

THE AMERICAN ARCHITECT

FOUNDED 1876

A MASTERPIECE OF ECCLESIASTICAL ARCHITECTURE IN FLORIDA

By HARRIET SISSON GILLESPIE

THE Church of Bethesda-by-the-Sea at Palm Beach, Florida, exerts a powerful appeal, not alone in gratifying the eye, in delighting the intellect and in inspiring the imagination, but in stimulating faith; for there are those who find in its ethereal beauty something of the healing quality of the

Pool of Bethesda in Jerusalem, of which the name is interpretative.

Perpetuating a little mission established at Lake Worth nearly a half century ago by Bishop Weed and Archbishop Carpenter of the Protestant Episcopal Church, it stands today as a dramatic

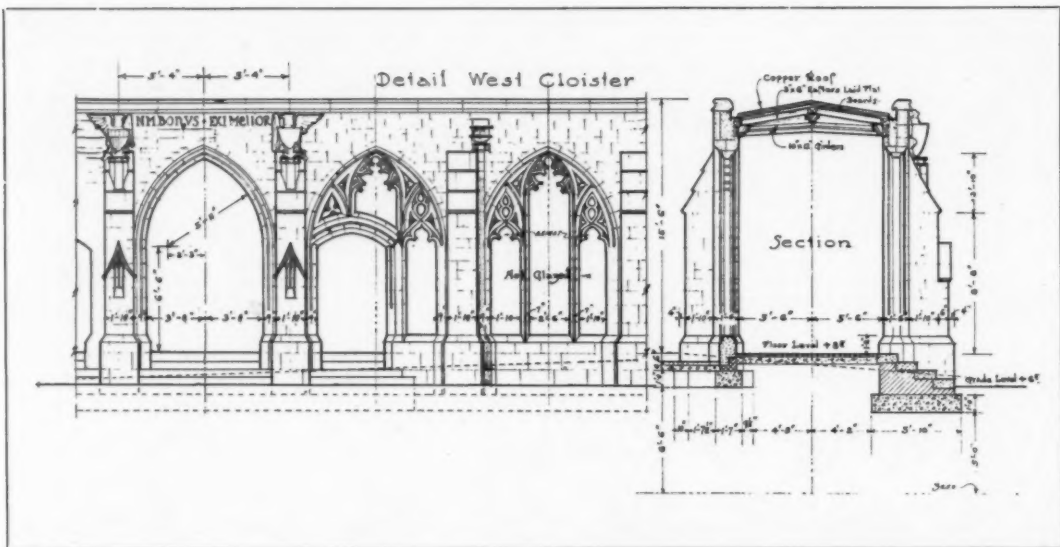


Photo by Geisler

BETHESDA-BY-THE-SEA, PALM BEACH, FLA.

HISS & WEEKES, ARCHITECTS

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CLOISTER DETAILS



Photo by Geisler

DETAIL OF NORTH SCREEN, SHOWING PROTOTYPE OF POOL OF BETHESDA AND A CARVED STONE FOUNTAIN BY JANET SCUDDER, SCULPTOR

BETHESDA-BY-THE-SEA, PALM BEACH, FLA.—HISS & WEEKES, ARCHITECTS



Photos by Geisler

ABOVE, THE ENTRANCE TO THE WEST CLOISTER, AND, BELOW, THE GARTH, LOOKING NORTH AND EAST
BETHESDA-BY-THE-SEA, PALM BEACH, FLA.—HISS & WEEKES, ARCHITECTS



SKETCH OF PULPIT AS EXECUTED

illustration, not only of the rapid development of the Church and of the remote outposts of American civilization, but also of the enduring appreciation of ecclesiastical architecture as "a living, not a historic style."

Designed by Hiss & Weekes, architects, the church in its general design follows certain historic precedents in that it embraces features from several perfected periods of the ecclesiastical style. Suggesting something of the chaste simplicity of the Norman stronghold in the embattled tower that once served a defensive purpose, but was later retained as a decorative feature, together with the cloister, the edifice presents an expression of nobility and character. Every phase of the design has been carried out with painstaking attention, not only in the matter of scale and detail, but with reference to the exceeding refinement, as well as the innate spiritual quality to be found in ecclesiastical work of the thirteenth century.

Architecturally, the design of Bethesda-by-the-Sea includes numerous features common to the

early church. The main elevation, facing west, shows the tower rising to a height of one hundred and five feet, terminating in a parapet with four corner finials. The entrance to the church auditorium is through the tower, as was so characteristic of the churches designed six or seven centuries ago. The cloister, adjoining the tower, forms one of the most interesting features of the composition. The cloister screen continues around a rectangular space approximately eighty by ninety feet, to form a quadrangle known as the cloister garth. The garth is reminiscent of a medieval church. In one corner is built a pulpit for open-air services. Imposed against the north transept, with the richly decorated foliated arches of the cloister below, the traceried window opening on the loggia and the gracefully designed organ tower rising above, the effect is both dramatic and sacred. The pulpit, the face of which is enriched by carved motifs of religious significance, is reached by an open flight of stone steps which, by the use of a pierced stone screen, connects with the loggia on the second floor where access is had to the adjoining Parish House. The facade of the Parish House is carried out with low buttresses and arcaded walls in which the arches spring from pier to pier, after the manner of the old European churches. It contains guild room, sacristy, a chapel and classrooms.

Quite as interesting as the design itself, and in harmony with it, is the material in which it takes form. The exterior is built of cast stone resembling native limestone. While the blocks, varying over a considerable range of sizes and colors, were cast, the surface closely resembles the sawed surface of natural stone. The colors range from a soft French gray to a warm tone approaching a brown. The surface texture is also varied, some units being smooth and others more or less pitted. Color variations were secured by the choice of suitable sands and aggregate. The texture was influenced by differences in the amount of water used in the mixes for different blocks. The dignity achieved with this material has been largely due to the care taken by the architects to secure a wide variation in sizes of individual blocks, and grading to secure pleasing variations in color and texture. Joints are approximately one-quarter inch in thickness and struck flush with the surface of the stone. The floors of the garth and the church are of the same material as the exterior walls. The roof is covered with a

special shingle tile that varies in color from red, through the greens, into the dull yellows. The success of the structure not only depends upon an interesting composition, but upon color and texture as well.

Thus it will be seen that apparent limitations are ephemeral where a high purpose is involved, for the rich imagery of medieval ecclesiastical art, stored in the minds of the designers, was given material expression for all the symbolism for which the church has stood for eight centuries has been wrought into the fabric of Bethesda-by-the-Sea. The inspiration of its origin and purpose is ever present.

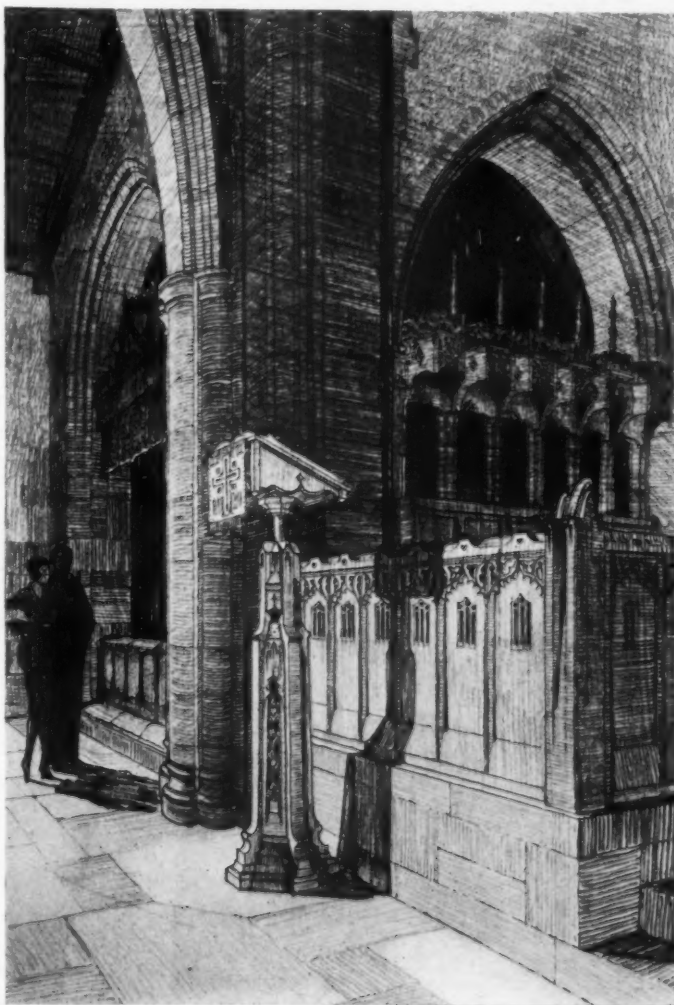
The church building itself comprises the nave, consisting of six bays, two of which are low transepts. The width of the nave with the aisles is forty-four feet, but should it become necessary to seat more than the normal capacity, which is approximately five hundred, it is so arranged that additional seats can be placed in the aisles as well as in the south cloister adjoining the north aisle. The nave rises to a wood-trussed ceiling fifty-one feet above the floor. Choir stalls in the chancel will seat forty-five. A well-designed organ and vestibule screen divides the west tower from the nave. Adjacent to the chancel is the baptistry which, when completed, will require a screen between it and the north transept.

One of the most interesting aspects of the design of the interior of the church is the location of the organ which permits services to be held either in the church or in the garth. The organ is located in the organ tower over the north transept, and is open to the nave through a large screen and to the cloistered garth by louvred openings. When services are held in the church, these openings are closed by metal shutters; when services are held in the garth, they are opened and the volume of sound can be heard as clearly there as in the church.

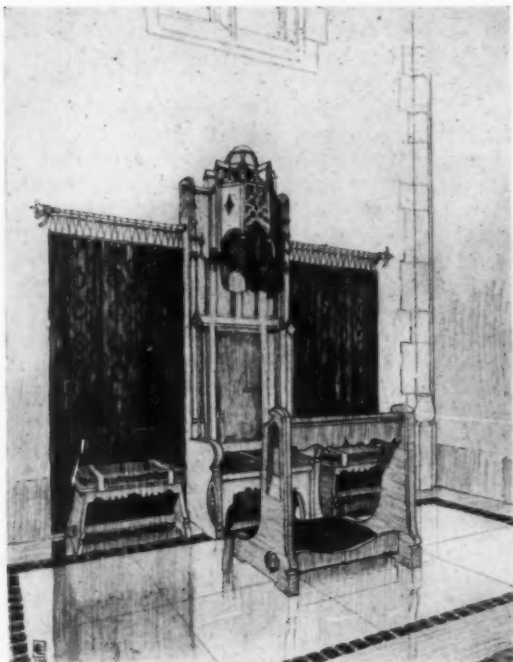
Due to the fact that it was not advisable to proceed with the completion of the interior at this time, no photographs of this phase of the design are shown. The pulpit and organ have been completed, but a majority of the other details of the final interior furnishing scheme have not yet been started. It is planned to proceed with the work

in perhaps the course of the next year, according to the designs reproduced as illustrations to this article. At their completion they will be illustrated in detail in this magazine.

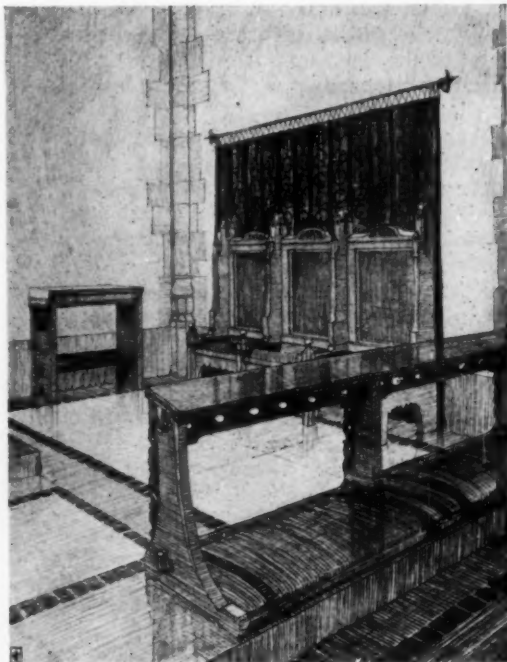
A word might be said concerning the sketches of the various features of the interior furnishing scheme, reproduced herewith, both as to their design and to the manner in which they are rendered. The details of the several pieces are in complete harmony with the architectural treatment. The lines are soft and dignified and the occasional carved motives are symbolic in character and of sufficient importance to emphasize the prominent part which the furniture plays in the services of the church. The sketches are made especially interesting by the manner in which they are rendered. The pencil lines are bold and high lights are contrasted with strong shadows to give a satisfactory effect. The architects also designed the complete interior scheme.



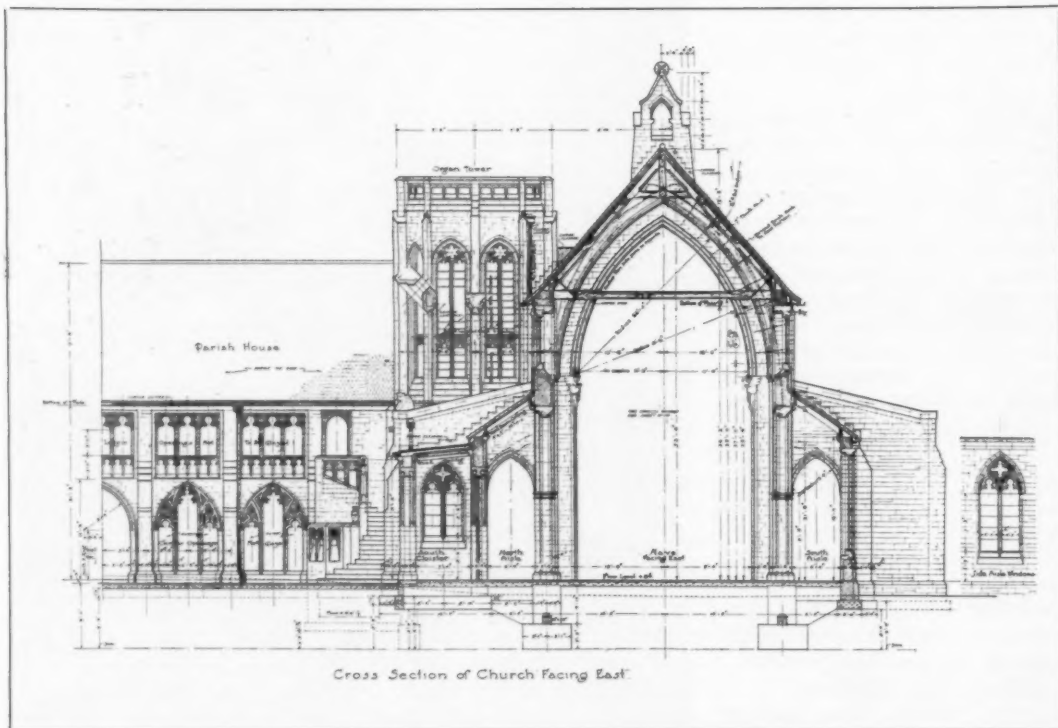
PROPOSED DESIGN FOR LECTERN AND CHANCEL RAIL



SKETCH OF PROPOSED BISHOP'S THRONE



COMMUNICANTS' RAIL, SEDILIA AND CREDENCE



BETHESDA-BY-THE-SEA, PALM BEACH, FLA.

HISS & WEEKES, ARCHITECTS



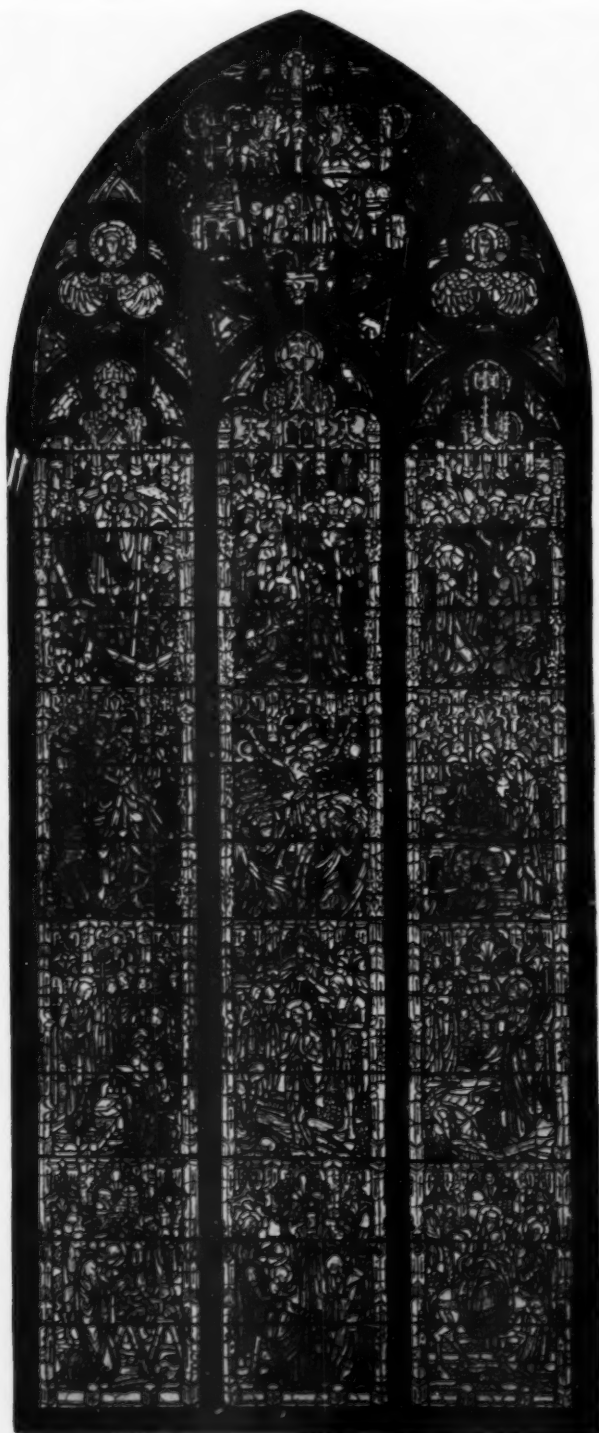
SKETCH OF PROPOSED ALTAR AND TRIPTYCH
BETHESDA-BY-THE-SEA, PALM BEACH, FLA.
HISS & WEEKES, ARCHITECTS



Photo by Geisler

EAST ELEVATION OF PARISH HOUSE, BETHESDA-BY-THE-SEA, PALM BEACH, FLA.

HISS & WEEKES, ARCHITECTS



SKETCH OF PROPOSED CHANCEL WINDOW, DESIGNED BY G. OWEN BONAWIT, INC.
BETHESDA-BY-THE-SEA, PALM BEACH, FLA.—HISS & WEEKES, ARCHITECTS



EDITORIAL COMMENT



Misleading Information

THE Slate News Bulletin published by the National Slate Association, printed, not long ago, an account of an architect who always wrote his specifications for structural slate to be "clear electrical marine finish." Upon being asked why he called for electrical slate he replied, "We always write specifications that way for structural slate." Upon investigation it was found that the representative of a slate contractor had informed this architect—and probably others—that "electrical slate marine finish" was the correct specification for all structural slate. The effect of this misinformation was that other slate contractors in bidding upon these specifications quoted upon electrical slate and lost the job, while the contractor familiar with the intention of the specifications quoted a lower price and obtained the contract.

We question whether similar instances occur today sufficiently often to be the subject of comment. That they have occurred in the past is one reason why manufacturers' and contractors' representatives often find it difficult to obtain interviews with the heads of architectural firms.

With the rapid growth of wall and roof insulating materials, a large number of manufacturers have entered this field and, as might be expected, many exaggerated claims and statements have been made, or information so presented that it was confusing and misleading to the consumer. The National Better Business Bureau, after two-year survey of insulation advertising, formulated a uniform advertising and selling code. This code is designed to aid the buyers of insulation to choose intelligently the type of insulation best suited for the intended use. The protection afforded to the consumer is based upon accuracy of statements and avoidance of conflicting and confusing claims. Nineteen companies, stated as making 85% of the insulation materials produced in this country, have agreed to base their advertising and selling upon the standards formulated by the National Better Business Bureau.

The Producers' Council, affiliated with The American Institute of Architects, has also furthered the matter of giving architects accurate information and the elimination of exaggerated claims and statements in advertising.

Associations representing materials and equipment used in building construction have, for the good of their industry as a whole, recognized the necessity of giving architects information that is

not misleading. This is one of many valuable features that have marked the work of these associations and gives them a very good right to exist.

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Architectural Style

WE are accustomed to refer to the peculiar style in which an artist paints his picture as his technique. Every creative artist—and every artist is a creator—has his own individual style. One can recognize a Corot by the brush marks; it does not take a scholar to distinguish a Rodin. Although no one will question that an architect is—or, better, perhaps, should be—an artist, how many architects really have an individual style? The fault lies unmistakably in our interpretation of the word "style." We do not associate a style with individuals, but rather with eras. Every building that is erected in this country today, from the smallest house to the most monumental structure, is designated as being designed in some particular style or era of architectural history. This all too prevalent tendency has without doubt hindered the development of creative ability amongst the members of the architectural profession of this generation. In the past, it was customary immediately to recognize certain buildings as the work of certain architects. If a client desired a building of that type, he would logically select that architect whose creative ability ran in that direction. Today, rather than selecting an architect for his individual style, he is selected because he has evidenced a marked familiarity with some one in particular, or all, perhaps, of the old historic styles and periods. A successful architect today will be called upon one day to design a Colonial house, tomorrow a Jacobean mansion, and some day next week an Americanized French chateau. Is he allowed much opportunity to express his individual style? He is a clever man if he can in all three houses. There are, of course, exceptions. We have in mind a certain architect whose personality is evidenced in everything he does. Yet he derives inspiration from various sources. But one can never say of any of the houses he designs that it is a Spanish house, an Italian house or an early American house. What is to be done? We feel that there is no remedy for righting the situation in an instant, but if we will all pull together to do away with this foolish custom of designating the design of a modern building by a style associated with the architecture of some foreign country four or five centuries ago, we feel sure that the artist in us all will be more than satisfied with the results.

The World Engineering Congress

IT is significant of the rapid rise of Japan among the rapidly growing nations of the East that the World Engineering Congress will be held at Tokio, Japan, during October of next year. It is less than a century that Commodore Perry, in command of a fleet of American men-of-war, visited Japan on a diplomatic mission that was the beginning of relations that up to this time have never been disturbed. It is less than half a century that Japan, equipped for war on a footing comparable with the leading nations, waged a successful conflict with a nation many times its size. And having since that time quietly pursued the arts of peace and sent its sons to universities of the Western world, there to acquire the technical knowledge that is today the foundation of a nation's progress, it is less than five years since a devastating earthquake disclosed the fact that as a country menaced by seismic disturbance, Japan was easily in advance of other nations.

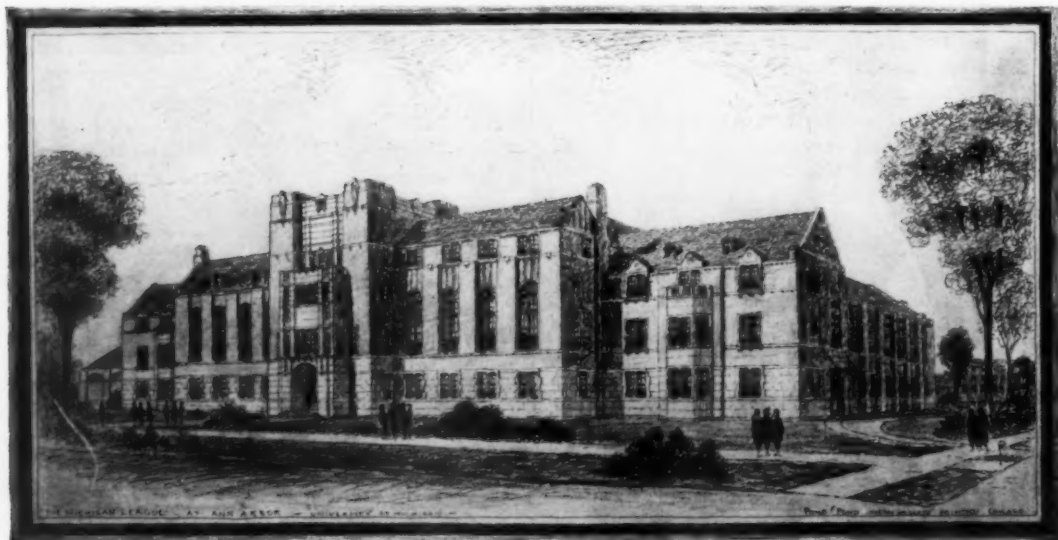
Western engineers will derive a very great pleasure in a visit to Japan. The Japanese have been called "the Frenchmen of the East." Evidence of the highest culture is everywhere apparent. The writer recalls four visits to Japan, the first in the middle 70's, and was deeply interested to note on the three succeeding visits the rapid progress that has today resulted in placing Japan in the forefront of the great nations of the world.

That this engineering congress will be fruitful in results may not be questioned, as the profession in Japan, ably assisted by government agencies, will undoubtedly spare no effort to make the visiting delegates welcome in the highest degree.

Antiquated Building Codes

A PATIENT and untiring committee of The American Institute of Architects has, as long as we can remember, been engaged in a study that might lead to the solution of a standard building code. Their efforts, as far as they may be regarded as a patient research into the various difficulties that surround the question, have been valuable. But the fact remains, as stated by Arthur R. Lord, before a recent meeting of the Western Society of Engineers, held in Chicago, that antiquated and inadequate building codes are making building costs unnecessarily high. We believe Mr. Lord's contention, that antiquated building codes now in force in various communities are the cause of low rents, poor construction, and act as a strong retardant to good building, is a point well taken.

The rapid progress in invention, the improvement of old forms used in building construction and the development of new ones do not appear to be recognized in the codes of most of our large cities. In fact, those codes practically stand today as they did a decade ago, and for that reason should be revised and amended to comply with modern conditions. It is undoubtedly true that for speed in operation, efficiency in the handling of materials and general economic progress, American builders stand in the forefront. That they should be able to accomplish so high a purpose with the antiquated codes under which they now work, leads logically to the conclusion that under codes revised to meet present conditions, they might attain to performance not now dreamed of.



Rendering by Irving K. Pond

THE MICHIGAN LEAGUE, UNIVERSITY OF MICHIGAN, ANN ARBOR, MICH.

POND & POND, MARTIN & LLOYD, ARCHITECTS

MAJORCAN HOUSES AND GARDENS

THE small farmhouses and *villas de campo* of Majorca are the subject of a new book by Arthur Byne and Mildred Stapley, who have contributed so many interesting and instructive books on architecture and decoration in the Mediterranean district. The many beautiful illustrations with which the book abounds are accompanied by sketches and detail drawings by Mr. Byne. As in their previous publications, the authors have sought out the unusual in their quest for the picturesque.

We quote from the authors' introduction: "Outside of Palma and the few large towns like Soller, Inca, and Manacor, the domestic architecture of Majorca may be looked upon as distinctly rural. The capital possesses numerous important palaces of the XVI and XVII centuries, the towns, dignified stone houses somewhat less urban in character; but the houses that most appeal are the country seats—that combination of villa and farmstead which one finds scattered over the island. Beginning with Catalan Gothic as their prototype, Majorcan houses were later subject to Italian influence, principally Genoese; but in time they came to constitute a Mediterranean Island type which is just a bit different from anything in Italy or Spain.

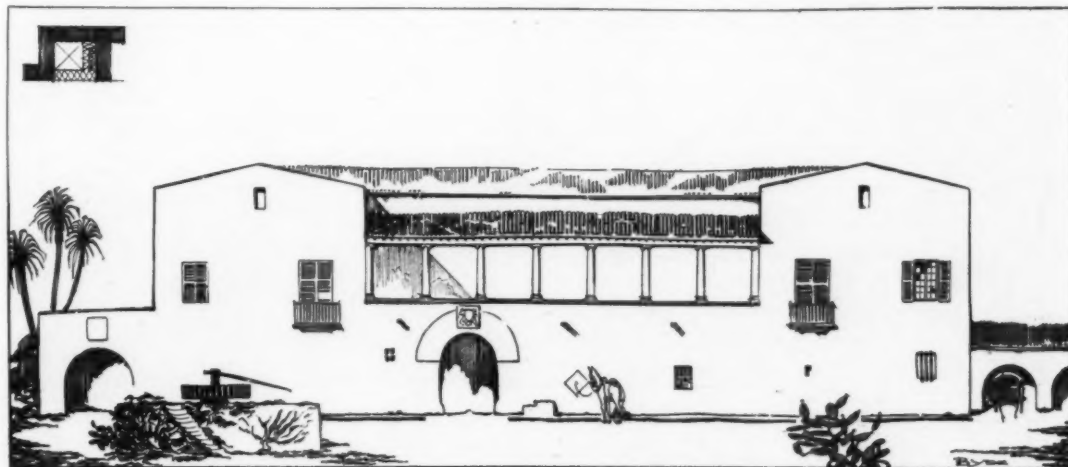
"During the last quarter of a century some of the old Majorcan properties have passed from the original families to the prosperous merchant class of the towns. The new owners have installed themselves in most up-to-date fashion, thus robbing of its charm what had been the typical interior of two or three centuries ago. On the other hand many Majorcans have been able to hold their homes and

have neither altered nor refurnished; having early attained material prosperity and a high degree of refinement in the art of living, and not being by nature restless nor inordinately acquisitive, their unostentatious houses offer interiors of a certain antique elegance, where small modern manufactured bric a brac has never intruded. In short, the type of house like the type of the race itself early became fixed and remained so.

"As to the houses selected for illustration in this volume, the authors having shown certain Palma residences in previous works, they are here concerned mainly with the as yet unpublished *villas de campo* and small farmhouses. These admirably met the primary requirements of a country house: beautiful setting, harmonious relation to their surroundings, provision against summer heat, practical arrangements for agrarian activities, and a pleasant house and garden for the owner. As an economic and artistic solution of such more or less universal problems, old Majorcan houses ought to prove interesting in newer parts of the world."

There are in all one hundred and eighty-eight plates of exteriors, gardens, interiors and details, reproduced from photographs and scale drawings. The authors have a knack of accumulating material which is inspirational to the architectural profession, and this publication is up to the high standards which their previous efforts have attained.

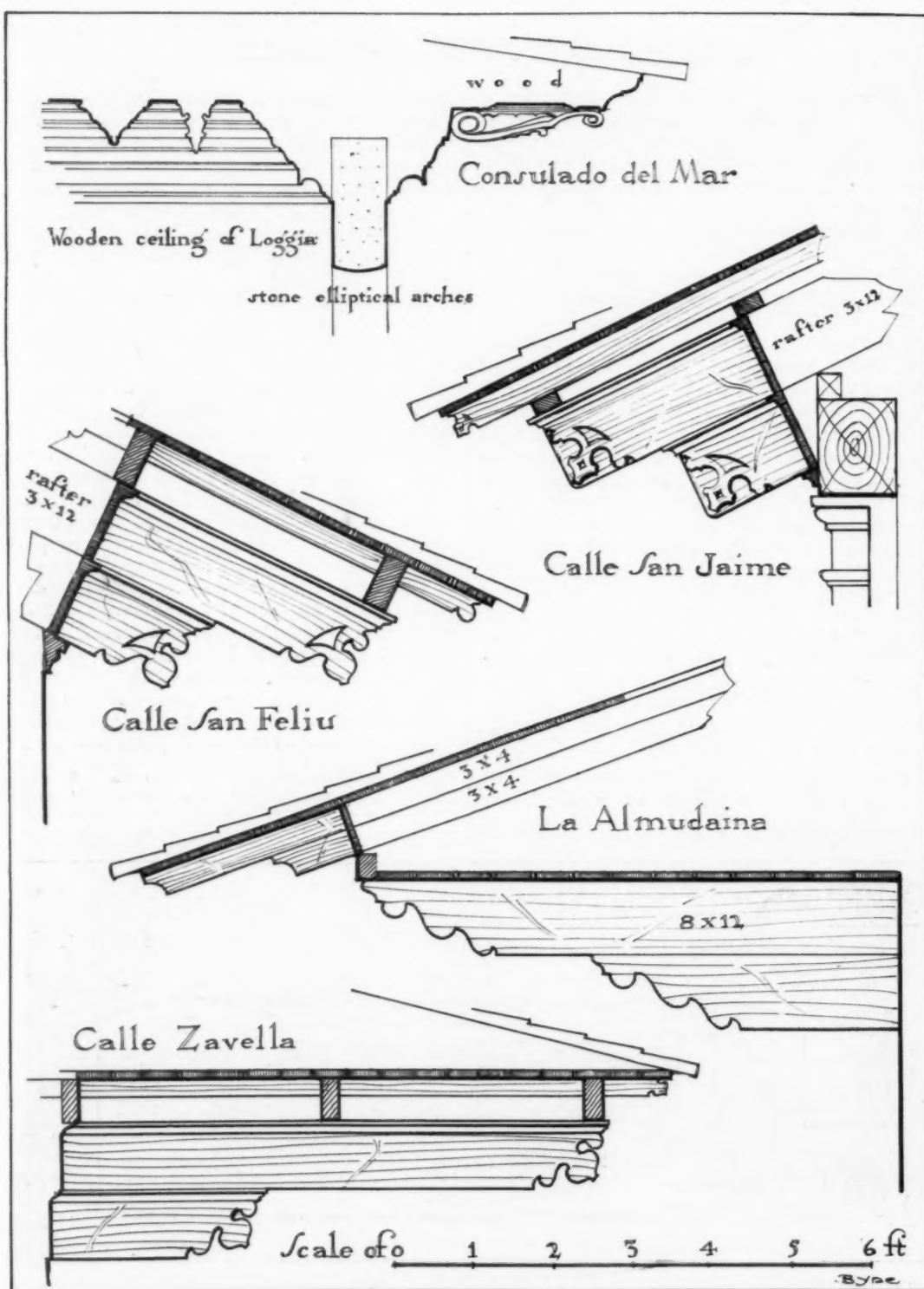
Majorcan Houses and Gardens. By Arthur Byne and Mildred Stapley, of The Hispanic Society of America. Published by William Helburn, Inc., New York City. Size 12¾ x 16¾ inches. Board covers. One hundred and eighty-eight full page plates and seventeen pages of descriptive text; indexed. Price \$25.00.



FACADE OF SON HOMAR, ON THE SOLLER ROAD, 17TH CENTURY

THE COVERED SOUTHERN GALLERY SERVES AS A PLEASANT PROMENADE AND ALSO TO LIGHTEN THE PATIO

(From "Majorcan Houses and Gardens")



TYPICAL WOODEN EAVES IN PALMA, 16TH AND 17TH CENTURIES
 VERY OFTEN THE SOLE FEATURE OF THE FACADE AND SOMETIMES COVERING THE FULL WIDTH OF THE STREET
 (From "Majorcan Houses and Gardens")

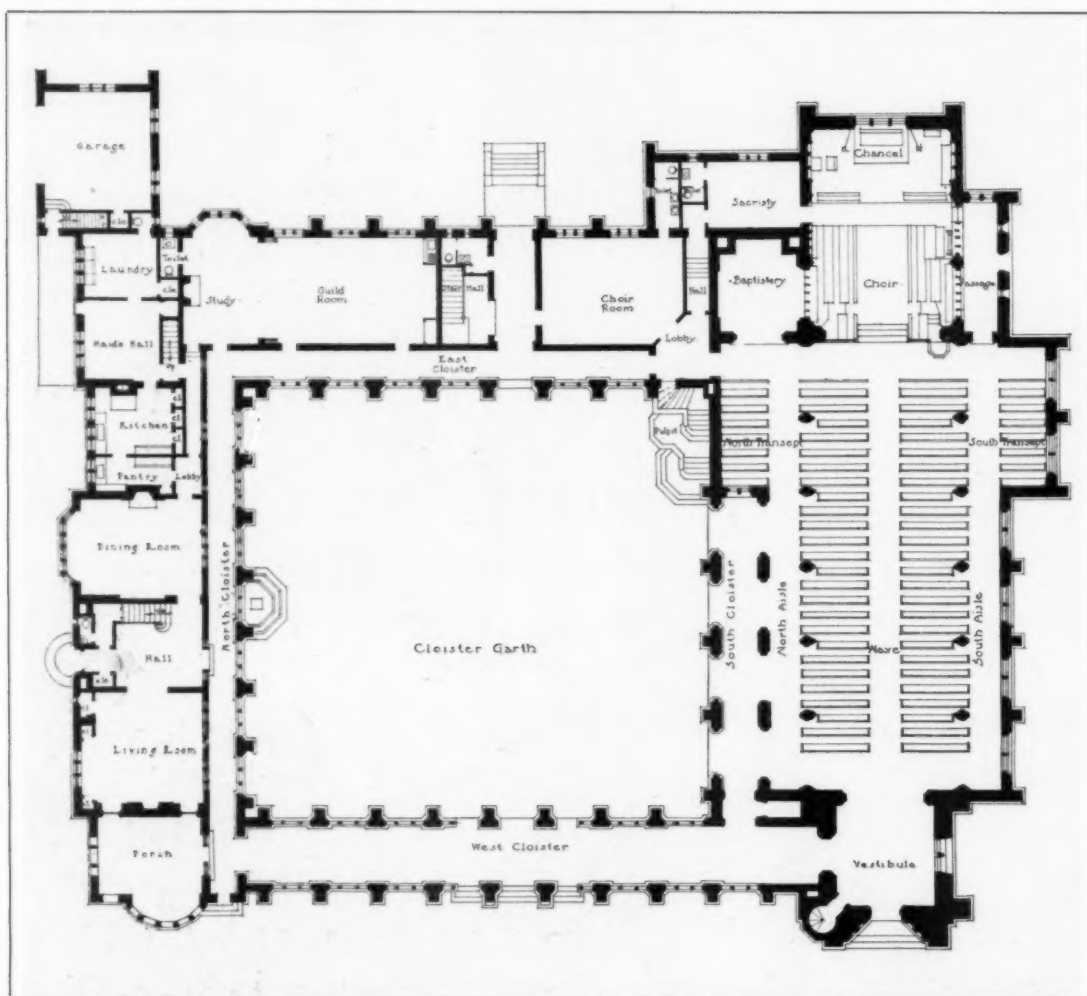


Photo by Geisler

THE OUTDOOR PULPIT AND ORGAN TOWER, BETHESDA-BY-THE-SEA, PALM BEACH, FLORIDA

HISS & WEEKES, ARCHITECTS

(See plan on back)



PLAN OF GROUND FLOOR

BETHESDA-BY-THE-SEA, PALM BEACH, FLORIDA—HISS & WEEKES, ARCHITECTS

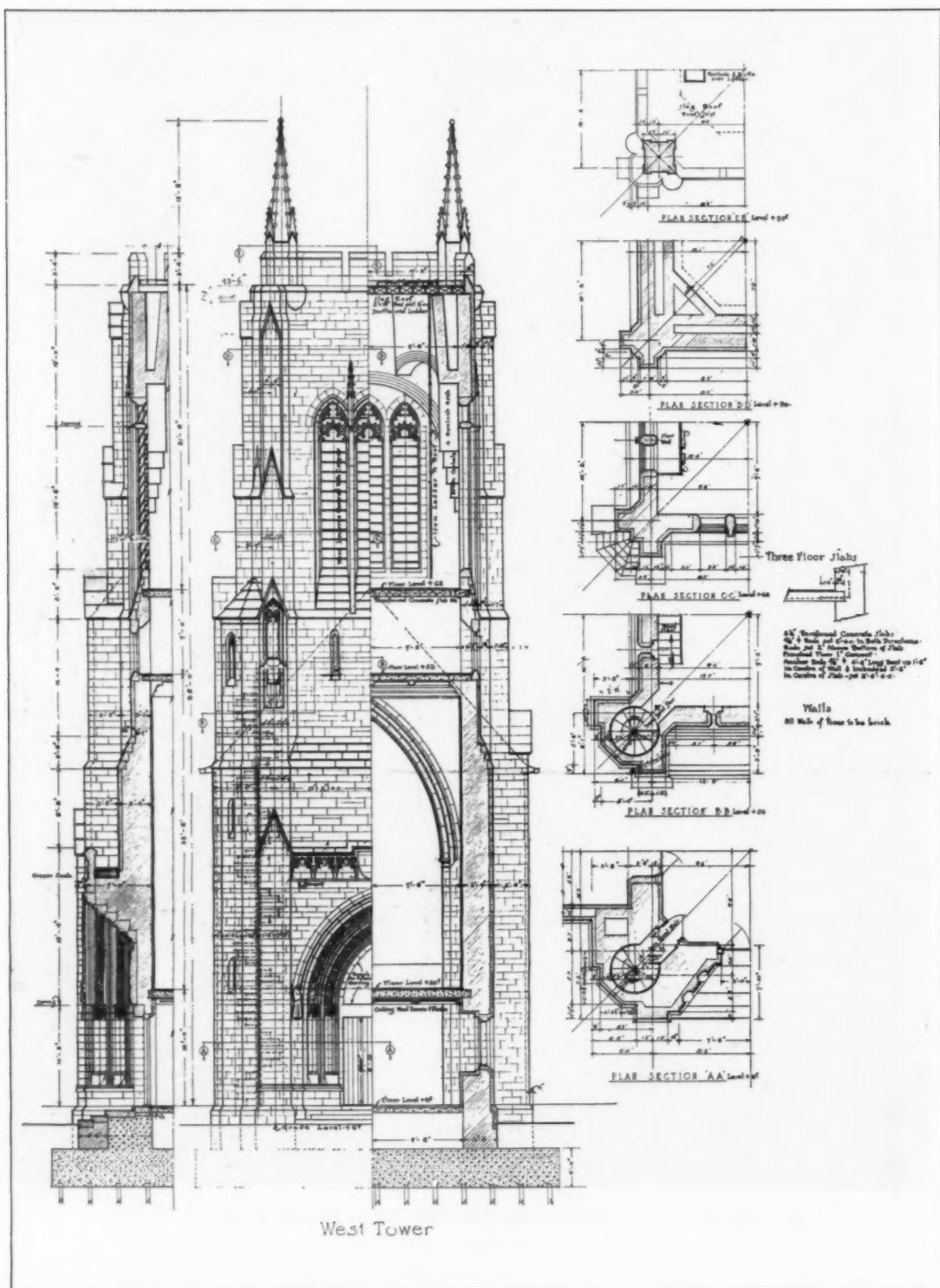


Photo by Geisler

THE GARTH, BETHESDA-BY-THE-SEA, PALM BEACH, FLORIDA

HISS & WEEKES, ARCHITECTS

(See details on back)



DETAIL OF TOWER, BETHESDA-BY-THE-SEA, PALM BEACH, FLA.

HISS & WEEKES, ARCHITECTS

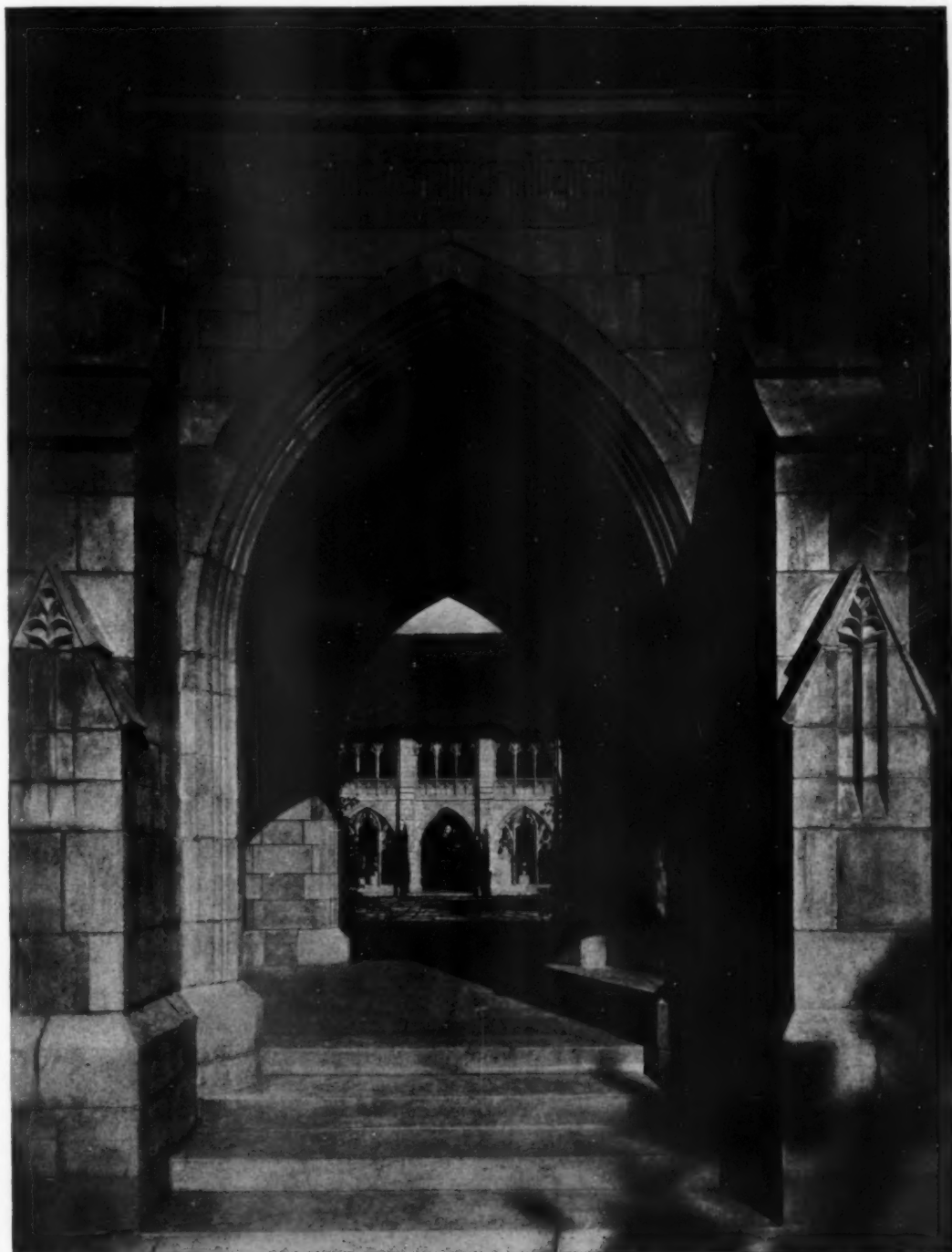


Photo by Geisler

WEST ENTRANCE TO GARTH, BETHESDA-BY-THE-SEA, PALM BEACH, FLORIDA

HISS & WEEKES, ARCHITECTS

(See details on back)



Photo by Geisler

CLOISTER DETAIL, BETHESDA-BY-THE-SEA, PALM BEACH, FLORIDA

HISS & WEEKES, ARCHITECTS



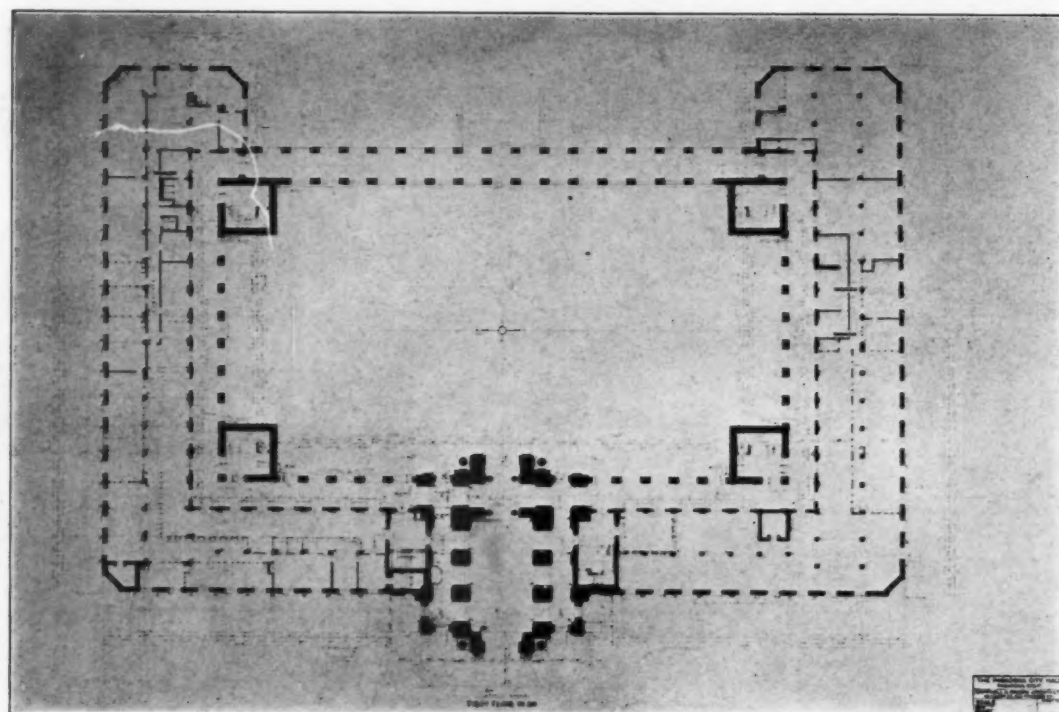
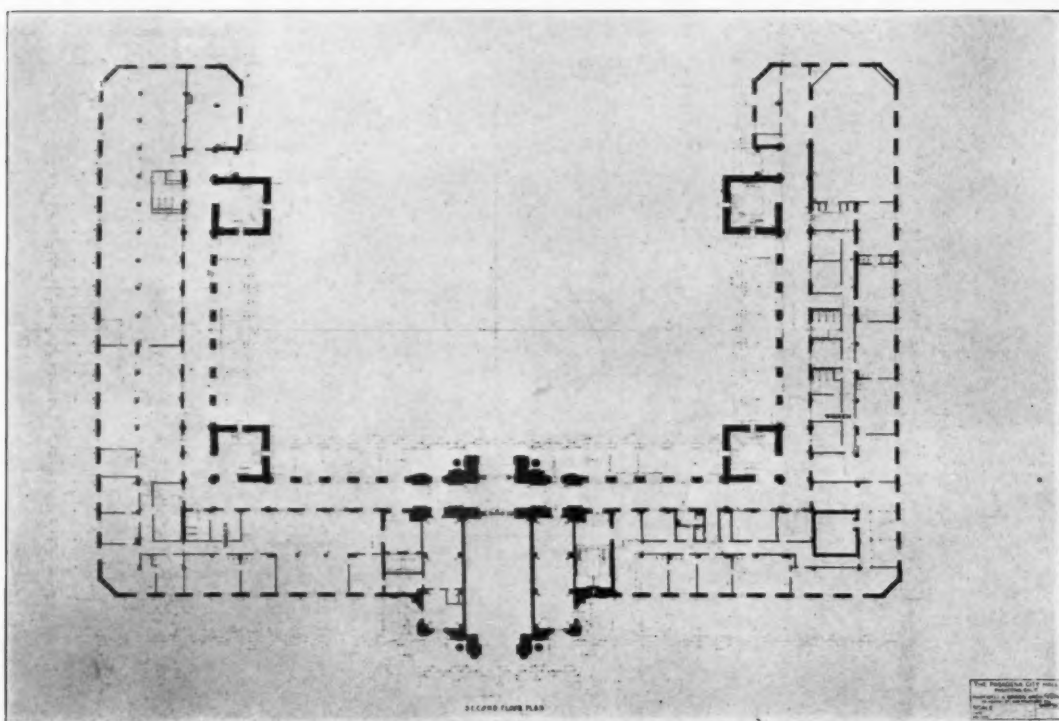


Photo by Keystone Photo Service

PASADENA CITY HALL, PASADENA, CAL.

BAKEWELL & BROWN, ARCHITECTS

(See plans on back)



PASADENA CITY HALL, PASADENA, CAL.
BAKEWELL & BROWN, ARCHITECTS

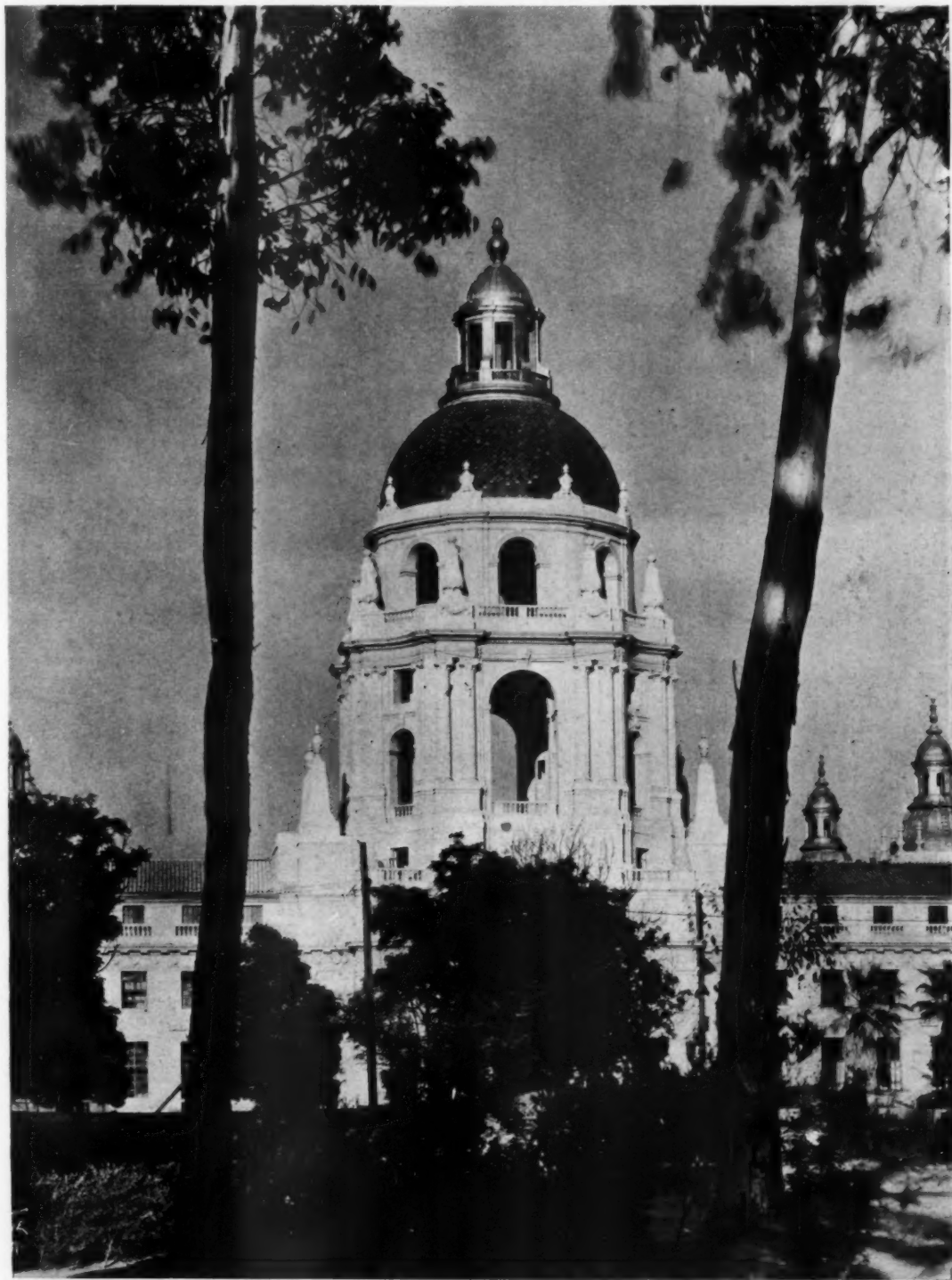
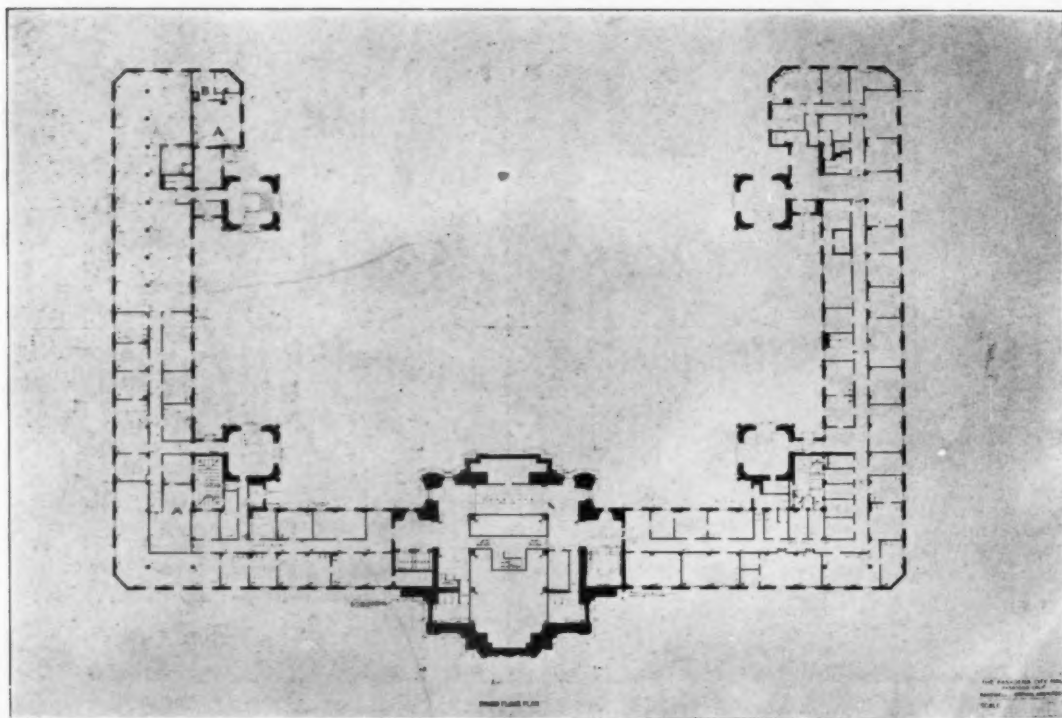
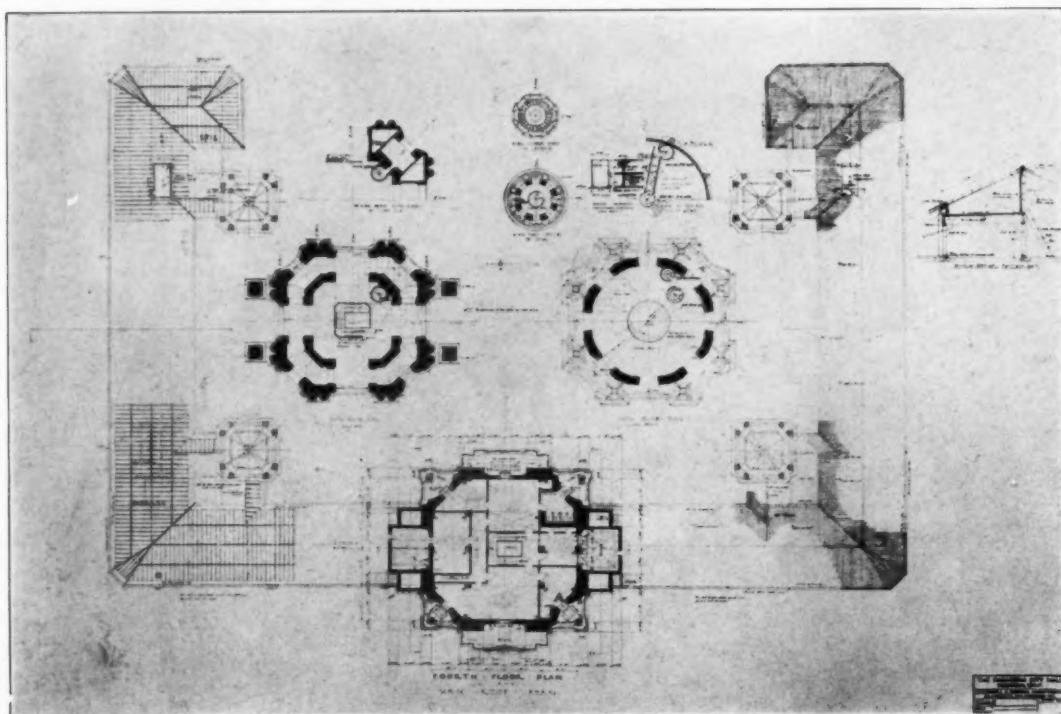


Photo by Keystone Photo Service

TOWER—PASADENA CITY HALL, PASADENA, CAL.

BAKEWELL & BROWN, ARCHITECTS

(See plans on back)



PASADENA CITY HALL, PASADENA, CAL.
BAKEWELL & BROWN, ARCHITECTS

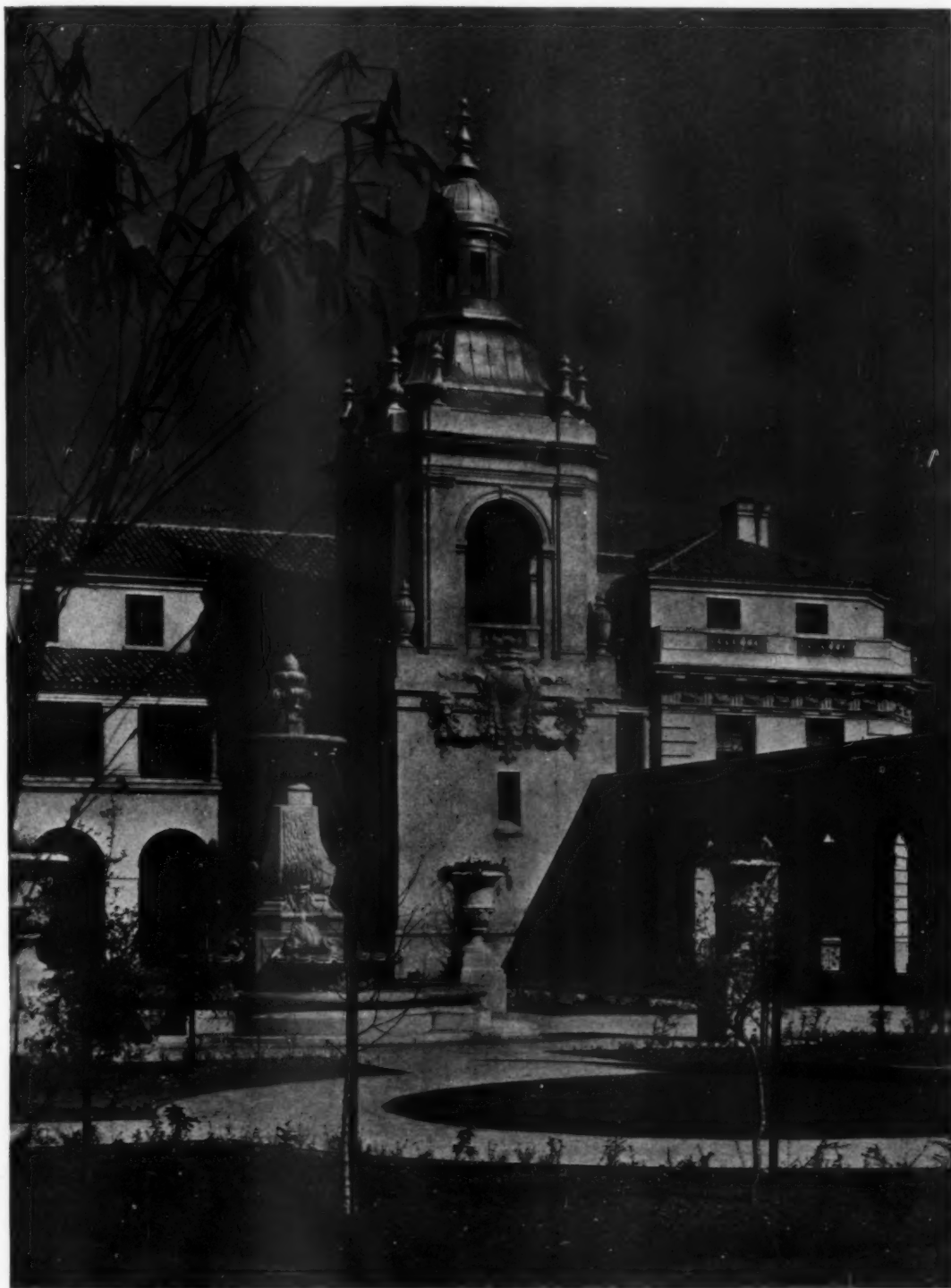


Photo by Keystone Photo Service

STAIR TOWER FROM PATIO—PASADENA CITY HALL, PASADENA, CAL.

BAKEWELL & BROWN, ARCHITECTS





Photo by Keystone Photo Service

ENTRANCE FROM PATIO—PASADENA CITY HALL, PASADENA, CAL.

BAKEWELL & BROWN, ARCHITECTS

INTERIOR ARCHITECTURE

EXPRESSING INDIVIDUALITY IN TEXTURED WALLS

By PETER DE RODYENKO, B. Sc.

Illustrations are reproduced from photographs of textured walls executed by the author or under his supervision

THE distinction inferred between an ordinary workman and a craftsman is that the one does what he is told to do in the way that he is told to do it, while the other is more concerned with the result achieved and will even invent his own method of production in order that the final result may satisfy his artistic sense. In a nutshell, the distinction might be described in this way: the craftsman is credited with possessing a certain artistic appreciation, while the ordinary workman's thoughts center on the time clock and the pay envelope. In these days, when we deal more with ordinary workmen than with craftsmen, it is

necessary that architects know something of craftsmanship themselves if their visualizations or mind pictures are to be accurately realized. In other words, the architect should be in a position to tell and even to show the workman, if necessary, how to achieve certain results which he has in mind.

Interest in textured walls has diminished somewhat of late due to the fact that so many of them looked alike in their monotony of texture and color. The application of a plastic paint, by which a wide range of wall textures is possible, is not a process that can be easily described by means of written specifications nor is it sufficient to supply



Photo by Starkliff

AT THE SAME TIME THE PLASTIC PAINT IS APPLIED TO THE WALL IT WAS GIVEN THE DESIRED TEXTURE. THE RESULT VARIES ACCORDING TO THE METHOD OF APPLICATION

the workmen with a finished sample of the desired texture. The beauty of a textured wall lies primarily in its individuality—in the method by which it is applied. It reflects the touch of the craftsman just as does a piece of clever wood carving. The various materials of modern manufacture, by which texture may be obtained, offer seemingly unlimited opportunities in texture as well as in color schemes, and enable anybody and everybody to express his individuality in a rough wall surface. The proof of that statement lies in the fact that the majority of walls treated with plastic paint are, we must admit, uninteresting, inartistic and monotonous, not because they lack individuality, but because the individuality they express is in itself lacking in artistic appreciation, and is, therefore, monotonous; for the workmen who applied the material even expressed themselves unconsciously in attaining the textured surfaces.

Lacking craftsmen, then, to perform the work, someone who knows must tell the workman just what to do and how to do it. It is far too much to expect an ordinary workman—a man who makes no claim of possessing an appreciation of things artistic—to develop a wall surface which in its texture will satisfy the requirements of one whose professional status is determined by the development of his aesthetic sense. A textured wall is actually a decorated wall, and a decorated wall is of tremendous importance in an interior architectural scheme.

In order to attain individuality in a textured wall, it is not sufficient to know the desired result to be obtained, but in addition, under the circumstances, it is necessary to know how to obtain various results. It is not a matter of materials. For I am convinced by experience that there is no limitation to the range of textures which any one of the several materials allows. Probably very few architects have taken the time and trouble of seriously considering the study of plastic paints. The mixture of most of the materials in use today is based on the same theory, although their formulae vary to a certain extent. They might be classified into two groups: those with a water base and those with an oil base; while the materials with a water base can be subdivided into two classes: those which undergo a chemical process during the mixing, and those which remain mechanical mixtures even after their application to the wall. I personally prefer those which undergo a chemical process in the course of mixing, as I have reason to believe that their adhesion and cohesion are stronger than the ones which do not undergo a chemical process. Lack of space prevents me from delving deeper into the chemistry of the plastic paints in spite of the absorbing interest of this particular phase.

While proper understanding of the chemistry of the materials may have something to do with their advantageous use, the main problem deals with the application—the craftsmanship. A few brushes of various types and sizes, a trowel and a sponge, perhaps, are the only necessary tools. The degree of thickness of the material when applied has an effect on the result, as does the handling of it on the



Photo by Gottsche

A TEXTURED WALL HARMONIZES PERFECTLY WITH WOODWORK WHICH APPEARS TO BE HAND-CUT AND COARSELY TURNED

wall and the temperature under which it is dried.

Very often monotonous and, thus, unsatisfactory results are obtained by a "repeat" that is too small in size. This means that the workman will repeat an effect which *per se* may be quite attractive, but which becomes monotonous when regularly repeated at close intervals. Thus, textures should be varied and care should be taken that the surface of a wall should never be monotonous by regularly repeating any one particular motive. A variety of textures, similar in character, creates a pleasing effect.

As already inferred, it is well for the architect or some one representing him who knows the material and its application to submit to the workman on the job a sample of the desired texture and to explicitly explain to the workman by actual demonstration how the texture was obtained—what material was used, how thick it was when applied, with what tools it was applied, and with what tools textured, perhaps. Let the workman, under the guidance of the architect's representative, try to match the sample. Instead of falling back on the old standby, "It can't be done," the workman will be shown how to do it. He will realize then that it is a matter of additional thinking, rather than additional labor. It frequently happens that not only do the architect and his client get just what they want through this procedure, but that the workmen, once their eyes were opened to see what could be done, became genuinely interested in the work. Another interesting fact is that even inexperienced men, who had never handled plastic paint before, could be made to produce interesting and unusual results. Each individual has his own way of doing the same thing and the application of plastic paint offers a wonderful opportunity for self-expression.

Most of the colored walls with which we come in contact suggest that colors ground in oil and mixed with one or more of the various patented media, as produced by the various manufacturers, have been used. These media, no matter what name they bear, are generally simply mixtures of raw linseed oil, wax, turpentine and soap. I will not discuss the merits of these media except to state that to my mind they limit

the use of pigments to colors ground in oil or Japan. This means that the effects thus obtained are generally rather hard and accompanied by a certain gloss which is not always pleasing.

I have used dry colors mixed with water and glue or ready-mixed tempera colors, as well as batik dyes, and have achieved soft-toned pastel shades which are very desirable. The work was afterward protected by a coat of flat varnish, thinned with turpentine. In many cases, the process has proved to produce infinitely more artistic effects than the ordinary method of using oil colors. When it comes to the application of colors, it should be kept in mind that it is a peculiarity of the workman to put the color on in "gobs"—that is, in large spots within reach of his arms, and then try to brush or to rub them out. As a result, the walls often have that peculiar "pockmarked" appearance—the contrasts are too strong and too



Photo by Starkliff

A SLIGHTLY ROUGH AND WAVY WALL SURFACE FINDS A COMPLEMENTARY NOTE IN HAND WROUGHT IRON WORK



Photo by Starkliff

AN EFFECT OBTAINED BY THE "BUILDING UP" PROCESS

regularly repeating themselves. This, too, can be overcome by adequate supervision and by making the workman blend the colors, a procedure which it is far easier to do than to describe in words.

Most plastic paints lend themselves beautifully to high relief work. While stencils are recommended by manufacturers, discriminating architects try to avoid their use and can, by making their own designs and employing skilled workmen, obtain interesting effects by the method of "building up" the design or cutting it out of the material while it is still wet. This process not only produces excellent results, but is infinitely less expensive than the use of ornaments cast in plaster or composition, in spite of the fact that the work is done entirely by hand and is original. Very interesting effects, however, may be obtained by using ornamental motives produced in various manufactured materials and applying plastic paint to the surface. A very effective and realistic rope moulding may be obtained by first treating a three-quarter inch rope and covering it with a plastic paint after it has been nailed in place. But all these results, being produced from stock patterns, cannot be compared with the opportunity which is offered for introducing original forms, by modelling the material itself, directly on the wall, as explained above.



Photo by Gottscho

EFFECTIVE RELIEF WORK IS OBTAINED IN A PLASTIC PAINT BY BUILDING UP CERTAIN SURFACES AND, AFTER ALLOWED TO SET, CUTTING OUT THE OUTLINE OF THE DESIGN WITH A SCULPTOR'S TOOL

Due to the fact, then, as I have already emphasized, that the peculiar charm of a textured wall is primarily in its individuality, it is obvious that it is impossible to dictate any specifications by which a texture which your visualization embodies may be obtained. The illustrations on the following pages of several textures and accompanying captions, which relate in detail how the various results were obtained, may be considered, then, more as suggestions and ideas rather than as information to be embodied in a specification. There are other suggestions which might be illustrated. For example, it is often desirable to allow slight cracks to occasionally appear in conjunction with a rough textured surface. These cracks are obtained with plastic paint by applying the material rather thick where the cracking is desired and drying it quickly by holding an electric soldering iron close to it.

In conclusion, it might be said that the technique of textured walls is still very much in its infancy. Many architects will find it interesting and to their own as well as to their clients' advantage to study and even to experiment with these modern materials. An understanding and appreciation of these new media of decoration will enable them to better express their own individuality in a textured and, as a result, a decorated wall.

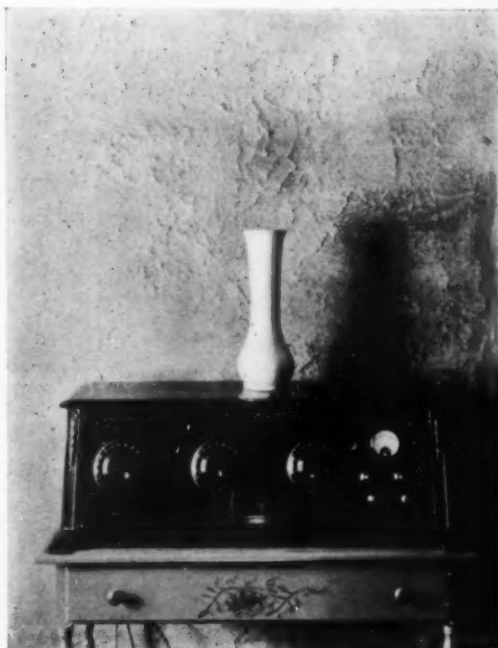


Photo by Starkliff

TEXTURE EMPHASIZED BY SHARP ANGULAR LIGHT RAYS



Photo by Gottscho

IT IS ALWAYS NECESSARY TO CONSIDER THE EFFECT OF LIGHT FROM THE WINDOWS ON THE SURFACE OF A TEXTURED WALL. AS THE CAST SHADOWS TEND TO EMPHASIZE THE DEGREE OF RELIEF OR TEXTURE



AFTER APPLYING THE PLASTIC PAINT EVENLY WITH A BRUSH, THE LAPS WERE OBTAINED BY A SLIGHT WRIST MOVEMENT WITH THE SAME BRUSH, PARTLY DRY. THE PECULIAR SLIGHT ROUGHNESS IN THE TEXTURE, AS NOTICEABLE IN THE CENTER OF THE PANEL, IS THE RESULT OF "SKIPPING" WHEN USING THE BRUSH

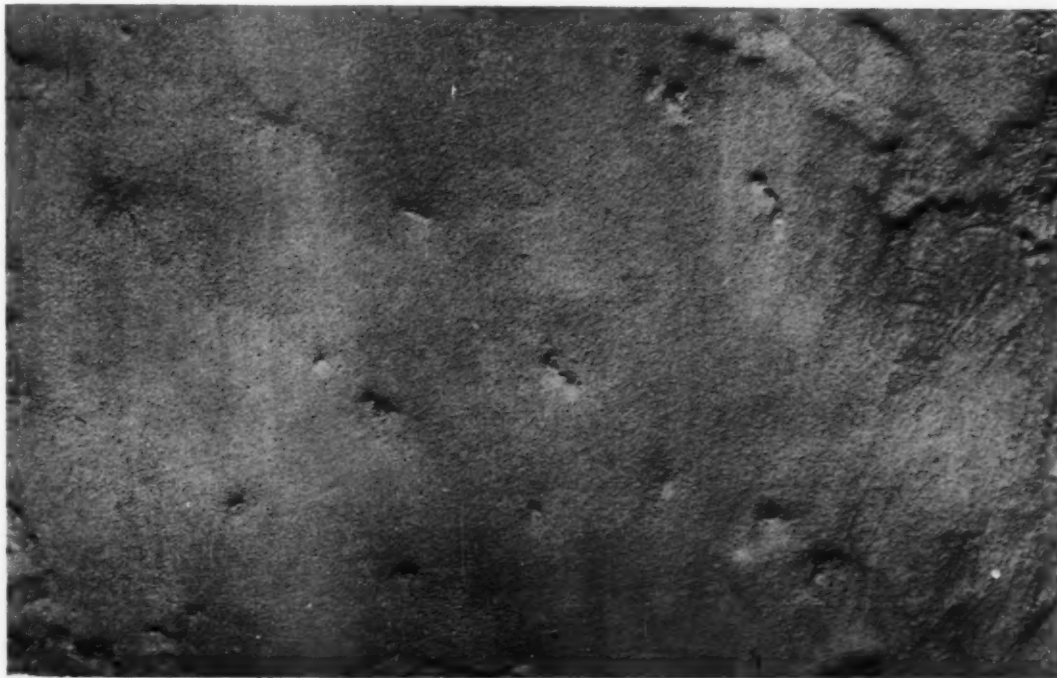


Photos by Germaine Kellermann

THE MATERIAL IN THIS CASE WAS APPLIED WITH A FOUR INCH BRUSH AND DURING THE APPLICATION, BY A WRIST MOVEMENT, CAUSED TO OVERLAP, RESULTING IN THE TEXTURED EFFECTS INDICATED IN THE UPPER CENTER OF THE PANEL. BY GOING OVER WITH THE SAME BRUSH, VARIETIES IN THE TEXTURE WERE OBTAINED, SOMETIMES CLEARLY SHOWING THE MARKS OF THE BRISTLES. THE "KNOBS" WERE OBTAINED BY USING A NARROW BRUSH IN A CIRCULAR WRIST MOVEMENT, SIMILAR TO THE ONE USED BY FENCERS IN THE "MOULINET" MOVEMENT



THIS PECULIAR STREAKY TEXTURE WAS OBTAINED BY APPLYING THE MATERIAL EVENLY, GIVING IT SEVERAL MINUTES OPPORTUNITY TO SET, WHEREUPON THE BRUSH WAS WASHED, SHAKEN OUT AND RUN VERY LIGHTLY OVER THE SURFACE. CARE WAS TAKEN TO USE ONLY THE TIPS OF THE BRUSH HELD BETWEEN TWO FINGERS ONLY



Photos by Germaine Kellermann

TO OBTAIN THIS TEXTURE MATERIAL WAS FIRST EVENLY APPLIED WITH A BRUSH. WHEN THE AREA HAD BEEN COMPLETELY COVERED, THE MATERIAL WAS SLIGHTLY "WHIPPED" WITH THE TIP OF THE BRUSH, CAUSING THE TEXTURED EFFECTS SHOWN IN THE UPPER LEFT AND LOWER RIGHT HAND CORNERS. A SPONGE WAS THEN WETTED AND PRESSED ON THE SURFACE HERE AND THERE, LIFTING OUT THE MATERIAL OCCASIONALLY, CAUSING VARIOUS INDENTATIONS WHICH ARE THEN PARTLY OBLITERATED WITH THE BRUSH, WITH THE RESULT AS PICTURED

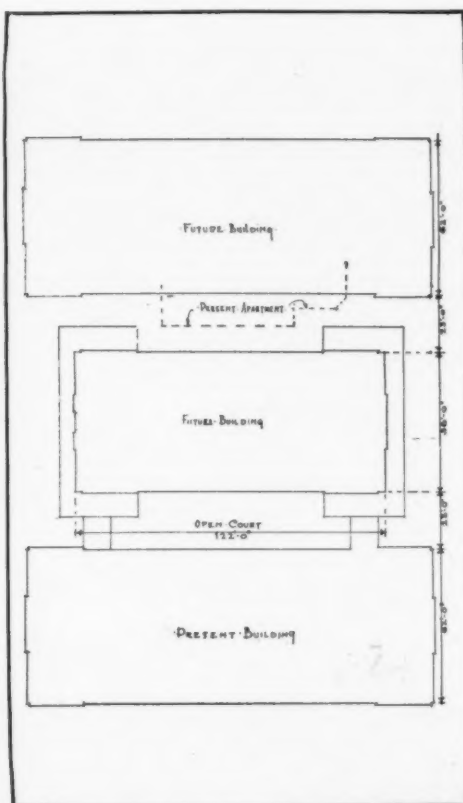


Photo by Gillies

LIVING ROOM IN THE HOUSE OF EDWIN C. DUBLE, FOREST HILLS, LONG ISLAND, N. Y.

FRANK J. FORSTER, ARCHITECT

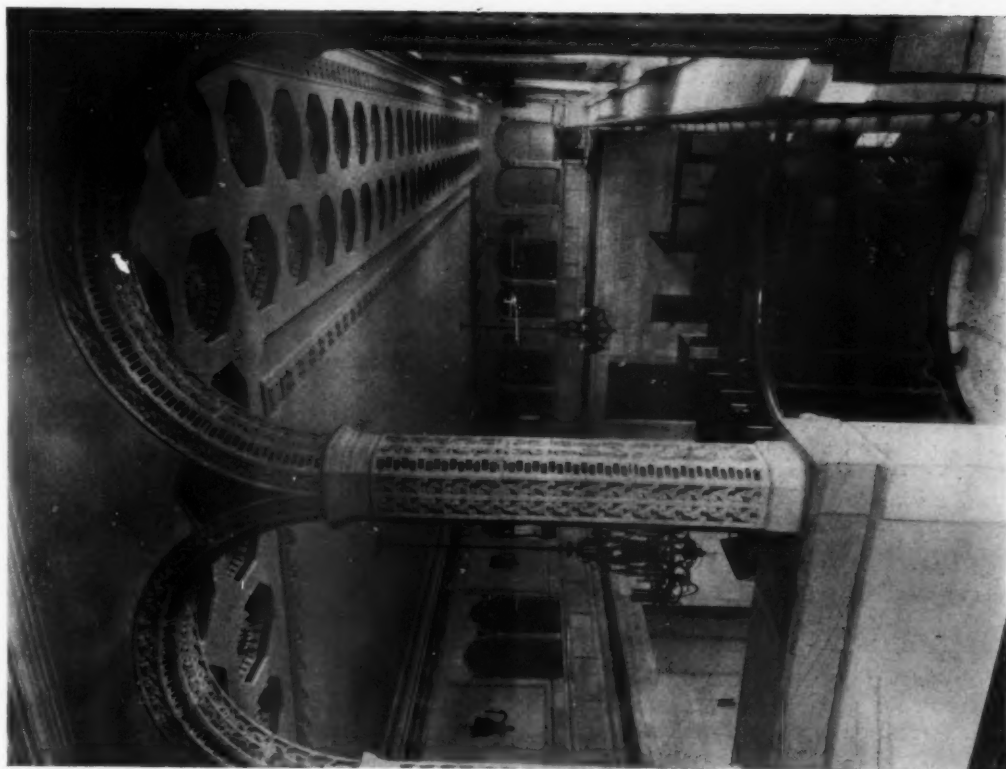
TEXTURED WALLS ARE IN THOROUGH HARMONY WITH THE CHARACTER OF THE OTHER MATERIALS EMPLOYED



Photos by T. M. Fisher

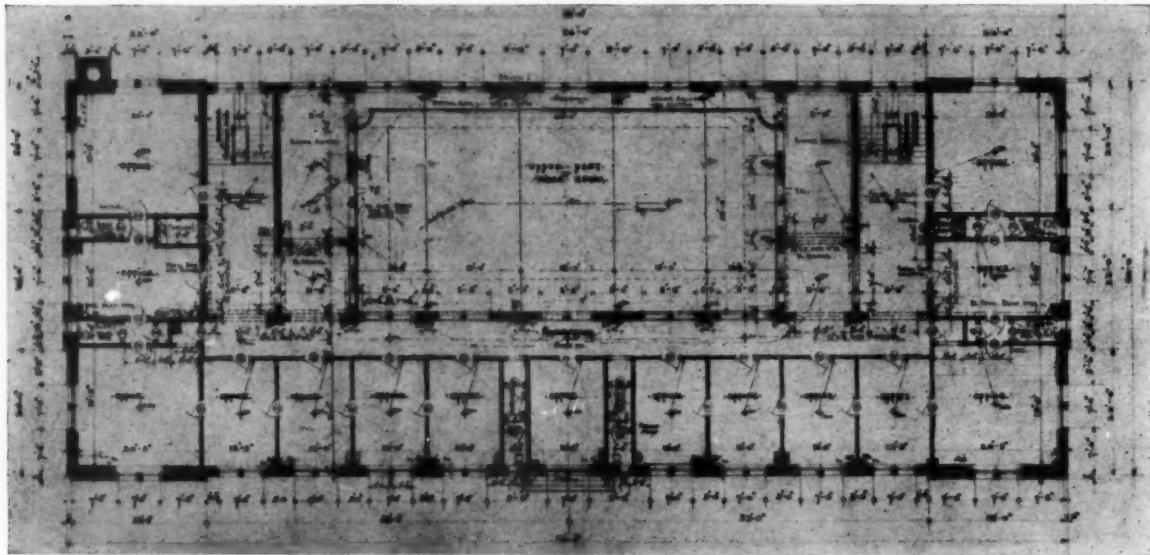
CAPITOL LIFE INSURANCE BUILDING, DENVER, COL.

HARRY J. MANNING, ARCHITECT



Photos by T. M. Fisher

CAPITOL LIFE INSURANCE BUILDING, DENVER, COL.
HARRY J. MANNING, ARCHITECT



SECOND FLOOR PLAN

CAPITOL LIFE INSURANCE BUILDING, DENVER, COL.

HARRY J. MANNING, ARCHITECT

THE CARE OF OAK FLOORS

ARCHITECTS are often called upon to instruct clients on the proper method of caring for oak floors. The beauty of an oak floor may easily be perpetuated by adhering to certain simple rules. It might not be out of place to list here certain advice which it would be well to follow:

In the first place, never use water, oil, kerosene, turpentine, soap or other alkaline cleansing agents.

If water has been spilled upon the floor and it has turned white in places, moisten a soft cloth with a little alcohol and lightly rub the spots, which should immediately disappear. Do not repeat this operation too often, however, or the finish will be entirely removed. Shellaced floors sometimes take on a clouded or grayish appearance due to dampness in the air. This condition can usually be greatly improved by the same treatment described above. If the finish has become so dirty that it is necessary to remove it entirely, first scrub the floor with wood alcohol and then bleach it with oxalic acid—never use lye as it turns the wood black and ruins the surface permanently. After all moisture has evaporated the original finish may be applied.

If the finish has become badly worn, thoroughly scrub it with a brush and Sapolio and water (never flood the floor). After it has dried out, apply a thin coat of varnish; or in case time cannot be allowed for the varnish to dry, wax may be substituted. Do not use shellac on top of old varnish or varnish on top of shellac.

Waxed floors should be dusted daily with a broom covered with flannel. Keep a can of wax on hand, and should the finish become worn in the doorways or elsewhere, apply a thin coat, rubbing well into the wood. Allow the wax to dry for one hour and then polish thoroughly. Before rewaxing the floor, scrub it thoroughly with turpentine and a piece of cheesecloth.

In finishing the floor, either wax or varnish may be used. The wax finish is preferred by many, due to its economy and ease in renewing spots that show wear.

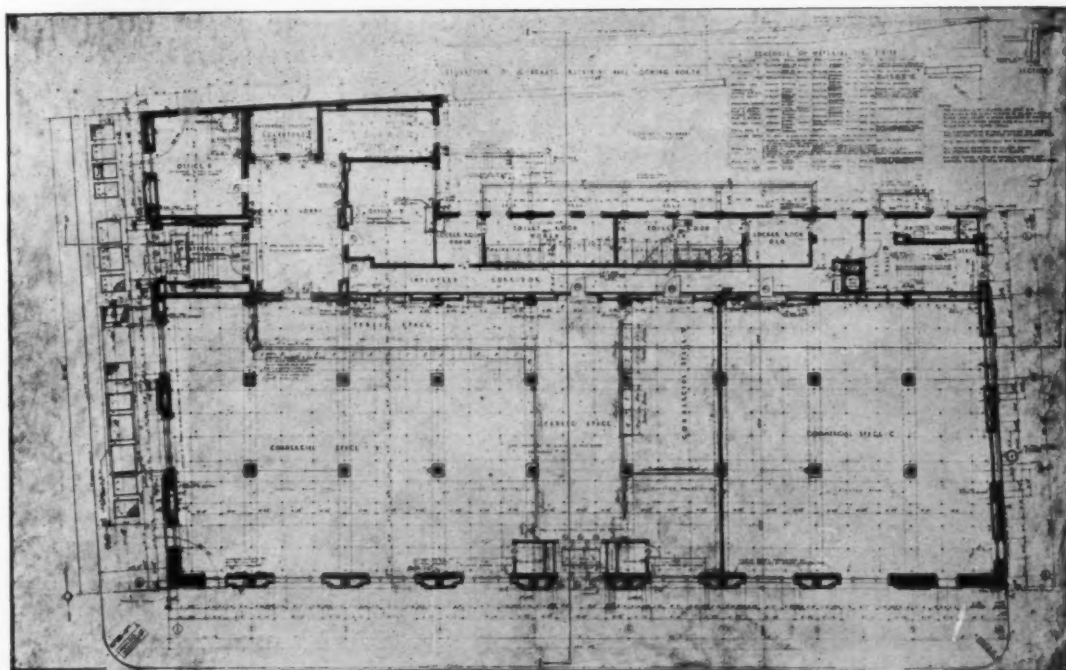
The best method of applying the wax is to take cheesecloth and double it, then fold into a sort of bag. Put a handful of wax inside and go over the floor thoroughly. The wax works through the meshes of the cheesecloth and coats the floor evenly. After drying for about 20 minutes, it is ready for polishing. Rub to a polish with a weighted floor brush, first across the grain of the wood, then with it. Then place a piece of woolen felt under the brush to give the finishing gloss. After waiting an hour a second coat of wax should be applied in the same manner and rubbed to a polish.

Varnish finish is more expensive than wax, but it gives a very hard surface which at the same time is elastic. One or two coats should be applied after the paste filler.

When a high-class finish is not desired, an economical one may be obtained by the use of light flooring oil. It serves as a filler as well as a finish.



Photo by Ellison



MICHIGAN BELL TELEPHONE COMPANY BUILDING, GRAND RAPIDS, MICH.
SMITH, HINCHMAN & GRYLLS, ARCHITECTS

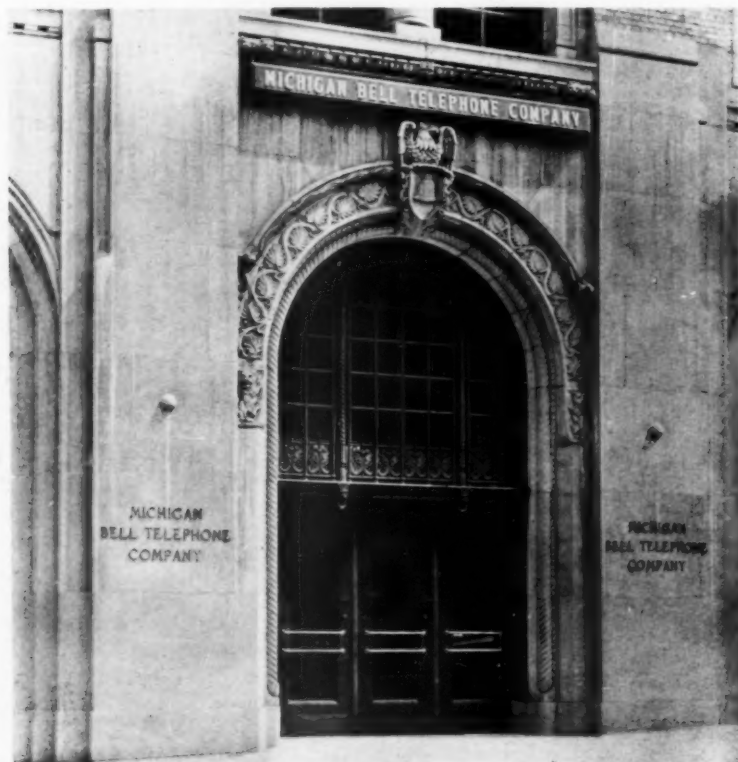
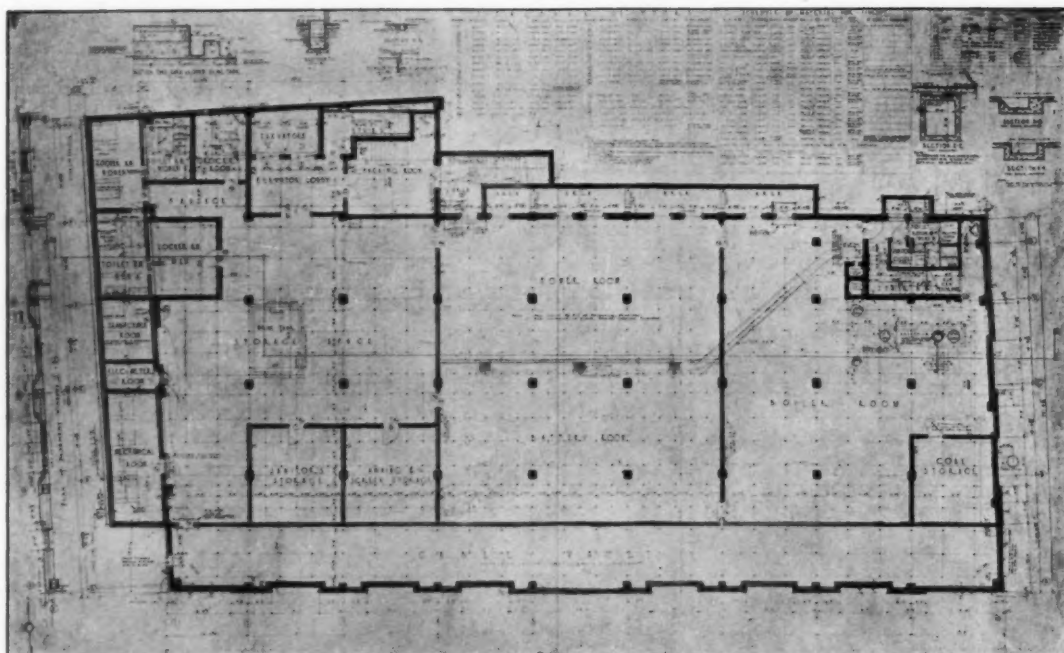


Photo by Ellison



MICHIGAN BELL TELEPHONE COMPANY BUILDING, GRAND RAPIDS, MICH.
SMITH, HINCHMAN & GRYLLS, ARCHITECTS

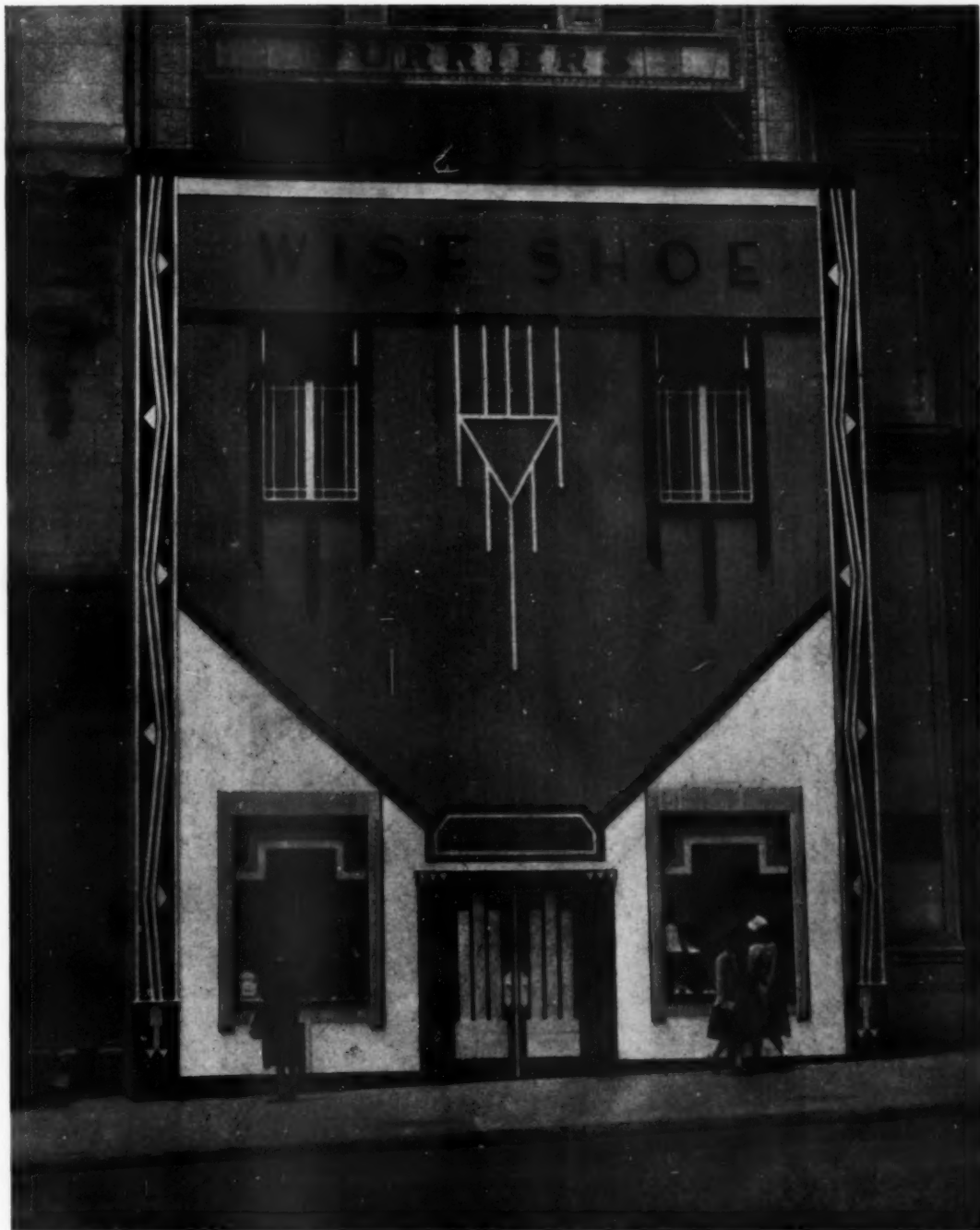


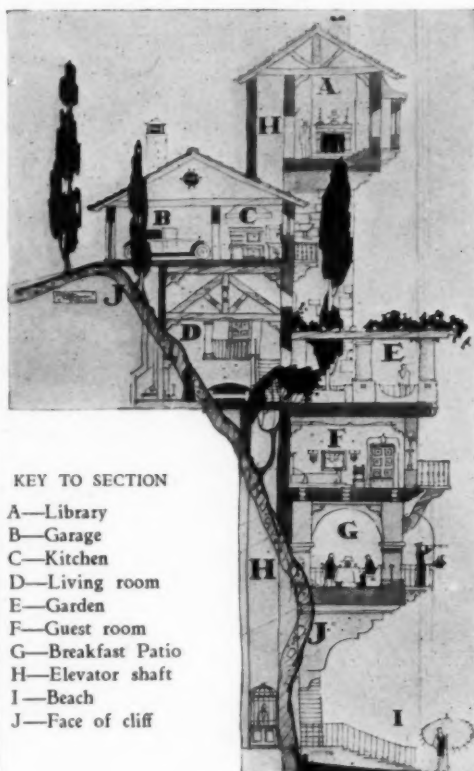
Photo by Van Anda

AN INTERESTING AND UNUSUAL TEMPORARY SHOP FRONT IN NEW YORK, CONSTRUCTED ENTIRELY OF WOOD AND PAINTED IN VARIOUS COLORS. THE DESIGN SUGGESTS THAT THE PERMANENT FRONT WHICH IS CONCEALED IN COURSE OF CONSTRUCTION IS TO BE MODERNISTIC IN CHARACTER. THIS IS A RELIEF FROM THE COMMON AND UGLY TEMPORARY FRONTS SO GENERALLY EMPLOYED AND OFFERS AN IDEA WHICH ARCHITECTS MIGHT CONSIDER WITH BENEFICIAL RESULTS

ELIAS ROTHSCHILD & COMPANY, DESIGNERS

A BUILDING ON THE FACE OF A CLIFF

INFLUENCED somewhat by the architecture of houses that line the Swiss and Italian lakes and the shores of the Mediterranean, a house has been designed by William Cameron Menzies for Douglas Fairbanks and his wife, Mary Pickford, at Solana Beach, San Diego County, Calif., which might be described as a cantilever structure, supporting itself against the sheer face of a cliff by its own weight. Reversing the customary order of arrangement, the garage will occupy the top floor on a level with the highway, and cars will drive directly into it from the road. Beneath it will be the living room, dining room, kitchen and incidental rooms as pantry, and so forth, and on a still lower level is a floor of bedrooms. The house will have windows on three sides. Steps will lead from the beach to a patio, and surmounting the entire building will be an observation tower. At high tide boats will be able to moor at the landing on the beach. The accompanying illustrations are reproduced from a perspective sketch and a sectional drawing of the house, rendered by the architect.





ENGINEERING AND CONSTRUCTION

ENGINEERING FEATURES OF THE UNIVERSITY
OF MINNESOTA FIELD HOUSE

By EDWARD S. NELSON, C. E.

Of the office of C. H. Johnston, Architect

THE new Field House recently completed for the University of Minnesota at Minneapolis is the second recent large structure made necessary by the rapid growth of the University. The Field House, a structure 440 feet long, 236 feet wide and 100 feet high in the center, will provide ample space for indoor workouts the year around for football, baseball and track events. It will also provide for the large attendance at basketball games and indoor space for military drill.

The Field House is on the main campus across from the large Memorial Stadium erected three years ago; and with the Stadium, Minnesota's athletic plant takes rank with the best in the Western Conference and compares favorably with the best in the college world. The construction is financed out of proceeds of athletic events, without cost to the taxpayers of the State, the bulk of funds coming from football proceeds. The total cost, exclusive of the property, was \$630,000.

The building has enclosing walls of brick. The face brick, and the cut limestone trim was selected to match that on the Stadium. The end walls, 104 feet high, terminate in a segmental arch. The side walls are 53 feet high. The foundations are of concrete. The segmental shape roof is supported on 14 three hinged arch trusses, spaced approximately 30 feet apart. On each side of the building on the interior, double decked balconies, supported on the main steel trusses, extend out from the side walls approximately 35 feet. At the present time 9 bays of balconies are built on each side. At one end of the building there is a full width balcony 32 feet deep, on the same tier as the lower side balcony, supported on columns.

The present permanent seating capacity, approximately 9,500, can be increased to 14,000 by the use of temporary circus type seats and chairs placed on the ground for basketball games



PIN CONNECTION AT BOTTOM OF TRUSS

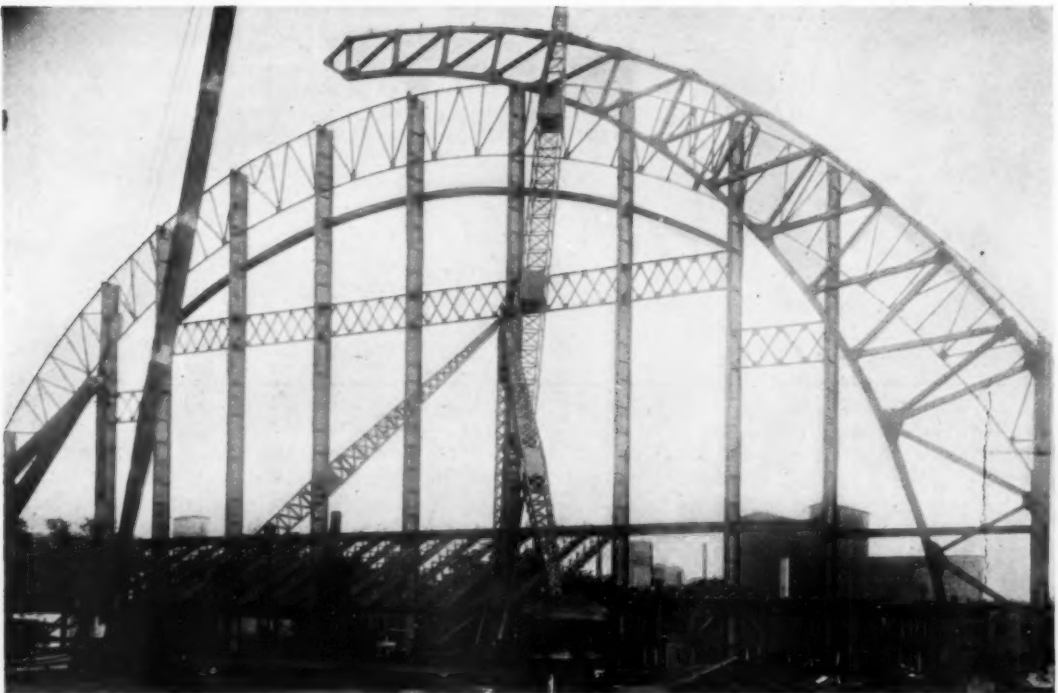
around the basketball court near one end of the building. The ultimate permanent seating capacity when the balconies are completed will be approximately 15,000, which can be increased to upwards of 30,000 by extra portable seats depending upon the nature of the entertainment.

A cinder track is planned around the interior at the front edge of the lower balcony which can be made one-quarter mile long by lapping the finishing and starting points on one long side.

The heating system is the unit type with steam coil chests, fan blowers and motors located under the upper balconies with metal ducts extending up under the roof to carry and diffuse the heat to all parts of the building. Steam heat from a central plant will maintain a temperature of 60 degrees F. when 15 degrees below zero outside.

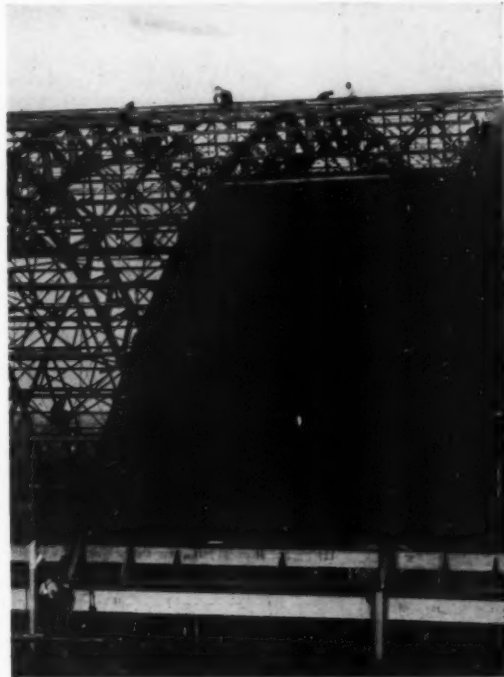
At one end of the building under the balcony are located on the first floor, the entrance lobby, ticket offices, locker rooms, each with large showers and toilets, and two public toilets for men. Four large apparatus storage rooms and two women's toilet rooms are located on the second floor. The construction throughout is of plain and reinforced concrete, brick and steel, with wood used only for the floors and the plank seats in the balconies.

The large trusses which carry the roof and balconies have a pin point span of 220 feet and

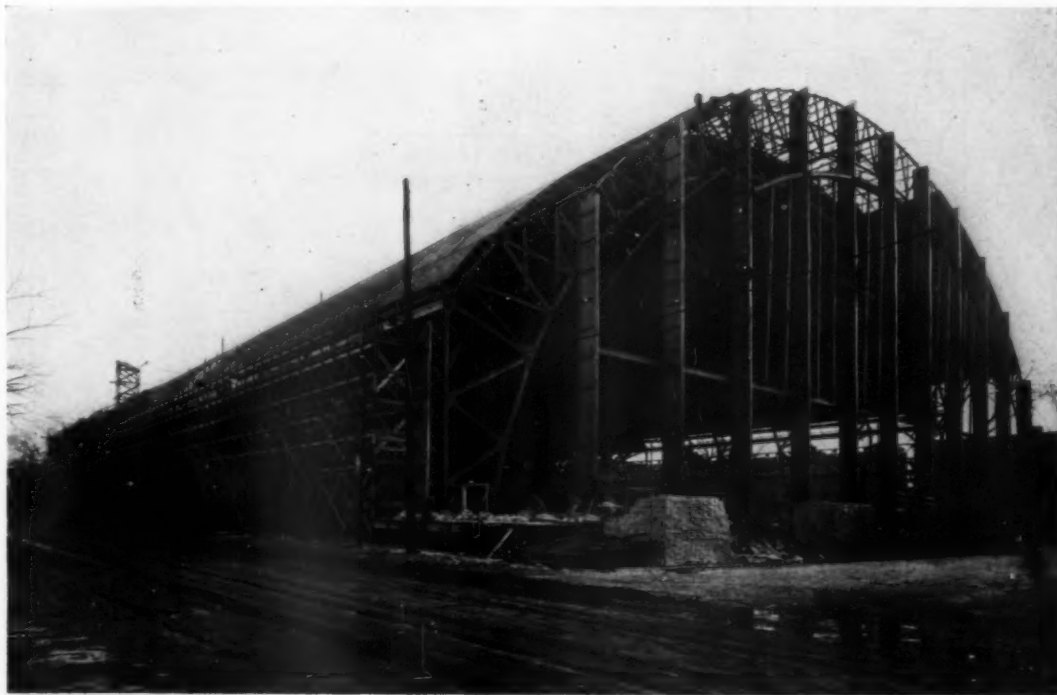


VERTICAL PLATE GIRDERS OF END WALLS ARE DESIGNED TO RESIST EXPANSION OF 446 FT. STEEL FRAME

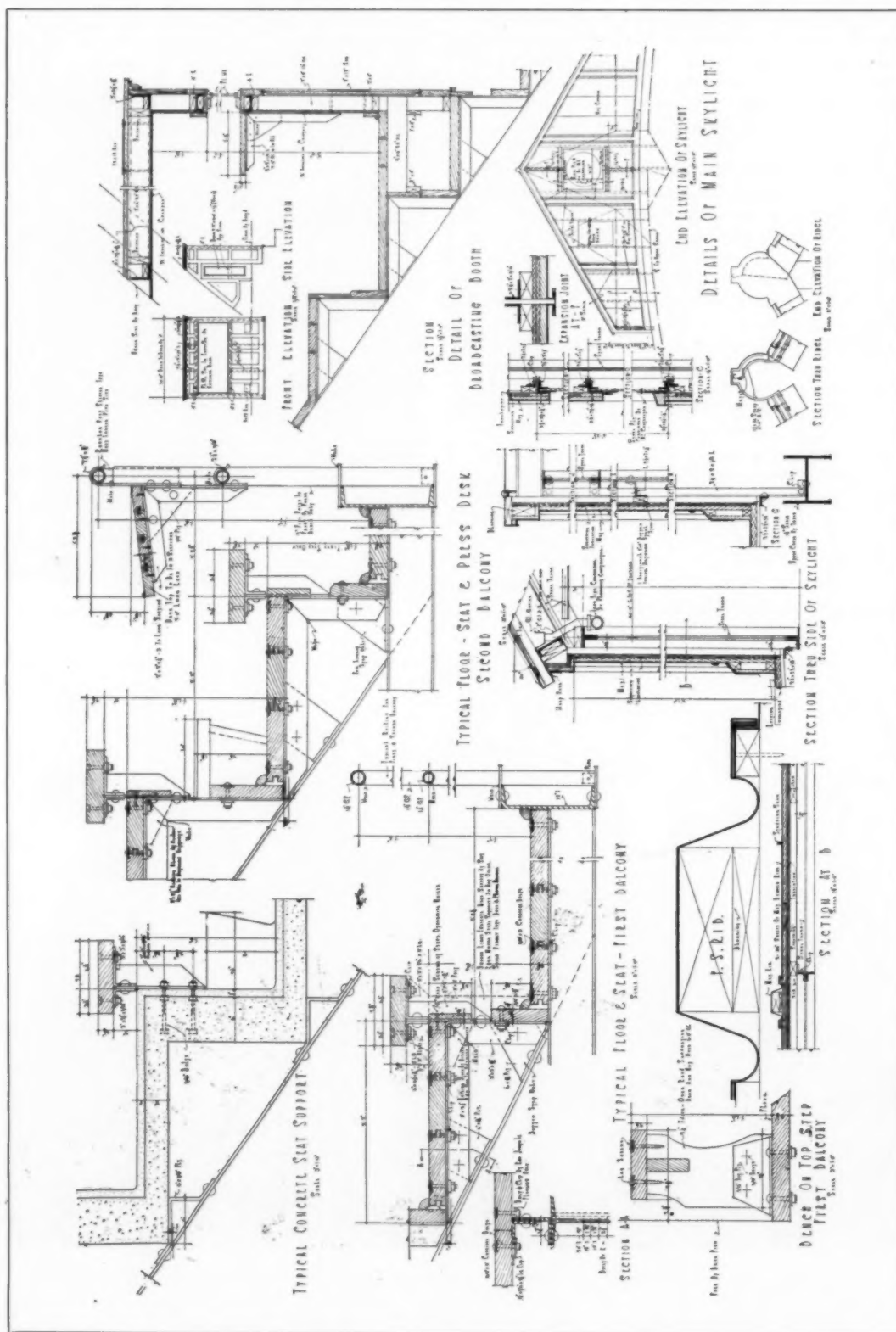
a vertical dimension from bottom pin to top pin of 100 feet. The radii of the curvature of the chords are 138 feet for the upper and 105 feet for the lower. The back post of the truss is vertical to a height of about 43 feet above the lower pin. All chord and web members are of Bethlehem shapes, using H, G and I sections varying from a minimum 12 inch I 28 ½ lbs. to 12 inch H 119 ½ lbs. In combining the three sections a large selection was possible to suit the stresses. A uniform 12 inch connection simplified gusset plate joints, and where sections had a depth of a fraction of an inch over 12 inches, fillers were used under the gussets. The chords were made up of two, three and four panel lengths, depending upon the change in section (panel lengths 10 feet and 12 feet) and the curvature of the chords was produced by a cold "kink" bend in the chord at the panel point. The majority of the struts in the truss are placed on the radial lines of the top chord. The top pin is 4 ½ inches in diameter and lower pins 7 inches in diameter. The bases are of cast steel bolted to concrete footings which are 12 feet square and 4 feet deep. The horizontal thrust on the lower pins is counteracted by tying them together by means of double 12 inch 30 lb. channels placed 3 feet below the ground and encased in concrete. The double decked side balconies are supported at



STEEL PLATE ROOF COVERING AND PURLINS

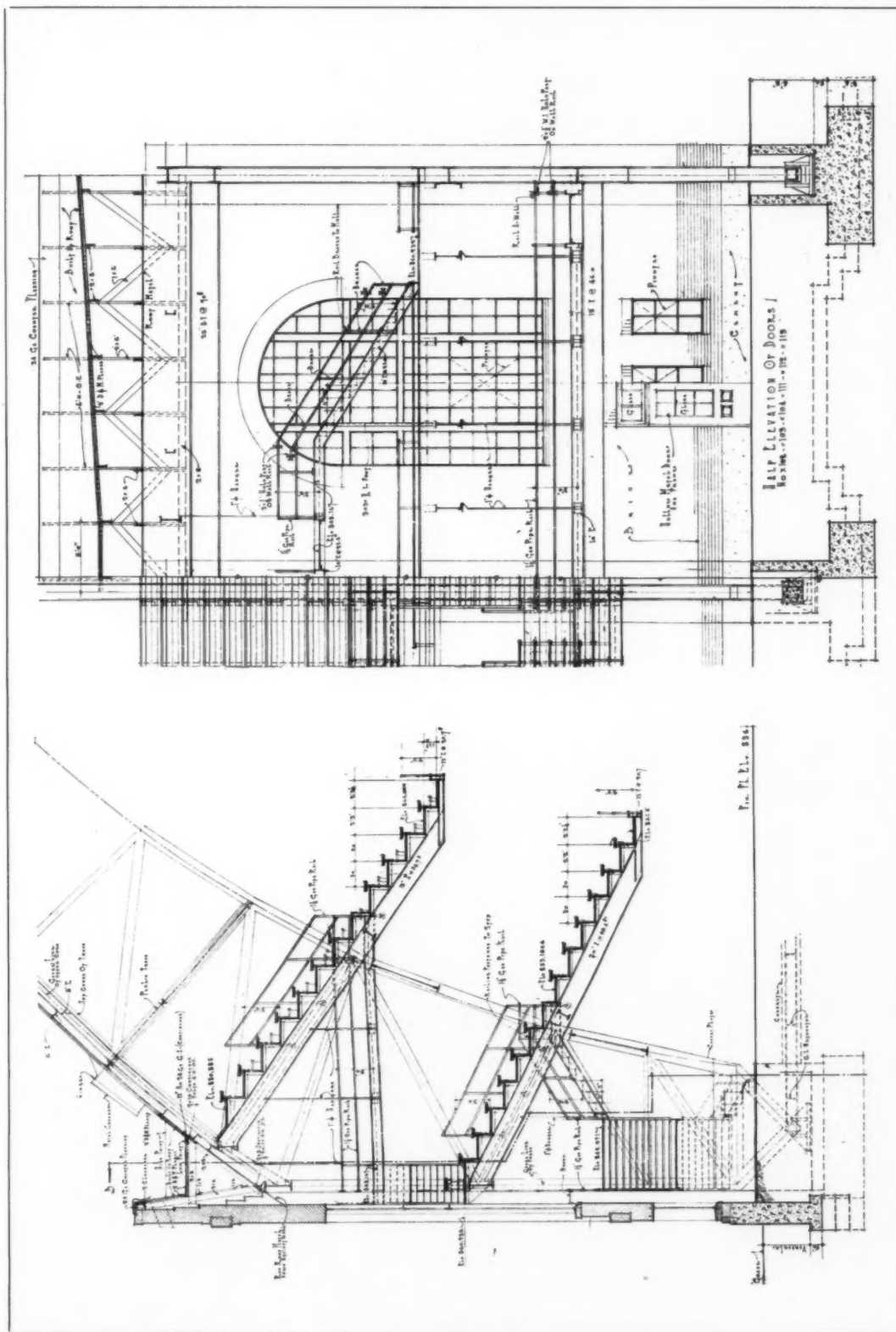


A STUDY IN BUILDING ANATOMY. BRICK ENCLOSURE WALLS PARTLY IN PLACE



DETAILS OF THE UNIVERSITY OF MINNESOTA FIELD HOUSE

C. H. JOHNSTON, ARCHITECT



TYPICAL SECTIONS OF THE UNIVERSITY OF MINNESOTA FIELD HOUSE

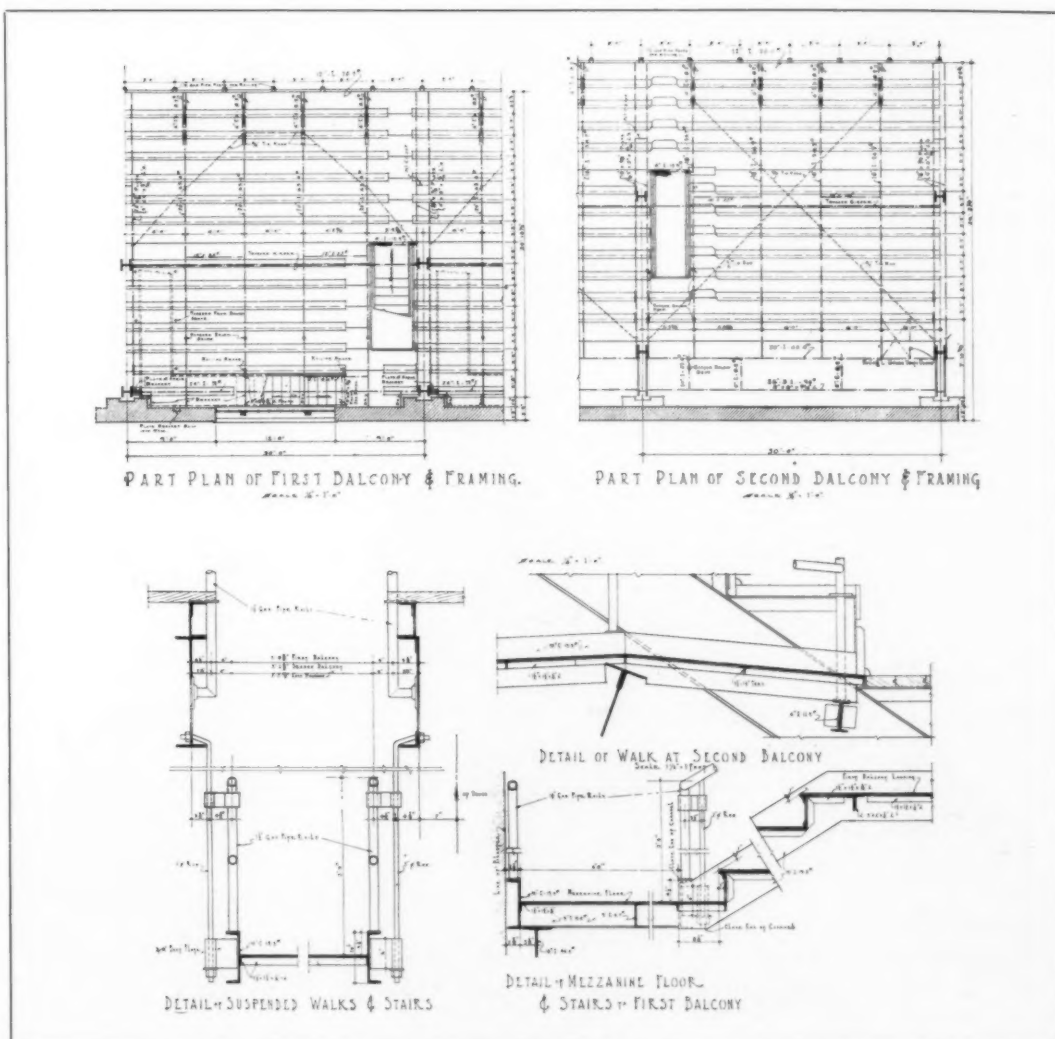
C. H. JOHNSTON, ARCHITECT

ness of insulation was placed over the steel decking and mopped on solid. The insulation was then mopped on top and covered with a layer of 15 lb. felt. Another mopping was then applied and black slate surfaced asphalt rolled roofing felt 32 inches wide was applied with a 17 inch selvage, 15 inches exposed. The selvage was solid mopped. Every layer of the surface covering before the next layer was applied, was fastened through the insulation and through the steel decking by sheet metal worker's steel screws and 1 1/2 inch metal washers, using one to each five square feet. The holes in the steel decking were made by a steel punch driven through the felt, insulation and steel decking just before inserting the screw. Asphalt saturated felts and asphalt moppings were used. The screwing

of the roof to the steel decking was necessary to guard against sliding of the roofing and insulation on the curved parts during warm weather.

It is believed this is the first time this type of insulated steel deck roof construction has been used on a building of this kind. Its total dead load per square foot is only 6 lbs. The heat transmission value per hour for one square foot of this roof construction is about .26 B.T.U. Where the curved roof intersects the side walls a built-up 5 ply pitch and gravel roof was laid on the plank framing, which forms the gutters about 5 feet wide to drain the high roof.

The roof was designed for a horizontal wind pressure of 30 lbs. per square foot on the steepest parts to 17 1/2 lbs. on the flat part, of which 10



UNIVERSITY OF MINNESOTA FIELD HOUSE

C. H. JOHNSTON, ARCHITECT

lbs. of the latter was an allowance for sleet and ice. The snow load was figured at 40 lbs. per square foot on the flat part, and reduced to sleet and ice allowance of 10 lbs. on the steepest part.

The main trusses were designed for all possible combinations of balconies, unloaded and loaded, and with all possible combinations of snow and wind loads at the same time. The stresses used in the design of the steel work were the latest recommended specifications of the A.I.S.C., except on shop rivets bearing was 25,000 lbs. and single shear 12,000 lbs. Field rivets were figured as 80 per cent. of above. Rivets $\frac{7}{8}$ inch in diameter in $\frac{15}{16}$ inch holes were used in the large trusses and $\frac{3}{4}$ inch rivets in $\frac{13}{16}$ inch holes elsewhere.

The high end brick walls are stiffened by steel columns of the plate girder type of 3 feet depth longitudinally with the building and of varying height according to the position and partly embedded in the brick wall, supported and anchored to the concrete foundation at the bottom and to steel wall trusses at the top, and curved at the same radius as the top of the wall. These trusses are connected to the main arch trusses by deep purlin trusses. These columns are also braced together about midheight with lattice trusses.

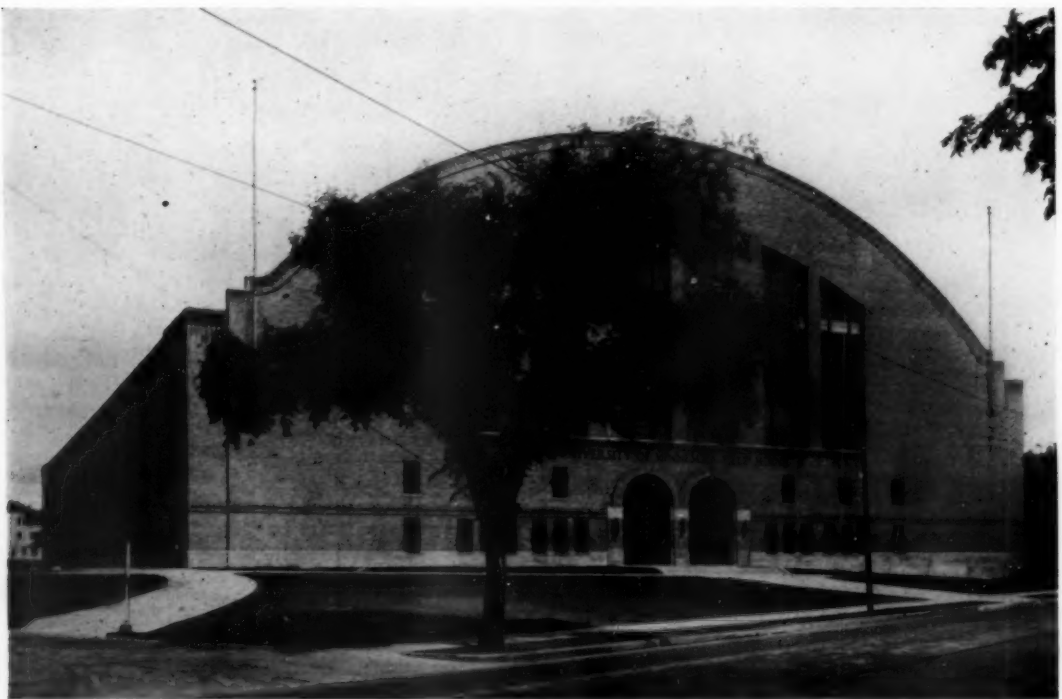
Because the steel framing of the roof was riveted together for its full 440 feet length provisions for expansion and contraction from temperature changes were made by weatherproof expansion key

joints in the four corners of the enclosing brick walls. It is planned that the embedded columns and trusses in each end wall will so stiffen it as to allow it to hinge about its base in one unit. In addition three weatherproof key joints were distributed full height in the long brick side walls.

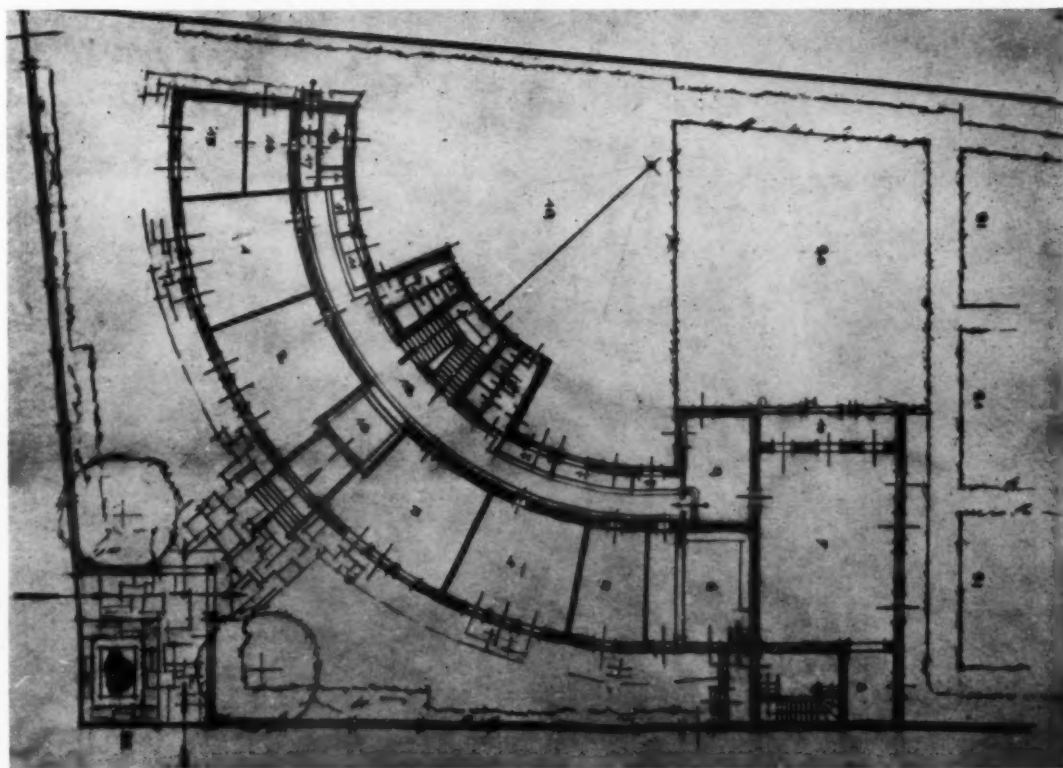
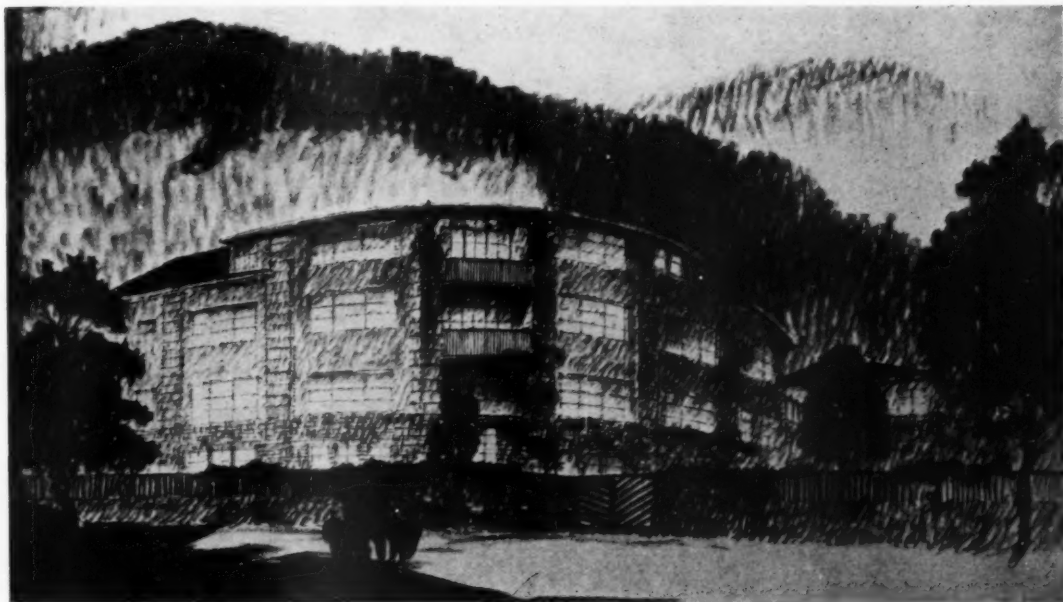
The shop paint on the steel work was a sublimed blue lead made from a formula prepared by the architect. The pigment was composed of sublimed blue lead (basis blue sulphate), zinc oxide (lead free American process), American Vermillion (basic lead chromate), and asbestine. The vehicle was raw linseed oil, Spar varnish, Japan drier and U. S. Government Specification turpentine substitute. Of the whole 55 per cent. was pigment and 45 per cent. vehicle. The paint covered well and resisted abrasion.

The contract for the building was let on May 10, 1927, and was ready for use February 4, 1928. The first truss was erected on August 27th and the last truss erected on October 20th. Each truss weighs 60 tons, and the total steel tonnage for the building was 2,300 tons.

The Architect for the Field House was C. H. Johnston, St. Paul. The writer laid out and supervised the structural design, and details were worked out by C. Warren Durr, office engineer. W. B. Marschner was the Architect's superintendent in charge on the job. The general contractor was the Madsen Construction Co.



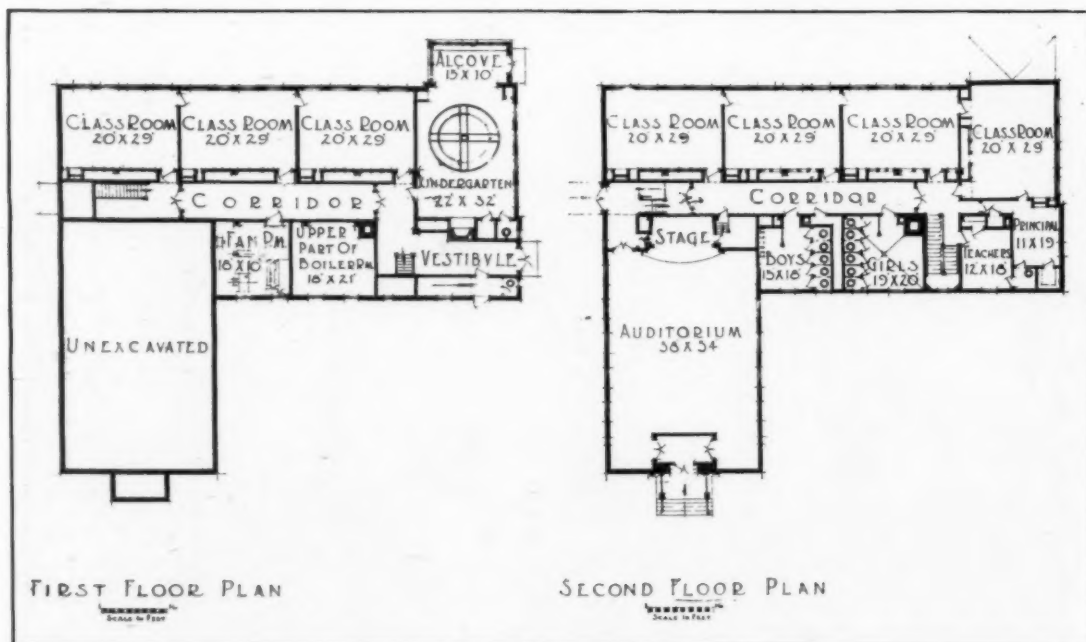
UNIVERSITY OF MINNESOTA FIELD HOUSE—C. H. JOHNSTON, ARCHITECT



DESIGN AWARDED FIRST PRIZE, PUBLIC SCHOOL COMPETITION, LILIENFELD, AUSTRIA

RUDOLF FRASS, ARCHITECT

THIS SCHOOL IS NOW UNDER CONSTRUCTION. THE CURVED PLAN WAS ADOPTED TO SECURE MAXIMUM LIGHT IN CLASS ROOMS



MYSTIC SCHOOL, WINCHESTER, MASS.

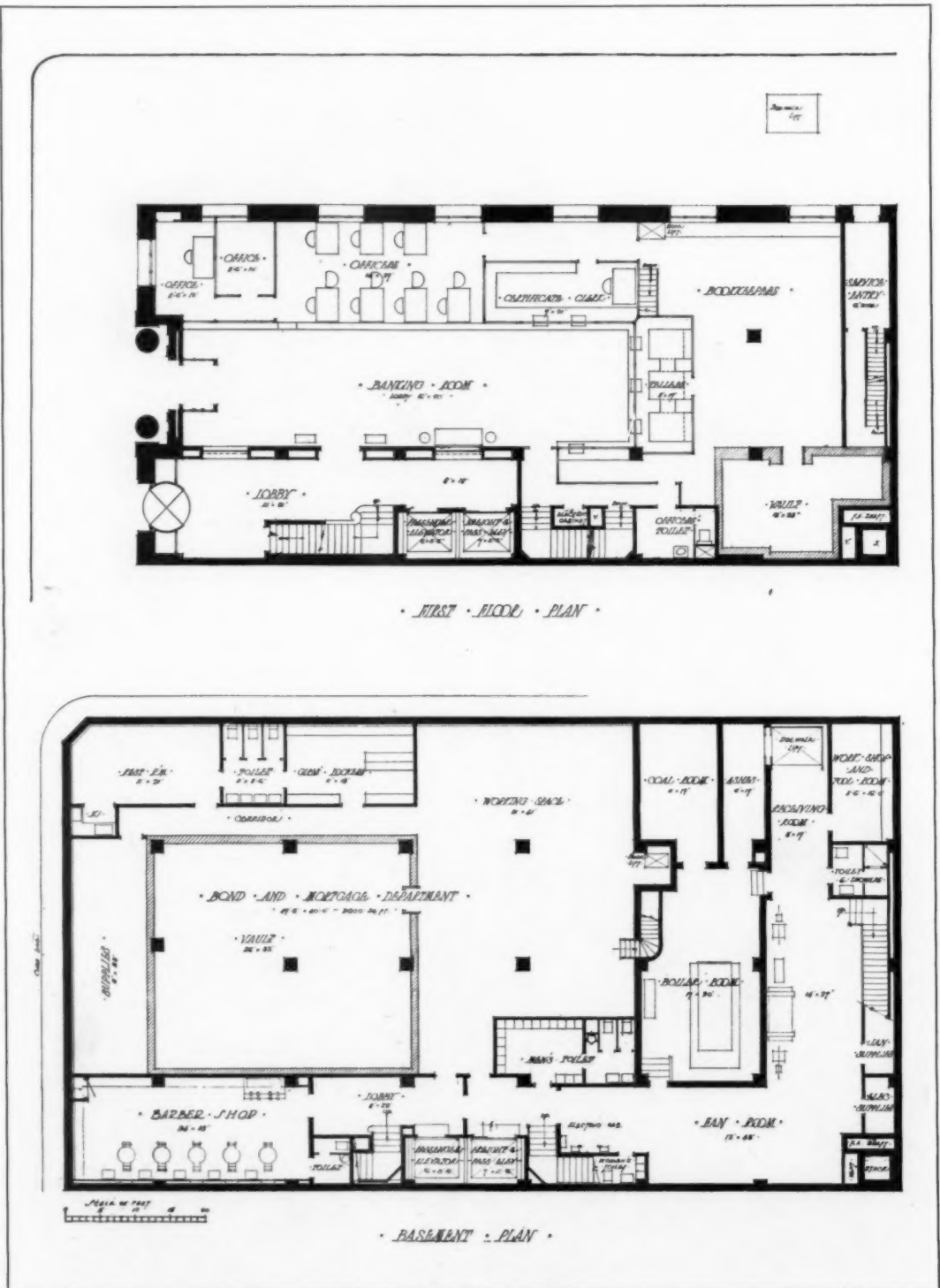
JAMES H. RITCHIE & ASSOCIATES, ARCHITECTS



Photo by Ellison

STANDARD SAVINGS & LOAN ASSOCIATION, DETROIT, MICH.

GEORGE D. MASON & CO., ARCHITECTS



STANDARD SAVINGS & LOAN ASSOCIATION, DETROIT, MICH.

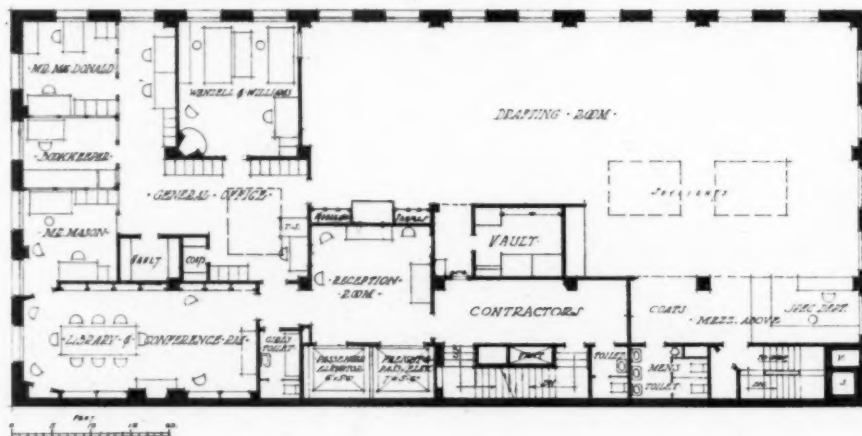
GEORGE D. MASON & CO., ARCHITECTS

(See other plans on following pages)



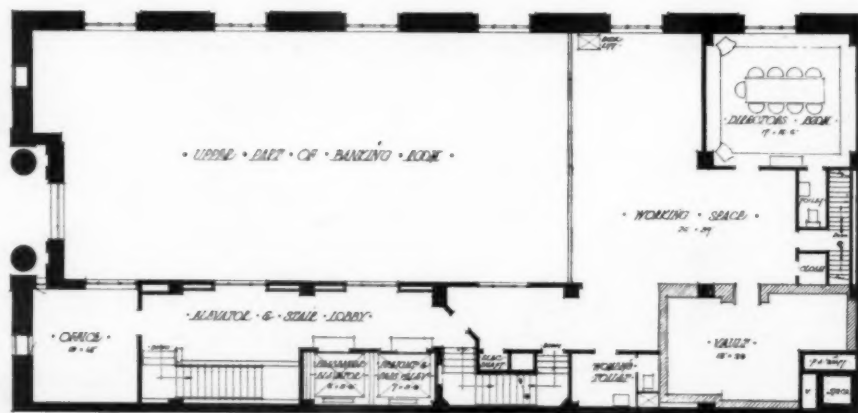
STANDARD SAVINGS & LOAN ASSOCIATION, DETROIT, MICH.
GEORGE D. MASON & CO., ARCHITECTS

Photos by Ellison



• TOP FLOOR PLAN •

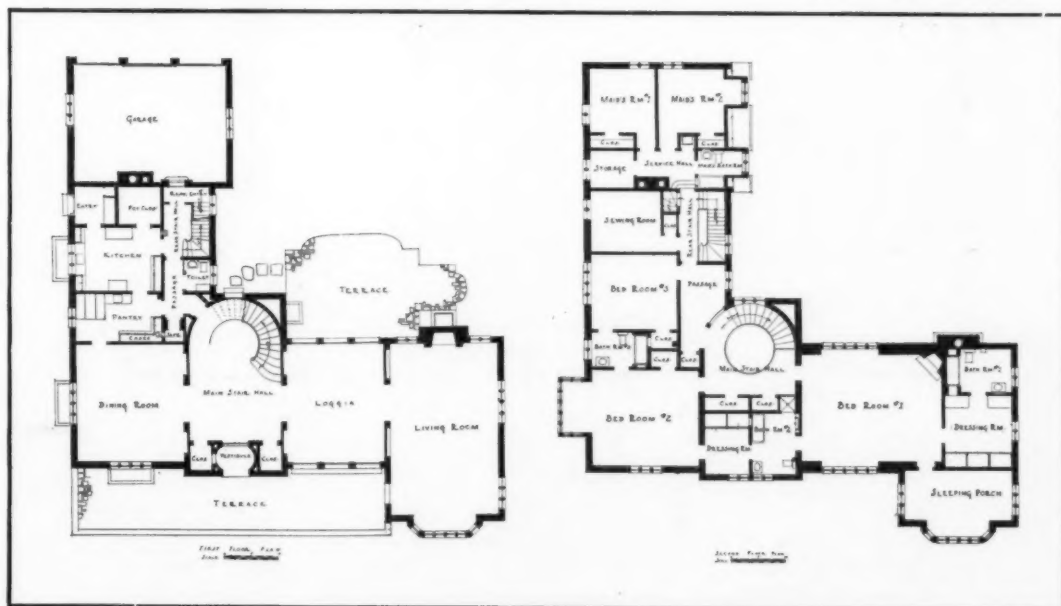
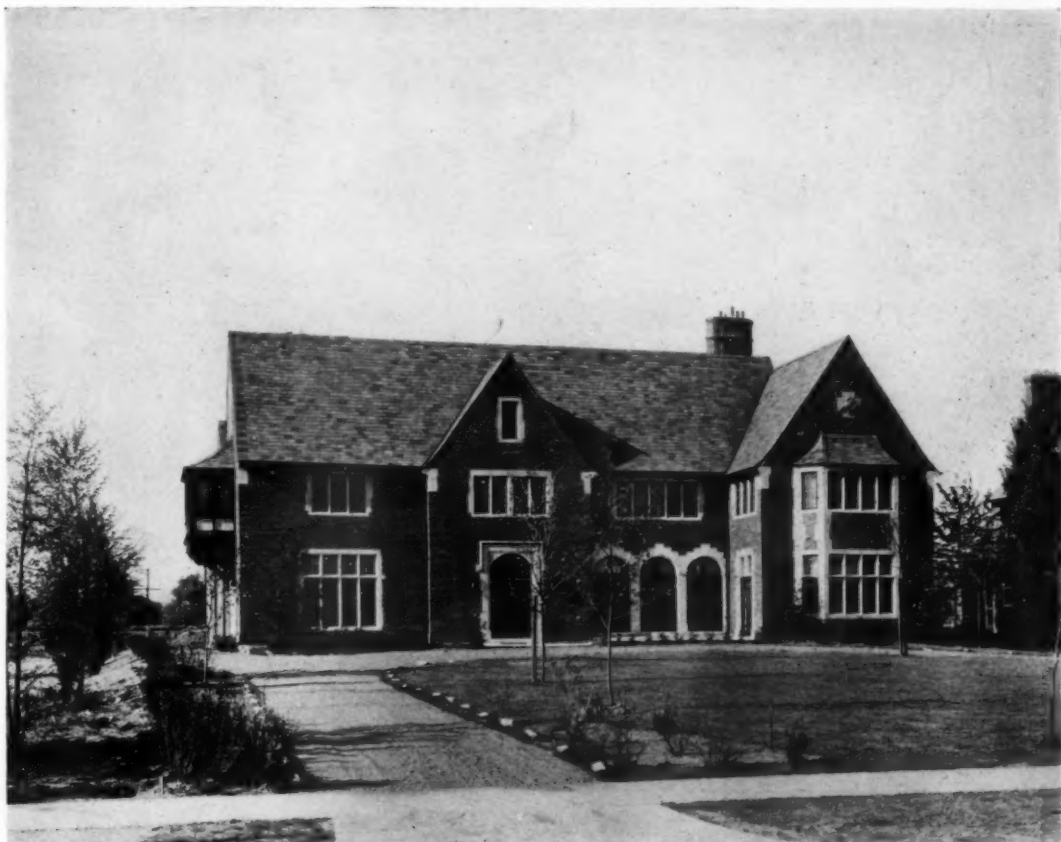
PROPOSED OFFICE LAYOUT FOR GEORGE D. MASON & CO., ARCHITECTS



• FIRST MEZZANINE FLOOR PLAN •

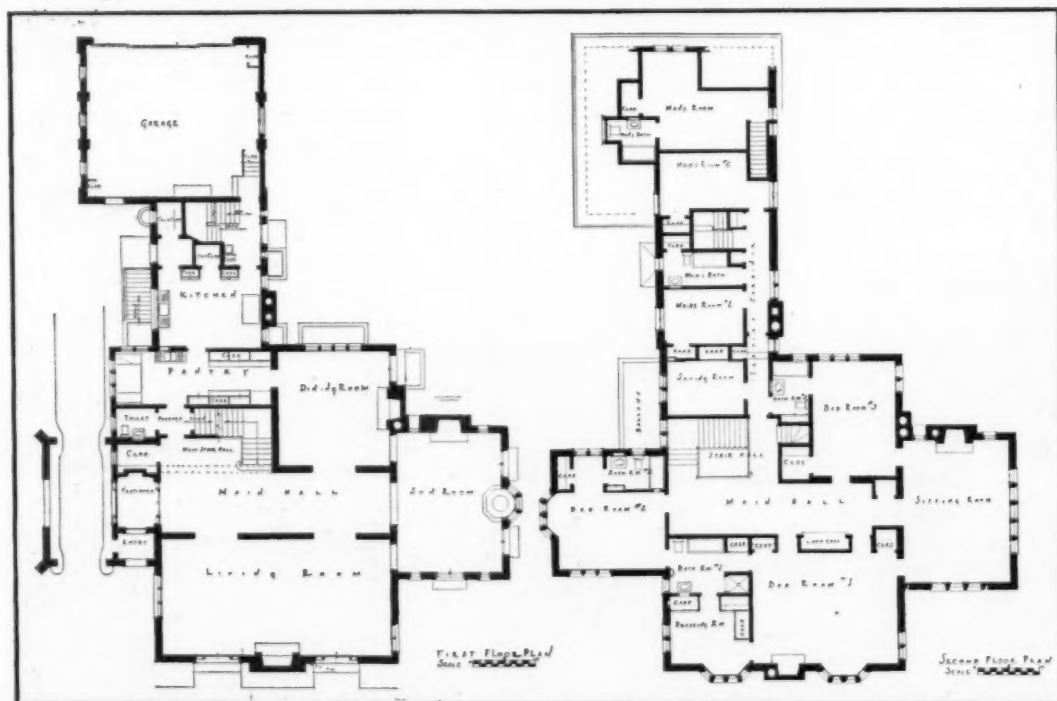
STANDARD SAVINGS & LOAN ASSOCIATION, DETROIT, MICH.

GEORGE D. MASON & CO., ARCHITECTS



HOUSE OF LOUIS M. MONHEIMER, ST. LOUIS, MO.

MARITZ & YOUNG, INC., ARCHITECTS



HOUSE OF JOHN J. O'FALLON, ST. LOUIS, MO.

MARITZ & YOUNG, INC., ARCHITECTS



SKETCH OF HOUSE IN CLEVELAND, OHIO—CHESTER N. LOWE, ARCHITECT



SKETCH OF HOUSE IN CLEVELAND, OHIO—CHESTER N. LOWE, ARCHITECT



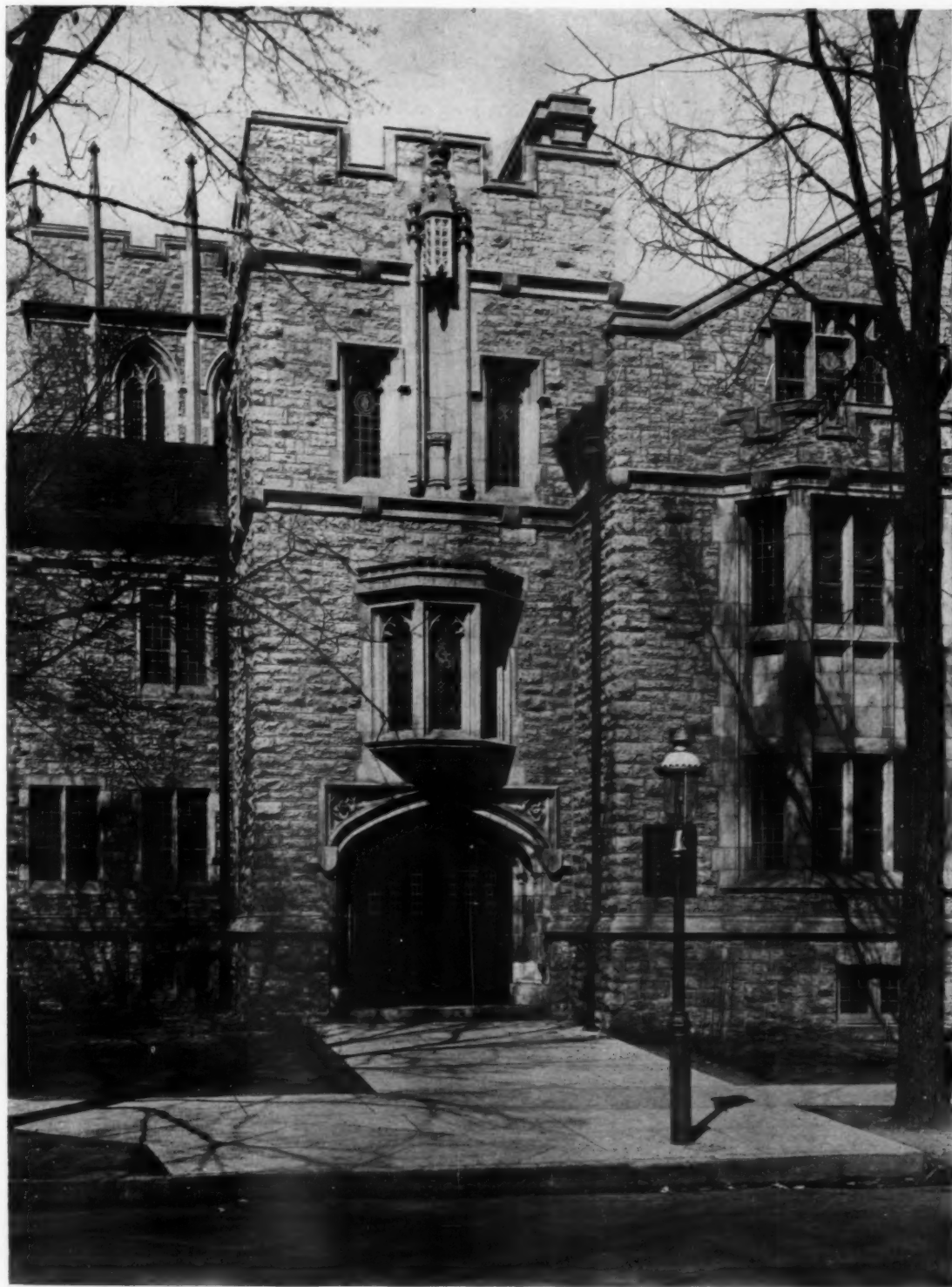
HOUSE OF SENATOR WESTELL, WHITE PLAINS, NEW YORK—CHARLES A. PLATT, ARCHITECT

(From the original sketch by Norman R. Moore)



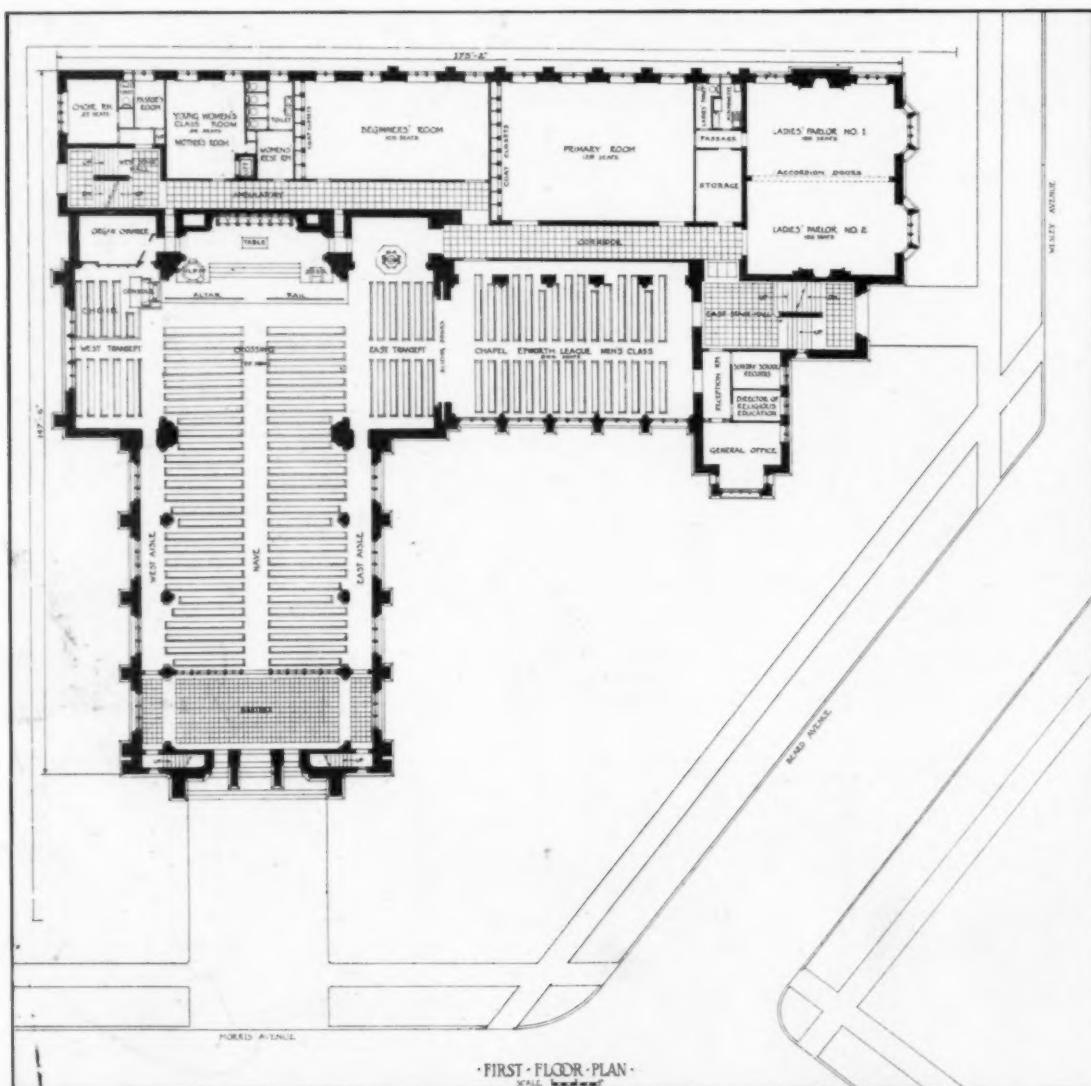
HOUSE IN SCARSDALE, NEW YORK—HAROLD BROWN, ARCHITECT

(From the original sketch by Norman R. Moore)



CENTRAL PARK M. E. CHURCH, BUFFALO, N. Y.

CHAS. W. BOLTON & SON, ARCHITECTS



CENTRAL PARK M. E. CHURCH. BUFFALO, N. Y.

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STUDY FOR A SUBURBAN CHURCH

MILLER & REEVES, ARCHITECTS

Rendering by J. E. Myers

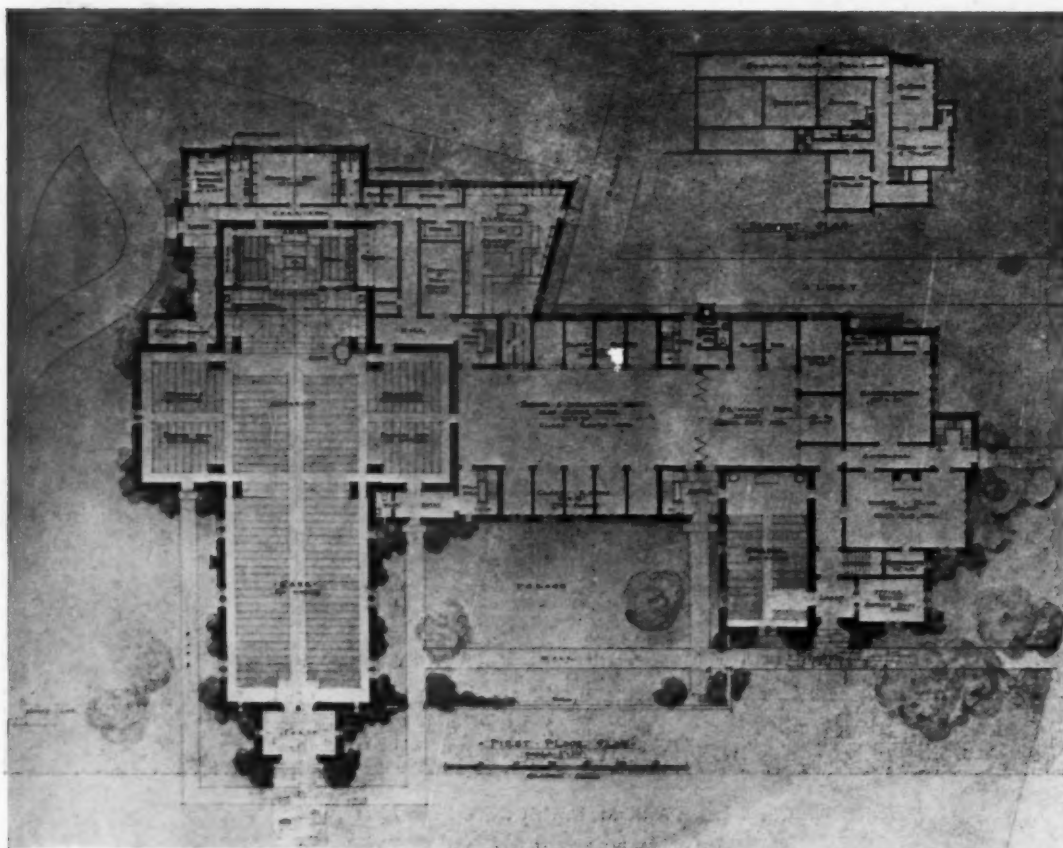




Photo by Peyser & Patzig

HOUSE OF JOSEPH McDONOUGH, NEWARK, N. J.

SIMPSON & ROLSTON, INC., ARCHITECTS

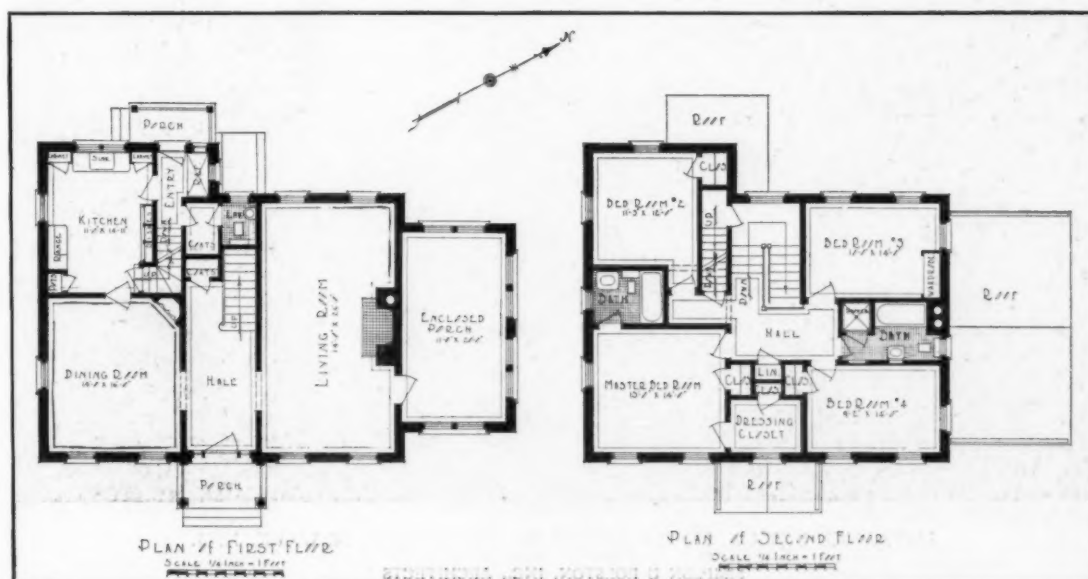




Photo by Peyser & Patzig, Inc.

ENTRANCE DETAIL, HOUSE OF JOSEPH McDONOUGH, NEWARK, N. J.
SIMPSON & ROLSTON, INC., ARCHITECTS

... as convenient as your modern kitchen



Model H-5 provides 5 cubic feet of food storage capacity and makes 48 ice cubes. Well-proportioned, yet compact. 56" high; 26½" wide, 23½" deep. Ideal for apartment use.



YOU'LL find Model H-5 Servel as convenient in arrangement as your latest kitchen. Now available in colors to harmonize with any modern kitchen setting. The lowest shelf of Servel is comfortably high. Ice-cube trays right in easy reach. Flat, clear top, for fruit or flowers. Quiet, economical, dependable. Particularly fitted for use where space is at a premium.

SERVEL SALES, Inc. Factory and General Offices: Evansville, Indiana
Administrative Offices: 51 E. 42nd St., New York

OAKLAND
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LOS ANGELES

Specifications of most products advertised in THE AMERICAN ARCHITECT appear in the Specification Manual

TRADE-MARKING AND GRADE-MARKING OF
LUMBER MEET WITH APPROVAL OF
ARCHITECTS

DECISION of the National Lumber Manufacturers Association to embark upon a program of grade-marking and trade-marking of lumber is being welcomed by architects throughout the country, according to Wilson Compton, secretary and manager of the Association. Among the numerous endorsements of grade-marking and trade-marking which have been received at the headquarters office at Washington, D. C., since the directors of the Association recommended the adoption of the practice early in February, expressions of approval from architects are stated to have been prominent.

In grade and trade-marking of lumber architects find the solution of a problem which has frequently been a source of annoyance to them in their relations with lumber dealers and their clients. Architects rarely have the time or the experience to become proficient in the grading of lumber. They are not usually familiar with manufacturers' complicated grading rules, nor should they be expected to be. Heretofore architects have had no ready means of being sure that the lumber delivered on the job was of the grade specified. With a grade-mark, which is the sign of relative quality, and a trade-mark, which is a symbol of the maker's responsibility, stamped on every piece of lumber, architects can assure their clients that they are getting exactly what was specified.

Lumber has been in the past just lumber. With grade-marking and the National trade-marking to be introduced by the National Lumber Manufacturers Association, it becomes a financially guaranteed product, backed by a large organization of lumber manufacturers.

Grade-marking of lumber, already practiced by many manufacturers, becomes more valuable when coupled with National trade-marking; the trade-

mark giving the consumer the assurance that the grade-mark was placed on the lumber with the sanction of a responsible national organization.

The National trade-mark, it is proposed, will signify first of all, that the lumber upon which it is imprinted was manufactured under American Lumber Standards, approved by the U. S. Department of Commerce and the U. S. Forest Service; that it is dry, accurately sized to standard, and carefully manufactured.

The National trade-mark will be available for the use of subscribers to the National Lumber Trade Extension campaign through a license agreement with the National Association. In making reparations for claims under the guaranty, the National Association will act as special agent for the mill concerned and will be reimbursed for all proper claims. Subscribers to the National Lumber Trade Extension fund have been requested to advise the Association as to the extent to which they will be able to furnish lumber marked in accordance with the new program. Formal inquiry is now being made for that purpose.

The nationally organized effort to draw a line of distinction in the lumber market between lumber, well manufactured and uniformly graded under recognized standard rules, and the miscellaneous and uncertain products of inferior manufacture, irregularly seasoned and carelessly graded, has been widely acclaimed as the most progressive step ever taken by the industry for general use of lumber as a building and industrial material.

Architects in various sections of the country, in discussing grade and trade-marking with field men of the Trade Extension Department, state that they will welcome the practice as a solution of lumber difficulties, and that they are prepared to specify grade-marked and trade-marked lumber when it becomes available. Many state that they are already so specifying this material.



CONSTITUTION HALL FOR DAUGHTERS OF THE AMERICAN REVOLUTION, WASHINGTON, D. C.

JOHN RUSSELL POPE, ARCHITECT

TERRA COTTA

for

COLOR AGE

The modern demand for permanent beauty in buildings is readily obtained through the use of COLOR.

Terra Cotta fulfills all the requirements of this new style in architecture. Surface finishes and glazes in all colors for exterior and interior will blend harmoniously with any decorative scheme.

Chart showing various color suggestions will be sent free on request.

NATIONAL TERRA COTTA SOCIETY

19 WEST 44TH STREET

NEW YORK, N. Y.

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MODINE COMPANY ANNOUNCES NEW BRANCH OFFICES

THE Modine Manufacturing Company, Racine, Wisconsin, manufacturers of Modine unit heaters, blast heaters, cabinet, and concealed heaters, announces eight new branch offices recently opened, as follows:

W. B. Irwin Co., 1020 Mercantile Bank Bldg., Dallas, Tex.; Geo. W. Herlin, 401 No. Santa Fe St., El Paso, Tex.; English & Lauer, 1224 S. San Pedro St., Los Angeles, Calif.; Harry K. Mead, Board of Trade Bldg., Portland, Ore.; John B. Groseclose, 206 Builders Exchange Bldg., San Antonio, Tex.; E. H. Goins, 401 Sharon Bldg., San Francisco, Calif.; Crane Co., 307 W. 2nd St., South, Salt Lake City, Utah; Howard H. Fielding, 1226 California St., Denver, Colo.

These offices now are equipped to render service to architects and heating contractors. Competent men with broad experience are available to offer assistance in heating problems.

OBERAMMERGAU TO ERECT THEATRE FOR PASSION PLAY

A NEW theatre will be erected in Oberammergau, Bavaria, for the Passion Play in 1930. This building, which is to replace the present wooden structure, will be constructed entirely of stone. It will have a seating capacity for 4,500 people and comprise an annex for the stage properties and requisite costumes for 700 players. The total cost of this improvement is estimated at \$72,000.

FURNACE AND FUEL OIL SPECIFICATIONS

UNIFORM specifications for the guidance of oil and burner manufacturers and dealers have recently been announced by the American Oil Burner Association. These specifications are the result of research, tests, correspondence and conferences carried on over two years. The American Petroleum Institute and the American Society of Testing Materials co-operated in the work, and the specifications adopted have received practically unanimous approval by the members of the American Oil Burner Association.

In announcing these specifications, Harry F. Tapp, Technologist of the American Oil Burner Association, points out that one of the greatest variables in installations has been non-uniformity of oil. This probably has been more responsible for lack of satisfactory operation than any other one cause. Burner manufacturers found it difficult to explain just what oil they wanted, and oil refiners were in doubt as to the needs of the manufacturer of burners.

The specifications apply to six types of oil, including light, medium and heavy grades of fur-

nace oil used in domestic heating; and light, medium and heavy grades of fuel oil for industrial use. The requirements cover flash point, amount of water and sediment, distillation range, and viscosity.

OLD NEWPORT CITY HALL LEASED FOR RESTORATION

A LEASE has recently been obtained on the old City Hall at Newport, R. I., built before the Revolution, for the purpose of restoring it to its original Colonial lines. This building, which belongs to the city, has been leased for two years, during which time architects will draw plans for the restoration of the architecture, which is classed as among the best of the Colonial period.

YALE SCIENTISTS FIND CHURCH BUILT IN 496

PROFESSOR BENJAMIN W. BACON of Yale Divinity School, New Haven, Conn., has recently received a report from the Yale Expedition which is excavating in Gerash, Transjordan, in collaboration with the British School of Antiquities, telling him that the expedition has uncovered "a great Byzantine church" built in 496 A. D. and dedicated to St. Theodore of Amasia, according to the Greek inscriptions.

The principal remains of this city date from 150 to 300 A. D. and are Graeco-Roman in character. The Byzantine church was built over the earlier remains in 496. The city suffered severe depredations by the Chosroes in 615, and was deserted in 631, following its destruction in the Mohammedan conquest. It remained deserted until Abdul Hamid of Turkey planted a colony of Circassians there in 1878.

CZECHOSLOVAK FORESTS

ALMOST a third of Czechoslovakia is covered by forests, although in density of population the country ranks tenth in Europe. Approximately 86 per cent of the forest lands are sufficiently accessible to warrant regular exploitation, and of these lands 87½ per cent are systematically reforested immediately after cutting. All forests, private and public, are subject to State control.

PERSONALS

Frederick A. Elsasser, architect, is now occupying his new offices in the Falls Building, Morris Avenue, Union, N. J.

Jno. Wm. Donohue, architect, announces the removal of his offices from room 40, 1242 Main Street, to suite 609, 1200 Main Street, Springfield, Mass.



Texture produced with white-lead and oil plastic paint by pressing a sponge into it and giving the sponge a half turn with the wrist.

BEAUTY... COLOR... CHARACTER

in Modified Textures

with WHITE-LEAD and OIL PLASTIC PAINT

HERE is a wall treatment, secured with Dutch Boy white-lead, that gives finishes of surprising charm.

The architect may specify white-lead and oil plastic paint with perfect assurance that the resulting modified or low-relief textures will be in keeping with the highest decorative standards.

This paint can be manipulated with paint brush, sponge, whiskbroom or any other means, making possible an unlimited number of textured treatments.

The formula is 100 pounds Dutch Boy white-lead, 22 pounds dry whiting, 1½ gallons Dutch

The architect is assured of individual design . . . side-wall decoration of restraint and dignity . . . with this plastic paint made with Dutch Boy white-lead . . . in addition, this finish is relatively low in cost . . . durable . . . washable.

Boy flattening oil and 1 gill drier.

Plastic paint, made with this formula, is relatively low in cost. It is easy to apply . . . is brushed on. It sets up overnight. It may be tinted with regular colors-in-oil just like any other white-lead paint. The finish is thoroughly washable.

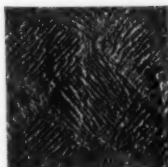
When textured, the paint is complete as a finish; though it may be glazed if desired. No size coat is necessary to permit glazing.

A booklet about this new use for Dutch Boy white-lead will be sent upon request. Address your inquiry to the Department of Color Research and Decoration, care of our nearest branch.

DUTCH BOY



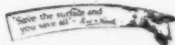
WHITE-LEAD



Texture obtained with paint brush.

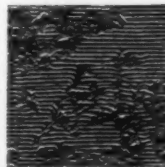


This texture produced with cloth bag.

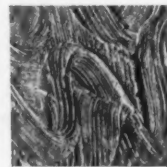


NATIONAL LEAD COMPANY

New York, 111 Broadway . Boston, 800 Albany Street . Buffalo, 116 Oak Street . Chicago, 900 West 18th Street . Cincinnati, 659 Freeman Avenue . Cleveland, 820 West Superior Avenue . St. Louis, 722 Chestnut Street . San Francisco, 235 Montgomery Street . Pittsburgh, National Lead & Oil Co. of Pa., 316 Fourth Avenue . Philadelphia, John T. Lewis & Bros. Co., 437 Chestnut Street



Textured with graining comb and ball of paper.



Unusual effect obtained with whiskbroom.

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SHIP MODEL MAKING

THIS is the third of a very unusual series of books on ship model making. Their value is distinctive in that each book of the series treats of a specific type and represents a well known example of each type. Volume I, describing in detail the making of a Spanish galleon, was reviewed in our issue of September 20th, 1926. A review of Volume II, treating of the full rigged clipper ship, "Sovereign of the Seas," appeared in our issue of March 5, 1927.

The ship model maker, who has been enabled to construct a model from the very complete instructions contained in the first two volumes, will approach the making of this one, of the historic "Constitution," with a deft certainty and patriotic pride. Every necessary measurement is set down by the author, and every form not possible to adequately describe in words is presented by accurately drawn illustrations. Further, the book carries in a paper pocket two large, full sheet drawings which make the accurate construction of the hull and spars very easy.

The best recreative effort for men of actively mental work is to occupy their time and thought with something directly opposed to daily tasks. The logical relaxation to mental work it to do something in which the hands are employed. For men engaged in the arts, and particularly does this apply to architecture, we can imagine no more delightful occupation than a ship model making. The flowing lines of hull, the tapering height and breadth of mast and spars, the seemingly intricate tracery of standing and running rigging, all combined form a thing of artistic beauty and of outstanding decorative value.

The historic value of an accurately made model of the frigate "Constitution" is very great because of its launching in 1797 and its subsequent career through the strenuous days of our naval history up to the time, about 1855, when the screw propeller was edging wind driven ships off the face of the waters. But while the Government was slowly abandoning wind driven ships, the period of the "Constitution's" retirement marks increased interest in those stately clippers that found their way, under the American Flag, to all the ports of the world. It will, therefore, be seen that two of the three books of this series are of famous ships that typify our supremacy on the high seas for at least a century.

How to Make a Model of the U. S. Frigate Constitution. By E. Armitage McCann, Master Mariner. Cloth; size 6 x 9 inches. Price \$2.50. New York, The Norman W. Henley Publishing Company.

MEMORIALS TODAY FOR TOMORROW

THE Georgia Marble Company has recently published for free distribution, in book form, a collection of memorials of various types. The illustrations are reproduced in color from original sketches,

and each is accompanied by a measured drawing, and a short descriptive note. The book is entitled "Memorials Today for Tomorrow." The purpose of the volume, as indicated in the preface, is to encourage good taste in the architectural design of cemetery memorials within the means and requirements of the average plot owner.

Memorials Today for Tomorrow. By Wm. Henry Deacy. Published privately by the Georgia Marble Company, Tate, Ga. Size 10 x 13 inches. Board covers. Seventy-four pages.

STAIR BUILDER'S GUIDE

THE art of stair building calling for skillful workmanship, ingenuity, and technical knowledge, has long been considered the highest branch of joinery. A well built, correctly laid out stair may well be viewed as the work of a specialist who has the knowledge and ability to solve intricate problems in plane and solid geometry.

Comparatively little literature is available on the construction of stairways, and persons interested in the details of stair building art will, therefore, welcome a volume on this subject that has been recently published. Morris Williams is the author, and "Stair Builder's Guide" is the title. This volume is a treatise on the building of straight flight, platform, cylindrical, and elliptical stairs, in which are explained the theory and practice of their construction.

While the book is primarily intended for the use of the mechanic, it will be found of value to architects and draftsmen called upon to detail any type of stairway. Examples of simple and complex forms are included.

Stair Builder's Guide. By Morris Williams. Published by Scientific Book Corporation, New York. 259 pages; 358 illustrations; bound in full flexible fabrioid; size 5 3/4 x 8 1/2 in. Price \$3.00.

AN ENCYCLOPAEDIA OF ENGLISH FURNITURE

A BOOK of unusual interest to those ever seeking information on types of old English furniture, entitled "An Encyclopaedia of English Furniture," has recently been published. The aim of this book is to present in a compact form all types of English furniture from Gothic times to the mid-nineteenth century. The pieces illustrated have been carefully selected and may be said to be authentic examples of the various eras. They are arranged in groups under the following headings: Gothic and Early Tudor; Elizabethan and Early Stuart; The Periods of Charles II to William II; The Eighteenth Century and The Nineteenth Century, with a short introductory note. The books has been edited by Oliver Brackett.

An Encyclopaedia of English Furniture. Edited by Oliver Brackett. Published by Robert M. McBride & Company, New York. Size 9 3/4 x 12 3/4 inches. Board covers. Price \$15.00.

JOHNS-MANVILLE

INDUSTRIAL FLOORING

is of UNIVERSAL USEFULNESS

*Specify it for Schools, Hospitals,
Public Buildings and Clubs, as well as
for Industrial Structures in Genera!*

For nearly every industrial use Johns-Manville Industrial Flooring has many advantages. But the same qualities which have proved so valuable in industry make Johns-Manville Flooring of special importance to the architect who is planning many non-industrial buildings.

Johns-Manville Industrial Flooring is "Made to Fit." It is plastic, and being applied in viscous form it literally does fit all irregularities, besides allowing for easy patching when damaged.

Highly resistant to acids and alkalis, and entirely waterproof, Johns-Manville Flooring is ideal for laboratories, for wash rooms, locker rooms, kitchens, and many similar places. Instead of the rigidity of concrete this Flooring has sufficient "give" to make it easy to work, or stand on. It is almost

impossible to slip on it, no matter how wet.

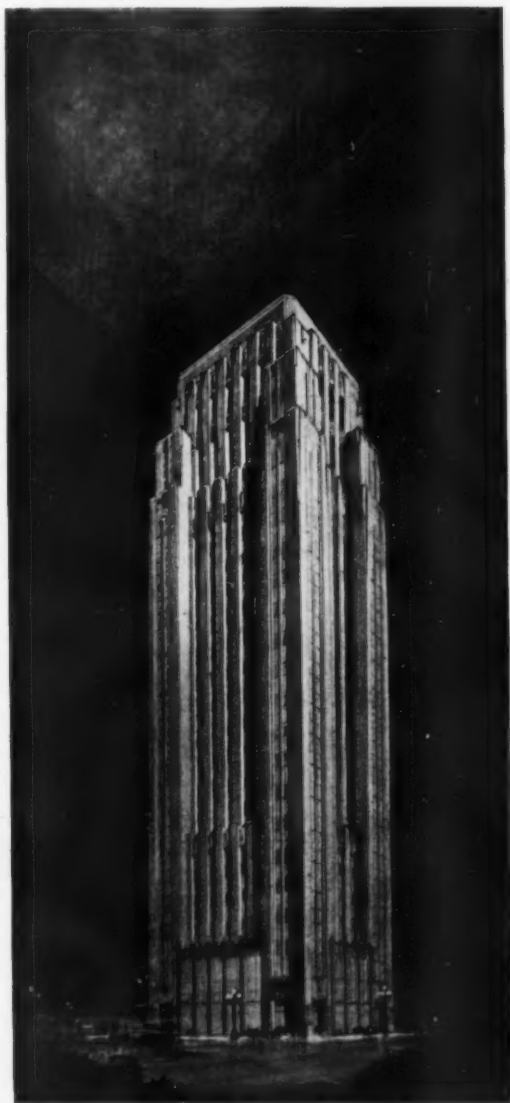
All flooring falls into two classes, utilitarian or decorative. While Johns-Manville Industrial Flooring makes no claim of decorative value, it is a good-looking, smooth floor. Furthermore it is utilitarian to the last degree. Measured by every test to which a floor may be subjected, Johns-Manville Industrial Flooring rates nearly twice, or more, as high as ordinary flooring such as brick or concrete.

Write for our test record which rates leading flooring materials as to their properties on the twelve points which show the worth of a flooring. We believe that every architect should have these figures before him when specifying flooring. Address: Johns-Manville Corporation, 292 Madison Avenue, New York City.



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INDUSTRIAL FLOORING

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SKETCH OF RAND TOWER, MINNEAPOLIS, MINN.
HOLABIRD & ROOT, ARCHITECTS

COLOR SCHEMES OF ADAM CEILINGS

AUTHENTIC examples of Adam ceilings are reproduced from original sketches in color in a group of five plates in portfolio form, entitled "Color Schemes of Adam Ceilings." The plates are lithographed from water-color sketches by Gerald K. and Betty F. Geerlings, reproducing the original studies by the Adam brothers now in the Sir John Soane Museum, London. The five plates are accompanied by introductory notes.

Color Schemes of Adam Ceilings. By Gerald K. and Betty F. Geerlings. Published by Charles Scribner's Sons, New York City. Five plates in portfolio. Size $9\frac{3}{4} \times 12\frac{3}{4}$ inches. Paper cover. Price \$2.00.

PUBLIC SCHOOL PLUMBING EQUIPMENT

ARCHITECTS are thoroughly familiar with the attention that has been paid to sanitation and public health and the advance that has been made in plumbing equipment in recent years. Those who design school buildings are also familiar, or should be, with the demands placed upon the plumbing service of schools.

A recent volume that will be found of interest to architects and others in charge of the planning of school buildings is entitled "Public School Plumbing Equipment" by Minor W. Thomas, Ph.D. This volume is a careful analysis of school plumbing requirements and presents criteria to determine standards for plumbing equipment in modern school buildings. The criteria are summarized in a convenient checking list. This book is the result of a study made to determine what school plumbing should be, rather than a study of present practice. It is a study of what may be termed ideal fixtures for public schools. The author states: "Strange as it may seem, manufacturers do not make a line of plumbing goods especially designed for public schools. . . . A few manufacturers put out a line of goods which they claim is suitable for factories and schools or for public comfort stations and schools, but no line designed especially for schools." Until a special line of plumbing fixtures is available, this volume will be found most useful to the profession through its recommendations for avoiding certain types of fixtures that have been found to be unsuitable for use in public schools.

Public School Plumbing Equipment. By Minor W. Thomas, Ph.D. Bureau of Publications, Teachers College, Columbia University, New York City. 128 pages. Bound in cloth. Size 6x9 inches. Price \$1.50.

30

RENTING OFFICES

WILLIAM F. DAVIDSON the author of "Renting Offices" is well qualified as a practical building manager to write a volume that presents a comprehensive study of sound and successful rental policies. While this volume is of greatest value to the managers and owners of buildings, it will be found of interest to architects and an aid to those who are called upon to prepare finance programs in connection with building operations.

The fundamental aspects of the business of merchandising office space is a condensed resume of the contents of this volume. Included within its pages there will be found an analysis of a building's selling points, value of space, information on securing and holding tenants, and other data on the subject of office renting.

Renting Offices. By William F. Davidson. Published by the National Association of Building Owners and Managers, Chicago, Ill. 277 pages. Illustrated. Size 5x8 inches. Price \$3.00.



SIR LAWRENCE WEAVER

THE leading article in this issue is by Sir Lawrence Weaver on the subject of "*The Architect and Industrial Design*." At a time when the efforts of the A. I. A. are being lent to further co-operation amongst the arts and crafts, this article will be sure to have unusual interest and value. ~ ~ ~ As previously announced, the leading article in the October

5th issue will be by Frank J. Foster and the subject will be Stone and Brick Work. Mr. Foster recently returned from a trip through Normandy and brought home with him many interesting photographs of details of French farm houses. Perhaps a dozen of these photographs will be used as illustrations to his article. ~ ~ ~ We are being continually requested to publish more good small houses. THE AMERICAN ARCHITECT is taking the lead in striving to impress upon prospective home owners that the design of any house, no matter how small, is a problem which is worthy of architectural service. In this issue, under the department of Interior Architecture, is illustrated a small house in North Carolina which we feel is a successful solution of a problem in domestic architecture. We would be only too glad to have architects forward to us any small houses which they have designed and which they feel possess unusual architectural value. ~ ~ ~ Gilmore D. Clark, landscape architect to the Westchester County Park Commission, is preparing an article for us on the development and design of "Playland"—an unusual shore resort at Rye, N. Y. The entire project was laid out under the supervision of the Westchester County Park Commission and the architectural features were designed by Walker & Gillette. This article, which will be very fully illustrated with general views and details, will be sure to have a very great interest to many readers of THE AMERICAN ARCHITECT.

September 20th, 1928.

The Publishers.



Photo by May Mott Smith

THE QUEENS GARDENS, GRANADA

THE AMERICAN ARCHITECT

September 20, 1928