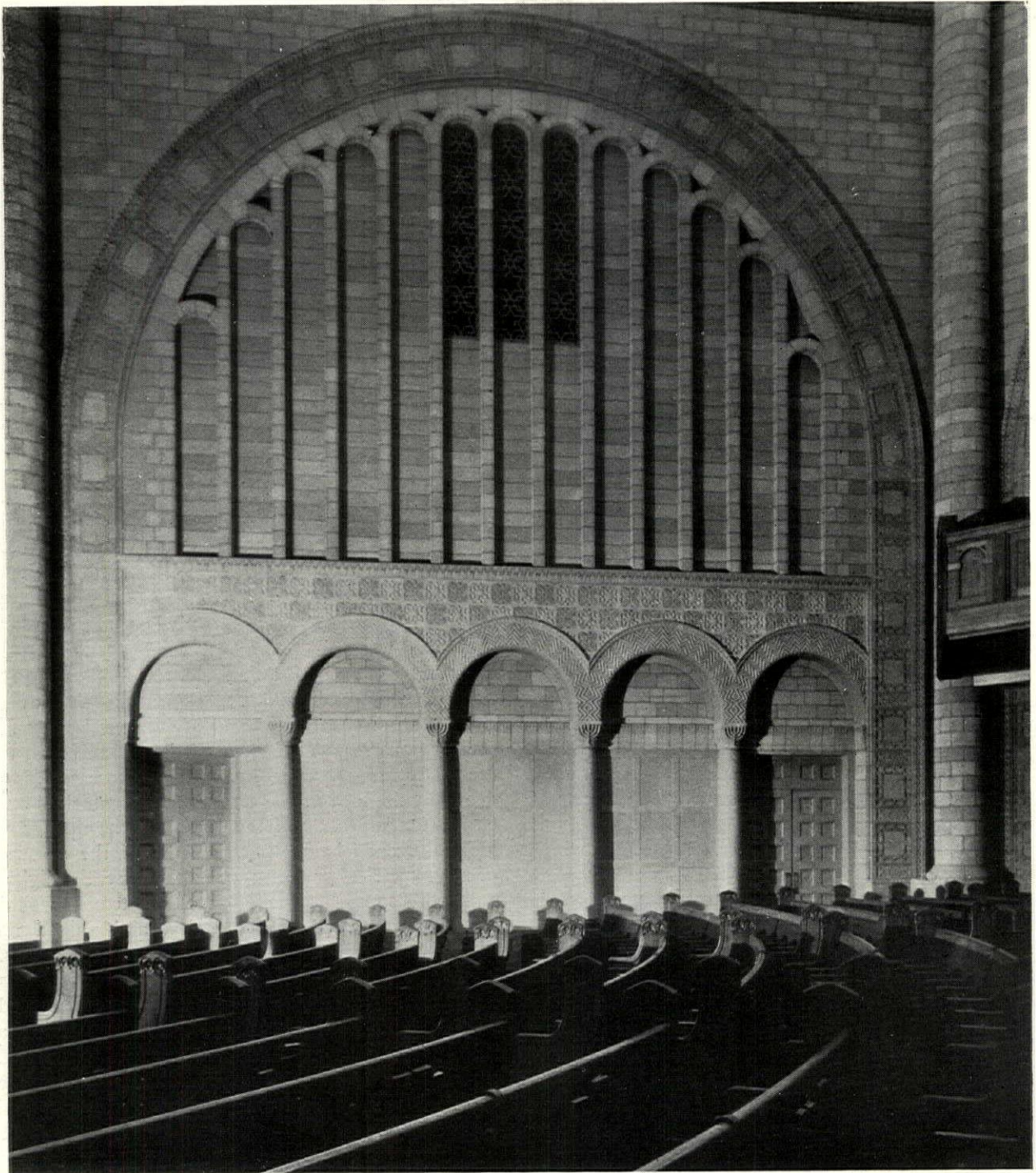
As the activities to be carried on in a building of this type divide into three phases, the religious, the educational and the social, so the plan of the building is divided into three main groups: the temple itself, occupying approximately the center of the lot and facing south; the offices and school, facing west on Ansel Road, both for advantages of light and the quietness of the lesser street; and the gymnasium and playcourt, or social portion of the building, facing east on East 105th Street. This latter group, owing to the drop of nearly 20 feet, is at the basement level, but is still above ground on the 105th Street side, making possible architectural treatment.

These three parts are coordinated by the spacious lobby, running completely across the building from the office entrance on Ansel Road to the 105th Street front, with side connections to the temple in two

places, to the school, and to the balcony of the playcourt. The playcourt is the only part of the building still held for future construction, its functions being temporarily performed by the gymnasium, which is directly connected with a large and completely equipped kitchen, for use on social occasions. The school, which is three stories high, contains 27 classrooms, and, in the basement, the heating equipment for the entire group, janitor's quarters, and a swimming pool, connecting directly both to the school above and to the gymnasium at the lower level.

It was early decided that the form of the main temple portion should be, or approach, that of a circle, both for religious and architectural reasons, the religious reason being that it lends itself best to the seating of the congregation and expresses most definitely the idea of the Unity of God, which is one of the fundamentals of the Jewish faith; the architectural reason being that, in spite of the absence of a symmetrical or even rectangular base, the higher and more conspicuous portion of the temple would rise against the sky, symmetrical and unified no matter from which direction it happened to be seen. Working from the circular form to polygons, it was soon discovered that a heptagon, or seven-sided polygon, fitted the lot to perfection, presenting a side parallel to each street, and it was then decided to make this seven-sided polygon the keynote of the temple plan. The main entrance, facing a broad forecourt and mall extending over 200 feet to the southern apex of the plot, is flanked by two minor, seven-sided towers, carrying the planes of the upper portion down to the ground, as seen from any point.

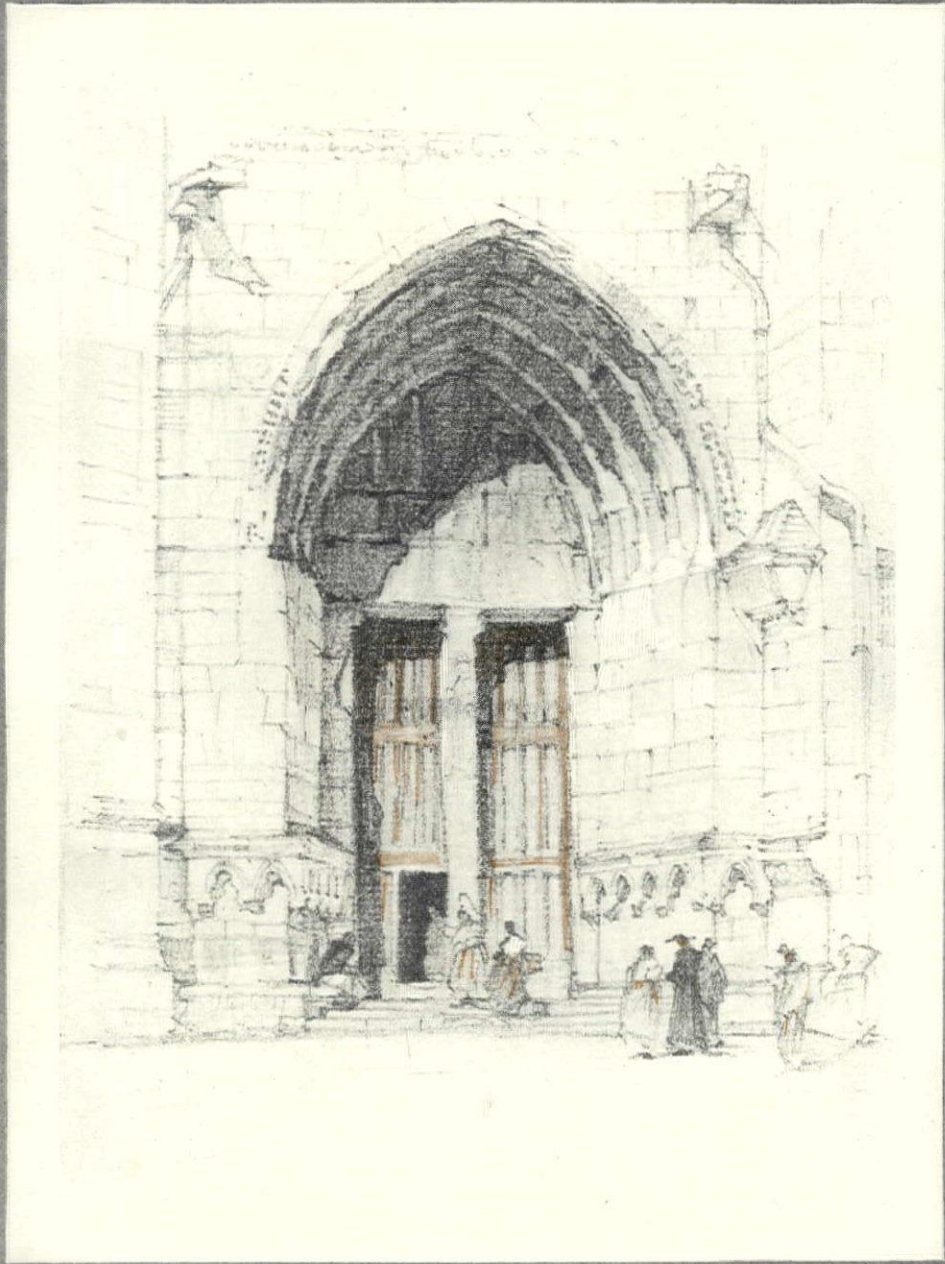
The exterior of the temple is faced throughout with Indiana limestone laid in wide and narrow courses alternating, the wide courses having a smooth finish, while the narrow bands are tooled. With a brief period of weathering this will give a slightly banded effect similar to that of Santa Sophia and other buildings in the near East. On the entrance front this is relieved by inlays of colored marble over the entrance arches and under the windows in the flanking towers. The main dome and the two smaller domes are of special yellow-buff tile, while the roofs over the rest of the building are almost flat.



Detail, Side Wall, Temple Tifereth Israel, Cleveland

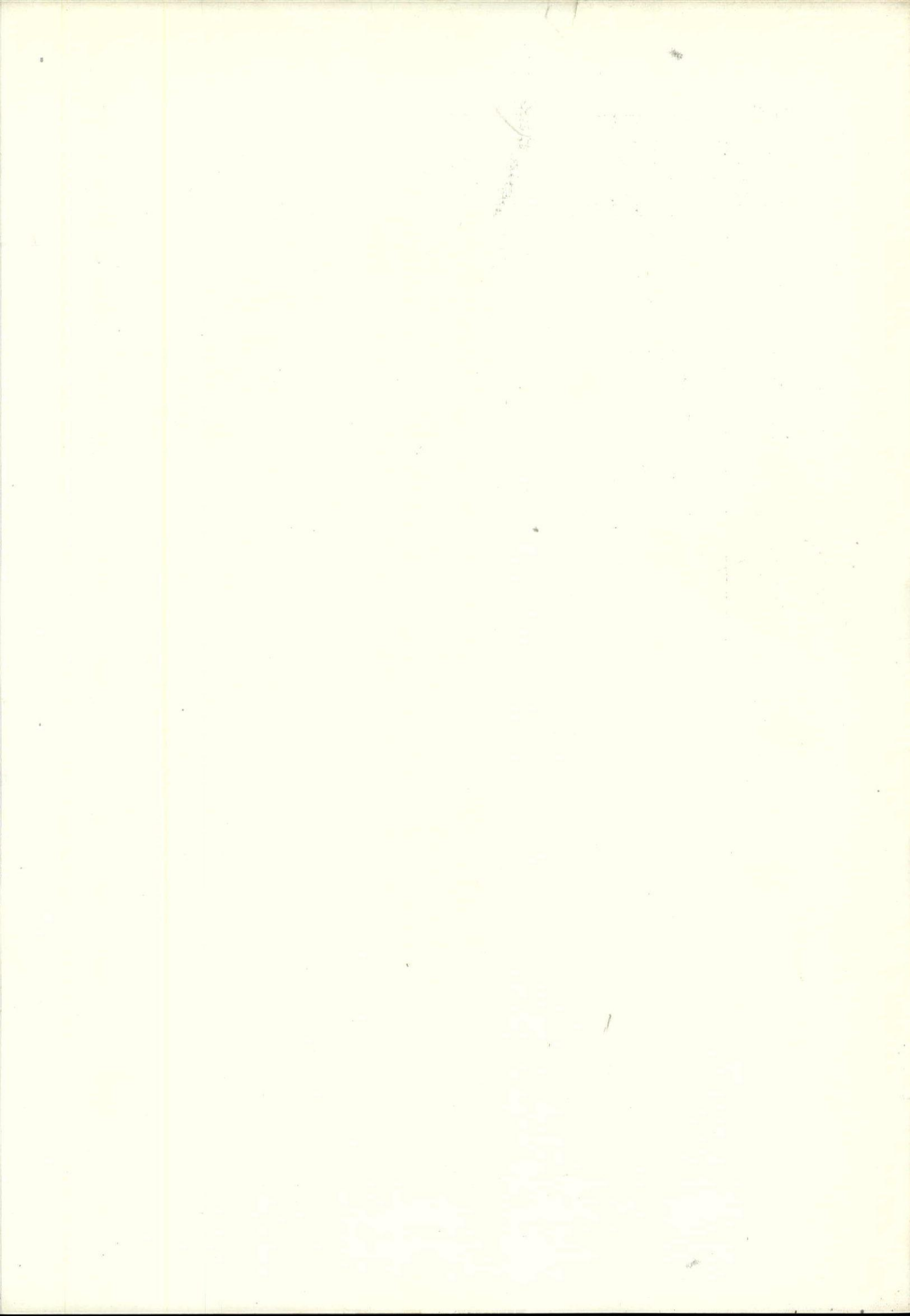
The interior of the temple, in form a heptagon 90 feet in diameter, is carried out in two tones of wall tile, every fourth course being in the deeper tone, giving a suggestion of banding as given to the exterior. Each of the seven interior faces has a great arch with a broad band of arabesque, touched with color on the faces and reveals of the voussoirs. These arches, 34 feet in diameter and 40 feet high, support a plain wall surface, with five beautiful stained glass windows of Byzantine motifs, extending up to the dome. The corner columns are unbroken shafts from floor to the spring of the dome,

and are carried up in the form of semi-hexagonal ribs decorated with arabesques, all meeting in the center of the dome, 88 feet above the floor. The great arch over the Ark and choir gallery carries back in the form of a barrel ceiling treated as a grille of Byzantine design and opening on each side into the organ chambers. Under this stands the Ark, the focal point of the interior, with the arcaded choir gallery forming a harmonious screen across the back of the central arch. The Ark and screen are carried out entirely in selected walnut and are elaborately carved and inlaid, the chairs and reading desk being



NORTH DOOR, CATHEDRAL OF ST. CYR, NEVERS, FRANCE

FROM A DRAWING BY LOUIS C. ROSENBERG





Detail, Entrance Facade, Temple Tifereth Israel, Cleveland

of the same materials and of special design. This treatment of the woodwork is repeated in the front of the balcony, which follows four of the seven interior faces, where three panels in each face are carved in symbolical representation of the Twelve Tribes of Israel, other panels bearing an interlaced symbol combining the shield of David with the Menorah, or seven-branched candlestick. All the carving is emphasized by a use of gold and color in the backgrounds of the symbols and arabesques.

The impression of color, both in material and in lighting, is particularly emphasized in the broad

entrance vestibule, from each end of which the main stairways lead to the balcony. The floor is of alternating equilateral triangular blocks of pink and gray Tennessee marble, with a large bronze insert in the center, showing the interlaced pattern of the shield of David, the seven-branched candlestick, and the ring or circle, in low relief. The walls are also of marble from floor to ceiling, in wide and narrow bands, the wide bands being of especially selected gray marble of deep tones with broad splashes and veins of ox-blood red, of very striking effect, the same marble of which the four exterior columns at

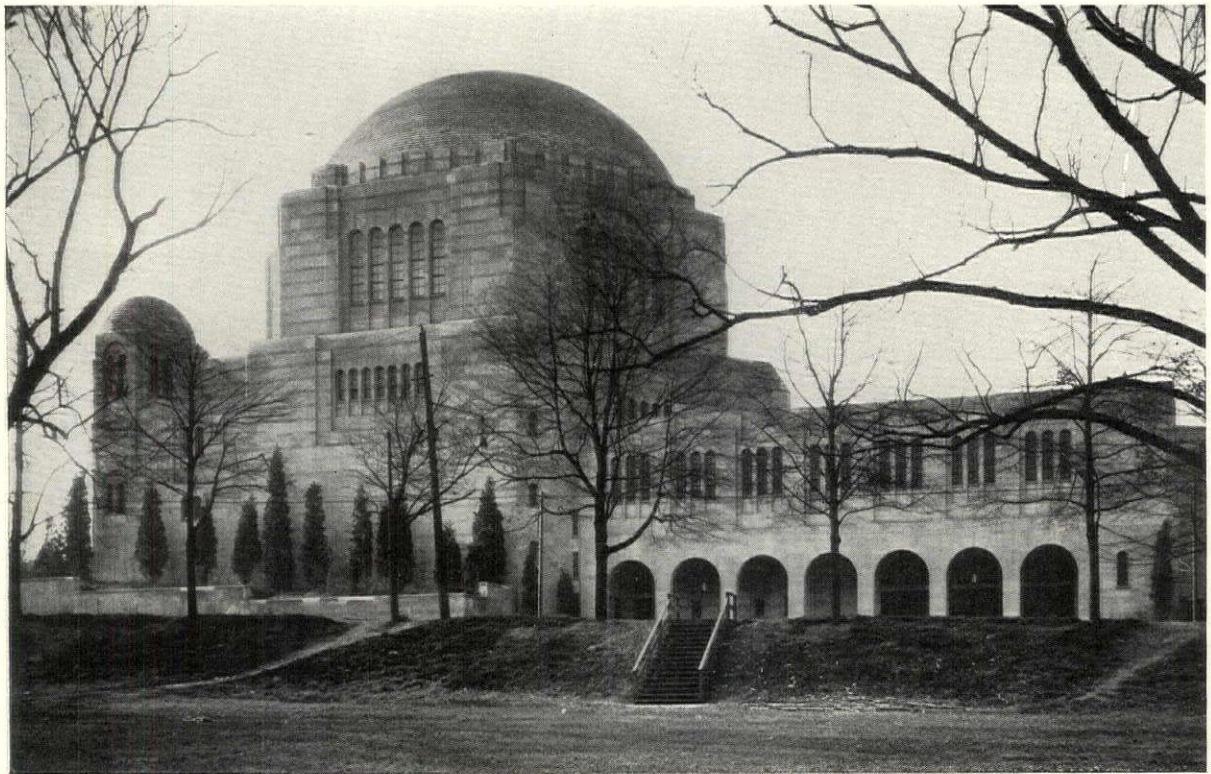
the entrance are made. The narrow bands are of rare imported marble. The ceiling is of modeled plaster in a design of hexagonal basis, the lines thus paralleling the 60° angles of the floor designs, and treated in bronze and dull gold. The whole effect of color is heightened by the lighting, all the light coming through three glass traceried hexagons, set flush in the ceiling, the bulbs above being treated with gold. The result is a red-gold glow of color, of such richness that the air itself seems almost to be colored.

Passing from this brilliance of color into the more somber tones and great height and breadth of the temple auditorium, the feeling of reverence is enhanced by the unusual softness and mellowness of the lighting. Except for small fixtures under the balcony and in the recesses of the great arches above it, all the lighting is indirect and very effective. In the upper part of each of the seven faces is a row of five deeply recessed stained glass windows, with splayed jambs and sills. In the splay of each sill, under amber glass, is a concealed floodlight aimed upward toward the domed ceiling, while outside the stained glass windows, in the space between the inner and outer walls, are other strong white lights shining through the colored windows. The result is a glowing effect of subdued daylight, through stained glass, as in the mediæval cathedrals, and practically the same at night as in actual daylight, which, with the soft, warm, rose-buff tones of the wall surfaces, greatly heightens the feeling of religious significance.

The question of acoustics was studied very carefully, both from the point of excluding sounds from outside and avoiding echoes and reverberation within. To achieve as nearly perfect stillness as possible,

in regard to external sounds, in a building located as this on a main traffic artery, the whole of the drum of the dome, as well as the dome itself, is a double shell. The only points where the interior and exterior walls are one are those on the two sides parallel to the two streets, for a short space at the back of the balcony, but the wall here is also furred doubly, and seven small windows have also two sashes each. The interior received very careful study to eliminate all echo from the standpoint of the speaker, without at the same time smothering the resonance and tone of the organ, which are equally necessary to the best effect. It was a great satisfaction to all concerned, when the completed building was put to the test of actual use, to find that the result had fully justified all the effort put into this important detail.

The architect and the committee felt from the beginning that the architectural treatment of the new building should not be based on any of the usual styles, but should rather be developed from the basic forms of those regions where the Jewish race passed the period of its national existence, taking only such motifs from various sources as could be welded into a harmonious entity. The outcome has been a type which is, perhaps, more Byzantine than anything else, but which is still not too oriental in feeling to prevent a transition without undue shock from the mass of the temple to the more modern and practical regularity of the school and other everyday portions of the group of buildings. It is felt that in solving the problem in this way there has been achieved a building which is not only architecturally satisfying, but which expresses in itself the deeply religious spirit and the essential unity of the Jewish faith.



General View, Temple Tifereth Israel, Cleveland
Charles R. Greco, Architect

Competition for the Design of the First Baptist Church, Plainfield, N. J.

IN preparing the designs to be submitted in the competition lately held for the First Baptist Church at Plainfield, N. J., the competing architects faced a somewhat complex problem. On the site there stood already a residence of somewhat ample size which it was desired to retain, and adjacent to which it was desired to erect a church and a building suitable for the use of a growing congregation, together with the assembly rooms, classrooms, parlors, offices and all the other adjuncts necessary for accommodating the activities of what has come to be known as "social service," an increasingly important part of the present-day activities of many churches. Added to this there was the requirement, dictated by good taste, that the buildings be of a type or character in keeping with the traditions of an attractive old town of considerable historic interest, and still containing many relics of the period of the Revolution. It was desired to give the group of buildings the appearance of structures such as might have been erected toward the end of the eighteenth century in a prosperous town near the Atlantic seaboard, and to remodel the old residence already standing upon the grounds to conform to the architectural character of the group as a whole.

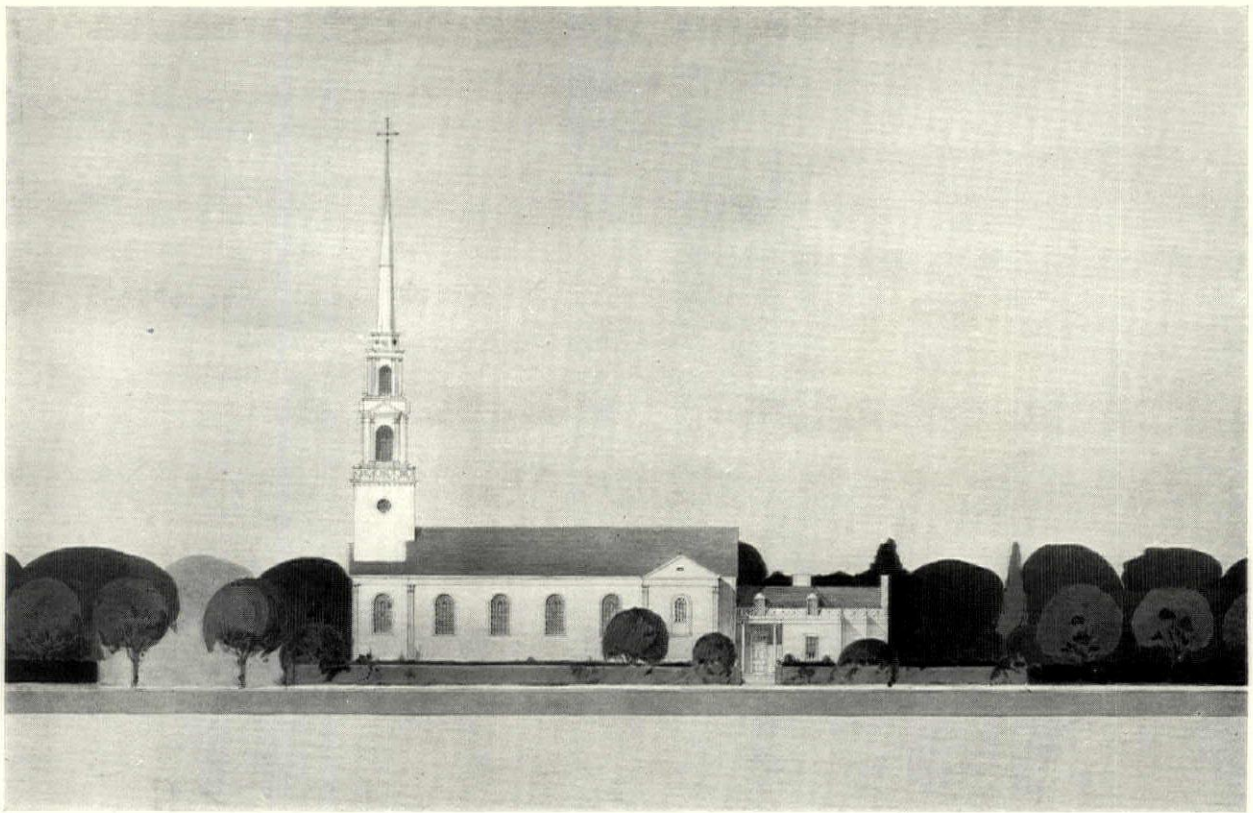
There are presented here the drawings and plans of the winning design, submitted by Hobart B. Upjohn, and of one of the other entries, from the office of Electus D. Litchfield and Pliny Rogers. In both these instances the architects have adapted the designs widely used during the late colonial era and the early federal period for ecclesiastical buildings in the northern colonies or states,—a slightly simplified form of the ecclesiastical architecture which was prevailing in England at the time, involving use of late English Renaissance forms, the most striking details of which were spires or steeples, such as had been made popular by such architects as James Gibbs and Sir Christopher Wren, and still to be seen on countless churches still in use in England.

In each of these designs the church proper forms (as it should) the dominating factor in the group,—a correct and dignified (even if slightly severe) meeting house, much similar to many which still face village greens or commons in old New England towns, the church in each instance having a graceful spire pointing skyward. In each case, again, the design calls for the placing of the church at some distance from the residence already existing, there being designed between and connecting the two another new structure planned to contain various offices for administrative purposes, a "Fellowship Hall," a study for the pastor, and rooms for his secretary.

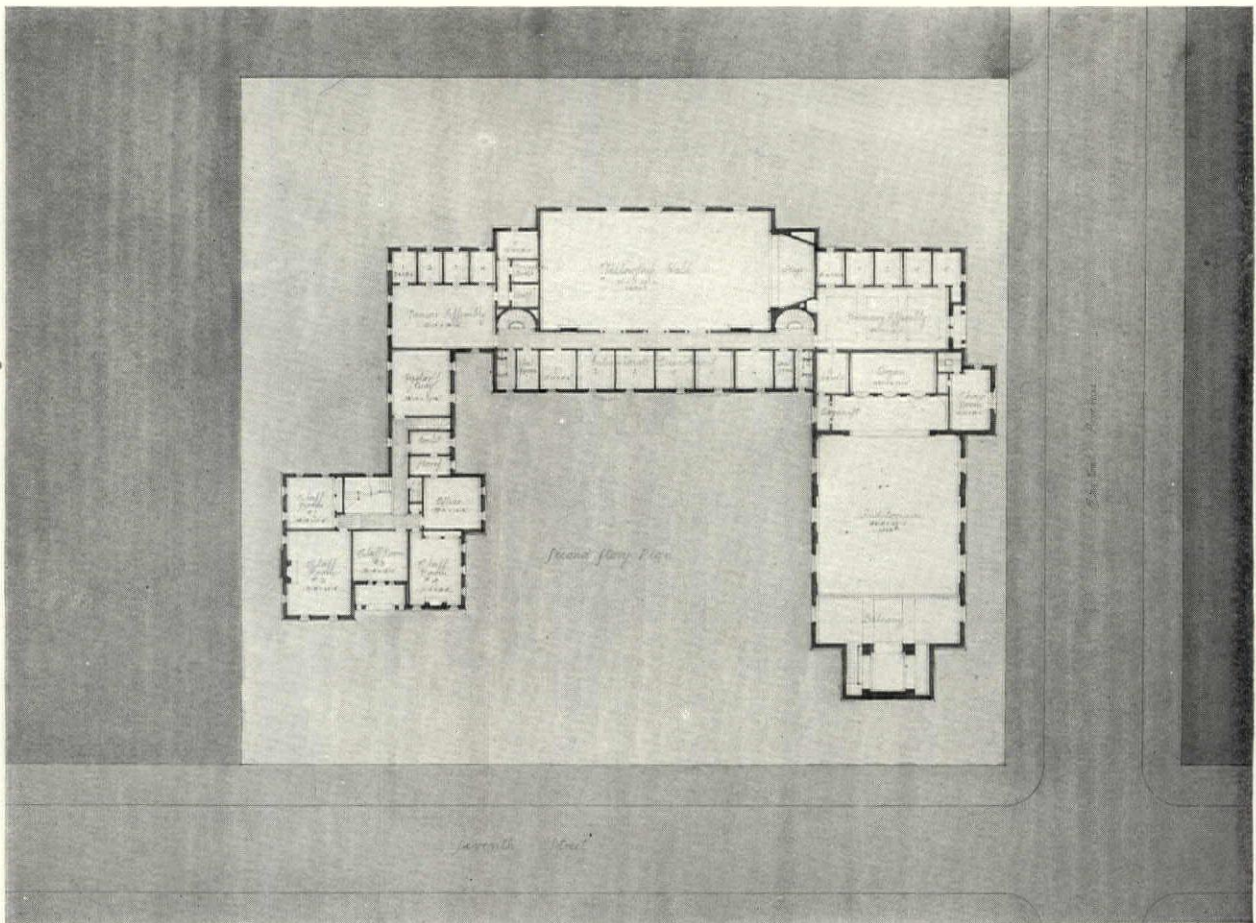
Either of these designs would provide a group of structures such as would constitute a valuable architectural acquisition to any large village or town. The

designs call for groups of buildings well related or coördinated. In both instances the main entrance to the church is through a spacious vestibule or narthex, the nave or "auditorium" as it is called in the plans being of the traditional oblong meeting house type amply lighted by round-topped windows in the side walls. Here custom required the placing of the organ and the singers at the east or pulpit end of the auditorium. The plans provide rooms in the church for the pastor, his assistant, and for the members of the choir. Both plans have in common the devotion of the larger part of the new structure which connects the church with the older residence to the "Fellowship Hall" which, next to the church auditorium itself, has the largest floor area in the group. The functions of this hall require not only a separate entrance, directly from outside, but also a small stage and the connecting rooms and the coatrooms and kitchen which use of the hall for a wide variety of social activities would naturally require. The importance of the Sunday School department in this church is indicated by the ample provision for its use of many classrooms intended for primary, junior and senior scholars, these rooms being placed sufficiently near the Fellowship Hall to make possible the assembling of the entire Sunday School in this large area. The architects' plans in both these instances call for the skillful remodeling of the old residence, already described as being on this site, into a practical parish house, occupying, as it is planned that it should, one end of the long group of buildings. It is intended, however, that the house should preserve intact its residential character; it therefore has its own entrance from the street, the doorway opening into a wide hall with rooms, in regular residence fashion, at each side. From this front hall the stairway leads to the floor above, while just beyond as one enters the parish house there begins the passage or connecting hall which leads back to the structure, already described, which connects the parish house with the church proper.

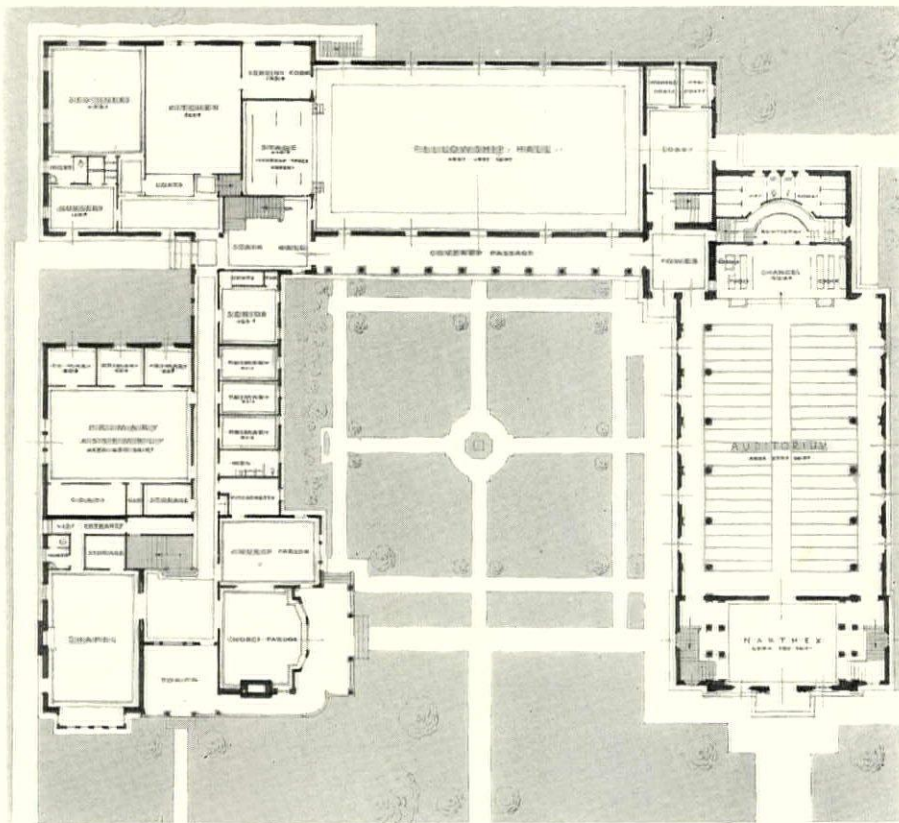
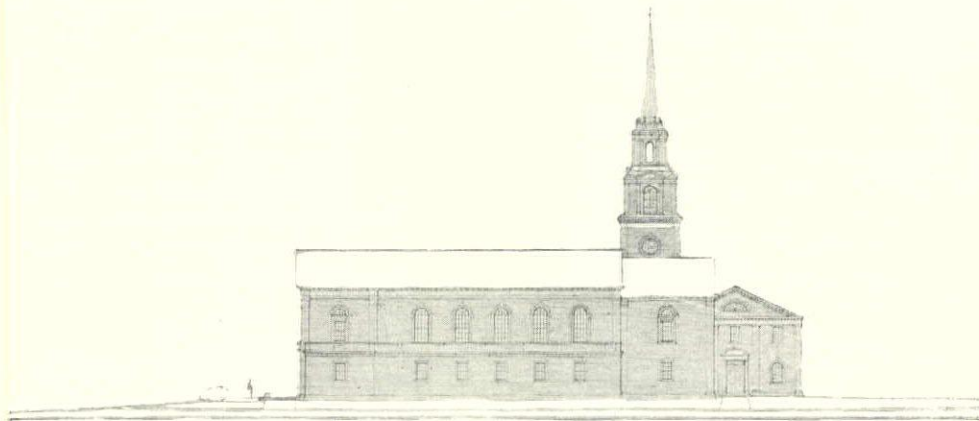
In its report, signed by Harvey Wiley Corbett as Chairman, and by Grosvenor Atterbury as Secretary, the Jury makes some interesting observations on the designs and plans which might be said to apply to competitions in general: "While obviously all of the designs are subject to further criticism, it is equally obvious that they are subject to improvement by study which would eliminate, in the opinion of the Jury, any of the unsatisfactory elements now shown therein. Obviously, too, the selection of the design to recommend for acceptance and execution, involves a weighing of virtues and defects, one against the other, and it is after very careful consideration of those involved in the present instance that the Jury recommends the ranking of the designs submitted."



SIDE ELEVATION OF CHURCH



SECOND FLOOR PLAN, PRIZE DESIGN
COMPETITION DRAWING FOR THE FIRST BAPTIST CHURCH, PLAINFIELD, N. J.
HOBART B. UPJOHN, ARCHITECT



DESIGN FOR THE FIRST BAPTIST CHURCH, PLAINFIELD, N. J.
ELECTUS D. LITCHFIELD AND PLINY ROGERS, ARCHITECTS

Banks and Bank Buildings; Part II

By ALFRED HOPKINS

THE success of a bank's building depends fully as much on the completeness of its equipment as upon its architectural and structural arrangement; in fact equipment might almost be said to count for more, since sometimes a poorly planned building has been made serviceable and practical by installing proper accessories. Now that the general requirements of the average bank have been set forth, it will be interesting to consider briefly the details of the equipment. This is a matter frequently left to chance or to the ingenuity of some manufacturing company. It should not be. The details of the bank are most important, for it is the little things which make for comfort, and particularly in a bank.

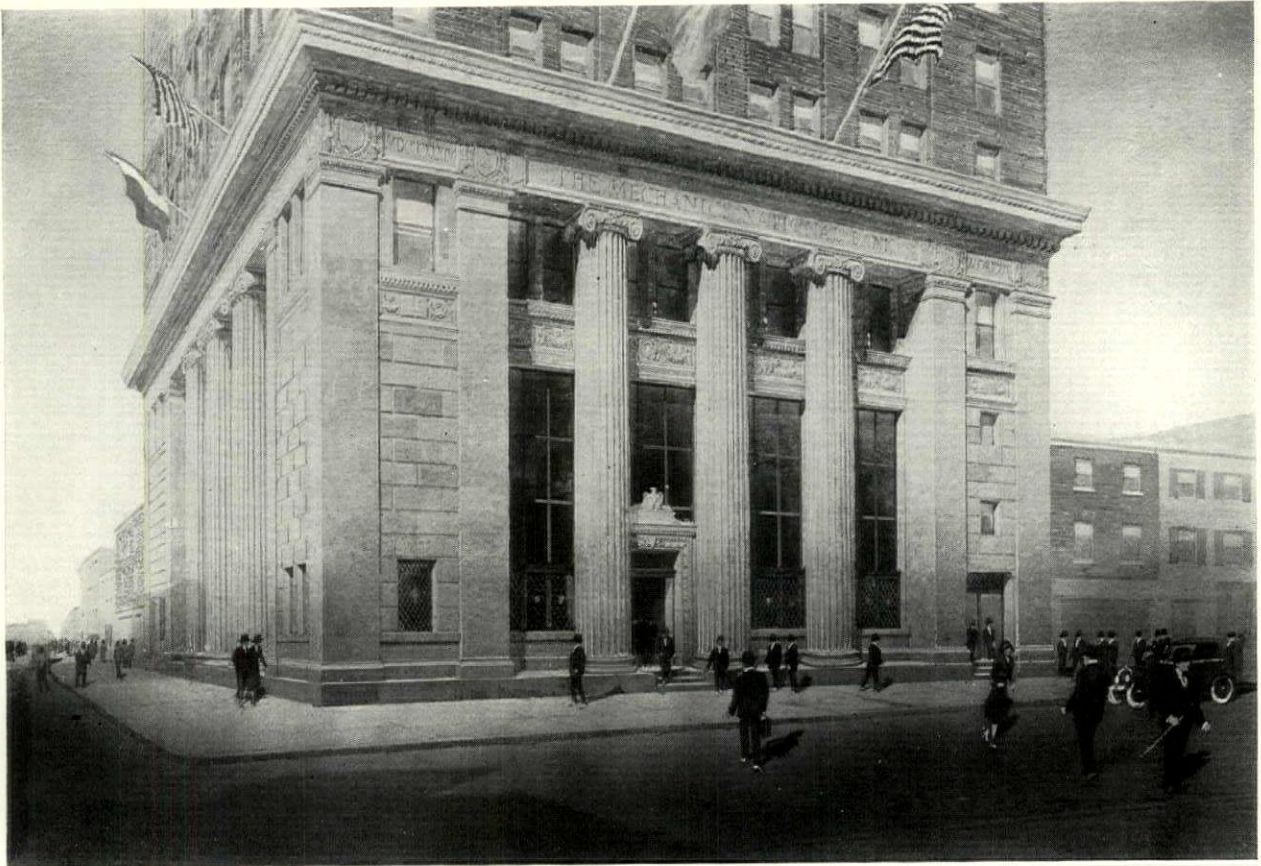
The first principle of good and orderly banking is to keep all money out of sight. In the smaller banks it has sometimes been the custom (and a bad custom) to allow money to be piled up on the counters. This is simply an invitation for a holdup. Even the country grocer keeps his money out of sight in his cash register, and there is no reason why the banker should not conduct his business in as orderly a way. If the receiving teller is taking in money faster than he can put it away in his drawer,—and experienced tellers dispute the possibility of this,—an extended marble shelf can be provided so that this money may be concealed under it until a time comes when it can be put away properly in the drawer. This projecting marble shelf answers two purposes,—it keeps the money out of sight, and it forms complete protection at the window, which is very desirable. It does away with the necessity of having the protecting side partitions, sometimes placed at the windows, which are always awkward.

The typical teller's cage is fitted up with long counters across the front, and any additional counters required should be in the rear. The old fashioned way of having counters down the sides is all wrong. These were developed on the theory that the teller never had his back to the customer,—a good enough theory, but such counters take up too much space. What is wanted in the teller's cage is accessibility to the public. With counters across the front only, it is possible on peak days to put two tellers in a cage. With counters down the side this cannot be done without increasing the width of the cage. A counter at the rear is just as convenient as at the side provided the depth of the cage is not too great, and it should not be more than 3 feet, 6 inches or 4 feet, but in double cages the distance between front and rear counters should always be sufficient to permit two tellers to pass each other, and never less than 4 feet between front and rear. The front counter is best equipped with two "pedestals," or tiers of drawers, one on each side, each containing four drawers, the two upper drawers

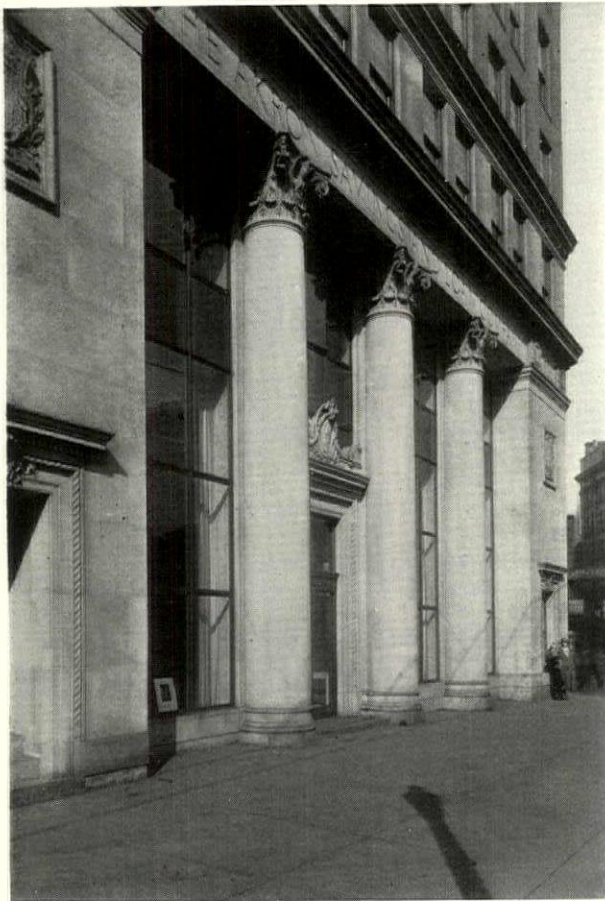
under separate locks, and each three lower drawers under stack locks so that all these lower drawers can be locked together. These drawers remain locked at all times and hold the surplus money,—money that is taken in or money in reserve to be paid out. Between the pedestals are adjustable pigeon holes for bank checks, deposit tickets and other necessary printed matter. A stamp drawer next to these is convenient, and speaking of drawers, it is highly important to have them all of one standard unit of size. Astonishing economy can be effected in the cost of manufacturing by using standard sizes. Ordinarily to make one drawer might cost \$20. If 100 drawers are made the same size, it would be possible to make them for something like \$4 apiece; so standard sizes are desirable from every point of view. The idea of standardizing sizes is important throughout the whole equipment.

A very serviceable and practical feature of the screen is the emergency wicket. This is a small door in the bottom of the screen, available for an extra teller on peak days. It makes it possible to double the service in all the cages. The lighting of the cages is important, and the usual long trough light at the top of the screen is out of date. It is unpleasant for the teller, besides being unnecessarily expensive in first cost and in operation. A double light in the right place with a light shield is the thing, and with this is combined the sign giving the nature of the cage—"Paying," "Receiving," etc. It is also possible to have the numbers of the cages illuminated. An illuminated sign over the wicket gives the teller's name on one side, and on the other it reads: "Closed. Go to the next window." All these signs are interchangeable, and may be put in one wicket as well as another, this being convenient.

The savings department, as has already been said, is best separated from the commercial part of the bank as much as it can be. The old way was to have the ledger cards in cases in the center or back of the cage. It is more convenient to have these in the front counters, where the teller will always be facing his customer. The counter top may be arranged to fold up, either at the side or at the back, and a wide deal plate always leaves sufficient space to work on. Additional area of course must be had in the rear of the cage, where there are placed the index cards and records of inactive accounts. The same arrangement is desirable for Christmas clubs, school savings accounts and the like. Statements are best filed in the front counters in the same way, and space may be saved by filing them vertically in document files rather than flat. The statement cage is usually a good place to install the pneumatic tube station. The teller's signature cards are well kept in movable cases on the rear counters, available for use in ad-



This Shows How, in the Office Building, Importance of the Bank's Quarters May Be Emphasized



Akron Savings & Loan Co., Akron
Detail of Main Entrance

joining cages. The revolving signature case takes up too much space and is difficult to clean. Non-communication between cages is important, and to carry this idea to its ultimate end the telephone may be placed in a revolving cylinder between cages, which makes it available for each, but effectually closes off the next cage at the same time. Tellers' balances may be kept in the vault, each teller having his own compartment, or else each teller may have his own compartment in a bus and keep his money there, the bus being taken to the vault when the tellers' balances have all been completed. Busses are frequently made too large and too heavy, and when this is the case the tellers generally prefer to take their balances to the vault to wheeling the bus. Busses are most useful when the bank's vault is in the basement, and the architect must be sure that the elevator is large enough to contain the busses and the attendant. There is less need of them when the vault is on the first floor.

The safe deposit department should have the same arrangements for expansion as the main floor. Space for additional safe deposit boxes should be provided in the vault, which should be either 8 or 16 feet in width; 18-inch reinforced concrete walls with $\frac{1}{2}$ -inch steel lining and a 10-inch door meet the specifications of the insurance companies for the minimum rate of insurance. The round door is always effective advertising, but it looks better in the basement where it does not conflict with the architectural treatment of the large banking room.

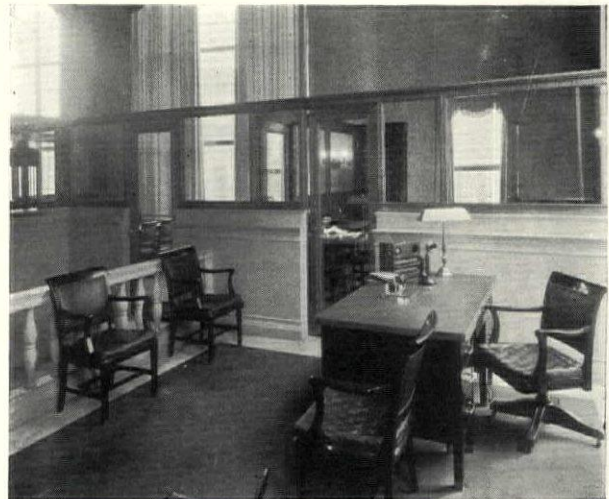


Preliminary Design for a Savings Bank
Alfred Hopkins, Architect

The public entrance to the safe deposit department should always be through two grille doors, where space permits. Between the first and the second door is the place for the identification window, and the custodian should be able to release both doors electrically. The public entrance should be the only possible entrance to the safe deposit department. This department is best cut off entirely from every other part of the building, if this does not cause too great inconvenience otherwise. Ample accommodations for coupon booths (4 by 6 feet is a minimum size) should be provided, and at least one large room for every three or four of the smaller rooms. The coupon booth should have a good light, a ventilated door, coat hooks, call bells, suitable accommodation for the necessary deposit slips, envelopes, pins, rubber bands, clips, scissors, pens and ink. Glass is an excellent material for the shelves, as it is transparent, and it is easy to see an important paper which may have fallen on the floor. Waste baskets are not desirable. Telephone outlets are usually provided. A great deal of ingenuity has been exercised over the lock which, with a door check, fastens the door after the customer has left the booth, and the door must be opened by the attendant. This is not necessary for the average safe deposit department, which can be readily supervised by the attendant in charge. It is always desirable, however, to plan the department so that it can be completely supervised from the identification window. One

of the important things to think of in the safe deposit department is to furnish it properly and to keep it as much as possible from resembling a mortuary chapel, which it is often only too likely to do.

Workroom. The first requisites of the workroom should be light, ventilation and adequate area. All are vitally necessary, and one rarely finds a workroom which will qualify under this simple specification. Neither adequate lighting nor ventilation can be had without windows on opposite sides, although



Akron Savings & Loan Co., Akron
Public officers' space showing private offices. Glass partitions are always effective, as they obstruct no light



The Akron Savings & Loan Co., Akron

The tower is a detail of modern commercial work which has great possibilities as an advertising feature, especially at night when it can be illuminated



The Commercial Trust Co., New Britain, Conn.

Where the bank builds an office building, it is desirable to emphasize the importance of the bank's quarters. This emphasis is evident in this design

there are inadequate substitutes for both of these. The workroom should be acoustically deadened throughout, which makes a machine room unnecessary. For supervision all fixtures should be of only counter height, and if any partitions are required they are better of glass. All windows are best 48 inches above the floor. High windows distribute the light better, and leave wall space below for filing cabinets and work tables. No bank ever had enough space for files. It is usually convenient to arrange the bookkeeping department in units of two bookkeepers each, who have all necessary accommodations for filing, checks, deposit tickets, ledger sheets, signature cards, etc. within immediate reach. Sorting tables with slanting compartments on the top are better than the old pigeon hole system. Care must be taken to have these carefully soldered so that no items can slip through the joints and be lost, which sometimes happens. The workrooms cannot have too many electrical base and floor outlets, since changes in the location of machines, lights, etc., are always being made. The duplex outlets are always preferable. All equipment in the workroom should follow out standard practice in sizes, so that changes and substitutions may be readily made. If the telephone switchboard can be placed to afford a view of the interior of the banking room, it is a convenience.

In the main banking room there should be a complete annunciator system, every teller and officer having his own bell which registers on an annunciator where the floor man can readily see it. The auto call is coming into general use, and is liked. Another variation of this idea is a lighting signal, which has the advantage of being noiseless. Intercommunicating telephones or the dictograph are indispensable, but the telautograph is not generally useful in the smaller bank. The pneumatic tube will do everything which the telautograph will do, and it provides a physical communication besides.

Telephones. The telephone system is important in the equipment of the bank. There are three divisions of the subject,—the public telephone, the dictograph, and the automatic intercommunicating telephone. The public telephone service is satisfactory within certain limits. It is possible to install a service with a limited number of outlets, all of which are intercommunicating and all of which are public telephones as well. Where the number of stations is not over a dozen, this is entirely satisfactory. Such installations as the dictograph are excellent where the offices are quiet. In buildings where most of the offices are private this is an excellent arrangement, but in a busy banking room there is likely to be so much noise, which the instrument of course picks

up, that is is sometimes difficult to hear. The automatic intercommunicating service is becoming more and more useful, and it has many advantages. It is operated by a machine switching automatic central that interconnects the telephones with great rapidity and with mechanical accuracy. Some of the advantages are that the public telephone operator is relieved of all interior telephone intercommunication, and thus there is no interruption to the outside public system. The use of two telephones, one for private and one for public use, is frequently an advantage, since it is possible to seek information for the outside line over the inside line without interruption. The expense, including amortization of the first cost, maintenance, interest, etc., is about \$15 per year per telephone. There are some very interesting special features for use in connection with the automatic telephone to meet special requirements.

Lighting of Main Banking Room. We have discussed the general lighting of the banking room, largely from the point of view of the man in the street. The lighting of the room from the stand-

point of those who work in it is highly important. It is always a simple matter to obtain light artificially, but to secure daylight everywhere on a small or interior lot is much more difficult. This is best achieved by the use of areas formed in such a way that light and ventilation may be had in the side walls for the banking room, and vault light at the bottom of the area for the space beneath. This system provides light and ventilation at the dark side of the lot without sacrificing any of the lot area. It is astonishing how much light a vault lighting of this type will give. It is not open to the objection of the ordinary skylight, which is difficult to keep clean and more difficult to keep from leaking. Vault light construction has been improved wonderfully in the last decade, and this detail of building may now be considered as perfected. Objection to it is sometimes made on account of snow. There is nothing to this, however, since the snow soon melts over the vault lights and leaves them unobstructed. If it does not, we have arranged steam pipes which will perform that service, though they are seldom used.



The Suffern National Bank, Suffern, N. Y.

Alfred Hopkins, Architect

The stone portico is always an effective feature for a country bank. This building greatly needs a little judicious planting

Cross lighting is always the best, for it makes possible cross ventilation. This is the only way to ventilate a building. It sometimes happens that such natural ventilation cannot be obtained. The next best thing is to blow air under high velocity into the unventilated portions of the room. This can be accomplished very economically, and if given proper attention it is as a rule very satisfactory.

The Office Building. A problem which the bank frequently faces is whether to build an office building or an individual banking structure. This is a matter which is much easier to decide now than formerly. Higher rents have made the office building much more profitable, and with anything like a fair demand for offices, the office building is undoubtedly the thing. The size of the property, however, should permit an available office renting area of from 4,000 to 5,000 square feet per floor. But the offices should always be secondary; the bank should never lose one iota of its prestige as the dominant factor in the proposition. When an office building is under consideration, the inclination of the board is sometimes to treat the whole thing as a real estate proposition, with the bank as one tenant among many.

That point of view has produced some very sad examples of bank building. You can find any number of structures where the bank's legitimate interests have been entirely submerged and the bank, whose position is paramount, we find sacrificed to offices and stores. Banks that rent the fronts of their premises for stores always live to regret it. If you don't believe that statement, ask some banker who has gone through the experience. The bank is the thing. Its position should be primary, and everything else secondary. The idea of sacrificing the bank's entrance to the office building entrance, on the theory that the traffic to the office building will bring trade to the bank, is fallacious. Its fallacy can easily be made apparent by watching the people pass on the street and trying to realize how many more pedestrians would pass the building than would go into it, checking up the result on an actual count of an existing building. The bank wants to be in a position to make its appeal to everyone who passes it on the street,—not limiting itself to those who come to its office building. The office building entrance should usually be on the side street,—for it is never wise to build an office building anywhere but on a



Akron Savings & Loan Co., Akron

The photograph was taken from the street to show how low windows permit a good view of the interior from without, useful since it affords to the public a glimpse of the bank's activities

corner,—and the bank's windows and position should be so emphasized by its architectural treatment that the rest of the building is entirely secondary. If the office building does not accentuate the bank from every point of view, don't build it. President Coolidge once asked the country to "Have faith in Massachusetts." We would ask every banker to have faith in his institution and in his community to support it,—a faith that, in the phrase, "will move mountains." That is the point of view from which to undertake bank building, because when building has been wisely done, that faith is justified.

Given the point of view, here are a few general hints that the banker might have in mind regarding his office building. Provide adequate elevator service; a good rule of thumb is 20,000 to 25,000 square feet of rentable office area per elevator for buildings of under 12 stories. Elevator cars should be 6 feet, 6 inches wide by 5 feet, 6 inches deep,—not the space which the architect indicates in his drawings, but the actual interior of the car. A few inches less than these dimensions are not important, but ordinarily these figures may be kept. Use double

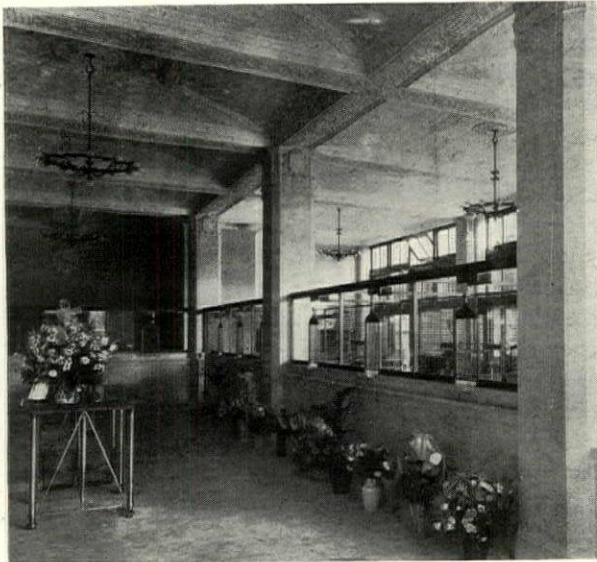
doors, and have glass in them so that the operator may see out; and slant the jambs of the doors, which will give him a better chance to see who is waiting. Dials need be put in the ground floor only; up and down lights elsewhere. Give the elevator a decent speed of not less than 400 feet per minute, and don't be too much carried away with elevator sales talk on service, repairs, etc. Arrange for freight either by a separate elevator or a separate entrance in the basement to a passenger elevator. If a separate elevator is included, it is well to have this next to the general service for passenger use in an emergency. To get a profitable return on the building it should rent for not much less than \$2 a square foot. The sizes of offices are important, and take your real estate man's idea of sizes in preference to your architect's. This is a real estate and not an architectural matter. For offices a 9- or 10-foot unit is best, including one window of 4-foot width and 7 feet, 6 inches high. There is generally call for small offices.

Steel columns should therefore be placed 18 to 20 feet on centers, so that all offices may be subdivided. Front offices should always be 25 feet



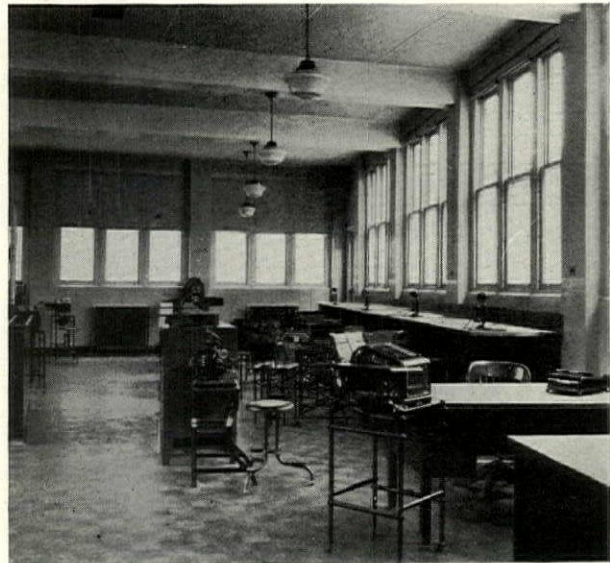
Entrance, The Dime Savings Bank, Akron

This type of door has an advantage over the revolving door in that it does not obstruct the view. Doors must open out, and ample radiation be provided, as may be seen at the side. Such a vestibule is effective in preventing drafts



The National Tradesmen's Bank, New Haven, Conn.

An interesting alteration, which shows how a bank interior may be effectively ornamented by a ceiling taken from casts of old English plasterwork.



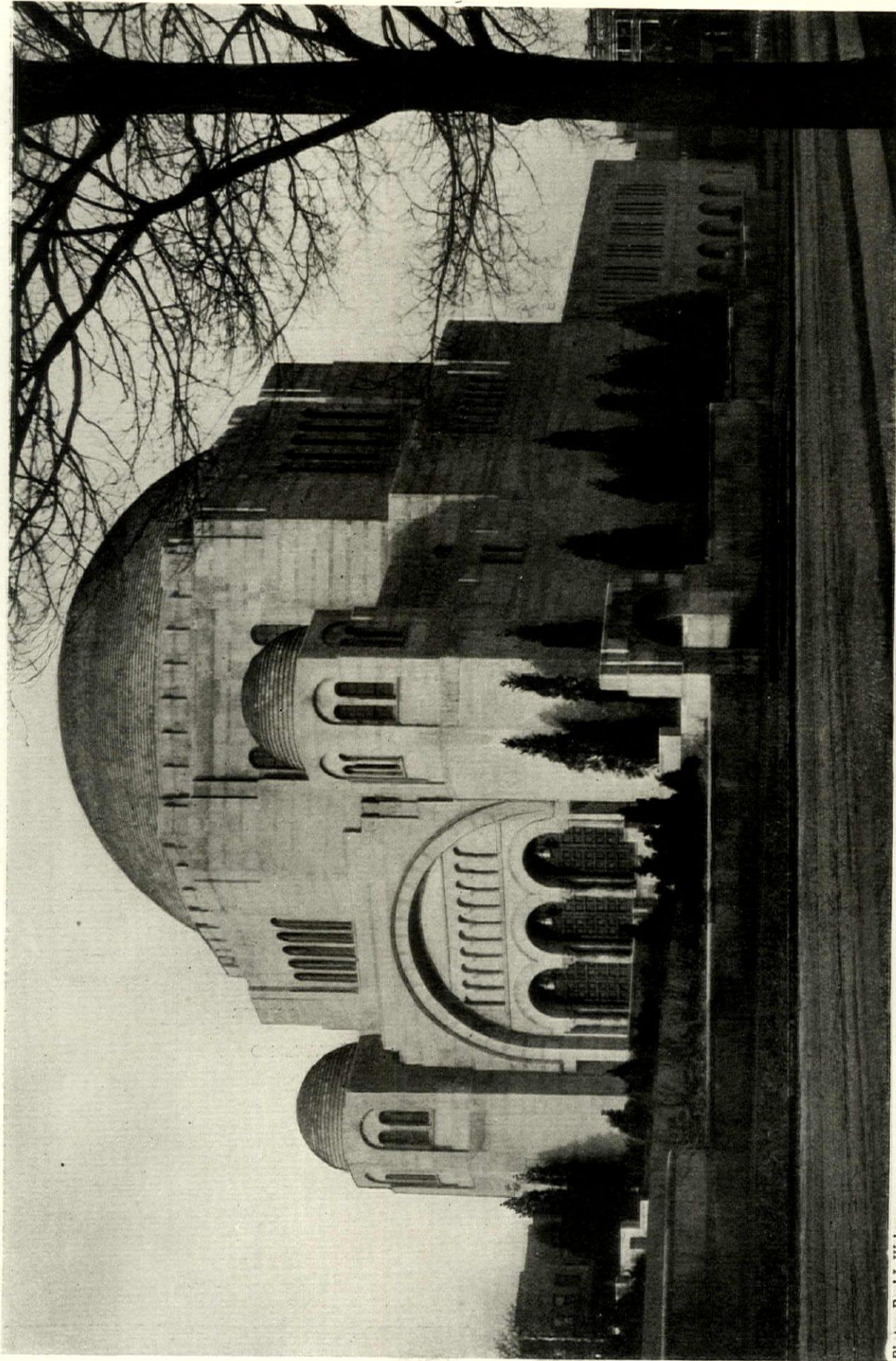
City National Bank, Binghamton, N. Y.

Showing a well lighted and ventilated workroom on the roof. The ceiling has been acoustically treated for sound absorption—a very necessary provision.

deep. Rear offices may be 20 or 22 feet. Keep windows as near the ceilings as possible, and have the radiators off the floor, below them. Concrete floors are best, and they should be finished over the whole area, so that when partitions are changed the floors do not need refinishing. Tile partitions are usually preferred by the superintendent. Make all doors the same size, so as to be interchangeable, also all windows. If all windows are the same size, it simplifies fitting them with shades. Remember that tenants want light, and if your architect is so infatuated with wall surfaces that he wants to build brickwork instead of providing windows, discipline him, even to the extent of appointing his successor. Corner rooms always rent first, because they are lightest; therefore ample window area is a first consideration. Get expert service for engineering and heating. Over-heating is as costly an error as under-heating. All offices should have picture mouldings. All doors should have transoms and automatic door stops. Decorate the walls and ceilings by painting them, and the landlord might paint the floors once for each tenant, the tenant to keep floors in repair. Line the corridors with marble, as high as you think you can afford,—and then some. Corridor floors should be of terrazzo or perhaps of marble. Good corridors are essential, and a good elevator lobby on the first floor is still more so. Build well to rent well. Charge more for the upper stories than for those lower down. Mezzanine or second story stores are coming into vogue, and always rent for more than office areas. They must have real show windows, though, in the corridors and on the street. Provide hot and cold water in each room and ice water in halls; have toilets for men and women on all floors instead of on alternate floors, since this

always involves the elevator service. Provide for metering each tenant for electricity. Get enthusiastic about burning oil for fuel, and either use it or provide for using it. Give your building to a real estate man whose business it is to rent it, and don't try to do his business for him, but attend to your own. And, last but not least, note this advice: Don't fill your banking room with columns because the office building above has to be filled with columns. Pay for girders or trusses so as to eliminate all columns if possible. That is what our marvelous steel construction is for,—to give unobstructed areas. There never was anything like it in any age, and there is nothing like it for the bank. It is absolutely impossible to do a banking business comfortably in a forest of columns. Four should be the limit, and it is possible to locate these at the four corners of the screen where they will be practically out of the way; but the unobstructed area is always the best, and as a result of it a wonderful thing happens. Between the trusses required to support the superstructure is a place for all the things which are put in the basement and never should be there—the locker rooms, toilet rooms, stationery room, file rooms and the like. Here is the ideal location for them, where they can be up out of the ground and well ventilated.

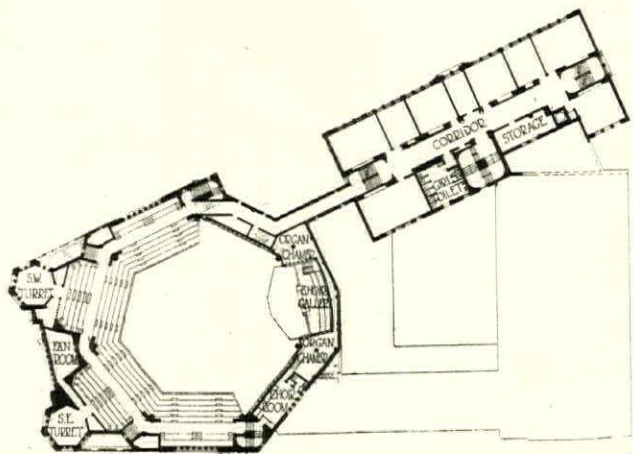
Such in fact is a brief resume of the delightful possibilities of bank building. Apart from all the details there stands back of the whole problem the necessity for a fine, restrained and sustained architectural expression. At times commercialism must necessarily limit, but it should never eliminate, real dominant qualities of architectural excellence. Granted this excellence right down the line, and we can say with conviction and without qualification that a new building is usually the bank's best bid for business.



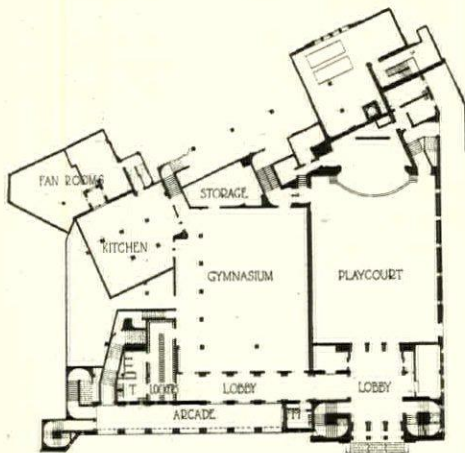
Photos. Paul J. Weber

TEMPLE TIFERETH ISRAEL, CLEVELAND
CHARLES R. GRECO, ARCHITECT

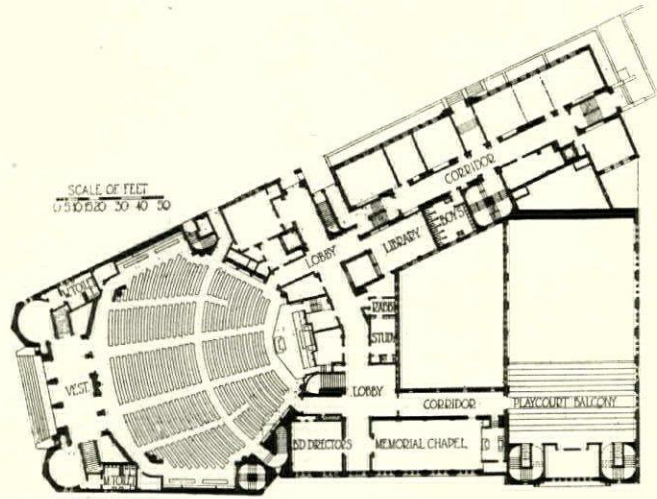
Plans on Back



BALCONY AND SECOND FLOOR

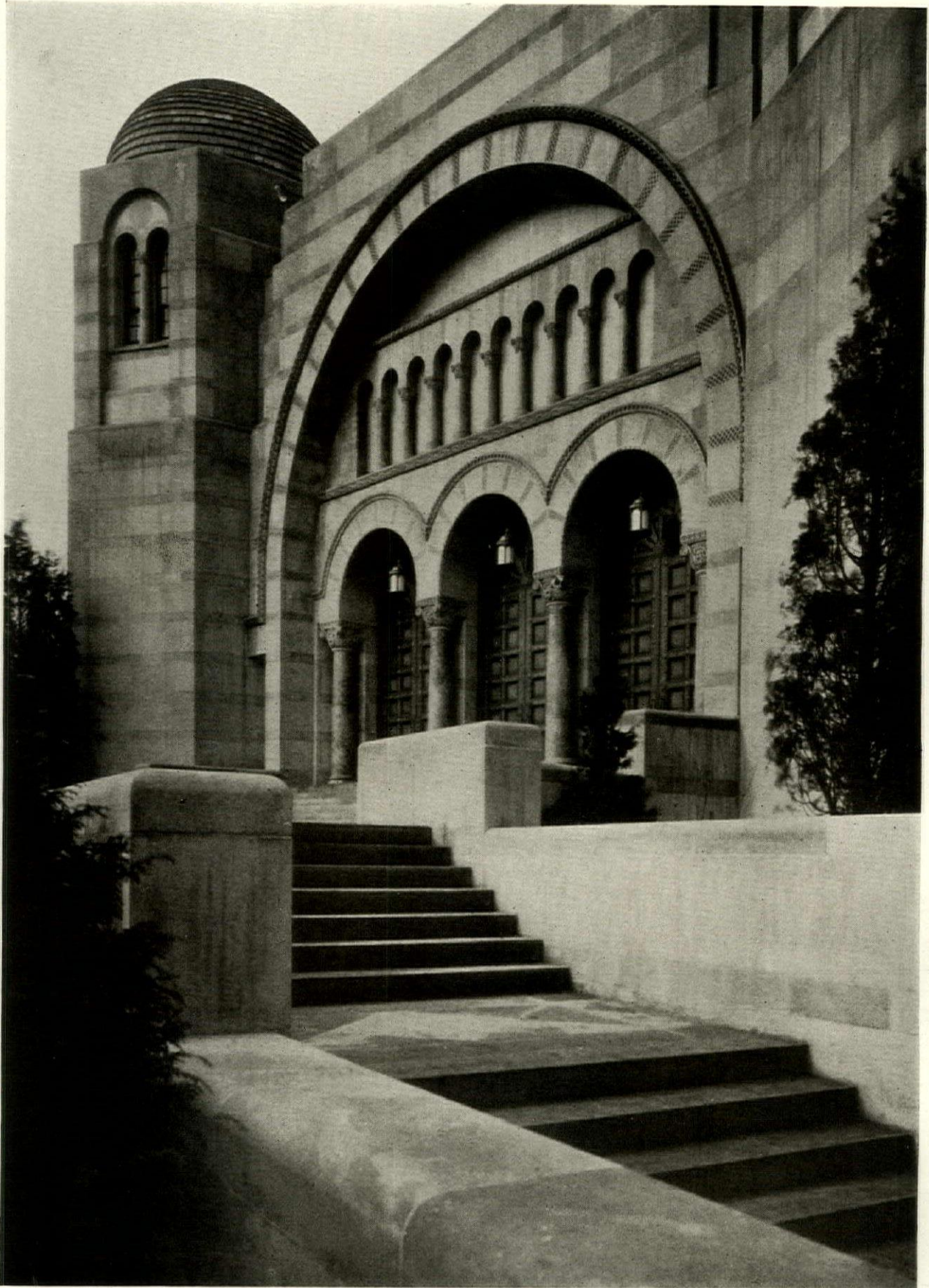


BASEMENT



MAIN FLOOR

PLANS, TEMPLE TIFEREETH ISRAEL, CLEVELAND
 CHARLES R. GRECO, ARCHITECT

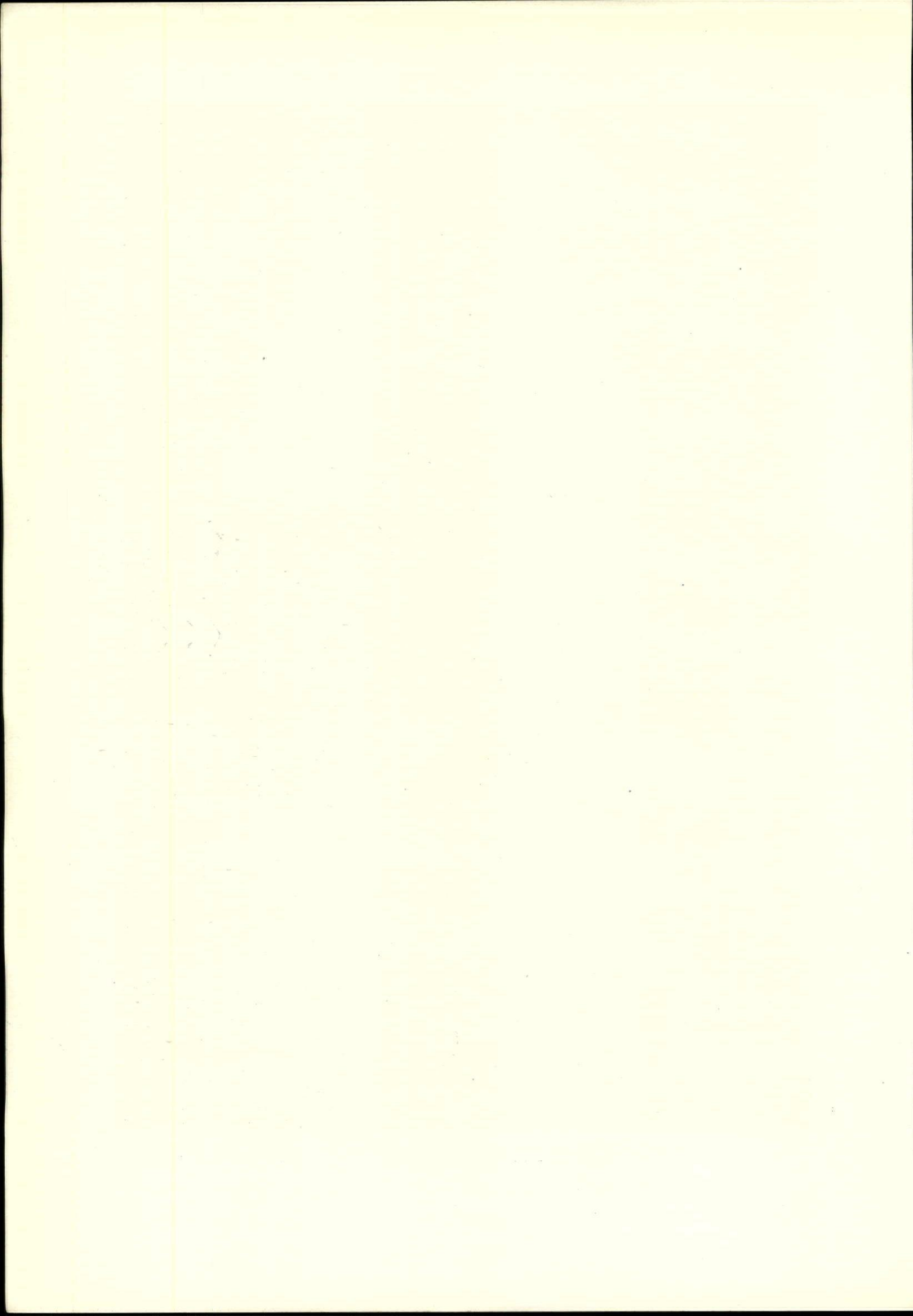


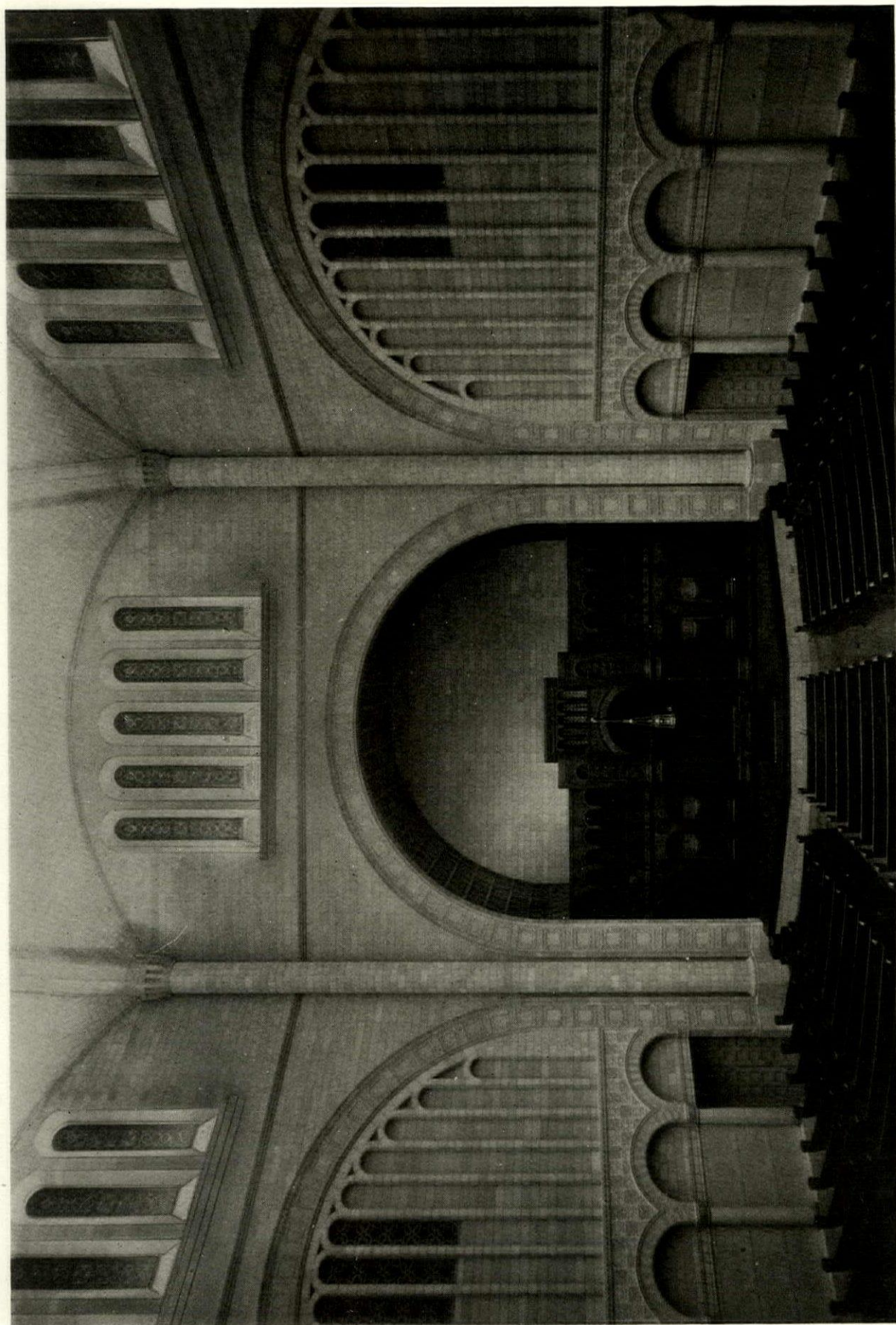
DETAIL OF ENTRANCE
TEMPLE TIFERETH ISRAEL, CLEVELAND
CHARLES R. GRECO, ARCHITECT



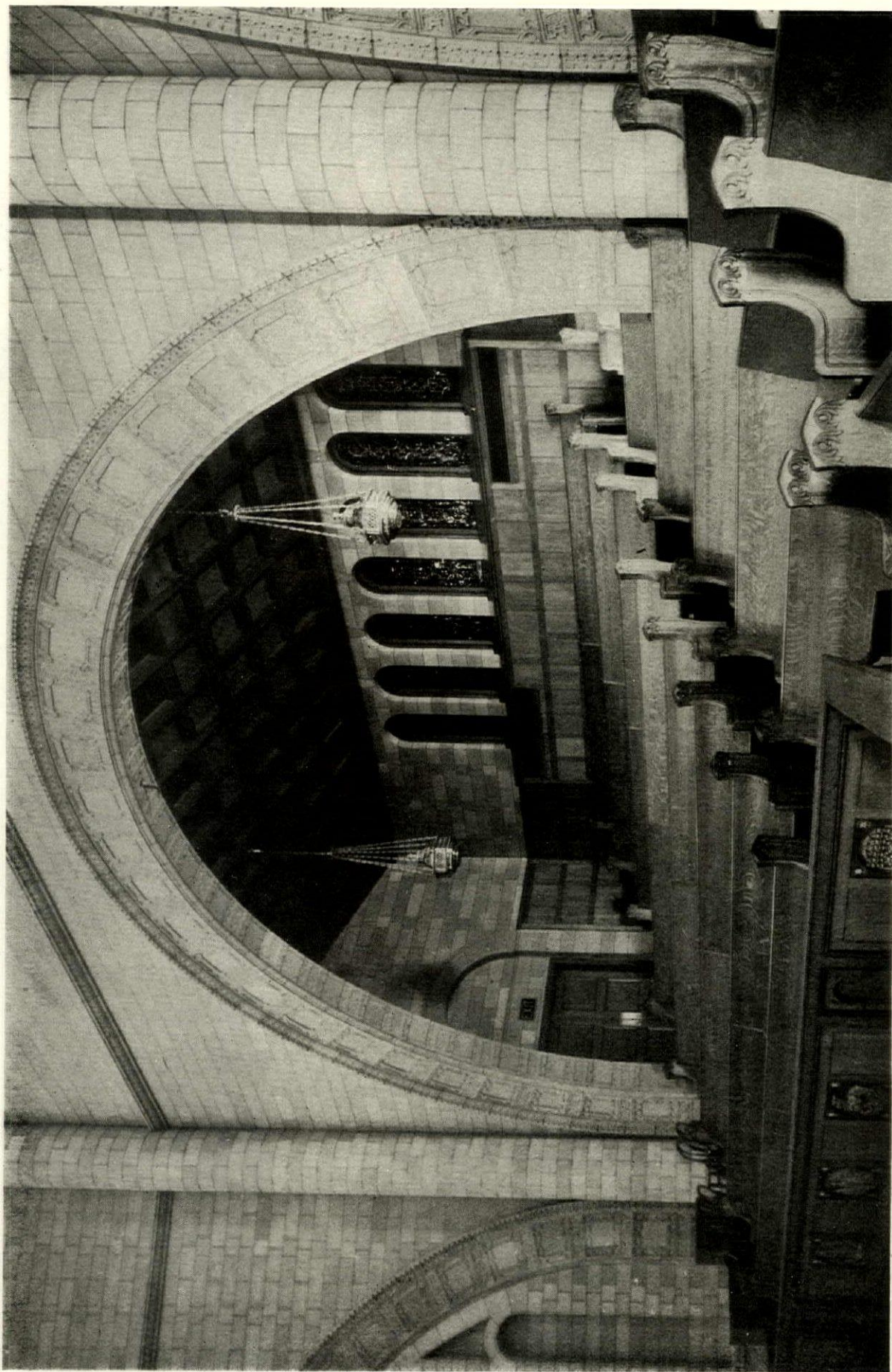


DETAIL, ENTRANCE DOORS
TEMPLE TIFERETH ISRAEL, CLEVELAND
CHARLES R. GRECO, ARCHITECT

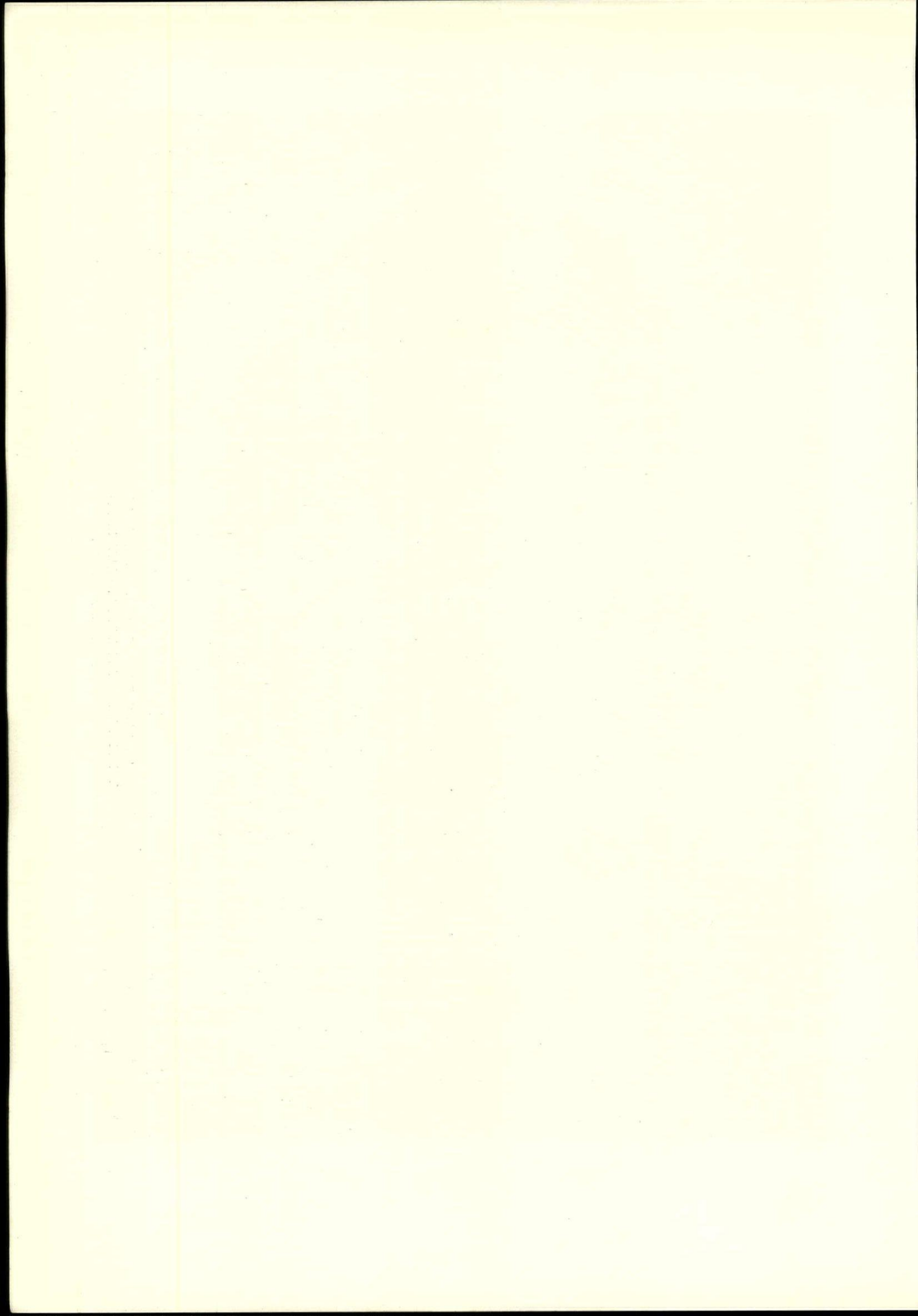


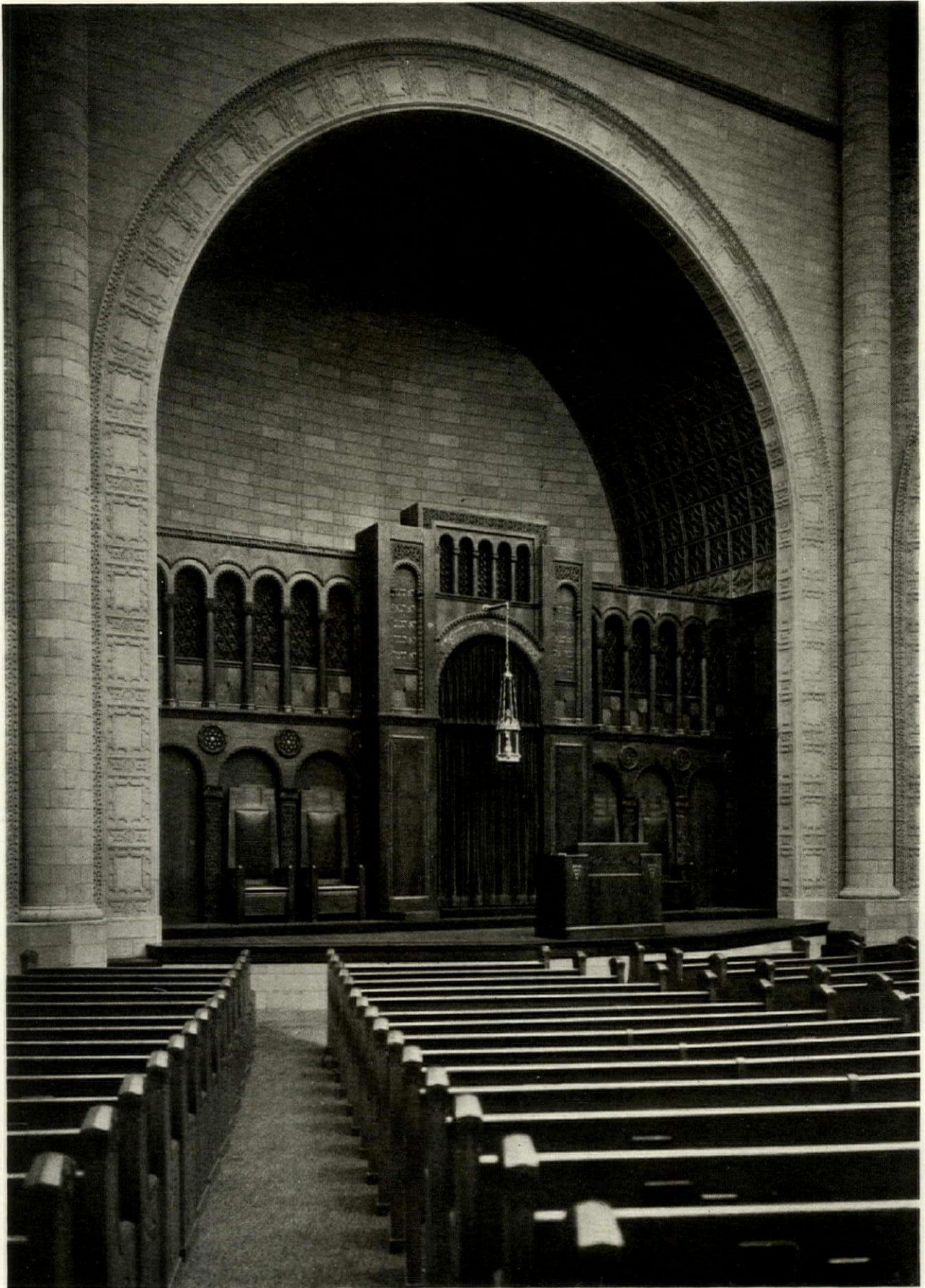


INTERIOR OF TEMPLE TIFERETH ISRAEL, CLEVELAND
CHARLES R. GRECO, ARCHITECT

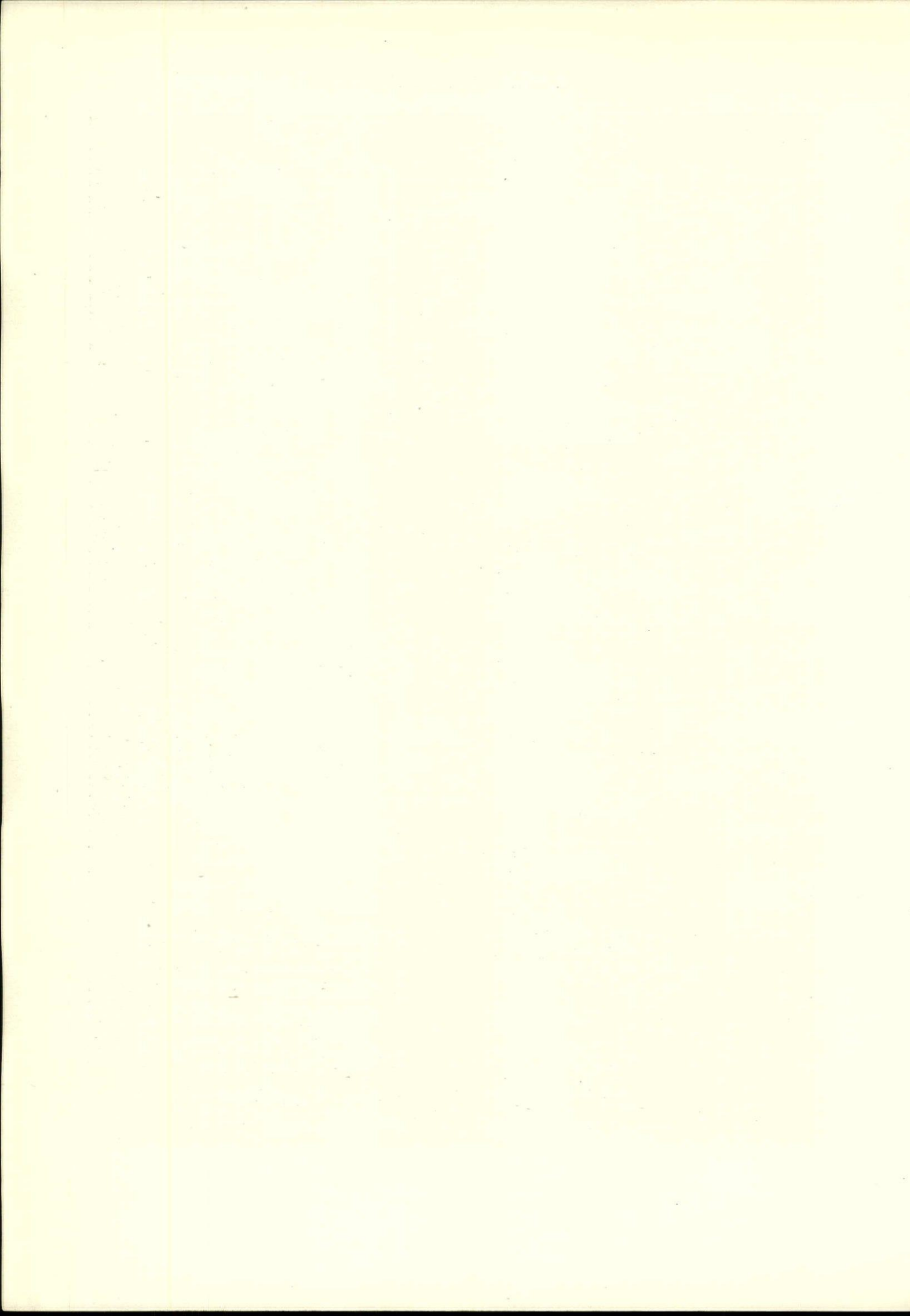


DETAIL, ONE SECTION OF THE BALCONY
TEMPLE TIFEREETH ISRAEL, CLEVELAND
CHARLES R. GRECO, ARCHITECT



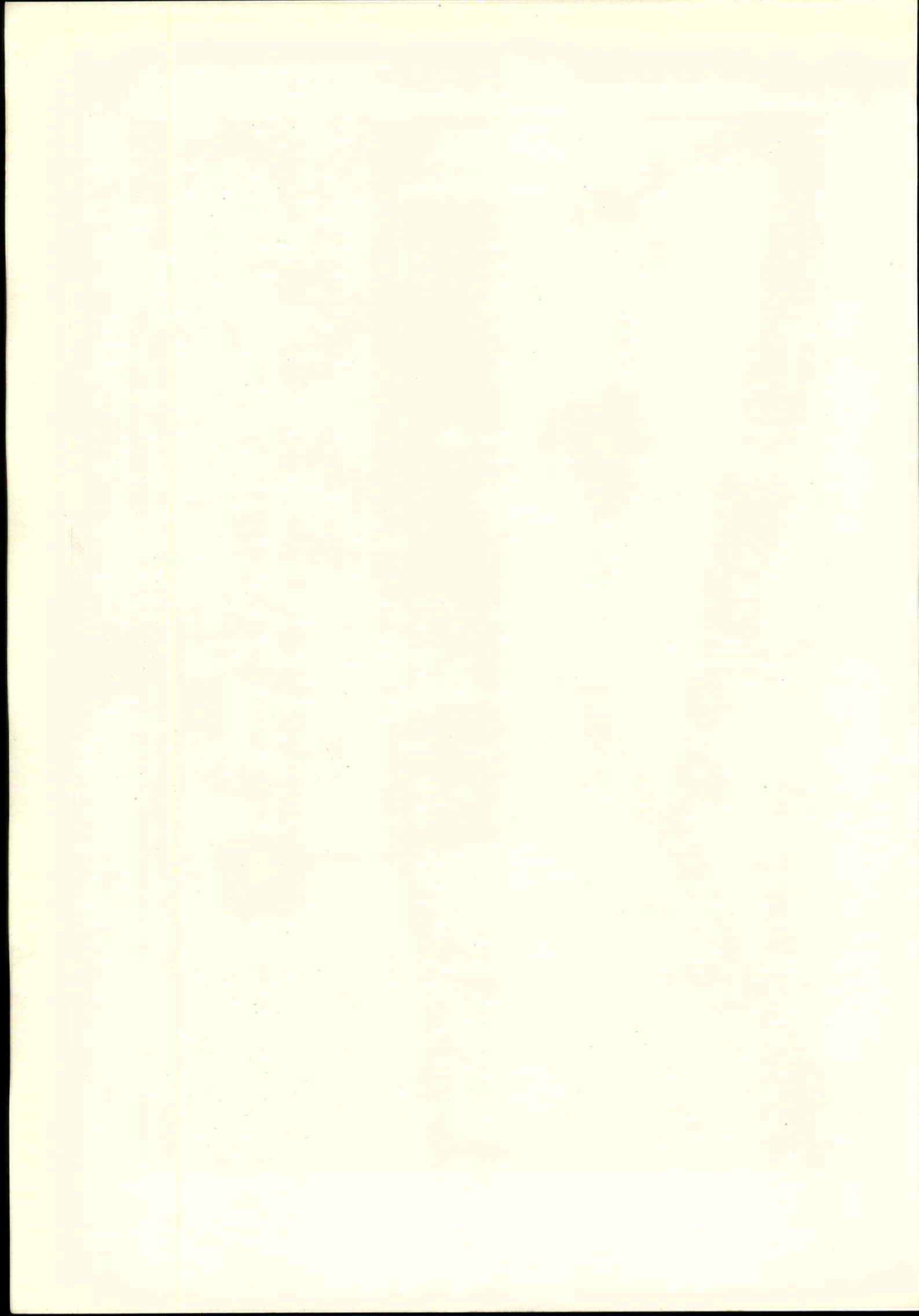


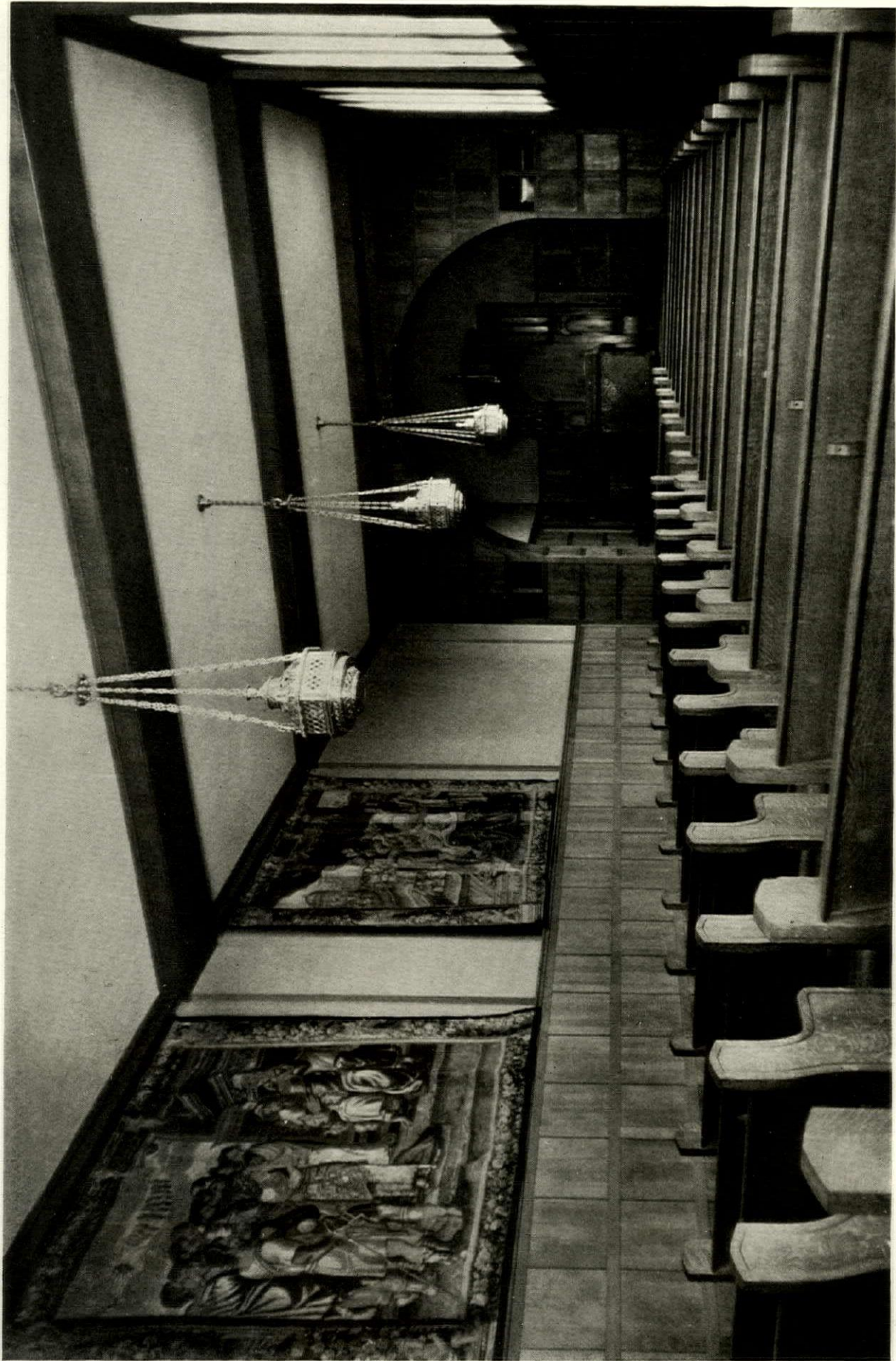
DETAIL, ARK AND CHOIR GALLERY
TEMPLE TIFERETH ISRAEL, CLEVELAND
CHARLES R. GRECO, ARCHITECT





DETAIL OF ARCH AND WALL DECORATIONS
TEMPLE TIFERETH ISRAEL, CLEVELAND
CHARLES R. GRECO, ARCHITECT





THE CHAPEL
TEMPLE TIFERETH ISRAEL, CLEVELAND
CHARLES R. GRECO, ARCHITECT

THE UNIVERSITY OF CHICAGO
LIBRARY

Savannah's Architectural Background

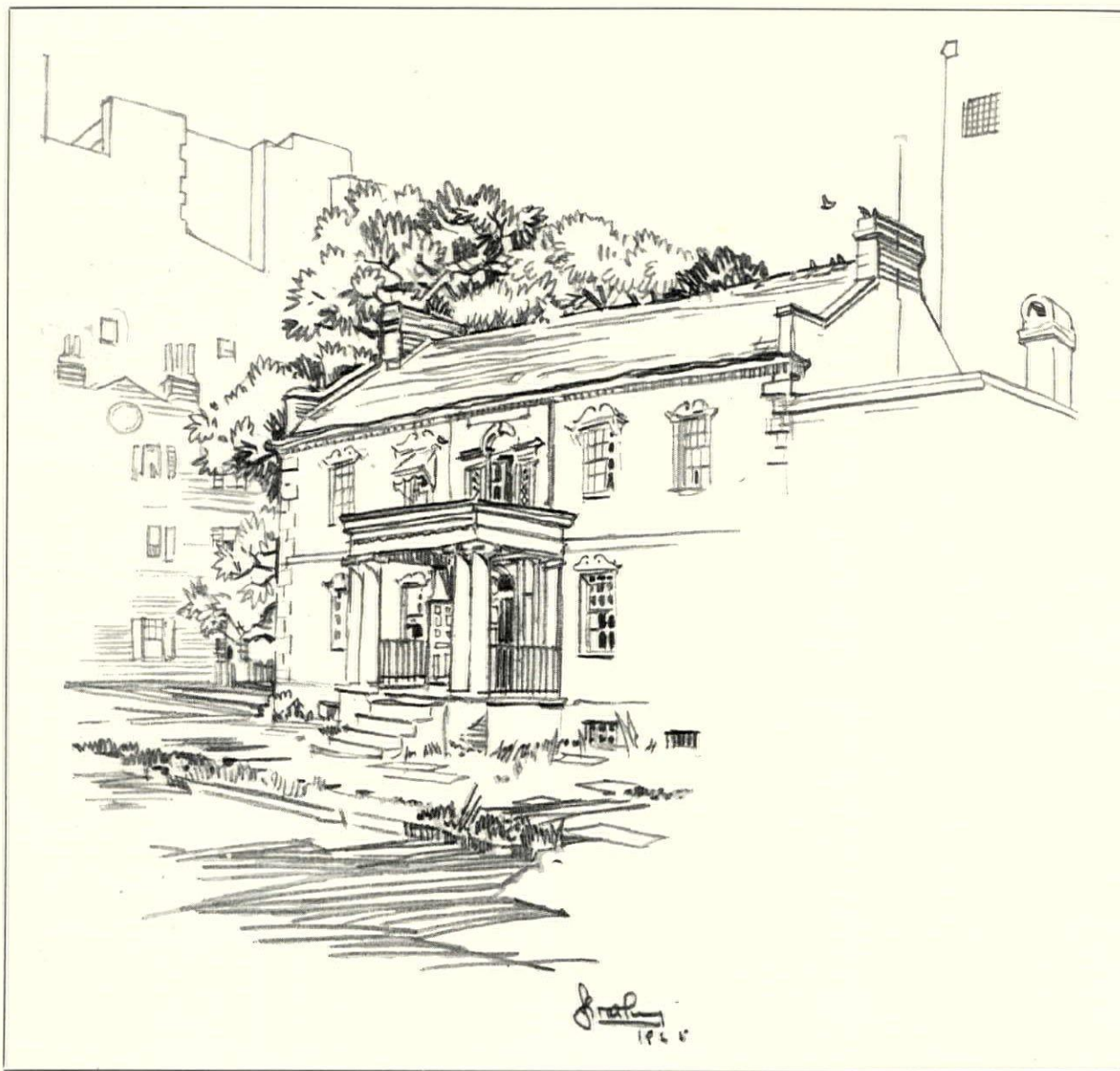
With Sketches by WILLIAM P. SPRATLING

TO one who has visited or is familiar with New Orleans, Savannah would probably appear the older. It has that sedateness and dignity that only an English tradition can give, and which is apparent in most of the old architecture, not only in the grand mansions of the rich, but also in the humble homes of the poor. This air pervades the entire city.

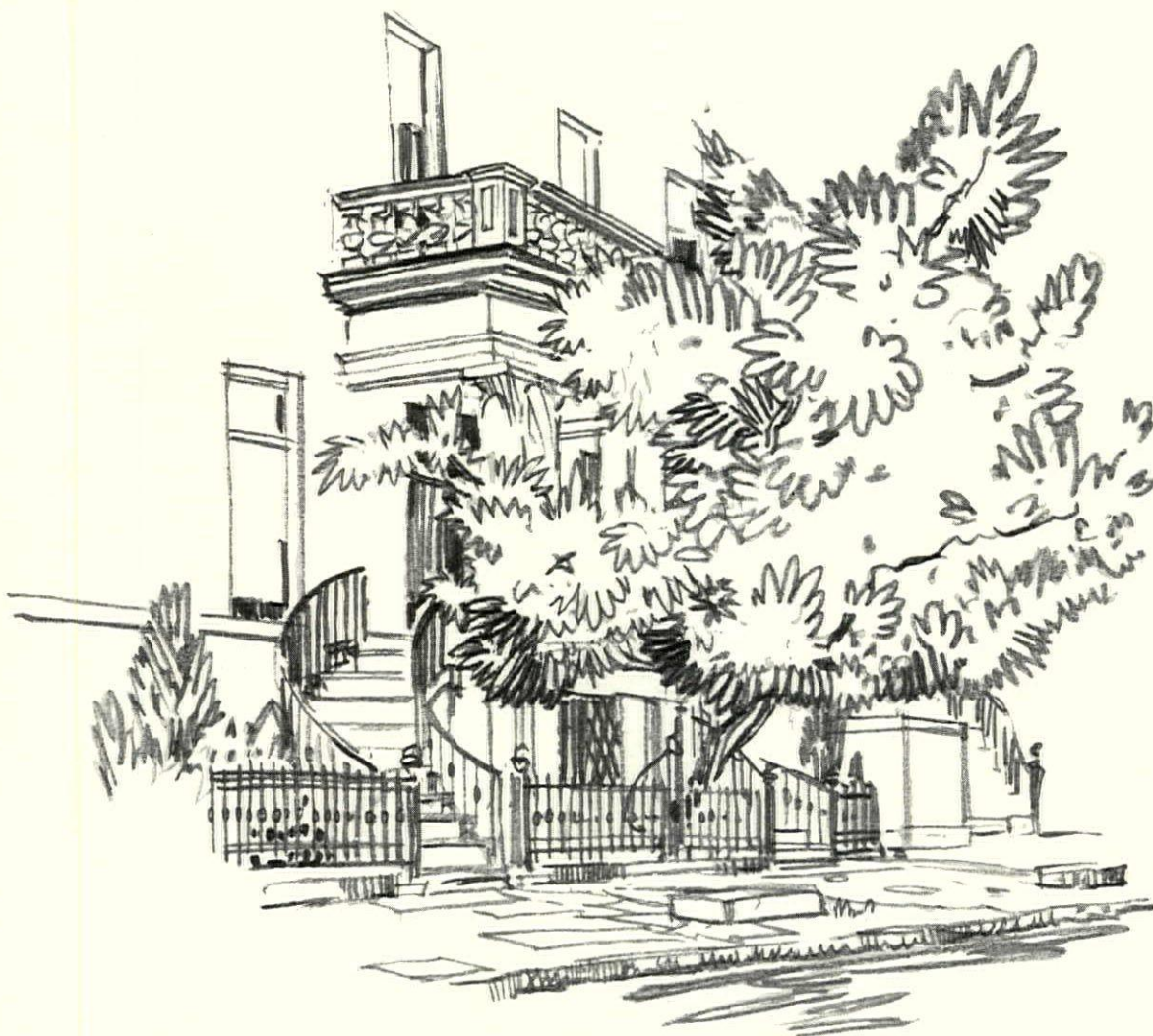
Savannah has much in common with old cities farther north, Charleston, Norfolk, Baltimore and, most noticeably, with certain cities of New England. There is a strange similarity found here to the snug little architectural mannerisms seen in the older parts of cities like New Haven, combined with a graciousness and leisureliness that is entirely the South's own. The streets are broad and shady, and the houses are beautiful and dignified, with doorways

raised above the basements, and with their porches and high stoops asserting an air of restful quietude.

The city, with its many open spaces is perfectly planned. In fact there is a pleasant, shady, grassy "square" to be found every block or so. The trees and shrubs which fill these squares, as well as the center spaces and sides of the larger streets, afford a profusion of luxuriant semi-tropical growth that is unequalled anywhere, even in Bermuda. It is remarkable, on coming up Bay Street from the docks, to note how well the large modern hotels and bank buildings fit into the picture. Luckily they are not numerous, since on the same square are such fine bits of early architecture as Christ Church (rebuilt in 1804). In the vista, two blocks away down Bull Street, set among tall, thickly clustered live oaks, is



The Old Brick Houses Possess a Quiet Dignity and Charm



J. P. [Signature]
1925

THE WELCOMING GRACIOUSNESS OF CURVING ENTRANCE STEPS



THE HUMBLE HOMES OF THE POOR HAVE A QUALITY OF PICTURESQUENESS ALL THEIR OWN



From Behind Old Walls of Brick and Stucco Peep Quaint Outbuildings

seen the pure Georgian spire of the old Independent Scotch Presbyterian Church. Just around the corner from a tall bank building is an old house, a sketch of which is shown here, which at present contains the office of an architect. Possibly the transition from new to old is facilitated by the masses of foliage with their deep and welcome shadows. The fine old granite Custom House and the shipping offices along Bay Street add much dignity to that part of Savannah. In the streets, which are mostly broad and quiet, one notes a certain casualness in the way an alley decides to be a street, and in the next block or so suddenly becomes an alley again.

There is about Savannah a spirit of easy-going kindliness, which spirit is supposed more or less to pervade the entire South. Here there is no mistaking it. These old brick houses have a feeling of quiet and calm about them, combined with a certain

welcoming graciousness in the curves of old marble steps and the wrought iron handrails as they lead up to the fine, old fashioned, white paneled doors.

Whether or not this charm is due to what a commercial man would call "business stagnation" and "low scale of wages" doesn't really matter,—that is, it doesn't matter to one who loves the beauty of old things. Certain it is that the architecture of Savannah possesses a characteristic charm of gentility and simplicity that is most difficult to secure in modern modes of building. It is possible that Savannah may have missed her opportunity for a business boom or something stirring. If this is so, we must confess that we are rather glad of it, for in missing much, she has in one way gained more, because it has been possible to preserve something that would otherwise have been demolished and trampled underfoot in the frenzied rush of modern business life.

The Olympia Fields Country Club

GEORGE C. NIMMONS & COMPANY, Architects

APPROXIMATELY three million people of the United States play golf, and approximately two million boys carry the clubs or caddy for these golf players. Nearly every city of from ten to fifteen thousand people has its golf club. Chicago alone has about 160 golf courses, which, if reckoned in acreage, would equal at least 15,000 acres of land. It is estimated that the members throughout the country will pay \$100,000,000 as club dues this year, of which the caddies will receive about \$40,000,000. In addition to this, according to estimate, \$50,000,000 will be spent for golf apparel, \$30,000,000 for golf balls, \$13,000,000 for golf clubs, and \$25,000,000 for new club houses. These figures testify to the value of golf.

Golf has become a topic of common conversation, a subject of news for the papers, and often a recreation in which all members of the family indulge. The up-to-date club furnishes not only facilities for playing golf but also amusements and entertainment for old and young of both sexes. It has become a social center for cards, musicales, dinner parties, outdoor and indoor dancing, and a place of residence for those who can take a vacation in the country during the summer. Any pursuit followed by so many people, who apparently find so much in it to attract and amuse them, must therefore be of material importance. And so golf has become within one generation one of the outstanding features of the social life of almost the entire American people.

During the last generation people became so intensely and strenuously absorbed in the business and professional activities of the day that it appeared as if there were nothing which could induce them to give up any time from continual pursuit of their daily occupations, which were materially affecting their health; and yet in some unaccountable way, golf has crept into the lives of these people and become an important part of it. Even among the busiest and most distinguished men of our times, engagements to play golf are given their places on office calendars among the most important business and professional appointments. At first it was with considerable misgiving on the part of many that they took this time off for play, and it was not an uncommon sight to see some prominent man keep himself in the background when he took the "golf special" for his golf club,—and if discovered by his principal client or customer, to remark casually that his physician had recommended that he take a little time off occasionally for recreation! When aboard the train, it is customary for four men who are going to play to find seats together, so as to discuss the important subject always to the fore on such an occasion,—that is, how many strokes as a handicap are to be given one pair of players by the other. Captains of industry and the cleverest of business men

will often use, for amusement, the skill and big business experience which they have acquired in trading, to secure the largest possible handicap to win three golf balls! Another popular subject of discussion is some phase of the theory of playing the game. So great is the skill which may be acquired, that perfection of play is rare, and this field of discussion is practically limitless. A skillful player may play the game easily and make his "par" with apparently little exertion, and yet at the same time, when in a tight contest and pressing for advantage, he may hit the ball from the tee with all his might, and when he comes near the green, handle his smaller clubs with all the delicacy used with surgical instruments.

Golf also reaches into the field of mental processes to be gone through with when making the strokes. There are only seven strokes which the well informed psychologist can explain in detail, and regarding which he can point out how the mind can be trained and disciplined so as to guide the hand properly in playing the game. One amusing thing about all of this is that the correct way to hit a golf ball is, as a rule, the very opposite of the beginner's conception of it, thereby adding much interest to the never-ending process of learning to play the game. The result of golf in this way has been nothing less than a life saver in this country, and the authorities agree that it has added as much as ten years to the lives of many of the men who have taken up the game. Golf is one of the cleanest sports we have, as it is seldom played for large stakes or made the medium of gambling. It has become a typical American institution, and is today exercising a most wholesome influence on the people of this country.

Golf club houses have become, therefore, one of the most important subjects for consideration and study by the architect. Golf club architecture in the beginning consisted largely of altering and enlarging the houses usually found standing on the land bought for the golf grounds. After that came the first new buildings, which very often had a common defect in plan and arrangement in failure to provide properly for the space needed and for the service required in the "back" of the house, and for the lockers of the golf players. Since then, however, these defects generally have been corrected, and the golf club house has been developed and improved so as to provide adequately for all of the service and entertainment required by its members. The club house caters to the entire family.

The Olympia Fields Country Club House, herewith illustrated, marks the completion of an undertaking by a few enthusiastic golfers, which was declared at first, on account of its size and cost, to be impossible of accomplishment, since the organizers were not men of large means. It presents an instance, however, which proves the strong appeal of



Detail, Fireplace in the Great Hall

golf today, and of the surprising extent to which the golfer will give backing and support to the erection of his club house. The management of the club now proudly announces that "The Olympians" have the largest and most complete club house in the world. It undoubtedly is the "largest," and the declaration as to its being the most complete is of course only the normal and natural expression of a well pleased client, the truth of which will be correctly and dispassionately judged in due time by the public. The club was originally organized nine years ago by Charles Beach, who discovered a beautiful tract of 700 acres of land and originated the idea of having four wonderful golf courses radiating from a prominent central spot on which should be built a great club house, commanding attractive views down the courses which were to center at this place. In addition to golf there were to be provisions for all the other outdoor games and a headquarters for outdoor athletics, which was suggested by the original Olympia of Greece, from which he took the name. For his success in carrying through his undertaking he depended upon the beauty and fitness of his land, the great plan of his enterprise, and its resulting appeal to the golfer. Mr. Beach won, and with the assistance of Alonzo A. Stagg, Athletic Director of the University of Chicago, James P. Gardner and Charles M. Smalley, the three men acting in turn as presidents of the club, and with the hearty support of many other enthusiastic Olympians, the undertaking was carried through and the club was made complete in almost every detail. It has 1000 regular

members and 300 members of other classes. The membership is complete, and there is now a waiting list. The dues are \$125 per annum, and the annual income from all sources is about \$225,000. The land and all the improvements are paid for, and the only financial obligation is a bond issue, held by the members, of \$500,000 on a property the value of which is \$2,500,000. The finances are on a firm basis.

The land comprises approximately 700 acres of rolling, partly wooded, country, with a stream of water running through it, and it is located about 25 miles south of Chicago on the Illinois Central Railroad. It was bought for \$300 an acre, and now with the completion of the club house a value of \$2,000 per acre has already been established for the poorest residential property in the vicinity. The land can conservatively be valued at \$1,500,000. The club house consists of a series of buildings one and two stories high, all joined and arranged around two courts. The front of the main building is about 600 feet long. The construction is fireproof, made in some parts of concrete and in others of steel skeleton and tile. The total cost of the building and its furnishings was \$1,000,000, these being recent figures.

In designing the structure, the scheme adopted for the plan included a wide veranda in front, overlooking the courses and acting as a thoroughfare connecting the men's and women's locker buildings with the cafeteria between them. The north end of this veranda connects with the main part of the club house containing the dining rooms, the great hall, and administrative departments. The south end of the veranda connects with the caddy and club storage departments, the club professionals' headquarters, and the golf shop. The providing of caddies and the taking care of clubs are a complicated proposition where there are four golf courses and about 10,000 clubs to be cleaned and carefully put back into 1,200 golf bags, when it is remembered that the misplaced or lost club of any member is sure to be his favorite club, and that its loss will cause a protest from him sufficient to raise the roof. Such is its importance.

When a member determines the course over which he wishes to play, a caddy is selected for him and sent with his clubs to the course selected. Here again accuracy and good organization are required of the club management in order to prevent sending the caddy to the wrong course, which would cause delay and confusion. This club has about 1,400 boys registered for caddy service; there is a caddies' club house with its playground, where play is supervised and instruction given as to the boys' duties.

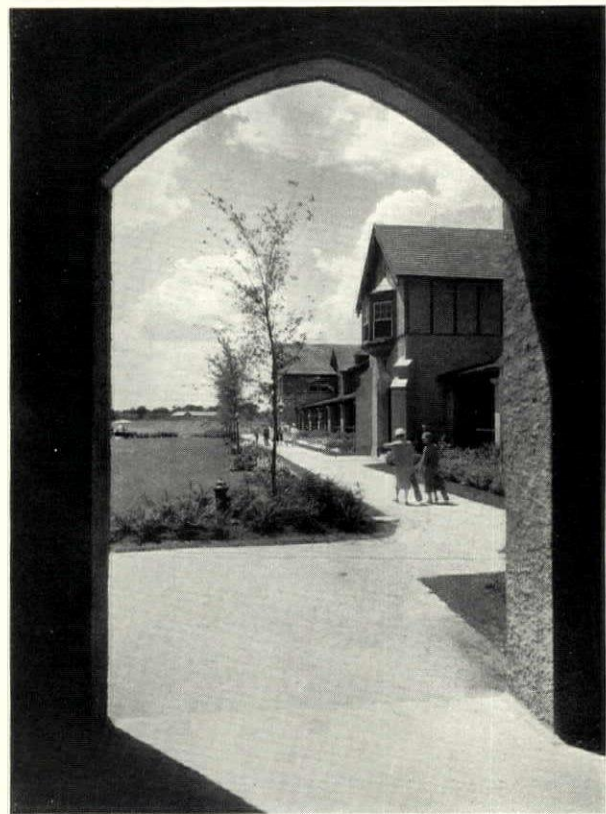
The locker departments are no doubt the most important feature of the club house. There are two separate wings of the building built for this purpose, one for men and another for women. Between them there is to be a swimming pool set in a garden not yet completed. The men's locker wing is a large cross-shaped building, as is shown by the plan. It contains 1,200 lockers. The reason of its being

cross-shaped is that this is the one form that makes shorter the distance to the shower and toilet rooms and to the front of the building, where the headquarters of the valet service is located. Good valet service in a locker room is the finishing touch to the convenience and enjoyment of the golf player. The valet chief is the intimate and dependable friend of everybody, because it is to him and his organization that each man must look to take care of his laundry work, sew on the vital buttons, shine his shoes, do up his bundles, bring the drinks, deliver messages to friends, break the news to those at home that father has been unavoidably delayed and may be a trifle late for dinner, and to perform a number of other diplomatic services that have to be rendered. Here the valet chief has an organized headquarters with information desk, tailor shop, shoe shining shop (where shoes are shined by machinery, since there are hundreds of them), a regular soft drink bar, and a mechanical clothes drying equipment for use on rainy days. Equipment is unusually complete.

The main room of the men's locker department is a huge affair, some 250 feet long, with a floor plan which suggests that of a cathedral, and with clerestory and side windows that give good light and ventilation. The shower baths are enclosed in separate rooms and not arranged around the walls of the locker room, as in a few recent clubs, because it has been found that this latter arrangement creates so much moisture in the air that at times the metal parts of clubs in the lockers will rust, clothes will become damp, and shoes mildew. The lockers are each 2 feet square, of steel, and arranged in alcoves with a bench and carpet in each aisle. In addition to the lavatories and toilets there are a barber shop and rest room, adjuncts which are found to be useful.

Women have equivalent facilities in their wing of the building. The lockers have the same arrangement as those of the men, and the organization of maid service is as complete as that of the valet service for men. In connection with this wing there is a separate department for small children, with its special toilet facilities. There is also near the clubhouse an attractive playground completely equipped for children. The women's club room, at the front of their locker department, has connection with the cafeteria kitchen, from which tea and refreshments can be served. The cafeteria is located between the men's and the women's locker departments, and serves cafeteria luncheons during the noon time only. Other parts of the club house include the lobby, the great hall (called "lounge" on the plan), the cafe, the main dining room, kitchen and administrative offices, all arranged conveniently to one another.

The arrangement adopted for the approach to the club house and for the parking of cars has proved most satisfactory. The old arrangement, formerly adopted by country clubs, of allowing chauffeurs to drive up to the front doors or under the buildings, has with the increase in the number of cars used become the most disturbing and disagreeable



Detail, Path to the Locker Rooms

feature of a country club where this arrangement exists. The plan adopted here, which means having the main entrance to the lobby in the rear of the house, with a large parking space extending away from the building, has resulted in making it possible for hundreds of cars to arrive and depart without being heard by those in the front of the club house. The suburban railroad station is located a short distance to the rear of the club house, and within its own grounds, forming part of the club.

The great hall or lounge is a huge room, resembling somewhat the principal room in an old baronial hall, with its great timber trusses, 40 feet high to the apex of the roof, its oak paneled walls, large fireplaces, and with its ample musicians' gallery at one end. This hall, however, has its windows extending down near or to the floor, through which on one side appears the garden court with its fountain, trees and flowers, and on the other are seen the veranda and vistas of some of the landscape features of the various golf courses, which are unusually beautiful.

The main dining hall is on the opposite side of the garden court from the great hall; the cafe forms another side, and in front are the terraces, including the semi-circular dancing terrace, surrounded by a stone balustrade. The kitchen, as shown by the plan, has an unusual location in reference to the main dining hall and cafe. It extends diagonally away from the angle at which these two rooms meet. This arrangement has the advantage of bringing the kitchen into the closest possible relation with the middle of these two rooms, thereby shortening ma-

terially the line of travel of waiters in the service of food. In case also of a large gathering at the club, the speakers' table can be located at the angle of the two dining rooms, from which place the voices will carry farther than from any other point.

The kitchen is finished in white with blue trimmings, and it is fitted up like a workshop with all of the latest equipment for producing good food and for affording the best of service. It has good light and ventilation, and below in the basement are some unusual features. It has four very large refrigerator rooms, in which an ample supply of perishable foods can be kept. The kitchen store room resembles a grocery store. The kitchen employes have their own locker and toilet rooms and a cafeteria dining room. There is also an officers' dining room and a place for members' chauffeurs, an employes' rest room, a hospital, a complete laundry, an ice-making room, a carpenter and paint shop, and a place where the garbage is treated by a process which consists, first, of recovering all of the flat silverware which has gotten through the kitchen and pantry (and this is a considerable amount), and then preparing the garbage for sale to the farmers for use as fertilizer, an excellent means of disposition.

There are about 300 regular employes of the club, and an additional 100 waiters are required for week-ends. A large servants' dormitory is located in the woods some little distance from the club house, where they are comfortably housed and where they can have their recreation and make all the noise they desire. These provisions for employes and the various departments for service at the back of the club

house are very essential, in order that such an institution may operate economically and give service.

The entire front of the club house, with an extent of some 600 feet, has a second story in which are located about 80 bedrooms for members. Some of these are single rooms, and others are family suites of rooms with private baths and all the appointments of a modern hotel. The men also have a large card and game room in the second story.

The exterior of the building is of stucco with a dull red tile roof and pre-cast stonework. An old fashioned veranda extends across the entire front of the building, with a half-timbered treatment of the story above. The great hall and dining hall have a somewhat Gothic character, which was often the case with the great halls of large country houses of England during the Tudor period, when some of the best country homes there were built by craftsmen who were themselves, or the descendants of, the great cathedral builders of England. The main floor plan of the club is similar in arrangement also to the plans of many old English country houses, in that the principal rooms are arranged around courts, just as were the rooms in many of these old buildings, a beautiful and picturesque arrangement.

The Olympia Fields Country Club, with its buildings and grounds completed, now starts forward on its career, which promises to be long and successful. If the game of golf continues to hold its present place in the estimation of the public, of which there is every indication, this club has a great opportunity to contribute materially to the enjoyment and health of a great many people for quite a number of years.



Garden Court, Olympia Fields Country Club, Olympia Fields, Ill.

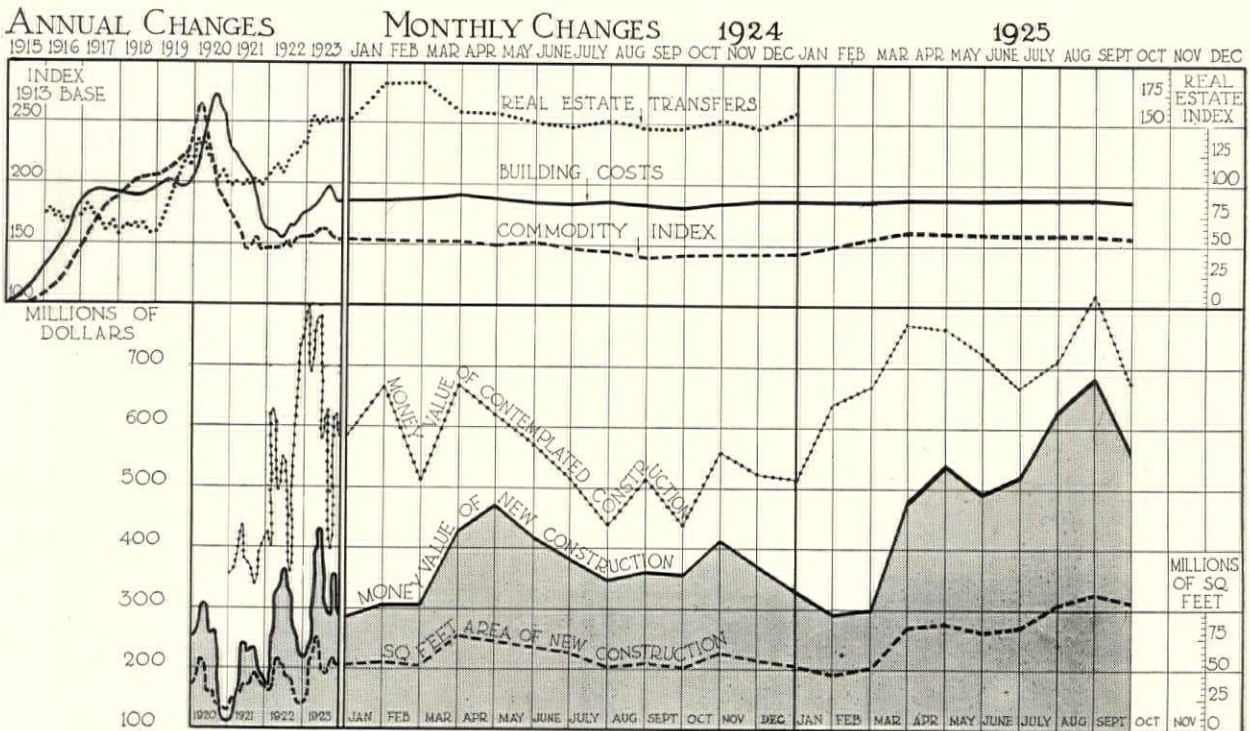
THE BUILDING SITUATION

A MONTHLY REVIEW OF COSTS AND CONDITIONS

BUILDING activity continues throughout the country at an unprecedented rate, as evidenced by the trend of the various lines in the chart included here. There is, of course, a natural falling off of activity as we enter the fall and winter months, but it will be noted that the September volume of building construction breaks all records for that month, and is over 50 per cent higher than for September of last year. The interesting fact in connection with this activity is that it shows no sign of "mushroom" growth, but is based upon the sound economic development of the country. The building which is represented by the great volume of this year has been developed to meet still existing shortages, and it also reflects strongly the attitude of the investing public, which finds in the building field sound collateral and an interesting return in both turnover profits and net rentals. There is still a heavy contribution of new buildings erected for speculative purposes, but it may be well to note that the general character of such structures is much better than it was a few years ago. The mortgage

interests have deliberately discouraged the very cheap and shoddy types of residential construction.

Reports from architects throughout the country indicate that most offices are busy, and that the character of the work is generally better than it was at this time last year. It is still too early to predict definitely as to 1926 activity, but the Annual Survey and Forecast of THE ARCHITECTURAL FORUM for next year is now in preparation, and it is believed that some interesting facts and figures will be divulged when this estimate is completed. An encouraging fact is that in spite of the huge volume of construction, there is no sign of withdrawing on the part of mortgage interests, and there is no feeling in business circles that too much money is going into building. On the other hand, it is the general opinion that building activity is one of the strongest economic contributors to the prosperity of the country. 1926 is evidently to be more than a \$6,000,000,000 building year, and will probably establish a record which will not be equaled for many years. This momentum should not drastically decrease.



THESSE various important factors of change in the building situation are recorded in the chart given here: (1) *Building Costs*. This includes the cost of labor and materials; the index point is a composite of all available reports in basic materials and labor costs under national averages. (2) *Commodity Index*. Index figure determined by the United States Department of Labor. (3) *Money Value of Contemplated Construction*. Value of building for which plans have been filed based on reports of the United States Chamber of Commerce, F. W. Dodge Corp., and *Engineering News-Record*. (4) *Money Value of New Construction*. Total valuation of all contracts actually let. The dollar scale is at the left of the chart in millions. (5) *Square Foot Area of New Construction*. The measured volume of new buildings. The square foot measure is at the right of the chart. The variation of distances between the value and volume lines represents a square foot cost which is determined, first by the trend of building costs, and second, by the quality of construction.

Down Draft and Dutch Oven Furnaces

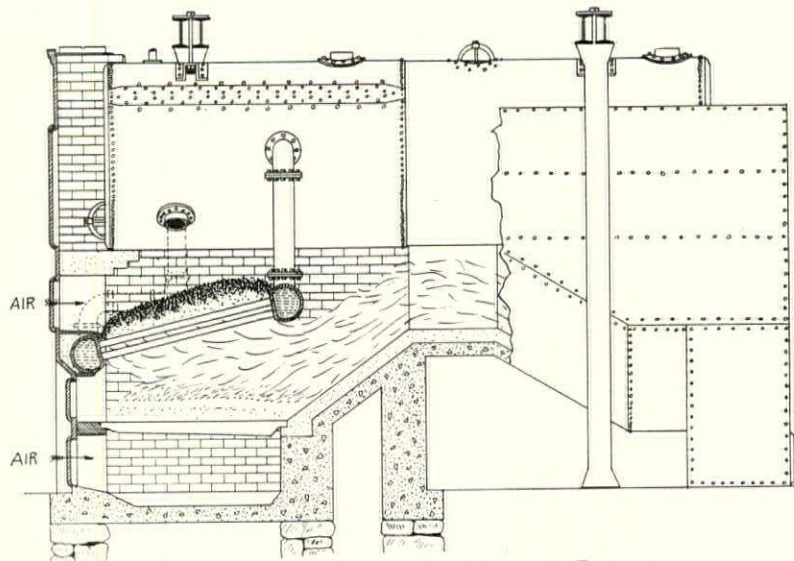


Fig. 32. Down Draft or Double Grate Furnace

Down Draft Furnaces. These are really double-grate furnaces. The boiler in each is fitted with the regulation common grate, then above this, (as shown in Fig. 32) is a water-tube grate with water from the boiler circulating through it. Coal is fired on the water-tube grate, and air is admitted above it, so that the flames pass downward into the firebox and combustion chamber. Spent fuel and small particles of coal which fall through the water-tube grates are caught on the regulation common grate, where they are consumed. The reason for using the down-draft furnace is to eliminate smoke. Most cities which have smoke ordinances limit the amount of smoke to 10 per cent, and hand firing with ordinary grates creates a dense smoke every time the fire door is opened and a fresh supply of coal is thrown on the fire.

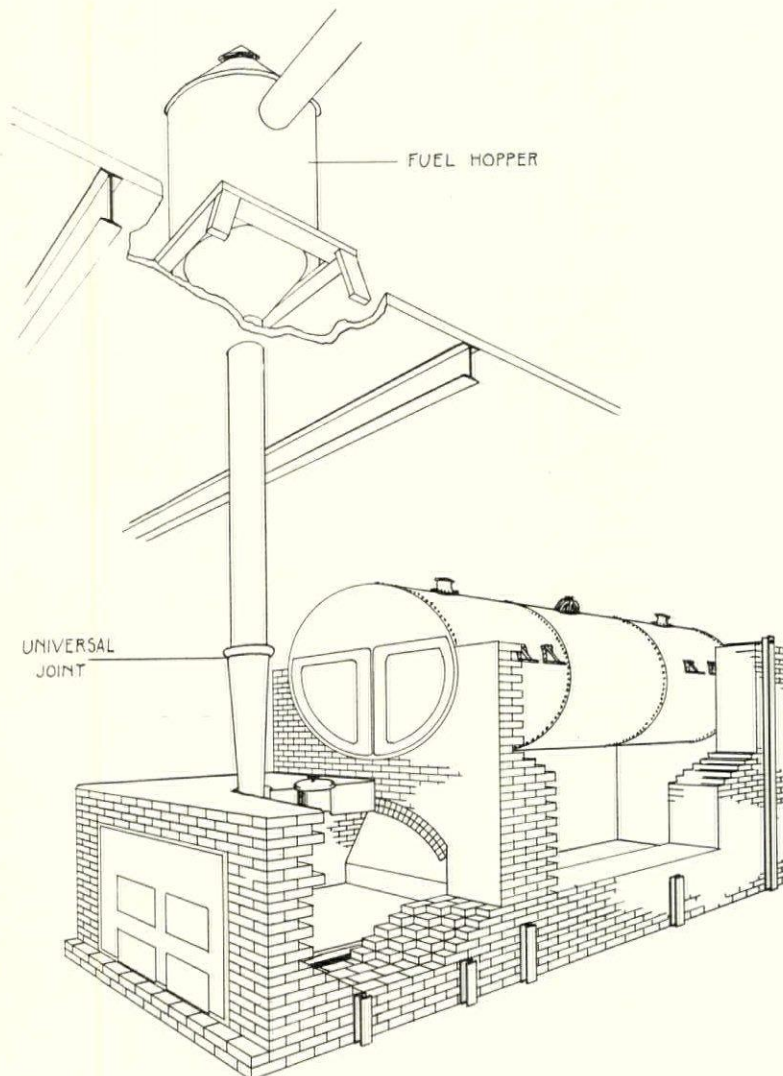


Fig. 33. Dutch Oven Furnace

Dutch Oven Furnaces. The Dutch oven type of furnace is strictly an industrial type, used in plants where there is accumulated a large amount of combustible material that would prove troublesome refuse if it could not be burned. Large mail order houses and similar institutions grind up their refuse packing materials, such as pasteboard boxes, packing boxes, straw, excelsior, cord, parchment—everything burnable in fact,—and feed it into the Dutch ovens. Mills obtain the power to operate machinery by burning in Dutch oven furnaces their sawdust, shavings, tanbark, bagasse, and other refuse. Large material is cut up in a "hog," a machine designed for the purpose. The trunk of a tree 16 inches in diameter can be put into the hopper of a "hog" and will come out at the other end cut up into chips. Fuel for a Dutch furnace can be fired automatically, as shown in Fig. 33. A blower carries the chips from the "hog," or the sawdust or shavings from the pile to a hopper located at a higher level than the boilers. From this hopper the fuel is fed by gravity to the Dutch oven furnace, entering the top openings. A Universal joint on the feed pipe enables the fireman to feed the oven through either of the inlets, and to remove the spout when a charge has been put in. Dutch oven furnaces will burn also the lowest grades of coal, lignite, coke breeze or peat.

ENGINEERING DEPARTMENT

Power and Heating Plants

COMMERCIAL TYPES OF BOILERS AND FURNACES

By J. J. COSGROVE

IN order to bring out interesting points relative to water-tube boilers, we may select certain well known standard makes. For purposes of this discussion these will be called First Type, Second Type, etc., and special features of each will be pointed out. Architects wishing further details and manufacturers' names may communicate with the author through the office of THE ARCHITECTURAL FORUM. The selection of types mentioned is made at random.

Water Tube Boilers

First Type. A water-tube boiler of the cross-drum type as shown in Fig. 34. A cross-drum boiler differs from a longitudinal-drum boiler primarily in that the steam drum at the top is crosswise with the boiler instead of parallel with it. A marked difference be-

tween this and other types of water-tube boilers is in the headers used for a bank of tubes. Other water-tube boilers have either a drum or water-leg for a header. In this boiler a bank of tubes is connected to front and rear headers of wrought steel (Fig. 35) which are separate completely from the other tubes in the nest, so that one bank of tubes can be removed as a unit without disturbing the rest.

Instead of using vertical baffling, this or any other water-tube boiler can be horizontally baffled, so that the flames and hot gases will move along the bank of tubes, instead of crosswise, thereby setting up numerous eddies, reducing the draft and leaving "dead spots" where hottest flames and gases do not reach.

Second Type. A water-tube boiler as shown in Fig. 36. In this type of boiler drums are used instead

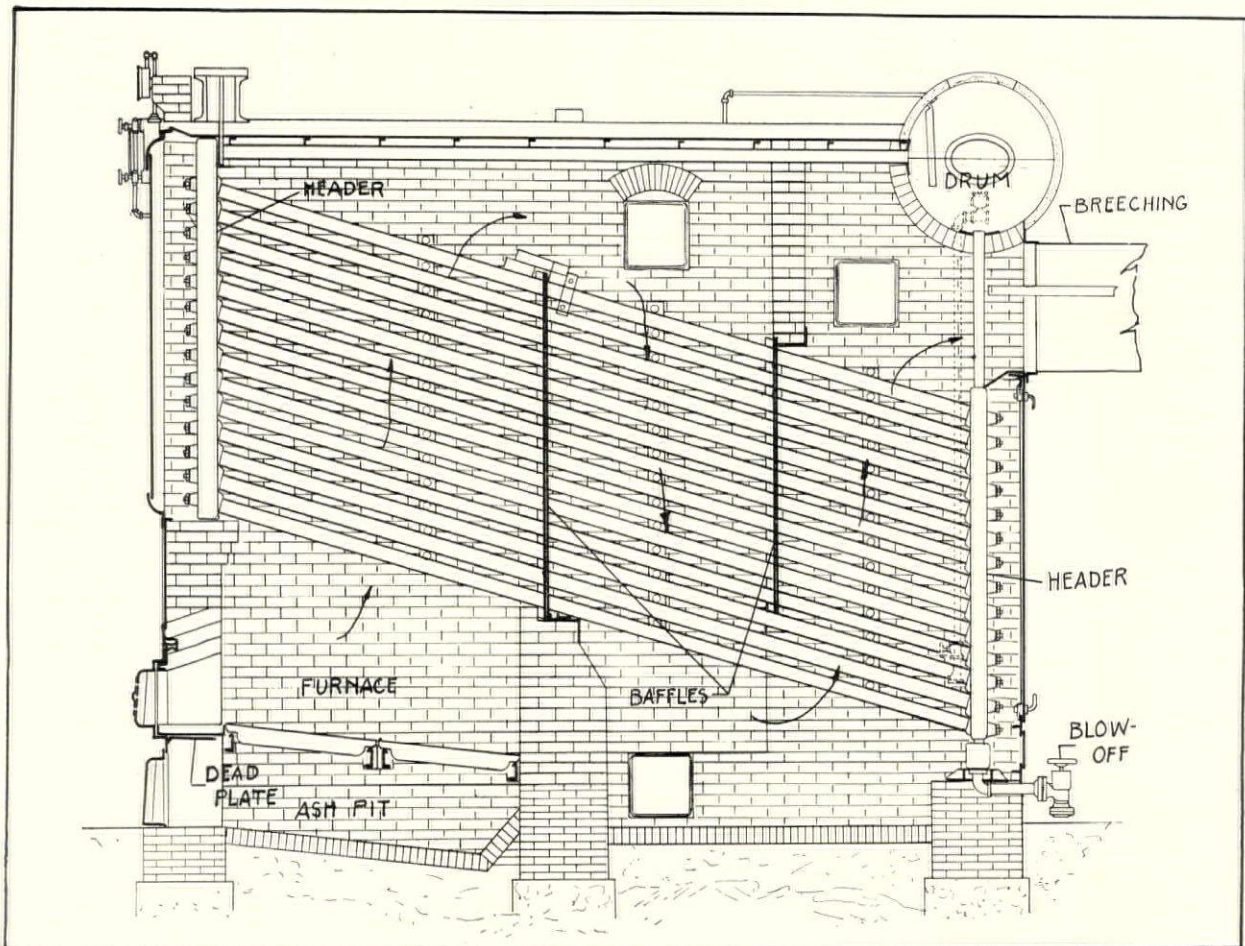


Fig. 34. Cross Drum Water Tube Boiler
First Type Discussed in Text

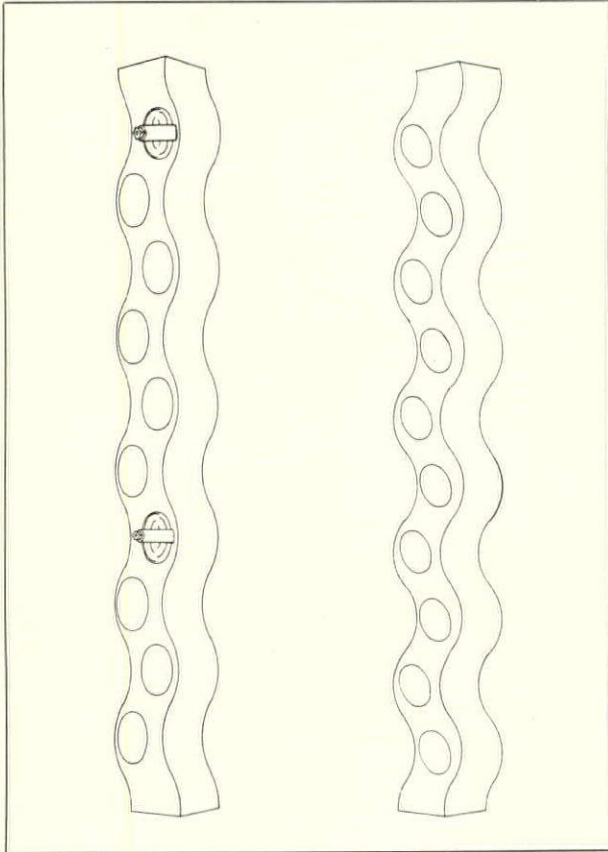


Fig. 35. Front and Rear Headers

of either water legs or headers. It is also a bent-tube boiler, in that the water tubes are curved to ease the stress from expansion and contraction. The baffling and direction taken by the flames and hot gases from furnace to breeching are clearly indicated by the arrows.

Third Type. This boiler as shown in Fig. 37 is a water-leg boiler, the water tubes connecting to water legs at front and rear. The drum is longitudinal. (All manufacturers of boilers make both the cross and longitudinal types.) This boiler is vertically baffled in what is known as the single-pass design,—that is, the gases pass only once forward and back from the combustion chamber before escaping up the stack. The lower baffle, directly over the firebox or furnace, it will be noticed, is *below* the lowest row of tubes. With a low setting this maintains a higher temperature in the furnace than would be possible if the lower course of tubes were ex-

posed to the flames, and insures a quicker ignition.

Fourth Type. This type of boiler is shown in Fig. 38 and is unique in many ways. It is all furnace or combustion space, so that all of the heating surface is prime surface. It has no bridge wall or baffles, and the travel is direct from the firebox and combustion chamber straight up to the breeching.

Owing to the ease with which water-tube boilers can be repaired and parts replaced, their lives are longer than those of the horizontal tubular boilers.

Baffling Water Tube Boilers

Investigations by the Bureau of Mines show that: (1) A boiler whose heating surface is arranged to give long gas passage of small cross section will be more efficient than a boiler in which the gas passages are short and of large cross section. (2) The efficiency of a water-tube boiler increases as the free areas between individual tubes decrease, and as the lengths of the gas pass increase. (3) By inserting baffles, so that the heating surface is arranged in series with respect to the gas flow, the boiler efficiency will be increased. These results point to the desirability of using horizontal baffles.

In a series of tests on a vertically baffled boiler, using pyrometer measurements, only about 60 per cent of the surface was an active heat absorber, the remaining 40 per cent representing dead pockets. This can be seen by referring to Fig. 39, where the shaded portion represents the dead pockets and the

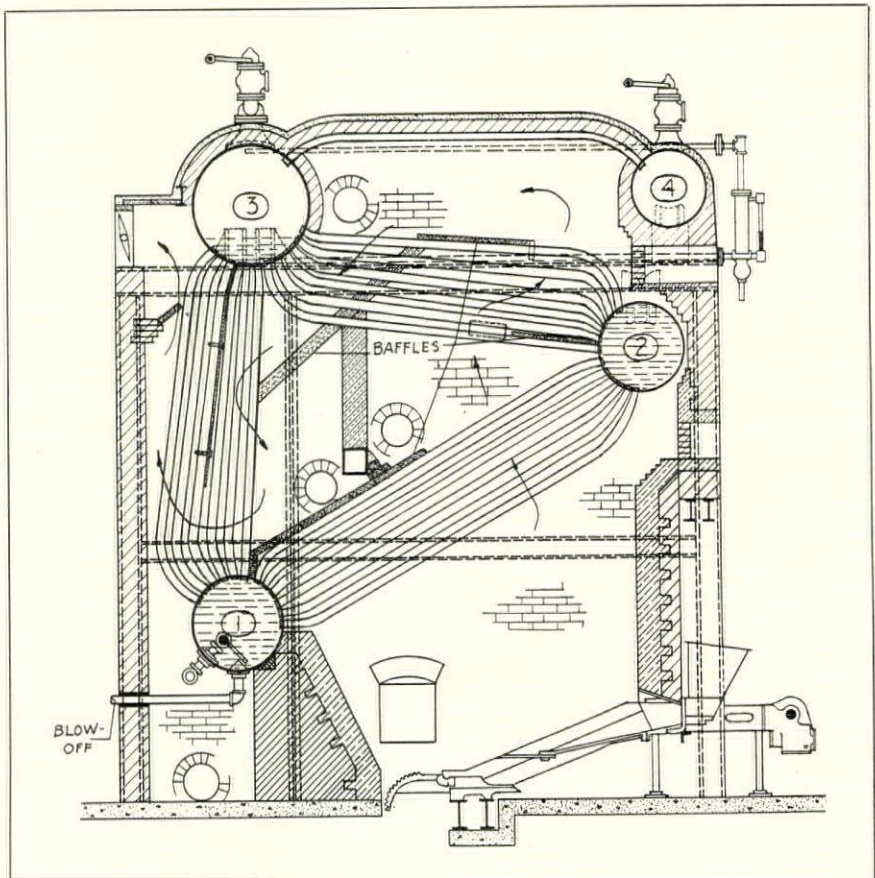


Fig. 36. Bent Tube Design Water Tube Boiler
Second Type Discussed in Text

unshaded portion the passage followed by the flames.

Third Type. Fig. 37 shows a single-pass horizontal baffle. When necessary, horizontal baffles can be arranged in water-tube boilers for single pass, double pass or triple pass. The horizontal three-pass baffling gives the highest evaporation, and the horizontal two-pass develops the highest horse power when burning high volatile coals. It is difficult to keep vertical baffles tight, and yet if they are not tight they allow the flames and hot gases to short circuit, resulting in high temperatures and lower efficiency.

Furnace Design

From an economic standpoint, the proper design and proportioning of the furnace are the most important considerations in securing high boiler efficiency. A single design and proportion of setting cannot be standardized to meet the various requirements of fuel, space and operation. To obtain complete combustion of the fuel used, different designs and proportions are required for high and low volatile coals, gas, fuel oil, sawdust, and pulverized coal for hand firing and for stoker firing, for forced draft and for natural draft, and for moderate or excessive consumption of coal per square foot of grate surface. The three essentials of combustion are: (1) Sufficient space for the mixing of air and gas. (2) High

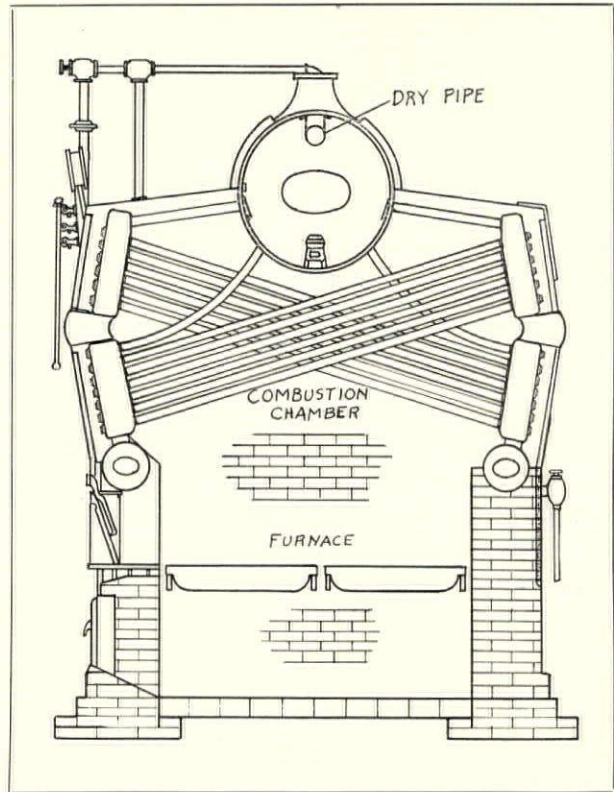


Fig. 38. Fourth Type Boiler Discussed in Text

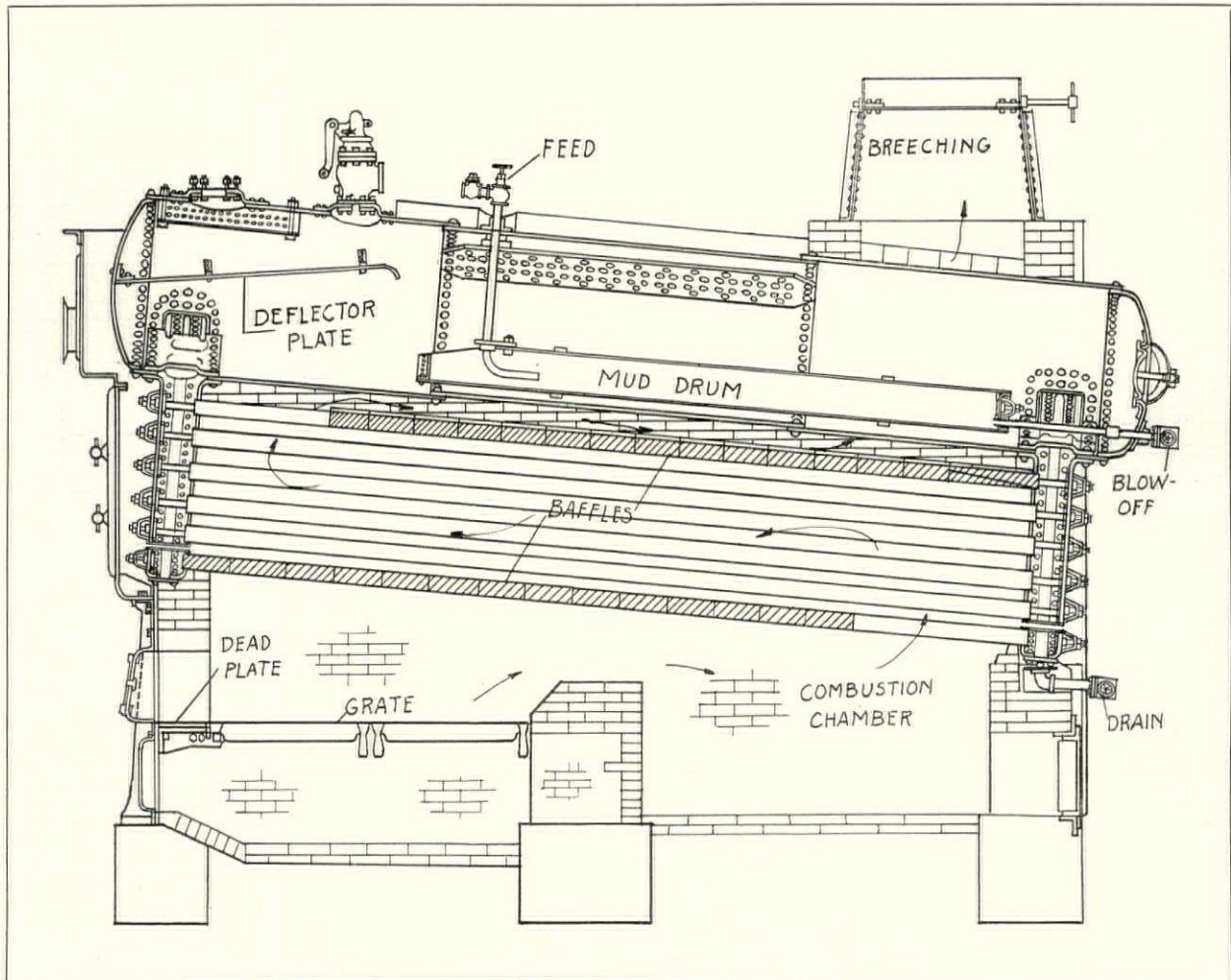


Fig. 37. Showing Baffles in Single Pass Design
Third Type Discussed in Text

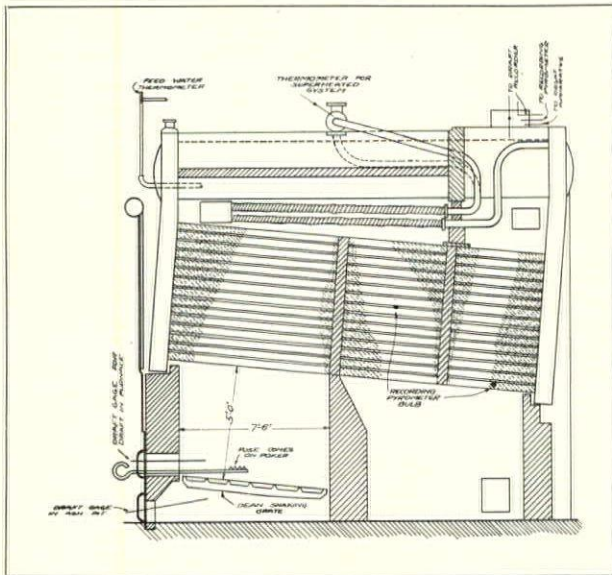


Fig. 39. Dead Pockets in Vertically Baffled Boiler

temperature to ignite the mixture. (3) Time for the mixture to burn before reaching the breeching outlet.

Furnace Volume. The area of a boiler setting being determined by the size of the boiler, any increase of furnace volume (outside of the Dutch-oven type) must be gained by increasing the height of the boiler above the grates. The distances of heating surface above grates for hard coal range from 18 to 20 inches, it is found, in general practice.

The combustion space required for a boiler, and the height of setting, will depend upon the kind of fuel to be used and the maximum amount of fuel to be burned per square foot of grate surface. Small heating boilers in residences burn from 2 to 3 pounds of coal per hour per square foot of grate surface. Power boilers, hand stoked, will range from 15 to 20 pounds of coal per hour per square foot of grate surface, while mechanical stokers will burn from 25 to 65 pounds of coal per square foot of grate surface.

Theoretically, each pound of coal requires 12 pounds of air for its combustion. On account of stratification of air and gases, the large amount of nitrogen in the air, variations in fuel, and mechanical interference of ash and clinker, about 50 per cent more than the theoretical amount of air must be supplied. But about 75 per cent of all settings leak, so that from 40 to 50 per cent of excess air finds its way into the boilers from this source.

The results of several tests which were conducted by the Bureau of Mines, using coals of different composition, with 50 per cent of excess air, can be seen in the chart Fig. 40, which is included here.

Height of Boiler for Smokeless Setting. The best heights for horizontal return-tubular boilers to insure smokeless operation when hand fired, can be found in Table V, which is included immediately below.

Diameter of Boiler, Inches.....	42	48	54	60	66	72	78	84
Distance from Dead Plate to Under Side of Boiler, Inches.....	28	30	32	34	34	36	38	38

The height of setting for hand-fired, water-tube boilers, and for both water-tube and horizontal tubular boilers operated with different types of grates and stokers, can be found in Table VI. These are for the smokeless combustion of soft coal under average conditions. All the dimensions are in inches.

TABLE VI
Heights of Smokeless Boiler Settings, Shell to Floor

Kind of Furnace Grate or Stoker	Horizontal Return Tubular				Water Tube				Continental or Scotch Marine
	Diameter in Inches				Baffles				
	54	60	66	72	Hor. 1 1/2" pitch	Vert. 1 1/2" pitch	Hor. 3/4" pitch	Vert. 3/4" pitch	
Hand Fired									
Down-draft.....	60	60	60	60	72	*	78	*	*
McMillan.....	52	54	60	60	72	*	78	*	**
Twin-fire.....	58	60	62	64	72	*	78	*	*
Semi-extension refuse-burning	†	†	†	†	84	*	90	*	*
Gravity Feed									
Burke.....	48	48	50	54	60	*	66	*	Full Extension
McMillan.....	48	48	50	54	60	*	66	*	" "
Front Feed									
Chain Grate...	72	72	78	78	84	114	96	120	**
Moore.....	48	54	60	60	72	120	78	106	**
Roney.....	60	60	60	72	84	108	90	120	**
20th Century..	54	60	66	72	84	108	90	120	**
Side Feed									
Detroit.....	66	72	78	84	90	*	96	*	Full Extension
Model.....	66	72	78	84	90	*	96	*	" "
McKenzie.....	66	70	70	90		*	96	*	" "
Murphy.....	66	72	78	84	90	*	96	*	" "
Under Feed, from Shell to Dead Plate									
American.....	42	42	42	42	78	96	84	102	**
Jones.....	36	38	40	42	78	96	84	102	{ Min. Diam. of Furnace 36 ins.
Taylor.....	**	**	**	**	84	102	90	108	**
Westinghouse..	**	**	**	**	84	102	90	108	**

*Combination not recommended as smokeless setting.
**Combination not ordinarily met with in practice.
†Applied only to water-tube boilers.
(Table after O. Monnett.)

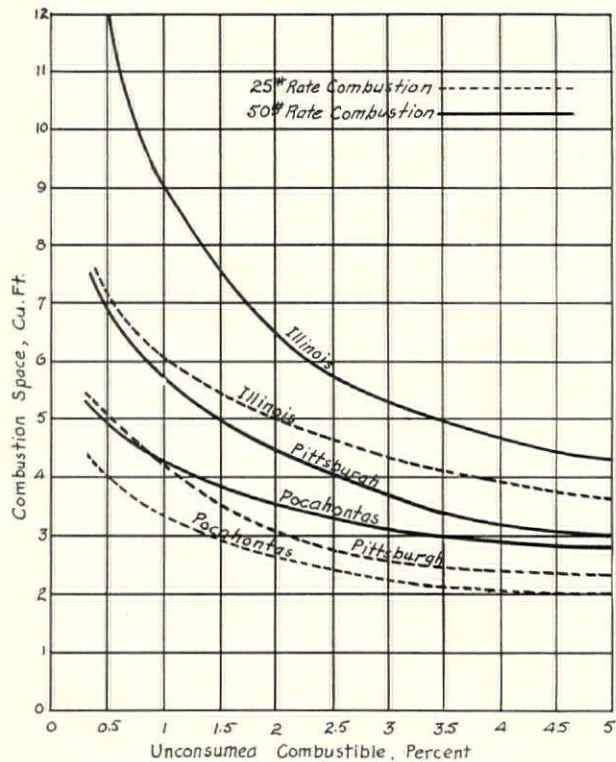


Fig. 40. Bureau of Mines Tests of Mechanical Stokers

This chart shows the cubic space required when burning three well known varieties of steam coal at two different rates of combustion. The dotted lines indicate a rate of 25 pounds of coal per hour per square foot of grate surface; the solid lines indicate a rate of 50 pounds of coal per hour per square foot of grate surface. Outside of the Illinois coal, burning at the highest rate, the results call for spaces in the combustion chamber of from 4.5 to 7.5 cubic feet, or an average of about 6 cubic feet per square foot of grate surface.

The New Nicollet Hotel, Minneapolis

HOLABIRD & ROCHE, Architects

IN response to a long felt need in Minneapolis, the Nicollet Hotel has been rebuilt. The project was sponsored by the Minneapolis Civic and Commerce Association, a group of progressive men who realized the necessity of creating adequate hotel accommodations for the rapid development of business and industry in the city. The site of the old Nicollet House, a landmark of Minneapolis for the last 67 years, was chosen for the new hotel. This location could not have been bettered. It is convenient to the industrial and wholesale areas of the city, adjoins the fashionable shopping district, and is within three blocks of both the railroad stations. Moreover, this site commands a view over Gateway Park; it is a wedge-shaped area, formed by the junction of Nicollet and Hennepin Avenues, the two principal thoroughfares of Minneapolis, and an excellent setting is thus provided for the building, one of the most prominent in Minneapolis.

The structure is 12 stories in height and contains, in addition to its public rooms, about 600 guest rooms, 12 of which are also sample rooms. All of the street frontage is reserved for shops, etc., with

the exception of the spaces used for the two entrances to the hotel. The architects have seized the opportunities offered by the splendid setting and have erected an imposing monument in the style of the English Renaissance. Conforming to the trend of the times, they have relied for interest upon silhouette and mass rather than upon extensive use of ornament. The exterior of reddish brick with terra cotta trim has been kept simple almost to the point of severity. Use of costly architectural detail has been minimized to allow for the extra expense incurred in creating a building which is complete from all sides. Although Minneapolis has not yet adopted the zoning setback regulation in vogue in New York, the architects deemed it advisable to be a step in advance of the time, and have accordingly planned setbacks on Washington Avenue and on the alley side, as well as a shallow light court on the Hennepin Avenue front, thus affording light and air.

This same note of simplicity and refinement is dominant in the interior architecture and decoration of the hotel. The wide promenade that stretches the length of the block between the Nicollet and the



The New Nicollet Hotel from Washington Avenue

Hennepin Avenue entrances is paneled in walnut, as is also the elevator lobby, and the rich furniture coverings lend color to the whole. Centrally located in the building, and opening from this promenade, is the main lobby, a commodious room of excellent proportions, two stories in height. The walls and pilasters are of specially selected walnut rubbed with wax, and the bases of the pilasters are of burl walnut. The floor is of a native marble bordered with a verde antique band. Moulded plaster is an antique ivory tone forms the ceiling, from which hang two large lighting fixtures, the rest of the illumination coming from nine bracket lights on the walls.

Across the promenade from the lobby is an *entre salle*, also paneled in walnut, which opens into the main dining room. The walls of this room are of an Elizabethan oak design, developed in plaster and so decorated as to faithfully reproduce the color and texture of wax-finished white oak. A narrow frieze between the wall panels and the ceiling adds richness by simulating the characteristic inlay work of the period in ebony and pearwood. The ceiling tone is a rich old ivory, and a particularly fine design of the period has been developed in moulded plaster. On the ground floor are also the quarters of the Traffic Club, its billiard and conference rooms being below in the basement, reached by a private stairway.

Located directly above the dining room on the second floor is the magnificent ball room, measuring 180 by 52 feet, with its accompanying promenade

and assembly rooms. This serves as both ball and banquet room, and can accommodate about one thousand people. Folding doors of walnut are arranged to shut off the two ends of the great room when desired, and three separate rooms can thus be created. The ball room is designed in the Georgian style, having rich plaster ornament. The mezzanine writing room and lounge on this floor are developed in tones of old ivory to harmonize with the lobby which it overlooks. The remainder of this floor is devoted to three large private dining rooms, charmingly decorated, quarters for the Old Colony Club, 12 sample rooms and a "beauty parlor." The sample rooms are fitted with concealed beds and all the newest features for display of samples. From the hotel's roof garden a view over the city is had.

Ventilation is provided for all dining rooms, lobbies and special rooms by supplies of washed and tempered air, together with positive exhaust of all vitiated air through the highest point of the roof. The hotel is built of skeleton concrete construction. The floors are of solid concrete slabs, spanning the widths of the rooms for the most part, with beams located on the partition lines. In the bays which form the bathrooms, closets, etc., two-way slabs have been used, with beams on the center lines of columns. The foundations are in general spread footings, bearing on sand. A few of the column footings around the boiler room extend through the overlying sand and bear down upon the solid rock.



Main Lobby, New Nicollet Hotel, Minneapolis

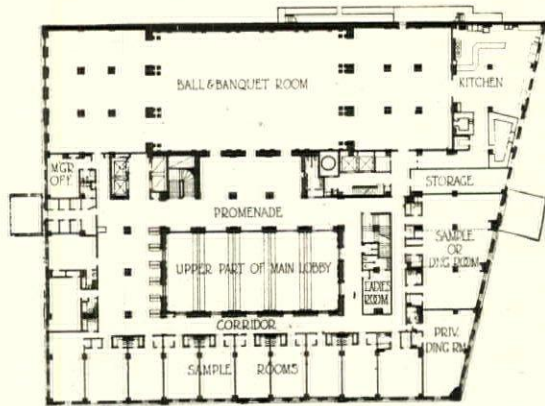
Holabird & Roche, Architects



Photos, Trowbridge

THE NEW NICOLLET HOTEL, MINNEAPOLIS
HOLABIRD & ROCHE, ARCHITECTS

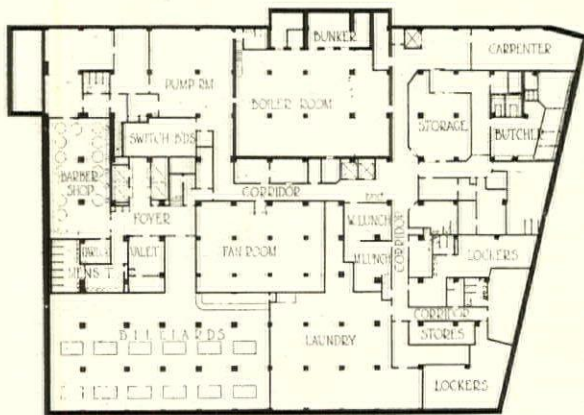
Plans on Back



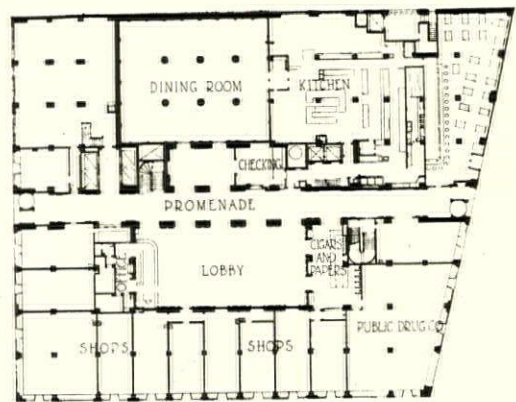
SECOND FLOOR



THIRD FLOOR



BASEMENT



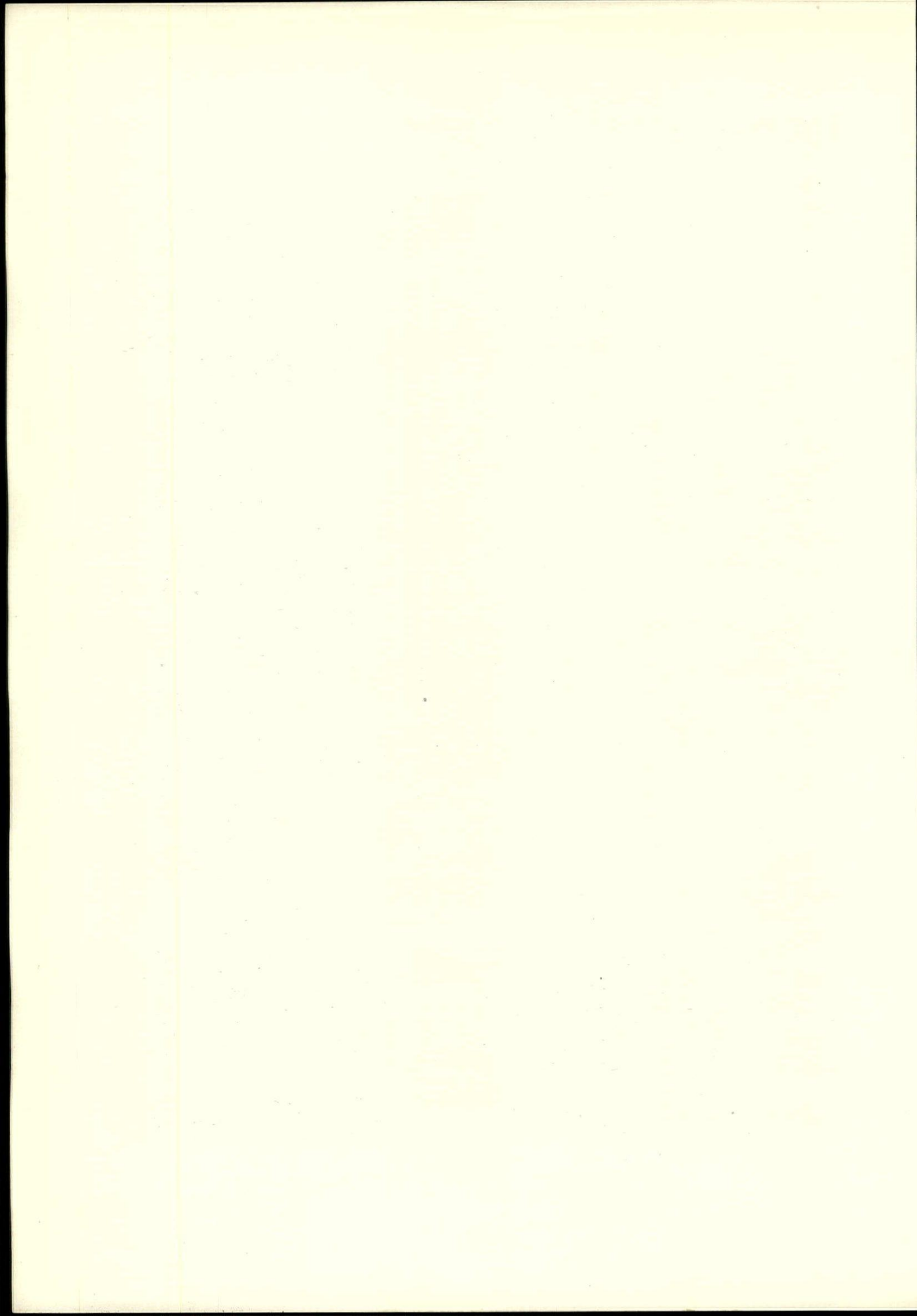
FIRST FLOOR

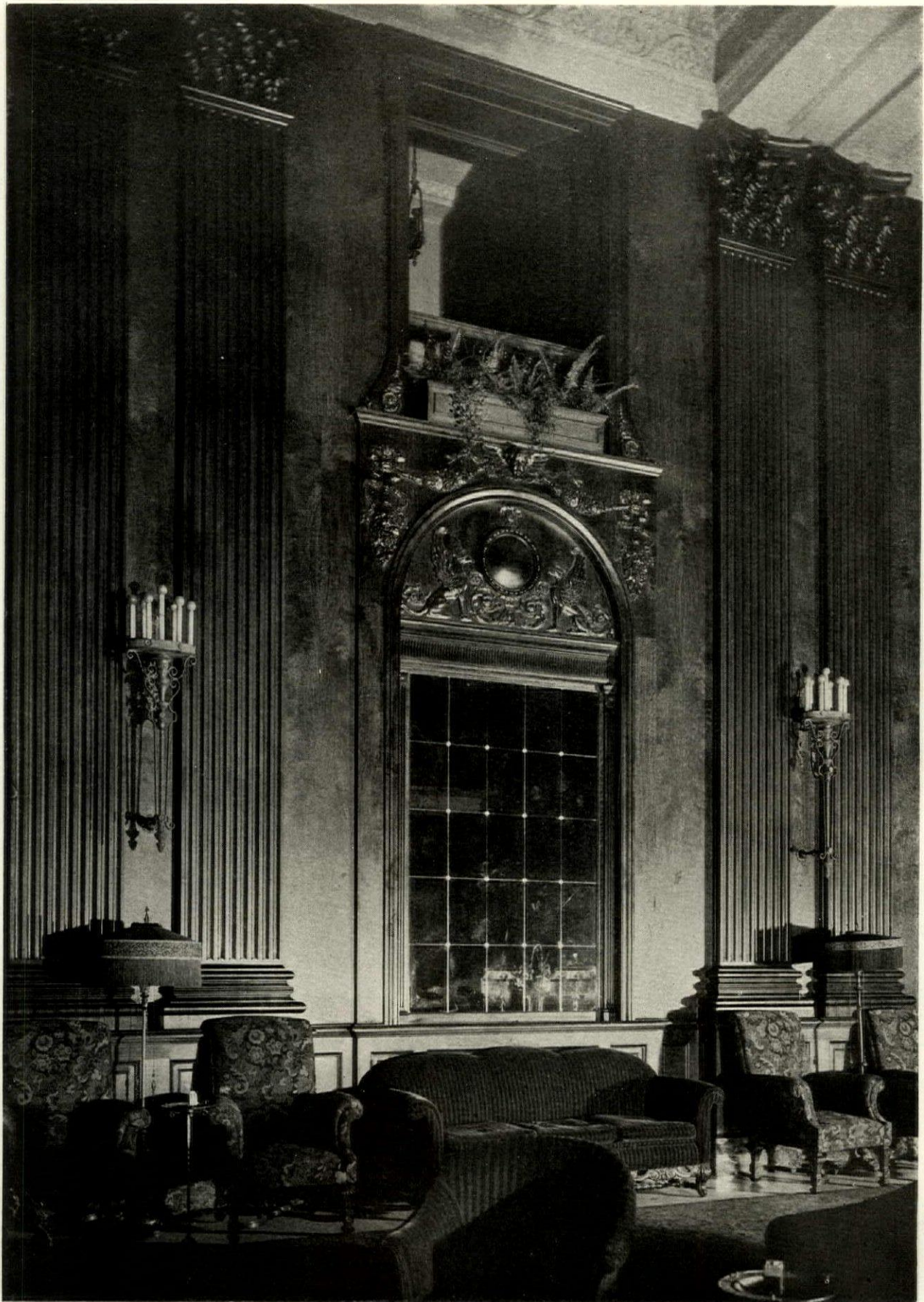
PLANS, THE NEW NICOLLET HOTEL, MINNEAPOLIS

HOLABIRD & ROCHE, ARCHITECTS

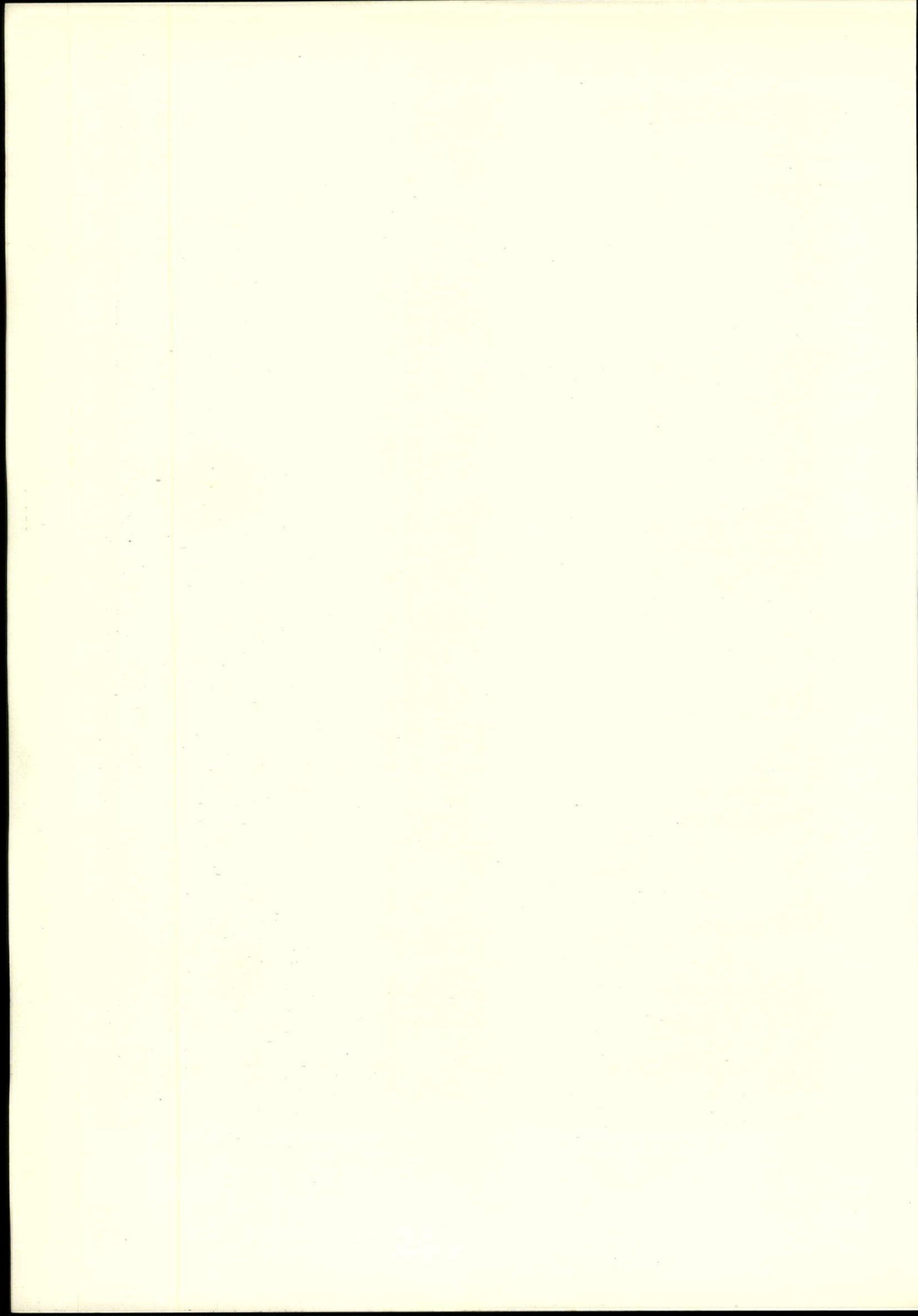


LOBBY AND PROMENADE
THE NEW NICOLLET HOTEL, MINNEAPOLIS
HOLABIRD & ROCHE, ARCHITECTS



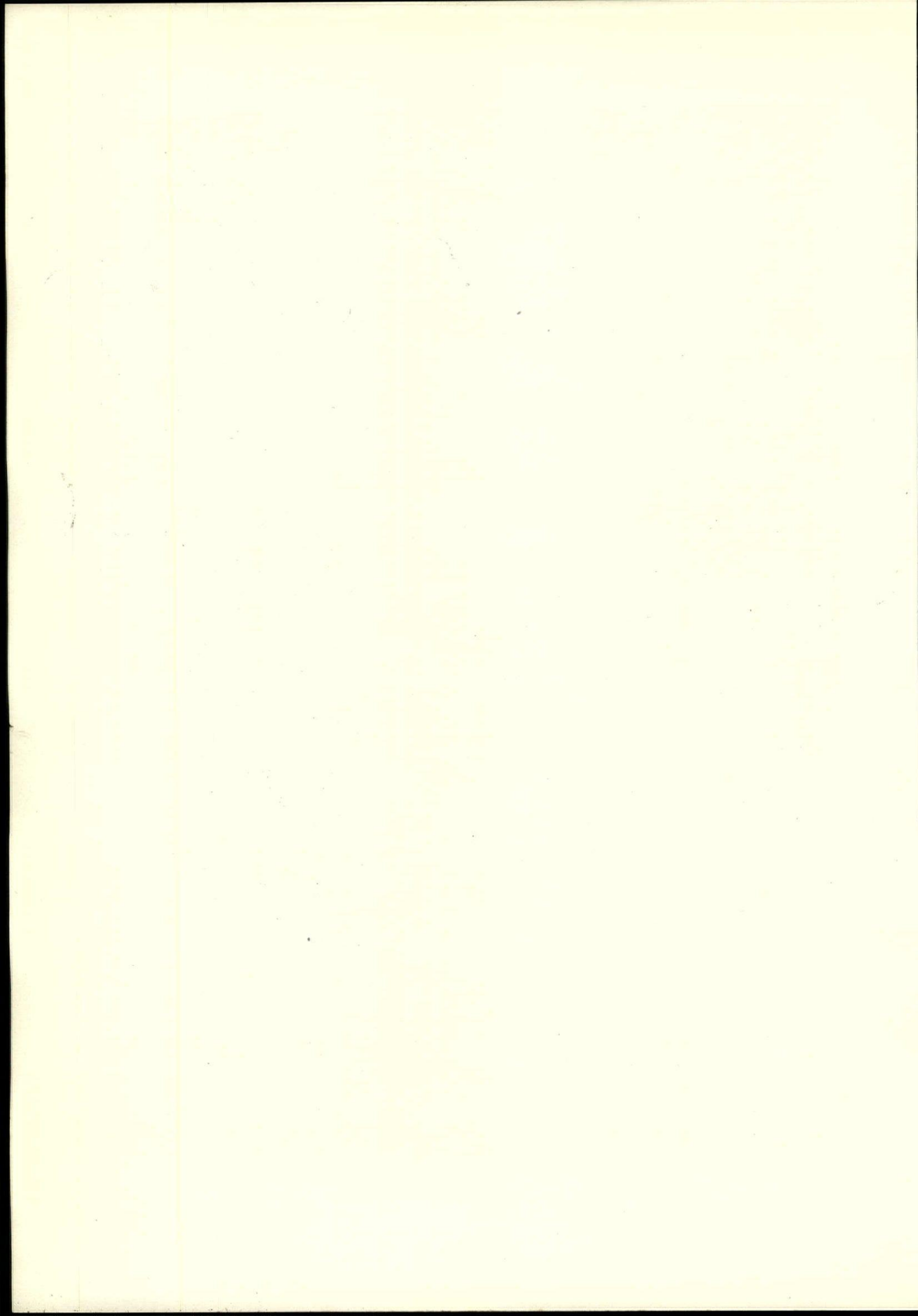


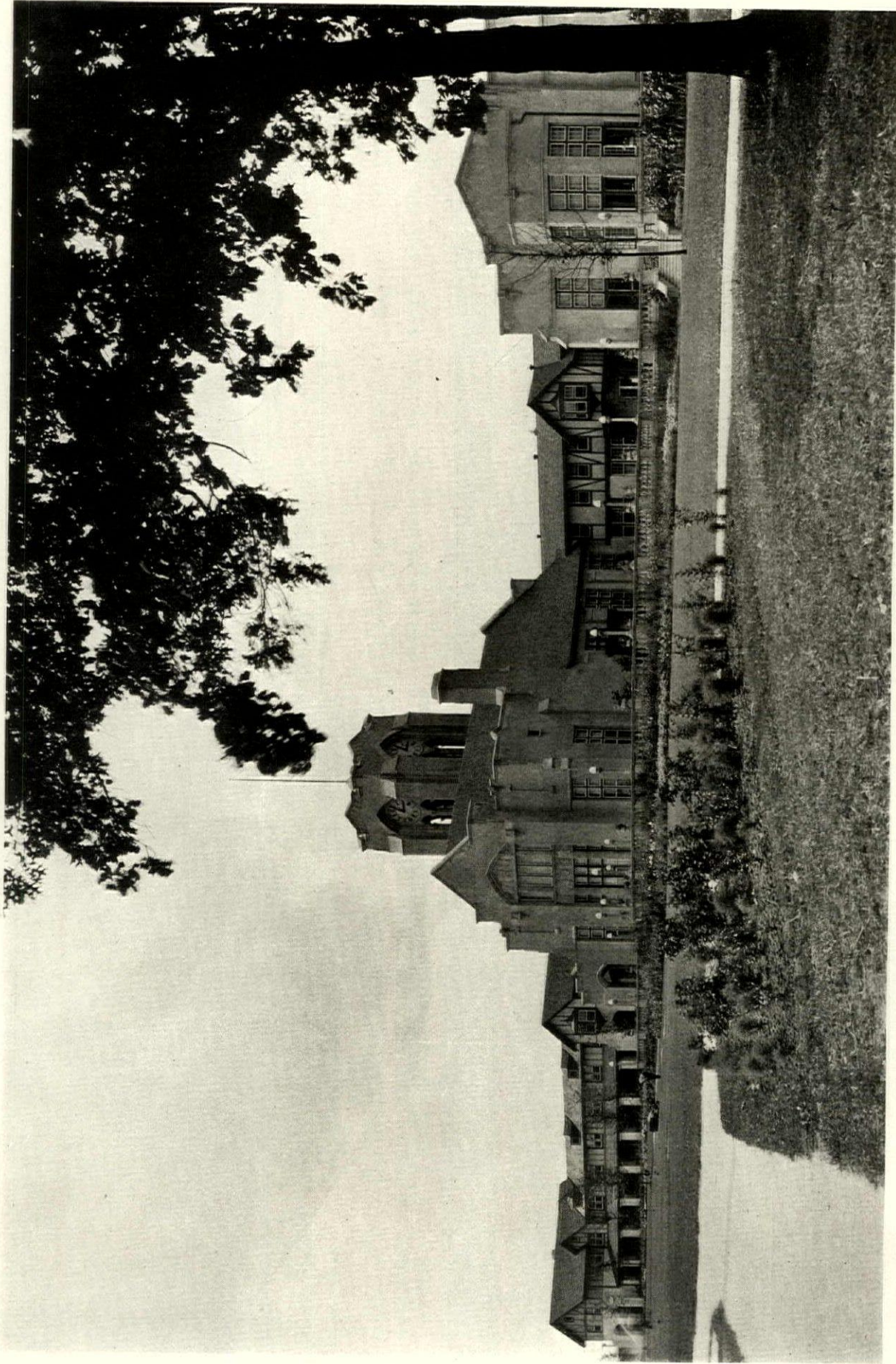
DETAIL, MAIN LOBBY
THE NEW NICOLLET HOTEL, MINNEAPOLIS
HOLABIRD & ROCHE, ARCHITECTS





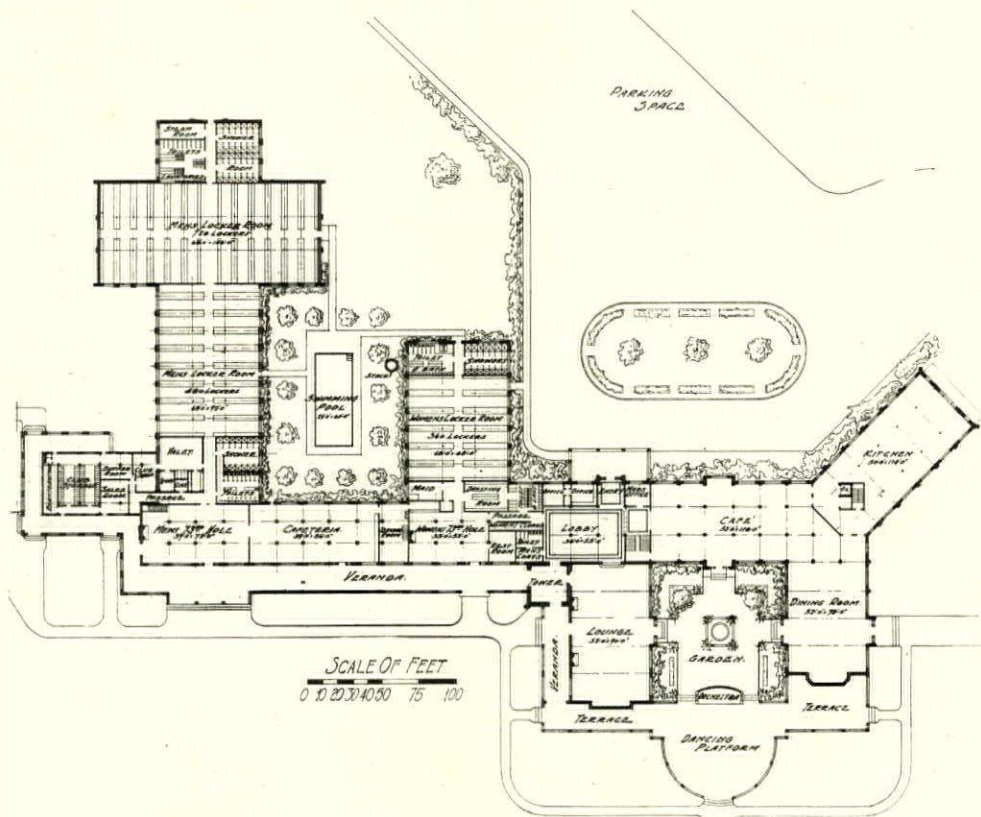
DETAIL, MAIN DINING ROOM
THE NEW NICOLLET HOTEL, MINNEAPOLIS
HOLABIRD & ROCHE, ARCHITECTS





Plans on Back

OLYMPIA FIELDS COUNTRY CLUB, OLYMPIA FIELDS, ILL.
GEORGE C. NIMMONS & COMPANY, ARCHITECTS

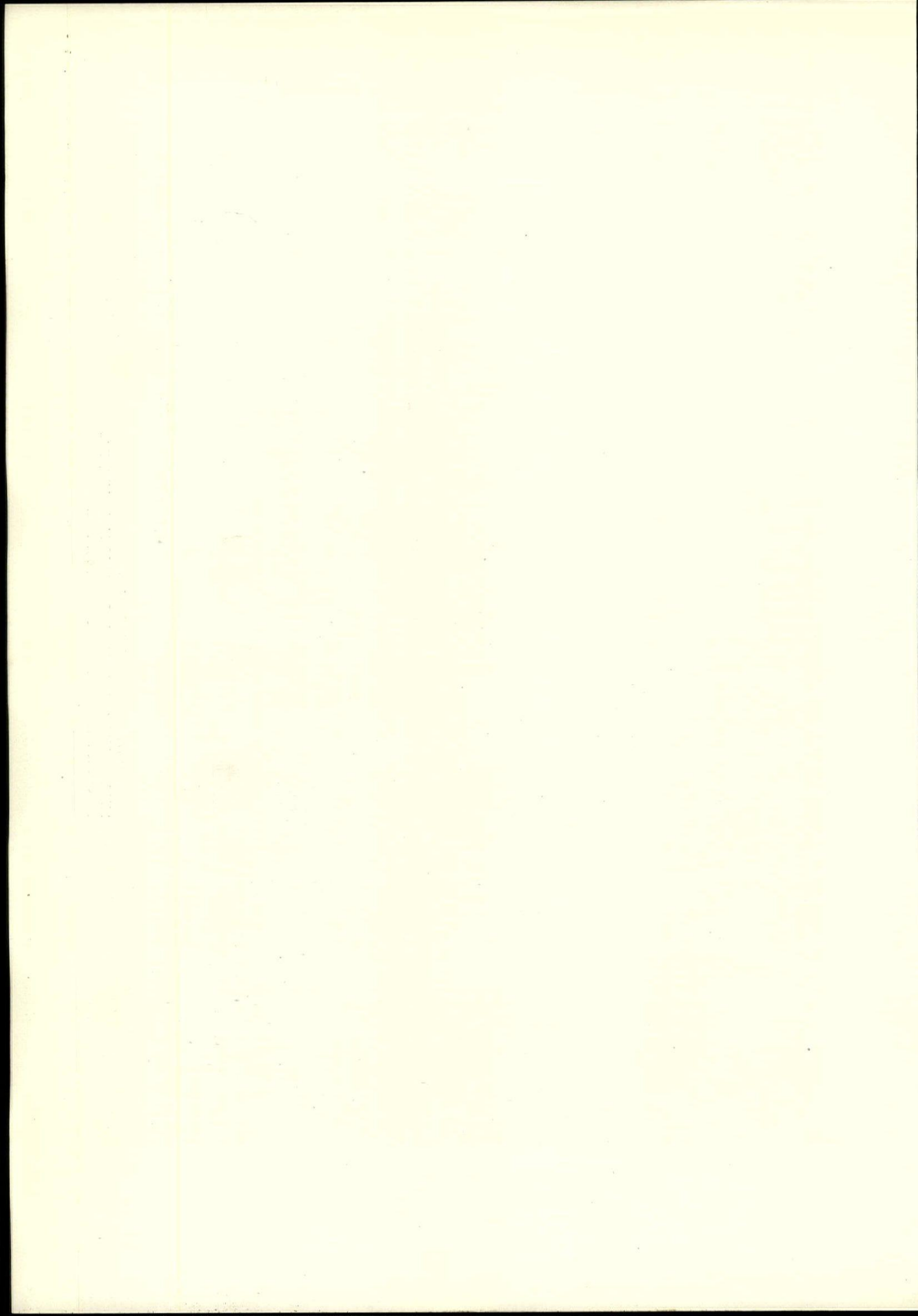


PLAN, OLYMPIA FIELDS COUNTRY CLUB, OLYMPIA FIELDS, ILL.

GEORGE C. NIMMONS & COMPANY, ARCHITECTS



GARDEN AND CAFE
OLYMPIA FIELDS COUNTRY CLUB, OLYMPIA FIELDS, ILL.
GEORGE C. NIMMONS & COMPANY, ARCHITECTS



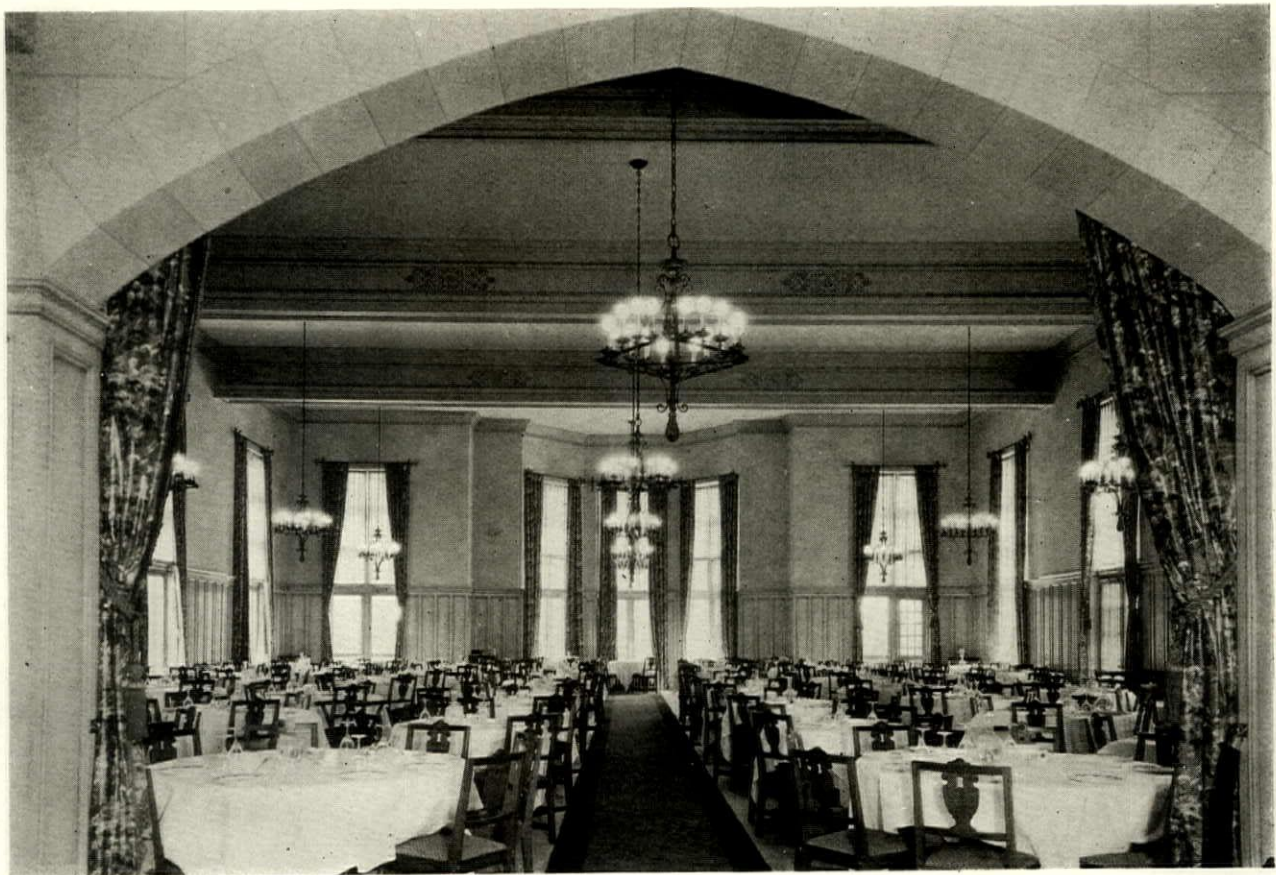


WATER TOWER
OLYMPIA FIELDS COUNTRY CLUB, OLYMPIA FIELDS, ILL.
GEORGE C. NIMMONS & COMPANY, ARCHITECTS

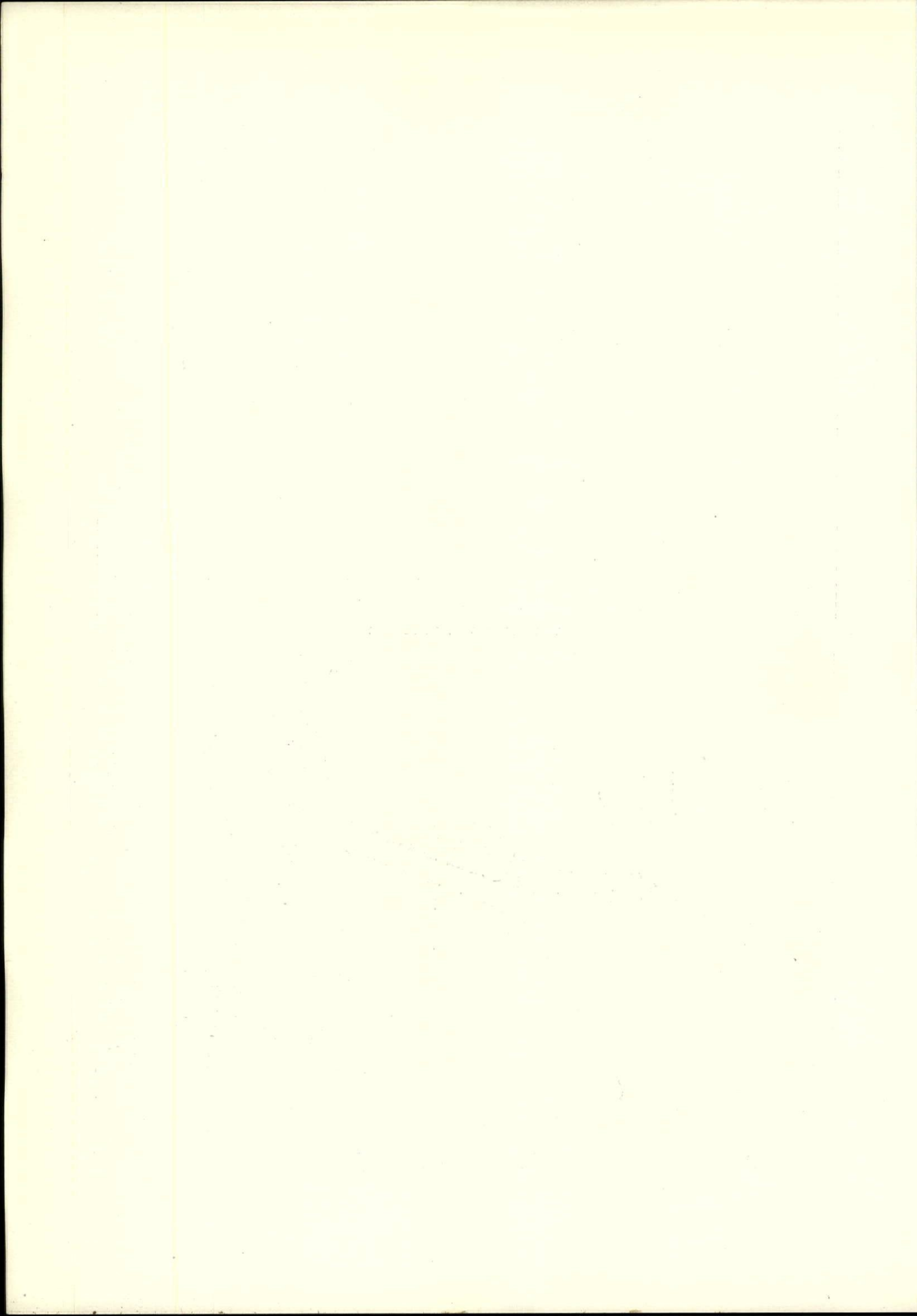




THE GREAT HALL OR LOUNGE



MAIN DINING HALL
OLYMPIA FIELDS COUNTRY CLUB, OLYMPIA FIELDS, ILL.
GEORGE C. NIMMONS & COMPANY, ARCHITECTS



SMALL BUILDINGS

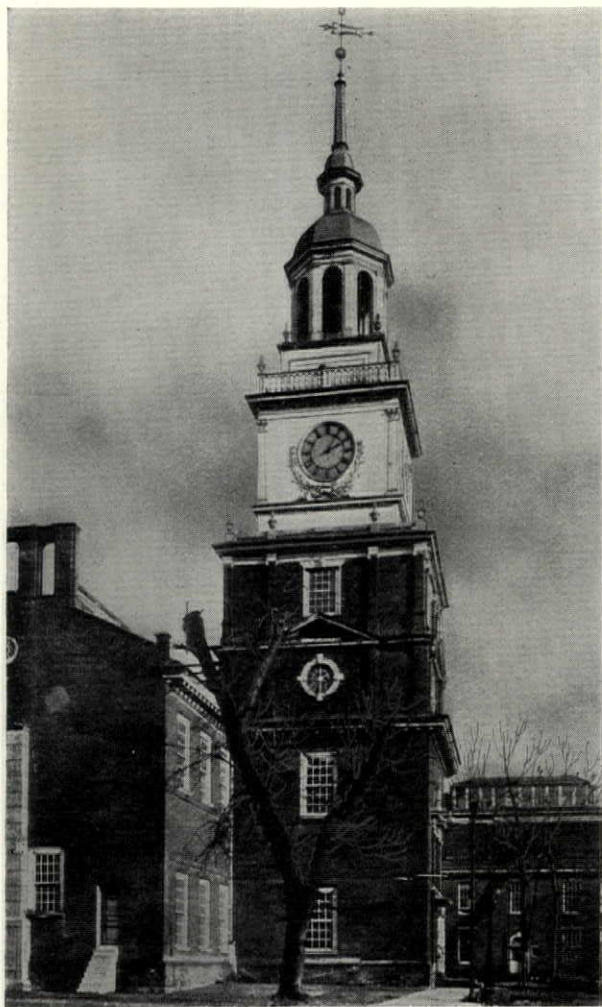
The Small Town Hall

By CHARLES G. LORING

A LONG Main Street there is a sign over the leading dry goods emporium, which reads "Town Offices;" or maybe the fountain-head of government is reached through the side door of the fire engine house, where in a dingy suite of rooms upstairs presides the Town Clerk in his shirt sleeves! The next township, perhaps, has a Civil War relic for its Town Hall,—Victorian-Gothic outside and a wood-sheathed firetrap within. So much for Type One! In brilliant contrast stand the leading examples of a century or more ago,—Independence Hall in Philadelphia, the Old State House in Boston, and the City Hall in New York, and those structures of today which have been inspired by them. For the very reason that our town governments are based

on precedents, the use of well established local forms of architecture is particularly appropriate. Even if there is a "Town Manager" or a "Commission" rule, there is no obvious need of designing the new structure as an Italian villa, or of going to the other extreme and making it resemble a factory office!

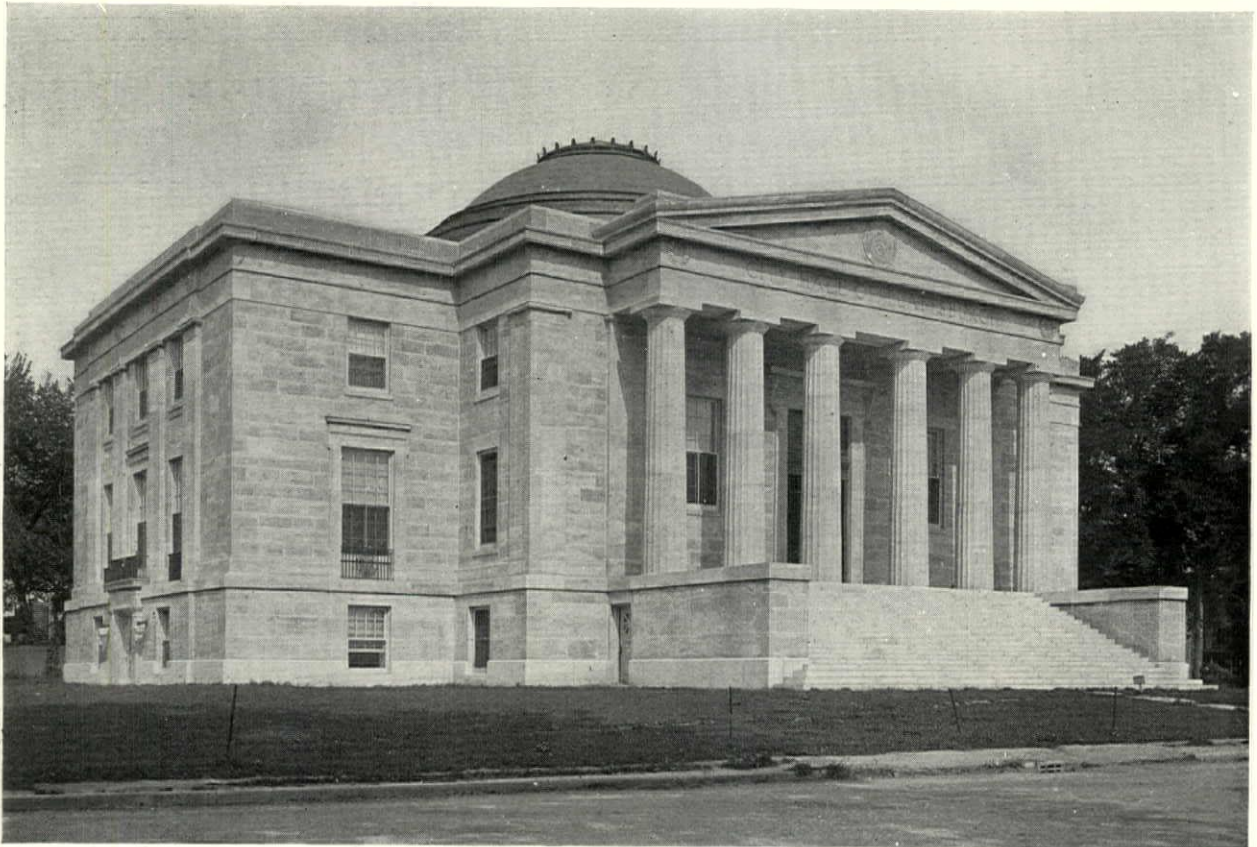
The "Old State House" was built as a Town House in 1713, and was so occupied until appropriated for the use also of the province, and then after the Revolution for the state. At that time the gilded lion and unicorn of Great Britain were torn from their positions on the main gable, but they have since been replaced to visualize history and to add to the gayety of the skyline. When the Bulfinch State House was erected on Beacon Hill, in 1798, its pred-



Independence Hall, Once the Town Hall, Philadelphia



Old State House, Originally the Town House, Boston



Town Hall, Plattsburg, N. Y.
John Russell Pope, Architect



Detail, Town Hall, Chester, Pa.

ecessor on State Street was soon given over to stores and mercantile offices. Rescued from these and converted into an historical museum, its latest transmutation involved the converting of the cellar into a subway station, certain alterations also being made.

The City Hall, in New York, hardly belongs in the "small town" class, for when it was designed by John McComb, in 1803, it served a population of about 79,000. The delicate treatment, however, may well be followed in smaller buildings today. The scale and composition of the facade are so masterly that it has held its own, even when overtopped by the Woolworth Tower and the Municipal Building.

The central portion of Independence Hall, built of brick, roofed with copper and crowned by a graceful cupola, is a model of Colonial architecture and even more generally adaptable than the rather formal stone orders of New York. Though there is some uncertainty of its authorship, Andrew Hamilton is generally named as the architect.

The neo-Grec Town Hall of Salem, built in 1838, might be called a "dated specimen," since it so typifies the last phase of architecture before the dark ages of art which shrouded the middle of the nineteenth century. It well represents the "Greek Revival."

The Town House, when it exists as a distinct building, lends itself to monumental treatment, and after each war the natural desire to create memorials, followed by a reaction toward saving on their cost and squeezing a utilitarian dividend out of the investment, has suggested the Town Hall as a com-



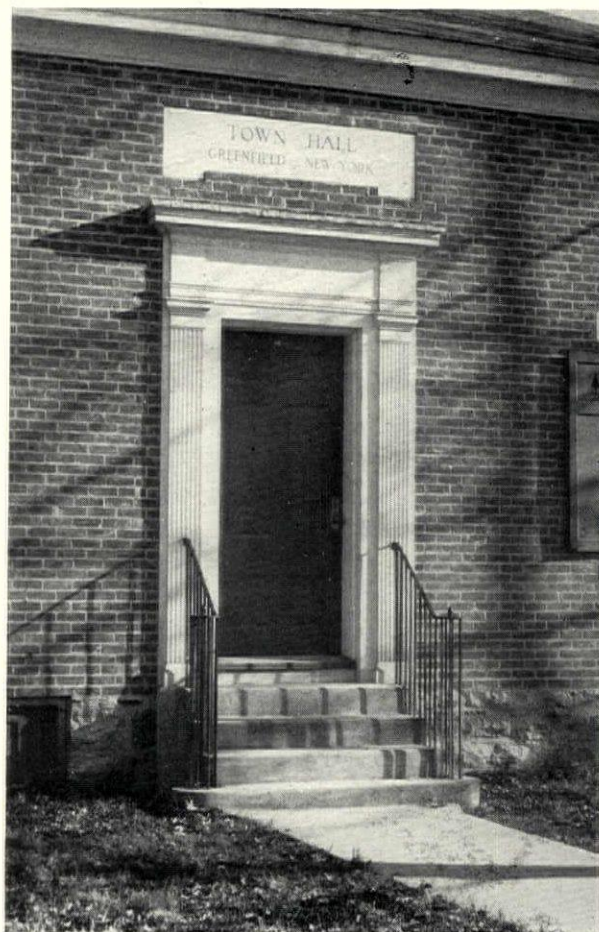
Town Hall, Greenfield, N. Y.

Lewis E. Welsh, Architect

promise. Survivals of such compromises in other days still stand as warnings against false economy. A little Hall was erected "up state" in the eighteen-seventies in memory of the immortal dead. Today it is so crude and decrepit that the surviving G. A. R. veterans are ashamed of it. In one thrifty suburb, the taxpayers wished to dedicate their spic-and-span municipal building to those who had served in the World War;—but the lustre of the tribute was somewhat dimmed by a cynic who pointed out that the money had been voted for construction some fifteen years before, with the idea of its serving at that time also as a Civil War Memorial,—and the fact had already been forgotten!

The Town Hall can be made interesting from the historical point of view by means other than calling it a War Memorial. No place is more appropriate than the Town House for relics and records of the town's past,—not bronze tablets or stained glass windows, but rather the incorporation in the public lobby of some handsome old doorway taken from a house erected in the early days, or a quaint tavern sign, if there are local historic traditions. The corridor walls can be made an historical museum by hanging upon them a display of Indian relics or of early prints and photographs.

The size of the Town House does not depend on the length of the voting list, for in smaller communities, where the citizens still gather to make their local laws directly, the hall, as such, is needed; where the electorate has become so large that representa-



Detail, Town Hall, Greenfield, N. Y.



Town Hall, Reading, Mass.

Adden & Parker, Architects



Detail, Town Hall, Reading, Mass.

tive government is required, the Council Chamber or Selectmen's Room may take the place of the Hall. Unless the site is sloping, and so allows easy access on two levels, the general practice is to place the auditorium on the main floor, for the convenience and for the safety of large gatherings. As basement rooms are not desirable, and offices above a hall are not easily arranged, the auditorium has developed naturally as a one-story, rear wing.

As the legislative quarters become smaller the size and number of the executive offices become larger. But for the lesser township, the Clerk's office and a big safe are almost the sole essentials; the "movie" theater or the Grange will do for the vote casting!

In small communities, where the size of the public office building must be kept down on account of both first cost and maintenance, and where the clerical force is strictly limited, particular attention must be given to grouping the various departments around one or more centers where a member of the permanent staff is at work behind a rail. Incidentally, this rail or counter can be used to great advantage if made a good 40 inches high for convenience in writing, with the entire inside a nest of filing drawers. The grouping of departments also simplifies the concentration of the fireproof files.

In one Town Hall, the departments are coordinated, with the financial offices on the first floor, on one side of the entrance, these offices including those of the Treasurer, Collector, Auditor and Assessor. From them a private stairway leads directly to the



Town Building, Reading, Mass.

Adden & Parker, Architects

large fireproof storerooms in the basement, which supplement the vaults above. On the other side of the main lobby are the Street, Water, Engineering and Building Departments, with a common drafting room and special filing shelves for blue prints. These departments were placed on the ground floor because they are those most frequently visited by the public. On the second floor are the Council Chamber and the offices less often consulted by the townsfolk and more deserving of privacy and quiet. In the basement is the Bureau of Weights and Measures, with convenient access to the street.

An auditorium (if there is one) or a council chamber is used comparatively few times during the year for legislation, and if an entrance can be planned so that this hall may be cut off from the rest of the building, it can serve the taxpayers for lectures, dances and meetings, and in the smaller towns become a fairly definite source of income.

Opinions vary as to the justification for allowing space for such organizations as the Public Library, the Chamber of Commerce, veteran societies and the Red Cross. In one town a strong drive was made to include a restaurant in the basement, which could be used as an adjunct to the auditorium, and six days a week serve as a gathering place for those interested in the town's affairs! It is almost to be regretted that this extreme use of space for a non-governmental purpose was not adopted; would it have become the center for serious minded clerks or a convenient rendezvous for scheming politicians?



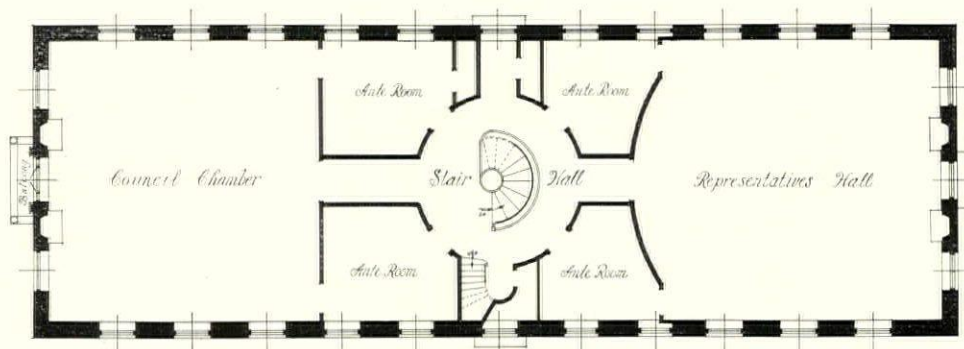
Entrance, Town Hall, Dover, Mass.



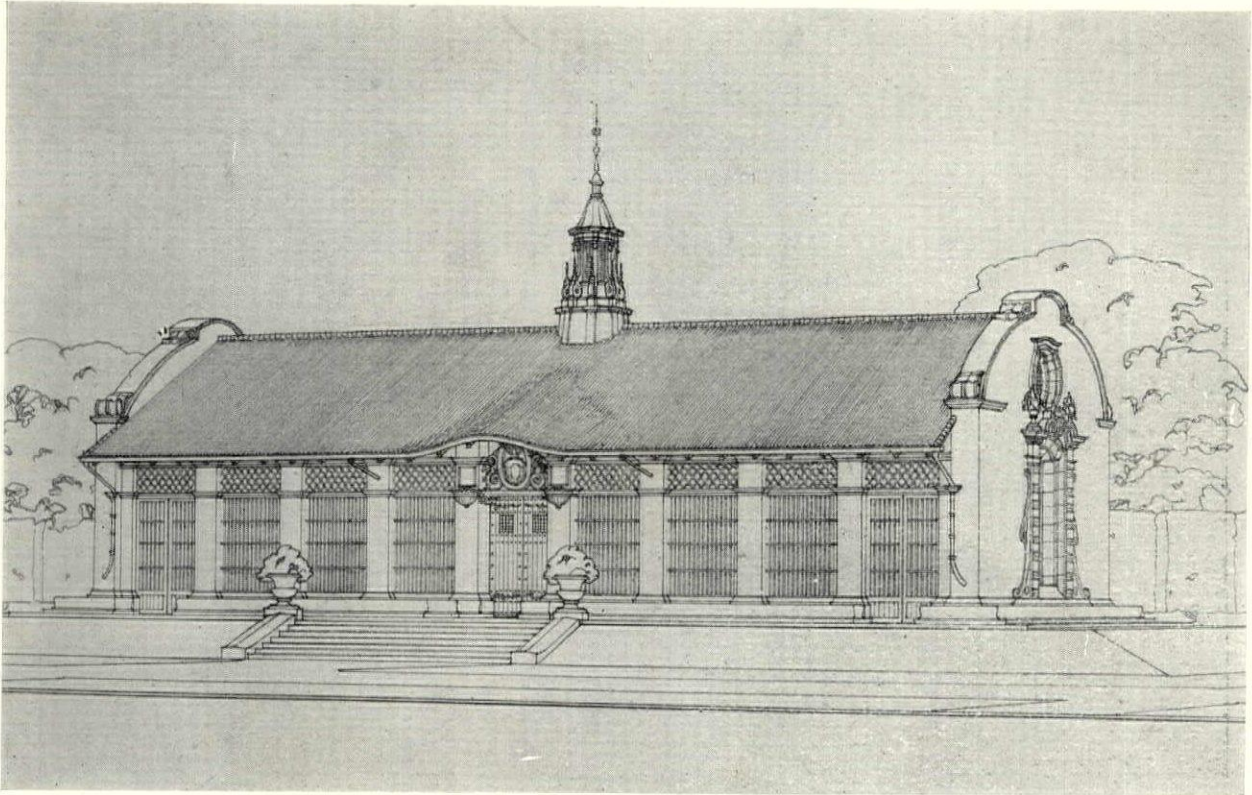
Town House, Boston, From an Old Painting in the Collection of the Massachusetts Historical Society

Among the small modern Town Halls which follow the tradition of the northern colonies, that at Greenfield, N. Y., designed by Lewis E. Welsh, should take precedence. The very limitation of its size adds to its charm, and yet cannot detract from its sturdy uprightness of character. On the other hand, the Robbins Memorial Town Hall at Arlington, Mass., of which R. Clipston Sturgis was the architect, is almost outside the bounds of an article on small town halls because of the building's size, expensive material and imposing character. It is included here for the sake of contrast with that at Greenfield,

and for comparison with the New York City Hall. The free silhouette of the Tewksbury, Mass. Town Hall, by Kilham, Hopkins & Greeley, is a noteworthy bit of design, well adapted to its open surroundings, and suggestive of the tendencies developed in the South and in Philadelphia, rather than anything in the New England district. To continue the parallel with the historic examples illustrated in the early part of this paper, John Russell Pope's stone Town Hall in Plattsburg, N. Y., so orthodox and classical, is reminiscent of the neo-Grec prototype from Salem, or certainly of that general architectural period.

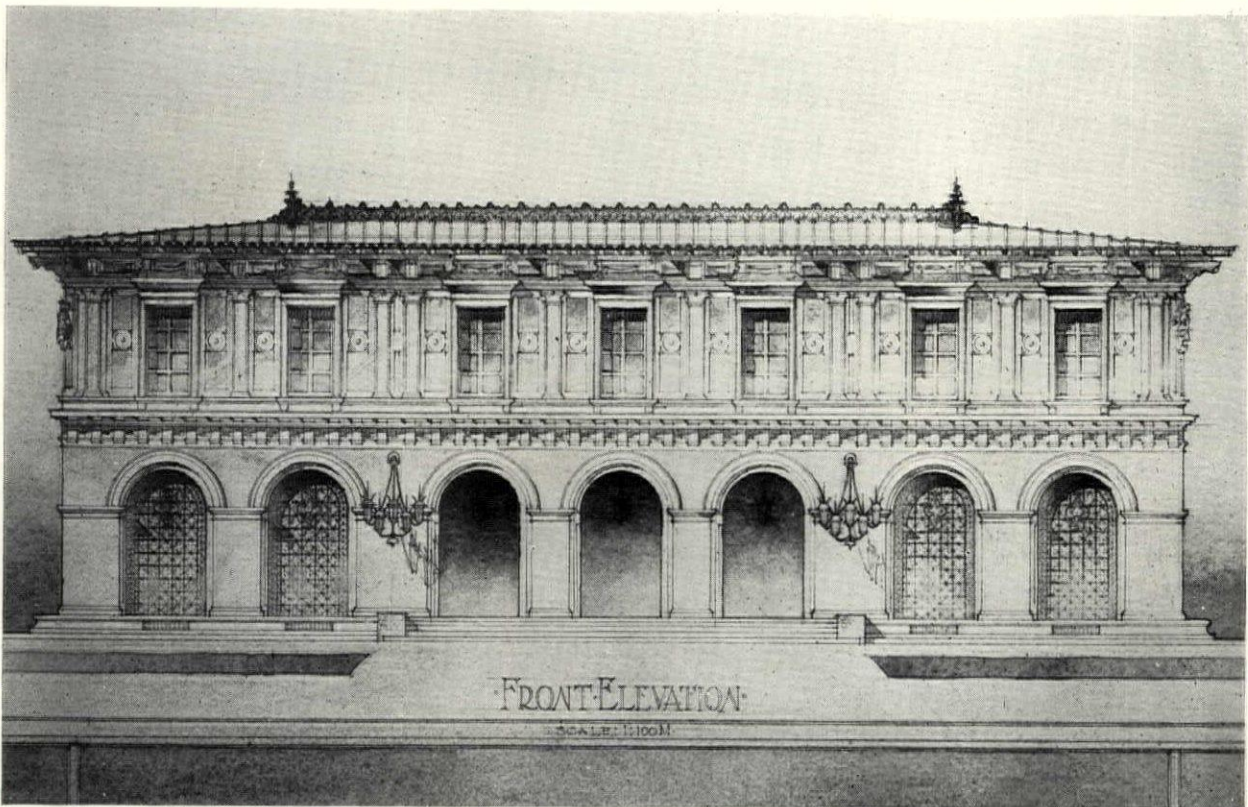


Main Floor Plan, Old State House, Boston
From an Old Drawing



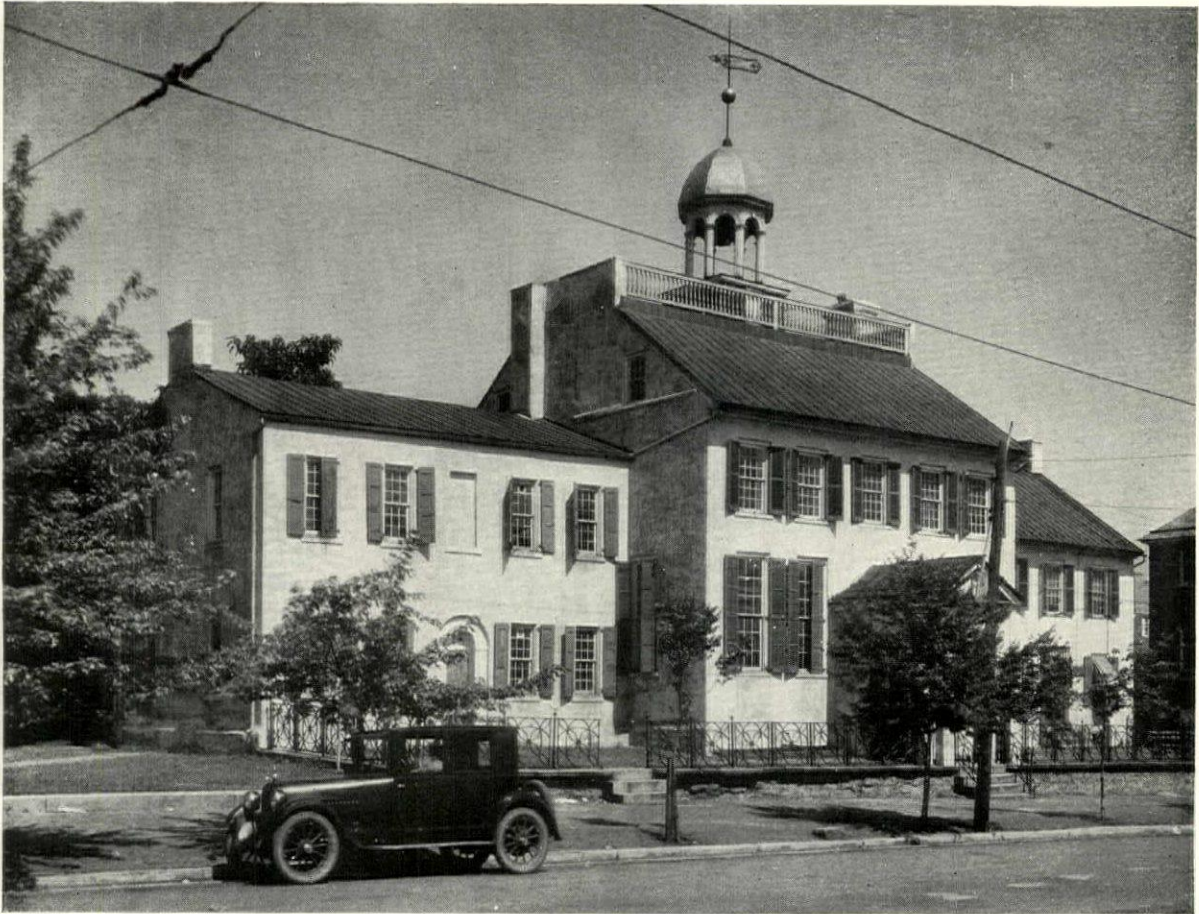
This Town Hall for Caloocan, Philippine Islands, locally called The Presidencia, is constructed of material salvaged from the ruins of old Spanish churches in the neighborhood, destroyed during the War with Spain. At each end of the structure is a pair of doors which will admit the passage of a vehicle. In one end of the building is storage space for the town fire apparatus, and in the other locker space for public employees. The main entrance to the building is in the center, with the offices of the town officials on one side and space for the clerks on the other. The building is built of conglomerate stone with a tile roof. All the openings are protected by heavy mahogany grilles, to prevent thieving when the sliding windows, which are made of shell, are left open

Ralph Harrington Doane, Architect



A design for a Town Hall, executed in artificial stone of various colors, with brightly illuminated ornamental cornice. This is one of the larger town halls used in the Philippines, and contains offices on the first floor for all branches of municipal government, and on the second floor a hall for public assemblages

Ralph Harrington Doane, Architect



TOWN HALL, NEWCASTLE, DEL., BUILT ABOUT 1750



COUNCIL CHAMBER, MUNICIPAL BUILDING, PLAINFIELD, N. J.
LAURENCE F. PECK, WILLIAM LAWRENCE BOTTOMLEY, ASSOCIATE ARCHITECTS



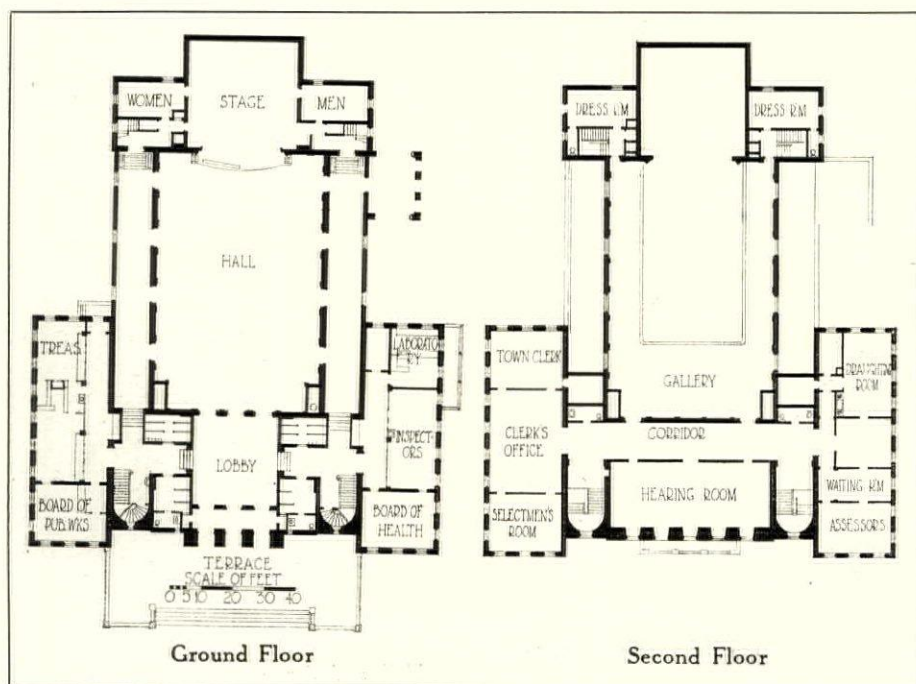
ROBBINS MEMORIAL TOWN HALL, ARLINGTON, MASS.
R. CLIPSTON STURGIS, ARCHITECT

ALTHOUGH completed many years ago, the Robbins Memorial Town Hall at Arlington is still an outstanding example of this particular type of architecture. The exterior design shows a long, low building, two stories in height, the central bay of which is distinguished by a dignified triple arched entrance, the slight projection of which gives it added emphasis and importance. The fenestration is perfectly proportioned and carefully studied in rela-

tion to the wall surfaces. The windows of the second floor on the front elevation show a baluster treatment which emphasizes their importance and repeats and balances the balustrade above the entrance portico. The simple cornice which crowns the two-story facade is surmounted by a balustrade of perfect proportions. It often happens that balustrades are made too low, so that when seen from close range they are inadequate in height to act as a

proper crowning feature of a design derived from classic precedent. But in the case of the Arlington Town Hall this crowning balustrade is right in height, so that it assumes proper scale and importance as a part of the whole design, whether viewed from a distance or near at hand. The use of small panes of glass for the many windows still further emphasizes and makes perfect the scale of this beautiful building. To break the length of the structure a belfry or cupola surmounts the roof above the pavilion at the center.

The plan of the build-



FORUM SPECIFICATION AND DATA SHEET — 64

Robbins Memorial Town Hall, Arlington, Mass.; R. Clipston Sturgis, Architect

OUTLINE SPECIFICATIONS

GENERAL CONSTRUCTION:

Fireproof.

EXTERIOR MATERIALS:

Limestone.

ROOF:

Slate.

WINDOWS:

Wood, double-hung.

FLOORS:

Marble, terrazzo and wood.

HEATING:

Steam, direct and indirect.

PLUMBING:

Brass piping throughout; porcelain fixtures.

ELECTRICAL EQUIPMENT:

Lighting and vacuum cleaning.

INTERIOR MILL WORK:

Chestnut, stained brown.

INTERIOR WALL FINISH:

Smooth-finish, plaster, painted.

DECORATIVE TREATMENT:

In the hall, plaster ceiling is in gold and colors.

WALLS:

Chestnut, stained brown, with gold on carving.

APPROXIMATE CUBIC FOOTAGE:

624,025.

COST PER CUBIC FOOT:

About 28½ cents.

DATE OF COMPLETION:

June 3, 1913.

ing is as carefully studied and well balanced as is the exterior design. The chief feature is the large hall and deep stage, which may be used not only for municipal purposes but also for concerts, dances and theatrical performances. This hall extends well back of the front or main part of the structure, and has long side corridors and a separate covered carriage entrance at the rear.

The architectural detail and character of the interior of the building consistently and perfectly repeat the Renaissance expression of the exterior. The main hall itself is a splendid example of the rich-

ness of detail combined with warmth and depth of color treatment characteristic of the Renaissance style. The dull gold and color of the highly ornamental paneled ceiling contrast effectively with the deep brown tones of the paneled walls and balcony railings. The richly ornamented and gilded proscenium opening, with its heavy hangings of dull red and old gold damask, gives the final touch needed to make this hall an unusually fine example of the use of Italian and English Renaissance precedent in modern American work. The entire hall literally glows with subdued richness and color.



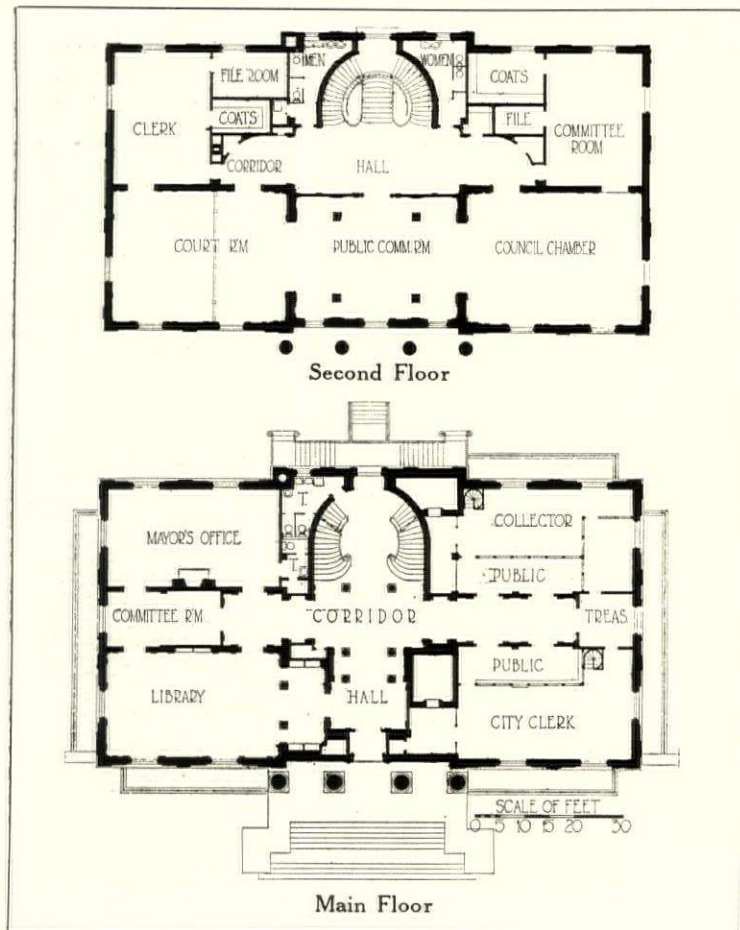
Entrance Front



Hall and Stage



MUNICIPAL BUILDING, PLAINFIELD, N. J.
 LAURENCE F. PECK, WILLIAM LAWRENCE BOTTOMLEY, ASSOCIATE ARCHITECTS



ANOTHER fine example of the use of Renaissance precedent in town hall architecture is found in the Municipal Building, Plainfield, N. J. The combination of deep red brick walls and limestone trimmings gives an effective and colorful exterior. So large a part of the design is carried out in limestone that the brickwork gives a pleasing effect of panels between the wall pilasters, foundation, string course and entablature.

The carefully studied design of this building, which won the competition for the Plainfield Town Hall several years ago, gives one of the best examples of a compact, well planned small municipal building in this country. No better structure of its type has been erected in the past eight years. Although the Georgian of England is somewhat suggested in the combination of brick and stone, the detail shows distinct influence of the Italian Renaissance. All the mouldings, as well as the carvings, possess unusual refinement and delicacy. The urns which surmount the attic above the entrance portico are distinctly Italian in feeling, which is also true of the candelabra on either side of the entrance door. This door itself suggests Italian work of the fifteenth cen-

FORUM SPECIFICATION AND DATA SHEET— 65

Municipal Building, Plainfield, N. J.; Laurence F. Peck, William Lawrence Bottomley, Associate Architects

OUTLINE SPECIFICATIONS

GENERAL CONSTRUCTION:

Fireproof throughout; reinforced concrete columns and girders; long span, reinforced concrete floor and roof construction.

EXTERIOR MATERIALS:

Brick and limestone.

ROOF:

Composition slag.

WINDOWS:

Wood frames and sashes, double-hung.

FLOORS:

Granolithic and cement finish.

HEATING:

Steam.

PLUMBING:

Porcelain fixtures.

ELECTRICAL EQUIPMENT:

Lighting and vacuum cleaning.

INTERIOR MILL WORK:

White pine, oak and walnut.

INTERIOR WALL FINISH:

Eggshell plaster.

DECORATIVE TREATMENT:

Italian and English Renaissance.

TOTAL COST:

\$180,000.

YEAR OF COMPLETION:

1917.

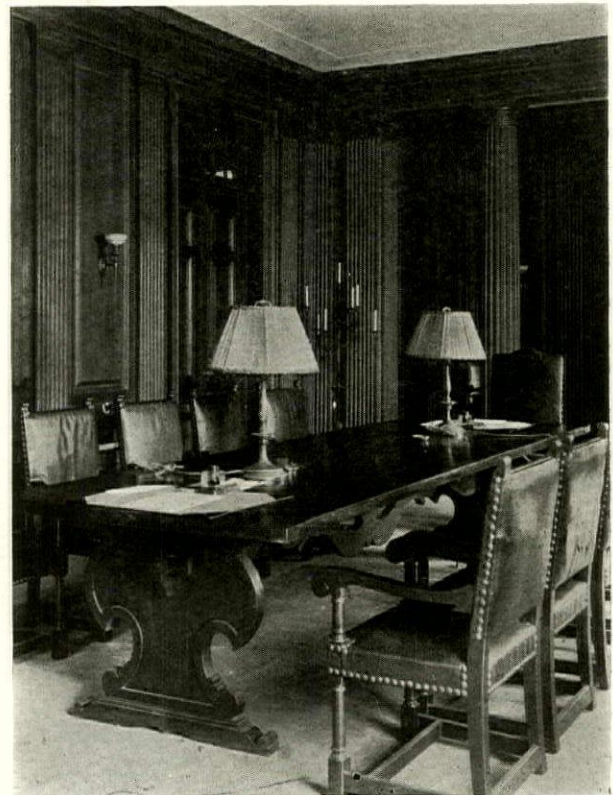
tury. The entrance or center portico is the main feature of the front facade, occupying practically one-third of the elevation. The massive fluted columns are carefully spaced and beautifully proportioned. The vertical note of these columns is repeated by the flat pilasters on the wall surface on either side of the center portico. The whole design is splendidly tied together by the horizontal lines of the base course, string course, entablature and attic. Continuing and emphasizing the importance of the central portico of the design, a splendid cupola or enlarged lantern surmounts the center of the roof. The simplicity and dignity of this lantern add much

to the charm of the whole design, which would lose much of its elegance and importance without it.

The design and detail of the interior of the Plainfield Town Hall show the same beautiful lines as the exterior. The architecture of the Italian Renaissance, quite as much as the English Georgian, has served the architects for their precedent and inspiration. On page 296 of this issue is an illustration of the charming little courtroom on the second floor of this town building, from which, as well as from the illustration of the paneled library on the first floor, some impression may be gained of the delightful and very distinguished interior details of this building.



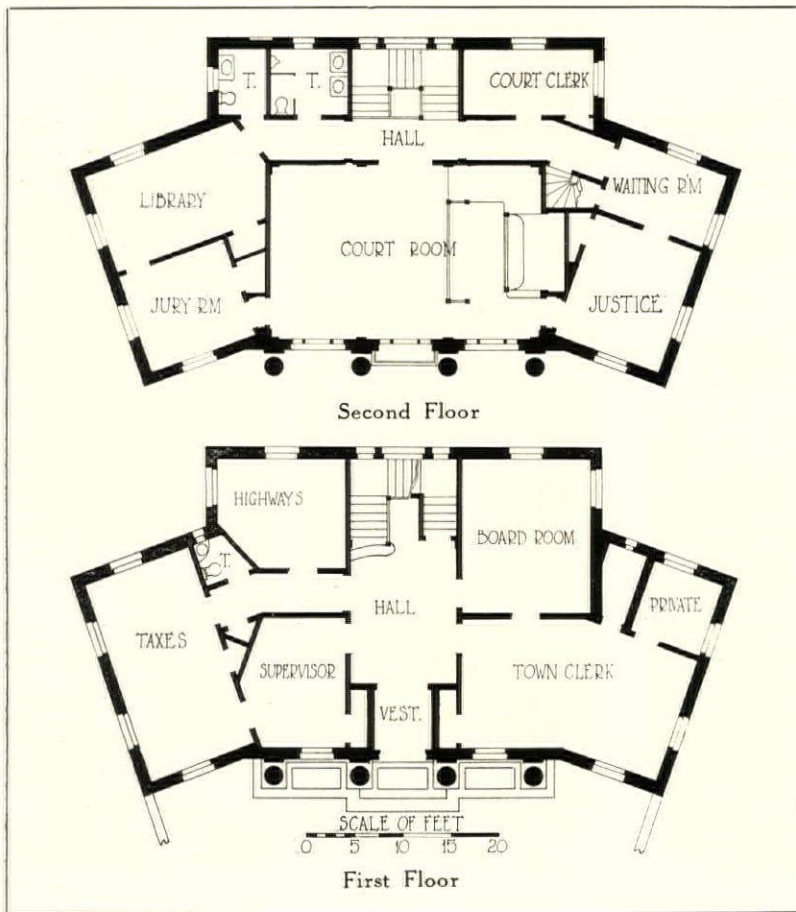
Rear Elevation



The Library



TOWN HALL, HUNTINGTON, N. Y.
PEABODY, WILSON & BROWN, ARCHITECTS



AN interesting example of the way in which the plan of a building is influenced and more or less determined by the location and topography of the site, is excellently illustrated in this Town Hall at Huntington, N. Y. To begin with, the lot was comparatively small, but well located at the junction of two avenues in the heart of the town. A drop of 5 or 6 feet between the level of one avenue and that of the other made the plan problem difficult and interesting. The building is so laid out that it extends from one avenue to the other, with each end of the structure parallel to the thoroughfare upon which it faces. This arrangement produces an unusual effect on the front elevation, where the importance of the central bay of the building is emphasized by a slightly projecting Ionic portico. Above this portico a high pediment gives still further importance to this center motif of the design.

Brick walls with limestone trimmings are used for the exterior

FORUM SPECIFICATION AND DATA SHEET— 66

Town Hall, Huntington, N. Y.; Peabody, Wilson & Brown, Architects

OUTLINE SPECIFICATIONS**GENERAL CONSTRUCTION:**

Fireproof throughout, except for roof.

EXTERIOR MATERIALS:

Brick and limestone trimming.

ROOF:

Wood, covered with slate.

WINDOWS:

Wood frames and sashes, double-hung.

FLOORS:

Terrazzo.

HEATING:

Steam.

PLUMBING:

Enameled iron fixtures.

ELECTRICAL EQUIPMENT:

Lighting.

INTERIOR MILL WORK:

Quartered oak.

INTERIOR WALL FINISH:

Painted plaster.

DECORATIVE TREATMENT:

Stained oak and painted walls.

APPROXIMATE CUBIC FOOTAGE:

78,000.

COST PER CUBIC FOOT:

23 cents.

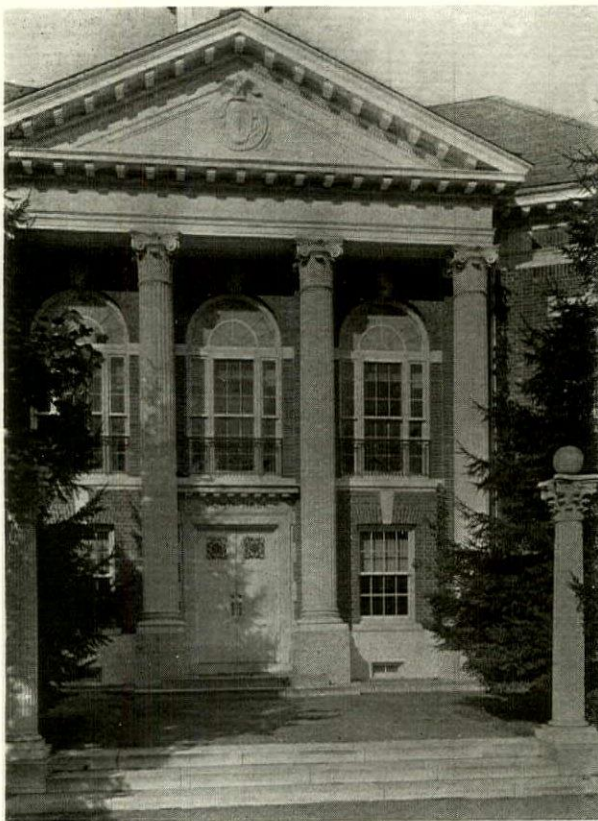
YEAR OF COMPLETION:

1910.

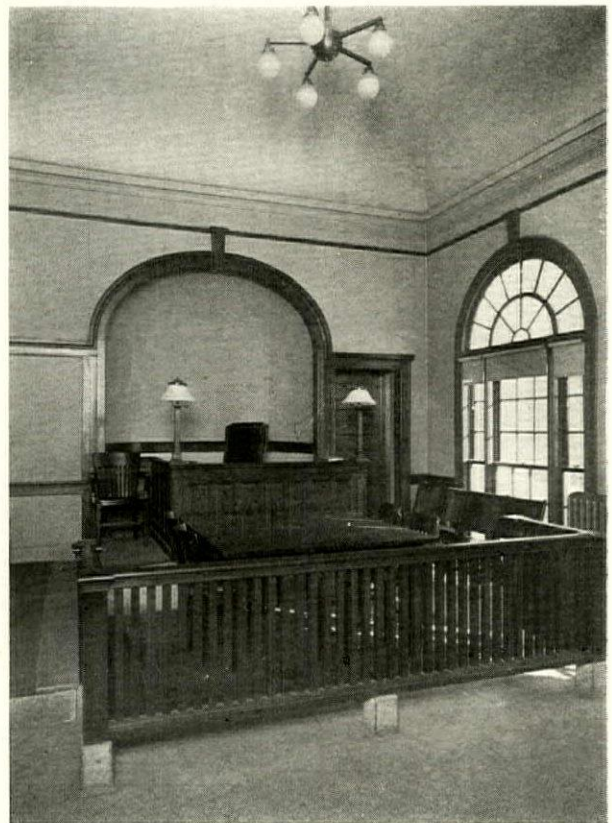
of the building. Heavy stone keyblocks and lintels are placed at the window openings, while the white painted trim of the doors, window frames and sashes, gives still further contrast to the red brick walls. The Ionic portico which marks the center of the entrance front is made more important by the use of three large arched windows with iron balcony rails on the second floor. These windows successfully suggest the courtroom within. The approach to the main entrance is attractively laid out as a terrace with brick walls and stone coping, which breaks the

drop in grade between the two avenues. A low clock tower or cupola surmounts the roof at the center, indicating more completely the public character of the building, besides considerably enhancing its dignity.

The first floor plan shows a center hall with offices on each side for the town officials. At the rear of this hall is a graceful stairway leading to the second floor, which is occupied entirely by the various rooms of the municipal court. A simplicity and severity of detail mark the interior, though consistent balance in the use of ornament has been maintained.



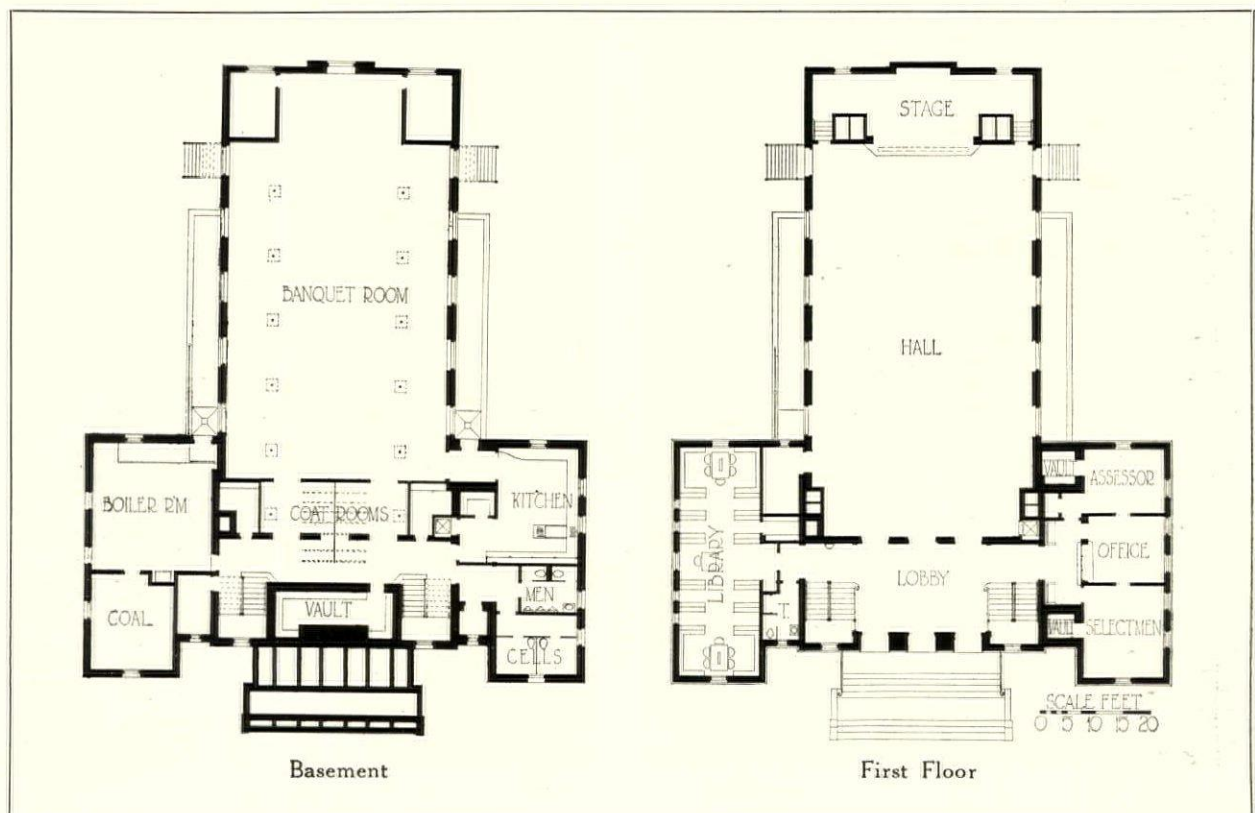
Entrance Front



Court Room



TOWN HALL, TEWKSBURY, MASS.
KILHAM, HOPKINS & GREELEY, ARCHITECTS



FORUM SPECIFICATION AND DATA SHEET— 67

Town Hall, Tewksbury, Mass.; Kilham, Hopkins & Greeley, Architects

OUTLINE SPECIFICATIONS

GENERAL CONSTRUCTION:

Second class or slow-burning.

EXTERIOR MATERIALS:

Brick with stone trimmings; wood belfry.

ROOF:

Slate.

WINDOWS:

Wood frame and sash; double-hung.

FLOORS:

Marble and tile for lobby and first floor; wood covered with linoleum and granolithic elsewhere in the building.

HEATING:

Steam.

PLUMBING:

Enameled iron fixtures.

ELECTRICAL EQUIPMENT:

Lighting.

INTERIOR MILL WORK:

Arkansas pine.

INTERIOR WALL FINISH:

Hard plaster.

DECORATIVE TREATMENT:

Painted walls and woodwork.

APPROXIMATE CUBIC FOOTAGE:

189,350.

COST PER CUBIC FOOT:

31 cents.

DATE OF COMPLETION:

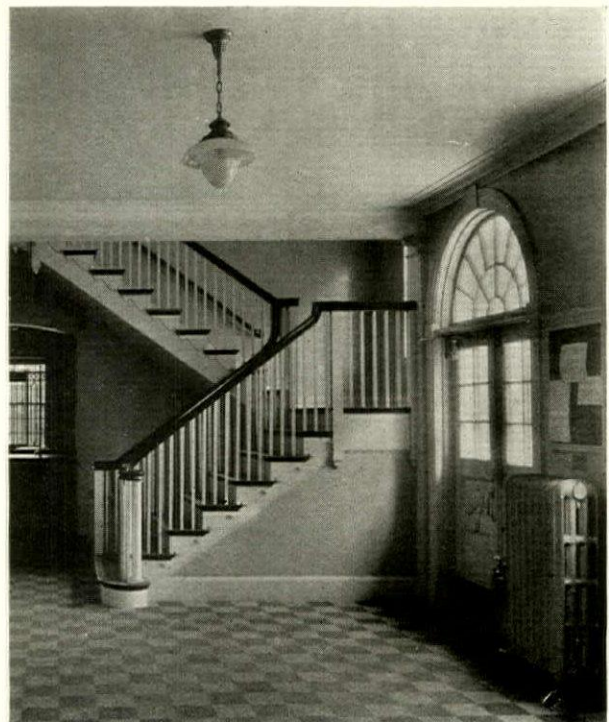
June, 1920.

NOTHING could be more appropriate for a small New England community than this delightful red brick town hall, designed in a simple straightforward adaptation of the Colonial style. Here again the topography of the site had much to do with the plan. As the land falls away at the rear of the building, it is possible to utilize the entire basement of the structure, at the front of which are located the stairways leading down from the lobby on the main floor. On one side of this hall are the boiler and coal rooms, and on the other a kitchen, men's lavatory and two cells. The remainder of the basement floor is occupied by a large, low banquet room situated directly under the large auditorium.

The first floor plan shows a spacious entrance lobby, entered through three large arched doorways. On either end of this lobby are stairways leading both to the basement and to the second floor. The two short wings of the building on this first floor are occupied on one side by a library with coat and toilet rooms adjacent, and on the other by offices for the town officials. Appropriate to the purpose of the building, the hall or auditorium, which is large and spacious, is the main feature of the building. This hall, which is flanked on either side by large arched windows, has exit doors on either side, so that it may be easily emptied in case of emergency. Though it is not large, the building successfully serves its purpose.



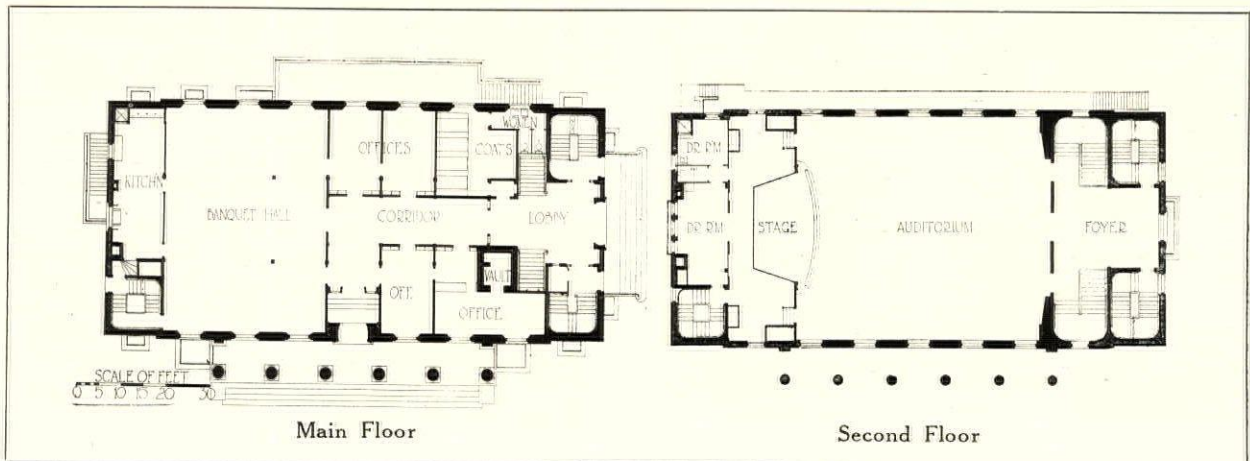
Entrance Front



Entrance Hall



TOWN HALL, WESTON, MASS.
BIGELOW & WADSWORTH, ARCHITECTS



FORUM SPECIFICATION AND DATA SHEET— 68

Town Hall, Weston, Mass.; Bigelow & Wadsworth, Architects

OUTLINE SPECIFICATIONS**GENERAL CONSTRUCTION:**

Concrete foundations, steel girders, wood floor joists and partition studs.

EXTERIOR MATERIALS:

Brick and cast stone. Wood colonnade.

ROOF:

Slate.

WINDOWS:

Wood frame and sash, double-hung.

FLOORS:

Marble in corridors; maple elsewhere.

HEATING:

Steam.

PLUMBING:

Brass piping throughout; enameled fixtures.

ELECTRICAL EQUIPMENT:

Lighting.

INTERIOR MILL WORK:

White birch.

INTERIOR WALL FINISH:

Smooth plaster.

DECORATIVE TREATMENT:

Wood mouldings on plaster, forming panels, together with trim painted.

APPROXIMATE CUBIC FOOTAGE:

279,350.

COST PER CUBIC FOOT:

34 cents.

DATE OF COMPLETION:

September, 1917.

A NOTHER excellent example of the adaptation of the Colonial style of architecture for a modern town hall is found at Weston, Mass. Placed well back from the highroad, the building with its long central colonnade of two-story columns has decided dignity and real impressiveness. A long center path with terraced steps leads to the entrance door in the center of the front facade, while a driveway winds up to a large doorway at the end of the building, which is really the main entrance. The use of red brick with imitation stone trimmings is well suited to carry out the excellent Colonial spirit of the design. Broad, unbroken wall surfaces and carefully

proportioned, well located windows add dignity and charm. The high brick gable ends, which terminate above the roof in coupled chimneys and sloping stone copings, are most appropriate for this type of suburban public building, as they give a determining note of strength at either end of the structure. The ground floor plan, in keeping with the purpose of the structure, provides offices, coat rooms, and lavatories for the town officials, as well as a banquet hall with its adjacent kitchen. As the construction of the building is slow-burning, ample stairways are provided in three corners. The Town Hall and its grounds are among the attractions of a distinguished town.

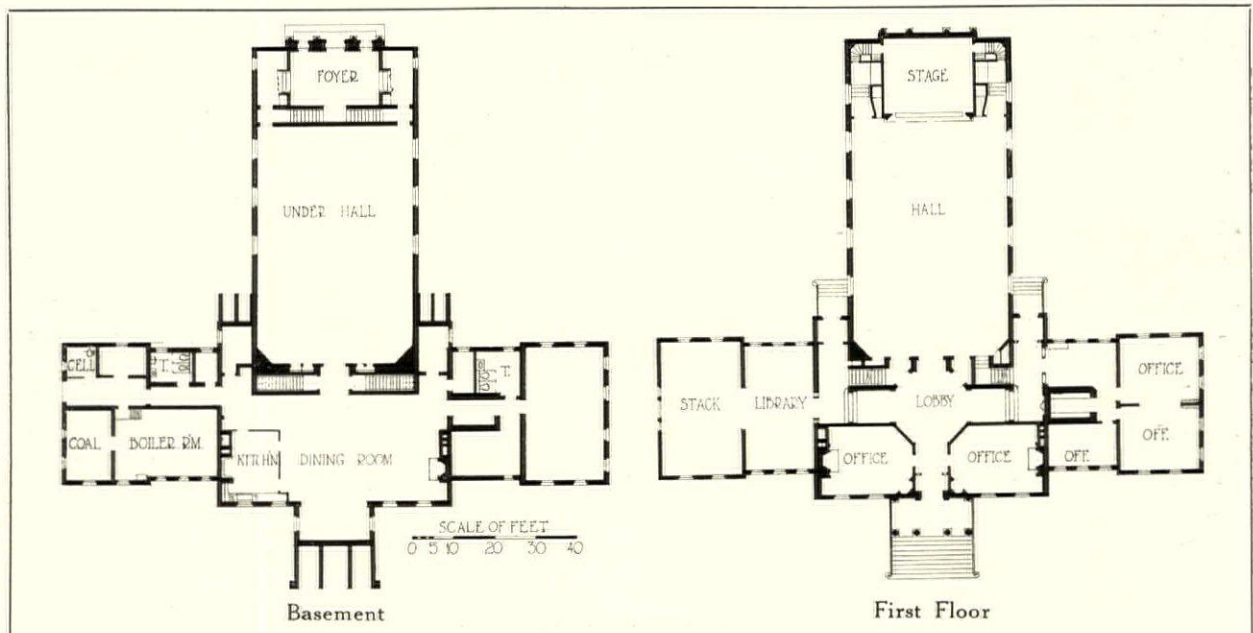




TOWN HALL, DOVER, MASS.
KILHAM, HOPKINS & GREELEY, ARCHITECTS

THIS large and imposing town hall, which was built about three years ago, is another example of the consistent and successful use of the Colonial style in a suburban community building. The design shows a central structure with impressive projecting portico emphasizing the entrance to the building. Large windows balance this central motif, which is made still more important by a splendid arched entrance door, in which the leaded glass and Colonial detail are of exceptional beauty and interest. This imposing entrance portico is flanked on either side by finely proportioned, tall windows, above which

stone panels carry the eye up to the cornice of the main building. An interesting clock tower of medium height gives distinction and finish to the whole design. Following the Southern custom, low arcades connect the main structure with a one-story wing on each side. The large hall or auditorium, which is located at the rear of the main building, has its own entrance at the end. Stairways connect this rear entrance, which is on the grade level, with the hall above. The Colonial details of this entrance are unusually interesting, showing three entrance doors between four tall engaged columns, which, together



FORUM SPECIFICATION AND DATA SHEET— 69
Town Hall, Dover, Mass.; Kilham, Hopkins & Greeley, Architects

OUTLINE SPECIFICATIONS

GENERAL CONSTRUCTION:

Second class, or slow-burning.

EXTERIOR MATERIALS:

Brick and stone.

ROOF:

Slate.

WINDOWS:

Wood frame and sashes, double-hung.

FLOORS:

Concrete in basement; wood elsewhere.

HEATING:

Steam.

PLUMBING:

Enameled iron fixtures.

ELECTRICAL EQUIPMENT:

Lighting.

INTERIOR MILL WORK:

Arkansas pine.

INTERIOR WALL FINISH:

Smooth plaster.

DECORATIVE TREATMENT:

Walls and woodwork painted.

APPROXIMATE CUBIC FOOTAGE:

241,359.

COST PER CUBIC FOOT:

33 cents.

DATE OF COMPLETION:

July 1, 1922.

with a high entablature and pediment, form the architectural treatment of this rear entrance to the building and directly into the assembly room.

The plan, which is laid out in the shape of the letter T, is logical and well arranged. Entering through the main front portico, a center lobby is reached, on each side of which are offices for town officials. In the left wing of the building is located a library with its stack room, while in the right wing are additional offices for town officials. The center lobby opens directly into the large hall or auditorium.

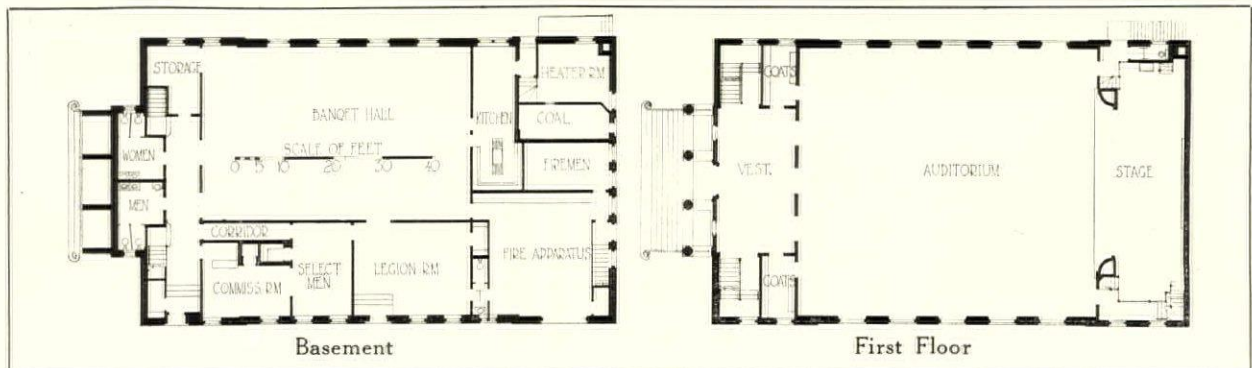
at one end of which is a deep stage with stairways to the basement for the actors in stage performances as well as for the public. The basement plan shows another hall under the auditorium, low in ceiling height but equal in area. In the basement are also located a dining room and kitchen, coat room and lavatories, a boiler and coal room and one cell. The total omission of cells in most cases, and introduction in other town halls of only one or two, lead one to realize how much less crime exists in the country than in the city, requiring but little in the way of jails.



Rear View Showing the Auditorium Wing



TOWN HALL, KENNEBUNK, MAINE
J. D. LELAND AND COMPANY, ARCHITECTS



FORUM SPECIFICATION AND DATA SHEET— 70

Town Hall, Kennebunk, Maine; J. D. Leland and Company, Architects

OUTLINE SPECIFICATIONS

GENERAL CONSTRUCTION:

Brick and wood, slow-burning.

EXTERIOR MATERIALS:

Brick with limestone and wood trim.

ROOF:

Slate.

WINDOWS:

Wood frame and sash, double-hung.

FLOORS:

Granolithic and wood.

HEATING:

Steam.

PLUMBING:

Enameled iron fixtures.

ELECTRICAL EQUIPMENT:

Lighting.

INTERIOR MILL WORK:

White wood and ash.

INTERIOR WALL FINISH:

Smooth plaster.

DECORATIVE TREATMENT:

Walls and trim painted.

DATE OF COMPLETION:

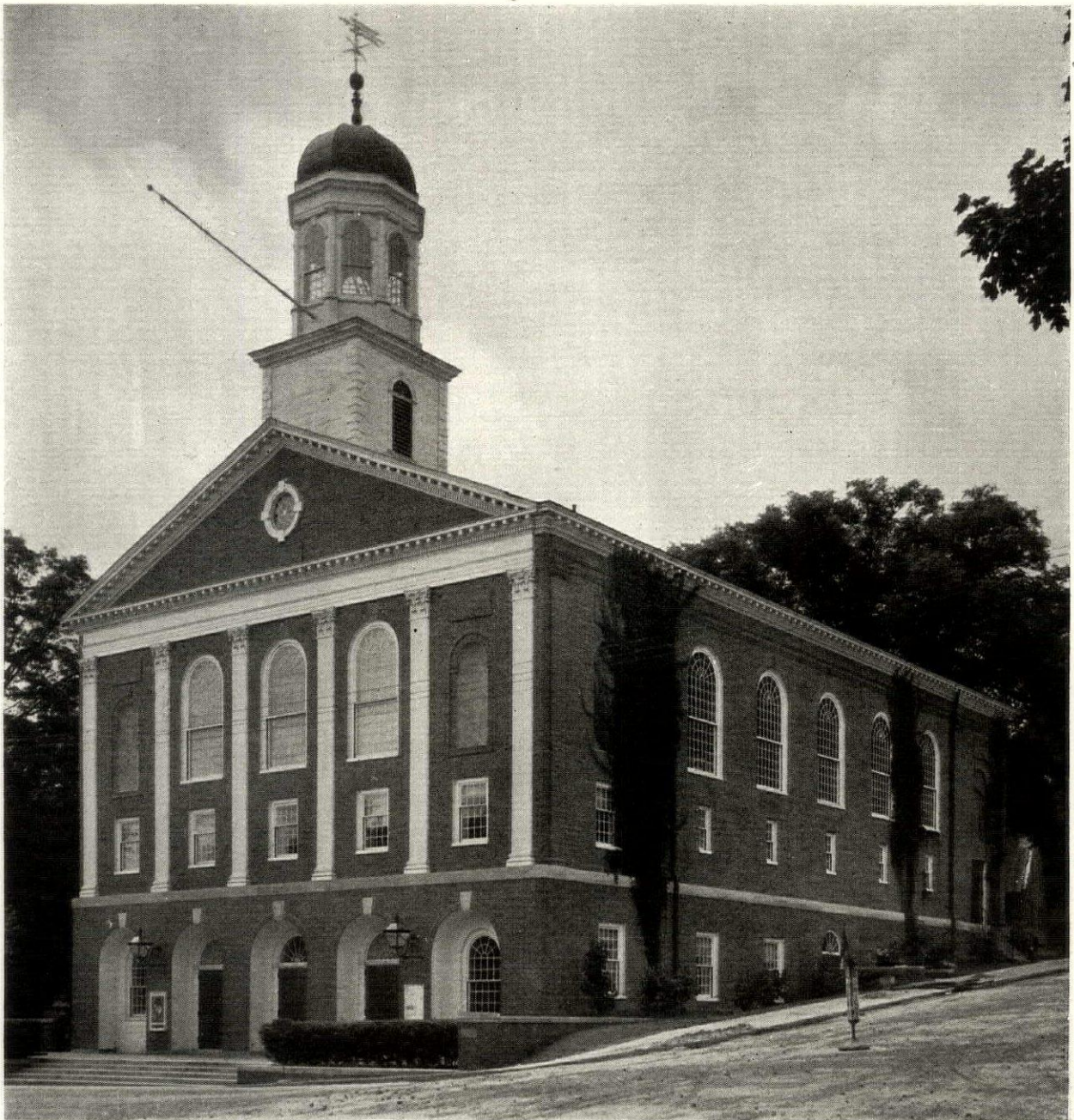
June 1, 1922.

IT is a rather interesting fact that in New England are found most of the best examples of town hall architecture, the great majority of which are successful adaptations of the Colonial style. It is only natural that in designing town halls for New England communities, architects should go back to the best Colonial precedents for their inspiration; not that there were many town halls of any size or importance built in Colonial times, as usually the meeting house was used for all community gatherings.

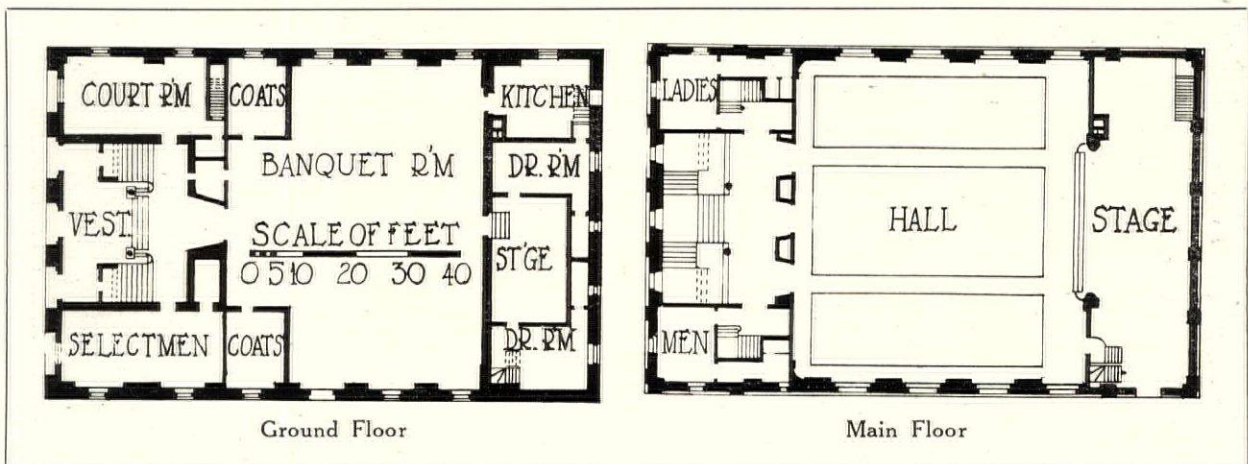
This town hall in Kennebunk is unusually appropriate in design for the old Maine town which it serves. A rectangular building, with an imposing approach of terraced lawn and broad steps, is entered through a fine Colonial portico of free-standing Doric columns supporting a simple entablature and high pediment. In the center of the pediment is a richly carved decoration showing the coat of arms and motto of the State of Maine, thus relieving the rich severity of the Town Hall's exterior.



General View of the Town Hall, Kennebunk, Maine



TOWN HOUSE, PETERBORO, N. H.
LITTLE & RUSSELL, ARCHITECTS



FORUM SPECIFICATION AND DATA SHEET— 71

Town House, Peterboro, N. H.; Little & Russell, Architects

OUTLINE SPECIFICATIONS

GENERAL CONSTRUCTION:

Second class, slow-burning.

EXTERIOR MATERIALS:

Brick with limestone and wood trim.

ROOF:

Green slate.

WINDOWS:

Sash and frame, double-hung, wood.

FLOORS:

Marble throughout.

HEATING:

Steam.

INTERIOR MILL WORK:

Pine.

INTERIOR WALL FINISH:

Plaster.

DECORATIVE TREATMENT:

Woodwork painted white, and walls gray. Stair hall and auditorium have white paneled wainscot.

APPROXIMATE CUBIC FOOTAGE:

340,000.

COST PER CUBIC FOOT:

23 cents.

YEAR OF COMPLETION:

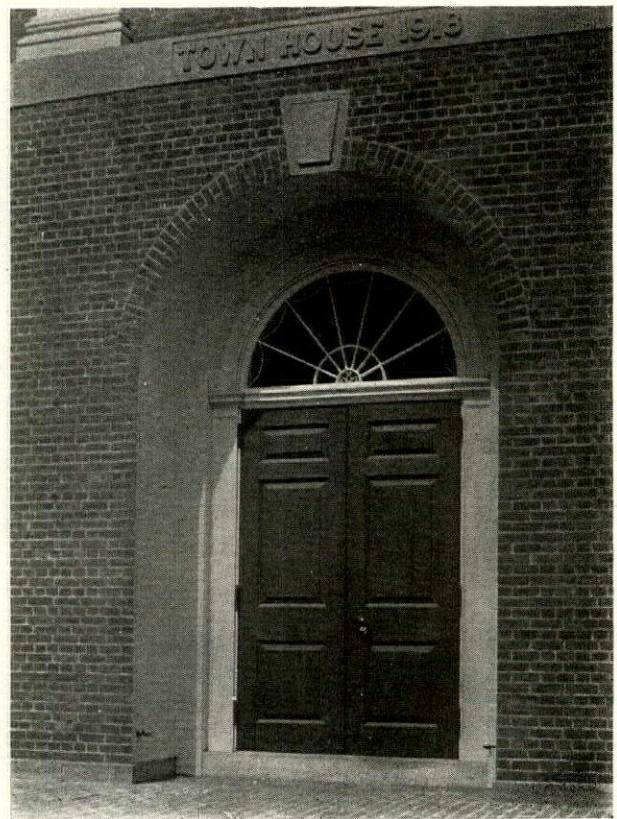
1918.

SUGGESTING in its general mass and proportions old Faneuil Hall in Boston, this town house at Peterboro has a distinct and sober dignity worthy of its New England antecedents. Built of brick with limestone trim, the design shows a compact, rectangular building, the entrance front of which is emphasized and distinguished by a pilaster colonnade in the Corinthian order resting on a broad belt course, below which five deeply recessed archways provide the necessary openings for three spacious entrance doors and two arched windows. These doorways lead through a vestibule to a dignified double

staircase, which gives access to the large public assembly hall on the second floor. This hall is provided with a stage, coat rooms and lavatories for men and women, and a deep balcony across the entrance end. On the ground floor are located small rooms for the local court and the selectmen, as well as a large banquet room, beyond which are dressing rooms, which connect by stairs with the stage, and a kitchen. It will thus be seen that the greater part of the building is planned for large community gatherings and entertainments. This building is justly regarded as being one of the best of an important class.



Entrance Hall



Entrance Door

INTERIOR ARCHITECTURE

Dining Room in Napoleon's Apartments at Fontainebleau

By C. HAMILTON PRESTON

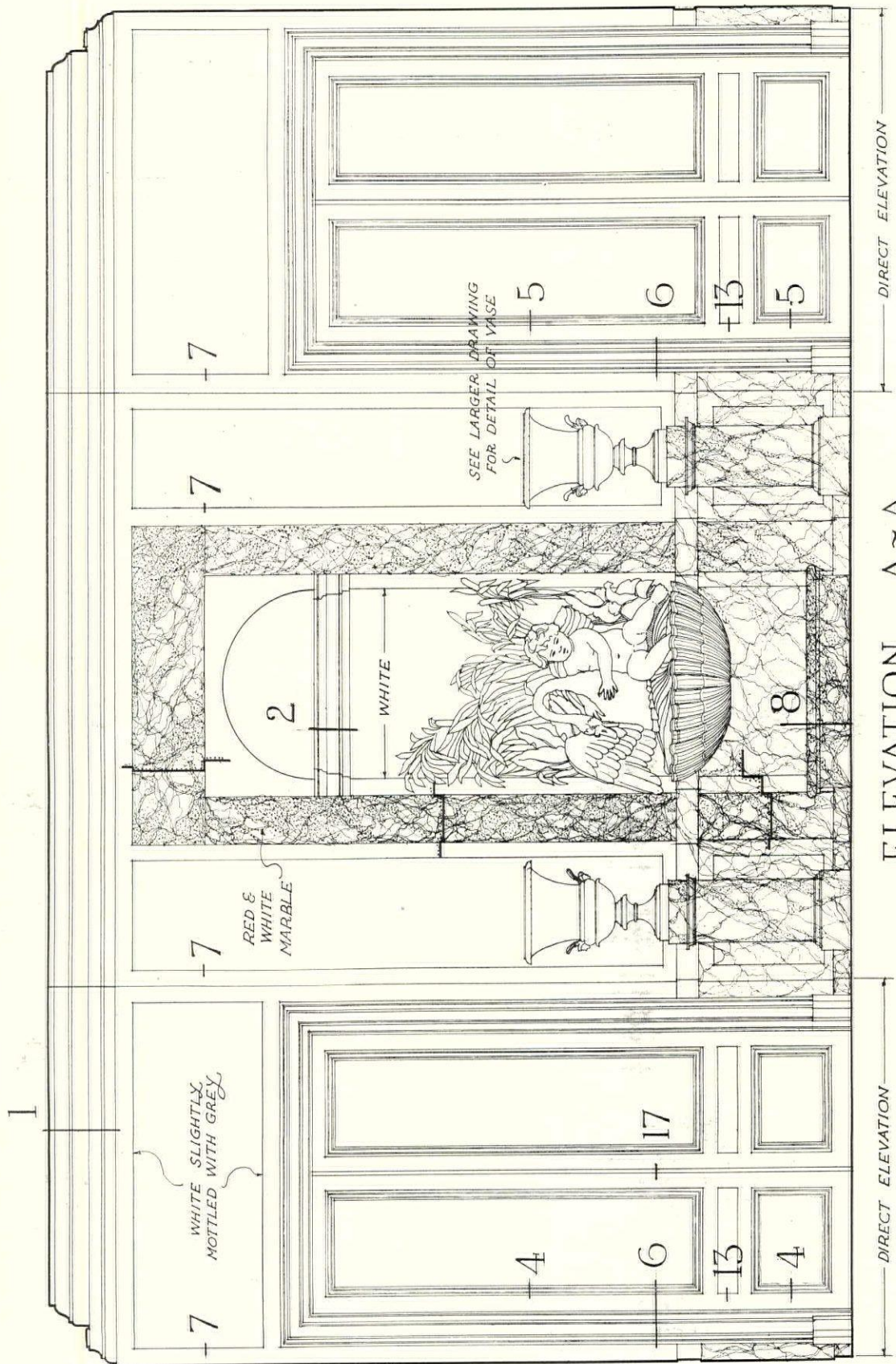
ON the ground floor of the Palace of Fontainebleau and adjacent to the main entrance (distinguished by the imposing horseshoe staircase, of Du Cerceau), is found the suite of rooms reserved by Napoleon as the intimate apartments of himself and the Empress Josephine. It is a vast, imposing suite, of which the subject of our sketch served ordinarily as the dining room.

The plan of the room is rectangular, with the far corners cut off at an angle of 45 degrees, and doors are placed on these angles. The floor of octagonal and square design, with borders, is of black and white marble, the units being large enough in scale to lend great dignity to the room. The walls are marbled in light gray with darker mottlings, the dado being carried around in rose and white marble.

But the really imposing feature of the room is the beautiful niche at the far end. The flat, broad architrave is of the same rose and white marble as the dado. The inside of the niche itself is a dead white, in sharp contrast to the architrave. Set into this niche is the loveliest of fountains, a shell of cream marble holding the justly celebrated bronze boy and swan with a background of reeds. On either side of this niche are marble pedestals surmounted by bronze vases of rarest workmanship, elaborately decorated with emblems and trophies of war. The niche, flanked by these two pedestals with vases, forms an incomparable composition, giving to the room a distinction rarely to be seen. This room has great possibilities, as to design and color, as an inspiration and precedent to present-day designers.



Napoleon's Dining Room at Fontainebleau, As It Appears Today



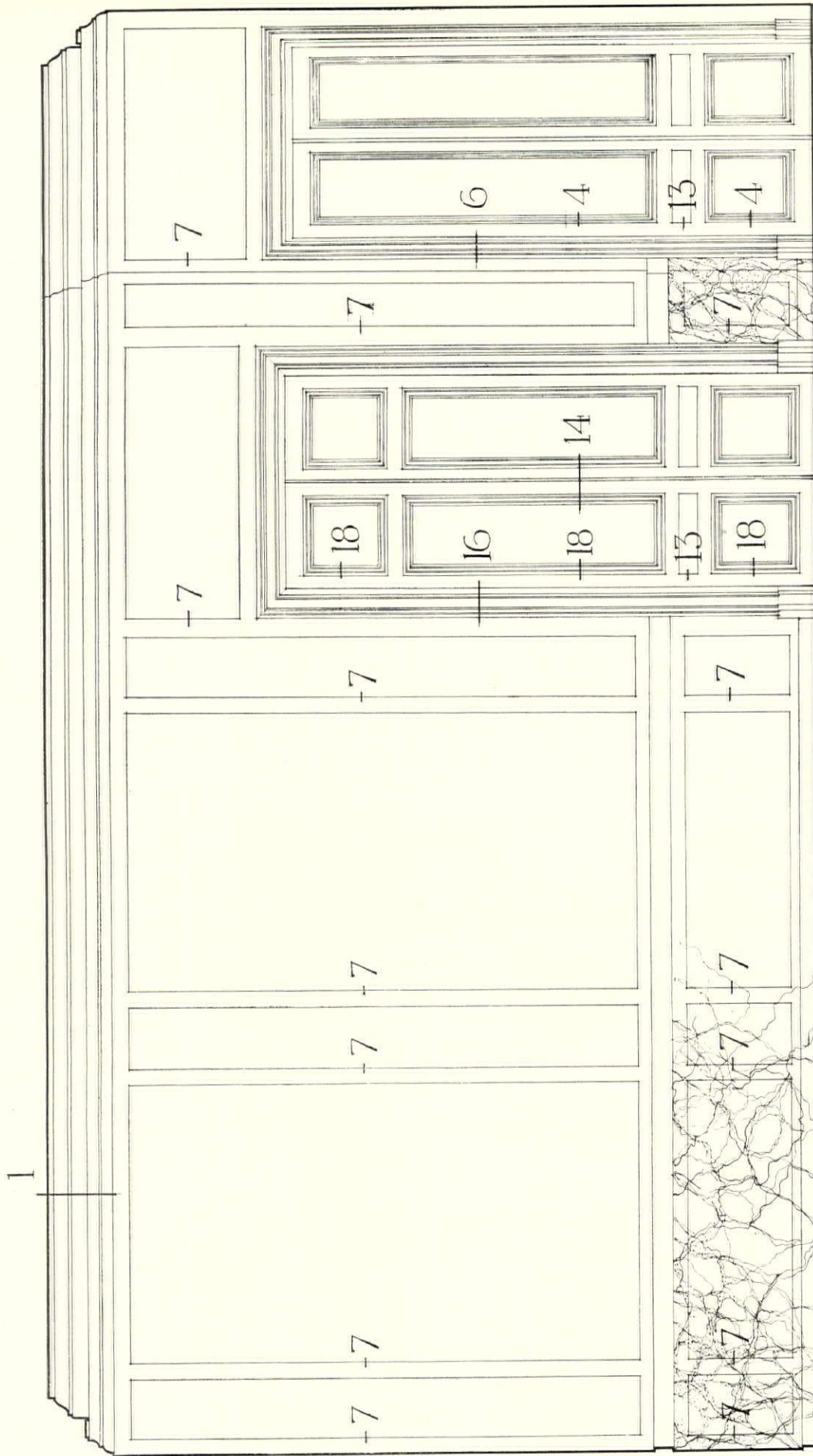
DIRECT ELEVATION

ELEVATION A~A

DIRECT ELEVATION

Scale $\frac{3}{8} = 1$ Foot

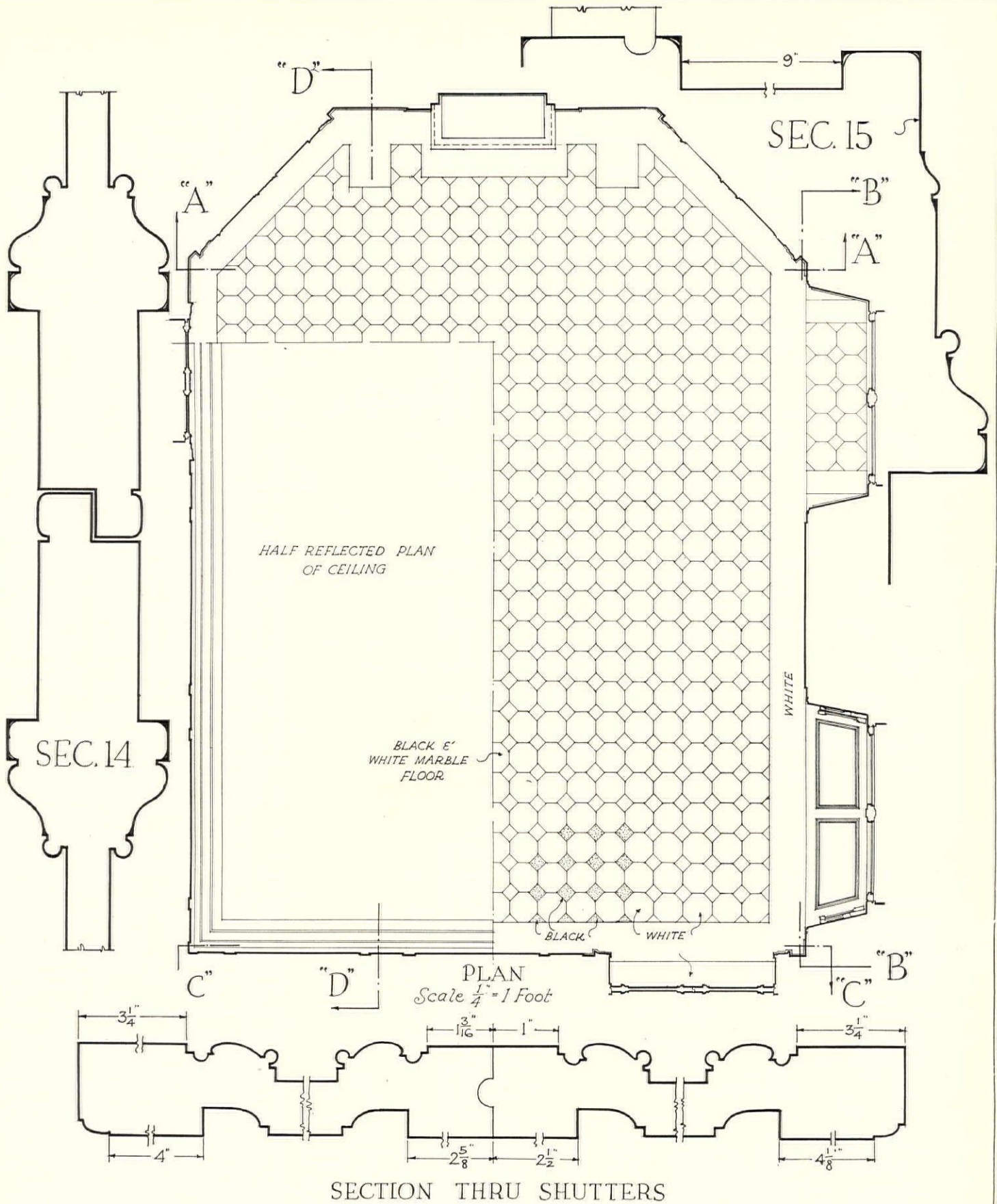
DINING ROOM
 NAPOLEON'S APARTMENTS
 FONTAINEBLEAU



ELEVATION D~D

Scale $\frac{3}{8}'' = 1 \text{ Foot}$

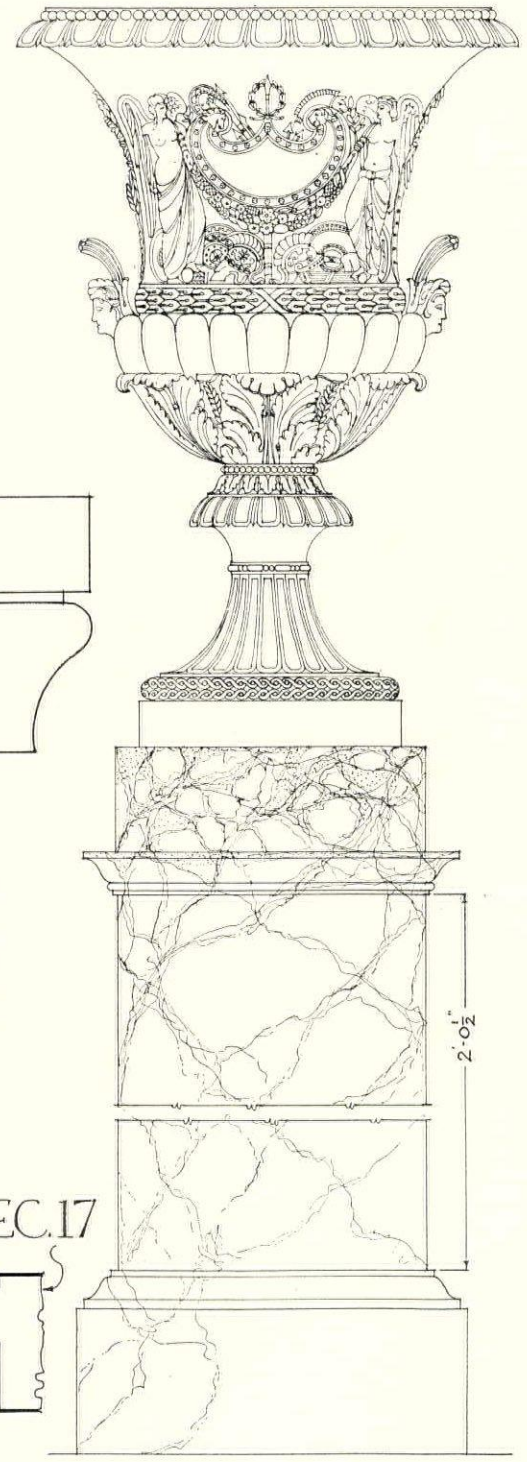
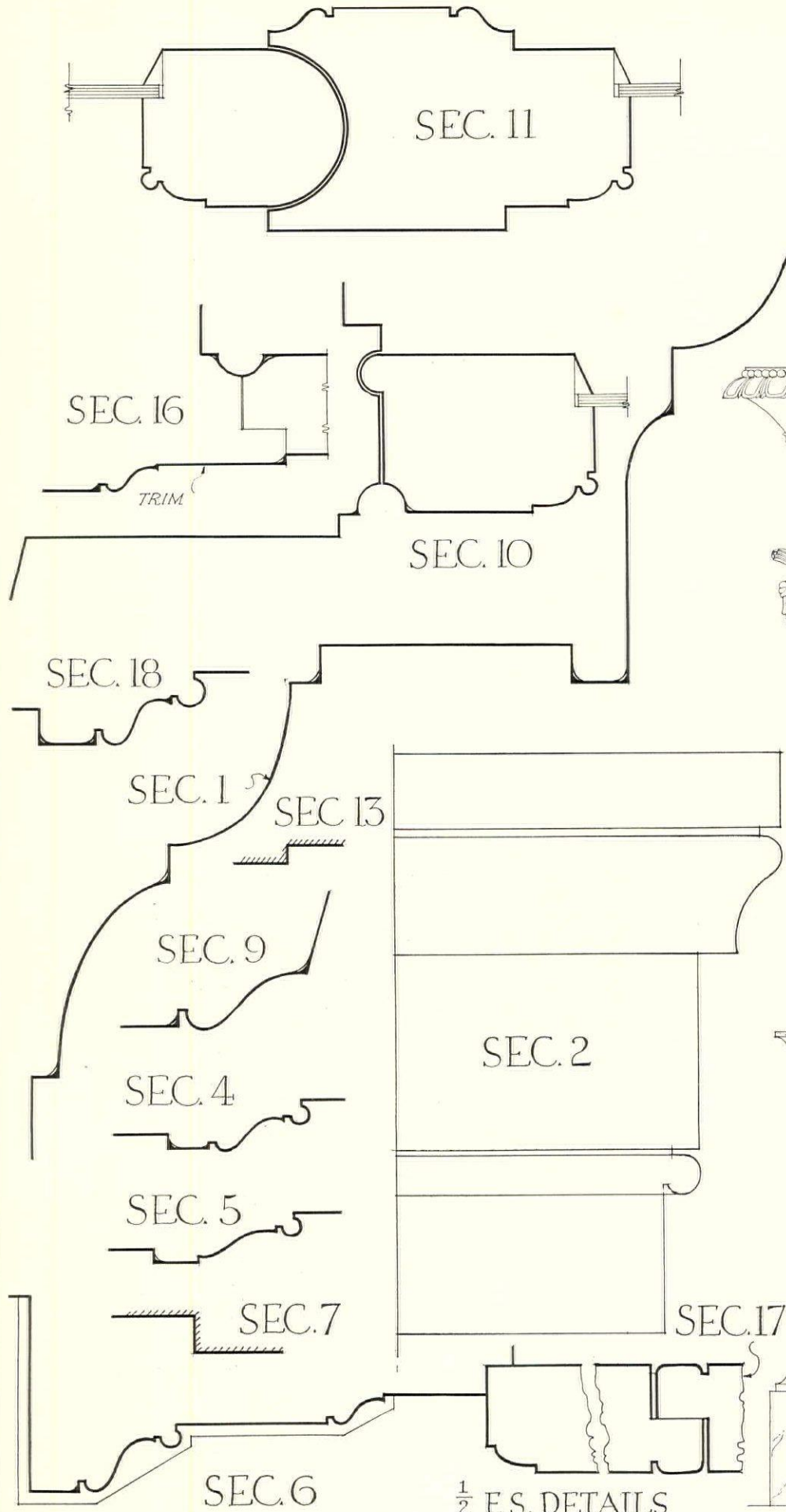
DINING ROOM
 NAPOLEON'S APARTMENTS
 FONTAINEBLEAU



SECTION THRU SHUTTERS

DETAILS

DINING ROOM
 NAPOLEON'S APARTMENTS
 FONTAINEBLEAU



$\frac{1}{2}$ F.S. DETAILS
 DINING ROOM
 NAPOLEON'S APARTMENTS
 FONTAINEBLEAU

ELEVATION
 OF VASE
 Scale $\frac{1}{2}$ " = 1 Foot

DECORATION & FURNITURE

Decorative Walls and Backgrounds

By PIERRE DUTEL

IF at least one room in every home could be set aside in which to feature a background in some interesting manner, how delightful it would be! Rooms are like people, and should be individual in their character. The average person today prefers a painted wall as a background against which to arrange the furniture. This may be interesting as to its color value, but a wall carrying a design will make a more pleasing background and add a note of interest to the complete ensemble for which one works. In France there are many delightful examples of decorative walls to encourage emulation elsewhere.

Picture the effect of a small boudoir or salon paneled in wood that has been painted in some soft pastel shade and rubbed down until it has the texture of chalk. The panels may be divided into smaller sections and lined with gilt or color, and their centers treated with pastoral scenes of country life, such as shepherds and milkmaids posed against shrubs and trees with sheep and cattle about them. Again one may find walls decorated with pictures of monkeys

and birds, or of people dressed in Chinese costume after the *Chinoiserie* manner, which became the fashion during the Louis Quinze period. During the Directoire and late Louis Seize eras, wallpapers came into prominence. These were at first used by the country people and the middle class, but by the close of the eighteenth century the character of the design had reached such perfection that wallpapers were the fashion, so that no house of any importance was considered complete unless it possessed a series of scenic papers. Then began wallpaper's progress.

Boucher, who was one of the noted artists of the time of both the Regency and Louis XV periods, painted many delightful decorations as well as the portraits and paintings for which he is best known. Among his works were designs for screens, furniture and china, as well as cartoons for silk and tapestry designs that were executed by the Gobelins. There is a house still existing near the Sorbonne which at one time belonged to Demarteau, who was an engraver for Boucher. As a note of respect to



A detail showing the decorated walls in the Imprimerie Nationale by Huet. The carving of the old boiseries is gilded, and the panels are enriched with scenes of Chinese life. Furniture, architecture, and the design of clothes and materials all showed oriental feeling at the time



Toile de Jouy papers make pleasing backgrounds for modern interiors. This has a decoration of Chinese pagodas and gardens in lacquer, red on a dull cream ground. The panels of the doors are decorated in keeping with the character of the wallpaper

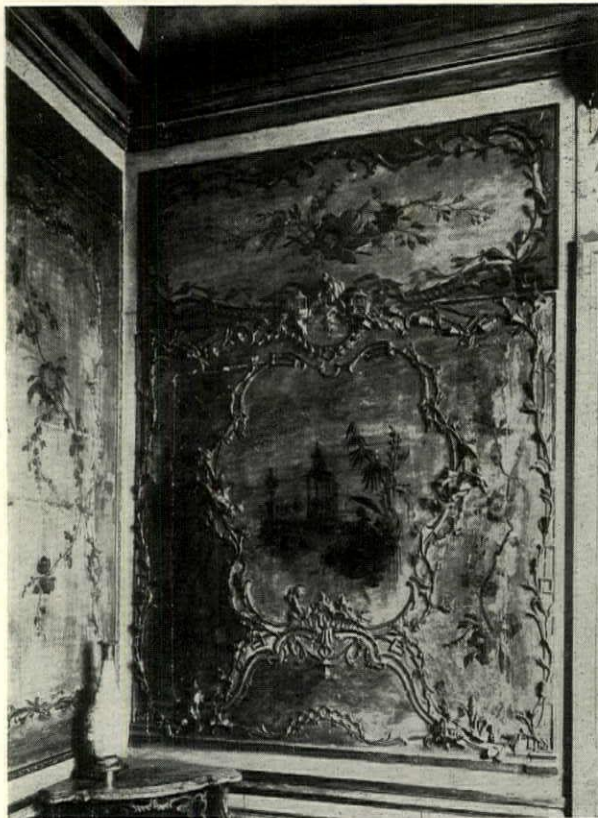
his master and teacher, Boucher, he at one time undertook to paint the drawing room in a series of delightful designs and decorations. The walls were painted with trellis work that framed the doors and window trim on which roses and plants appeared to be growing. Panels between the trellises were designed to show vistas of garden scenes with fountains playing, while above the doors and windows decorations consisting of fat, chubby cupids and birds were painted. The cupids were shown drinking from goblets, squeezing juice from fruits, and feeding doves and other birds, subjects given decorative interest.

When the vogue for painted papers had reached its height, there was no house of importance in Paris that did not possess at least one room with its walls covered with this material. Some of these papers were first brought from China by the Dutch and Portuguese traders and are poems in themselves.

I am thinking of a delightful design that might be worked out today for a foyer hall in either a house or an apartment. The walls could be painted in silver or gold leaf and glazed a rich yellow. Upon this dazzling background a series of panels could be planned, showing scenes from India. These could consist of a procession of elephants and horses and natives in state with swaying palm trees in brilliant shades of rich green. The purplish browns and russet shades found in the elephants' colorings and the richness of the trappings could make a marvelous design. A painted wainscot of marbled wood, about 2 feet high, with a tiled floor or a substitute in linoleum, would make an effective background

for any furniture. Small rooms adapt themselves well to decorative wall treatments in either paper or painted decoration. The elevator in a private house I recently visited had a delightful and amusing design painted on its walls. The lower part of the walls was paneled in wood, above which to the ceiling canvas had been stretched and held in place with narrow mouldings. The canvas was painted with marine scenes showing ships in full sail upon a choppy sea. This was executed in a sketchy, rather crude, but amusing manner. A sailor who had fallen overboard was being pursued by a shark, while his fellow mates were trying desperately to come to his rescue. A lighthouse and one or two fishing shacks and a distant horizon completed the picture. A ship lantern had been wired for electricity and suspended from the ceiling, which was painted in blue and yellow stripes like an awning, a composition of great interest.

A dressing room may be decorated in an elaborate or a simple manner, according to one's taste or pocketbook. If the room is large enough, the corners may be cut off and converted into closets. The doors may be paneled with mirrors, on the under sides of which (before they are silvered) decorations such as scrolls and arabesques in terra cotta and gold may be painted against the silver of the mirror. The walls may be painted in violet over a silver coat of aluminum, in which case the woodwork and trim of the doors and closets should be painted violet and marbled with veins in a deeper tone to harmonize with the walls, treatment which will supply rich architectural character and strong decorative interest.



A corner of a room in the Musee Carnavalet. Its Chinese yellow walls and gilt decorations in carved wood show amusing designs painted by Pillement



Wall treatment of the Salon des Singes in the Musee, Chantilly, shows elaborate decorations in gold and color. A characteristic example of the Louis XV style