# THE AMERICAN ARCHITECT

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## THE ARCHITECTURAL GARDEN—II

*By* HENRY PRESTON WHITE, *Landscape Architect*

ARCHITECTS work under no important limitations in designing houses, except those imposed by their client's taste and requirements and the sum which he wishes to spend. It is only occasionally that irregularity in topography of the house-site is great enough to influence the general design, but the landscape architect works under many additional limitations, in that whatever he does is after all but a reforming or re-embellishing of the ground itself, and so his work must be influenced by whatever exists that cannot or should not be changed. Large trees, rocks, ledges and water-courses all have to be made part of his plan. The only work which an architect does, which has at all corresponding difficulties, is that of altering old buildings. Architects who have tried that, can appreciate the difficulty which attends good landscape design.

Crude detail, but illustrative of a fine effect produced by the aid of an existing natural feature—the large tree which balances the projection of the house on the major axis of the garden.

Experience, however, trains the landscape architect to turn limitations into starting points. He learns to welcome them for their suggestive power, and as means to the end of individuality in his design. In this day of stock garden ornaments and garden magazines, the architectural garden without natural limitations presents a terribly dreary problem. Much that is intrinsically good is hackneyed and held in the contempt which familiarity has bred. Since the garden usually presents but a single *coup d'oeil*, it is necessary to avoid the commonplace. Very few estates are without some existing feature which may be used to give individuality to gardens, though a seemingly disproportionate amount of study may be necessary to find it and its use—a matter clearly within the province of the landscape architect.

The purely architectural features of a garden should

View taken six months after construction and planting was finished. Another season will see the gateway covered with vines.

be designed by the architect, but in no other part of estate design is co-operation with the landscape architect more necessary, because it is his province to describe the different functions of garden features and the practical use to which they may be put. A pergola or trellis is put in a garden to support vines, and should be designed not only to do this in a practical and durable way but also differently for different vines. Features which depend upon water should be studied in connection with the general water supply and drainage system of the whole estate—horticultural and engineering data which only the landscape architect can supply.

Perhaps no feature of the architectural garden has been more badly handled through the lack of appreciation of its use than the pergola. Architects and owners have seized upon it with an avidity not surprising to anyone who has had the good fortune to see its most perfect prototype, the pergola at the Hotel Cappuccini in Amalfi. It really seems as if nothing in architecture is more perfect of its kind. It presents a wonderfully rich contrast of light and shade, the delicately graded shade of the rounded columns with the infinite detail of leafage. Considering the real beauty of the prototype, it is extraordinary that architects have strayed so far from it. Their desire for originality, entirely commendable as a general quality, seems here misplaced. Four-fifths of the beauty of the pergola at Amalfi comes from the absence of architectural ornament. Most of it lies in the extreme simplicity and crudeness of it. The columns are whitewashed and not at all carefully modeled. The trellis work above, which supports the vines, is made of rustic poles laid over the columns without regard to their appearance, and indeed this trellis work is completely covered by the vines. No one who has seen it would say that it could be improved in any respect, and if this is true, there is sufficient reason for not trying to evolve something different. Vines are as essential a part of a pergola as the trellis work which supports them or the columns which support the trellis. Without the vines the pergola is a gaunt skeleton of timber work, an incomplete

This greenhouse screens the carriage yard from the garden and makes an attractive feature of the garden itself.

A well studied and economical arrangement of walls.

and lifeless architectural excrescence. Properly roofed, with its leafy thatch, one sees jewel-like patches of blue sky in the highest value through the brown, green, and golden tracery, whose shadows on the leaf-strewn floor make another tracery in gold and gray. Without the vines, the rafters cut the sky in monotonous parallels, and cast their naked shadows on the floor, sharp-edged and graceless, and vines will not grow on a pergola which is not properly proportioned and located. A recent publication shows illustrations of a pergola built somewhere in southern California, which has for trellis work concrete imitations of tree branches. It seems that the imitations are perfect in color and texture, being in reality casts made in moulds struck from the branches themselves. The desire for originality leads to such devices, but this idea, ridiculous as it is, yet shows appreciation of one basic principle of the pergola, namely that whatever the supports used, whether columns, posts or piers, the thing to be supported is a vine or living thing and not a wooden roof with the boarding left off.

Arbors, fountains, basins, walls or lattice fences, all should be placed in or around gardens as a means to the end of serving as foils or settings to phases of natural beauty. These details should not be designed without a perfectly definite knowledge of the kind of natural beauty which the garden is to have. Such knowledge can only be gained in conference between the architect and owner and the landscape architect. It is to be hoped that the era of the commonplace is drawing to an end, and that we may soon see in architectural garden designs, that same precision and sense of propriety which is now evident in house design. It is necessary in the practice of all arts to "Know what you are going to do, then do it." This should be the rule in garden design. Know not a part, but all of it, the topography, the exposure, the water and drainage, the soil and what may be grown upon it, the amount of maintenance the owner can afford to provide for it. Build the house for the garden and the garden for the house. Establish reciprocity between them so that each adds beauty and convenience to the other. This is to be taken seriously. There are thousands of well designed houses in this country, hundreds so good that nothing could be better, and but an insignificant number of architectural gardens which have any claim to perfection. Many houses are well proportioned, well built, with good rooms, good chimneys, roofs, porches, windows and cellars, well ventilated, well lighted and well heated. Gardens that are even good places for plants to grow in are rare. Very few have a practical arrangement of beds, fewer still have that peculiar, indescribable charm which we have noted perhaps in one or two.

The charm of old gardens, of those in Italy or England, or in Nantucket, Charleston or Salem, is perhaps indescribable but easily traced to its source. One hears the statement frequently reiterated that age lends this charm. It is more truthful to say that it is what age does that makes the charm; and what age does the designer can do. For the effect of time is merely that of softening harsh lines, subduing raw color, and establishing a lower and therefore more restful and a more complete harmony than the new work had. This is done partly by erosion or weathering, staining or bleaching, and largely by the growth of vegetation; but plants, trees and vines can be purchased of such a size, and handled to such advantage, that a wholly sufficient effect of maturity can be produced in less than five years, often three years. Harmony of color and form, it will be admitted, is a quality which proper design can give to any new object; but just as charm in a dwelling, whatever its source, is seldom produced by the architect alone, but only by the combined study of the owner, decorator, paper maker, weaver and other craftsmen, so in the architectural garden it can be assured only through the co-operation of those specialists whose separate provinces combine to cover the whole field of knowledge applicable to garden design.

## SUGGESTIONS AS TO PROPER METHODS TO EMPLOY IN THE SETTING OF MARBLE

*By* CHARLES HILF

PRACTICALLY all trades or branches of industry engaged in the construction of modern buildings can refer to books for reference or instruction pertaining to their work with the exception of the marble industry, particularly as applied to thin stock commonly employed for decorative purposes. Although several books have been written on the subject of marble, they are useless from a practical working standpoint as no essential information is offered in regard to the best method of procedure to follow in anchoring and securing marble in various required positions permanently.

The marble industry has increased enormously within the last decade, marble being now used in every city of any importance, from coast to coast. In fact, there is seldom a modern building constructed for any purpose without its use, so an article briefly outlining errors that are frequently committed and how they may be averted should be of interest to those who are constantly inspecting or directing this class of work.

Architects in their specifications do not ordinarily specify how thin stock shall be anchored, nor always specify the kind or quality of material for backing, etc. As a practical man with many years of experience, I offer a few suggestions which if adopted will, it is believed, insure the best workmanship without adding to cost.

As thin slabs of marble used in buildings for decorative purposes have not a natural bed, in fact are almost invariably set on edge, it is necessary to anchor them to a permanent wall of tile, brick, concrete or wood. Nothing is so unsightly as slabs that are loose from the wall or that present irregular open joints. Although no fixed or set rules can be applied in regard to anchoring, the essentials should be stated instead of specifying "anchored in the best manner," as is very often the case in architect's specifications.

Marble should be anchored by the edge if possible. Anchors should be no less than three feet apart; any slab containing more than two square feet should have no less than four anchors unless marble or some other materials covers a part of the slab to hold it permanently in place.

Copper or brass wire only should be used; about six gauge for seven-eighths-inch stock, held permanently in place in the anchor holes of the marble by a wooden plug cut wedged shaped and driven after the anchor is in position. This plug should be covered with plaster-of-paris so that it will not decay in time and cause the anchor to loosen.

Plaster-of-paris is always used to back up marble, as it does not injure it in any way, and its quick setting quality makes it an ideal material for that purpose. To secure the best results special attention should be given to the quality of plaster-of-paris used, as a great deal depends on this material for permanency; often loose slabs are the result of poor material used in the backing. Casting plaster is preferable to other plaster, and if possible should be specified. If fresh it does not set too rapidly for the average marble setter; it has the plasticity necessary, for when a slab is moved after material is placed on the wall it does not crumble, while an inferior grade sometimes sets at once, especially if the wall is not wet enough and the result is an insecure piece of work. This is a very common occurrence and although the slab may be firmly anchored, it sounds loose when tapped. This is especially the case with large slabs used as wainscoting or for lavatory purposes. Reliable marble firms who undertake large contracts generally use the best plaster; they find it economical as by that means and the emplyoment of skilled men the best results are obtained.

The first course or base should be set before finished floor is laid; better margins on the floor are the result and closer jointing to the floor is assured. It is best to set the first course about one-half inch below the floor; should the floor be out of level, which is often the case, or slight settling takes place since the marble is anchored to the wall, an unsightly joint where dirt would settle is thus avoided. It is also advisable that the first course, if not too high, should be filled with concrete mortar backing for the purpose of averting any injury to the marble, this first course on account of its proximity to the floor being more liable to damage than the other courses. Where white marble is used, no more cement should be used than is necessary to solidify the mortar, as too much cement may discolor the marble and does not add to the security of the work. Care should be taken if marble wainscot is placed before floor is laid that it is well filled under the course to insure good construction.

A very important point is that corners of base and upper courses are "cross anchored" (a trade term) meaning that corners forming a right angle should be diagonally anchored into each other, so that should an unforeseen strain be placed on the marble, the joints will not open. This is imperative where the highest grade of work is desired.

All joints should be as neat and close as possible; it is not of great consequence while the work is new and the plaster white and not very noticeable; but in time the joints turn dark and produce a very unsightly appearance, so the closer the jointing the better workmanship and the better permanent result.

Marble in large slabs or long strips on account of its thinness is more or less warped, so care and skill should be exercised in setting it as straight as possible. This can easily be accomplished by cautious mechanics. If the warp or bend is not straightened the adjoining piece will not present an even surface. In that case the setter depends upon the good grace of the architect or contractor, and upon the polisher to overlook or correct his carelessness.

Colored marble that is very fragile requires a polisher to rectify an uneven edge; that is to say, where an edge protrudes from adjoining work, it becomes necessary for the face to be stripped and then polished. The larger the surface repolished, the better the result, but it requires an expert to repolish it so that it is not noitceable or wavy. Therefore, in setting marble, care should be taken to avoid repolishing, if it can be avoided.

It is very desirable to have edges thinly plastered before setting, instead of setting dry, as is customary, especially when a joint is cut at the building (which is always an undercut), as the pointing does not then penetrate deep enough. By using the first method, it will assure the pointing from falling out afterwards. Molding and narrow courses should have bottom edges firmly embedded in plaster, especially if work is to be placed above it.

All thin stock is set on cardboard, heavy stock on sheet lead. This is indispensable. It is best to use white paper. If colored it will show an edge, or may discolor if white marble is used.

Hanging slabs for ceiling or soffits, etc., is a very simple operation, providing there is sufficient room above the marble for anchorage; about six inches or more is required. The best wire for ceiling anchorage is very soft copper or brass wire, generally used in double strands on top surface, or edge, about two feet apart. The purpose of doubling wire is that by twisting it the marble can be raised or lowered accurately into exact position. The wires should then be covered with plaster backed by terra cotta, as it adds to firmness and stability. The same procedure is used for beams, brackets and soffits, but larger gauge wire is used for heavier work. Wires can be fastened best to round rods or pipes to prevent shearing. Exceptionally heavy work is better bolted; this, however, only applies to large public or monumental buildings.

On door and window trim or architraves where edges are polished and exposed, V shape anchor holes are drilled in the back of the marble, but wherever possible avoid screws through face as they mar the beauty of the marble. This also refers to lavatory work. Nickel-plated angles, legs and standards soon lose the plating and are very seldom polished. They do not make a pleasing appearance in a short time. Marble standards appear preferable.

Partition slabs should be set between wall wainscoting members. Either tile or marble stiles should be doweled into partitions to do away with angles. A strip of marble should be overhead to take the place of railing.

In spacing, care should be taken in regard to rough walls, either brick, terra cotta, concrete or wood, especially when foreign colored marble is to be used. For white, Italian or American marble when the wall is straight and plumb, about seven-eighths inch space for bedding between nearest course, which is generally the dado and the wall, is sufficient, but when very fragile marble is used such as Sienna or Numidian, precaution requires a cheap marble backing which is about an inch thick, so additional space should be allowed to avoid the cutting of rough tile wall or whatever it may be.

### TILE, FLOOR AND BORDER

The main difficulty in laying a tile floor or border is encountered in doing the work so it does not sound loose or hollow when walking over it. There are only a few rules to be observed for best results. It should be laid upon mortar; about three parts of very coarse sand and one part cement. This mixture should not be too wet, although of sufficient dampness for cement in solution to work up to the top when tile are tapped in place. Mortar bed should be evenly spread so that the four corners of the tile rest firmly, then the tile should be tapped in the center, otherwise there will not be an even bed underneath, causing it to sound hollow. Marble tile cannot be floated as encaustic or ceramic tile for edges rubbing against each other would chip, hence one tile is laid at a time.

When tile are large, or border is used, after tile or border is tapped in place, it is advisable to take it up again, so all parts not filled with mortar can be filled with a mixture of pure cement the consistency of molasses, then again tapped in place. This will insure soundness and permanency. The bed of mortar should not be less than one inch nor more than two inches thick. The floor, before tile is laid, should be thoroughly swept and cleaned without sprinkling, then properly wet.

After floor is laid if joints have not been "buttered" with pure cement, the joints are to be filled with cement and water, called 'grout.' It is a mistake for grout to be mixed too thick; it should be as thin as possible as otherwise the joints fill too rapidly instead of filling all voids underneath. This is a very important procedure. It may seem trivial, but particular attention should be given to seemingly trivial matters. They count much for good workmanship, appearance and permanency.

## A RECENT LEGAL DECISION

### ARCHITECT'S CERTIFICATE NOT NECESSARY FOR MATERIAL FURNISHED

A contract was made to furnish cut stone according to the plans and specifications for the erection of certain buildings. In an action for the balance alleged to be due for the stone one of the defenses was that the plaintiff had failed to comply with the plans and specifications and to obtain a certificate from the architects that the material furnished complied with such plans and specifications. Article 11 thereof provided: "Payments will only be made upon certificate of the architect." It was held that this provision did not apply to one who merely furnished material, and that no certificate of the architect was necessary.

Such a contract, so far as the furnishing of stone was concerned, was not a building contract, but an executory contract of sale upon condition precedent. Consequently acceptance and use of the stone waived all non-conformity thereof to plans and specifications known to the owner prior to such acceptance and use.

Breen Stone Co. *v.* W. F. T. Bushnell Co., Minnesota Supreme Court, 135 N. W. 993.

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## ARCHITECTURAL LIMITATIONS

THAT architecture in America should have steadily improved in spite of the limitations and restrictions that surround it and hamper its progress, gives evidence among other things of the intelligence, persistence and energy of the profession in this country.

All other arts, save that of architecture, are only controlled by the materials employed, and only limited by the creative minds of the artists.

But in architecture, the design of the architect evolved after careful study of the problem and brought to completion after considerations of environment, purpose and occupancy, is frequently subject to revision by the client, whose usually practical mind can only grasp the utilitarian aspects of the problem, and whose purse strings are snugly drawn at any reference to embellishments that have no income bearing relation. In fact, the careful observer can usually detect in the design of most city buildings, the stresses of these conditions, but the uninformed will generally lay the shortcomings of the structures at the door of the architect. Yet in spite of rebuffs, unreasonable criticisms, and the unfair attribution of grievous faults to the architect, he has remained undiscouraged and returned to the new problems with commendable energy and an ever increasing vigor. It is this attribute that has enabled architects to accomplish what has been attained.

The growing appreciation of good architecture as a commercial asset is a direct result and the place that we have taken in the front rank is due to this indomitable zeal that is impressing its influence on the most captious and refractory clients.

But it is not the private client who is the worst offender in the direction indicated. The National government, state legislatures and municipal bodies are really the most difficult to handle and work the most harm. It is a sad commentary on the men in public office, that they seem to feel that in situations requiring economy the first and most legitimate means of accomplishing the desired end and proclaiming their title to the higher statesmanship is in a "cheeseparing" and parsimonious attitude towards the buildings to be erected. If the campaign of education and enlightenment now being carried on by the Institute corrects this impression, it will have accomplished much good.

## EXTENSION OF WORK BY INSTITUTE COMMITTEE ON EDUCATION

EVERY architect has probably at some time, if not frequently, realized that the success or failure of his work depends largely on the ability of the craftsmen who are engaged in its execution. It is obviously impossible to secure satisfactory results from men totally ignorant even as to methods necessary to obtain a desired effect. In other words, one lacking knowledge of good work cannot be expected to produce it. It is therefore with satisfaction that we learn of the plan of the American Institute Committee on Education to include in future educational campaigns the instruction of the craftsman as well as the architectural student.

The working out of the details connected with this comprehensive idea will be watched with much interest. and there can be no doubt that it will receive the hearty endorsement and co-operation of architects in practice everywhere.

## GOVERNOR SULZER INVITES CO-OPERATION WITH NEW YORK CHAPTERS OF THE A.I.A.

GOVERNOR WILLIAM SULZER of New York is to be commended for the attitude taken by him in asking the assistance of members of the American Institute of Architects in investigating the State Architect's Department. President Robert D. Kohn of the New York Chapter, as a result of whose activities the Governor has become alive to the situation, promptly accepted the invitation and in order that the committee be representative of the entire State, enlisted the aid of Messrs. A. L. Brockway, President of the Central New York Chapter of the Institute and E. B. Green, President of the Buffalo Chapter. They were asked to each select an architect of the highest standing who would offer his services in this investigation. Mr. Kohn will select a third member.

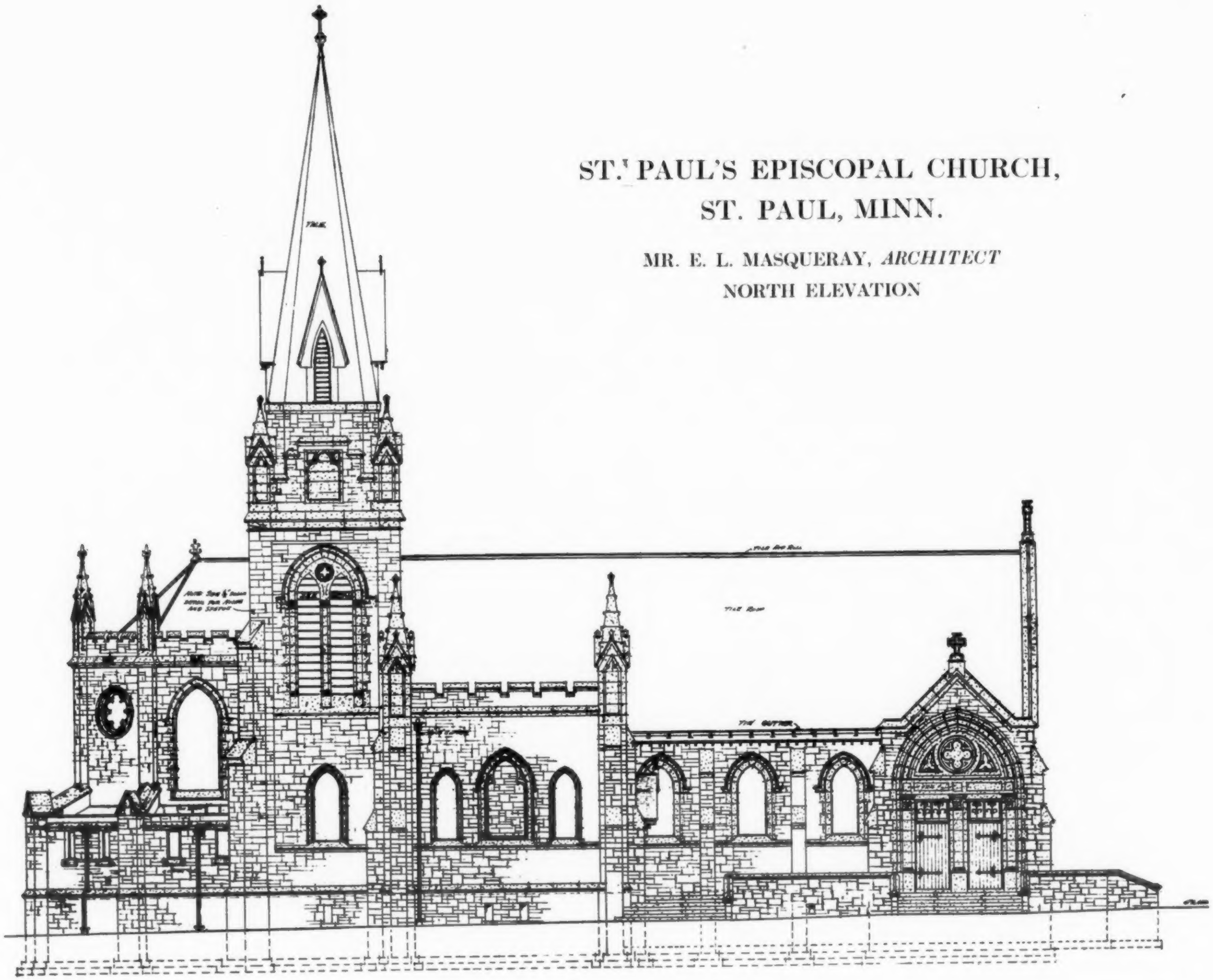
It is hoped that the report of this committee, composed of men whose qualifications and ability to report wisely cannot be questioned, will be favorably considered by the Governor. In fact, there seems no reason to doubt the Executive's sincerity in the matter, as it would be idle for him to ask aid of the profession if he were not prepared and willing to be guided by its representatives' suggestions.

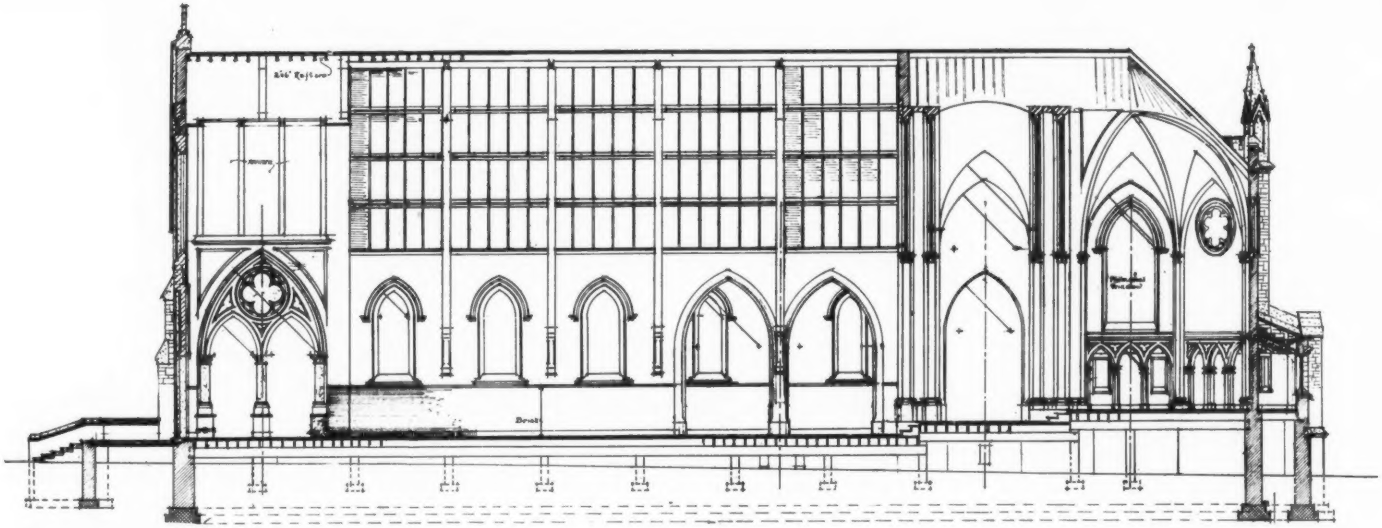
The incident is particularly gratifying as furnishing another indication of the growing appreciation of men in public life, of the importance of architecture in the development of this country. When appointments to positions of wide importance, as affecting the public buildings of a state, are made upon the recommendations of committees of architects chosen by State Chapters, there need be no fear of an incompetent or unworthy practitioner gaining public preferment, and becoming a menace to state and municipal art.

## ST.<sup></sup> PAUL'S EPISCOPAL CHURCH, ST. PAUL, MINN.

MR. E. L. MASQUERAY, *ARCHITECT*

NORTH ELEVATION





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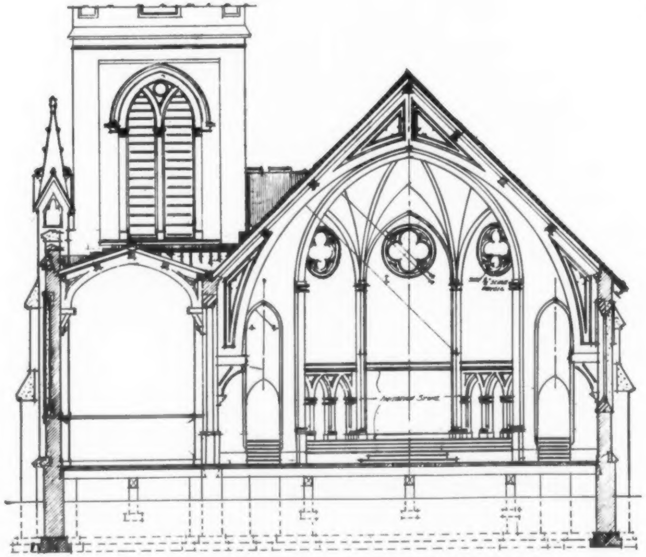

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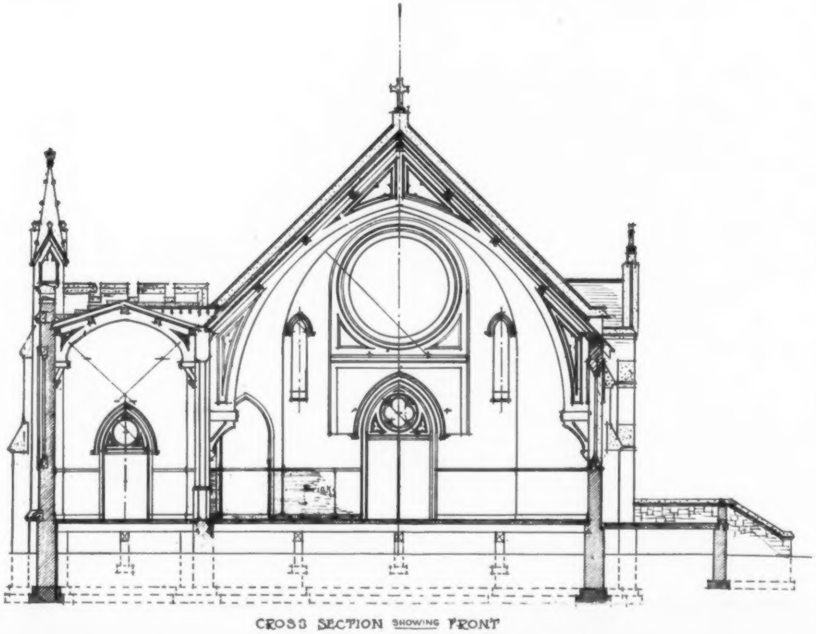

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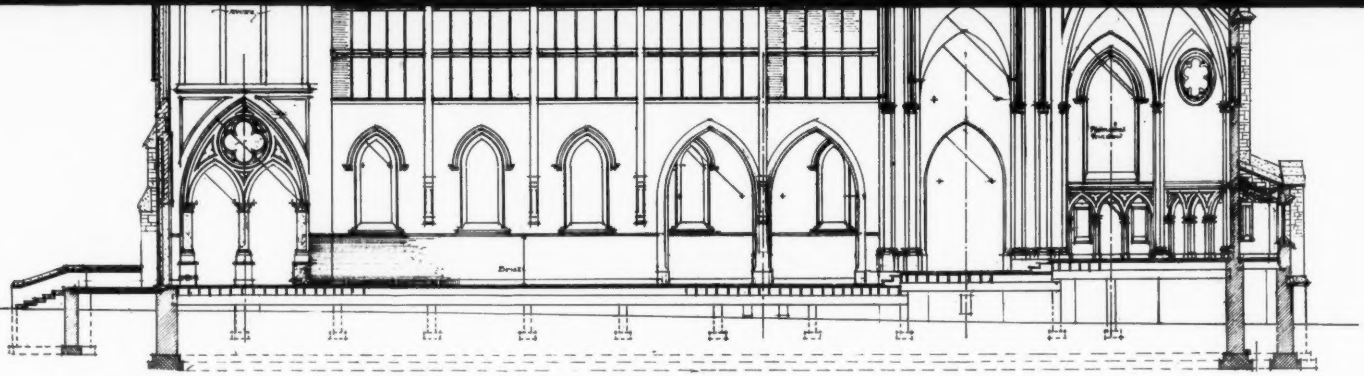

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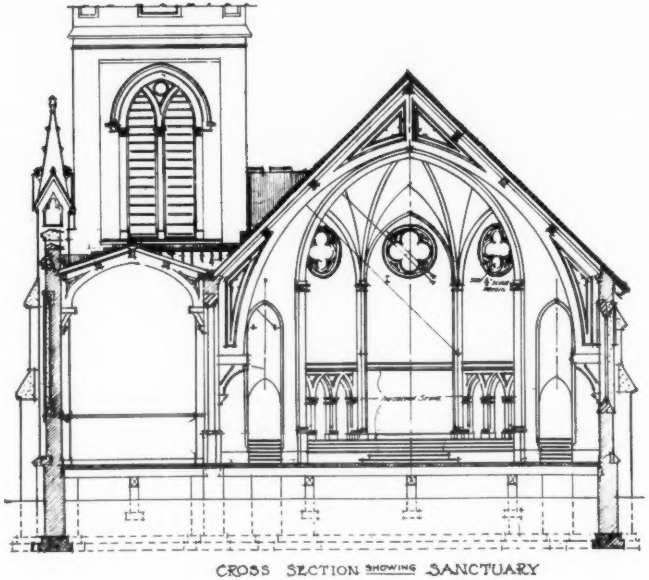

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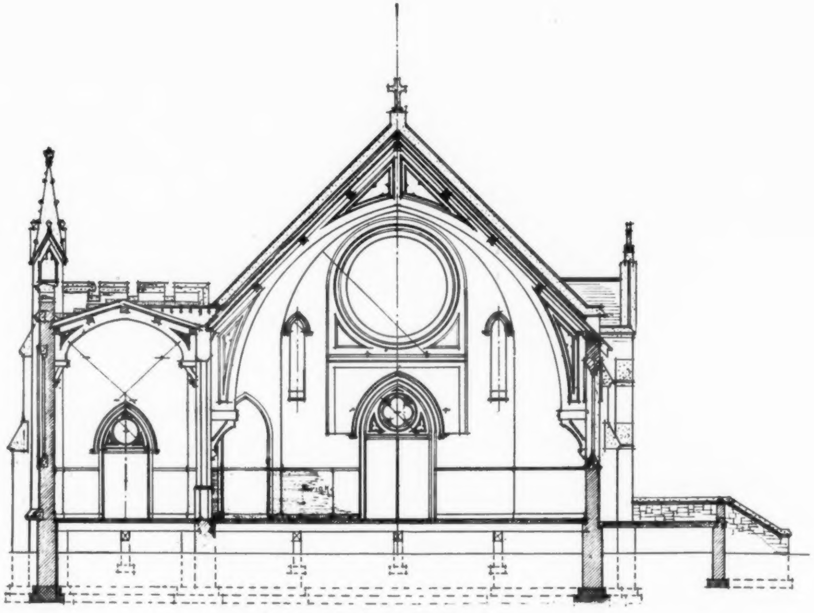

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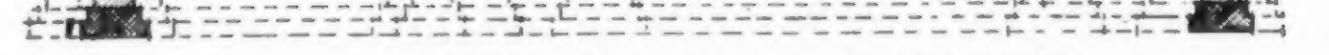

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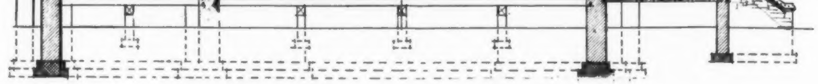

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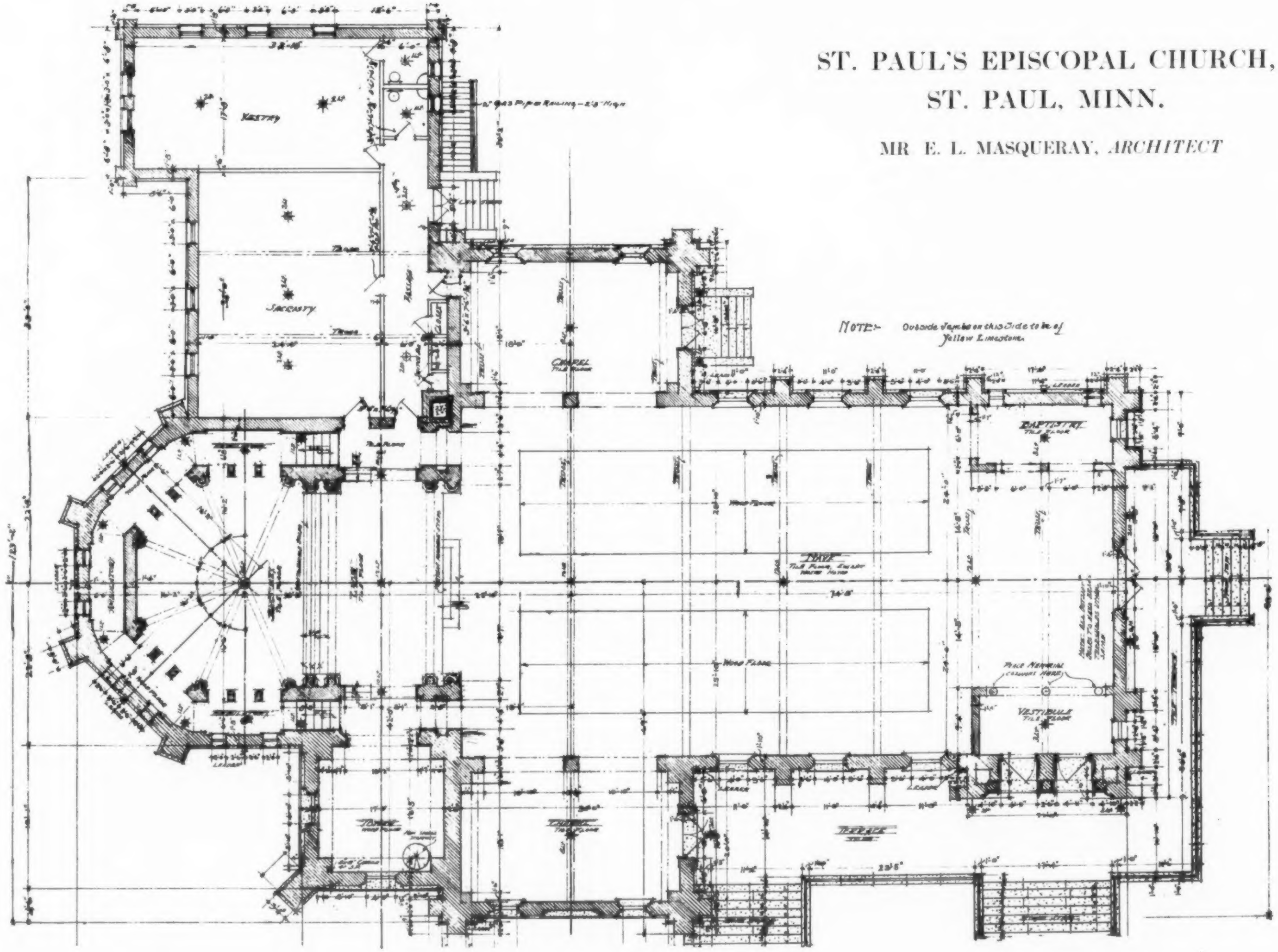
## ST. PAUL, MINN.

MR E. L. MASQUERAY, *ARCHITECT*



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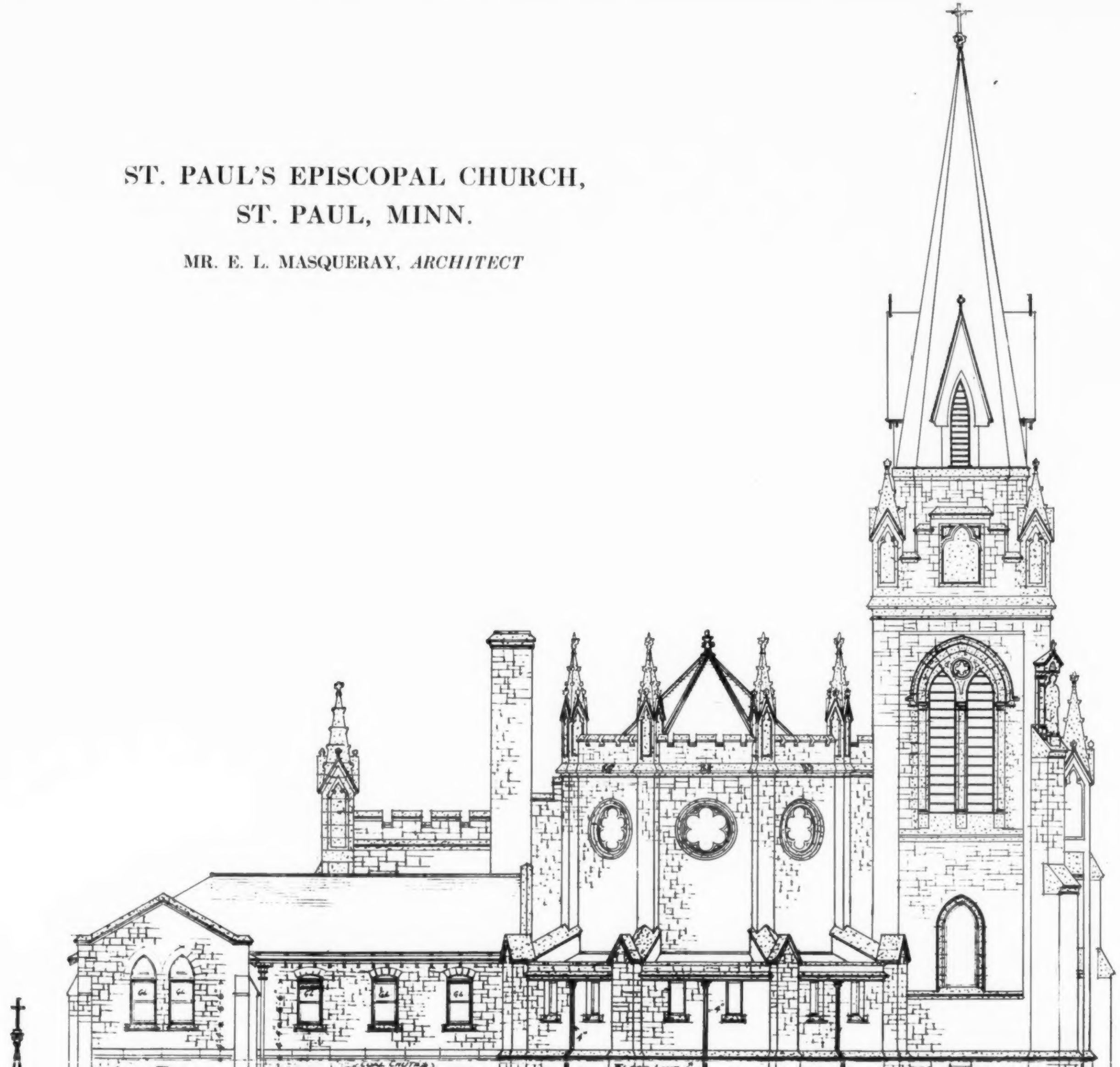
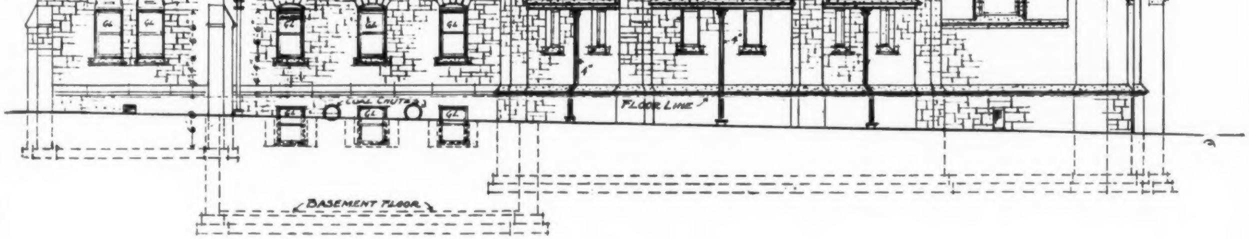


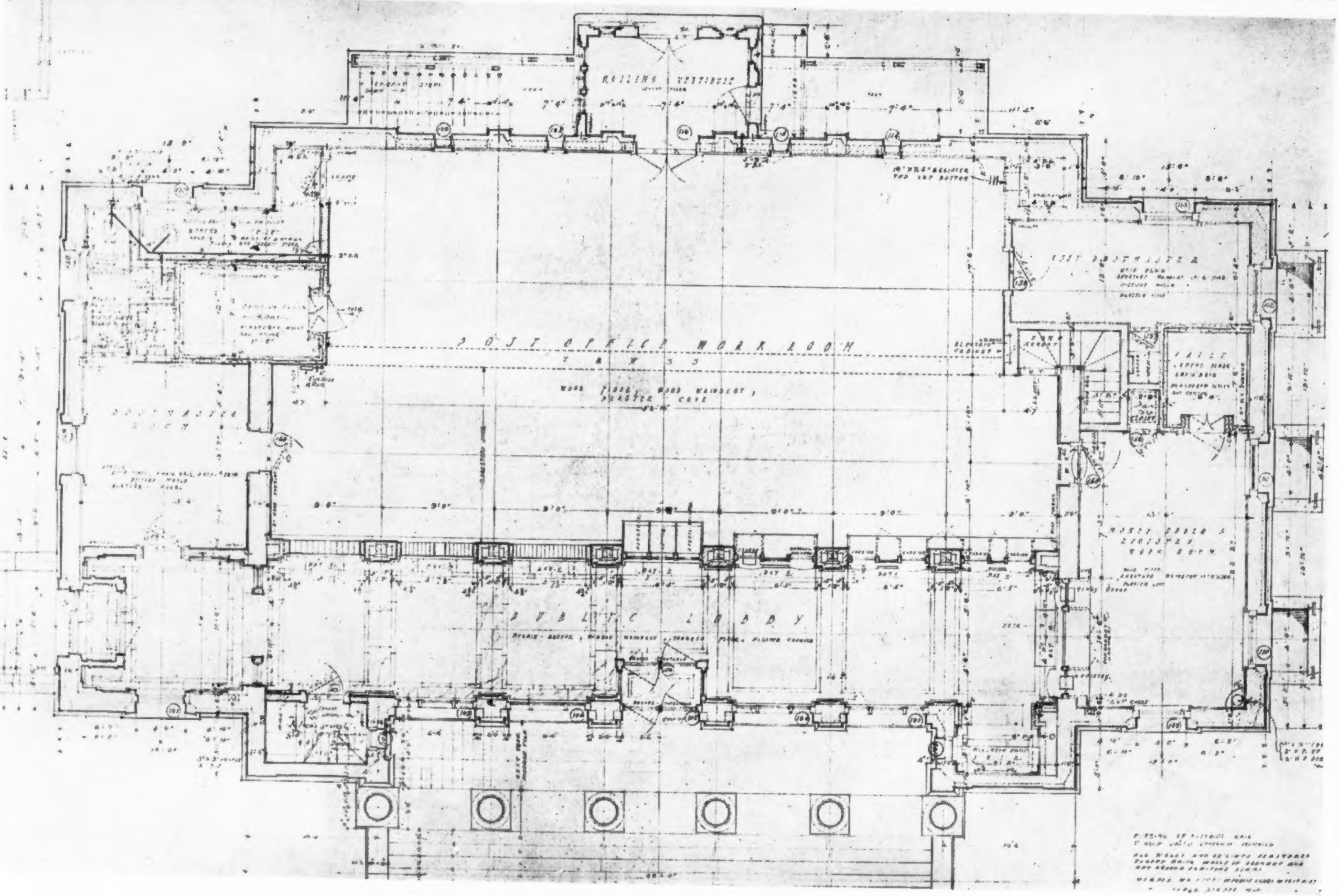


EAST ELEVATION

WEST ELEVATION

U. S. POST OFFICE BUILDING, BEVERLY, MASS.

MR. JAMES KNOX TAYLOR, *ARCHITECT*



U. S. POST OFFICE BUILDING, BEVERLY, MASS.

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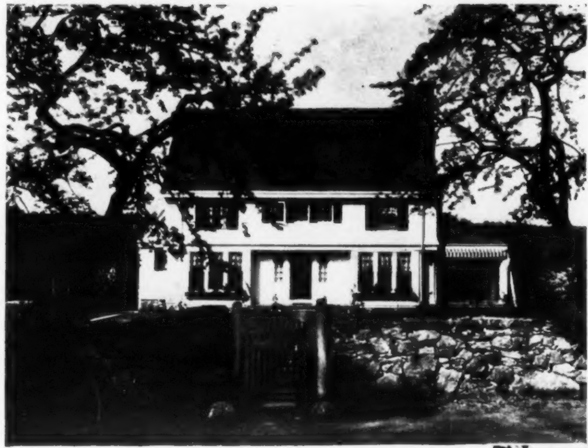
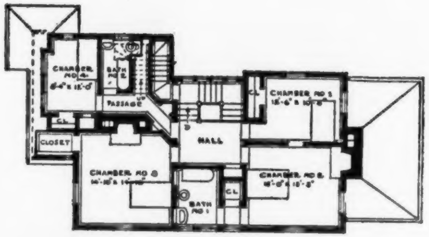
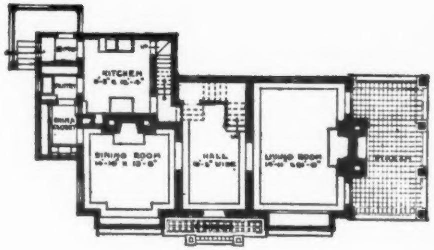


# HOUSE OF
# WILLIAM McKISSOCK, ESQ.,
## CHESTNUT HILL, MASS.



MR. J. LOVELL LITTLE, JR.
*ARCHITECT*



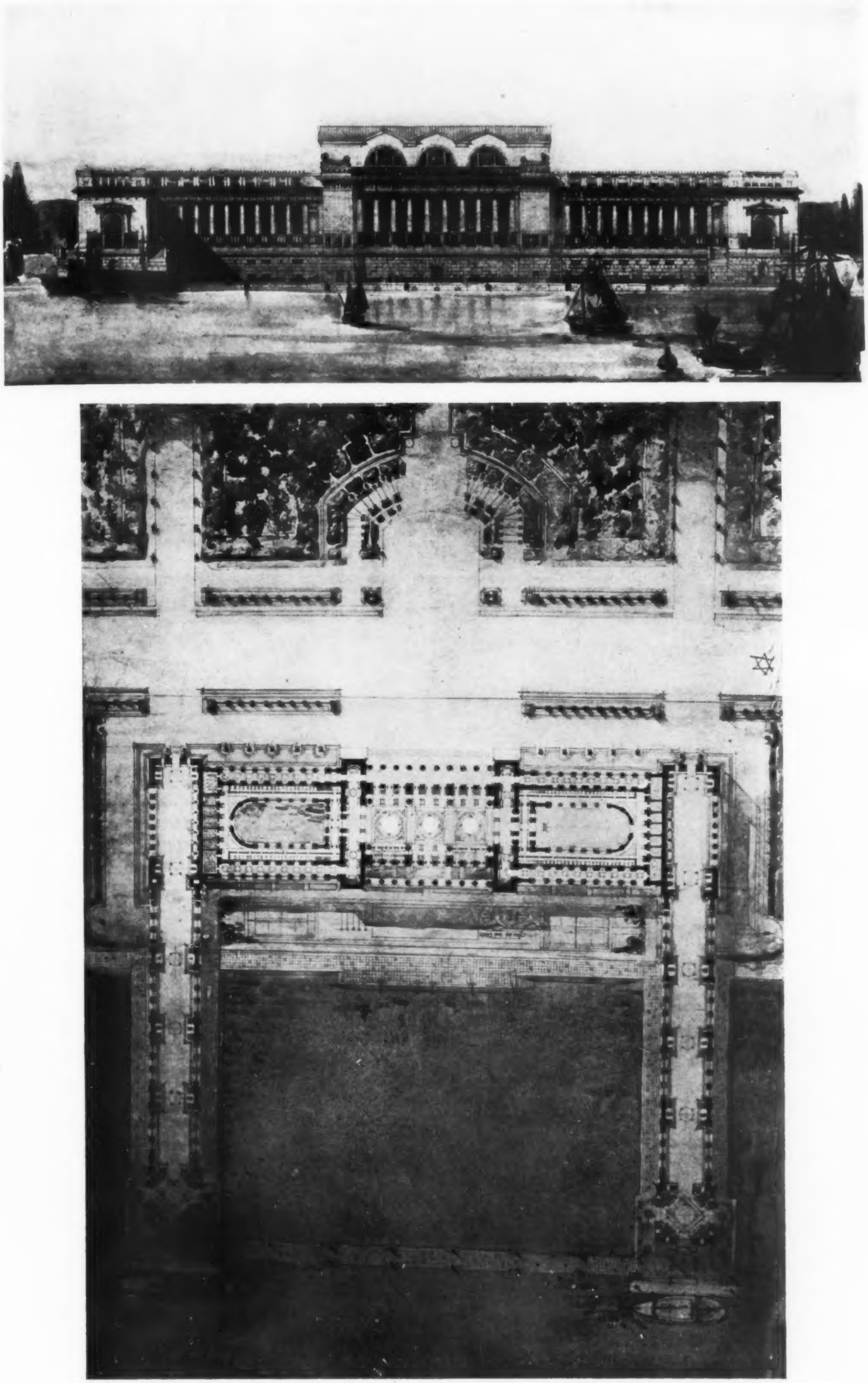
# HOUSE OF W. C. ENGLISH, ESQ., BUCKMINSTER ROAD, BROOKLINE, MASS.

MESSRS. CLARK & RUSSELL, *ARCHITECTS*

THE LOGGIA AND DINING ROOM

HOUSE OF W. C. ENGLISH, ESQ., BROOKLINE, MASS.

MESSRS. CLARK & RUSSELL, *ARCHITECTS*



FRANK A. SPANGENBERG, FIRST MEDAL, COLUMBIA UNIVERSITY

CLASS "A"—II PROJET (PROBLEM IN DESIGN)—A PUBLIC BATH

*STUDENT WORK, SOCIETY OF BEAUX-ARTS ARCHITECTS*

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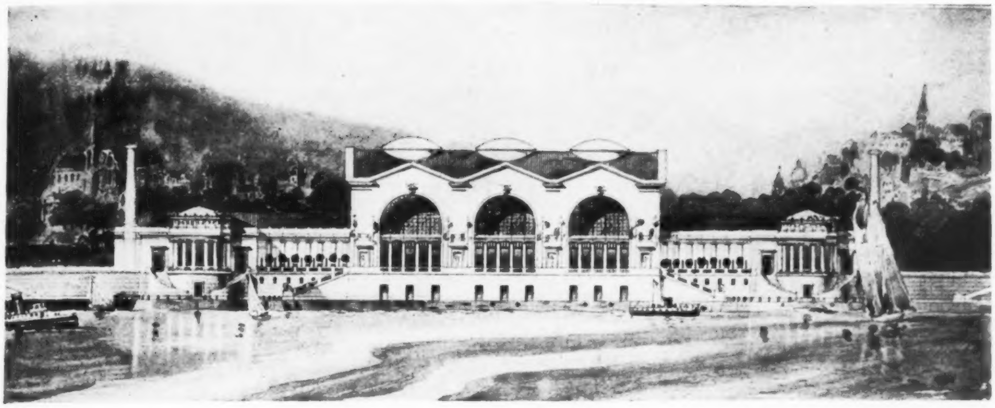
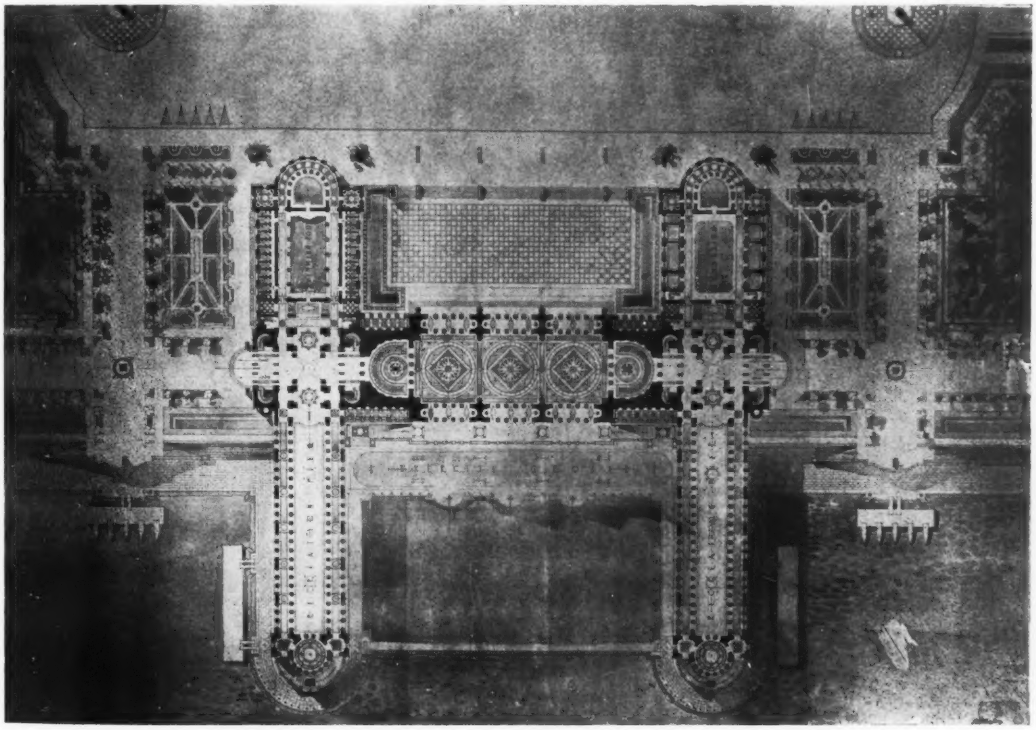
VOL. CIII, NO. 1934 JANUARY 15, 1913



W. L. RISLEY, SECOND MEDAL, COLUMBIA UNIVERSITY

CLASS "A"—II PROJET (PROBLEM IN DESIGN)—A PUBLIC BATH

*STUDENT WORK, SOCIETY OF BEAUX-ARTS ARCHITECTS*



CHURCH OF S. EUSTORGIO, MILAN, ITALY (VII-IX CENTURY)