

THE AMERICAN ARCHITECT

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FITTING A HOUSE TO ITS SITE

By HENRY E. WICHERS, *Department of Architecture, Kansas State Agricultural College*

IT is seldom difficult to distinguish between an elm tree and an oak even at a distance. The distinction is so marked that it can be easily seen by a careless observer. It is also easy for the trained observer to distinguish between the various species of elm trees and oak trees. Further, the trained observer

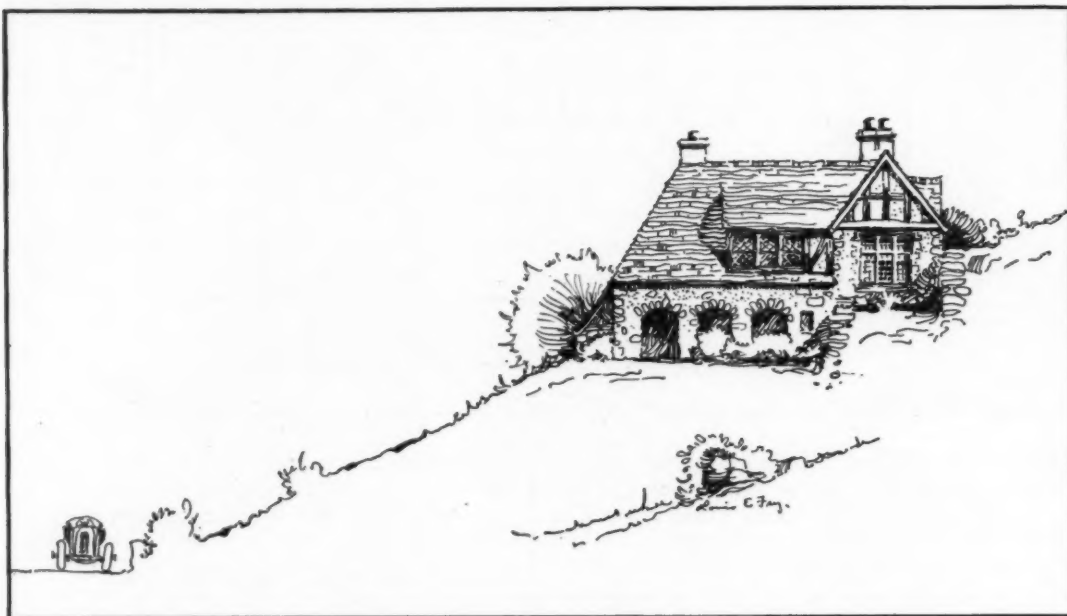
knows there are no two trees of the same species that will be exactly alike. He knows that surrounding conditions have shaped the tree, even to the size of the leaves and the shape of the trunk, to fit it to the environment. Each tree, then, is individual and its individuality is brought about by surrounding



A HOUSE IN KANSAS CITY, MO.—E. W. TANNER, ARCHITECT

ROOFS THAT RECALL THE LINES OF THE SLOPE, AND MASSIVE, TALL CHIMNEYS DO WELL AT THE TOP OF A HILL

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DESIGN FOR A HILLSIDE HOUSE

TO PLACE A HOUSE ON A HILLSIDE SO THAT IT SEEMS CONTENT REQUIRES THAT IN SOME MANNER IT GIVE VISIBLE EVIDENCE OF BEING FIRMLY ROOTED IN POSITION. IN THIS CASE TERRACES GIVE THE EFFECT DESIRED. THE ENGLISH COTTAGE TYPE LENDS ITSELF ADMIRABLY TO HILLSIDE LOCATIONS. THE STEEP-PITCHED ROOFS HERE SHOWN RECALL THE SLOPE OF THE HILLSIDE

conditions, its neighbors, the soil, the climate and geographic location.

Exactly the same conditions confront the architect who would build a house to fit a particular plot of ground and on his ability to correctly interpret these peculiarities, will rest, in a large measure, his ability as a designer of houses.

The happy combinations of house and site, examples of which we all can recall, are very seldom just "happen so's." They are the result of someone's careful analysis and study. The designer received an inspiration that has gloriously materialized. He studied his plot, knowing that all other elements were subject to it and could, within certain limits, assume many positions or shapes. Thus, with the plot as his definite beginning, he based his whole design upon it. And rightly! One must start with something. What can be more definite than the plot of ground upon which the structure will stand? Further, it is individual in every case. It is rarely a misfit and is expensive to radically change.

So economics, too, arrays itself on the side of the man who says, "I'll leave the plot alone as much as possible." The alteration of levels is expensive. When one tears down the existing site and builds a new one to fit a preconceived design for the house, he is confronted with the problem of making the new site harmonize with the neighborhood. This is not always an easy task. Further, it is costly, and,

unless there is some defect in the site as it exists, it is not advisable, however often demanded.

Even in this day a very large per cent of our house sites are forced to receive preconceived ideas of plan and form, ideas that were decided upon before the site was purchased. That this practice is harmful needs no jury decision.

The problem of fitting the house to site, like most other "problems," tends to solve itself, if we can bring our thought to bear upon it free of unbiased opinion and thus study and analyze it. By such careful study we recognize the various elements that tend to push the lines of the design this way or that; we learn to be swayed and guided by those existing elements and let the building grow into the plot, shaped by them. This is, after all, much the same process that the tree undergoes during its growth.

The trees of a western Kansas prairie are few; those that grow are low. They stay close to the ground. There are many natural reasons why this is so. Wouldn't it be wise to listen to the argument of the trees in this case? Its logic is forceful, there must be something back of it. Suppose we change to another climate where the trees grow tall and broad. The forces of Nature, judging by the tree growth, will not destroy that which stands up from the ground. It may be well to make use of this hint in any house we build in such a location.



DESIGN OF A HOUSE ON A FLAT SITE—F. A. KENDALL AND D. H. SMITH, ARCHITECTS

THIS HOUSE HAS AN ORCHARD BACKGROUND. THE SLOPE, IF THERE IS ANY, IS GENTLE. THE TREES ARE NOT CLOSELY PLANTED. GRASS AND SHRUBS ARE PLENTIFUL. THE LINES OF THE ROOF SEEM TO PICK UP THE LINE OF THE TERRACE TO FORM AN INTERESTING OUTLINE THAT GOES WELL WITH THE IRREGULAR SKYLINE

We find a tree on a hillside. In the example in mind, it is broad and fairly tall. Its neighbor is tall and thin. The ground contour at their feet, however, is similar. Their roots on the lower side are partially exposed and in both cases these roots hold together a sort of terrace that is fairly level on top. Clearly the tree has adapted itself to the environment and judging by the appearance it would take much to move it. This should hold a suggestion to be considered in connection with other elements that present themselves in a hillside problem. Observation will present much information in regard to any plot encountered that will not only be interesting but very helpful.

Simple intelligence can and will solve the problems of site. But intelligence cannot operate without that which it operates on; namely, the numerous facts about any given problem.

The above does not mean that there is one and only one solution to any site problem. There are usually several, any of which, if properly worked out, may be excellent. The possibilities of variety in houses and in sites is unlimited and makes for a happy condition. It forces many of us to think, whether we will or no.

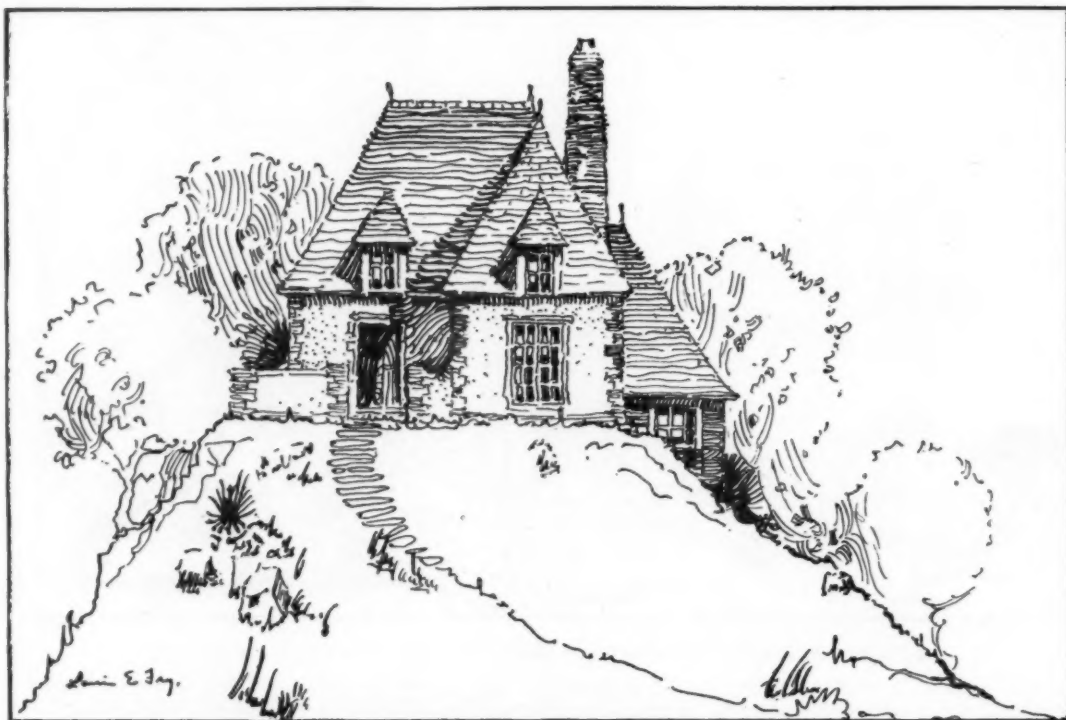
There is no known law by which one may solve all site problems. A site may belong to a type, but to say that a hillside house is thus and so is wholly impossible, because hills have a happy characteristic of varying in pitch; they may be wooded or bare, rough or smooth, with no two alike in every

respect. We may classify any plot to a general type and gain thereby, but after that we must look to these individualities and peculiarities for any special character that we may wish to give the house.

Probably the profile of a house for any given location is the most important single factor because, after careful study, it will be seen that the other elements, such as materials, fenestration and plan, may be changed to a marked degree and not materially derange the effect of a harmonious profile. To be sure, the proper and pleasing arrangement of materials, plan and fenestration add much to the house and cannot by any means be forgotten. Yet it is possible to have all these in a well-built house, and because the profile is wrong, the house will be a total misfit for a particular site.

As previously stated, it may be possible to reduce any plot of ground to the same general classification of many others, but each problem has, nevertheless, some peculiarity which, if recognized, will lift a design at once out of the ordinary. It is in this manner that careful observation contributes to the house by giving it and its site a feeling of unity and individuality.

It is well to remember, when trying to fit peculiar situations, that certain types of houses have already been developed to conform to the general characteristics of many different environments. There are types for the heavy foliage background with irregular outline and plan. There are prairie types with strong horizontal lines. There are hillside types



SKETCH OF A HOUSE FOR A HILLTOP

A HILLTOP SITE IS DIFFICULT TO HANDLE IF ONE MUST USE CONVENTIONAL FORMS. THE CONTOUR OF THE LAND MUST IN SOME MANNER BE RECALLED BY THE HOUSE, IF THE TWO ARE TO BE IN HARMONY



HOUSE OF J. H. REVERLEY, KANSAS CITY, MO.—E. W. TANNER, ARCHITECT
THE TERRACE MAKES THE HOUSE APPEAR FIRMLY PLACED ON THIS HILLSIDE



SKETCH OF A HOUSE FOR A FLAT HILLTOP

A HOUSE, IN THE COLONIAL MANNER, FOR A FLAT HILLTOP. THIS HOUSE IS BUILT ON A NATURAL TERRACE AT THE TOP OF A LONG, GENTLE RISE. THE UNBROKEN ROOF LINE IS A FITTING CLIMAX FOR THE SLOPING GROUND



A HOUSE IN MISSION HILLS, KANSAS CITY, MO.—E. W. TANNER, ARCHITECT
THE IRREGULAR SKYLINE IS ALWAYS AT HOME WITH A SETTING OF HEAVY FOLIAGE

which recall the lines of the site and at the same time appear to be firmly rooted into position. There are hilltop types with irregular skyline where the house becomes a fitting climax for the site. There are orchard background types where the ground may or may not be sloping. If the designer will recognize to which of these classifications the site in question belongs, he has limited it to a certain species. This will help materially in shaping the lesser details in such a manner as to bring about the "house individual."

In any example of the heavy foliage background, the skyline will be irregular in outline. The contour of the ground may be steeply sloping or vary in degree to that which is practically flat. Perhaps the sharp irregularities of the plot itself will call for sudden steep slopes or a drop in the roof level. In any given case, the profile of the building should recall in some manner the profile of the background, accentuating it, possibly contrasting with it, but nevertheless bringing about harmony.

There are many English houses that have been developed for sites similar to those suggested. The Spanish, too, has been used in similar locations. The Pennsylvania Dutch type of rambling Colonial work also does well under such conditions when carefully shaped to the requirements.

In the matter of materials, half timber is excellent, as are also stone, brick and wood siding. Just

how these should be used in each case should be determined from the design in question.

If, from the above site, we should suddenly change our location to flat prairie land, almost bare of trees with the horizon as a background, we have changed our environment radically. Here there is practically no suggestion of the vertical. All is horizontal. The trees such as exist will be short and most of them will have been carefully fostered by man. From the far distance to the foreground will appear a series of low, slightly curving, rolling lines, except in such instances where they have been usurped by man.

It is not difficult to imagine a client desiring a house with strong vertical lines on such a plot. Neither is it difficult to see why such a combination would ordinarily be out of place. If we bend our profile to the demands of the site, we must in some manner recall the background. Of necessity, there will be some vertical lines if the house is of any size, but these should be minimized as much as possible by the use of transitional members in the form of garden walls, banks of shrubs and clipped gables. In the matter of materials, half timber is seldom appropriate. Stone work does well. Stucco is at its best in such surroundings, because it is plastic and can be flowing in line. Wide siding accentuates the horizontal lines. Steep roofs are rarely usable. There are Spanish types that can be used in



HOUSE OF R. J. DELANO, KANSAS CITY, MO.—SHELBY H. KURFISS, ARCHITECT

THE STRONG HORIZONTAL ROOF LINE, TOGETHER WITH THE CURVED RETAINING WALL, HELPS MAKE THE HOUSE FIT ITS PLACE AT THE TOP OF A RATHER LONG, SLOW RISE

such places very appropriately, as can also certain types of the English, Colonial and French, the limiting feature in each case being the profile.

In trying to limit the hillside type to any particular outline, we are confronted by the great variety in hillsides, some of which have been suggested under the discussion of the heavy foliage background. The main characteristics, however, are fairly definite. The line of hill, be it steep or gentle in slope, is definite. A house built upon it must not appear to be restless. Battered walls help to obtain the desired effect. Shrubs properly placed are fine. Proper terracing, however, is in the majority of instances the most effective and is the method most often seen in Nature. The profile for the hillside will be influenced greatly by immediate surroundings. On a wooded plot it might conform but little to the line of the hill, while on a bare plot it would necessarily give much attention to it. Here, too, the materials used would be determined by existing conditions. For the wooded area, half timber used with shingles and siding would fit admirably, as would brick and stone. For the bare hillside, stone, brick and in some cases stucco could be made to look well. The material in every case should be determined by the existing conditions and should, of course, be secondary to profile.

The hilltop site presents still other problems together with suggestions for their solution. Very

little difficulty is encountered in making a house in such a place appear solidly placed. Neither should the size of the house bother greatly. The profile, again, is the thing. It is important because a house in such a location is seen most often in outline.

Here, again, the degree of slope in the sides of the hill, the extent of the area on top of the hill, together with the nature of the foliage, can and will alter conditions in most every instance. It is possible to say that this or that house is a hilltop type; but even ten or dozen such designs would not fit every new hilltop site. They might, however, help one to hit upon a scheme that will fit exceedingly well.

The author has encountered still another distinct site type. Reducing them to types does help to isolate characteristics. In the language of the mathematician, it reduces the number of unknown factors, leaving the mind clear to solve for those that remain.

There is a very common type of site which is most often found in fairly flat country. The ground may be gently sloping or flat; the trees are not very high, perhaps about twenty or thirty feet. They have been planted. They didn't just grow and are usually in rows or in regular order. The horizon appears a long way off and may be disregarded. This site type is common in our suburbs and farmsteads the country over. Such a site seems made to order for our own Colonial architecture, especially



A HOUSE IN KANSAS CITY, MO.—E. W. TANNER, ARCHITECT

STRONG HORIZONTAL LINES ARE NECESSARY IF A HOUSE IS TO FIT A PLOT SUCH AS THIS. THE GEORGIAN STYLE IS PECULIARLY ADAPTABLE TO THIS TYPE OF SITE



A HOUSE FOR A HEAVY FOLIAGE BACKGROUND

THIS HOUSE IS APPROPRIATE FOR A SETTING THAT HAS MANY TALL TREES AND AN ABUNDANCE OF SHRUBS AND FOLIAGE. THE HOUSE FITS SUCH A SPOT NATURALLY AND EASILY. SUCH HARMONY DOES NOT COME WITHOUT STUDY; IT DOES NOT HAPPEN BY ACCIDENT

the irregular Pennsylvania Dutch Colonial and the squat and contented Dutch Colonial. The Spanish, too, can be made to fit into such surroundings as can the English, but these need careful adjustment, while the Colonial types mentioned have already been acclimatized. The materials most often seen are siding and stone, but stucco and brick, too, are not out of place.

Perhaps the latter type of site is the best understood of all house sites, for in it we find the greatest number of really well-designed houses. Perhaps, too, almost any design, if not too vertical in line, can be made to fit into such a background. Then,

too, the Colonial is our heritage. We build our Colonial house and then build the landscape to suit because in the majority of instances we choose the level fertile site. So, building the landscape means planting trees and shrubs and building fences.

The unusual site, however, is fast finding favor and needs careful study. One cannot place Colonial houses on every site that exists, and in such places we must remember that the lines Nature accentuated are "large type" signs that it would be well to heed. For, by following Nature's lead, we not only get valuable suggestions for the profile and mass, but economic plan suggestions as well.



A HOUSE IN WHICH STRONG HORIZONTAL LINES ARE ACCENTED—MARSTON, VAN PELT & MAYBURY, ARCHITECTS

(From the original sketch by H. R. Harwood)

THE NEW SAN FRANCISCO STOCK EXCHANGE BUILDING

MILLER & PFLUEGER, Architects

By B. J. S. CAHILL, Architect

A CENTURY or so from now, historians will probably regard this epoch in which we live as the great building age of our country, when the cities took shape and the quickly conceived and provisional format of our street fronts was replaced by a more permanent dress unimported from foreign shores, individual and indigenous, the real architecture of America, the brilliant and flawless pourings of our stylistic melting pot into the moulds and modes of the future "fresh and modern continually." That day is approaching when the chronicler of later times may, like the chroniclers of today, find no little difficulty in identifying those few epoch-making structures which mark the new departure.

Transitions from one architectural style to another, if we may put it that way, are invariably brief and baffling. Nature's transitions are quite similar to those of art. For an immense epoch one biological type covers the planet, and paleontologists discover that this type suddenly disappears and another type has supplanted the first, and it is extremely difficult to find the interlinking transitory forms bridging the two. Clearly, the world of art needs a Darwin to write the Origin of Styles. We are led to these thoughts because they may help us in the right appraisal of the building design selected for the new San Francisco Stock Exchange.

As the lot is small and the requirements of the Exchange quite definite, all the plans were in rather close accord. The layout seemed self-evident. For all that, the winning design was the most straightforward. Supremely important as the plan is in all buildings, it is quite evident that in this instance the main thing to be selected was the architectural envelope or design. The five perspective drawings showed a beautifully graduated series ranging from the strictly conventional and classic, through varying phases of quasi-historical to free and unclassifiable types, culminating in the quite original winning design practically emancipated from all precedent whatsoever.

Ten years ago, we think, a classical design would undoubtedly have been selected for the first place. But in the case of this competition it was the first to be rejected. This curious fact leads one to inquire, is there any absolute standard, any architectural norm whatever? Can it be affirmed, in the light of the fact that the winning design today would, ten years ago, most assuredly have been rejected, that any one of these plans is intrinsically better than any of the others?

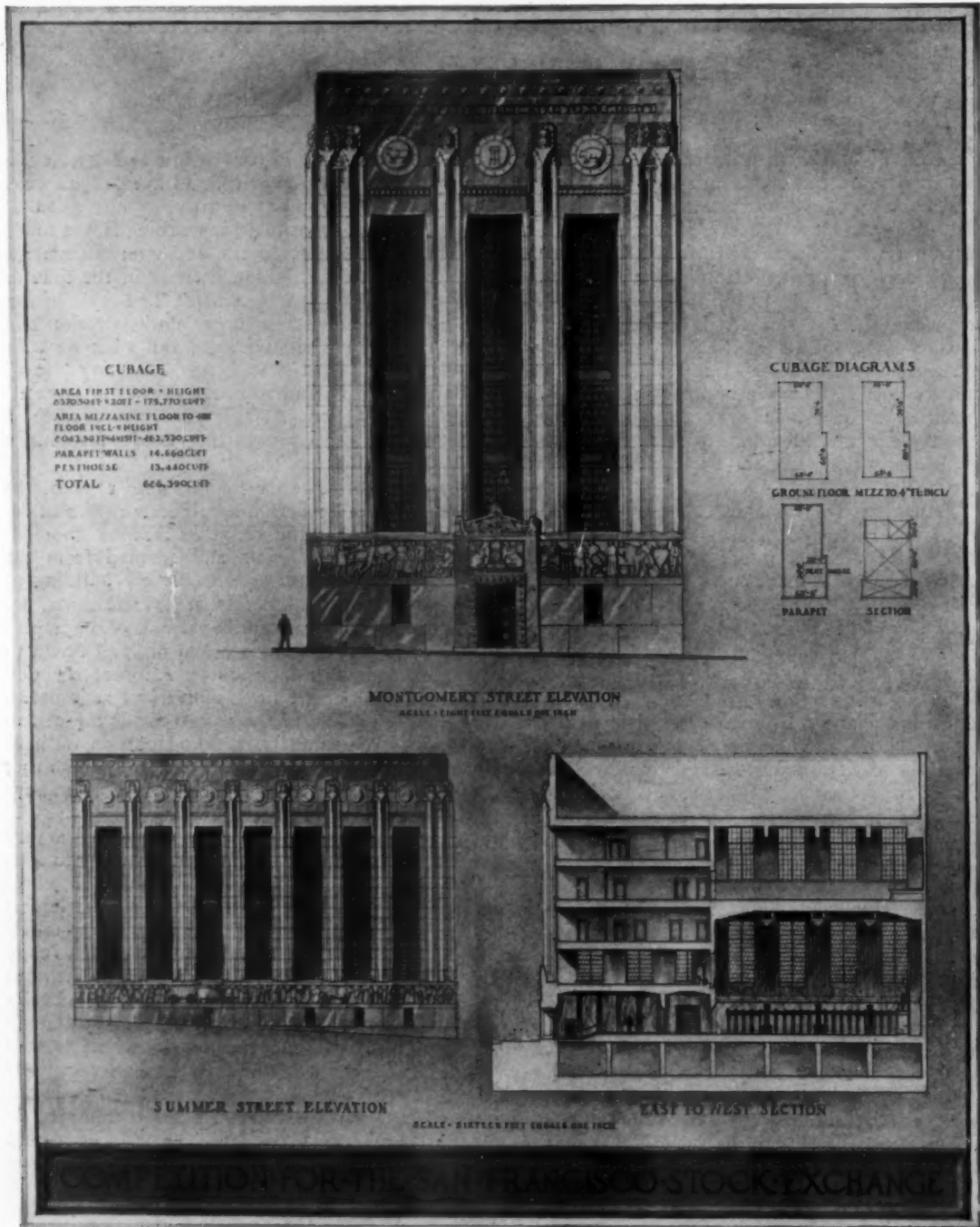
For the sake of argument and seeing that they were all worked out by competent architects, and

also waiving points of convenience and cost, it certainly might be assumed that all five designs were, from an absolute point of view, equally good. It is quite obvious that if the same thing is first today and last tomorrow, the real and vital difference is not so much in the thing itself as in the time or period in which it is presented. The style in our buildings, like the style in our clothes, varies; and the notion that what we build and what we wear is better *now* than it was *then* (and any "now" and any "then" will serve equally well) is necessarily pure fiction. At this particular age we in America are gradually getting tired of so much classical architecture.

In the South, we have a full-sized copy of the Parthenon; in Montreal, a half scale replica of St. Peter's at Rome; and countless samples, more or less lifted from Vignola and adapted from the books, dot the states between. Every building of antiquity and all of note that have followed we refer to in endless picture books and photographic collections. We have overlooked nothing down to wayside inns and farmhouses. All that the Old World has done we have copied and assimilated, and our education in the past is about completed. In facility of assimilation and adaptation we have achieved marvels and today the world admits that we are masters of form as far as form has been anywhere developed historically.

The general feeling that, having served a very full apprenticeship, it is time architecturally to start "on our own" has at last penetrated the whole community. At least our practical business leaders as well as our professional men have unanimously and jointly, as it were, come to a resolution to copy or adapt old work no more. It is a momentous resolve, and while it will take shape sporadically and by degrees with much sidestepping and many retrogressions, the movement as a whole is well launched, and there could be no better concrete proof of this than the action of the judges in the new San Francisco Stock Exchange competition which first rejected the most classical design and finally retained the least classical one. It is the surest sign that the American people will no longer consent architecturally to be piloted by the past, but will in future fly alone. It is the spirit of '76 again.

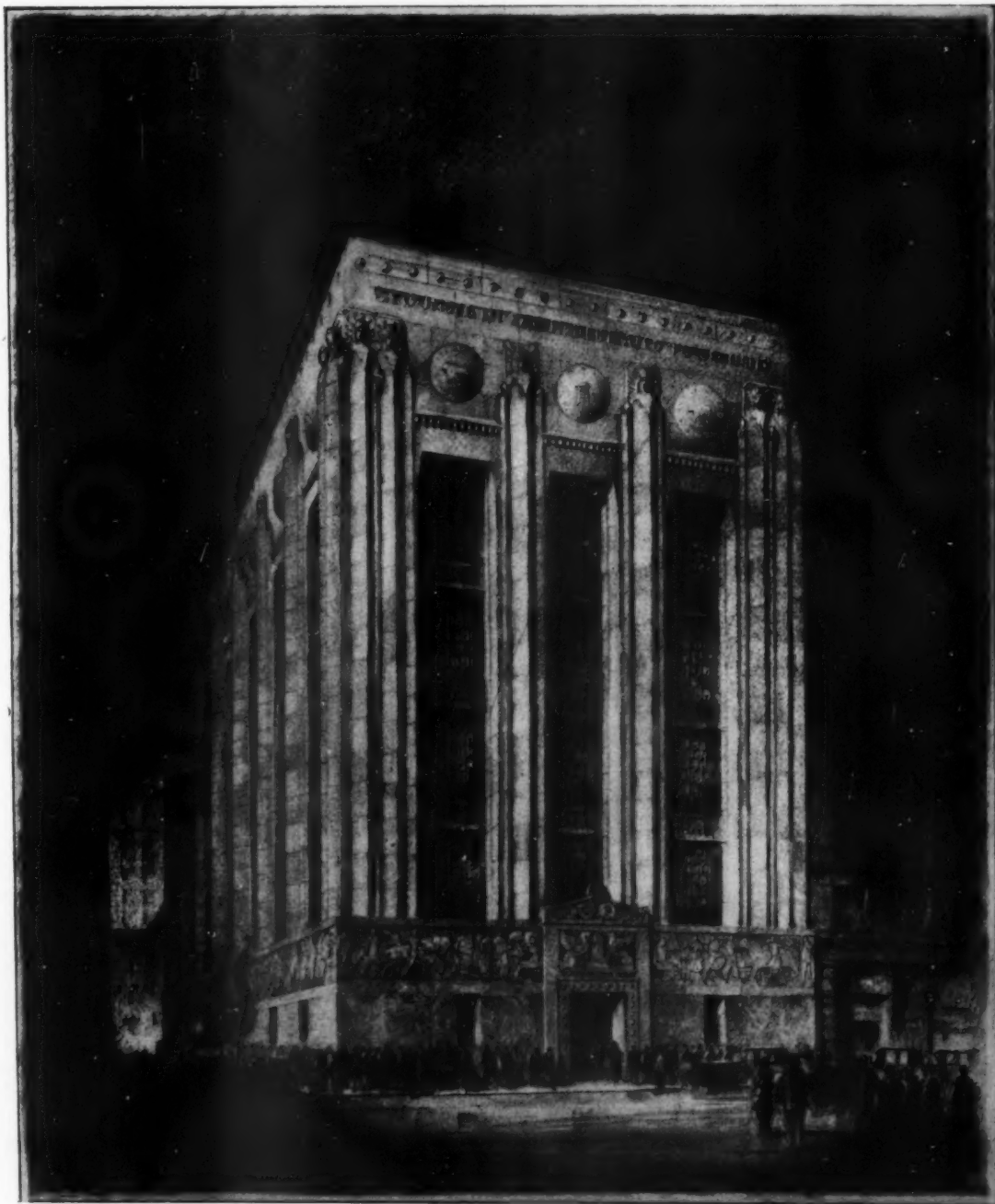
The competition was conducted under the rules of The American Institute of Architects. The jury was composed of two architects and one representative of the Stock Exchange. The architects selected to compete were: Arthur Brown, Jr.; Bliss & Fairweather; Weeks & Day; Lewis P. Hobart, and Miller & Pflueger, all of San Francisco.



WINNING DESIGN

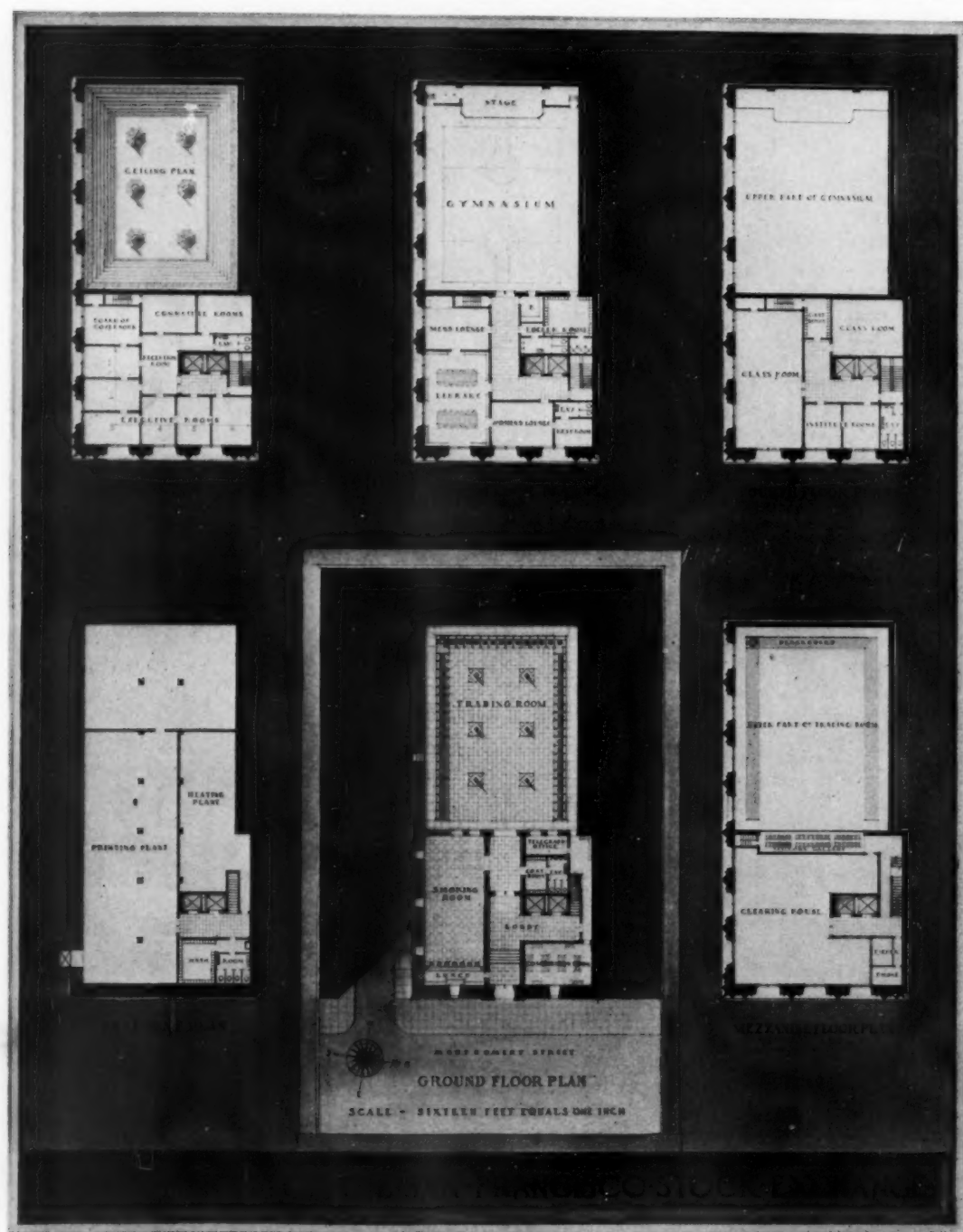
COMPETITION FOR STOCK EXCHANGE BUILDING, SAN FRANCISCO, CALIF.

MILLER & PFLUEGER, ARCHITECTS



WINNING DESIGN
COMPETITION FOR STOCK EXCHANGE BUILDING, SAN FRANCISCO, CALIF.

MILLER & PFLUEGER, ARCHITECTS
(From the original rendering by Hugh Ferriss)



WINNING DESIGN

COMPETITION FOR STOCK EXCHANGE BUILDING, SAN FRANCISCO, CALIF.

MILLER & PFLUEGER, ARCHITECTS



EDITORIAL COMMENT



RESULTS of a competition for the design of a building for the Museum of the City of New York are shown in this issue of THE AMERICAN ARCHITECT. The City, in assigning a site for the Museum, stipulated that the funds necessary for building be provided by June 1st of this year. The trustees have launched a campaign to raise \$2,000,000—one million for building and one for endowment—so that the design for the museum submitted by Joseph H. Freedlander, selected by the jury as the winning design, might immediately be proceeded with. It is the aim of the Museum of the City of New York to illustrate by means of exhibits the chronological development of the various phases of New York City life from the earliest times to the present. Such a project would include a topographical section with a series of models showing the physical aspect of the city at its various stages of growth from Indian times. The history of New York architecture would be set forth by means of models, prints and photographs, illustrating the development of municipal and other public buildings, ecclesiastical and commercial structures, private houses, apartment and tenement buildings. The story of the harbor and shipping would be related by models of Indian canoes and modern vessels; land transportation would be illustrated by models of ancient stage-coaches, other horse-drawn vehicles, surface cars, elevated railroads and subways. Memorabilia of the various city departments would be collected, and a section devoted to the specific contributions of the various heterogeneous nationalities and creeds would illustrate those elements which have given New York its essential character. Typical interiors would illustrate ways of living at various periods, with costumes and other accessories. Playbills, costumes and memorabilia of the personages connected with the history of music and drama and other forms of entertainment would be exhibited. Of particular interest would be collections illustrating the personalities and significance of the men and women in every field who have contributed to the city's growth. The Museum, since its incorporation in 1923, has been temporarily housed in the historic Gracie Mansion. Delightful and worthy of preservation as is this fine example of early New York domestic architecture, it is entirely inadequate for the ultimate program of the organization, and THE AMERICAN ARCHITECT sincerely hopes that the trustees may be successful in obtaining funds to proceed with the erection of its own building.

THE importance of industrial research to the industries concerned and generally to the profession of architecture, is made clear by the fact that \$200,000,000 a year are spent in this country in such work. The National Industrial Conference Board, in a statement recently issued relating to industrial research as carried forward during 1927, sets forth that industries that spent the largest amount on research five years ago, are those that have made the greatest relative growth since then. While it may be true, in many instances, that these researches have been undertaken with a purely commercial purpose in mind, it is equally true that they more often result in a better product and sometimes cheaper cost to the ultimate consumer.

The intensive researches that have been conducted, and the resulting improvement in manufactured products are undoubtedly important factors in the remarkable advance in the development of our architecture and the great strides in building efficiency. They also result in a certain standardization that enables manufacturers to set before prospective buyers the true merit of their products and the most economical methods of use.

And, in addition to researches carried on by corporations, there are the many similar activities that form as large a part of the workings of our government. Readers of this journal have had presented for their information in our Department of Engineering and Construction, many reports issued by the Bureau of Standards that vitally present knowledge of materials and their reaction to certain physical conditions. The work of the government in these directions, combined with that of thousands of manufacturers, has resulted in a perfection of products that is far-reaching in the development of building in all of its many branches.

THERE is a national campaign afoot by the Palos Verdes Art Jury of California, to determine what are considered to be the ten greatest examples each of American painting, sculpture, architecture and landscape architecture. While it is still too early to make any report as to the consensus of opinion, such buildings as the Nebraska State Capitol, the New York Telephone Company's New York building, and the New York City Hall are almost sure to be unanimously chosen. On the other hand, architecture is so definitely related to social and economic conditions, that a building might often be considered successful under imposed conditions and yet might be criticized by those of another generation. THE AMERICAN ARCHITECT feels that

it is absolutely impossible to list the ten finest examples of American architecture. In discussing the subject with us a while ago, an architect, in agreeing with our attitude, stated the matter accurately in these words: "The greatest examples of architecture in America are to my mind far too broad a basis of selection. My own mind would find it necessary to make distinctions, to consider when the buildings were erected and why each was selected as architecturally good. All of these, moreover, would naturally fall into categories, limited enough in scope for my mind to concentrate upon." However, according to reports from the secretary of the above organization, there are those who are brave enough to make their selections. Besides those buildings cited above, we find that many votes are being cast for St. Thomas' Church, New York; The Pennsylvania Station, New York; The White House; The Scottish Rite Temple, Washington, D. C.; Harkness Memorial Quad-

rangle, New Haven; Washington's Mt. Vernon home; and Independence Hall, Philadelphia. While we rate these ten examples of American architecture very high, we would in no wise have it understood that, in the opinion of THE AMERICAN ARCHITECT, these are the ten greatest examples of architecture in the country. For while we have recognized in that list such men as Cram; Goodhue; McKim, Mead and White; Pope; Rogers; and Voorhees, Gmelin and Walker, we have failed to include in the group such immortals as Richardson, Hunt, and Sullivan. As regards painting, sculpture and landscape architecture, the choice is somewhat narrowed, although opinions are apt widely to differ. Sargent, Abbey, Inness, Homer, Whistler, La Farge and Chase are all to be considered as great painters; St. Gaudens, MacMonnies, MacNeil and French stand high as American sculptors, while Olmsted, L'Enfant, and Simonds are landscape architects of highest rank.

COMMUNICATIONS

Editor, THE AMERICAN ARCHITECT:

I READ with interest your editorial in the April 5th issue of THE AMERICAN ARCHITECT regarding the bills passed by the N. Y. State Legislature which relegates the State Architect to a subordinate position. It was Governor Smith's appointment some years ago of Sullivan Jones and Col. Greene to their respective positions, for which each was eminently fitted, which led me, an independent republican in politics, to vote ever since for Governor Smith. As your editorial was written before the Governor signed the bills, I trust you will give him credit for stating that his wish to have a separate Department of Architecture had been turned down by the Legislature. Our representatives, and not Governor Smith, appear to be responsible for the farce that has been enacted.

I do not know whether or not there is any truth in the reason given in the enclosed clipping from *The World*, for the sudden dwindling of the opposition to the bills by distinguished local architects, when they discovered that the bills would benefit them financially. Some explanation seems to be in order.

OSWALD C. HERING.

Editor's Note: The following is an extract from the clipping referred to above that appeared in the New York World:

The mass of opposition to the bills, which had been promised, did not develop at today's hearing. Some people were inclined to see a connection between the dwindling opposition and the publication of the names of twenty-one architectural firms in many cities, to whom the designing of \$9,500,000 in State buildings is to be farmed out. It developed that fifty-two firms of architects had

expressed a willingness to take a slice of the \$500,000 appropriation for designing outside the public works department.

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Editor, THE AMERICAN ARCHITECT:

I HAVE read recently in some Camden papers about the employment of two architects to make a survey and recommendation for public buildings, and I think that mention of it in your journal might be of assistance to other architects in soliciting such work.

The Board of Freeholders in Camden County, New Jersey, employed Dr. Warren P. Laird, F.A.I.A., and Dr. Lewis F. Pilcher, A.I.A., of the University of Pennsylvania to make a survey of the needs of Camden County to establish a basis for recommendations for the new Court House Annex. The survey was made and recommendations presented to the Board for the new Annex and certain changes in the existing building which would serve the needs of the County until 1950. The Board of Freeholders unanimously accepted the survey and recommendations as presented by Messrs. Laird and Pilcher. They employed the firm of Edwards & Green of Camden to be architects of the new building without competition and also retained Dr. Pilcher as consulting and advisory architect. This procedure demonstrates the availability of architects to perform this service. Because of this method of making a careful and detailed survey of the methods and needs of county government and its relation to growth of population, Camden County will not find itself with inadequate buildings such as has been the case in many other counties and cities which have planned without a scientific analysis of their present and future needs.

A. T. NORTH.



Photo by Peyser & Patzig, Inc.

MEDICAL TOWER BUILDING, NEWARK, N. J.

WM. E. & DAVID J. LEHMAN, ARCHITECTS

(See description on back)

MEDICAL TOWER BUILDING, NEWARK, N. J.

WM. E. & DAVID J. LEHMAN, Architects

THE phenomenal growth of Newark since the World War has resulted in an increase of population from 200,000 to 500,000. Several doctors' and dentists' offices were distributed in office buildings but the major portion was in their respective homes. Guided by this condition many doctors and dentists of Newark determined to have a suitable building, designed to house the various practitioners in the diversified branches of the medical profession.

It was decided to erect this building convenient to the four corners of Newark, facing on Lincoln Park. The problem which confronted the architects is analyzed in the following program:

- (1) Accommodation for 75 suites for doctors and dentists.
- (2) Units from 500 sq. ft. to 2,000 sq. ft.
- (3) Space required for drug store—2,500 sq. ft. Surgical store—2,500 sq. ft. Barber shop—1,500 sq. ft.
- (4) Physicians' library—1,000 volumes.
- (5) Garage space incorporated in building or adjoining thereto for 50 cars for exclusive use of tenants and their patients.
- (6) Administration.
- (7) Telephone service for all tenants controlled from special switchboard at entrance.
- (8) Mechanical plant.

This is the first structure in Newark designed on the setback principle. The Romanesque was selected as the most suitable style of architecture to harmonize with the surroundings. The exterior walls are of face brick, tan in color, with suitable relief being achieved through the use of ornamental terra cotta. Italian marble, and bronze have been used in the lobby. Three high-speed, self-levelling elevators serve the upper stories. The elevator corridor and store floors are of terrazzo while that in the main lobby is of travertine.

It was realized that each tenant would require more space than that required by the average tenant of an office building, and it was decided to construct a fifteen-story building to allow for expansion. Since each prospective tenant's requirements were

different from the others, no set plan could be followed in laying out the various floors. A flexible plan was obtained by having the renting space at the ends of a center corridor hall, and with light courts to provide for permanent light and air. This permitted the arrangement of suites to suit the exact needs of the tenants.

The plans provide for a center lobby entrance, flanked on either side by a store, 15' x 60'. These stores were designed to house a drug store and a surgical supply house. Each store is provided with a mezzanine balcony for the prescription department and office force. Store display windows and an entrance door are arranged to open into the main lobby. In the rear of one of the stores, space was allotted for use as a barber shop. A mezzanine balcony extends from the rear of the building to the front lobby and was designed as a tenants' lounging room and library.

The building occupies a plot 60 ft. by 100 ft. on a lot 60 ft. by 180 ft. A two-story garage, fed by two ramps, with an entrance from a side street for the parking of cars, occupies the rear portion of the lot. This garage has been found to be an essential feature in this special type of building. The Medical Tower Building is the first in Newark to make adequate provision for the parking problem of its tenants.

A special telephone switchboard was designed, providing for extension lines from each office telephone to the main lobby. Every occupant has his own number and calls go to it from the outside central telephone offices. In the event that there is no one in the office, the main switchboard receives the call and reports the message or locates the physician. This system eliminates confusion in handling calls and yet assures the tenant that his messages are being taken day or night.

The mechanical equipment includes two oil burners for the heating system, an air compressor, an incinerator and a smaller oil burner for heating water in warm weather. The care given to the design of the mechanical features has resulted in an efficient plant.



Photo by Peyser & Patrig, Inc.

ENTRANCE DETAIL
MEDICAL TOWER BUILDING, NEWARK, N. J.
WM. E. & DAVID J. LEHMAN, ARCHITECTS
(See plan on back)

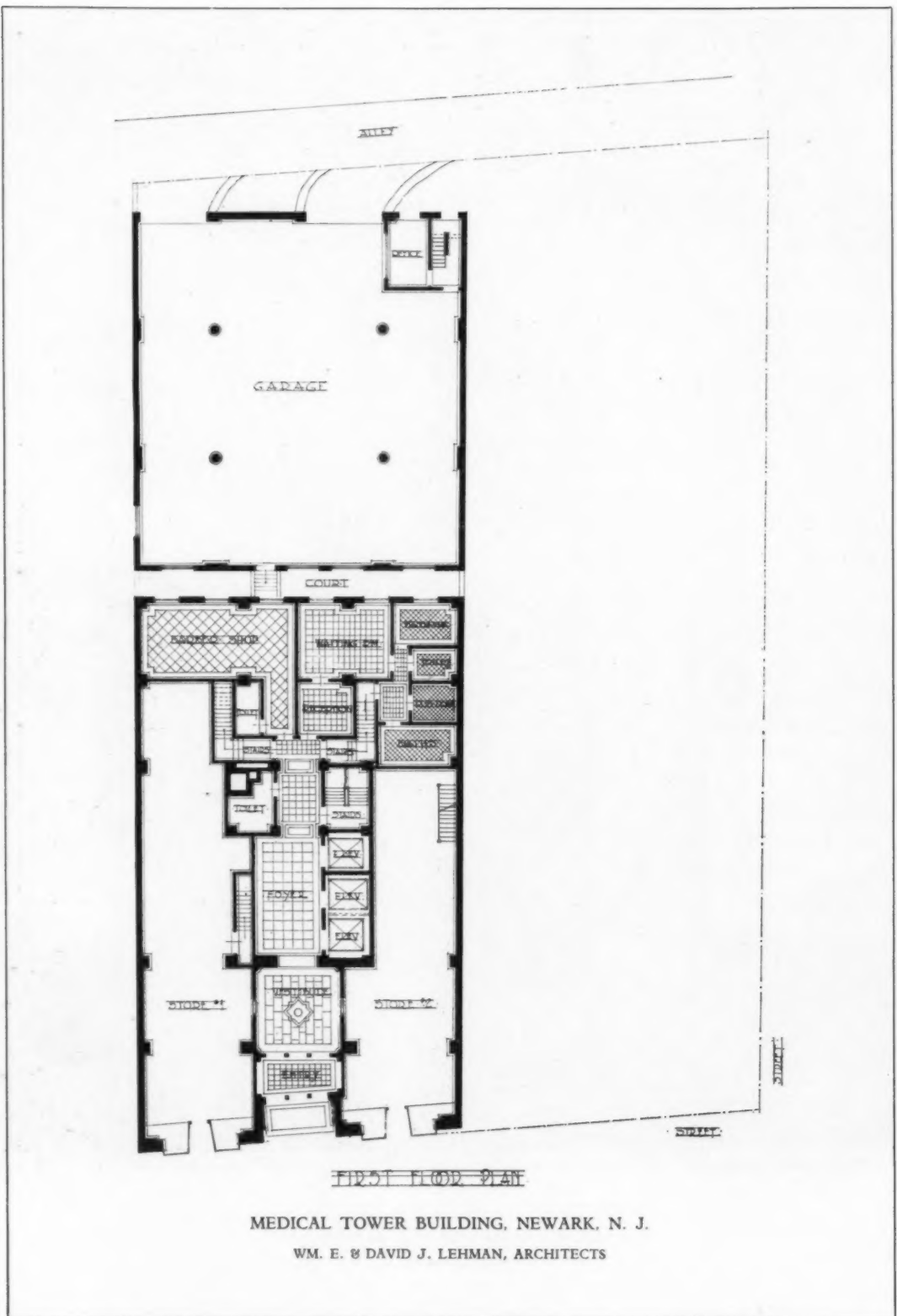




Photo by Peyser & Patsig, Inc.

LOBBY
MEDICAL TOWER BUILDING, NEWARK, N. J.
WM. E. & DAVID J. LEHMAN, ARCHITECTS
(See plan on back)



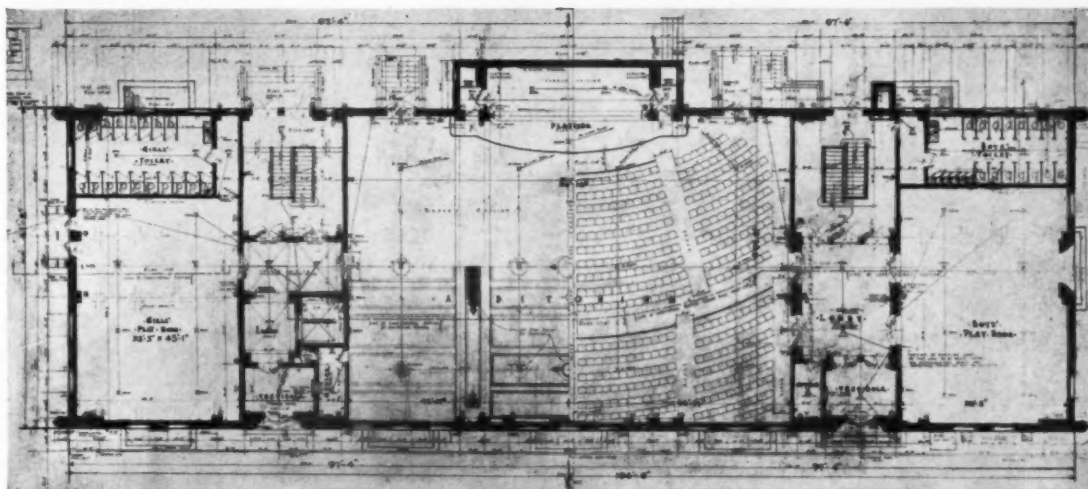
• TYPICAL FLOOR PLAN •
SECOND FLOOR - EAST WING

MEDICAL TOWER BUILDING, NEWARK, N. J.

WM. E. & DAVID J. LEHMAN, ARCHITECTS



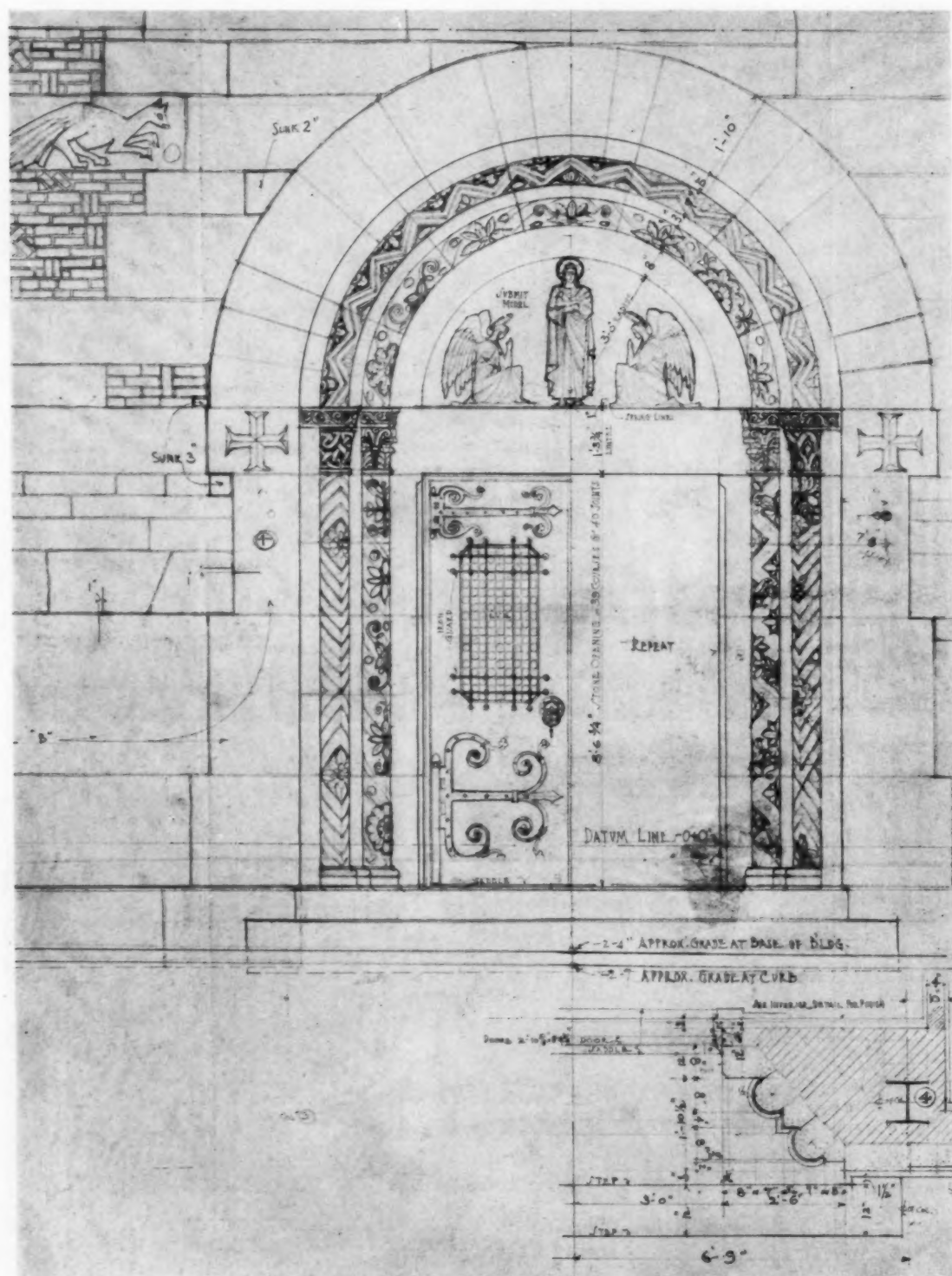
Photo by Peyser & Patzig, Inc.



PAROCHIAL SCHOOL FOR CHURCH OF OUR LADY OF ANGELS, BROOKLYN, N. Y.

ROBERT J. REILEY, ARCHITECT

(See detail drawing on back)



SCALE DETAIL OF FRONT ENTRANCE
 PAROCHIAL SCHOOL FOR CHURCH OF OUR LADY OF ANGELS, BROOKLYN, N. Y.
 ROBERT J. REILEY, ARCHITECT

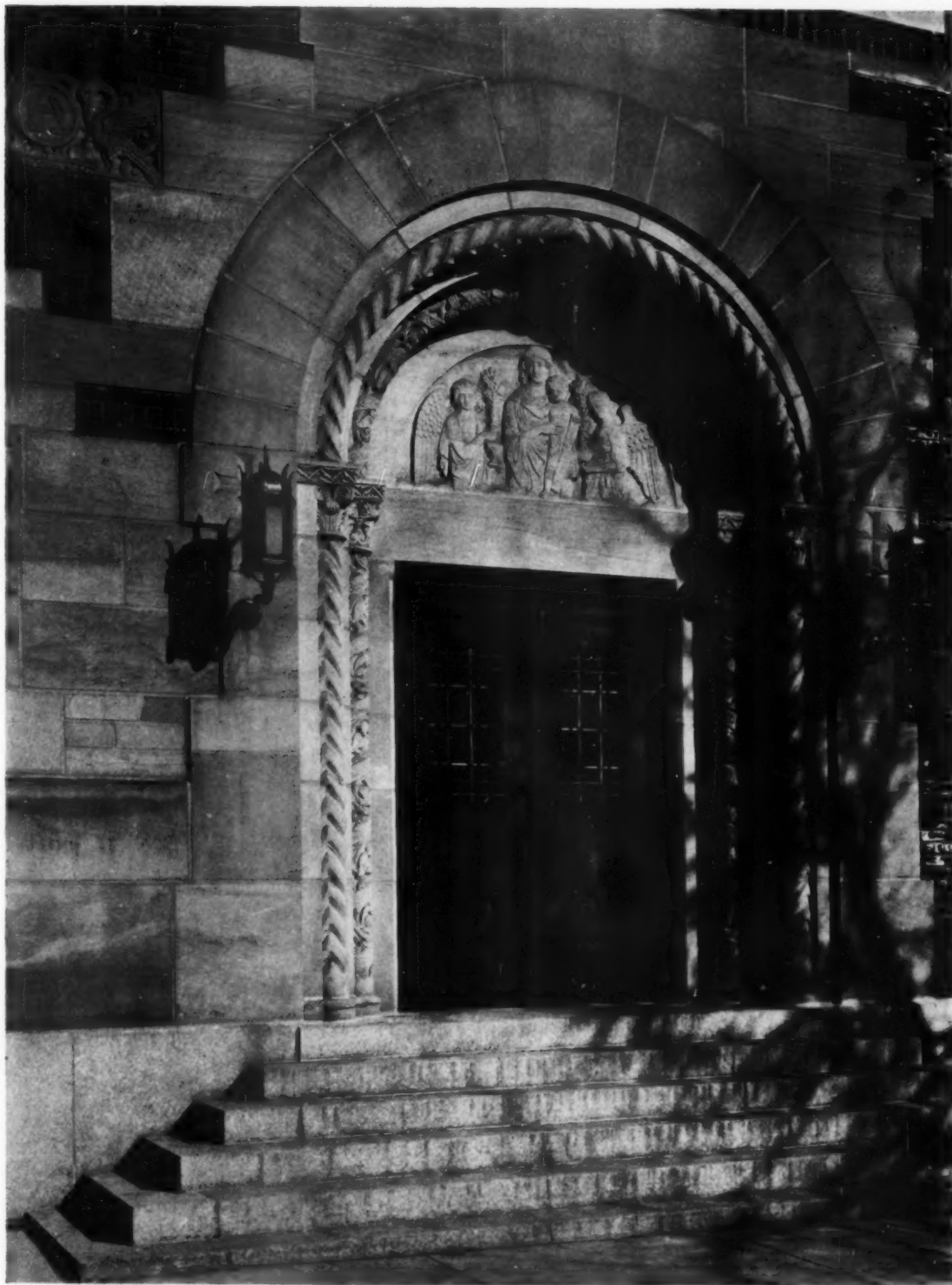


Photo by Peyser & Patzig, Inc.

ENTRANCE DETAIL

PAROCHIAL SCHOOL FOR CHURCH OF OUR LADY OF ANGELS, BROOKLYN, N. Y.

ROBERT J. REILEY, ARCHITECT



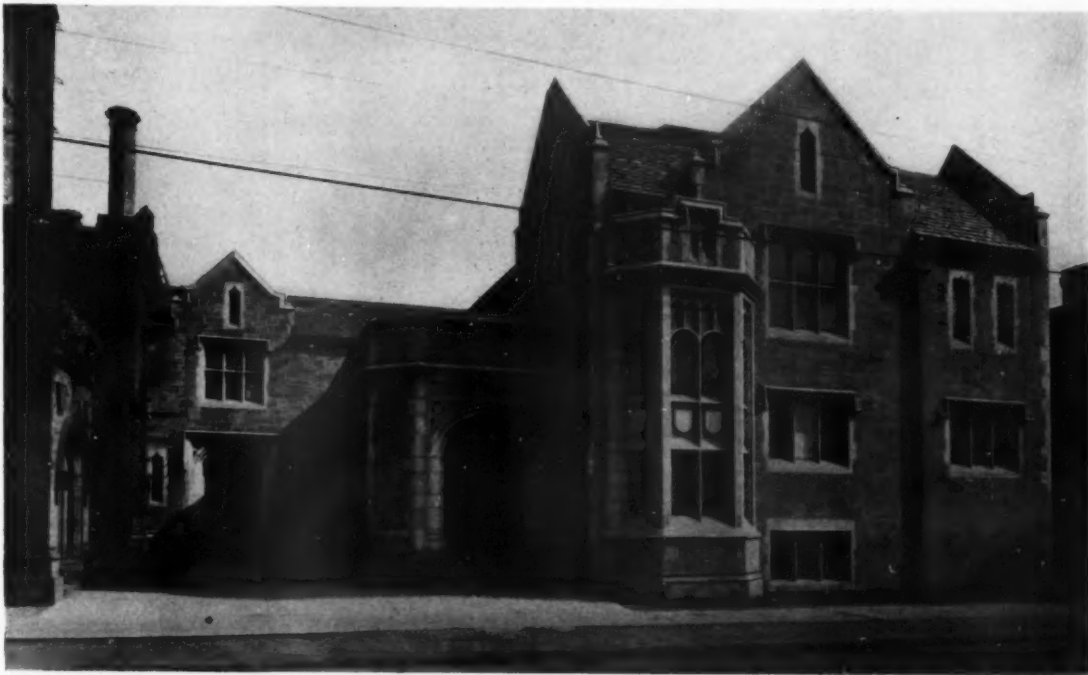
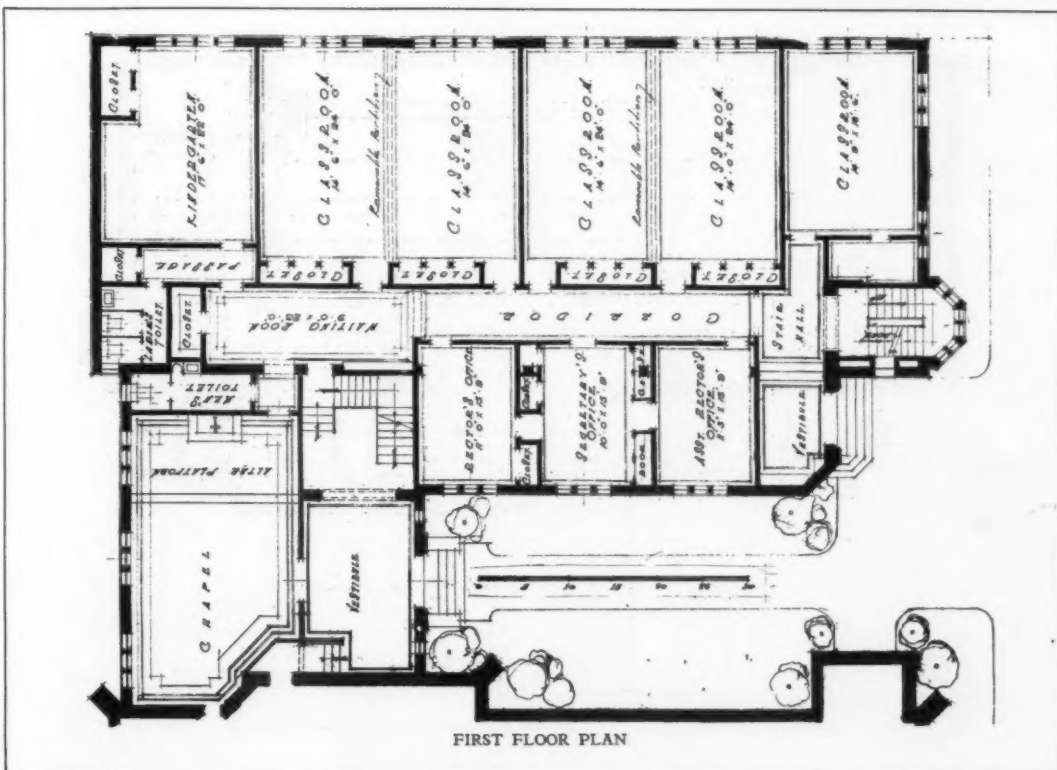


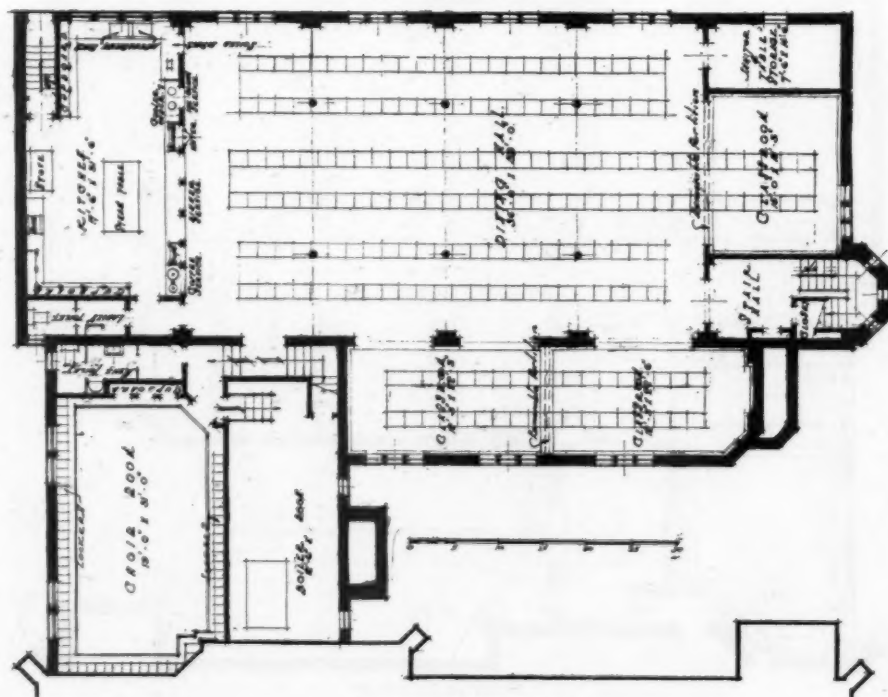
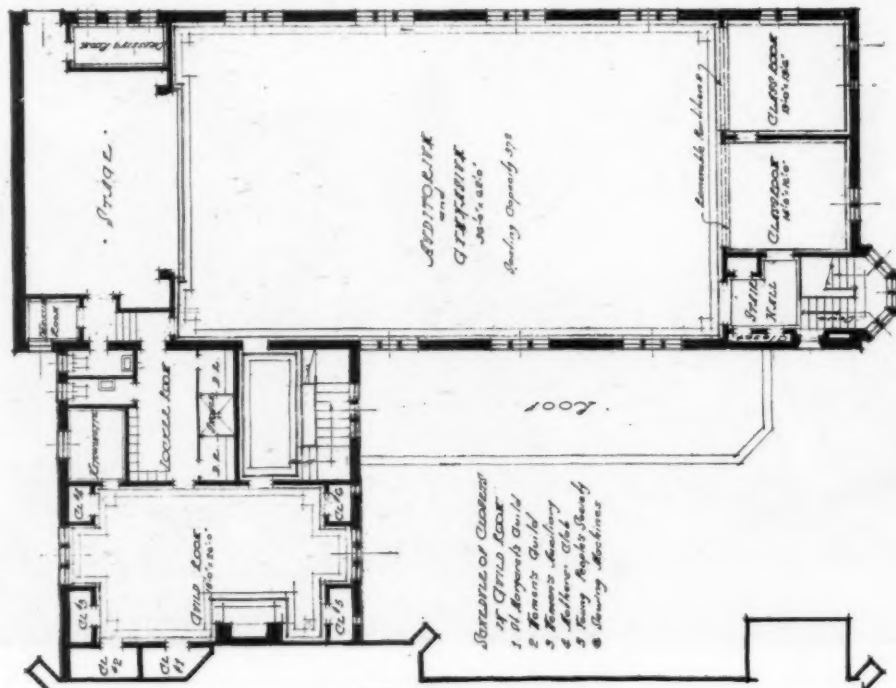
Photo by Ellison



TRINITY PARISH HOUSE, DETROIT, MICH.

LANCELOT SUKERT, ARCHITECT

(See additional floor plans on back)



TRINITY PARISH HOUSE, DETROIT, MICH.
LANCELOT SUKERT, ARCHITECT



VIEW IN CHAPEL LOOKING TOWARD ALTAR



Photos by Ellison

AUDITORIUM AND GYMNASIUM
TRINITY PARISH HOUSE, DETROIT, MICH.
LANCELOT SUKERT, ARCHITECT





REAR VIEW AS SEEN FROM ACROSS CHICAGO RIVER
PROPOSED BUILDING FOR CHICAGO CIVIC OPERA
GRAHAM, ANDERSON, PROBST & WHITE, ARCHITECTS

UTILIZATION OF WORKING SCHEDULES IN OFFICE PRACTICE

A METHOD EMPLOYED IN THE DESIGNING OF AN OFFICE BUILDING FOR THE
R. J. REYNOLDS TOBACCO COMPANY AT WINSTON-SALEM, N. C.

SHREVE & LAMB, Architects

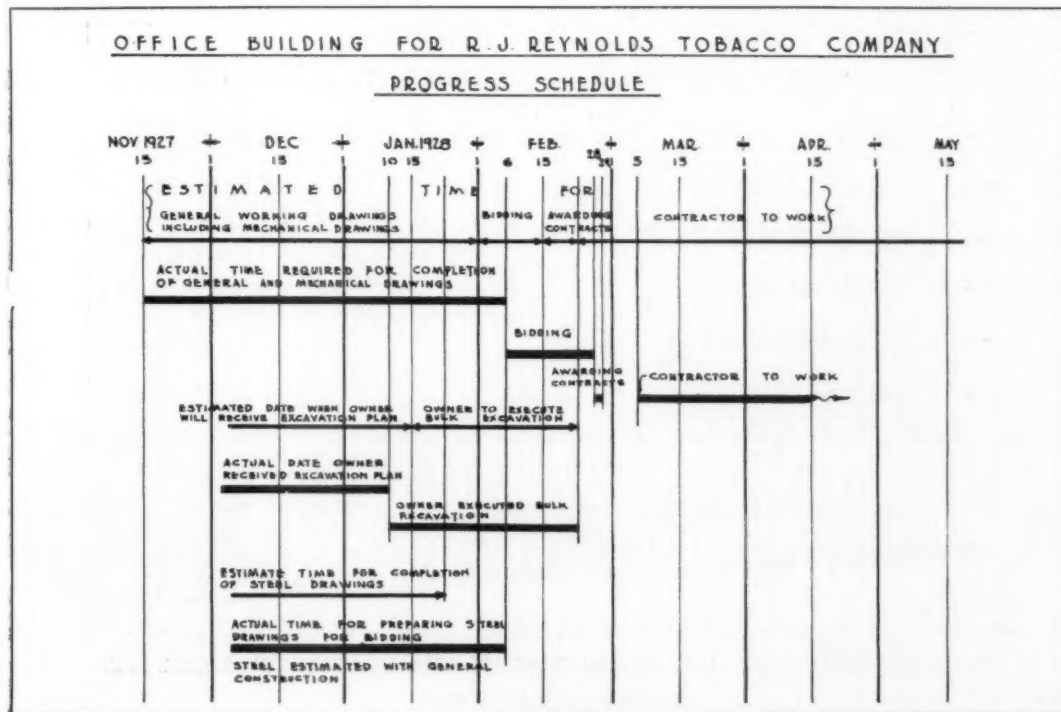
THE lack of good business management and efficient organization in all departments of an architectural office is unquestionably responsible for much lost profit to clients and incidentally to architects through requiring a longer period of time for the preparation of drawings and specifications than should be necessary. This is particularly true in the case of commercial buildings where the capital invested demands the completion of the building and a return on the investment at the earliest possible time. Modern contracting equipment and methods of procedure, through co-operation of the architect, contractors, and owner, may be safely counted upon to result in construction being done within a minimum time after the contract is signed. The work must be conducted on a businesslike basis from the time the job enters the architect's office or, in other words, the time-saving program should begin with the inception of the operation.

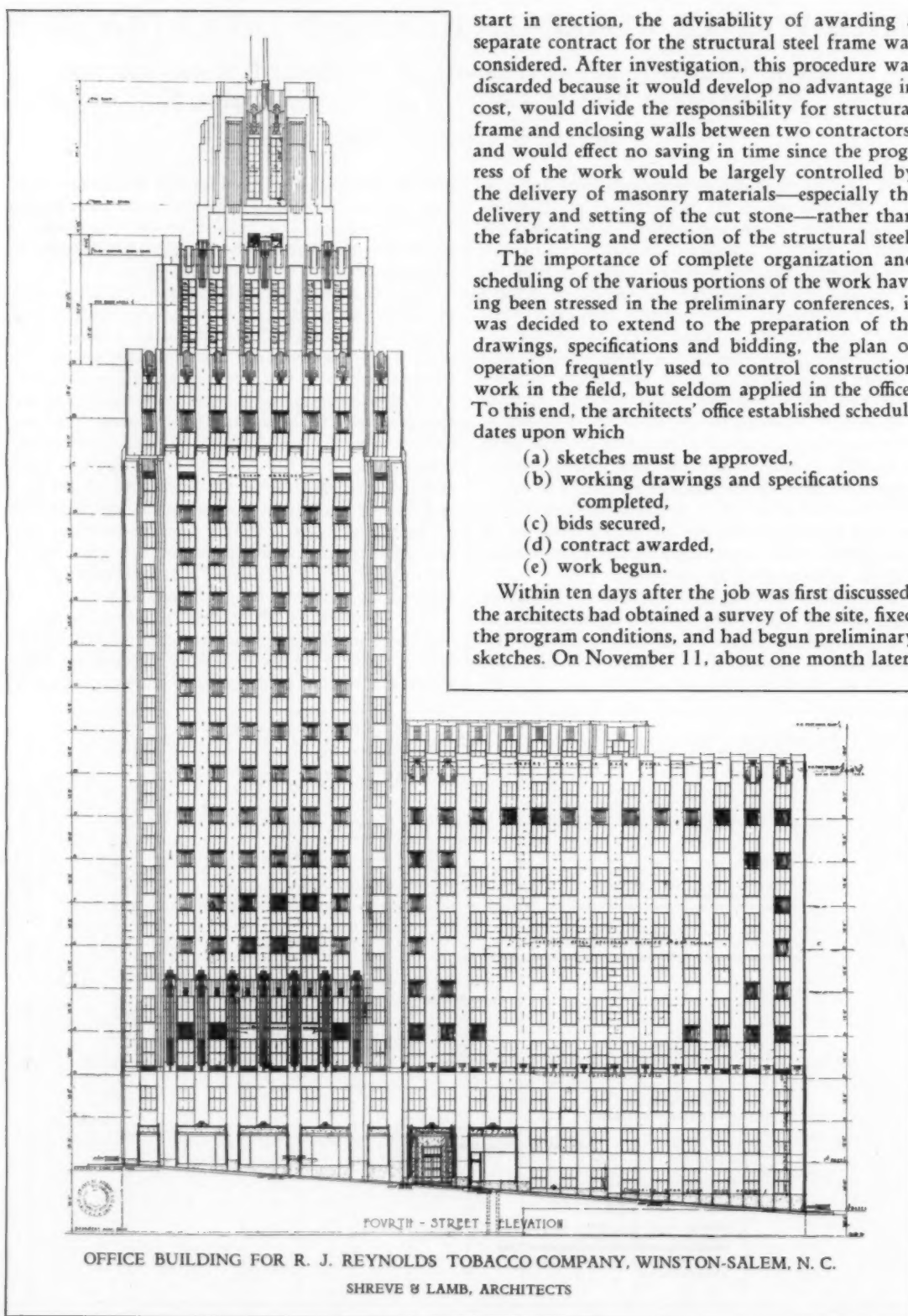
The office building for the R. J. Reynolds Tobacco Company, now under construction, at Winston-Salem, North Carolina, designed by Shreve and Lamb, architects, of New York City, affords an excellent example of such co-operation,

and the methods developed on this work were such that they can be studied and developed to advantage by other offices. The following analysis presents the facts not only in chronological order, but also in sufficient detail to be of practical value.

Before selecting an architectural firm to prepare plans for the building, the work, organization and personnel of several architectural offices were studied by the owners. The first contact of the selected firm with the owners occurred in October, 1927. Preliminary conferences made clear that the structure was to be erected for business purposes and that to this end it must be well constructed, economically planned, modern in equipment, well executed and distinctive in appearance. A further and highly important consideration was the date of completion. In accepting the commission, the architects realized that the entire operation must not only be well designed but that it must be carried through on a definite time schedule as well.

The owners readily agreed to lend their co-operation to secure early completion of the building by authorizing the bulk of the excavation done while plans were in progress. To secure an early

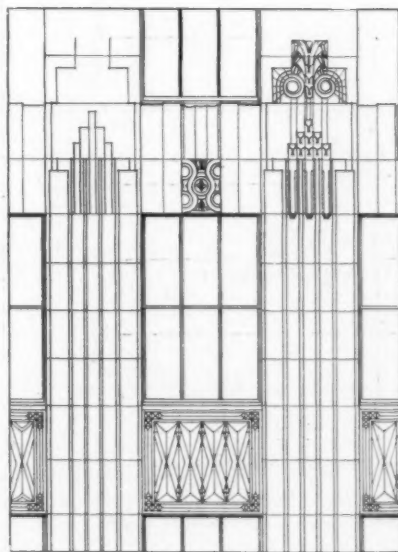




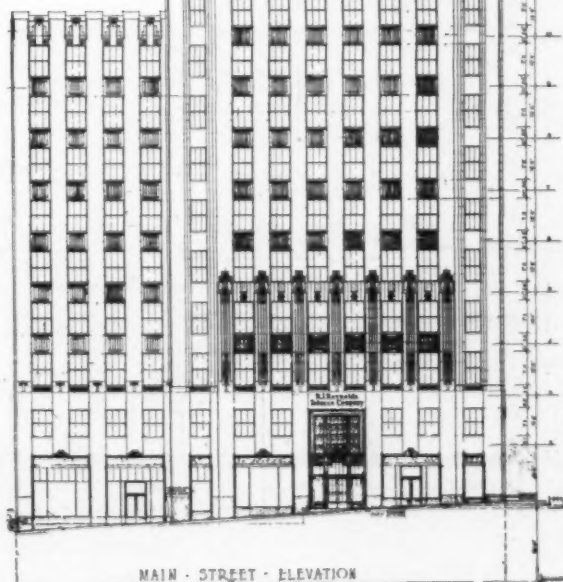
several complete well studied schemes were submitted to the client and authorization obtained to develop the preferred type plan. Five days later, the engineers began designing the essential mechanical equipment. On December 1, 1927, a working program was set up for completing the plans and specifications so that bids could be obtained in February, 1928, and a contract awarded on or before March 1. On January 22, 1928, complete mechanical layouts were delivered to the client and approved. On February 6, 1928, plans and specifications were issued to contractors for estimating. Bids were received on February 28 and the contract awarded on February 29. Construction work began on March 5, 1928.

If plans and specifications are to be prepared within a specified time, it is absolutely essential that those in authority make prompt decisions and avoid what are often radical and non-essential changes. To this end, the parti developed in the preliminary plans was very carefully studied and, once approved, was closely adhered to. Definite decisions as to details, materials and type of construction were made upon the completion of the approved sketches.

It is not uncommon practice to develop what are essentially preliminary plans for obtaining bids and then complete the working drawings after it has been established that the job will proceed. This procedure is usually not an ultimate economy, although it may appear so at the time the drawings



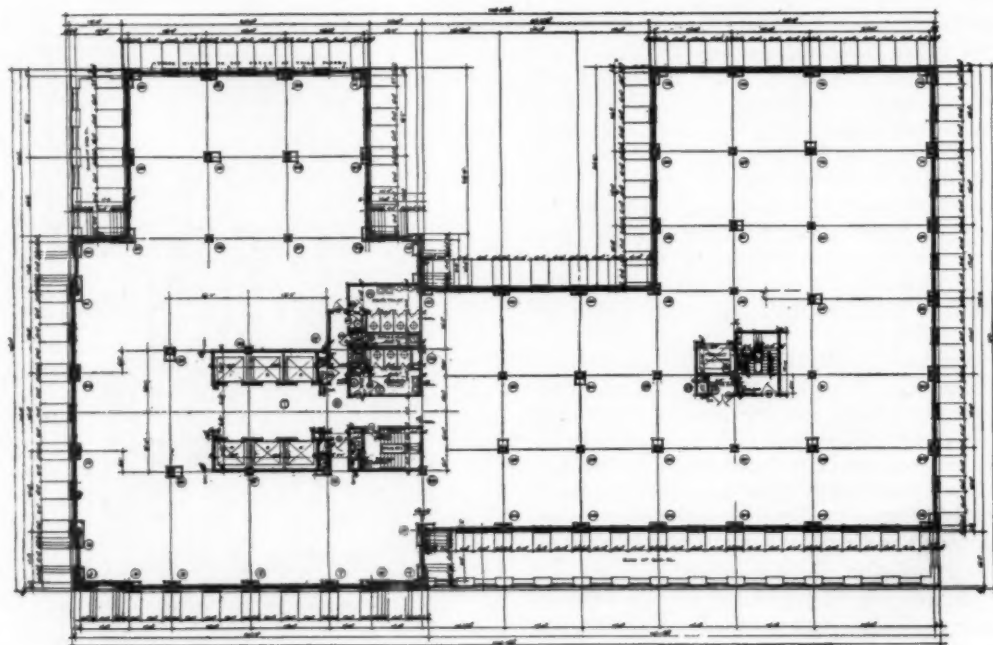
EXTERIOR DETAIL AT 4TH AND 5TH FLOORS



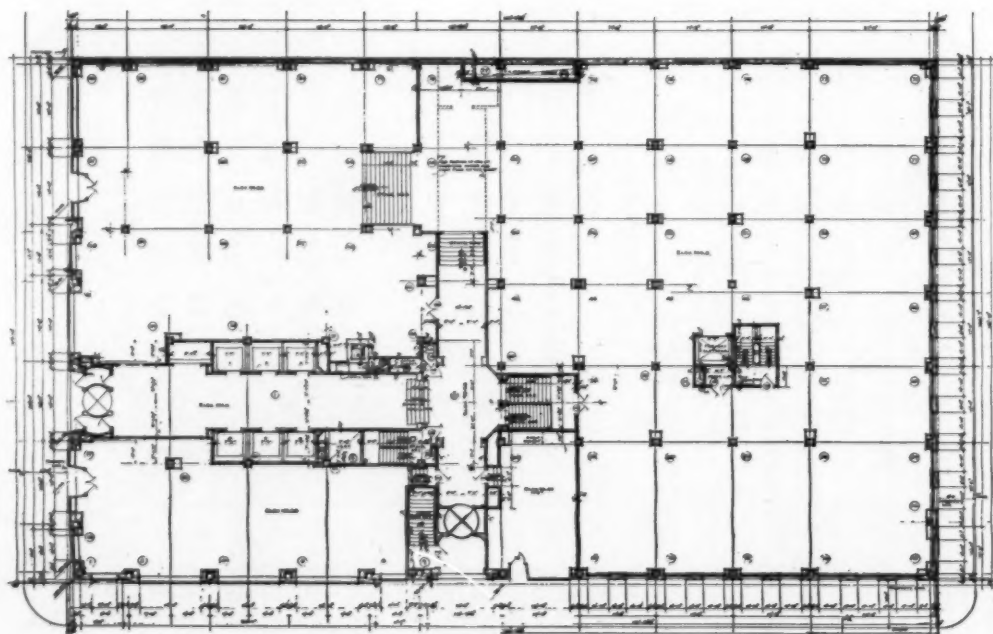
MAIN STREET ELEVATION

OFFICE BUILDING FOR R. J. REYNOLDS TOBACCO COMPANY, WINSTON-SALEM, N. C.

SHREVE & LAMB, ARCHITECTS

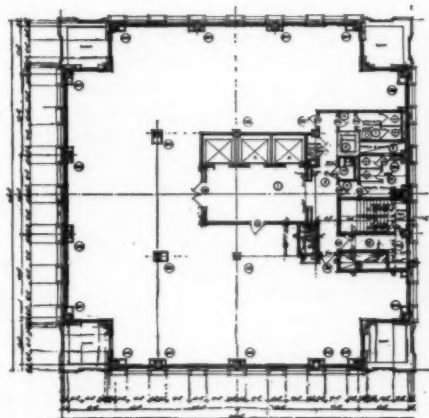


TYPICAL PLAN 3RD TO 6TH FLOORS

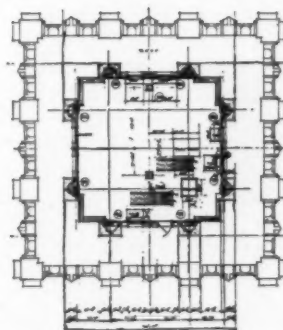


FIRST FLOOR PLAN

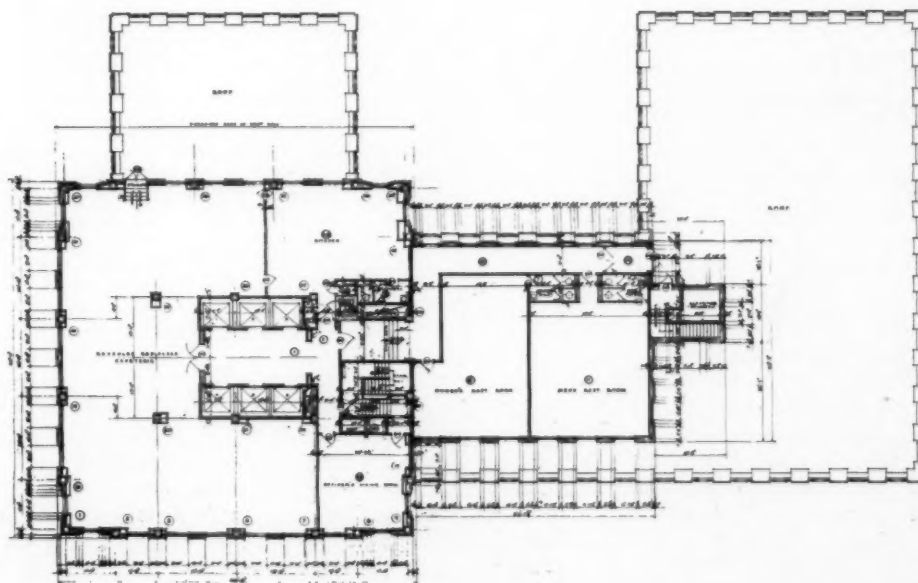
OFFICE BUILDING FOR R. J. REYNOLDS TOBACCO COMPANY, WINSTON-SALEM, N. C.
SHREVE & LAMB, ARCHITECTS



17TH AND 18TH FLOOR PLAN



ELEVATOR MACHINE ROOM FLOOR



10TH FLOOR PLAN

OFFICE BUILDING FOR R. J. REYNOLDS TOBACCO COMPANY, WINSTON-SALEM, N. C.
SHREVE & LAMB, ARCHITECTS

are in course of preparation. In the case of the building for the R. J. Reynolds Tobacco Company, the general construction drawings, structural steel plans, and mechanical and equipment plans were developed in sufficient detail to enable construction work to start as soon as the contract was awarded. All branches of the work at this time proceeded simultaneously insofar as possible. The plans were reviewed with the City Building Superintendent in advance of completion. The engineers for the heating and ventilating, plumbing and electrical work, worked side by side with the architectural draftsmen. Specifications were carried forward at the same time and as a result architectural plans, mechanical plans and specifications were completed on the same date.

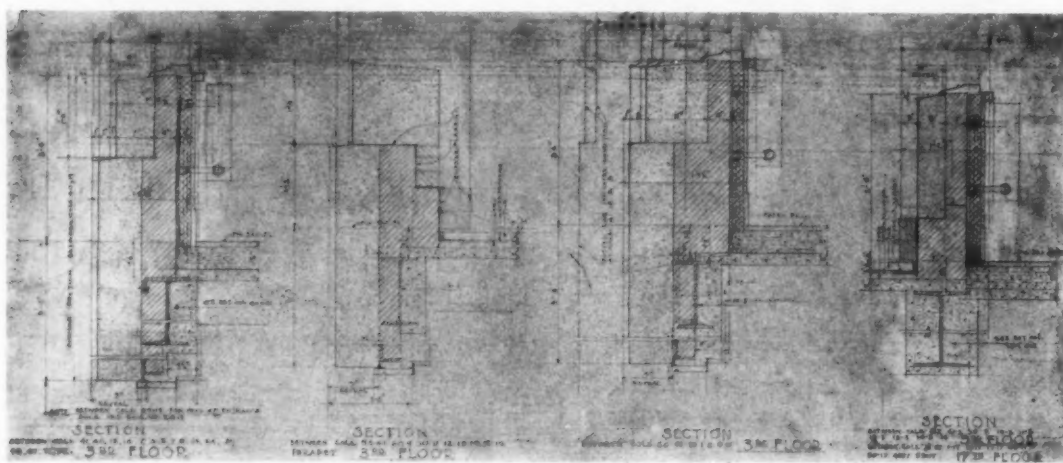
It is of interest to learn that as a practical test of the New York Building Congress Standard Speci-

carry on a large building operation with dispatch

(b) familiarity with southern building industry conditions

Eleven general contractors were invited to bid upon the work. Several sets of plans and specifications were issued to each bidder. Copies of certain portions of the bidding documents were also issued to an approved list of sub-contractors and material and equipment producers. The number of firms thus given an opportunity to submit sub-bids was unusually large and required issuing 6,000 sheets of blueprints and 25,000 pages of specifications.

To facilitate the making up of advantageous figures, proposal forms were prepared by the architects. These permitted either (a) a fixed sum bid or (b) a cost plus fee basis with a guaranteed limit of cost. All proposals were required to be based on one



TYPICAL SPANDREL DETAILS

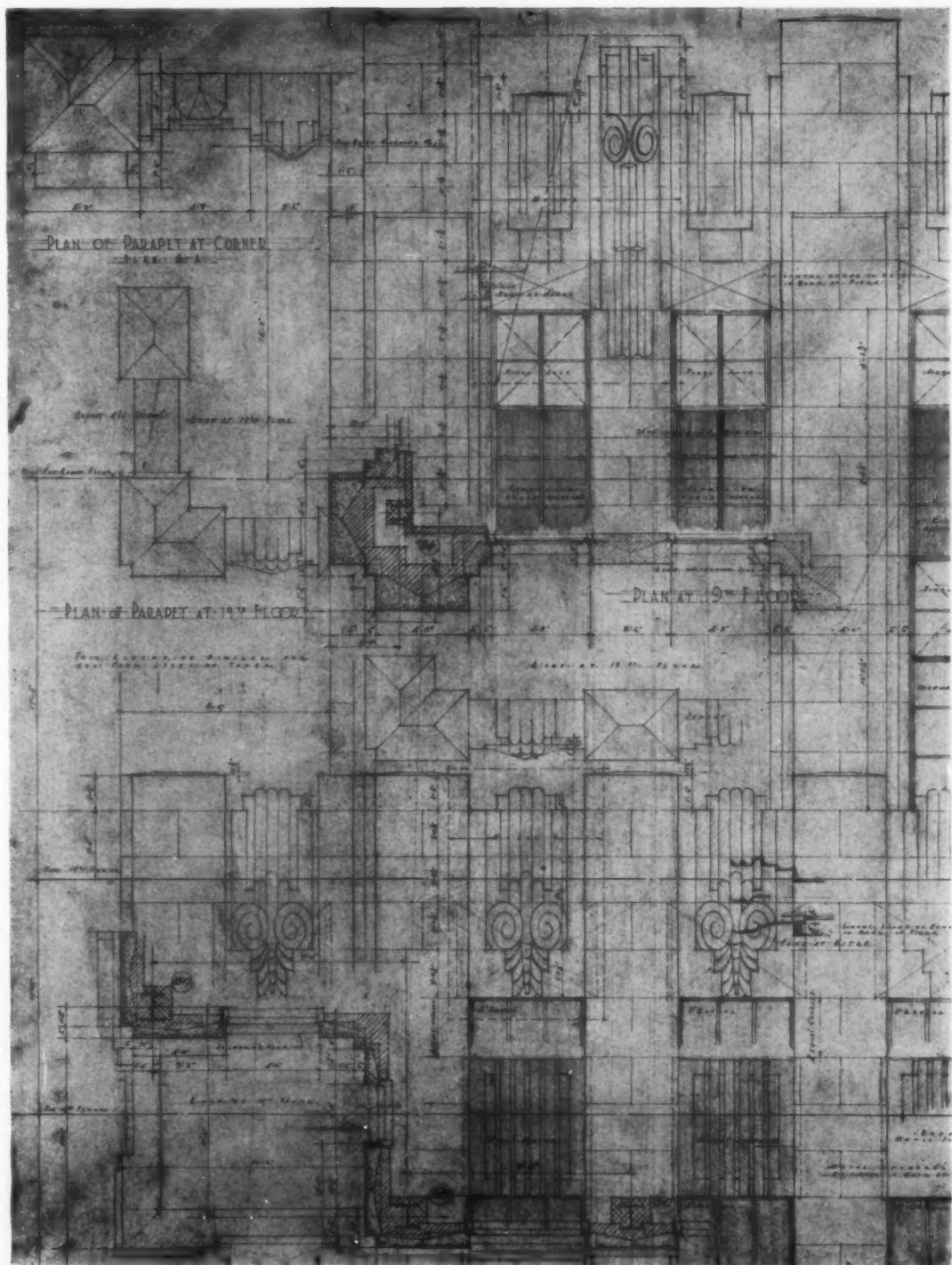
fications, now being prepared by the Congress for publication, the specifications of the building for the R. J. Reynolds Company were prepared in the same form and closely followed the Building Congress' standards. These specifications are written in two parts. One part describes the work included, while the other is a specification of standards for materials, workmanship and methods of construction. One contractor aptly described the two specifications as "where" and "how." To simplify the transmittal of documents to contractors located in widely separated geographical centers, the specifications for all trades on this particular building were bound together into one volume. This method of preparing specifications, however, also permits each trade to be issued as a separate document where this is desirable.

In selecting the general contractors, who were to be invited to bid on the work, the following facts were given careful consideration:

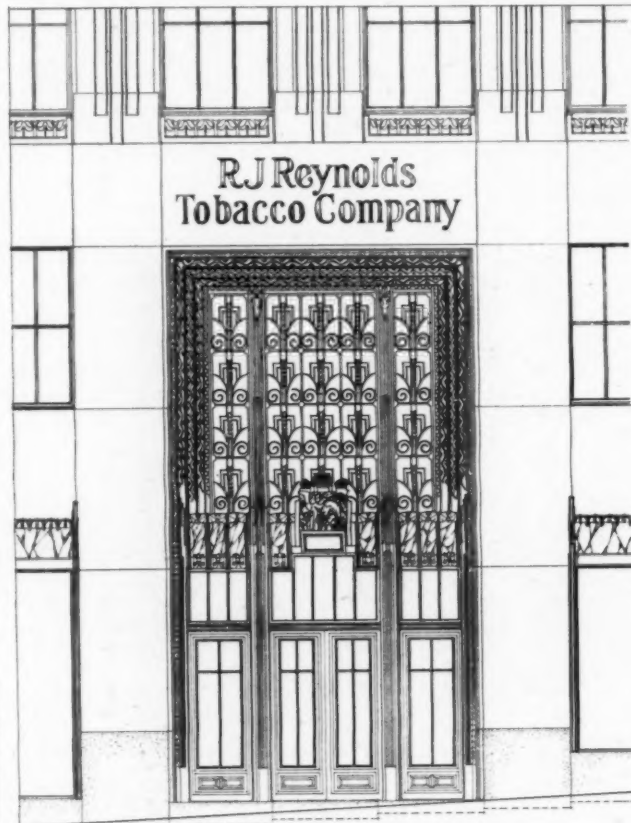
(a) ability and experience of organization to

manufacturer's product in each case with stated provision for alternate bids. That is, in order to obtain the advantage of competitive bidding and permit the architects, when approving sub-contracts to secure the most favorable prices for the owner, the proposal forms required a statement of additions or deductions for substituting approved and listed products of other manufacturers for those first specified. This method assured a fair and ready comparison of all bids without losing the advantage of direct competition.

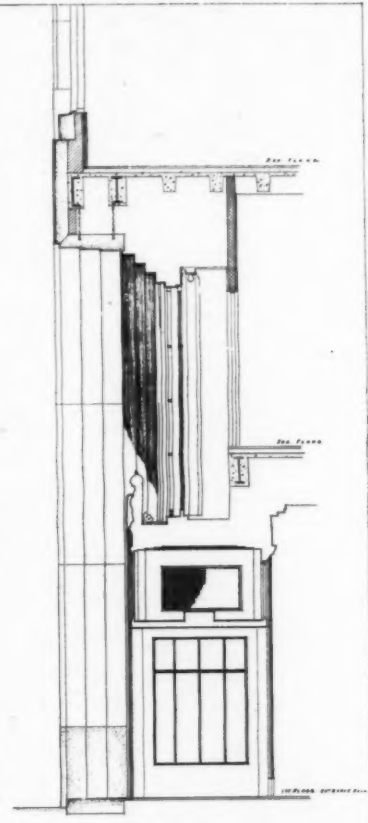
For the convenience of bidders making up final figures, proposals were received at Winston-Salem, North Carolina. The figures were remarkably close. Out of eleven bidders, the four low bids ranged within one per cent of the total cost, and two per cent covered the range of the seven low bids. The narrow range between bidders was due, contractors have stated, to all bidders receiving definite plans and complete information; equality of the invited bidders; a reasonable length of time allowed for



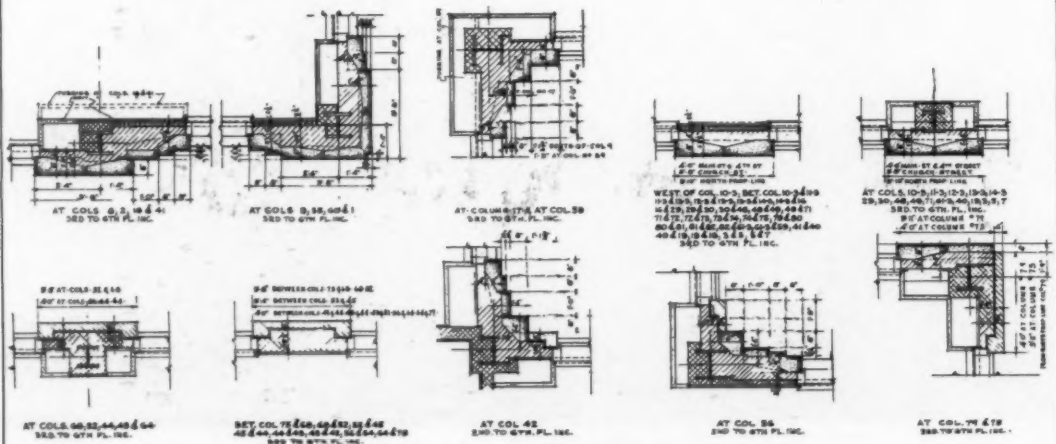
PORTION OF EXTERIOR DETAIL SHEET SHOWING DETAILS OF UPPER STORIES
 OFFICE BUILDING FOR R. J. REYNOLDS TOBACCO COMPANY, WINSTON-SALEM, N. C.
 SHREVE & LAMB, ARCHITECTS



DETAIL OF MAIN STREET ENTRANCE
- BUILDING FOR -
R. J. REYNOLDS TOBACCO COMPANY -



SECTION THRU MAIN STREET ENTRANCE
SCALE





OFFICE BUILDING FOR R. J. REYNOLDS TOBACCO COMPANY, WINSTON-SALEM, N. C.

SHREVE & LAMB, ARCHITECTS

RENDERING BY CHESTER B. PRICE

preparing estimates; and the establishing of one standard as a basis for all bids. The contract was awarded to the lowest bidder on the cost plus fee basis with a guaranteed limit of cost and fee total.

After the contract was awarded, in order to secure the benefits of their experience and advice, all bidders were asked to comment on the specifications in view of the fact that, as stated before, this work was utilized as a practical test of the standard specifications adopted by the New York Building Congress. The results obtained, and the general opinion of the contractors, were such that the opinion is justified that the use of the Standard Specifications will be found of advantage to archi-

ects, contractors and owners. The belief was expressed that after contractors have become thoroughly familiar with the standards, thus set up, that their work as respects estimating will be greatly simplified and construction costs reduced.

Inasmuch as the R. J. Reynolds Tobacco Company's building was designed, complete drawings and specifications prepared for contracts, and a contract awarded within a period of five months, the architects are justified in feeling that their judgment in placing all work preliminary to the contract on a working schedule to be realized at fixed dates, was vindicated.

Page 54

OFFICE BUILDING
for
R. J. REYNOLDS TOBACCO COMPANY
Winston-Salem, N. C.

SPECIFICATIONS

for

HOLLOW METAL

Part I

Shreve & Lamb
Architects
11 East 46th Street
New York City

January 31, 1928

WORK INCLUDED

1. This division shall include all labor, materials and appliances necessary for the furnishing and installing of all Hollow Metal Work as enumerated herein and indicated on the drawings, subject to the requirements specified under Part II, paragraphs 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 18, together with the additional paragraphs referred to under the various items.
2. The location and general extent of the work is as follows:
 - (a) Shop Drawings. (See Part II, paragraphs 11, 12, 13, 14, 15.)
 - (b) Samples. (See Part II, paragraphs 16 and 17.)
 - (c) Combination buck, frame without transom and trim, #16 gauge, for the following openings. (See also Part II, paragraphs 35, 36, 37, 38.)

Note: Three butts will be used on each door.

(1) Sub-basement

All door openings, including on intermediate level. Frame to freight elevator flush on shaft side.

WORK INCLUDED

Page 7

SPECIFICATIONS

for

HOLLOW METAL WORK

Part II

BUCKS

35. Bucks shall be reinforced at the corners with #18 gauge welded splices, provided at the bottom with 2" x 3/4" x #16 gauge channel spreaders, and on the jambs #18 gauge corrugated adjustable anchors, at least one every two feet.
36. Where bucks are for openings wider than three (3') feet six (6") inches, arch supports welded to the head shall be provided.
37. Combination buck and frame or buck, frame and trim shall be provided with spreaders, struts and masonry supports as specified for bucks and shall also be reinforced for hardware.

BUCKS

SETTING BUCKS AND FRAMES

38. All bucks and frames shall be accurately set in the locations indicated on the drawings, plumbed and securely braced until built into the masonry or adjoining work.

SETTING BUCKS AND FRAMES

PARTITIONS

39. Where hollow metal partitions are called for, they shall be of the sectional type, consisting of floor levelling strip, mop strip, panel, corner and wall mullions, cornice and wire moulding, at door height, and panel and door units, glazed or solid as indicated.
40. Where partitions are required to extend to ceiling, the mullions shall be extended and a ceiling cornice provided. Fixed transoms shall be provided over panel units and pivoted transoms over doors.
41. Where beams and girders occur, the ceiling cornice shall be placed at beam or girder soffit level as directed by the Architects, and filler pieces provided to fill in between cornice and ceiling.

PARTITIONS

TYPICAL PAGES FROM THE SPECIFICATIONS FOR THE R. J. REYNOLDS TOBACCO COMPANY'S OFFICE BUILDING AT WINSTON-SALEM, N. C.

PART I, PAGE 54, OF THE JOB SPECIFICATIONS SHOWN AT THE LEFT. NOTE ESPECIALLY PARAGRAPHS 1 AND 2C. PART II, PAGE 7, OF THE SPECIFICATION STANDARDS SHOWN AT THE RIGHT. PARAGRAPHS 35, 36, 37 AND 38 OF PART II, PAGE 7, ARE REQUIRED TO BE USED IN CONJUNCTION WITH PARAGRAPH 2C OF PART I, PAGE 54

INTERIOR ARCHITECTURE

TRADITIONS associated with SITE give CHARACTER to DESIGN of this HOUSE

THE design of the house illustrated herewith, gets its character from the traditions which are associated with the site on which it is located. In fact, the old house originally occupied by "Light Horse" Harry Lee, a cavalry officer of Revolutionary times, has been retained, although extensive alterations were made and additions erected on both sides. The original house occupied only the space that is now used and shown on the plan as the living room. It was the original intention of the present owner to do away entirely with the old structure, and to build the new house further back from the street where more privacy, as well as a more desirable view, could be obtained. The architect, however, recognizing the value to the setting which the old trees would afford, and appreciating the historical interest and significance attached to the old house, convinced his client otherwise.

In plan, the house is of the rambling type. The central portion of the house is devoted to the master quarters, and the east wing is entirely given over to service. Communication from one room to another has been carefully studied, and, on the first floor, from the entrance hall, just inside the vestibule, an interesting vista is obtained of the garden at the west side of the house, by the careful arrangement of doors leading to the ante room, the living room and to the porch beyond a hall. One of the conditions imposed upon the architect by the owner was the necessity for an office. This has been introduced on the first floor in the west wing, and an extra flight of stairs has been conveniently located, giving access to the owner's bedroom and dressing room on the second floor.

The architectural treatment of the interior is in keeping with the character of the exterior design. The proportions and simplicity of the scheme throughout are reminiscent of Colonial days. The wood panelled walls

and rough ceiling beams of the library are especially interesting and immediately recall the hand made work of the times when mouldings were run out by hand and standardization by machinery was unheard and unthought of. While the architectural treatment is so definitely influenced by Colonial ideas, the furnishings throughout are, too, suggestive of Revolutionary days. Old spinning wheels emphasize the early American character, and furniture which, in its lines and proportions, recalls the period of Empire influence in this country, is appropriately introduced. A wallpaper of old-fashioned design in the hall stimulates the Colonial quality of the staircase.



Photo by Duryea

HOUSE OF WARREN KINNEY, NEW VERNON, N. J.

JAMES W. O'CONNOR, ARCHITECT



DINING ROOM



Photos by Duryea

LIVING ROOM

HOUSE OF WARREN KINNEY, NEW VERNON, N. J.

JAMES W. O'CONNOR, ARCHITECT

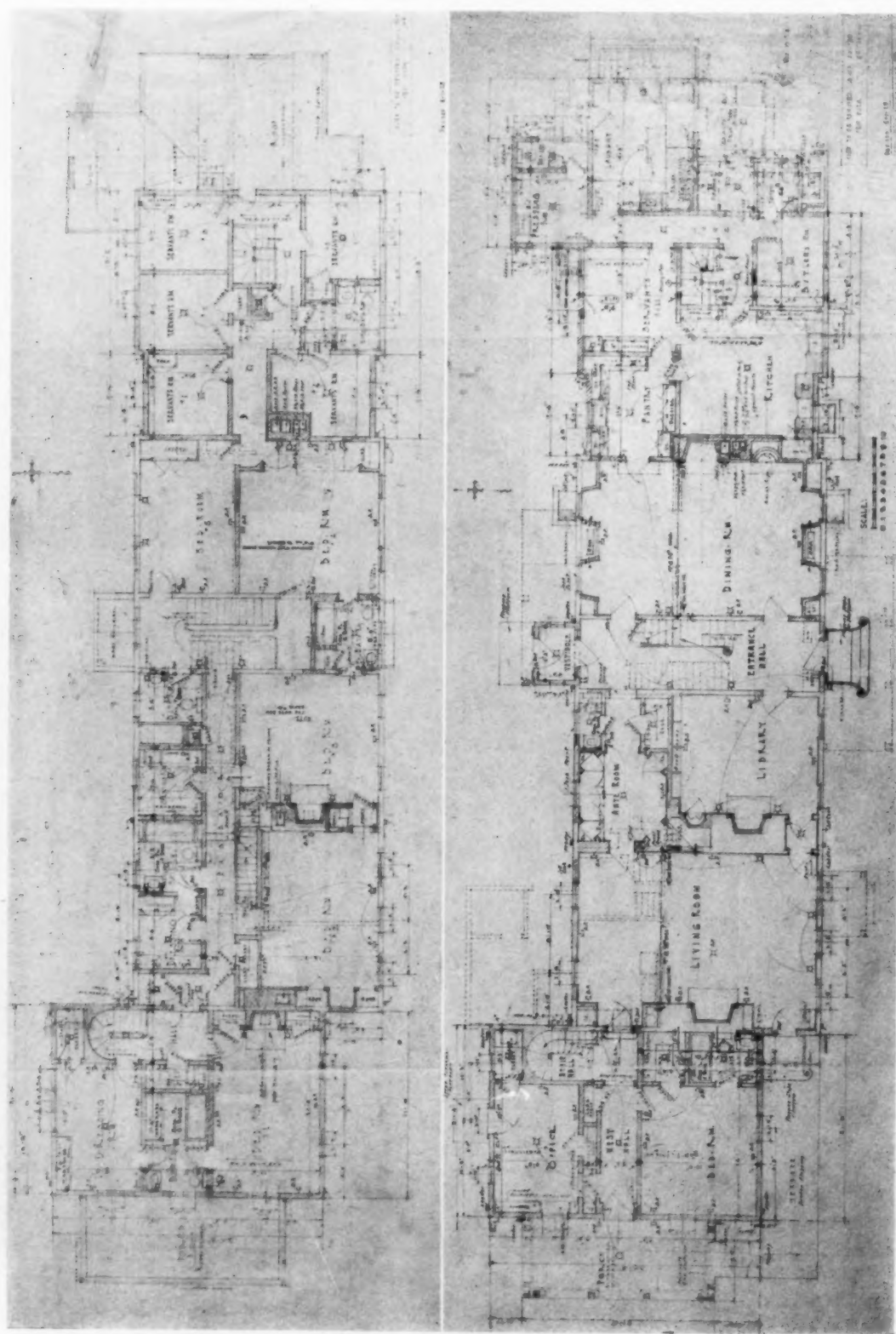


Photos by Duryea

LIBRARY

HOUSE OF WARREN KINNEY, NEW VERNON, N. J.

JAMES W. O'CONNOR, ARCHITECT



HOUSE OF WARREN KINNEY, NEW VERNON, N. J.—JAMES W. O'CONNOR, ARCHITECT

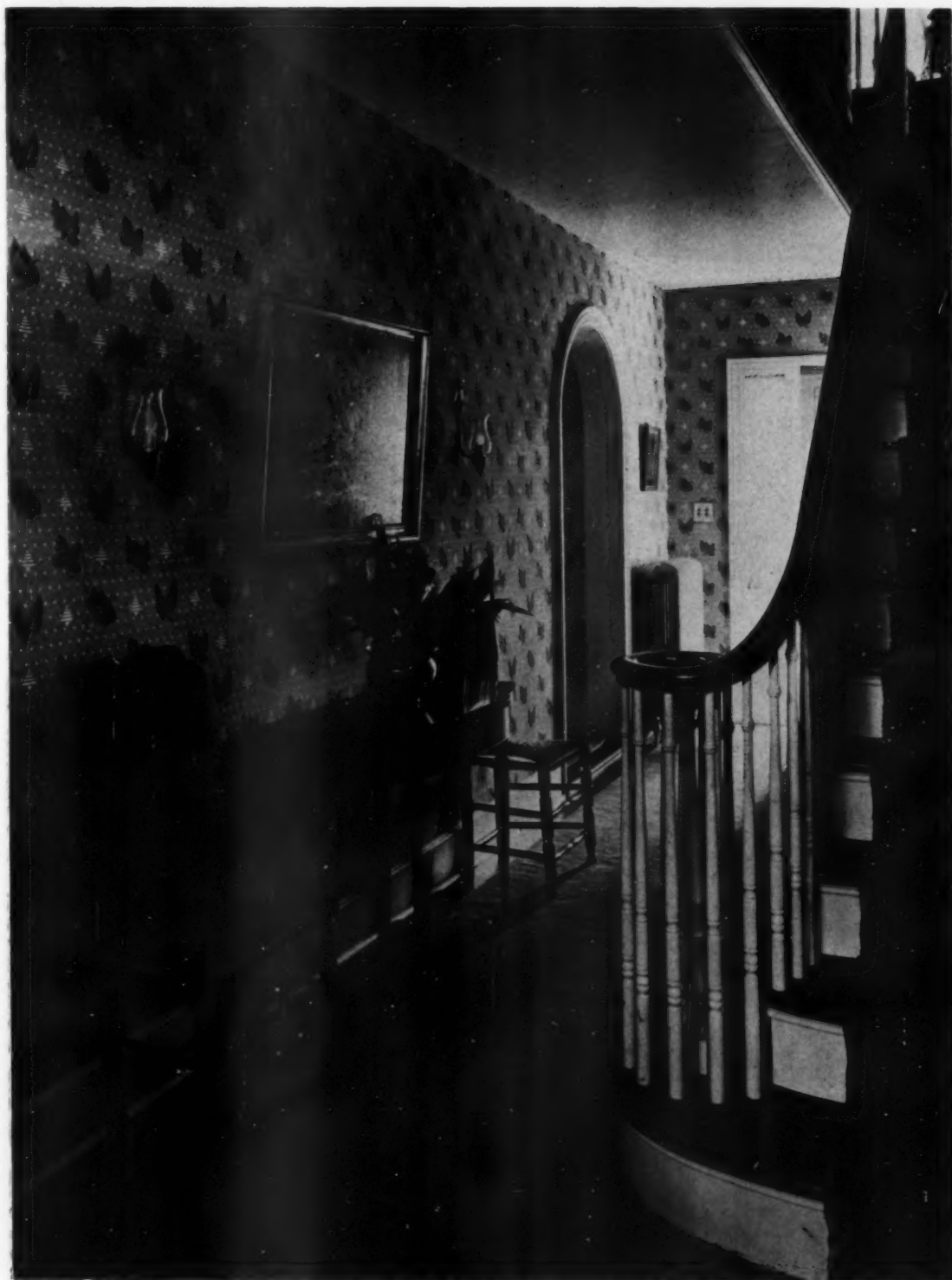


Photo by Duryea

ENTRANCE HALL, HOUSE OF WARREN KINNEY, NEW VERNON, N. J.

JAMES W. O'CONNOR, ARCHITECT



BEDROOM



Photos by Duryea

HOUSE OF WARREN KINNEY, NEW VERNON, N. J.

JAMES W. O'CONNOR, ARCHITECT

COMPETITION FOR MUSEUM OF THE CITY OF NEW YORK

THE project of establishing a museum which will illustrate by means of exhibition material the chronological development of various phases of New York City life from earliest times to the present, has reached its final stage. The city has assigned a site, 200 feet wide, on Fifth Avenue between 103rd and 104th Streets, with a depth of 150 feet, provided the trustees of the Museum raise \$2,000,000 by June 1st of this year. Contingent to the raising of this fund, one million of which is intended for the building and one million as endowment, a limited competition for the new building was held among the following five New York architects: Grosvenor Atterbury; Delano & Aldrich; Joseph H. Freedlander; Helmle, Corbett & Harrison; and Benjamin Wistar Morris. A jury, consisting of the trustees, James Speyer, Luke Vincent Lockwood and Edward Robinson; the director, Hardinge Scholle; and Charles A. Platt, F. A. I. A., selected as the winning design that of Joseph H. Freedlander. John V. Van Pelt was appointed professional advisor to prepare the program and conduct the competition.

The problem as stated, reads as follows:

The competition drawings are to show a solution for the final completed building with gardens either entirely enclosed or open on one or more of the three streets, and it is expected that this final or completed building will have a cubic content of at least double that of the portion of the building to be erected first. This final cubic content is suggested, not mandatory.

No restrictions are placed upon the competitors in the selection of a scheme for the plan nor of a style for the exterior of the building. They are merely reminded that the building is to be expressive of New York of the past, which is fading, as well as of the present.

It is hoped that the competitors may evolve a solution of the problem which will permit successively the addition of wings.

Requirements of the building are as follows:

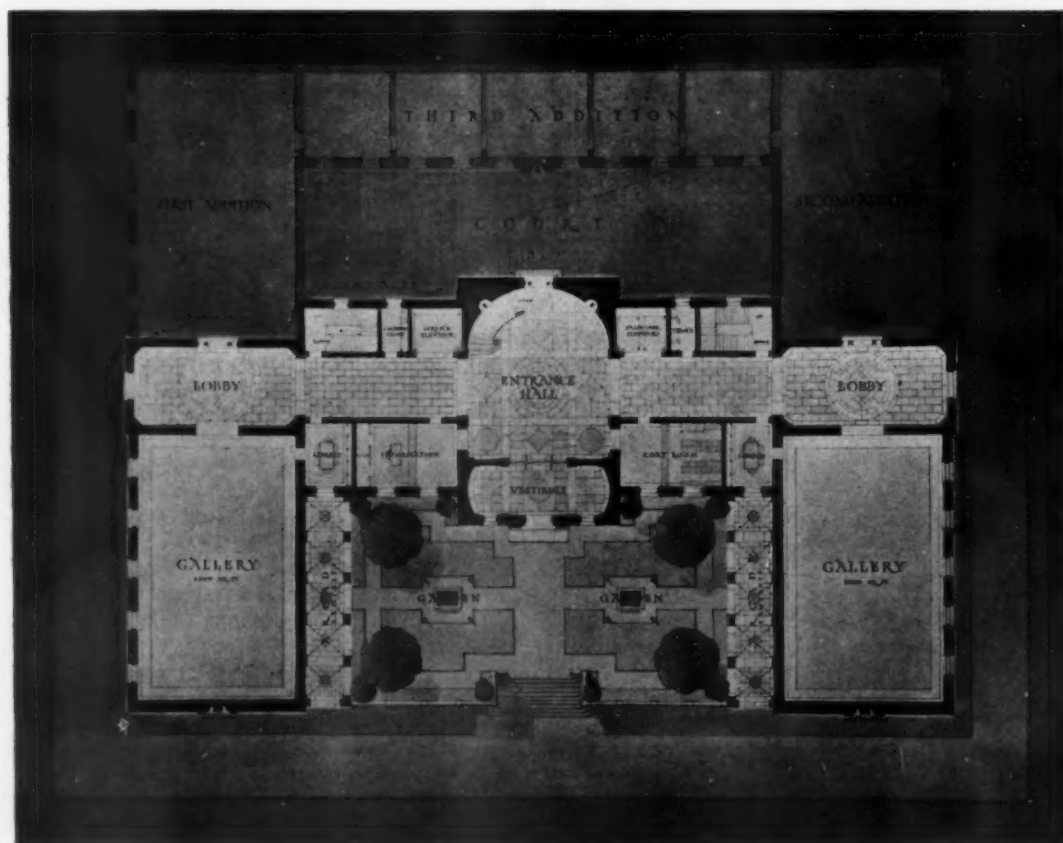
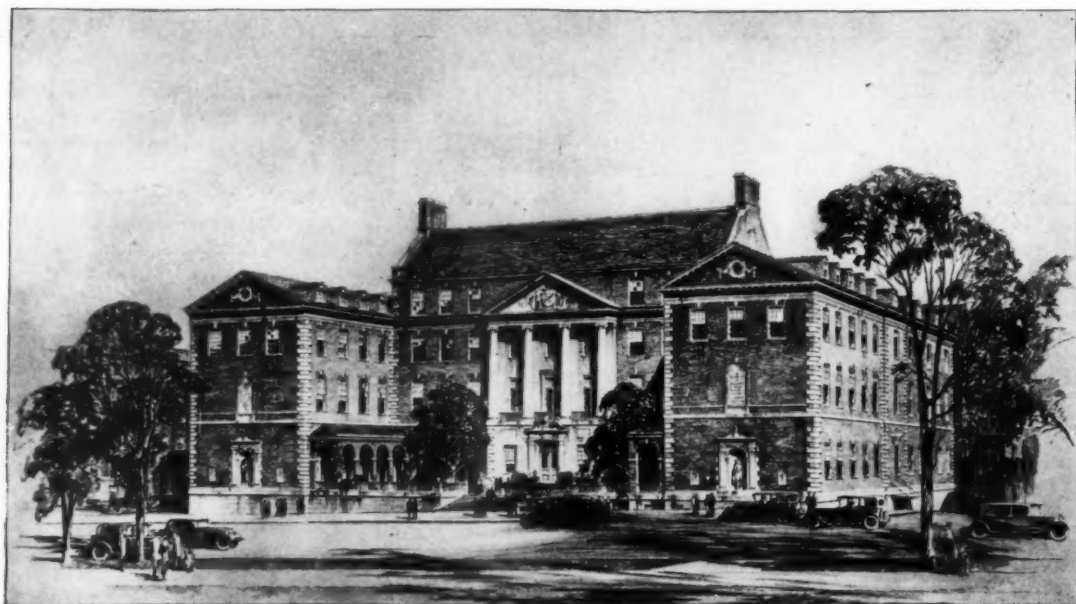
PUBLIC PORTION: outer vestibule; main vestibule; main stairs extending between 1st and 2nd floor; entrance to garden. Between the outer and main vestibules there must be turnstiles. Off the outer or off the main vestibule: a coat room for 300 coats and for umbrellas, canes, etc. Off the outer or off the main vestibule: information desk and photograph and sales room. Off the main vestibule: two passenger elevators and possibly a service elevator 9'x12'. The service elevator may be located elsewhere but must be so placed that access to it in the basement and from it to the galleries will be very convenient. Large exhibits will be wheeled into and from it. On the 1st floor two large galleries about 2,500 feet each; one of these for shipping, the other

for topographical models. On the 2nd floor: (a) An auditorium or lecture hall to seat 280 persons. It will have a small stage, two dressing rooms each with toilet and lavatory, also a screen for moving pictures and booth for double projecting machine. (b) A gallery to display transportation. Distributed among the 3rd, 4th, and 5th floors: A total of 12,000 feet of exhibition space. About one-third of this space will be used for models and other general exhibits. There will be special exhibits of costumes, silverware, jewelry, timepieces, etc. In the other two-thirds of the space in the three upper floors will be the theatre exhibit and period rooms. The requirements of the period rooms are flexibility in height and window spacing. Therefore, the floor heights of these upper floors should vary from 18' 0" in the clear on at least one floor to 12' 0" in the clear on the one with the least height. It is hoped that the chronological sequence of these rooms may be observed in their location in the building as the earlier styles usually require less height in the clear than the later ones. The theatre exhibit will include small enclosed sets lighted artificially. In connection with each main division will be a study room or library. The floor at the top of the building may be in the roof or in a gambrel roof lighted by dormers or skylights. Beside the main stairs, which should be architectural in character, there must be secondary stairs enclosed in fireproof partitions and affording exit in case of fire. The building must conform to the requirements of the Building Code, and all governmental departments having jurisdiction over building in the City of New York. Public toilets for the two sexes are desired on an upper floor, so located that they may be readily found but not so that they will be considered comfort stations for Central Park.

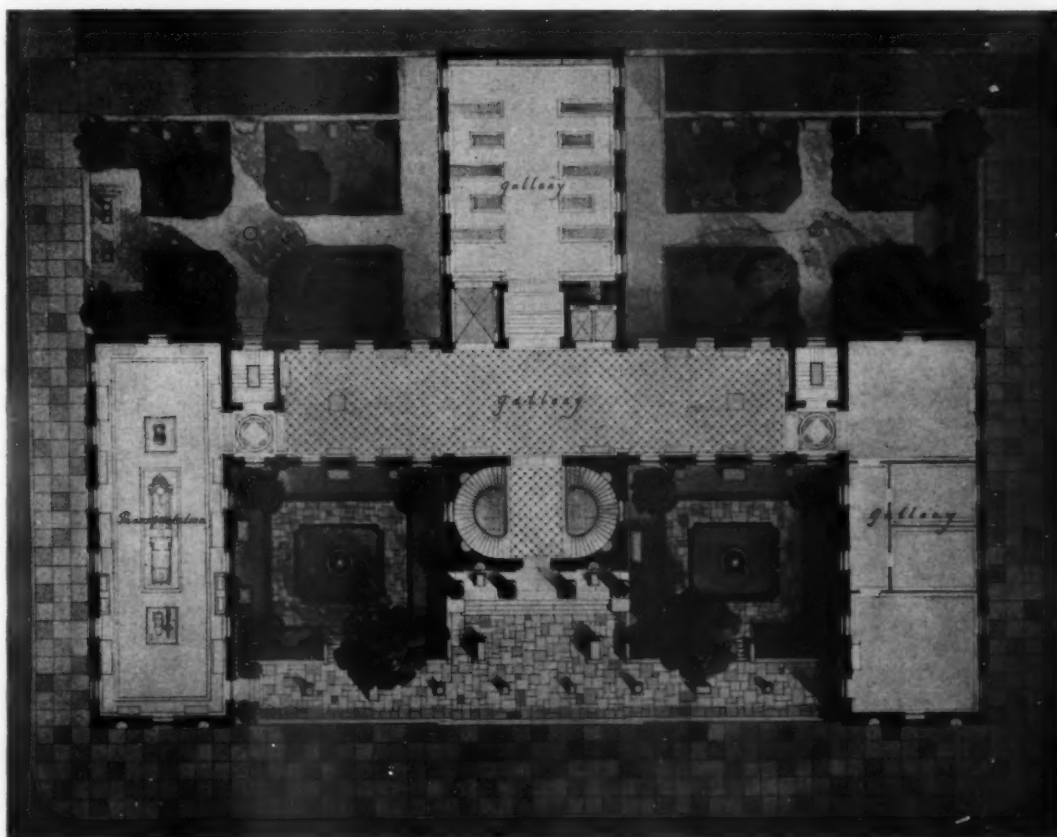
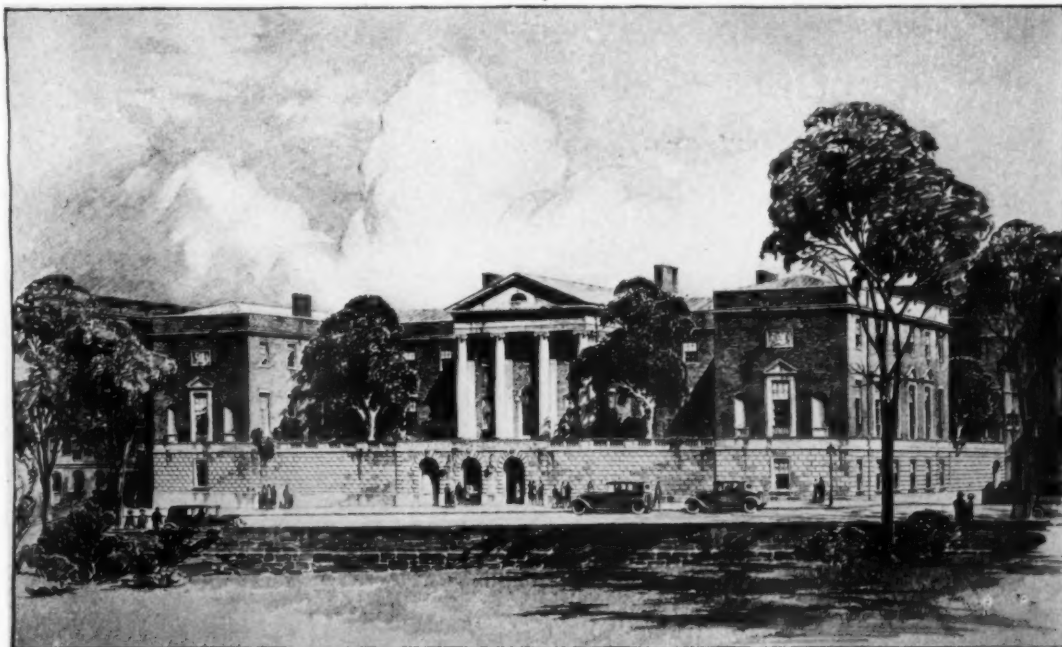
The treatment of the garden or court is of great importance as it will house exhibits that should be placed in the open. It may become one of the most attractive parts of the museum. A covered arcade or colonnade would afford shelter for more fragile exhibits that should be seen in an out of doors setting. The lot might permit differences in level.

Space must also be allowed for administration offices as follows: Director's office; room for director's private secretary; assistant director's room; general office; filing record room and four curators' offices; a purchase room of 400 sq. ft.; trustees' room and locker rooms with toilets for the staff.

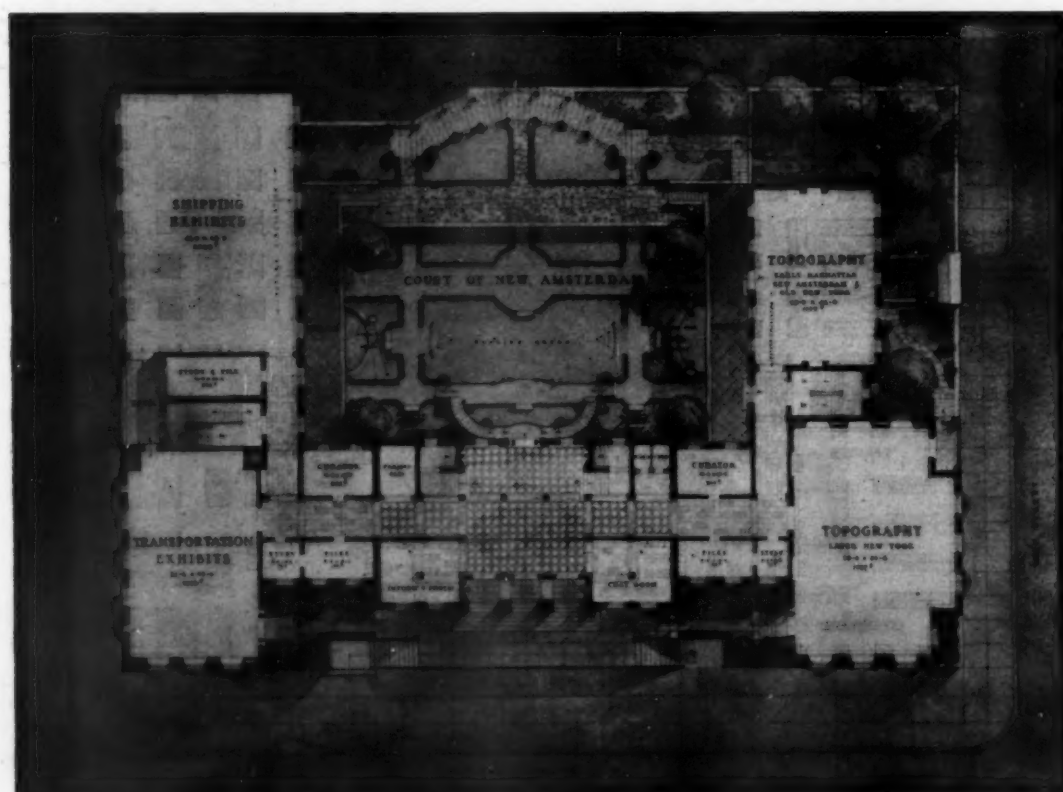
It is sincerely hoped by the trustees of the Museum that the New York public will provide by June 1st the necessary funds to enable them to carry out this project, patterned as it is on city museums in large European cities, that visualize and perpetuate their history and stimulate civic pride through a method new to this country.



COMPETITION FOR MUSEUM OF THE CITY OF NEW YORK
WINNING DESIGN SUBMITTED BY JOSEPH H. FREEDLANDER

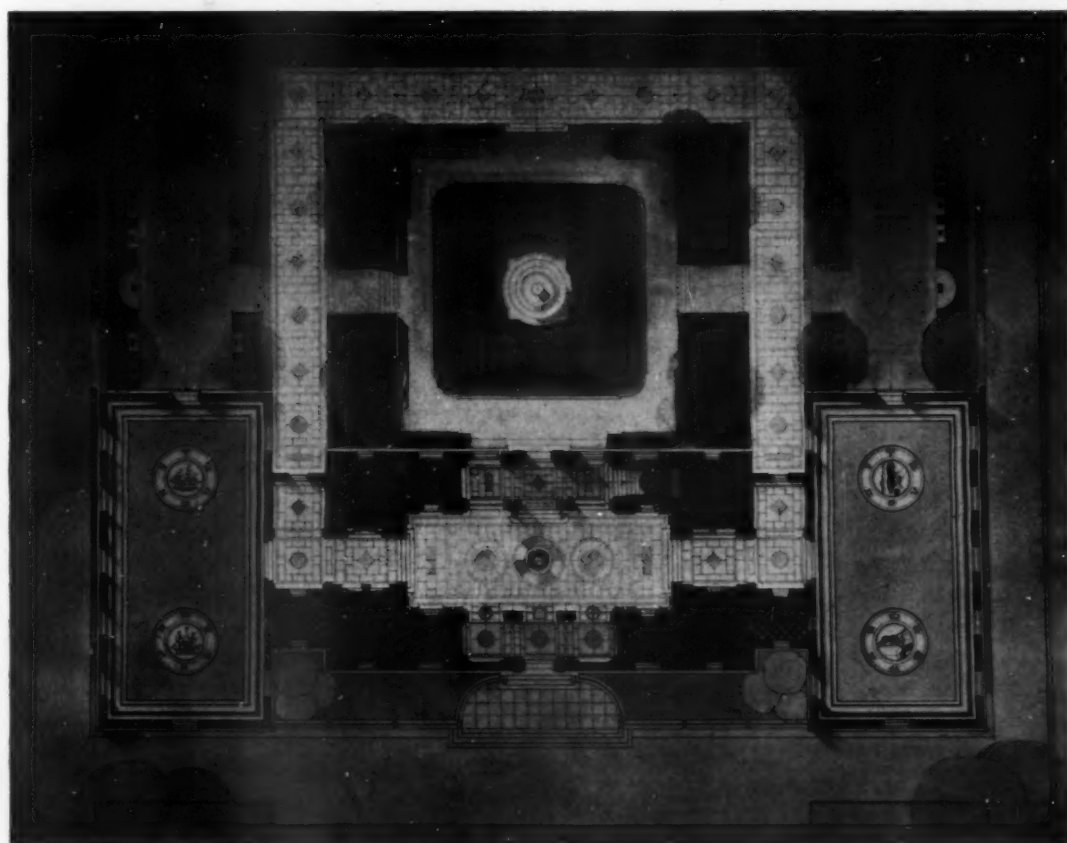


COMPETITION FOR MUSEUM OF THE CITY OF NEW YORK
DESIGN SUBMITTED BY DELANO & ALDRICH, ARCHITECTS

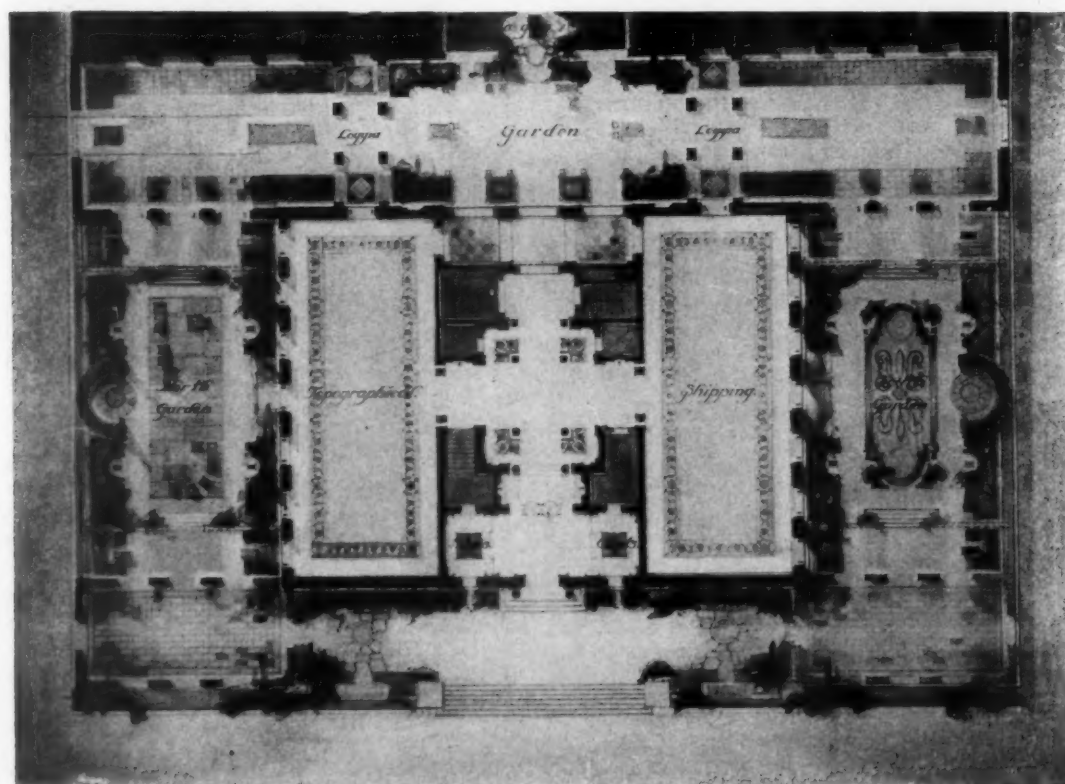
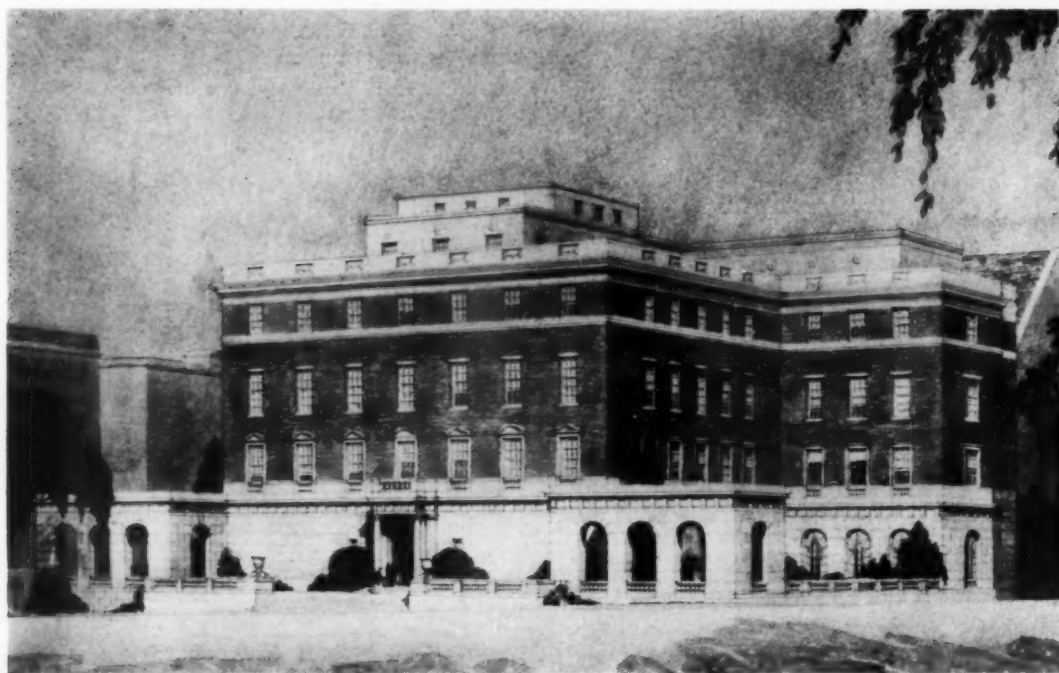


COMPETITION FOR MUSEUM OF THE CITY OF NEW YORK

DESIGN SUBMITTED BY GROSVENOR ATTERBURY, ARCHITECT; JOHN TOMPKINS, ASSOCIATED



COMPETITION FOR MUSEUM OF THE CITY OF NEW YORK
DESIGN SUBMITTED BY HELMLE, CORBETT & HARRISON, ARCHITECTS



COMPETITION FOR MUSEUM OF THE CITY OF NEW YORK
DESIGN SUBMITTED BY BENJAMIN WISTAR MORRIS, ARCHITECT

ENGINEERING AND CONSTRUCTION

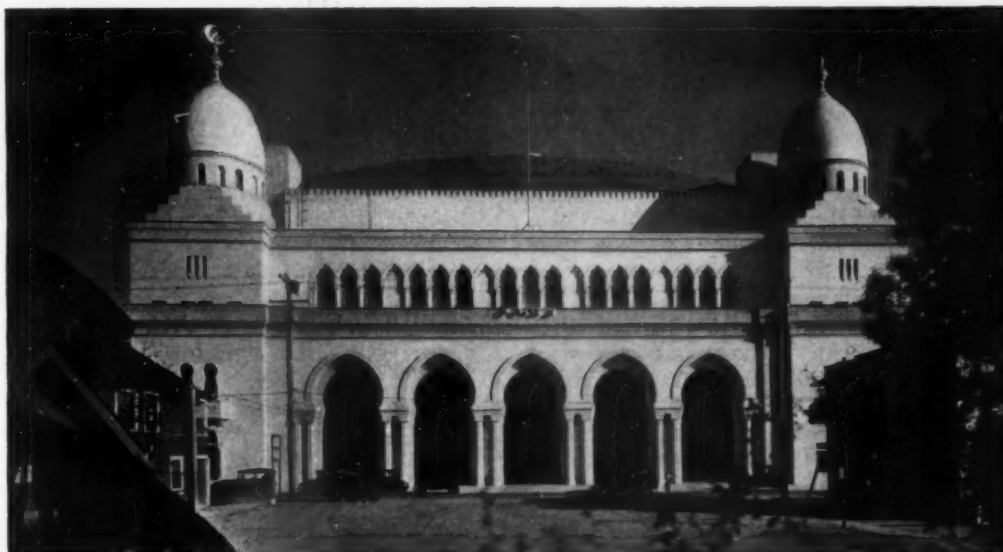


Photo by Mott

AL MALAIKAH TEMPLE, LOS ANGELES, CALIF.—JOHN C. AUSTIN, ARCHITECT

UNUSUAL ENGINEERING FEATURES OF THE AL MALAIKAH TEMPLE, LOS ANGELES

JOHN C. AUSTIN, Architect

By R. McC. BEANFIELD, Assoc. M. Am. Soc. C. E., Consulting Engineer

The Proceedings of the American Society of Civil Engineers issue of December, 1927, contained on pages 2645 to 2674 a description of the "Unusual Engineering Features of An Immense Theatre Building" by R. McC. Beanfield, Assoc. M. Am. Soc. C. E. Extracts from this article are published by permission of the author and the American Society of Civil Engineers.—THE EDITORS.

THE Al Malaikah Temple in Los Angeles, locally known as the Shrine Civic Auditorium, occupies nearly three acres and may be divided into three units, as follows: The auditorium, or theatre, with facilities for housing the various Shrine organizations; the banquet hall, with a large basement for public exhibition purposes; and a kitchen wing, with facilities for serving large banquets. The auditorium is 200 ft. wide and 294 ft. deep including the stage, which is 72 ft. deep and 192 ft. wide. The proscenium opening has a clear span of 100 ft. and a height of 37 ft. at the crown. The orchestra pit

can accommodate 200 musicians. There are 3,200 seats on the orchestra floor and 3,350 in the balcony. With the exception of 22 seats behind balcony columns, the entire audience has an unobstructed view of the stage. The stage has a seating capacity of 1,700. The auditorium, or theatre, consists of a reinforced concrete frame with exterior concrete curtain-walls. The roof construction consists of reinforced concrete joists, supported on structural steel purlins connected to the roof trusses.

The auditorium balcony risers and treads are of reinforced concrete, supported by eight steel cantilever trusses having a maximum overhang of 45 ft. which, in turn, are supported by a main balcony steel truss. This truss is, doubtless, the largest steel balcony truss yet constructed for the purpose. It weighs nearly 250 tons, and has a clear span of 168 ft. It is of interest that the balcony truss columns were located to displace a single seat on each side of the auditorium nearest the aisles adjacent to the walls, instead of outside the auditorium walls,

which arrangement would have increased the span 20 ft. The obstructed view for a few seats is relatively unimportant as compared with the increased difficulties in design and greater cost if 20 ft. had been added to the span of the main balcony truss.

As it is necessary to have sufficient clearance through the center part of this main truss for the balcony exit passageways, pin joints and eye-bar diagonals were used instead of the usual built-up members and riveted joints with larger gusset-plates. Riveted joints were used where practicable to obtain general stiffness. Where pins were necessary, nickel steel was chosen, particularly, to reduce the size of the pin-holes in the lower chord.

The balcony truss was delivered to the job in sections, the largest (center lower chord section) weighing 47 tons and being 80 ft. long. The truss was erected on a steel substructure consisting of the same members as were used in the falsework for the roof trusses. The lower chord sections were first set on camber screw-jacks. The web members were next placed, and followed by the top chord sections.

The jack trusses, T-1, tend to equalize the overhang of the cantilever trusses, which project a maximum of 45 ft. beyond the main balcony truss. It was desirable to prevent excessive and unequal de-

flections of the structural steel crosses supporting the balcony, particularly the cantilevers, and the possibilities of cracking and otherwise shearing the relatively thin monolithically finished 2 1/2-in. slabs and narrow 5-in. risers of the reinforced concrete balcony framing. Hence, it became necessary to design and arrange the balcony trusses so that their deflections would be relatively uniform and slight. Deflections of the various trusses were carefully computed and checked graphically. The maximum computed deflection of the cantilever trusses under dead load was 3/4 in. Secondary stresses were carefully computed for the balcony trusses and the roof trusses. Deformations in the main balcony truss, T-2, under full dead load conditions, were partially compensated by the forcing of initial stresses in the truss members during erection. Subsequent strain gauge readings did not indicate a very close relation between the computed stresses and the actual stresses. Those members which showed maximum secondary stresses by extensometer readings were likewise indicative of maximum secondary stresses by the analytical methods. In any event, the strain gauge readings indicated that all stresses were within the maximum safe stress allowable.

It is interesting to note that the strain-gauge

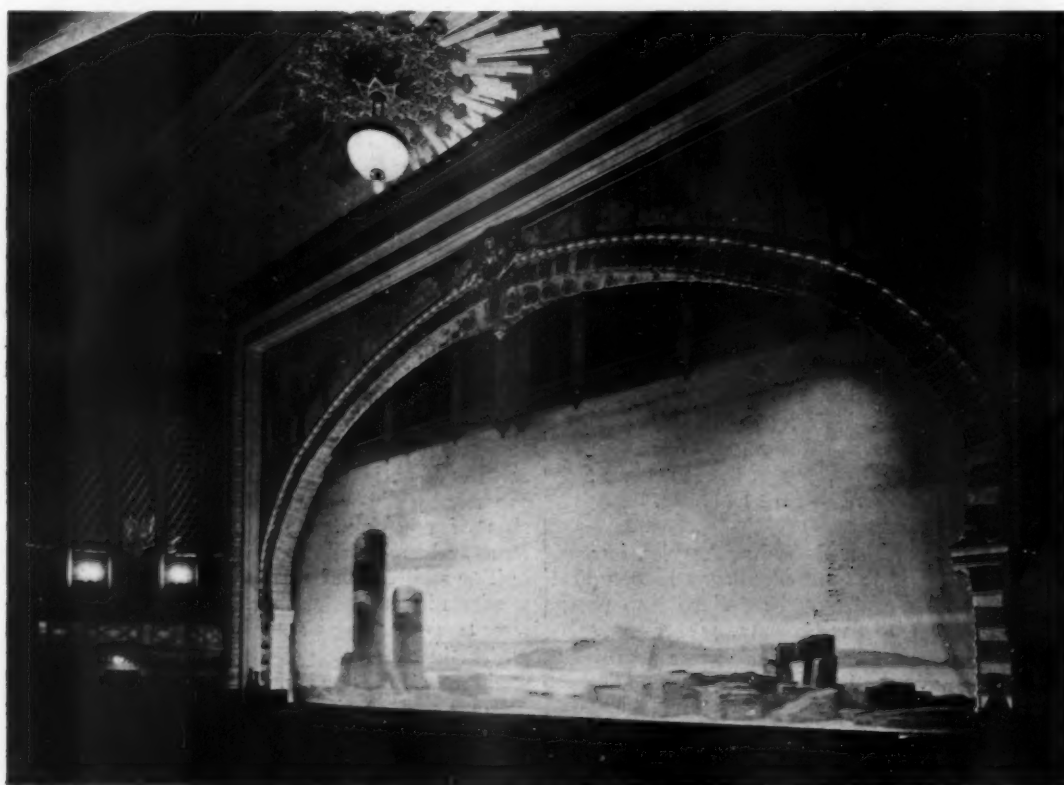


Photo by Mott

THE PROSCENIUM OPENING HAS A CLEAR SPAN OF 100 FT. AND A HEIGHT OF 37 FT. AT THE CROWN. AMPLIFYING SPEAKERS ARE CONCEALED IN THE JEWELLED CROWN OF THE ARCH

readings on the main steel columns supporting the balcony truss indicated a small moment with a maximum stress of 10,875 lb. per sq. in., which was safe, being about 30% greater than the computed stress. These columns were designed with a very low unit stress, 8,500 lb. per sq. in., to allow for increased stresses due to bending caused by pin friction and other causes, which could not be computed accurately. Each of these columns is braced near its top to the reinforced concrete wall structure by three 10-in. H-struts.

Jack truss T-1 is attached at one end to the main balcony truss by a pin connection in a large steel casting resting on a built-up stool between the web members of truss T-2. The other end is supported on a reinforced concrete wall column. The chords of truss T-1 consist of two 15-in. channels, with 8-in. H web members. The bottom chord in the end panel section of the balcony truss, T-1, was composed of two 8-in. standard eye-bars to avoid clearance difficulties. The pin joint connecting truss T-1 to the main balcony truss, T-2, eliminated any possibility of excessive restraining moments due to the varying deformations of the connected trusses.

There are eight cantilever trusses, four of which are directly supported and connected on the main

balcony truss, T-2; the other four are supported and connected at their fulcrum points to the jack trusses, T-1. The center four cantilever trusses are riveted at their fulcrum supports directly to the vertical member of the T-2 main balcony truss, which is common to both trusses.

The load on the main balcony truss columns is distributed by a 52 by 52 by 4-in. rolled steel slab to the reinforced column below. It was found to be more economical to use a reinforced concrete pier from the foundations to the first floor level than to extend the steel columns to the footings.

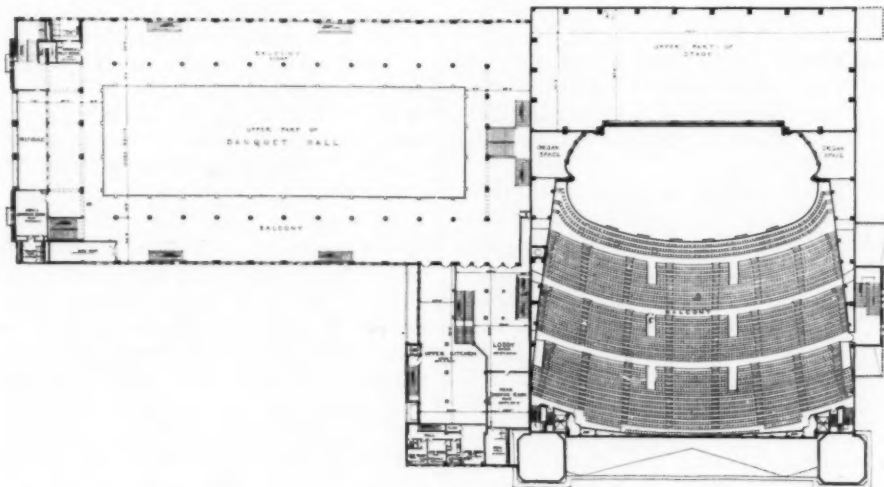
In order to stiffen the ends of the cantilever trusses and reduce their deflections to a minimum, a double web plate girder section was used. During erection, the plate girder sections were given a camber by offsetting the rivet holes in the bottom chord in the joint connecting them to the open web section of the truss. The chords were built of 8 by 3-in. angles, latticed and placed 1 ft. 3 in., back to back, which width added to the lateral stiffness. The anchor, or wall, ends of the cantilever trusses were secured to anchor-bolts on top of reinforced columns.

Special attention was given to the design of the general bracing throughout the balcony framing.

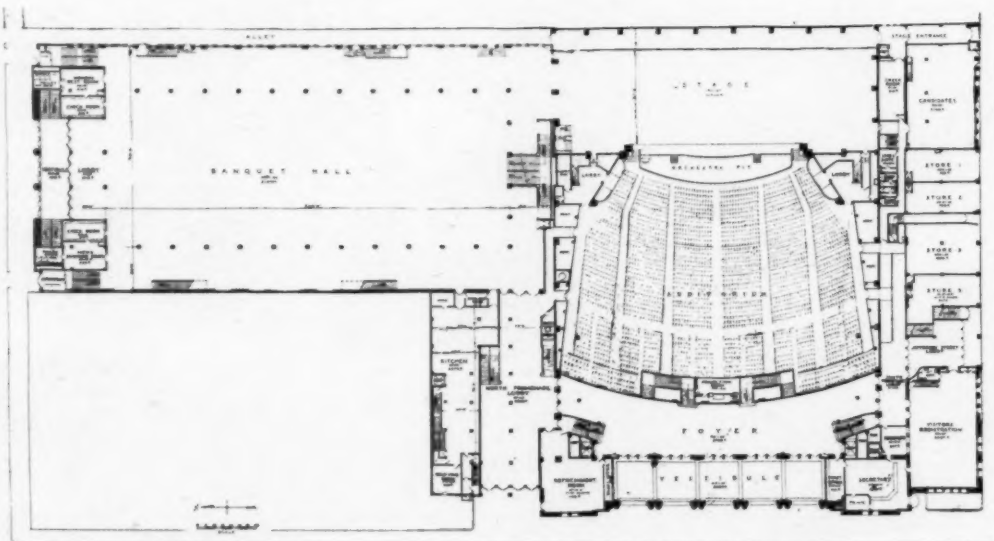


Photo by Keystone

THE 22 FT. HIGH CHANDELIER, WEIGHING APPROXIMATELY FIVE TONS, IS CONSTRUCTED WITH A STRUCTURAL STEEL FRAME AND HUNG FROM PIN JOINTS. IT CONTAINS 500 ELECTRIC BULBS, ARRANGED FOR 64 COLOR COMBINATIONS



BALCONY FLOOR PLAN



MAIN FLOOR PLAN

AL MALAIKAH TEMPLE, LOS ANGELES, CALIF.

JOHN C. AUSTIN, ARCHITECT

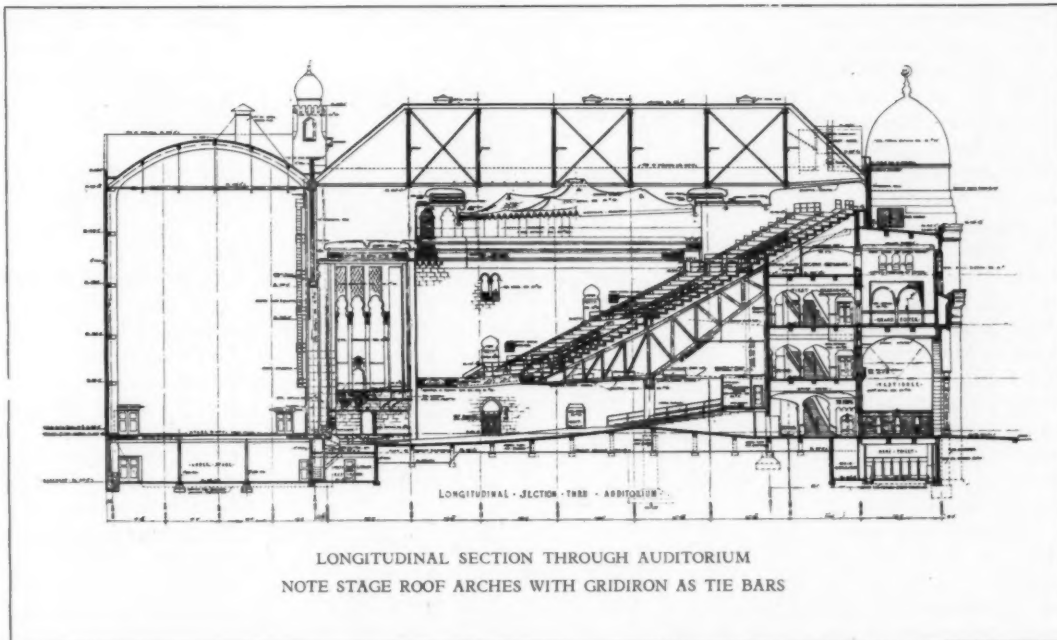


Photo by Mott

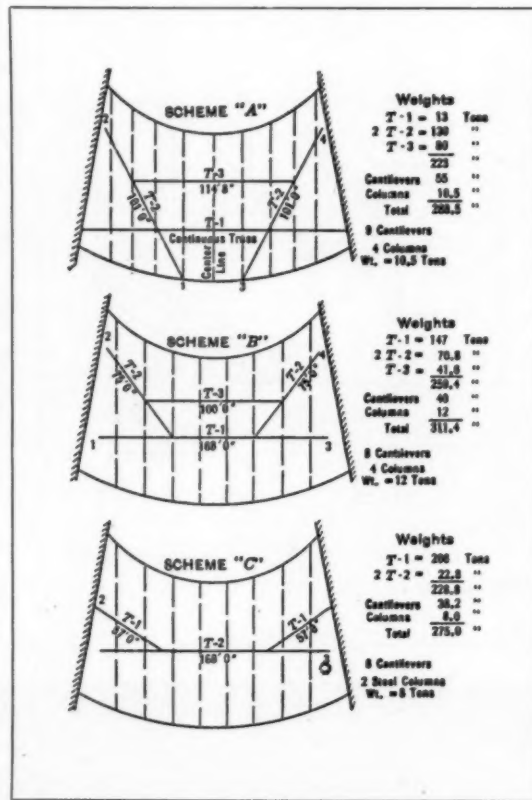
THE ROOF OVER THE BANQUET HALL IS SUPPORTED ON REINFORCED CONCRETE ARCHES OF 90 FT. CLEAR SPAN. BENDING STRESSES IN COLUMNS ARE REDUCED BY THE CANTILEVERED BALCONY. DECORATIONS ARE PAINTED ON CONCRETE

AL MALAIKAH TEMPLE, LOS ANGELES, CALIF.

JOHN C. AUSTIN, ARCHITECT

The cantilever trusses were sway-braced in horizontal and vertical planes by angle cross-bracing and struts in the form of bents. The cantilevers and jack trusses assisted materially in bracing the main balcony truss in addition to the four horizontal boxed latticed struts which braced the upper chord to the rear wall. The four exits passing through the main truss were supported by hanger rods anchored above in the concrete deck of the balcony.

To avoid any possibility of the concrete balcony cracking along the auditorium walls, due to deflections of the supporting trusses, a construction joint was placed in the concrete deck, midway between the auditorium wall and the adjacent cantilever trusses. Although the balcony has been loaded to capacity several times, no cracks in the concrete decking have been ob-

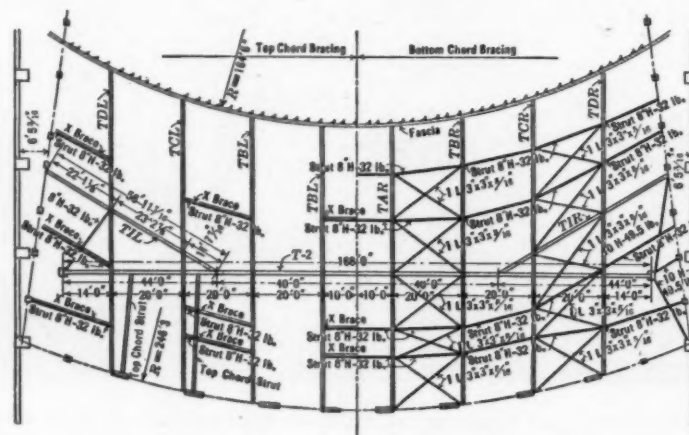


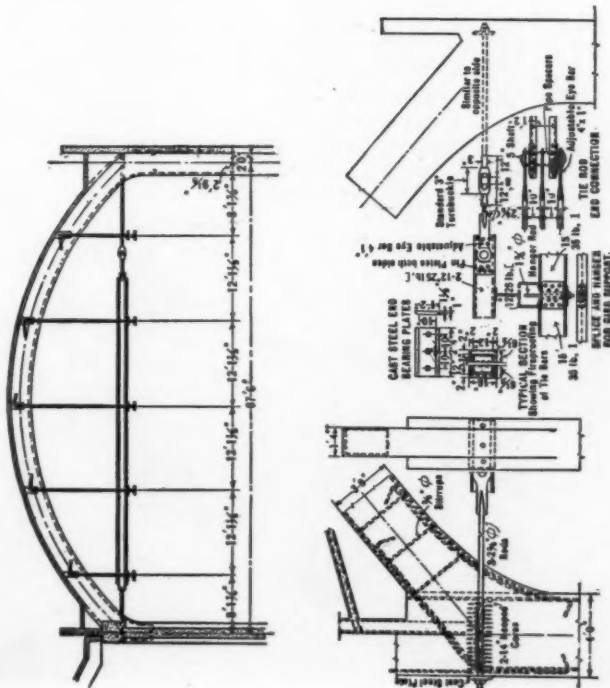
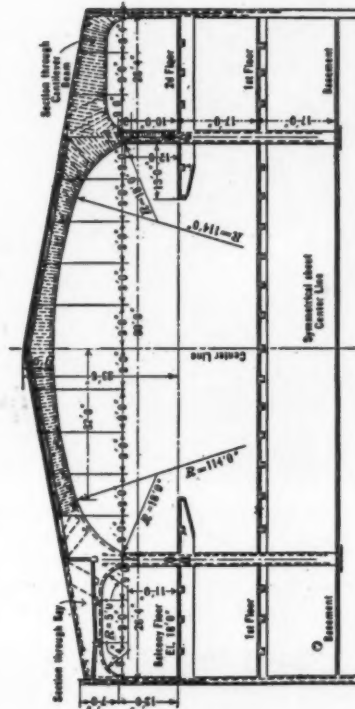
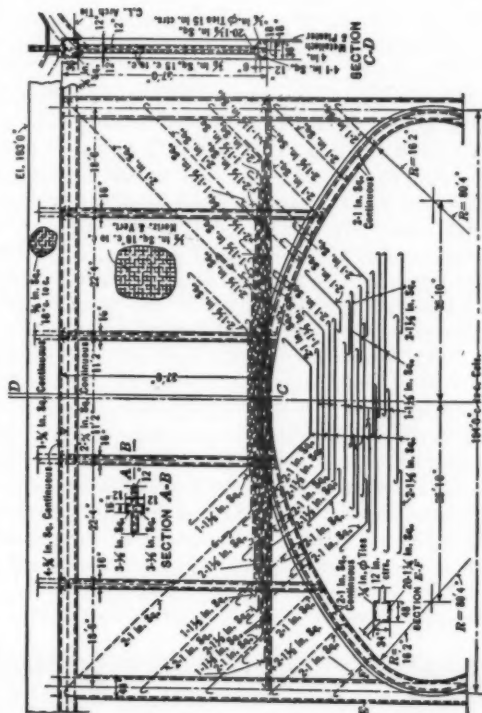
PRELIMINARY DESIGNS AND ESTIMATES WERE MADE FOR THREE DIFFERENT SYSTEMS OF BALCONY TRUSS FRAMING. SCHEME C WAS SELECTED AS BEING THE MOST PRACTICAL, ECONOMICAL AND RATIONAL.

served up to this time.

The local building ordinance required a full live load test of the balcony which was accomplished by using metal barrels filled with water. After the test the water was siphoned from the barrels.

The stage roof arches, eight in number, are spaced 22 ft. on centers. One end of each of the center arches is supported by the proscenium arch wall. The arches were designed as partly fixed. Turnbuckles were placed in the tie bars near the west wall to develop equal stresses in the two channels that form the horizontal tie and to produce a small amount of initial stress in the tie prior to stripping the forms. The gridiron floor, supported on the arch tie-bar channels consisted of flats 4-in. by $\frac{3}{8}$ -in., spaced 7 in. on centers, a type of construction that resulted in considerable saving as

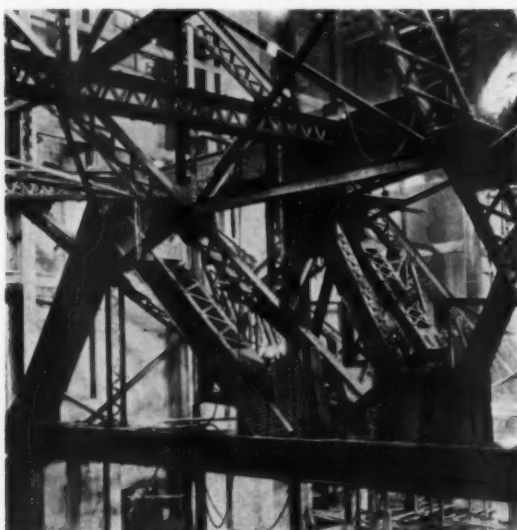




ABOVE AT LEFT: DETAILS OF STAGE ROOF ARCHES
 ABOVE AT RIGHT: DETAILS OF PROSCENIUM ARCH REINFORCEMENT
 AT RIGHT: CROSS SECTION OF BANQUET HALL

AL MALAIKAH TEMPLE, LOS ANGELES, CALIF.

JOHN C. AUSTIN, ARCHITECT



MAIN BALCONY TRUSS SHOWING PIN COLUMN CONNECTION AND PIN CONNECTION OF JACK TRUSS TO STEEL CASTING ON MAIN TRUSS. ABOUT 30% OF HOLES IN CONNECTIONS WERE BOLTED TIGHT BEFORE ONE INCH TAPERED RIVETS WERE DRIVEN UNDER 120-LB. PRESSURE

compared with the usual channel sections. The gridiron floor was designed for a live load of 100 lbs. per sq. ft., which has proved ample for stage operating conditions.

The stage roof arches were poured in one continuous operation, commencing from each springing line and working simultaneously and symmetrically toward the crown. The arches and the beam system were poured up to the under side of the roof slab, tee action being obtained by stirrups and bond. By casting the arched roof slab with concrete having a slump of $2\frac{1}{2}$ in., cover boards were found to be unnecessary. The roof arches were cast with a concrete mixed in the proportion of 1 part cement to 4.5 parts aggregate.

The proscenium arch, constructed of reinforced concrete, has a clear span of 100 ft. This arch was computed as a girder with partly restrained ends with diagonal tension stresses resisted by diagonal bars. In order to increase the lateral stiffness, pilasters were placed in the web under each roof arch similar to the stiffeners in plate girder construction. A flanged head, or tee, in the top of the proscenium girder also adds to its lateral stiffness.

Due to the great unsupported height of the reinforced concrete walls and columns surrounding the



Photo by Dwyer

OUTER ENDS OF BALCONY CANTILEVER TRUSSES WERE SUPPORTED BY CABLES FROM ROOF TRUSSES BEFORE RIVETING. PLATE GIRDER ENDS OF CANTILEVERS ARE USED TO REDUCE DEFLECTION AT OUTER END

stage, horizontal diagonal brace beams were installed at vertical intervals in all four corners of the stage enclosure. The stage walls were designed as two-way slabs to resist a wind pressure of 30 lb. per sq. ft. The stage columns were computed for direct stress and bending due to wind, and for partly fixed conditions of the roof arches.

The stage floor was designed for a live load of 250 lb. per sq. ft. The framing consists of standard steel I-beams supporting a wood-joint system. All steel connections were bolted so that any particular section of the floor could be removed without affecting the adjacent parts.

The structural steel roof trusses over the auditorium, each weighing 60 tons, have a clear span of 192 ft. and rest on reinforced concrete columns.

The auditorium proper was constructed with double walls on each side to resist earthquake forces and provide duct space for the ventilating systems. The inner walls of the auditorium are metal lath and plaster, supported by reinforced concrete columns and beams. This skeleton frame forms a system of braced bents with the outer walls and columns, which support the roof trusses.

Due to the large area of the auditorium and the long-span roof trusses, it was necessary to divide



MAIN BALCONY TRUSS SHOWING INTRICACY OF CONNECTION DETAILS AND PIN CONNECTION OF JACK TRUSS TO STEEL CASTING ON MAIN TRUSS. ELECTRIC WELDING WAS USED TO OBTAIN METAL-TO-METAL CONTACT WHERE INCLINED SURFACES MADE IT DIFFICULT TO MILL ACCURATELY



MAIN BALCONY TRUSS AND CANTILEVERS. CANTILEVERS WERE HOISTED TO CAMBERED POSITION. HOLES WERE DRILLED AND MATCHED BEFORE RIVETING. NOTE PIN JOINTS IN UPPER CHORD

the roof area into sections by expansion joints to prevent excessive deformations due to heat changes.

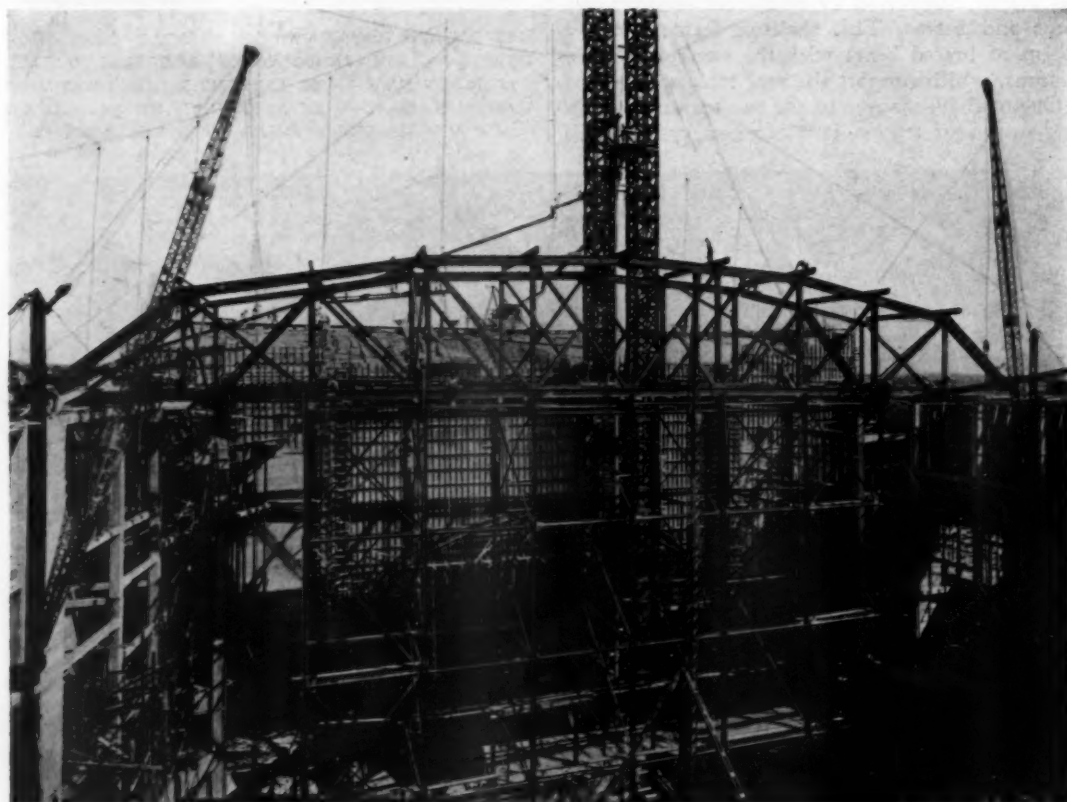
The south ends of the roof trusses were anchored; the north ends were set on nests of rollers. This provided an excellent structural connection for earthquake resistance. The roller bearings allow the roof and supporting trusses to move (horizontal translation) independently of the north supports with temperature variation, which is also a favorable structural condition of flexibility for relieving seismic stresses. If the roof trusses had been anchored at both ends, they would act like battering rams, tending to pull or push over the supports, particularly if the periods of vibration were different for the opposing supports.

To prevent excessive edge pressure on the reinforced concrete columns at the anchor end of the trusses, due to the slope at the end panel joint, a $\frac{1}{8}$ -in. lead plate was inserted between the bearing and shoe-plates. Lateral and vertical deformations,

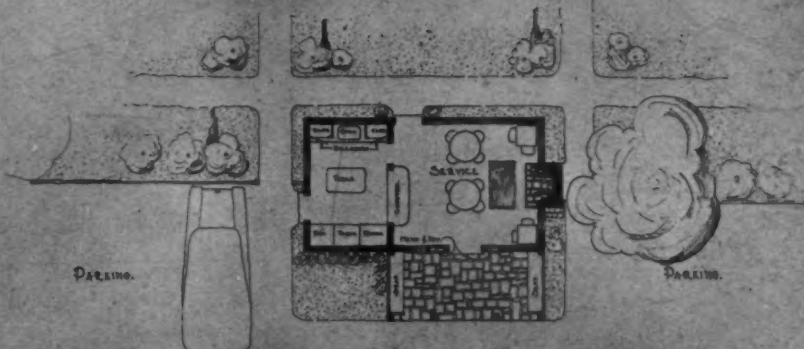
based on Williot diagrams, checked very closely with the actual horizontal movement over the rollers (maximum, $\frac{3}{8}$ -in.) and the vertical deflections (maximum, $2\frac{3}{16}$ -in.).

The continuous reinforced concrete girders, supporting the banquet hall roof, were designed as a part of a fixed frame. The soffits of the roof girders were curved to represent Saracenic arches, which added to the depth of the girders over the interior columns where large negative moments existed. The use of balcony cantilever girders tended to reduce the moments in the columns. The rear, or wall, columns were required to resist an uplift. The anchor arms of the continuous girders were projected through and above the roof, being hidden from the interior.

John C. Austin, F.A.I.A., was the architect. The writer, as chief engineer for the architect, was responsible for the structural design and the design of the heating and ventilating systems.



AUDITORIUM ROOF TRUSSES WEIGH 60 TONS EACH AND SPAN 192 FT. ONE END IS ON ROLLERS. ANCHOR END HAS A LEAD PLATE BEARING TO PREVENT ECCENTRIC LOADING ON REINFORCED CONCRETE COLUMNS



NOTES
The structure consists of a main body
containing a kitchen, a service counter,
and a rest room. The building is
designed to be simple and efficient,
with a minimum of material and
labor. The plan shows the building
and the surrounding site layout.

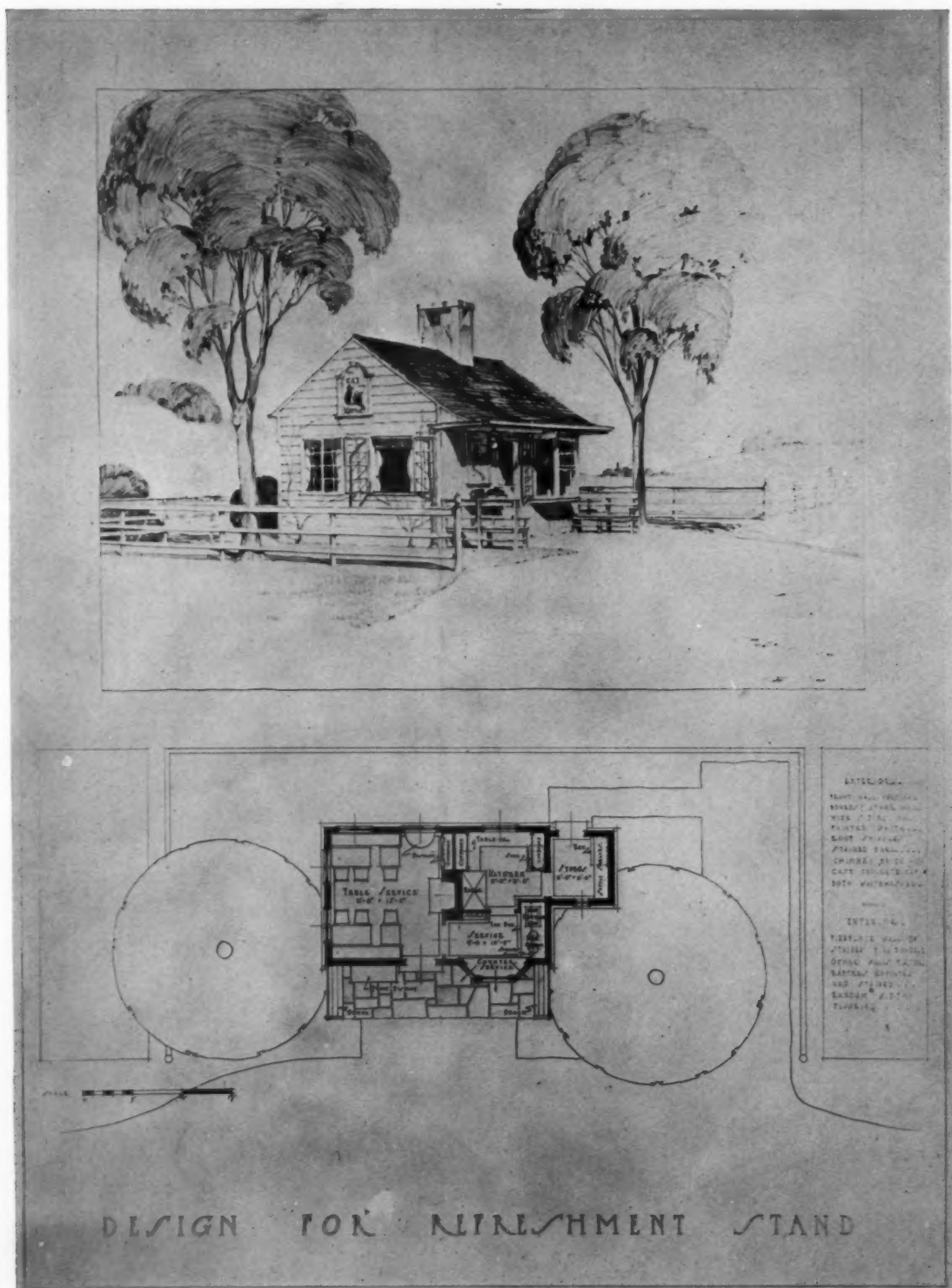
FIRST FLOOR PLAN

NOTES
The building is designed to be simple
and efficient, with a minimum of
material and labor. The plan shows
the building and the surrounding site
layout.

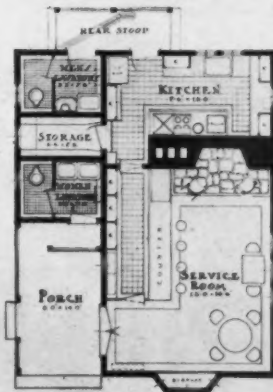
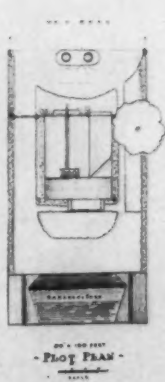
DESIGN FOR A REFRESHMENT STAND

COMPETITION FOR DESIGN FOR REFRESHMENT STAND

FIRST PRIZE—WILLIAM E. FRENAYE, JR., ARCHITECT



COMPETITION FOR DESIGN FOR REFRESHMENT STAND
 SECOND PRIZE—FRANKLIN SCOTT, ARCHITECT



COLOR AND MATERIALS:
 THE BUILDING IS INTENDED
 FOR A RICH ENGLAND
 SETTING.
 THE GENERAL COLOR
 IS WHITE WITH
 GREY GREEN ROOF AND
 APPLE GREEN TRIM.
MATERIALS:
 ROOF—CEDAR SHINGLES
 SIDING—RED CEDAR
 FRAME—SPRUCE
 FENCE—SPRUCE
 PORCH RAIL—SPRUCE
 FLOOR—OAK FINISH
 EXTERIOR TRIMMING
 WOOD
 INTERIOR SHEATHING
 WITH CEDAR PLANKS
 AND BATTENS.

- FLOOR PLAN -
 1/4" = 1'-0"

DESIGN FOR REFRESHMENT STAND AND GAS STATION.

COMPETITION FOR DESIGN FOR REFRESHMENT STAND AND GAS STATION

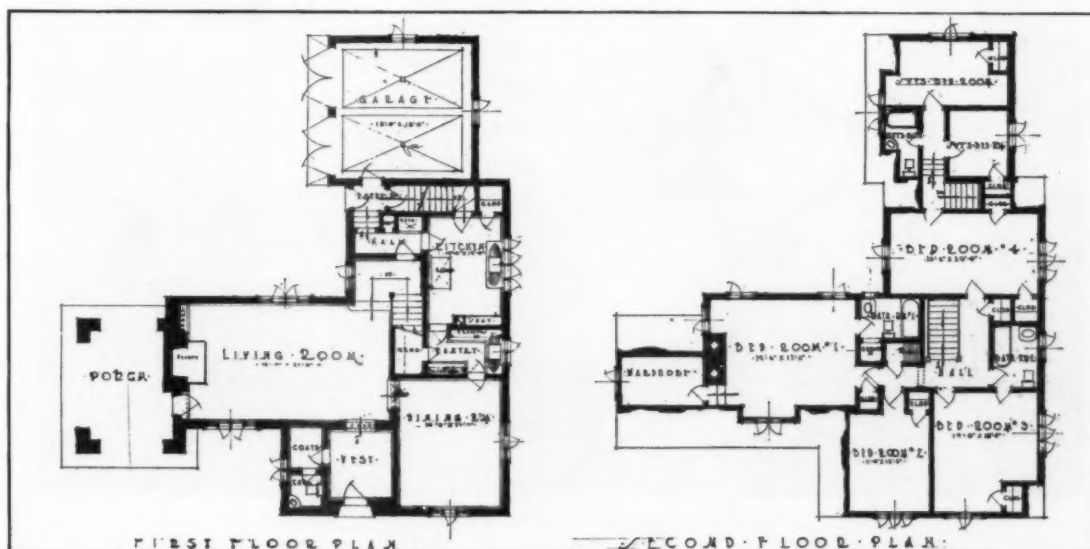
FIRST PRIZE—HENRY IVES COBB, JR., ARCHITECT

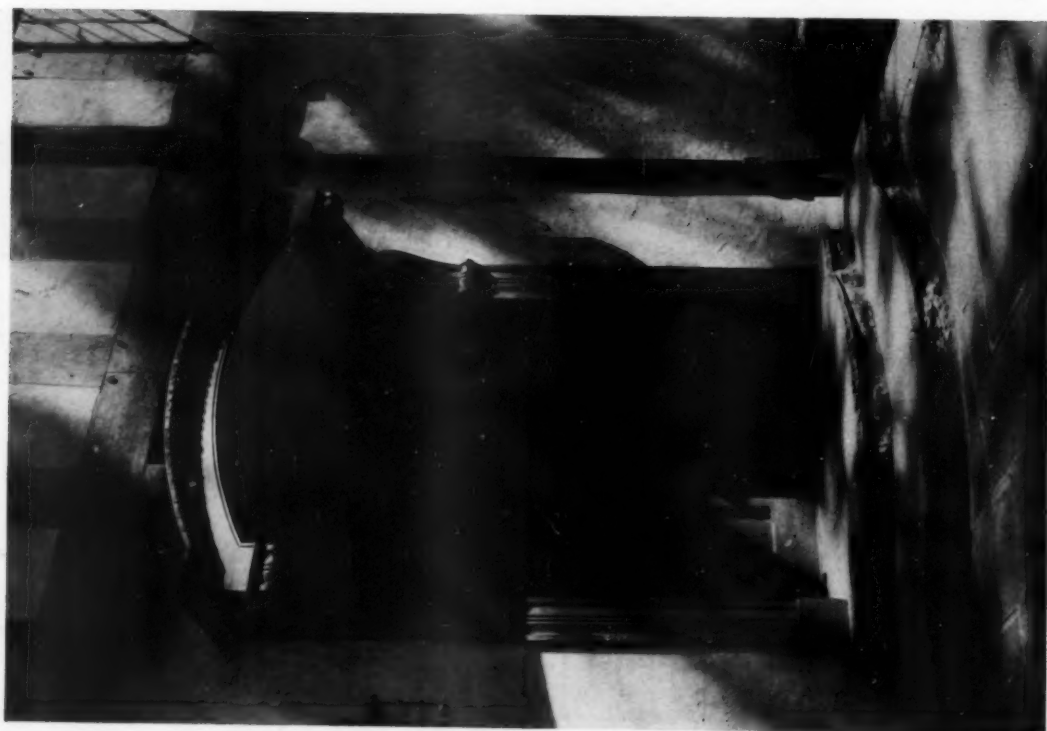


Photo by Gillies

HOUSE OF HENRY B. PENNELL, JR., BRONXVILLE, N. Y.

LEWIS BOWMAN, ARCHITECT





Photos by Gillies

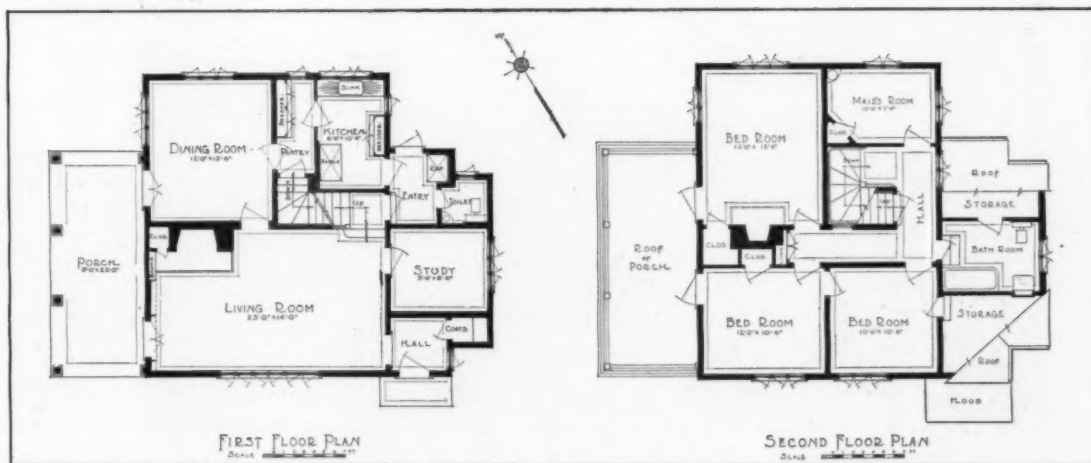
HOUSE OF HENRY B. PENNELL, JR., BRONXVILLE, N. Y.
LEWIS BOWMAN, ARCHITECT

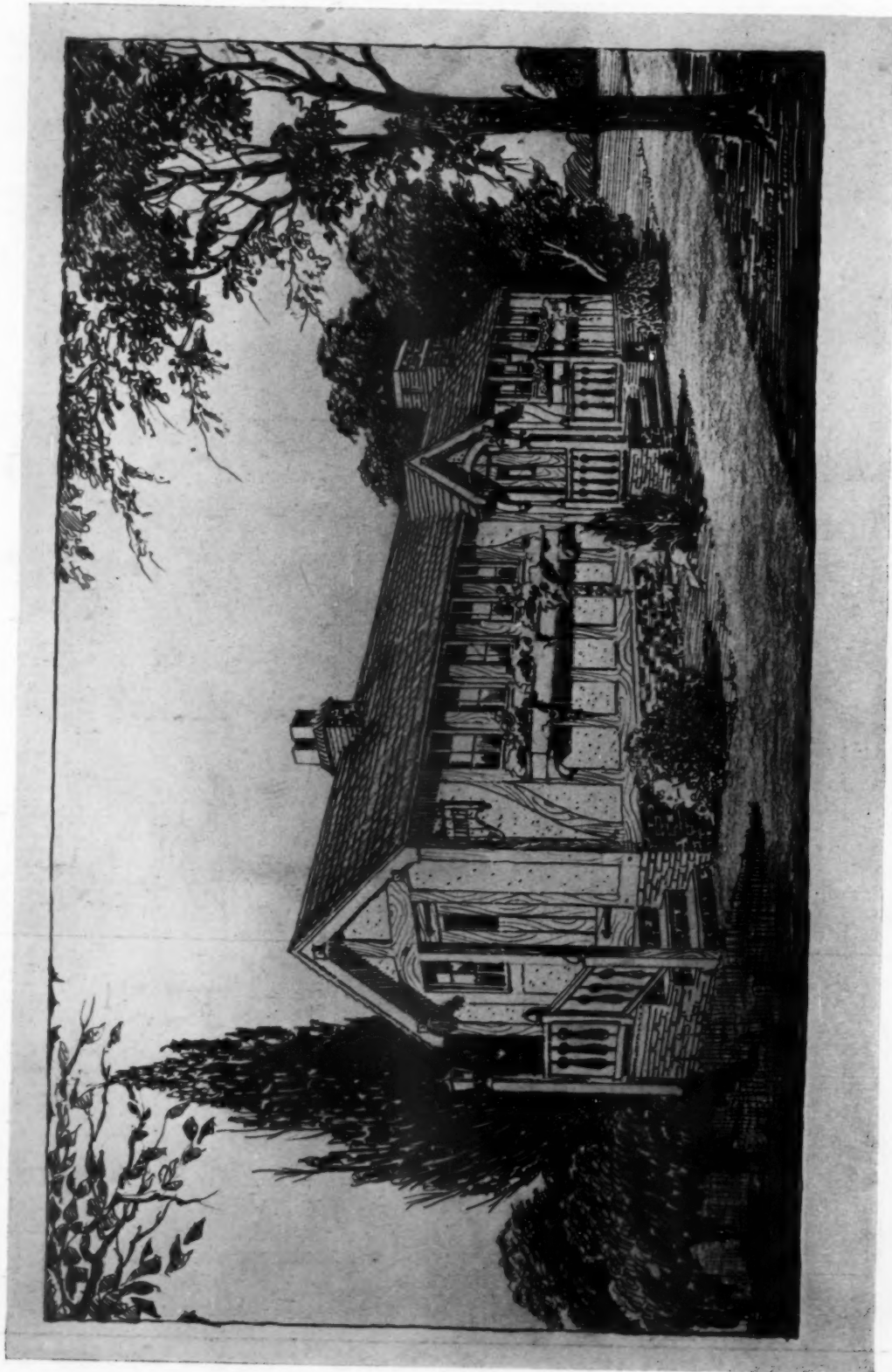


Photo by Peyser & Patzig, Inc.

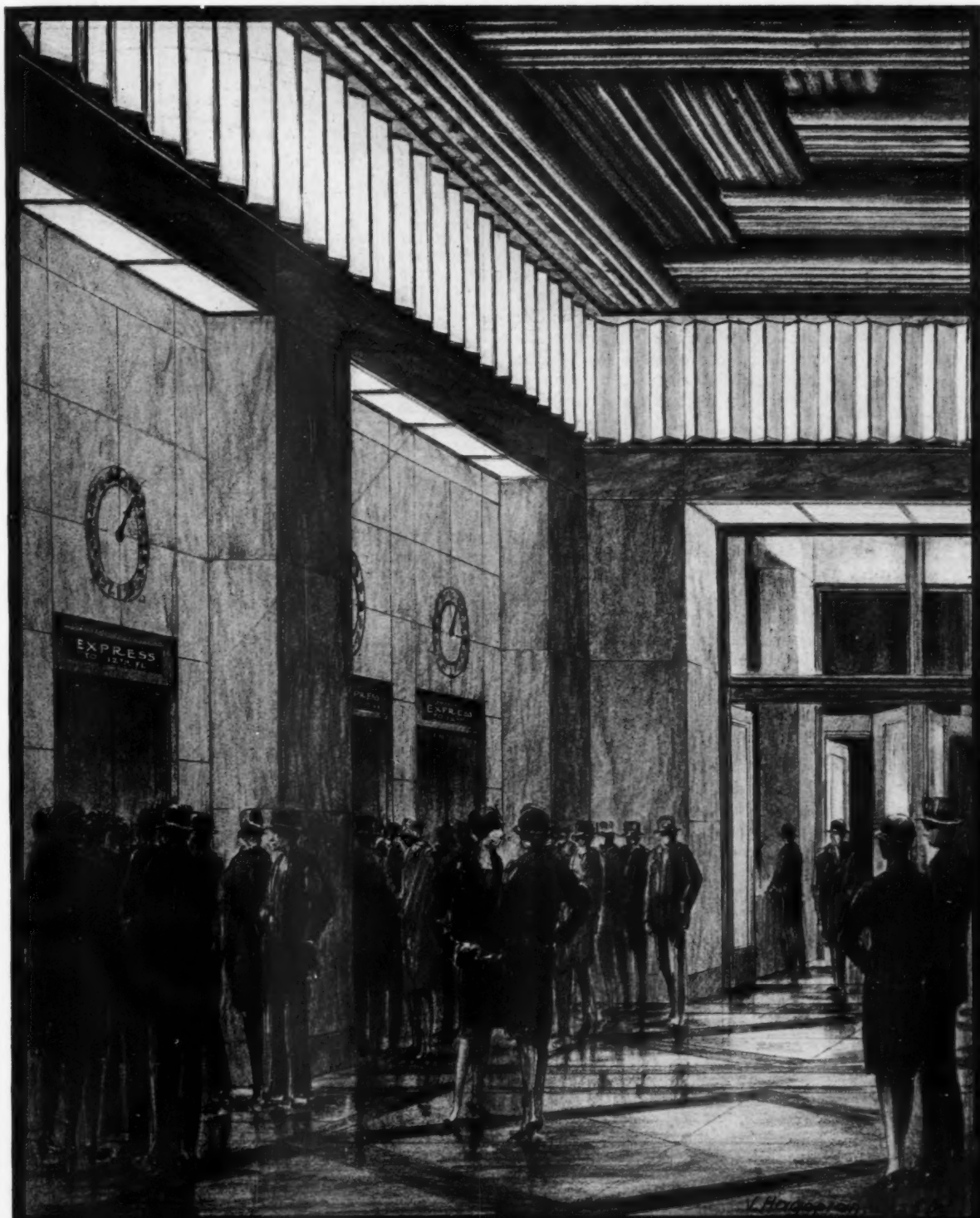
HOUSE OF MRS. SARAH GRIBBON, PLAINFIELD, N. J.

SIMPSON & ROLSTON, INC., ARCHITECTS





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Plate No. 2

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SIXTY-FIRST CONVENTION OF THE AMERICAN INSTITUTE OF ARCHITECTS

AS previously announced in THE AMERICAN ARCHITECT, the sixty-first convention of The American Institute of Architects will be held in St. Louis, Missouri, on May 16, 17 and 18, 1928. The sessions of the convention will be held in the auditorium of the Chase Hotel. The general convention and hotel headquarters for delegates and members will be at the same hotel.

Those who attended the convention last year will recall that the major theme for discussion was "Collaboration in the Arts of Design." The Committee on Allied Arts, of which J. Monroe Hewlett is chairman, has recommended to the Board of Directors that the sixty-first convention give further consideration to the subject of Collaboration in the Arts of Design by developing the idea along somewhat broader lines than at first contemplated. The suggested theme, which has been approved, may be termed "The Mobilization of the Forces Which Make for Better Architecture." The sixty-first convention will, therefore, begin with President Medary's address covering the principles underlying the activities of the Institute and the matter of co-operation between the profession and the government in the relation to government undertakings. Four distinguished speakers will discuss "The Influence of the Layman and Patron of the Arts"; "The Influence of Tradition"; "The Influence of Environment"; and "The Influence of Education."

Other papers will be read by Edwin Bergstrom on the subject of "Business Administration in the Architect's Office," and by Dr. F. R. Watson on "Architectural Acoustics." O. C. Harn will read a paper on the work of the Producers' Council.

Institute business to come before the convention includes the report of the Board of Directors reviewing the work of the Institute during the past year; a report upon the Journal and the Press of The American Institute of Architects, and their status under the resolutions adopted at the 1927 convention; reports upon The Octagon property; education; public information; code of ethics; competitions; public works; and upon other activities and accomplishments of standing and special committees. The Treasurer will make a complete report of the financing involved in the liquidation of the Press of The American Institute of Architects and its effect upon the finances of the Institute. Proposed amendments to the by-laws of the Institute will be acted upon.

The following nominations for officers and directors to be elected at the sixty-first convention are reported as of April 16, 1928.

President and Director:

Charles A. Favrot, New Orleans, La.
Abram Garfield, Cleveland, Ohio
C. Herrick Hammond, Chicago, Ill.
William L. Steele, Sioux City, Iowa

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Charles Butler, New York, N. Y.

Regional Director—Sixth District:

Louis LaBeaume, St. Louis, Mo.

A feature of the convention program will be an exhibition of what is believed to be a most complete collection of the work of Bertram G. Goodhue. This exhibition has been arranged by William Emerson, vice-president of the Institute, with Mrs. Bertram G. Goodhue and the Massachusetts Institute of Technology.

Regional meetings composed of Chapter Presidents and Secretaries, under the sponsorship of the Regional Directors, will take place at one of the luncheon sessions. This procedure will be inaugurated this year to conform to the opinion of the Board of Directors that the convention meetings of Chapter Officers should be on a strictly informal basis.

Delegates have been requested to register promptly on arrival in St. Louis. The Committee on Credentials will be at work in the Chase Hotel on the afternoon and evening of Tuesday, May 15, and on Wednesday morning, May 16. The Credentials Committee will be located in the main lounge of the hotel, first floor, adjacent to the auditorium.

DOWNTOWN LEAGUE OF NEW YORK MAKES ANNUAL ARCHITECTURAL AWARDS

AWARDS for the best commercial buildings erected during the last year in the downtown locality and also for the best alteration work during the same period have recently been made by the Downtown League of New York.

The first prize for new buildings was awarded to the Royal Insurance Building, which was very thoroughly illustrated in our September 5, 1927, issue. The building was designed by Starrett & Van Vleck, architects, and Marc Eidlitz & Son were the builders. It is in the late English Renaissance type.

The National City Bank received the second award for its new branch building at Broadway and Canal Street. Walker & Gillette were the architects and Starrett Brothers the builders.

For the best alteration work awards were given to the buildings at 55 Broadway, and 253-5 Church Street. The 55 Broadway building was erected forty years ago and was completely altered last year. John H. Duncan was the architect. The architect of the 253-5 Church Street alteration was Jean Jeauume.

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COMPETITION FOR COMPLETION OF TOMB OF THE UNKNOWN SOLDIER

CONFORMING with directions of Congress, the Secretary of War, Dwight F. Davis, has announced a nationwide invitation to architects or architects and sculptors in collaboration, who are citizens of the United States, to submit designs for the completion of the Tomb of the Unknown Soldier in the Arlington National Cemetery, Virginia. The authorized total cost of the memorial and of the designs therefor is limited to \$50,000.00, and it is estimated that of this sum, \$44,000.00 will be available for the actual fabrication and erection of the memorial.

A professional adviser will be appointed by the Secretary of War, on the recommendation of The American Institute of Architects, for the purpose of advising the Secretary of War in regard to all professional questions referring to the competition, and of assisting the Jury of Award in such manner as may become necessary. The Jury of Award will consist of five members: three architects to be appointed by the Secretary of War from a list of names to be submitted by the President of The American Institute of Architects, a representative of the American Legion and a representative of the Gold Star Mothers.

Competitors must forward their designs at such time as to reach The Quartermaster General, Munitions Building, Washington, D. C., before 12 o'clock noon on Saturday, June 2, 1928. All those intending to compete should make application for the necessary program and accompanying drawings to The Quartermaster General, Cemetery Division, Munitions Building, Washington, D. C., who will act as the representative of the Secretary of War in connection with this work.

LOUIS H. SULLIVAN MEMORIAL

THE following is a copy of letter which Thomas E. Tallmadge, Chairman of the Louis H. Sullivan Memorial, is sending to the architects of Chicago relative to the erection of a monument for Louis Sullivan:

Louis Sullivan lies in Graceland Cemetery without tombstone or marker of any kind. It has been proposed that the architects of Chicago erect a monument that will suitably mark his grave and be a memorial of his genius. For this purpose a joint committee has been appointed from the North Shore Architects' Association (from whom the suggestion came initially), from the Chicago Chapter of the Institute, from the Illinois Society of Architects, from the landscape architects, from the building industry and from the laity. The committee, not knowing the amount available, has made at this date no definite design for the memorial except to determine that it shall be of granite and in the decorative style so expressive of his philosophy and associated with his memory. It will also be carved with some account of Sullivan's life, some brief record of his achievements, and some suggestion of his influence. The one man who can design this monument better than any other of us is George Elmslie, for many years associated with Sullivan in his life and work. He has consented to make the design.

In the three years that have passed since Sullivan's death, his fame has constantly grown. His genius is now unquestioned, and time has begun to raise him to his place with the immortals. Architecture since the World War has embarked on a new era, and has begun to express itself in forms and speak with a language moulded more nearly to the heart of America. To this new destiny Sullivan, with the zeal of the prophet and the courage of the adventurer, pointed the way. By his architectural works, great in scope and power; by his drawings, unsurpassed in beauty and originality; by his writings, rich in poetry and truth; by his teaching, persuasive and eloquent; and by his philosophy, where in three words, "Form follows Function," he summed up all truth in art. Sullivan has earned his place as one of the greatest architectural forces in America.

The grave of such a man should be fittingly marked. This is the very least we can do.

Signed by the Committee,

THOMAS E. TALLMADGE, *Chairman.*

160 North La Salle Street, Chicago.

DISCONTINUANCE OF TECHNICAL NOTE NO. 173

FOR some years the U. S. Forest Products Laboratory, Madison, Wisconsin, has been issuing a Technical Note, No. 173, entitled "Relative Decay Resistance of Native Woods," that contains a table of estimated values for the relative durability of the more common American species. No further distribution of this note will be made.

As stated in the note, the table of estimated values was based on the service records available, supplemented by observation and expert opinion. The purpose of the note was to give a general estimate of the relative resistance to decay of different woods when used under conditions favorable to decay. It was not intended as an exact mathematical comparison because durability is a property which varies considerably, even under comparable conditions of service, and cannot be stated with accuracy. It was also not intended as a measure of the relative suitability of different species under conditions where decay resistance is of minor or of undetermined importance.

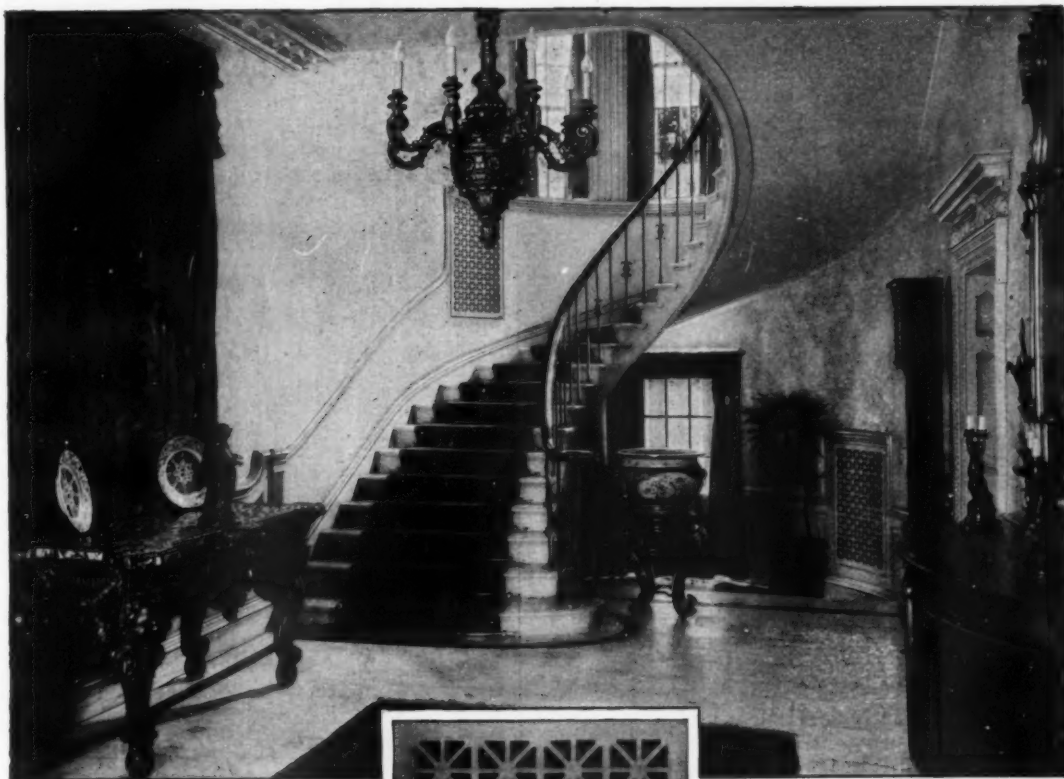
These limitations frequently have not been recognized in the use of the note, with resulting misunderstandings. Accordingly, it is being discontinued.

It is hoped to prepare, in the near future, a new statement relating to the durability of wood under different conditions of service, in order to meet the constant demand for information of this character, but the new statement will not contain a numerical comparison of species.

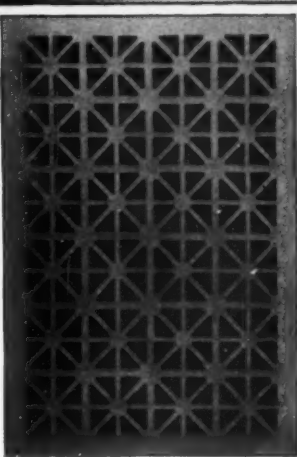
AMERICAN SOCIETY FOR TESTING MATERIALS TO MEET

THE thirty-first annual meeting of the American Society for Testing Materials will be held at the Chalfonte-Haddon Hall Hotel, Atlantic City, N. J., June 25-29, 1928. In accordance with the practice in vogue during recent years to provide for the many items on the program, several simultaneous sessions will be held. The third Elgar Marbury lecture is included on the program.

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Special Design No. 255, finished in Verde Antique, is the Ferrocrafft Iron Grille installed in the above interior. This is the residence of Mr. G. R. Larkin, Castle Frank Road, Toronto. George, Moorhouse & King of Toronto, Architects.

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WINNER OF 1928 FRENCH TRAVELING FELLOWSHIP HERE TO STUDY ARCHITECTURAL PRACTICE

MAURICE CHAUCHON of Paris, named by Paul Leon, Director Des Beaux-Arts, Republic of France, as second winner of the annual French Traveling Fellowship of The American Institute of Architects, arrived recently in New York where he will study American architectural practice for a period of six months, according to an announcement by the Fellowship Committee. This is the second award to be made by the French Traveling Fellowship, the first being won last year by Marcel Gogois. Mr. Chauchon is the first second medal winner at the Ecole des Beaux-Arts, graduating in 1927, as the winner of the best diploma, a member of the Societe des Architectes Diplomes par le Gouvernement and a member of other official French organizations.

Mr. Chauchon's advent will be of interest to proponents of aviation, among others, in America, in the opinion of the Committee which administers the Fellowship. His design of an International Aero Station now shown at the Chamber of Commerce in Paris won the Gaudet Prize, which, it was stated, attests the keen interest which the architects of France are taking in aviation and in its international aspects.

Under the rules of the Fellowship, applicants must be of French nationality and holders of a French Government diploma in architecture. The holder of the Fellowship is chosen by a jury of architects appointed by the Director of Fine Arts at the Ministry of Education and Fine Arts.

The Fellowship which calls for six months' study in this country in travel and in the employment of American architects for the study of architectural design and construction in the United States, is termed by The American Institute of Architects as "a valuable contribution to international architectural education and a graceful recognition of our educational debt to France." The committee in charge of the administration of the Fellowship is composed of Harvey Wiley Corbett, Chester Holmes Aldrich, Lawrence Grant White, and Julian Clarence Levi, its chairman.

REGIONAL MEETING OF PRODUCERS' COUNCIL HELD IN PITTSBURGH

THE second regional meeting of the Producers' Council was held in conjunction with the Pittsburgh Chapter of The American Institute of Architects on April 3rd. This meeting was even more successful than the one in Detroit and the large number of architects who attended were much interested in the possibilities of mutual contact as outlined by the several speakers. T. W. Ludlow, president of the Pittsburgh Chapter, presided.

J. F. Gowen, of the Producers' Council, explained the aims and activities of this movement and the purpose of the affiliation. He spoke of the

cost to the manufacturers of architectural salesmen; the matter of guarantees on various products; the possibility of developing standard specifications; and also of assisting the government in its campaign on Simplified Practice.

James M. Macqueen, vice-president of the Pittsburgh Chapter, spoke on "Better Co-operation Between Architects and Producers." He stressed not only the harmonious operation with others necessary for real co-operation, but also the necessity for concurrent action to promote the same object. He suggested that architects should work out their specifications along the lines of the A. I. A. Filing Classification.

E. B. Dawson, of the Westinghouse Company, gave a very interesting lecture on recent developments in the electrical field of the building industry, mentioning unusual types of lighting; also flood lighting, elevators and welded building structures.

Sullivan W. Jones, of the New York Chapter, spoke on the subject of: "Architects and the Large Public Building Problem Throughout the Country" which will be put into effect within the next few years.

Edward B. Lee, of the Pittsburgh Chapter, gave a very interesting treatise on: "What the Architect Wants of the Salesman," referring especially to the eternal problem that the architect does not want to be bothered with salesmen but, nevertheless, he has to obtain from them his information on building materials.

NATIONAL LUMBER SLOGAN AWARDS

ANNOUNCEMENT was made recently by the National Lumber Manufacturers Association, of Washington, D. C., that the winner of its contest for a lumber slogan, is James Edwin Noble, Jr., of Sanatorium, Mississippi, who was awarded first prize of \$5,000. "Certified by Centuries of Service," was selected by the judges as the best of the 370,000 slogans entered in the contest. Mr. Noble is an engineer with the Southern Bell Telephone and Telegraph Company. He is twenty-four years of age, and has an architectural engineering degree. Second prize of \$2,000 went to Mrs. Harry Webb Farrington, Professor of Journalism at Hunter College, New York City. Her slogan was: "Wood, use it—Nature renews it." Mrs. Maude Burt of Marshalltown, Ia., submitted as her slogan "Use it—Nature renews it," and was awarded third prize of \$1,000.

KOHLER COMPANY OPENS NEW YORK SHOWROOM AND OFFICE

THE Kohler Company of Kohler, Wisconsin, recently announced the opening of a New York showroom and office at 711 Fifth Avenue. H. E. Clark is manager of the New York office. This showroom is planned to care for the requirements of architects and their clients.

*American Cities*

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Drawing by M. PAUL ROCHE

(Series No. 13)

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BOOK NOTE

ARCHITECTURAL DESIGN IN CONCRETE
REVIEWED BY R. V. COOK

DURING the last few years a number of instructive books on the theory of architectural design have been published both in England and in the United States. Among them has been Howard Robertson's "The Principles of Architectural Composition," "The Study of Architectural Design" by Harbeson and "Architectural Composition" by Curtis. None of these publications, however, has treated the subject of architectural design in concrete in as complete and illuminating a manner as the volume by T. P. Bennett, F.R.I.B.A., recently published.

This volume contains not only a fine collection of one hundred full page plates but also a twenty-five page text in which the facts concerning the main types and problems in concrete design are elucidated. The elements of modern concrete construction are divided into pre-cast concrete blocks and mass concrete. The author regrets that the pre-cast blocks have become known as "artificial stone" since he believes it has led to the idea "that the basis of the design of a building of concrete block should be that of a stone structure."

As to buildings *in situ* concrete he says there have been very few up to the present where the building has been left exactly as it came from the form. More use, however, is gradually being made of the "original false work" to make the design. Here Mr. Bennett does not emphasize, as does Mr. Frederick L. Ackerman in his theory of concrete design, that the preparatory structure or form is the beginning and end of concrete design. By nature, it appears that concrete lends itself to originality of treatment because of the lack of precedent in earlier buildings. To be sure, concrete is a material of antiquity, but the conditions and manner in which it is now employed place it in the light of a new material.

Included in the text is a most interesting number of comments on the plates indicating the manner in which various architects have attempted to express the structural feature of a concrete design. In the Hollywood Terminal Building at Los Angeles, California, it is pointed out that the verticality and Gothic effect of this building is produced by making the constructural principle of the building the emphasis in the design. Other buildings which express the idea of verticality are also illustrated, such as a factory by Ture Sellman at Stockholm, the Bavarian Water Tower at Munich by Professor Kurz, and the Radio Tower, Kootwyk, Holland, by Luthman. With thought for

the main constructural elements "it was in this way that the mediaeval church builders handled their designs and the Greek artists their temples."

The two other features of modern concrete design discussed are the "wide span" common in industrial design and the "monolithic concrete" best illustrated in the Einstein Tower by Mendelsohn.

Numerically speaking, England and the United States have the greatest number of buildings represented in this publication, but on the whole they appear to be less daring in construction than many of the German and French examples. In Germany and France we find that great spaces have been spanned with structural vaults and ribs in a way which we have not yet ventured to do. As an example, the Centennial Hall at Breslau by Max Berg might be mentioned.

We have concerning this publication only a few regrets which we should like to mention. Particularly we feel the omission of a good index. Then, too, many of us would find the usefulness of these plates greatly increased if the plans of at least a few of the buildings had been included. The relation of plan to elevation is always a source of interest to the architect as well as to the draftsman and student. As to the date of completion of these constructions we also are interested. It seems a pity that so few authors who publish material on modern buildings care to include this information with the illustration caption. The date of a building is often of considerable importance to a writer who is attempting to trace a line of development in a certain type of construction. W. J. Watson has done this admirably in his recent publication of "Bridge Architecture" so that the reader has the information of dates before him.

Without doubt, this book is a most valuable contribution to the history and progress of concrete design in the last ten years or so. It brings together examples of work which have appeared only scattered in foreign periodicals, and gives the reader an opportunity to compare the manner in which architects of different countries have solved their problems in concrete. As a whole it gives the impression that design in concrete is still in the experimental stage and still far from its finite achievement. Architects who wish to clarify their thought and imagination on concrete design will find this book a practical inspiration.

Architectural Design in Concrete. By T. P. Bennett, F.R.I.B.A. One hundred full page plates from photographs compiled by F. R. Yerbury, Hon. A.R.I.B.A. Oxford University Press, American Branch, New York. Price \$10.00.

THE PUBLISHERS' PAGE

PHOTOGRAPHS of the new building of the National American Company, New York, are reproduced in this issue to illustrate an article in the Department of Interior Architecture on the importance of designing commercial buildings along good architectural lines. Joseph H. Freedlander, F. A. I. A., the architect of the building, is quoted in the article as stating that, because a building is devoted entirely to business purposes, it need not necessarily be lacking in character and refinement. The business which the building houses may limit its design as to style—for the purpose which a building serves should be expressed in its architectural treatment—but this merely makes the problem of the architect that much more difficult. His problem in every case is to design buildings that will possess certain art qualities. His success is determined by the manner in which he solves the problem based on the conditions which it imposes. We feel that Mr. Freedlander has been especially successful in the design of the National American Company building, and that our readers will find inspiration in a careful study of the article and its illustrations.

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We are to publish in an early issue an instructive article on the design of stores and shop fronts. The article has been written by Walter March, New York architect, who, until he came to this country three years ago, was practicing in Berlin, Germany. He has made a special study of the design of shop fronts and brought with him to America some modern ideas which are today being used with such success in European countries. The article will be illustrated by shop fronts and stores in the United States and European countries. In these days when merchants recognize the value of good architecture and the lure which it holds to their customers, a comprehensive article on this modern subject is eagerly looked forward to.

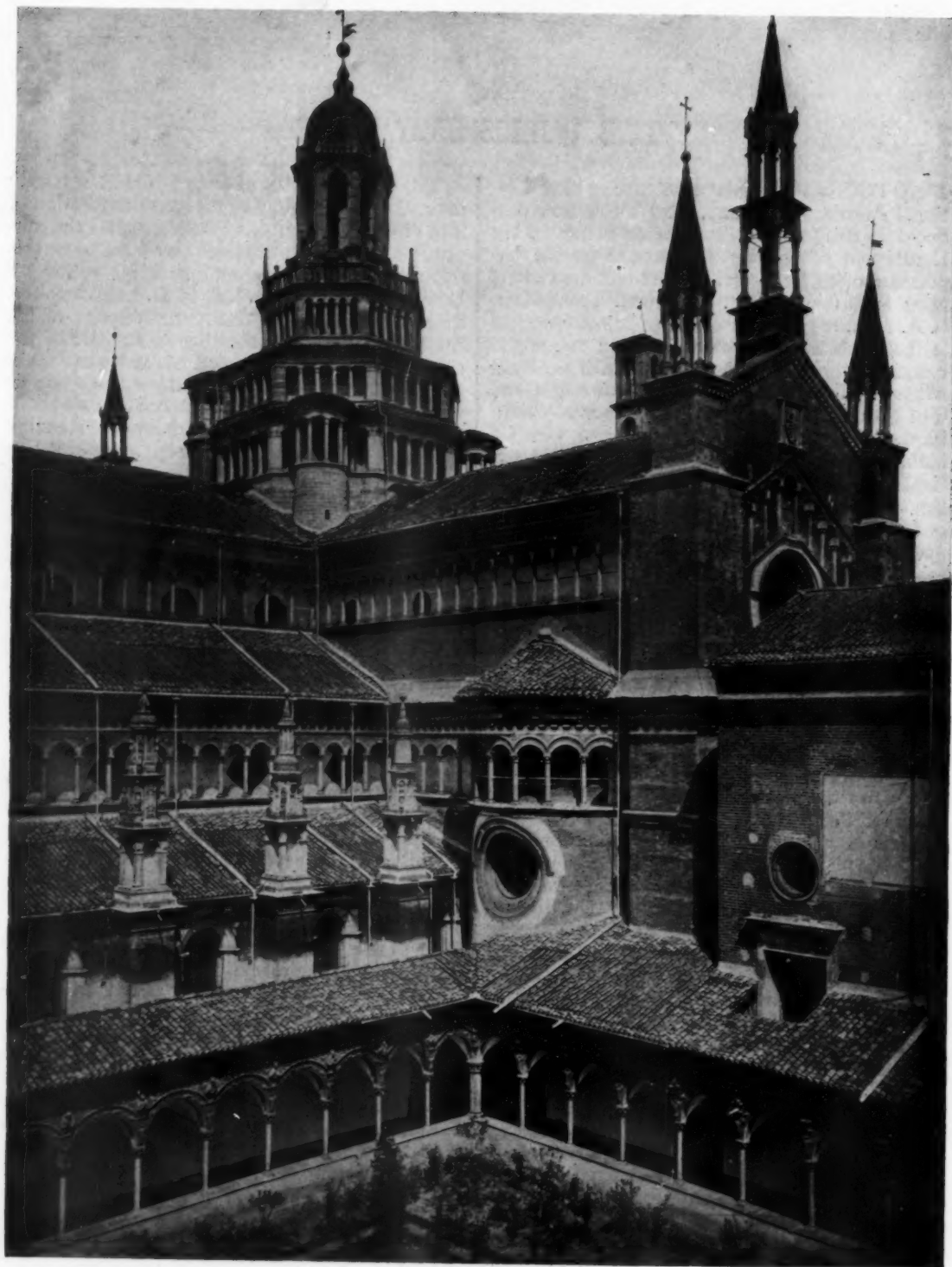
Mr. March contributed an article to this magazine a year ago, on the German Sportsforum at Berlin, which is now being built by the Federal government, according to Mr. March's plans, which won a prize amongst German architects.

The next issue, that of June 5th, will be largely devoted to the activities of the recent convention of The American Institute of Architects. As the convention was held in St. Louis, we have taken this opportunity to include an interesting article by Louis La Beaume, F. A. I. A., a St. Louis architect of high standing, on "Early Architecture of St. Louis," treating from the time of the sale of the city by Napoleon to the United States, up to the end of the last century. Mr. La Beaume's article will be illustrated by photographs of early St. Louis architecture, some examples of which are still standing while others have long since been demolished to make way for more modern structures. Mr. La Beaume emphasizes the influence of the work of such men as Richardson, McKim and Hunt on the development of architecture along the Mississippi valley and credits the firm of Eames and Young for no small part in the city's attaining the high standards in architecture which it has so long cherished. The appeal of Mr. La Beaume's article might result in the inauguration of a series of similar articles dealing with the early architectural development of other large cities in the country. We would be pleased to learn the reactions of our readers.

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We have made it a point to put aside several pages each issue for the presentation of preliminary sketches of proposed buildings. Those that have recently come to us have in almost every case been skyscrapers of the setback type. It is interesting, we think, to note carefully how various architects handle mass form to conform to the zoning laws. While there is of necessity a certain similarity of buildings which allow of comparison, on account of size and height, there is apparently an opportunity for original expression. It is our desire to obtain preliminary studies of buildings of various types from architects all over the country. We would be extremely grateful if subscribers would forward to us photographic prints of such sketches for publication in *THE AMERICAN ARCHITECT* to give our readers an opportunity to learn "how the other fellow does it."

Please do us a favor. If your magazine does not come regularly on time, drop us a postcard or a letter. Address us—501 Fifth Avenue, New York City.



MONASTERY AT PAVIA, ITALY

THE AMERICAN ARCHITECT
May 20, 1928