

# The ARCHITECTURAL RECORD

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Volume 62, Number 2

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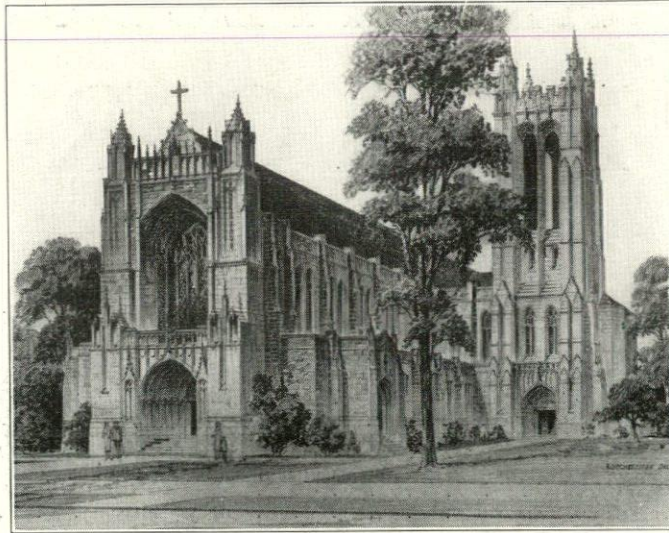
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CHURCH OF THE SAVIOUR—METHODIST EPISCOPAL  
Cleveland Heights, Ohio

Architects—Corbusier, Lenski & Foster  
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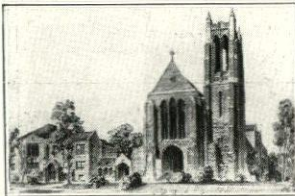
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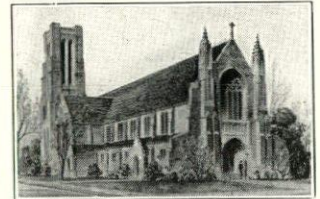
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ST. PAUL'S EVANG. LUTH.  
CHURCH, Massillon, Ohio.  
Architects—Corbusier, Lenski & Foster  
Contractors—A. F. Wendling Co.



GRACE LUTHERAN CHURCH—Sunday School and  
Gymnasium—Cleveland Heights, Ohio.  
Architects—Corbusier, Lenski & Foster  
Associate Architect—Walter J. Wofel  
Contractors—Engstrom & Company



ST. JOHN'S EVANG. LUTH.  
CHURCH, Oak Harbor, Ohio.  
Architects—Corbusier, Lenski & Foster  
Contractors—Boldt Construction Co.

The potential scenic capacity of many interesting architectural designs is unrealizable with the standardized systems of perspective practiced by the majority of renderers. Architecture is becoming a favorite subject with many of the Modernistic painters, who experience no compunction in departing from the formula for vanishing points in order that the decorative content of the subject may be realized. We illustrate this example as suggestive of a new point of view in architectural presentation, with certain reservations. It contains valuable suggestions in composition, with liberties deliberately taken with a definite purpose in composition. The present mechanical methods savor too strongly of the graphic statement of a business proposition.



A MODERNIST CONCEPTION OF  
BUILDINGS IN PROVINCETOWN, MASSACHUSETTS

# The ARCHITECTURAL RECORD

VOLUME 62

AUGUST, 1927

NUMBER 2

## The CLEVELAND PLAYHOUSE

*By*  
*Frederic McConnell*

THE NEW CLEVELAND PLAYHOUSE IS designed to accommodate the needs of a thorough-going and active repertory theatre where emphasis is put upon creative work in all branches of theatre art, where not only a season of important and significant plays can be produced with adequate and modern stage facilities by a permanent company, but also where the most important of these productions may be kept in the repertory of the theatre and saved intact both as to equipment and personnel for reproduction through a given season or in successive seasons. For the past five years the Playhouse has been conducting an experiment in building up the repertory theatre idea and the success of that venture in the rather small building in which it has been housed has justified the carrying on of the experiment in larger quarters and with more adequate facilities. The reper-

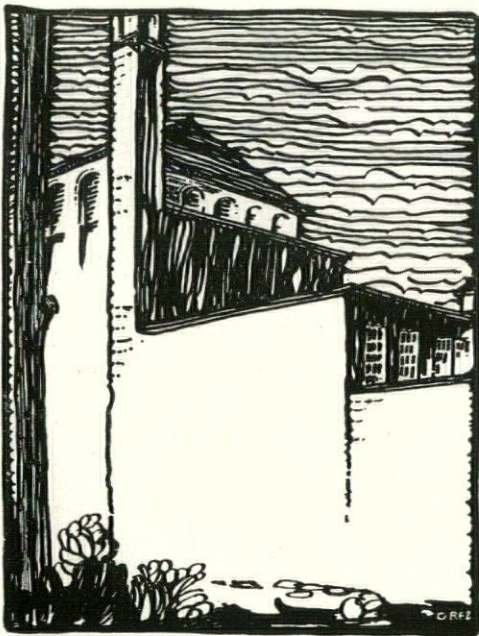
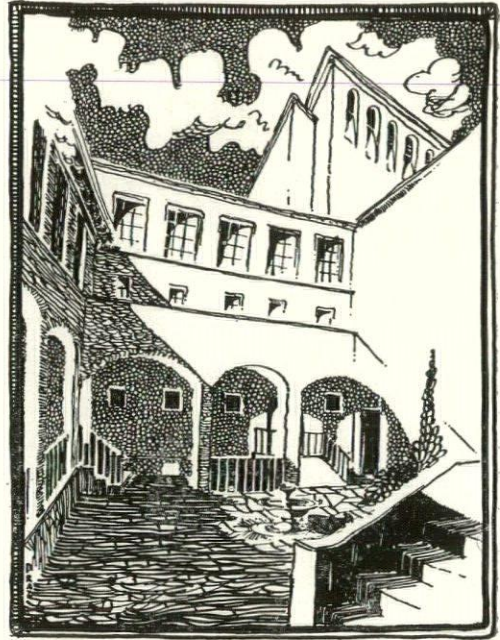
tory principle seems to be a basic part of the new independent theatres that gradually are claiming attention throughout America, particularly outside of New York City. A revival of interest in good plays and original and interesting stage production on the part of many local communities is tending to give strength and importance to the efforts of these independent local theatres and is giving them an importance in the community equal to that of the art museum, the orchestra and other artistic institutions.

The new Playhouse is unique in that it will house two theatres, one seating five hundred persons, and the other two hundred persons. In the first theatre will be maintained the present policy of independent repertory, producing by means of a permanent direction, a more or less permanent production and acting ensemble; of a constantly increasing regular

and, for the most part, permanent and built-up audience; of a program of plays of unusual interest and distinction, and plays which cannot, generally speaking, meet the commercial quotient of the regular commercial theatre.

In the smaller theatre which is to be known as the "studio" theatre the Play House will develop a major program of three parts:

- (1) To provide leisurely and thorough experimentation in the arts of stage production and in the technic of play-writing, affording opportunity for try-outs of manuscript material and the development of composition through the stages of rehearsal and practice.
- (2) To make possible, in connection with, and supplementary to, the program of the main theatre, the presentation of classics in dramatic literature and other plays of especial literary quality and distinctive novelty or newness, which in the first instance need not depend upon immediate or general popularity. Standing by itself such a theatre would have to depend upon some form of

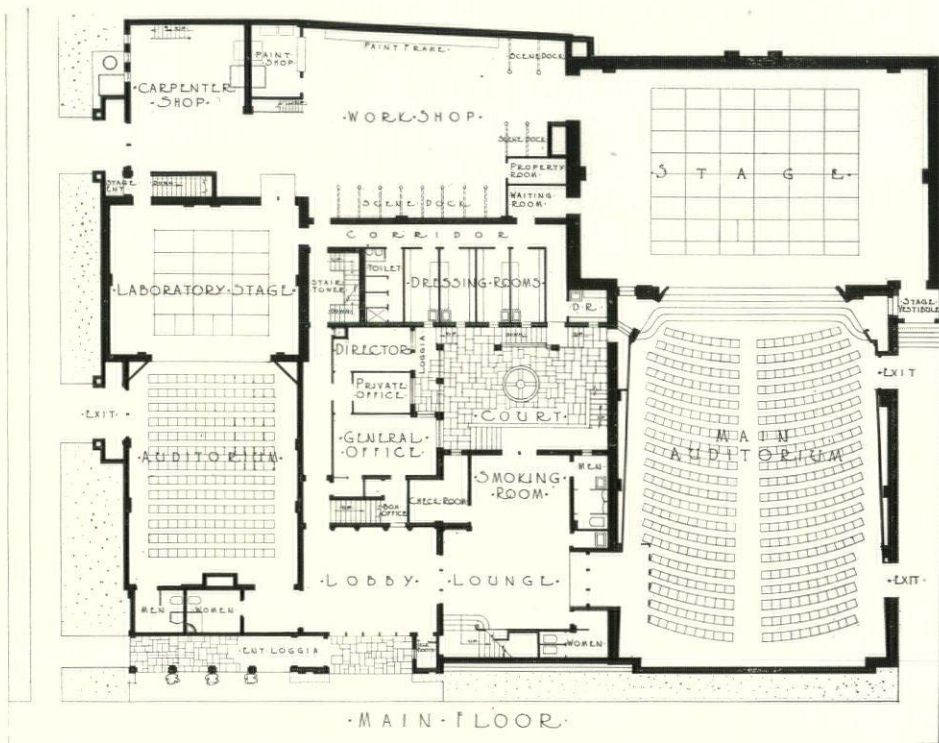


private endowment. But as an integral part of the entire Playhouse Program the highly specialized work of the "studio" theatre will be "carried" by the budget of the main plant.

- (3) To provide a laboratory where student members of the Playhouse organization as well as young men and women of talent within the community or within the reach of the community may undergo explicit training in the arts of the theatre by virtue of contact with definite theatre production. Besides training people who attach themselves to the theatre specifically for that purpose, the Playhouse hopes through the intimate contacts of this laboratory theatre to discover fresh talent and to interest and assure its development.

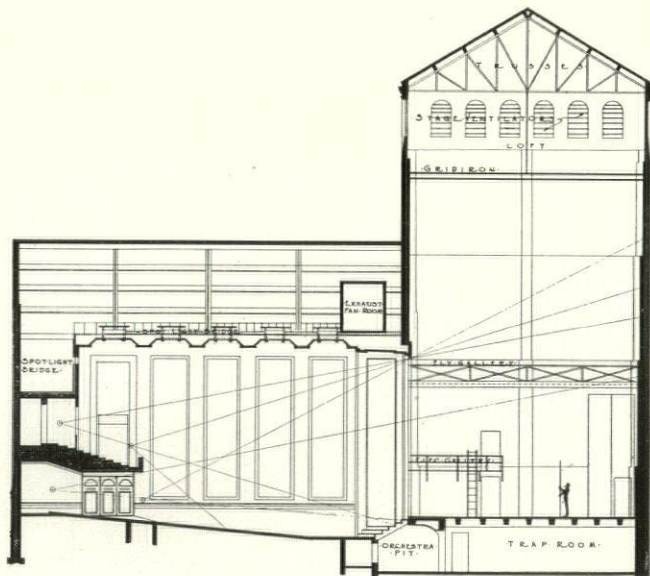
The "studio" theatre is a significant step in theatre planning because of its relationship to the main theatre with which it will share the most important element in the development of the artist, immediate contact with his public.

· L A S T · 86<sup>TH</sup> · S T R E E T ·



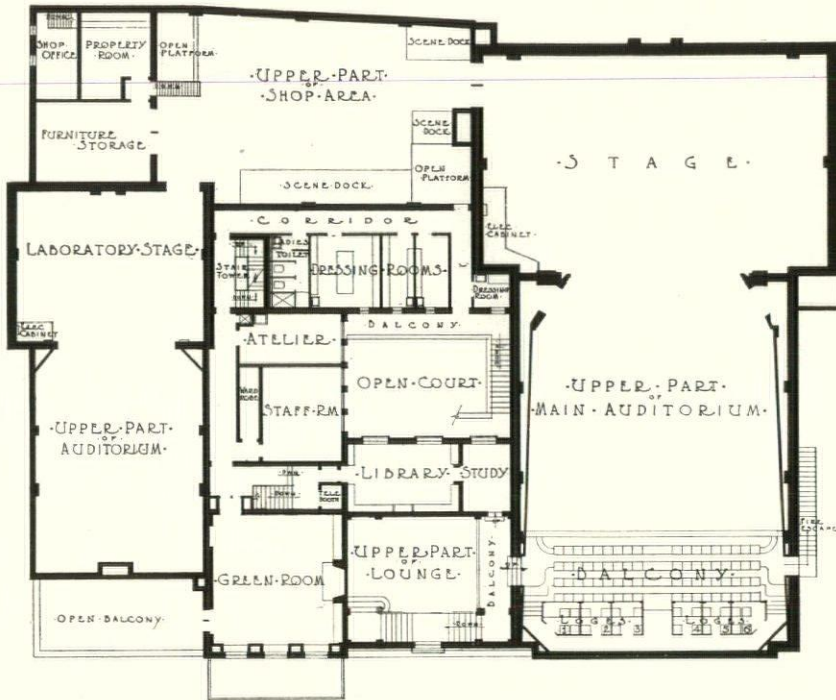
· D R U R Y · L A N E ·

THE CLEVELAND  
PLAYHOUSE  
Philip Lindsley Small  
and  
Charles Bacon Rowley,  
Architects

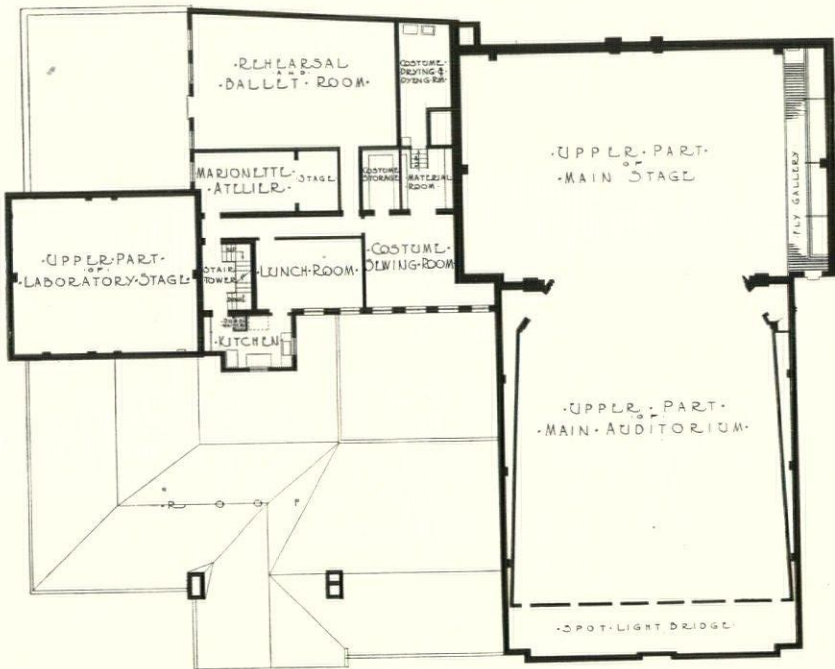


· S E C T I O N ·

THE ARCHITECTURAL RECORD



SECOND FLOOR



THIRD FLOOR

THE CLEVELAND PLAYHOUSE

Philip Lindsley Small and Charles Bacon Rowley, Architects





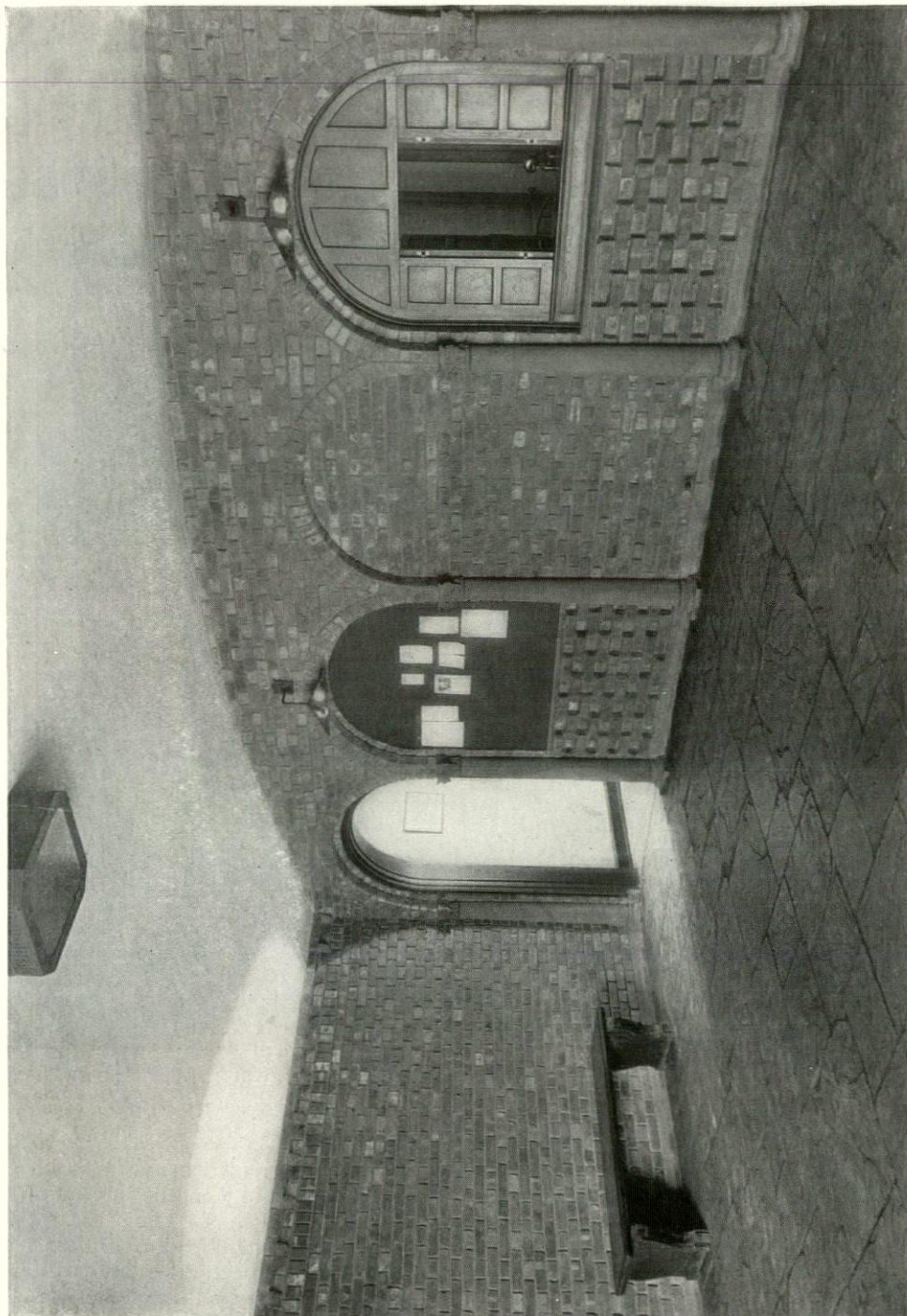
THE CLEVELAND PLAYHOUSE

Philip Lindsley Small and Charles Bacon Rowley, Architects

The repertory and personnel of the two stages will interchange freely, and as a practical matter the spirit of experimentation set afoot in the "studio" theatre will, because of the close relationship between the two theatres, be quickly absorbed by and reflected in the work of the main producing theatre. Interchangeability between the two theatres emphasis

will be constantly divided between building up and maintaining on the one hand a definite public taste for fine theatre values, and on the other hand, of training a personnel to interpret adequately the type of play expected by this public.

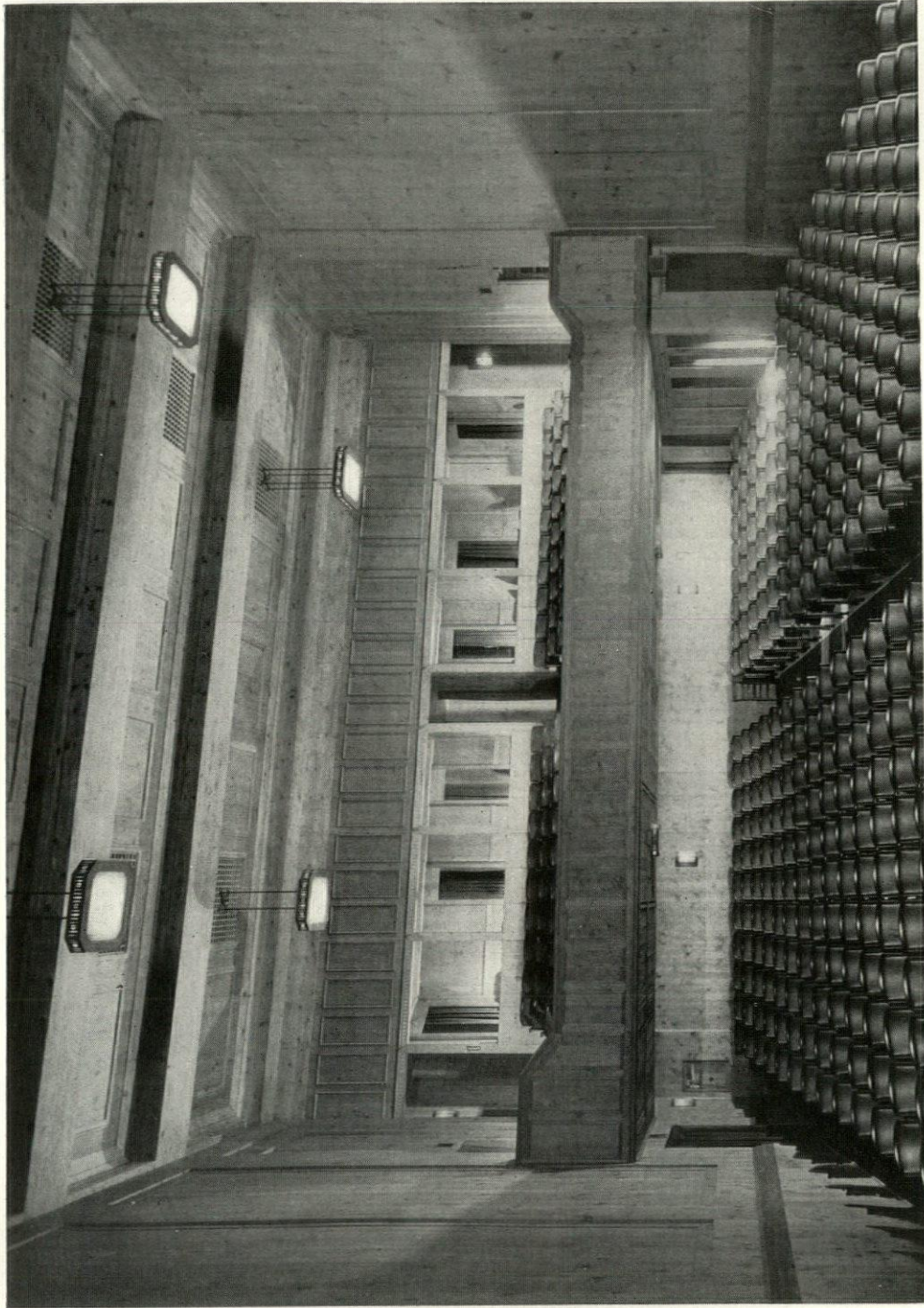
Quite the most important feature of any theatre is the audience from which it derives its support. A repertory the-



*The Architectural Record*

LOBBY OF THE CLEVELAND PLAYHOUSE  
Philip Lindsley Small and Charles Bacon Rowley, Architects

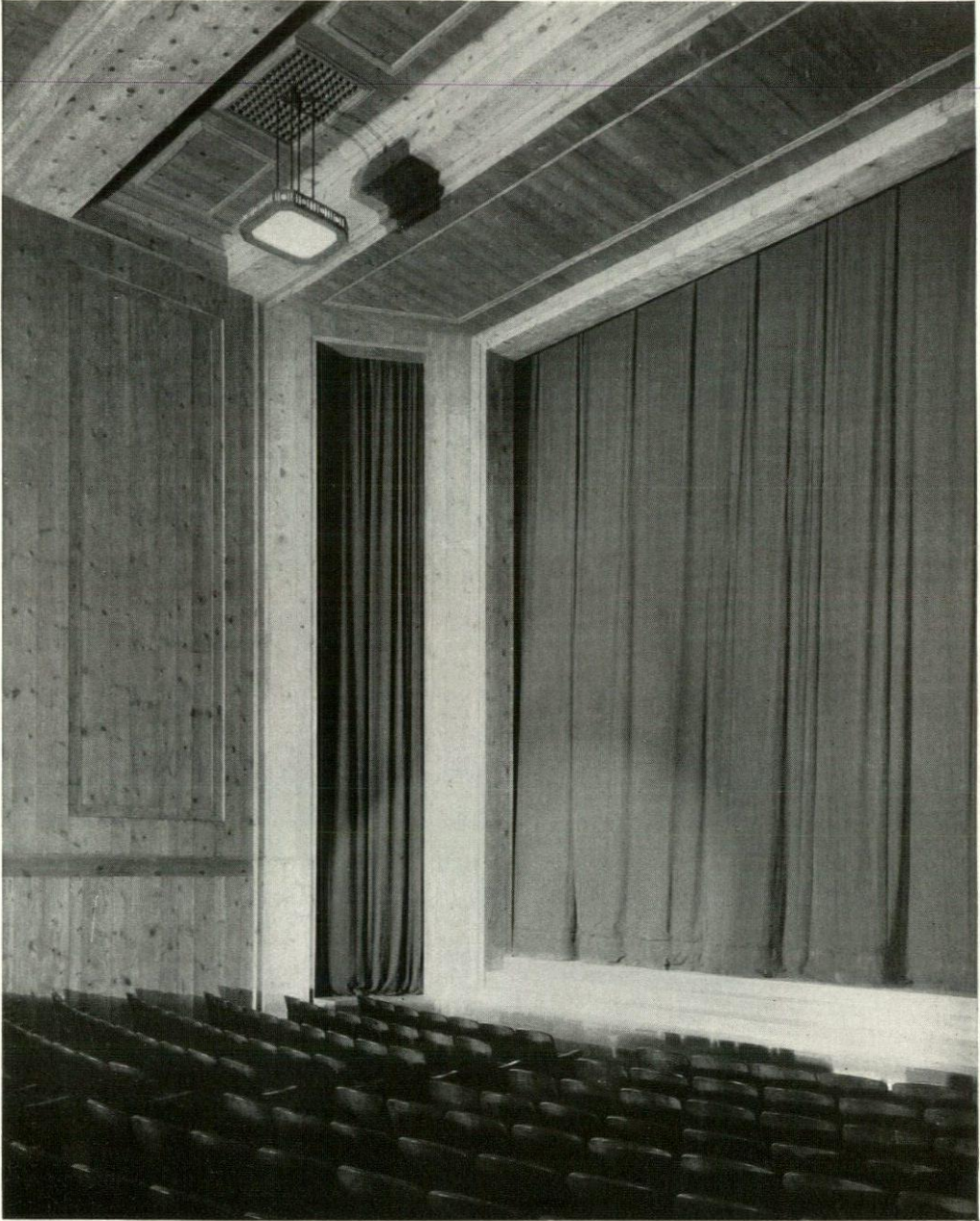
*August, 1927*



August, 1927

AUDITORIUM, THE CLEVELAND PLAYHOUSE  
Philip Lindsley Small and Charles Bacon Rowley, Architects

*The Architectural Record*



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*August, 1927*

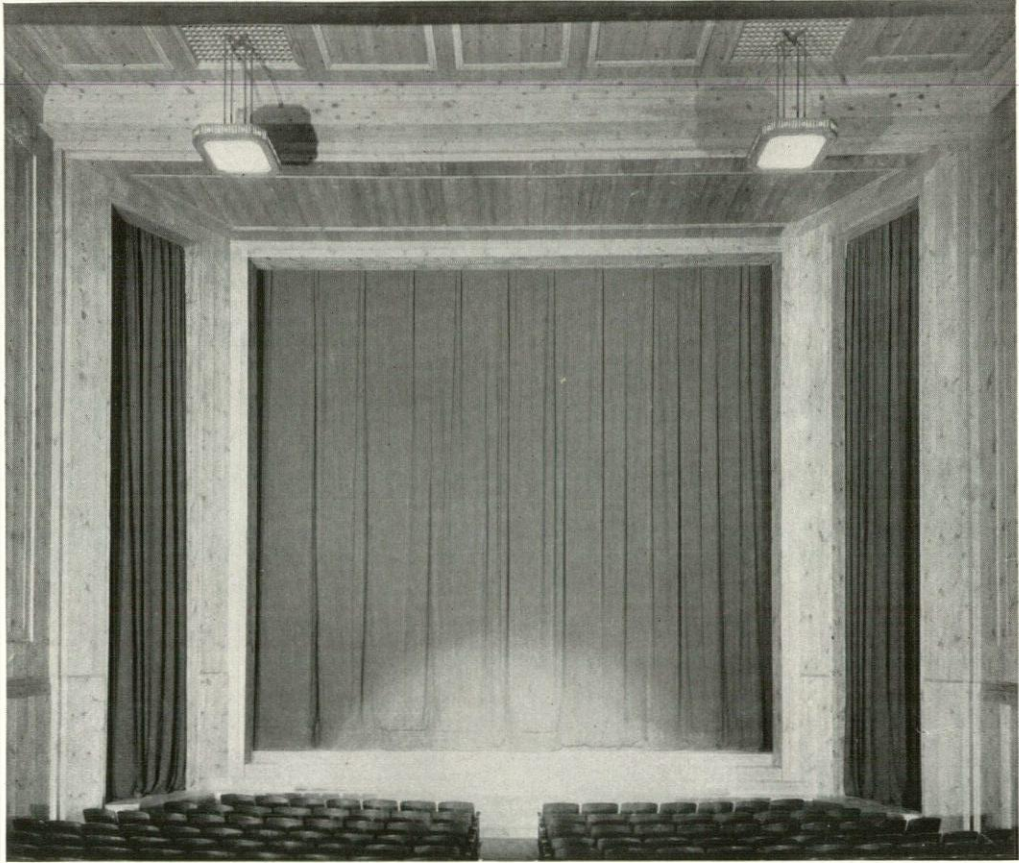
Detail, Proscenium  
THE CLEVELAND PLAYHOUSE  
Philip Lindsley Small and Charles Bacon Rowley, Architects



*The Architectural Record*

*August, 1927*

Detail, Corner of Balcony  
THE CLEVELAND PLAYHOUSE  
Philip Lindsley Small and Charles Bacon Rowley, Architects



View Towards Stage

THE CLEVELAND PLAYHOUSE

Philip Lindsley Small and Charles Bacon Rowley, Architects

atre like the Playhouse is supported in a large measure by subscribers who purchase in advance a season ticket to the year's program of from twelve to twenty productions. This audience, therefore, is in constant attendance and is, in fact, as great a part of the permanent structure of the theatre as is the personnel itself. The interest of this audience is stimulated not only by the entertainment afforded by attending the plays but also from the friendly and intimate atmosphere provided in that part of the building which it is its privilege to frequent.

Artistic economy requires that a production be made from the ground up and on the premises. Furthermore, after the initial run of the play is over in a reper-

tory theatre it is necessary that the production be kept for later repetition and revival, even though in the meantime other productions have to be completed and presented. Repertory does not eschew a successful run. Like any other theatre the repertory theatre thrives and prospers on the success of its stage presentations, but it must first preserve the continuity of its program, and the succession of a series of plays must not be disrupted by a single successful long run. Space and facilities have been provided, therefore, to adequately keep in storage a number of productions which later are to be replaced in the repertory, either during the season current or in years that follow. At the Playhouse, for example, a number

of productions have been given in revival for five years and these plays are as much a part of the tradition of the theatre as some of the personalities that in time have grown up with the theatre. A permanent staff ensemble and production staff must attach to a theatre of this character and in the new plan facilities have been provided for their accommodation, study, rehearsal and recreation.

The heart of this enterprise is in the dual theatre plan above discussed. The architects, Philip Lindsley Small and Charles Bacon Rowley of Cleveland, have had from the start a special problem. First the usual problem of confining the building within a given space, and second of providing rooms for the rather special artistic and social purposes of the building, of necessity placed so as to be equally accessible to both theatres.

On the main floor is a large shop area set between the two large stages and serving as a production center for the entire theatre. In this area are the carpenter shop with work bench and shop machinery, two scene docks for storage of scenery, a paint room and movable paint frame, special rooms for the storage of furniture and properties, and numerous closets for electrical equipment and miscellaneous paraphernalia, and an office for the technical director. The costume section on the third floor consists of a sewing room facing upon a light court, a dyeing and drying room, and a vault for wardrobe storage. In the basement there is an auxiliary wardrobe room and another tier of dressing rooms. For further storage of scenery and properties, ample space underneath the large stage is provided. The large stage is sixty feet wide, forty feet deep and seventy feet to the grid and the proscenium is thirty feet wide and twenty-eight feet high. The space between the chairs in the large auditorium and the sight lines are of more than average proportion. The stage merges gracefully into the auditorium by means of a proscenium of utmost simplicity flanked by two portals that extend the full height of the room. A series of curved steps leading from the stage to the auditorium floor, complete

the suggestion of intimacy between the stage and the audience. The chairs, of course, have been placed inside the range of the proscenium and from all parts of the room an equitable vision of the stage action is allowed for. A balcony is hung low in the rear and a feature of it is a row of six enclosed loges or boxes, each having its own entrance to the rear aisle. These are placed a little higher than the tiers of four rows in front and afford, of course, an excellent vantage point. The balcony, being hung low, is within comfortable range of the higher part of the stage. With the proscenium open to its height the spectator sitting in the balcony can see to a distance of forty-seven feet from the stage floor. The audience room will be finished entirely in wood and it is designed along simple plastic lines.

The second floor contains a library; an attractive greenroom which can be used for teas, receptions and concerts; a staff room which will be used for round table discussion and writing of plays, for staff meetings and an office for members of the staff; an atelier which is to be used for a scene-designers' studio and general production office.

The third floor plan shows a large rehearsal room which is to be used for rehearsal purposes when the two stages are occupied and which will also be used for classes in dancing, gymnastics and fencing. This room faces upon a flat roof set up against the wall of the small stage house. Later on the flat roof will be made into a hand-ball court. A lunch room and kitchen are also on this floor.

The building is on the corner of East 86th Street and Drury Lane, and, as will be seen from the plans and illustrations, a covered entrance is provided from either street, the main entrance on Drury Lane leading to an open vestibule and a loggia with groined ceiling leading from this to 86th Street. The lobby is a simple brick room with slate floor and very flat barrel vaulted ceiling, about twenty-five feet square, with a box office for both theatres and leads directly to the three important units of the entire plant: first, the public stairs to the green room,



Foyer

THE CLEVELAND PLAYHOUSE

Philip Lindsley Small and Charles Bacon Rowley, Architects

library and the corridors which give access to the offices, staff room and atelier and then on to the dressing rooms, and the various other working portions of the establishment which connect the two

stages; second, through the lounge to the main auditorium; third, to the auditorium of the studio theatre. Both theatres may operate at the same time without the intermingling of the two audiences.





Detail in Green Room

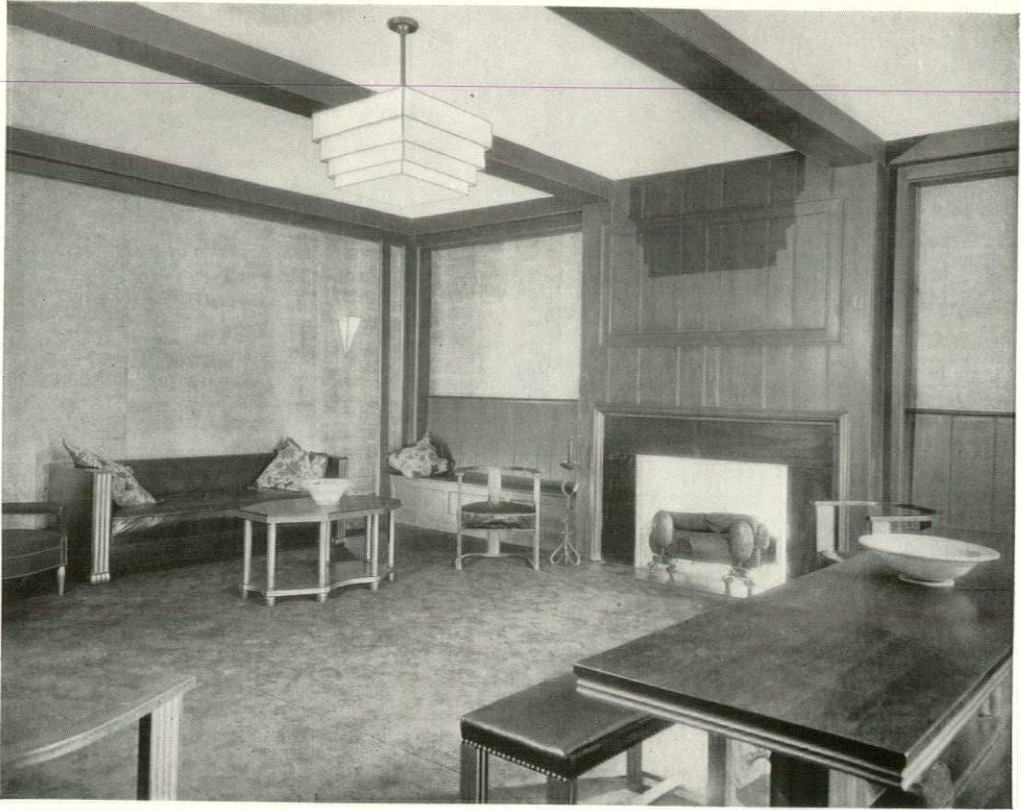
THE CLEVELAND PLAYHOUSE

Philip Lindsley Small and Charles Bacon Rowley, Architects

For the "long pause," the audience of the larger theatre has available the lounge and its adjoining smoking room, and in mild weather they may pass from this to the court where coffee will be served.

Service for this court as well as for the greenroom, staff room and lunch room, is taken care of by a dumb waiter which is available to each floor of the building.

The essence of the plan lies in so plac-



Green Room

THE CLEVELAND PLAYHOUSE

Philip Lindsley Small and Charles Bacon Rowley, Architects

ing the two theatres that the public is served with one box office in a foyer which connects both of them and gives access to the other public space and the working space beyond which lies in the center of the building around a central court, and also that the shop area and dressing room units both connect the two stages. This will be clear from the plans.

The exterior of the building is in brick with red sandstone trim and graduated slate roof, a simple plastic expression of the various units enclosed. It is almost entirely free from ornament and is an admirable example of the dignity, character and beauty obtained by well studied mass, line, texture, color and silhouette without use of embellishment.

PARISH BUILDINGS *of the* OVERBROOK  
PRESBYTERIAN CHURCH, OVERBROOK  
—♦— PHILADELPHIA —♦—

DAVIS, DUNLAP & BARNEY ARCHITECTS

*By Harold Donaldson Eberlein*

IN THE SPRING OF 1923 the authorities of the Overbrook Presbyterian Church, at Overbrook, Philadelphia, found their existing plant totally inadequate to meet the needs of a rapidly growing neighborhood and it became imperative to make extensive additions to their parish buildings if they were to discharge their responsibilities for social service and religious instruction in the community.

A committee was appointed to consider the best course of procedure, and this committee, after carefully canvassing the situation in all its bearings, wisely determined that they would refrain from making any explicit recommendations for enlarging the existing plant until the whole problem had been exhaustively studied from the point of view of future growth as well as of present needs.

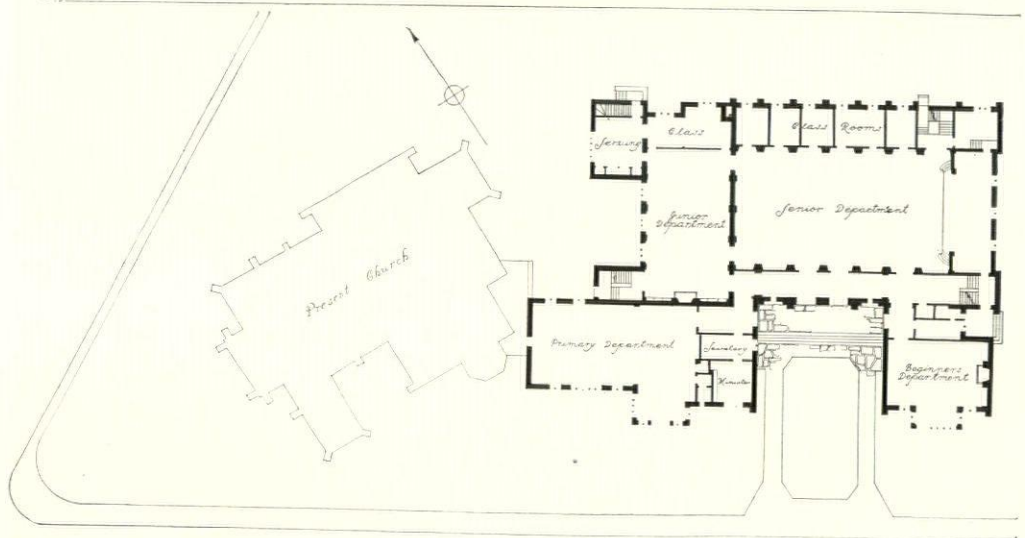
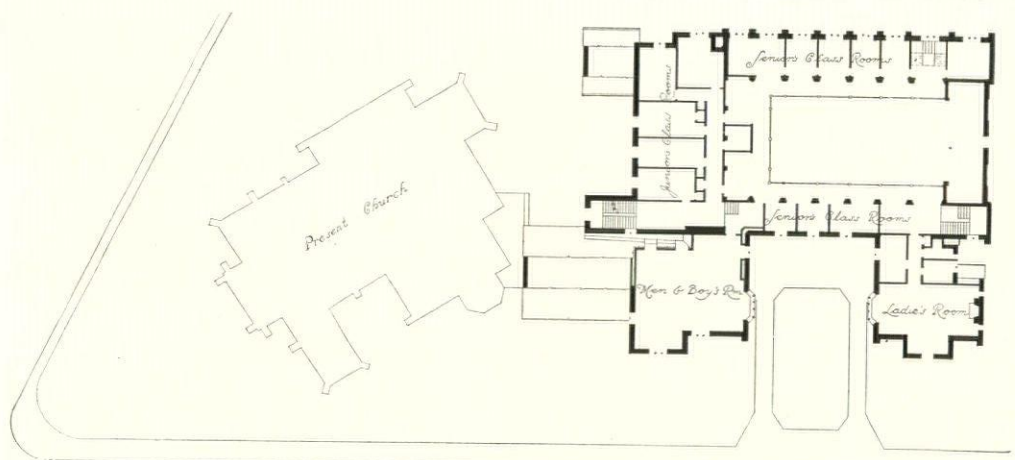
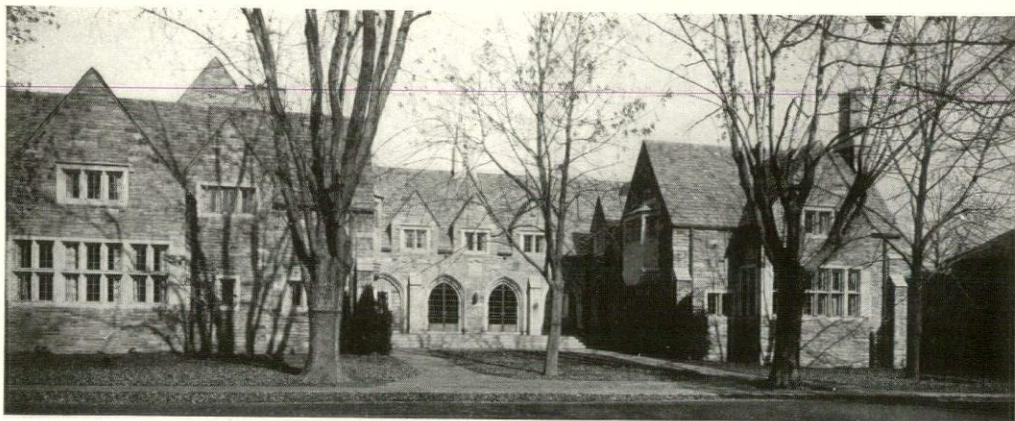
When this study had been made from every angle, the committee recommended the adoption of a comprehensive plan, in accordance with which all extensions should be considered, and that no alterations nor additions to the existing buildings should be entertained except as part of this comprehensive plan that would ultimately be realized in its entirety.

In order to arrive at this comprehensive plan, by which all future development was to be regulated, the committee entered into negotiations and consultations with Mr. Paul Davis, of Davis, Dunlap & Barney. For more than a year successive tentative studies were made and a variety of plans discussed. At last the result of these deliberations was embodied in a neatly printed and fully illustrated brochure for presentation to a full meeting of the congregation so that they might have a satisfactory basis of discussion.

The scheme provided for a Church, a Sunday School and General Service Building, and the Manse, all according to a unified and comprehensive plan.

When the meeting was called and the copies of the booklet presented for examination, the committee urged only that the plan be adopted in substance. The question whether or not any part of the group should be erected forthwith they deemed a secondary issue for the congregation to consider.

Besides shewing the plans and sketches of the proposed elevations, the brochure defined very clearly the functions of a modern church in general, and of the Overbrook Presbyterian Church in particular, as the committee conceived them to be. The scheme contemplated "a churchly building, dignified and beautiful . . . which does not have to be used for any other purpose" than worship, and a "suitable room for smaller meetings of a definitely religious character, such as the Mid-Week Prayer Meeting, Young Peoples' Christian Endeavor Societies' Meetings, Missionary Meetings, and similar activities. Under Education were required "separate departments, easily reached from one another, with adequate class rooms," and an "auditorium large enough for the occasional assembly of the entire school and for special Sunday School entertainments." Regarding social and recreational desiderata, there ought to be "rooms adaptable for societies and gatherings of various sizes and a wide variety of purposes; special rooms for boys and young men, and for girls and young women, where both Sunday and week-day activities can be carried on;" likewise, "equipment for



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View of Southwest Front, First and Second Floor Plans  
 PARISH BUILDINGS FOR THE PRESBYTERIAN CHURCH, OVERBROOK, PHILADELPHIA  
 Davis, Dunlap & Barney, Architects



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PARISH BUILDINGS FOR THE PRESBYTERIAN CHURCH, OVERBROOK, PHILADELPHIA

Davis, Dunlap & Barney, Architects

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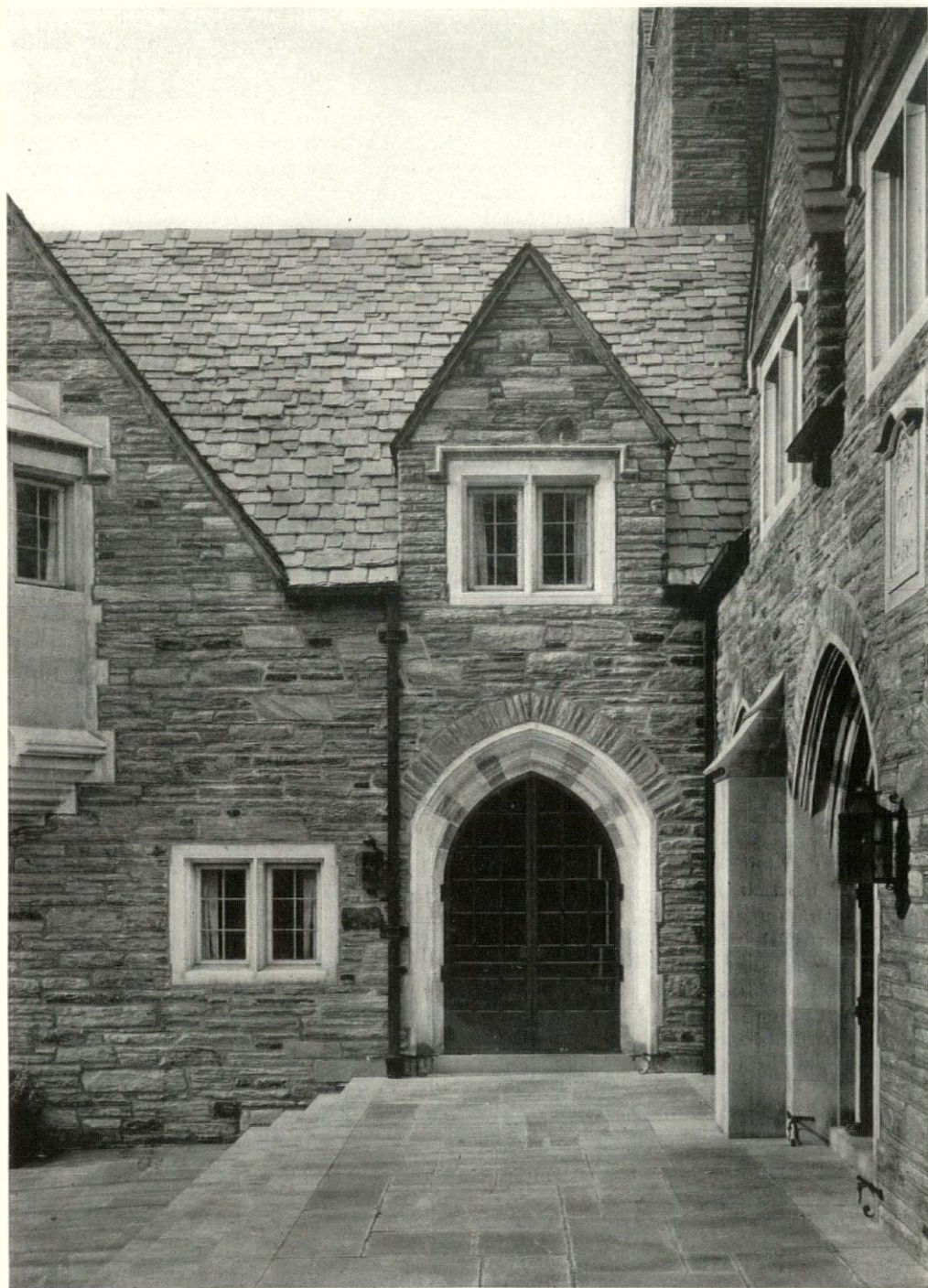
*August, 1927*

Cloister Court

PARISH BUILDINGS FOR THE PRESBYTERIAN CHURCH, OVERBROOK, PHILADELPHIA

Davis, Dunlap & Barney, Architects

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*August, 1927*

Entrance to Cloister

PARISH BUILDINGS FOR THE PRESBYTERIAN CHURCH, OVERBROOK, PHILADELPHIA

Davis, Dunlap & Barney, Architects

entertainments, amateur dramatics and athletic events." For purposes of community service there were to be "facilities which may be put at the service of community organizations for occasional meetings, so that the Church may be a centre of and a servant of the whole community life." Such were the general desiderata of parochial equipment laid down.

The specific provisions of the comprehensive plan under consideration included a "commodious Sunday School building" with "a Beginners' Department accommodating seventy-five to one hundred children; a Primary Department accommodating one hundred and sixty children around special tables; a Junior Department with fourteen class rooms, and assembly for two hundred and twenty-five children; an Intermediate and Senior Department with fourteen class rooms and an assembly room seating three hundred and eighty young people; and two large rooms for Adult Bible Classes."

The building contemplated also provided these facilities: "an auditorium having a large stage and seating a total of six hundred and sixty persons, and providing by the addition of another room which may be opened, for a total seating capacity of eight hundred and eighty-five; a ladies' parlor with kitchenette adjoining, for social and work meetings; a Boy Scout or Boys' Club room which can be used by them exclusively; a room for basket ball and other athletic activities, but not a separate gymnasium; and adequate kitchen and din-

ing room accommodations for a luncheon, dinner or evening reception." There were also "adequate offices for the Pastor, Assistant Church Secretary, and Sunday School Officers." Each Sunday School department had its own coat rooms and toilet rooms; all of the rooms were centred around a cloistered entrance, and easily reached from one another; and each room was so arranged as to receive a maximum of light and air.



Women's Guild Room

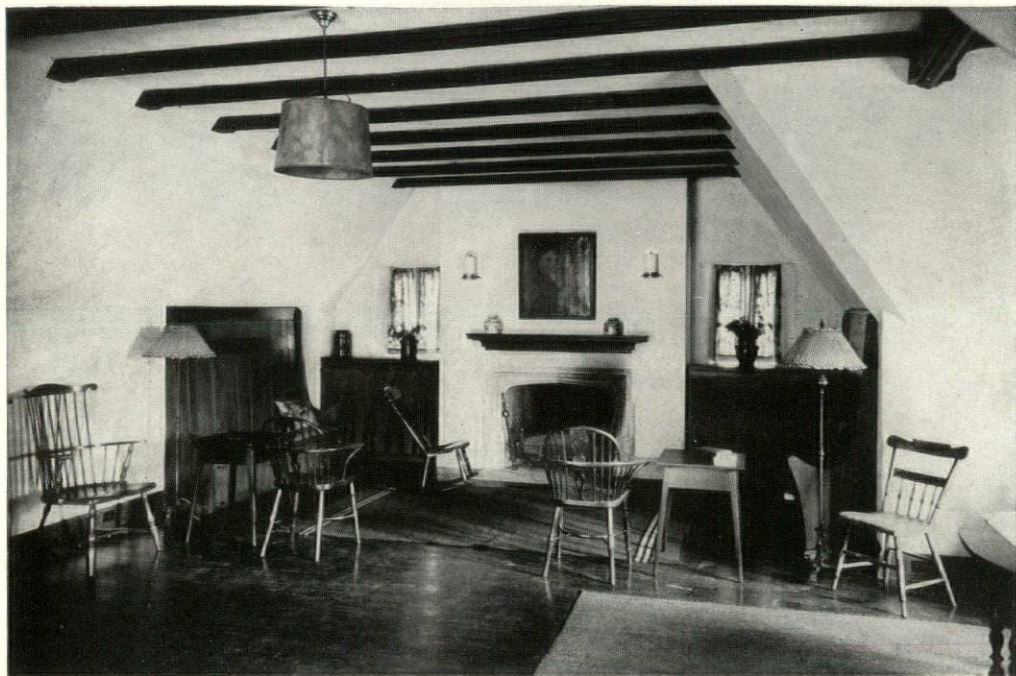
The plan also provided for extensive alteration and enlargement of the existing church, but that part of the project was regarded as a separate undertaking that might easily be postponed until some time after the more pressing needs had been taken care of. Attention was called to the fact that it had "been thought probable that some individuals might be interested in giving a unit of the Sunday School Building as a memorial," the proposed plan being "rather uniquely adapted to this possibility."

After setting forth some financial con-

siderations, the brochure closed with a pertinent and suggestive memorandum of what other Presbyterian congregations throughout the country had been doing in the way of building.

It is worth noting that prior to the general meeting of the congregation, at which the scheme outlined in the brochure was presented, sentiment had been somewhat hostile to the comprehensive plan program. By the end of the meeting there was a complete change of front, with unanimous approval of the comprehensive plan and an expressed deter-





Women's Guild Room



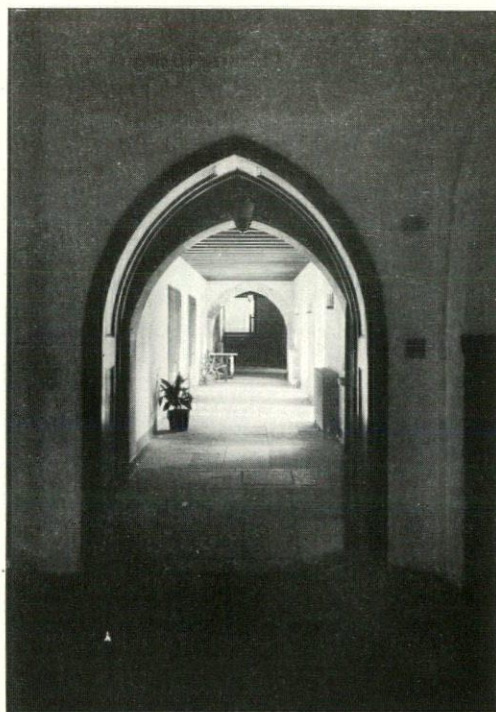
Large Auditorium

PARISH BUILDINGS FOR THE PRESBYTERIAN CHURCH, OVERBROOK, PHILADELPHIA  
Davis, Dunlap & Barney, Architects

mination to put it forthwith into execution. The wisdom of the committee in adopting the comprehensive plan and their tactful handling of the situation so as to elicit unanimous approval and enthusiasm is to be heartily commended.

The accompanying plans and illustrations shew the group of buildings recently completed, the enlargement of the church being left till some later date. The buildings are constructed of grey Fox Croft and Rock Hill stone with patches of rusty reds and browns appearing at random intervals; the trimming is of Indiana limestone and the roofs are slated. Relations between the plan

and elevations illustrated are sufficiently obvious and the characteristics of style are so patent that they require little comment. It only remains to note that readers who know Chipping Campden in the Cotswolds will be glad to find a reminder of Woolstaplers' Hall in the bow windows of the Cloister Court; likewise to call attention to the agreeable manner in which the back end of the large flat-roofed auditorium has been dealt with on the outside. Incidentally, this treatment contains a germ of suggestion for the acceptable management of fenestration in buildings of far greater size and height, and of wholly different style affinities.



Vista Through Cloister

# HILDRETH MEIERE MURAL PAINTER



By  
*Anne Lee*

HILDRETH MEIERE, New York mural painter, has found adaptability an important asset. Her work gives evidence of her courage in undertaking new problems and in experimenting with untried mediums. Already she has to her credit two large jobs that show entirely new treatment and new handling of the medium. On both she worked with the late Bertram Grosvenor Goodhue, and, whereas it was her adaptability which won her the opportunity to work with the illustrious architect, it was, according to Miss Meiere, largely through the inspiring collaboration with him that she had the courage to undertake the work. Mr. Goodhue's enthusiasm for trying new mediums and new methods proved a great inspiration to the painter.

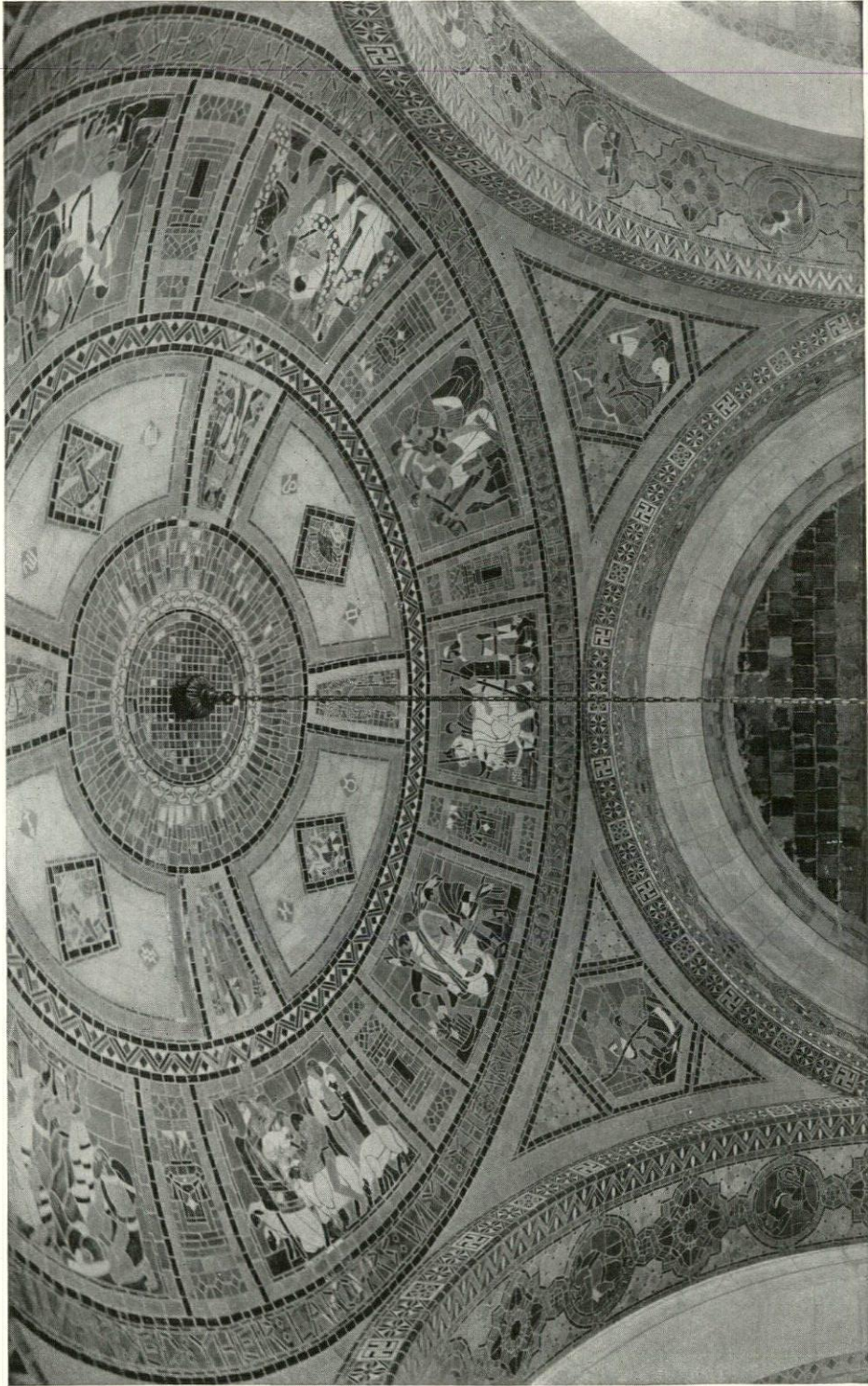
Pioneering in decorative work assumes added significance when buildings of such importance as the National Academy of Sciences at Washington, D. C., and the Nebraska State Capitol are in question. New decorative treatments are represented in each case, thus opening up new avenues of possibilities in the handling of the mediums employed.

For the capitol at Lincoln, Nebr., Miss Meiere has designed ceiling decorations for execution in tile, colored and glazed. Tiles for the vestibule dome are already in place. Designs for the Foyer, the Rotunda and the House of Representatives Wing have been completed and are now being executed by the R. Guastavino Company. Her designs represent the first attempt to use tile structurally. The pattern is indicated entirely by the shape of the tiles and the use of plain colors. The complete picture is made up by the piecing together of the tiles, with paint-

ing-on reduced to a minimum. In a few instances, small details, such as an eye, have been painted in, but the piecing has been relied upon to carry out the design. The effect is colorful, with qualities of texture and surface that are sympathetic with the marble and stone interior. Heretofore, the individual units of tile and mosaic decorations have been small, with the result that they have been seen in rather a small way. In the Nebraska Capitol, tile is being used, for the first time, for large figure work. Due to the shrinkage of the material (approximately  $\frac{1}{2}$  inch to a foot) the designs had to be drawn over-scale. The execution is an all-hand process. At the tile factory, the artist's cartoons are traced off and a piece of cardboard, marked with the color to be used, is made for each piece of tile. When the tiles have been made, the design is assembled at the factory, in much the same manner as a jig-saw puzzle, and sent to the job in large blocks.

In discussing the designs, Miss Meiere referred to Mr. Goodhue's interest in tile, an interest which increased with his travels in Mexico and Persia where tiles have been used extensively. The architect believed that tile could be used on a bigger scale and in a bigger way than had previously been attempted; hence the experiment was made. The result of the experiments for the first capitol dome, the Vestibule dome, was so satisfactory to Mr. Goodhue that the idea was adopted for the other ceilings.

One of the notable things about the Nebraska Capitol is that every bit of ornamentation is significant. It all pertains to the State, to its history and to its people. Nothing extraneous has been



August, 1927

VESTIBULE DOME, NEBRASKA STATE CAPITOL, LINCOLN, NEBRASKA

Bertram Grosvenor Goodhue, Architect

Hildreth Meiere, Mural Painter

*The Architectural Record*

resorted to for decorative value. This was the intention signified by Mr. Goodhue at the time he won the competition. He strove for a quality of direct meaning in all decoration. He wanted to avoid the ambiguous, avoid too great a generalization, so that the untrained and uneducated as well as the qualified observer could understand it.

Miss Meiere bore this continually in mind in designing the ceiling panels which might be termed "murals in tile", for the work belongs to the category of fine arts rather than to that of crafts.

The ground plan of the Capitol represents a Greek cross within a square, with the monumental entrance consisting of vestibule, foyer and rotunda, treated in decorative themes symbolic, respectively, of the Gifts of Nature, the Life of Man, and the Virtues of the State, with colors ranging from brilliant tones in the vestibule and intermediate in the foyer to subdued, cool tones in the rotunda.

In the illustration of the vestibule dome on page 104, the panels are shown in position. A symbol of the sun forms the crown of the dome, around which, in the first concentric, are panels representing the Four Seasons and the Signs of the Zodiac. In the second concentric are eight panels showing Cattle, Sheep, Swine, Maize, Wheat, Grasses, Fruits and Flowers, representing the first fruits of the soil.

The border inscription reads, "Behold they come as householders bringing earth's first fruits, rejoicing that the soil hath rewarded their labours with the abundance of its seasons." Four pendentives depict Plowing, Sowing, Cultivating and Reaping, the four divisions of agriculture. In the window arches are circular panels, with the various native animals, alternating with conventionalized sunflowers.

Three sibylls, symbolic of the Past, Present and Future, give the key to the decorative theme in the foyer—Life of Man in Nebraska. Six pairs of panels flanking the bays will represent the Pioneer Family and the Pioneer School for the Past; Recreation and Reflection for the Present; Reverence for Truth and Sense of Beauty for the Future, all of

which are united in thematic treatment by panels in the transverse arches which portray Labor, Law, Public Spirit and Religion, the four divisions of human life. A vigorous beauty characterizes the composition of the more abstract subjects, such as "The Tradition of the Past", as well as the panels in which an interesting realism has been achieved. The adaptation of modern dress, as seen for instance in the panels "The Teacher" and "The Pupil" in the pioneer school group, emphasizes the significance and realism of the capitol ornamentation as a whole. (See Page 106.)

Commenting on this, Dr. Hartley Burr Alexander of the University of Nebraska faculty, who is conducting all the research in connection with the capitol building, and collaborates with the artists, said in a letter to Miss Meiere, "I am anxious to see the capitol speak a language which will be fresh and interesting now and will remain so in the future." He pointed out that the simple gown of the frontier woman was not unlike the long chiton of the Greeks and that it could be treated quite as effectively. Maintaining that the use of modern dress would make the whole scheme of decoration more convincing, Dr. Alexander said, "Classic forms would be quite as relevant in any other state or any other continent as here in Nebraska, and this, while perhaps it may not be felt a calamity today, will surely be felt weakness, say, in five hundred years or many less, if the building endure as we expect."

For the Rotunda dome, which has a tremendous curve and is 40 ft. across and 110 ft. high, the painter has used repeat figures to represent the eight guiding virtues of the State. Here pattern was more important than detail because the figures are so large and so high. The points of the center star are formed by the heads and wings of the figures, their clasped hands repeating the star-points.

Brilliant coloring and striking vitality mark the designs for the House of Representatives ceiling which typifies the life of the first dwellers upon the plains, the Indians. The four main Indian panels, which measure approximately 10 x 14 ft.



Panels Representing the Pioneer Schools in the  
VESTIBULE DOME, NEBRASKA STATE CAPITOL

Hildreth Meiere, Mural Painter

are believed to be the largest panels ever undertaken in tile. Women Hoeing Corn, The War Party, Smoking the Peace Pipe and Equestrian Buffalo Hunt

are the subjects of the main panels. Indian art has been taken seriously for its own sake in these designs. An impelling strength of lines is seen in the design for

the "War Party". Through skillful construction of the tiles, the artist has achieved action comparable to vigorous brush work. Of exceptional interest, too, is the clever adaptation of the lined, white beadwork, so frequently used by the Indians for background in their designs, to white, oblong tiles for background in the Indian panels. It gives a

not try to do anything but two-dimensional things. She remained within the limits of the medium and created designs rather than attempts at painting.

The work for the National Academy of Sciences was of an entirely different character. There the designs for the 65 ft. dome are carried out in gesso on tile, representing the first use of this decora-



"Sowing," One of the Pendentives in the  
VESTIBULE DOME, NEBRASKA STATE CAPITOL  
Hildreth Meiere, Mural Painter

feeling of Indian beadwork and is one of the interesting new uses of Indian motifs evolved by Miss Meiere in her designs for this ceiling.

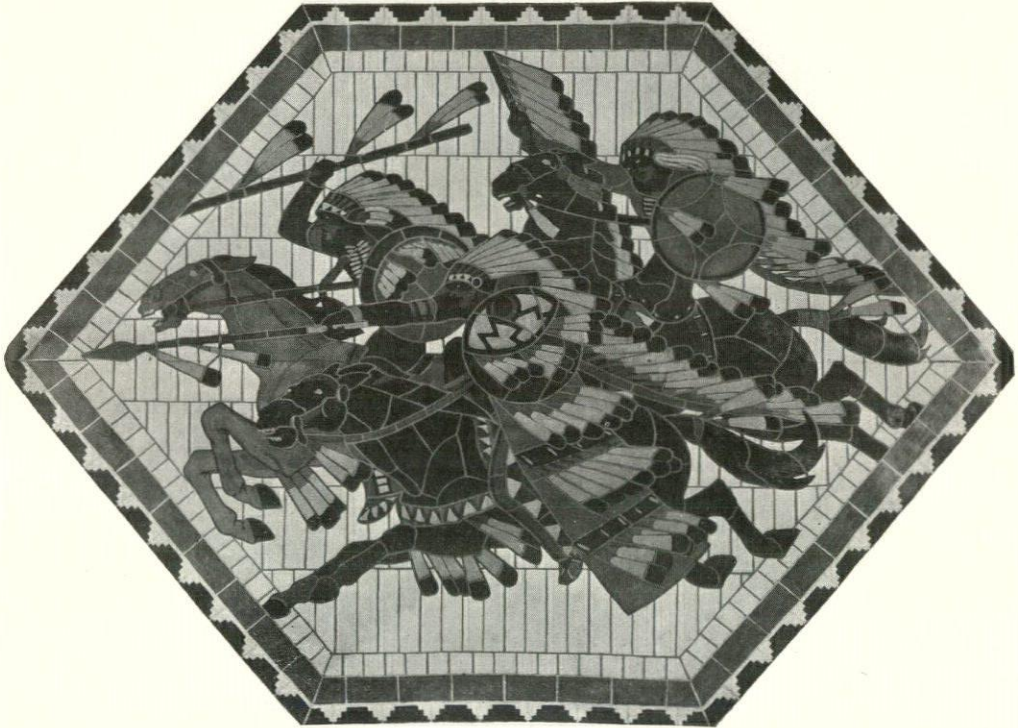
In working out new methods, the artist found it necessary to make up rules as she went along. Guided by the necessity of the medium, she had to decide what was practical in the way of joints; how to get an effect that was simple, yet rich. Miss Meiere explained that she did

not try to do anything but two-dimensional things. She remained within the limits of the medium and created designs rather than attempts at painting. The work for the National Academy of Sciences was of an entirely different character. There the designs for the 65 ft. dome are carried out in gesso on tile, representing the first use of this decora-

The entire pattern was worked out mathematically, and with such accuracy that no re-adjustments were necessary. High colors dominate the decoration which is rather archaic in design. The plaster is raised enough (about a half inch) to give an interesting quality of surface. Mr. Goodhue's first intention was to paint on the tile. The results were unsatisfactory. He felt the work lacked

in working out new problems. Undoubtedly it has enabled her to study a problem from the architect's point of view as well as from the painter's.

Church decoration is a subject of great interest to this artist. Among her prominent church works are the Winthrop Memorial Reredos for St. John's Episcopal Church, Beverly Farms, Mass., for which Cram and Ferguson were the arch-



The War Party, One of the Indian Panels in the  
HOUSE OF REPRESENTATIVES, NEBRASKA STATE CAPITOL  
Hildreth Meiere, Mural Painter

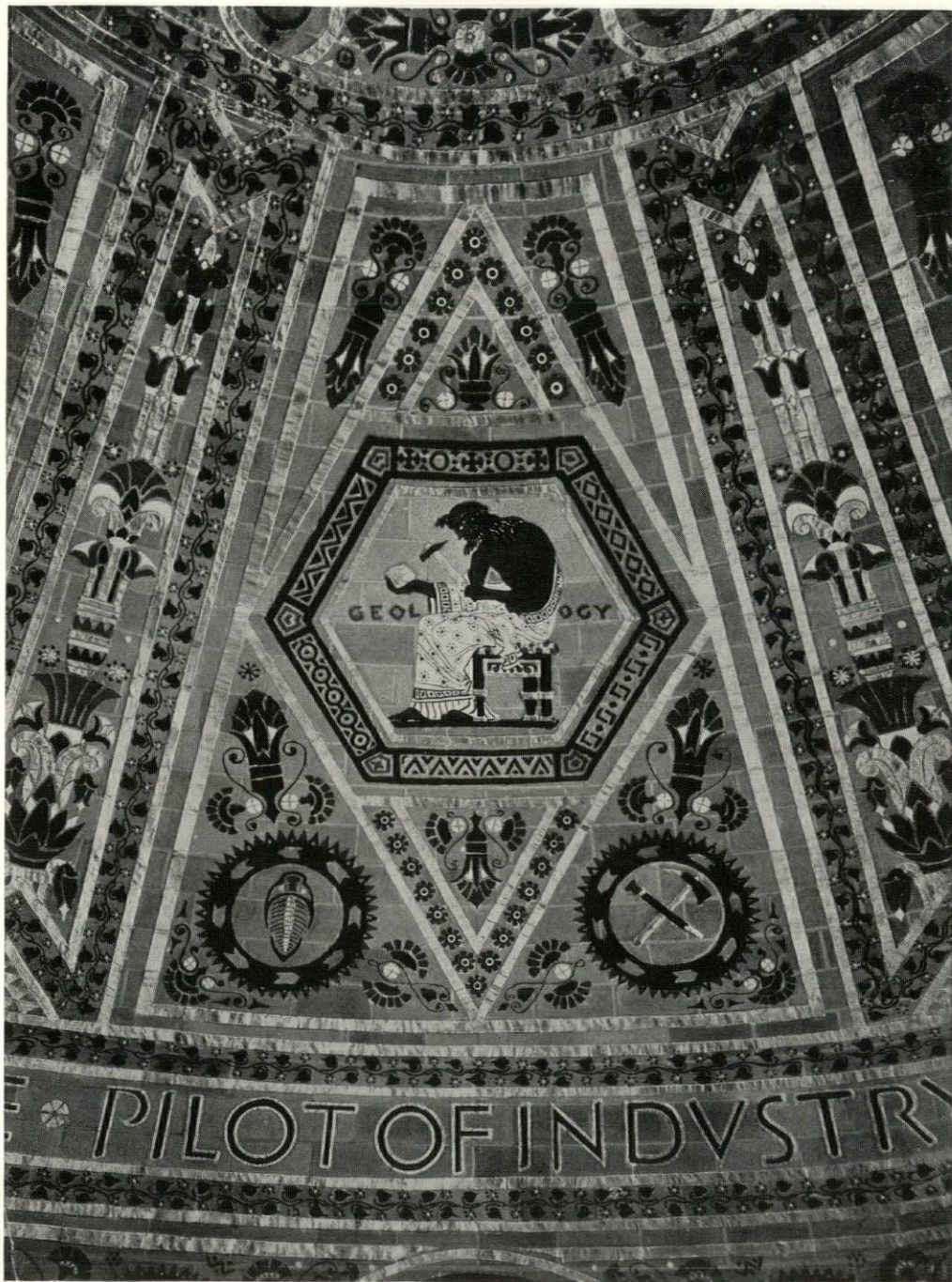
the feeling of surface which he admired. Hence experiments were made with plaster and the decorations in gesso on tile resulted. In this work, too, the artist was guided by the necessity of the medium. Each new problem demands new handling in design as well as in execution.

Miss Meiere believes her architectural studies and her experience, limited though it was, as an architectural draughtsman have been a tremendous help to her in understanding jobs and

itects; altar-pieces for St. Mark's Episcopal Church, the Winthrop Cowdin Memorial, at Mt. Kisco, N. Y. and for St. Martin's Episcopal Church, the Cornell Memorial, at Providence, R. I., for both of which Mr. Goodhue was the architect; as well as memorial altar-pieces at New Haven, Connecticut and Lexington, Kentucky.

Her design for a theatre curtain for the Woman's City Club, San Francisco, California is further evidence of Miss





MURAL DECORATION IN TILE, NATIONAL ACADEMY OF SCIENCE, WASHINGTON, D. C.

Hildreth Meiere, Mural Painter



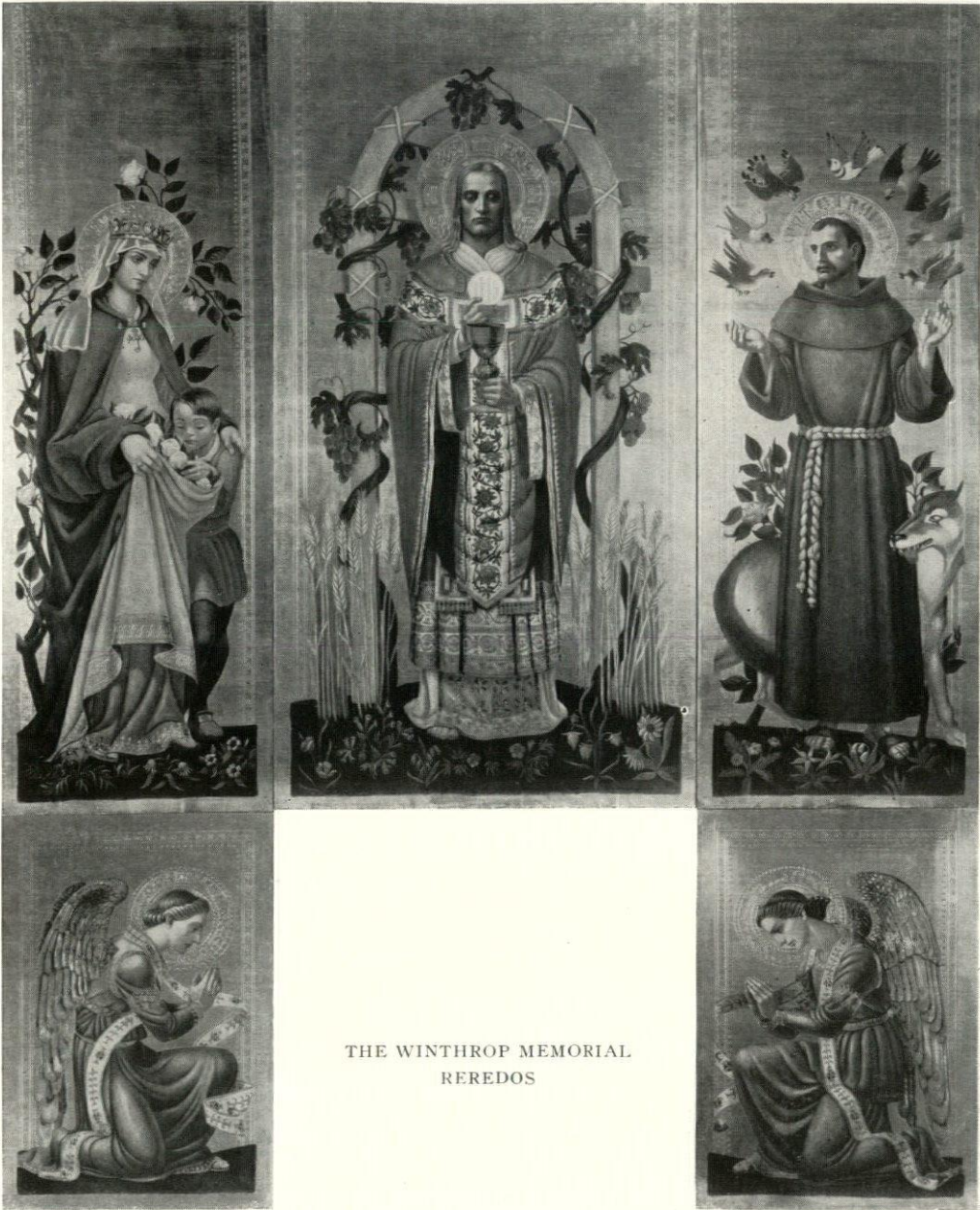
*The Architectural Record*

*August, 1927*

THEATRE CURTAIN FOR THE WOMEN'S CITY CLUB, SAN FRANCISCO, CALIFORNIA

Hildreth Meiere, Mural Painter

(Executed by the Herter Looms)



THE WINTHROP MEMORIAL  
REREDOS

*The Architectural Record*

*August, 1927*

REREDOS FOR ST. JOHN'S EPISCOPAL CHURCH, BEVERLY FARMS, MASS.

Cram & Ferguson, Architects  
Hildreth Meiere, Mural Painter

Meiere's versatility as an artist. The curtain was executed by Herter Looms in the manner of the old painted tapestries and painted in dyes, thus leaving the texture of the material (a heavy cotton rep) unimpaired and eliminating the stiffness produced by paints.

In considering the variety and quality

of Miss Meiere's work, particularly in view of the fact that she has been engaged at it less than ten years, one is tempted to apply to her her comments about Mr. Goodhue: that he had an open mind, was absolutely not set in his ideas, and was always eager to experiment with new things.



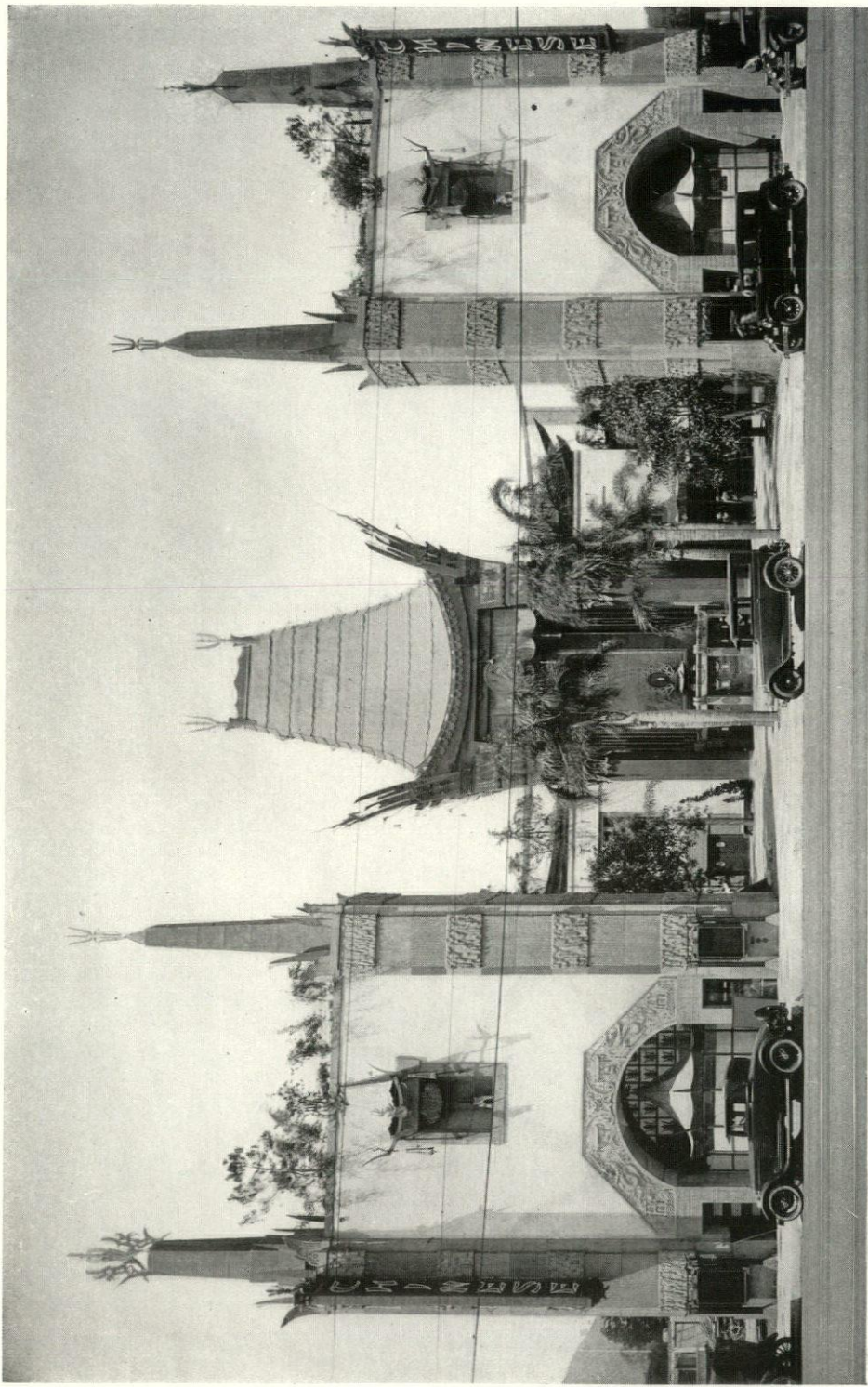
P O R T F O L I O  
C V R R E N T · A R C H I T E C T V R E



GRAUMAN'S CHINESE THEATRE, HOLLYWOOD, CALIFORNIA

Meyer & Holler, Inc., Architects





GRAUMAN'S CHINESE THEATRE, HOLLYWOOD, CALIFORNIA  
Meyer & Holler, Inc., Architects

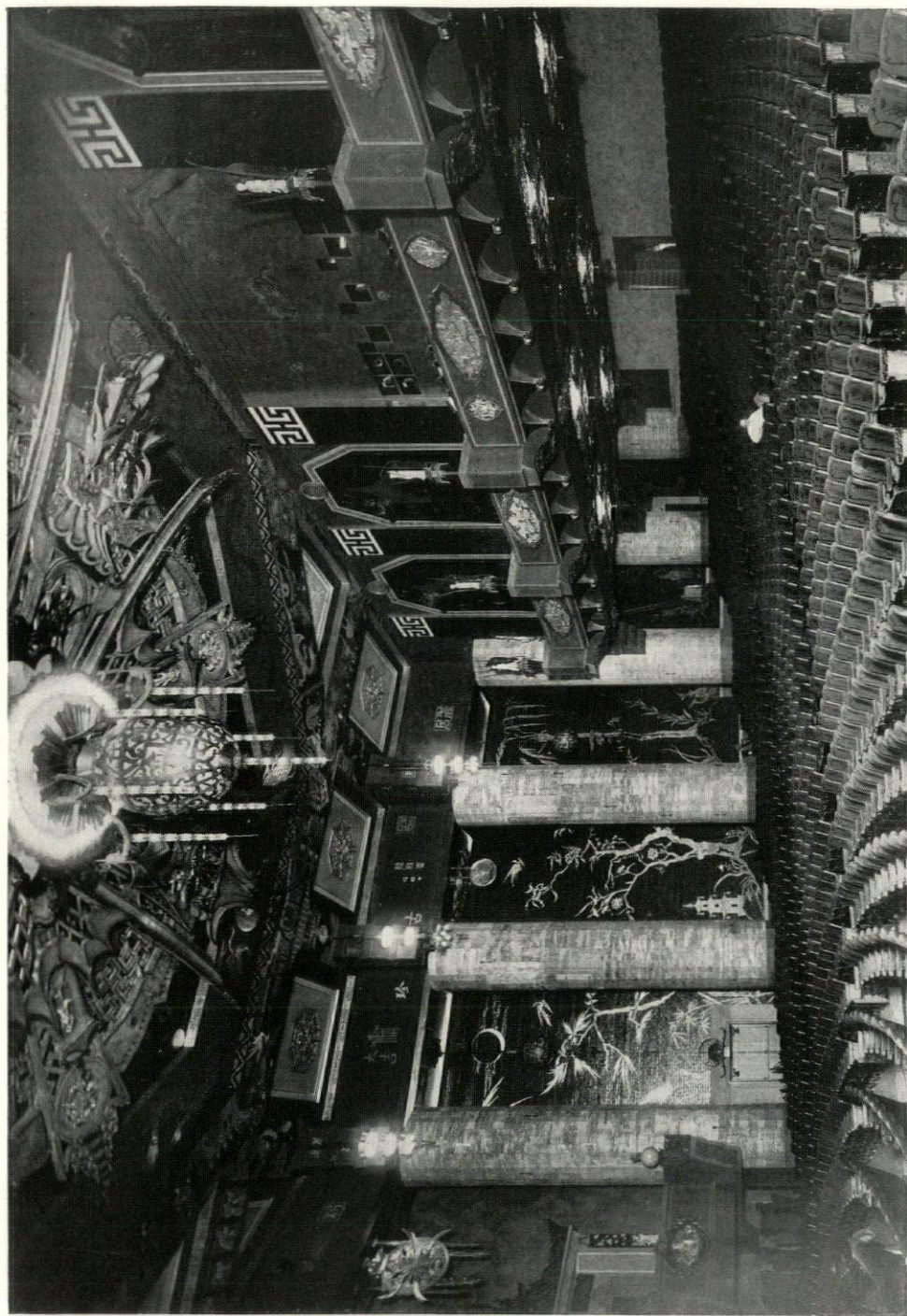






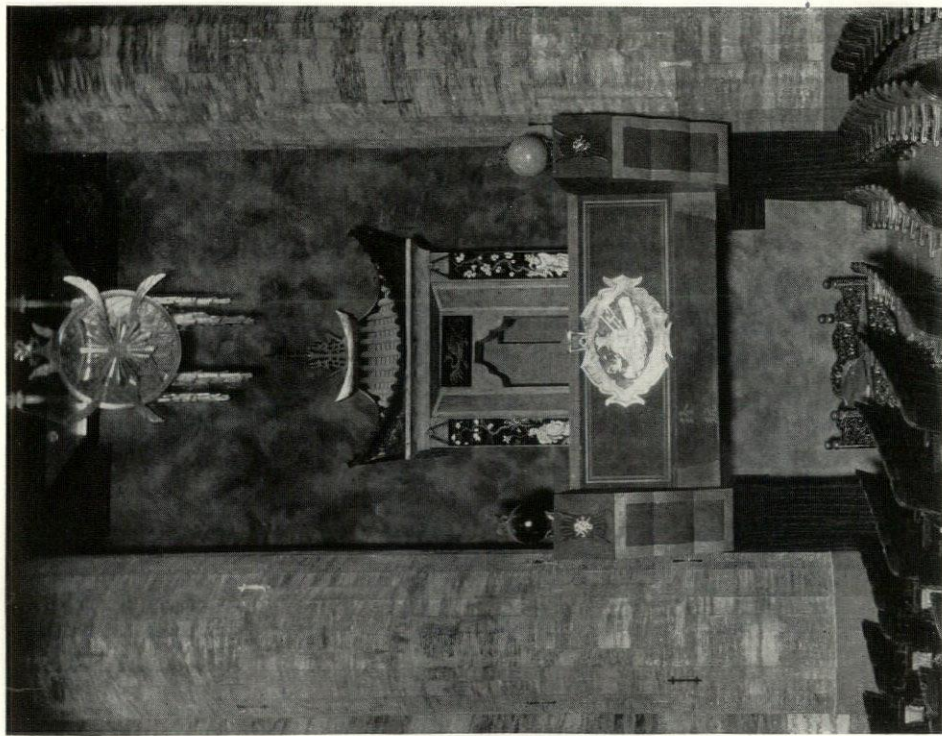
GRAUMAN'S CHINESE THEATRE, HOLLYWOOD, CALIFORNIA  
Meyer & Holler, Inc., Architects





GRAUMAN'S CHINESE THEATRE, HOLLYWOOD, CALIFORNIA  
Meyer & Holler, Inc., Architects





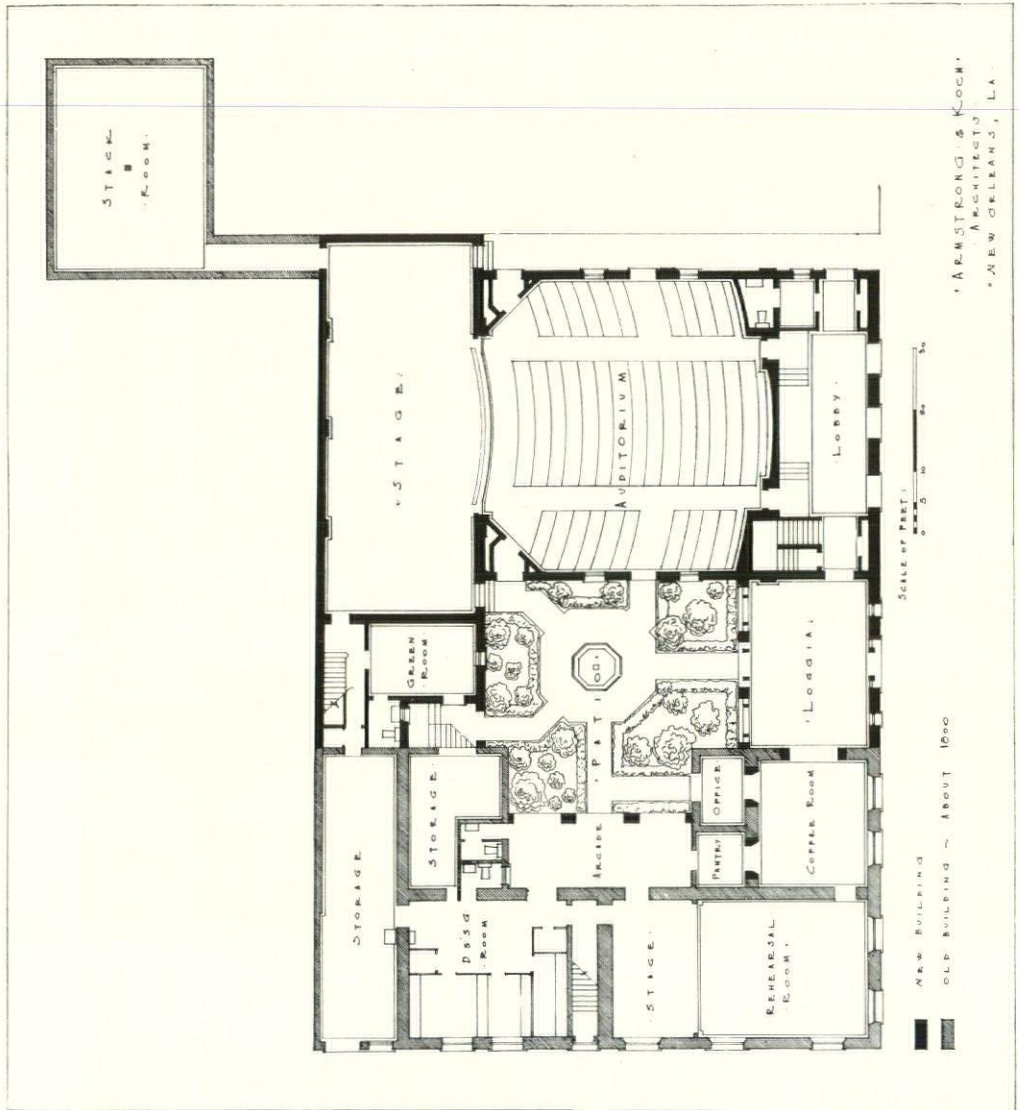
GRAUMAN'S CHINESE THEATRE, HOLLYWOOD, CALIFORNIA  
Meyer & Holler, Inc., Architects



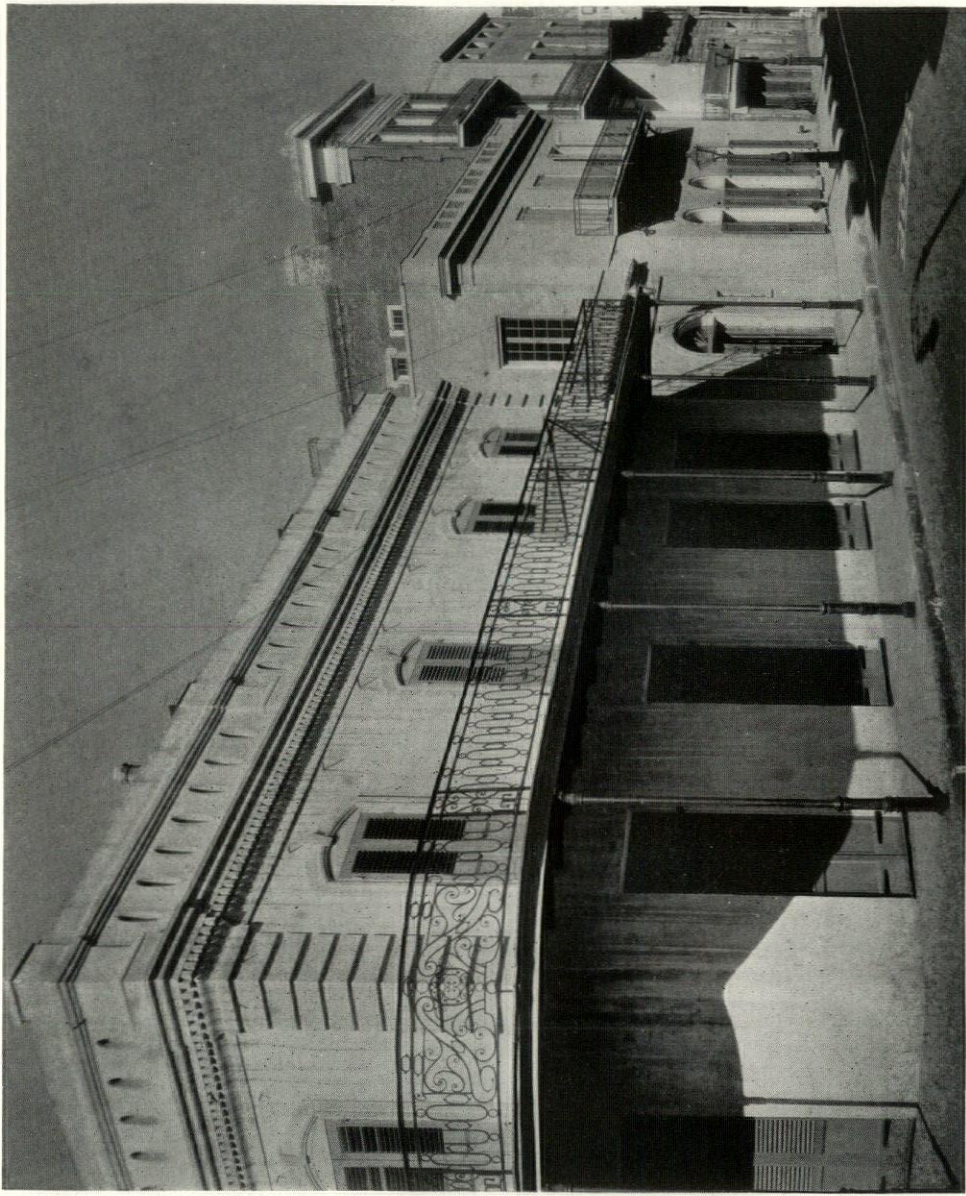


*Photo, Tebbs & Knell, Inc.*

LE PETIT THÉÂTRE DU VIEUX CARRÉ, NEW ORLEANS, LA.  
Armstrong & Koch, Architects



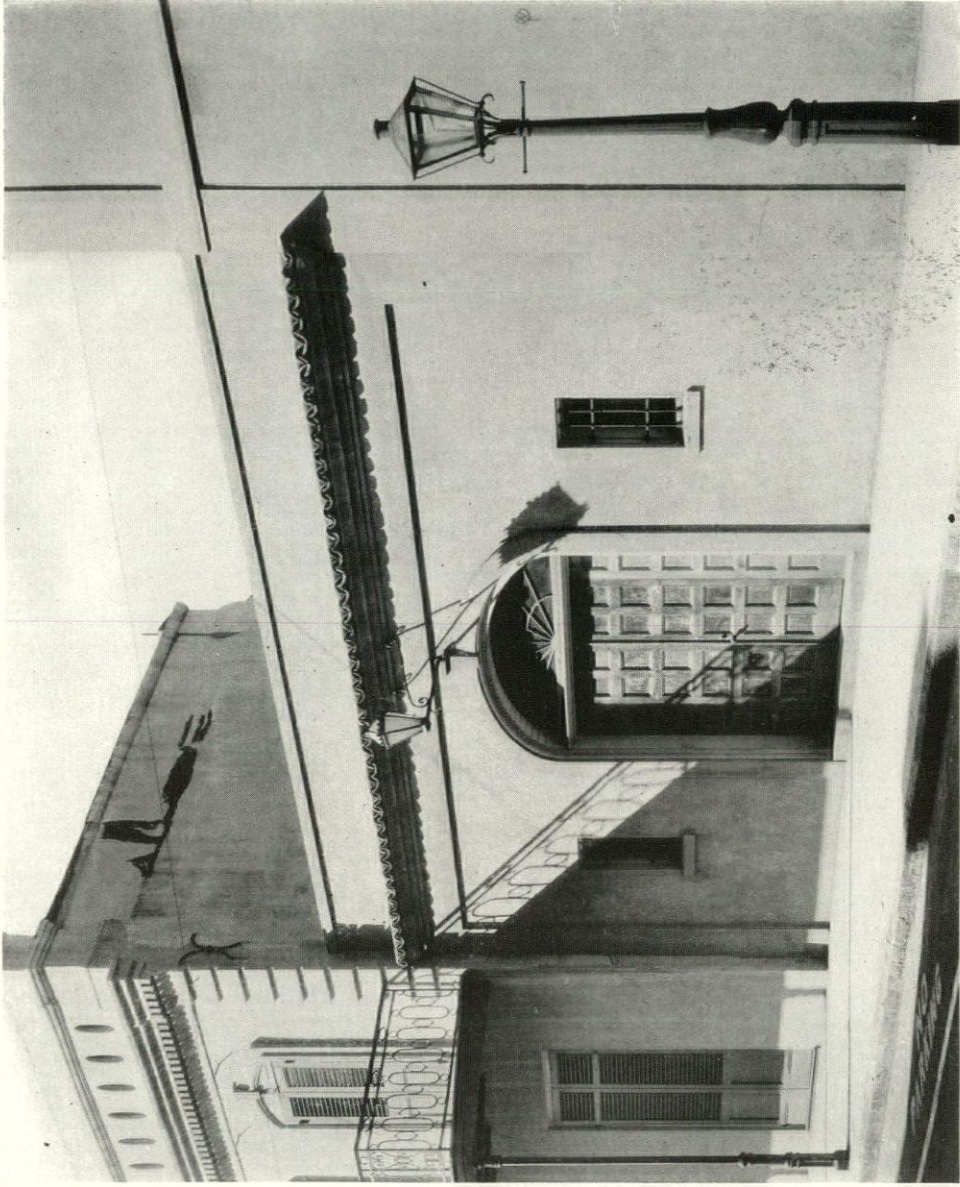




*Photo, Tebbs & Knell, Inc.*

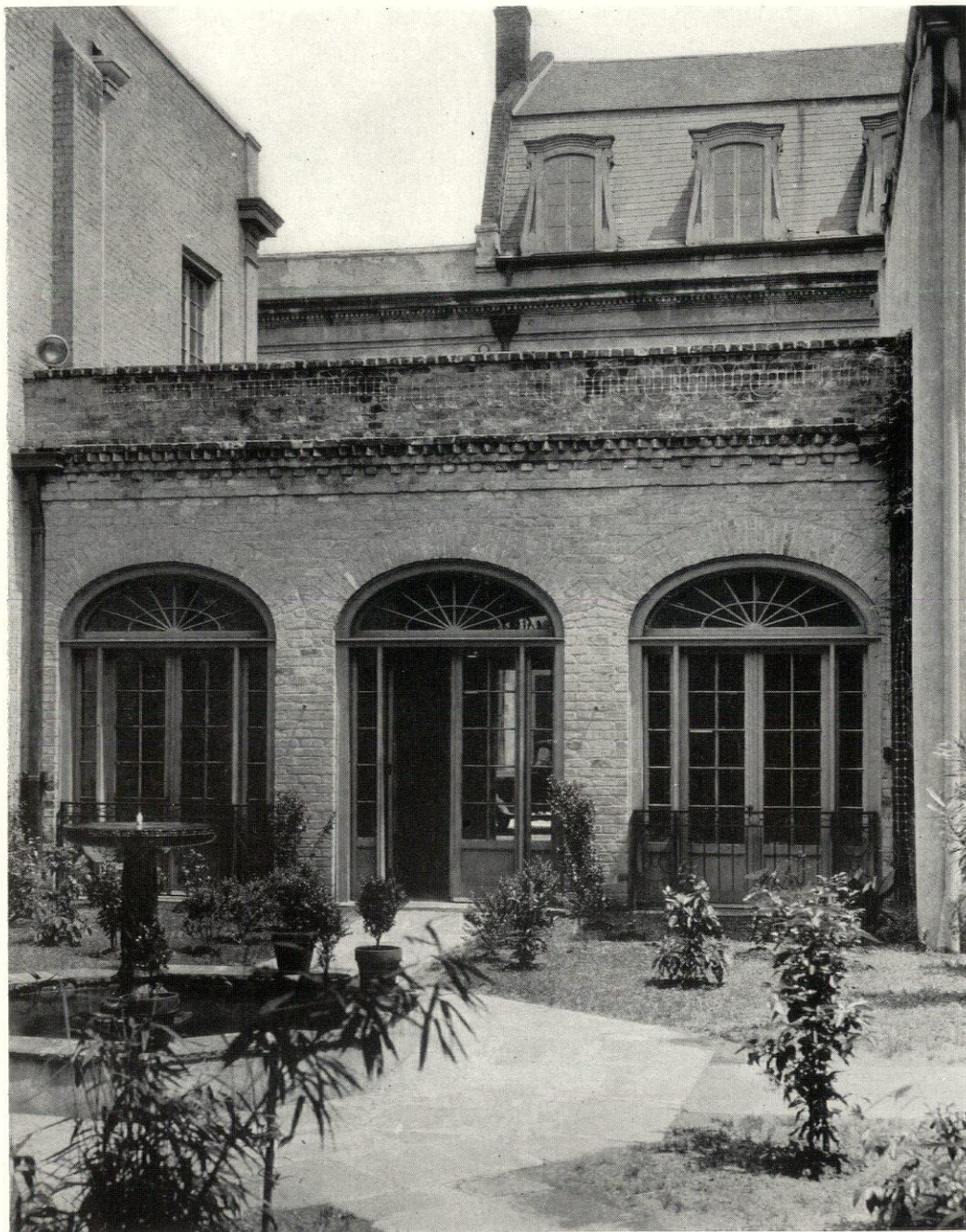
LE PETIT THÉÂTRE DU VIEUX CARRÉ, NEW ORLEANS  
Armstrong & Koch, Architects





*Photo, Tebbes & Knell, Inc.*  
ENTRANCE, LE PETIT THÉÂTRE DU VIEUX CARRÉ, NEW ORLEANS  
Armstrong & Koch, Architects





*Photo, Tebbs & Knell, Inc.*

PATIO, LE PETIT THÉÂTRE DU VIEUX CARRÉ, NEW ORLEANS, LA.  
Armstrong & Koch, Architects





*Photo, Tebbs & Knell, Inc.*

Lobby and Vestibule  
LE PETIT THÉÂTRE DU VIEUX CARRÉ, NEW ORLEANS  
Armstrong & Koch, Architects

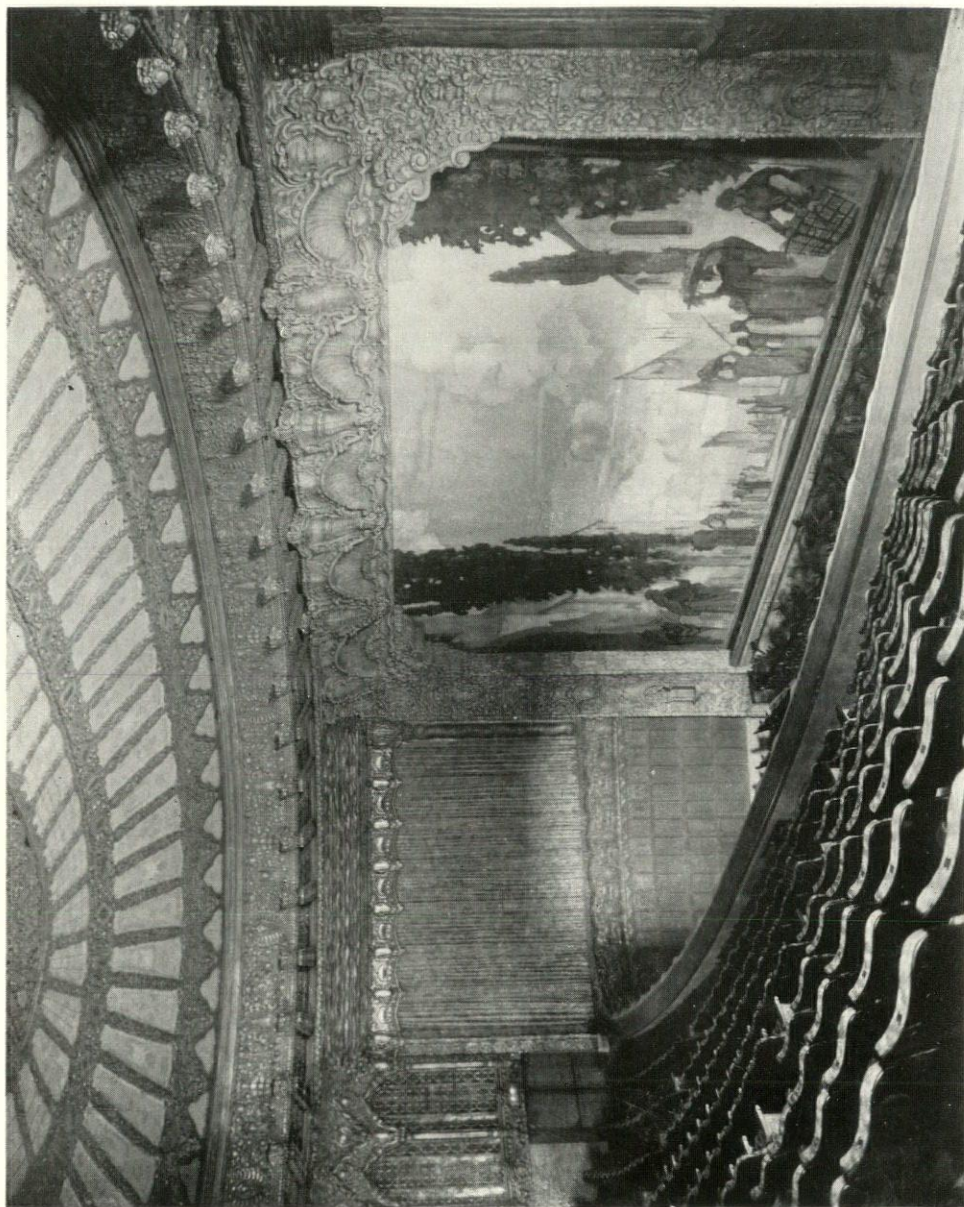






BELASCO THEATRE, LOS ANGELES, CALIFORNIA  
Morgan, Walls & Clements, Architects

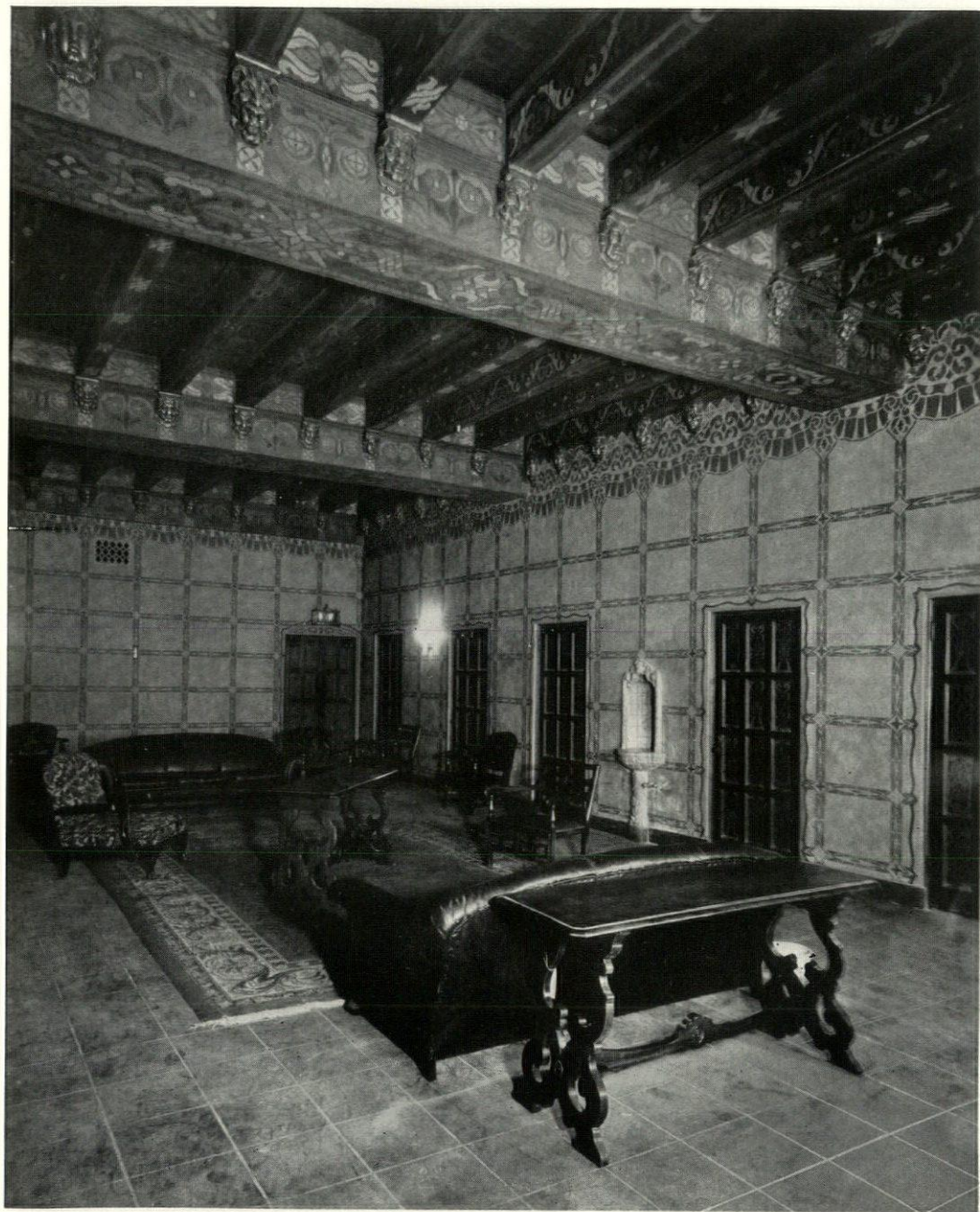




BELASCO THEATRE, LOS ANGELES, CALIFORNIA

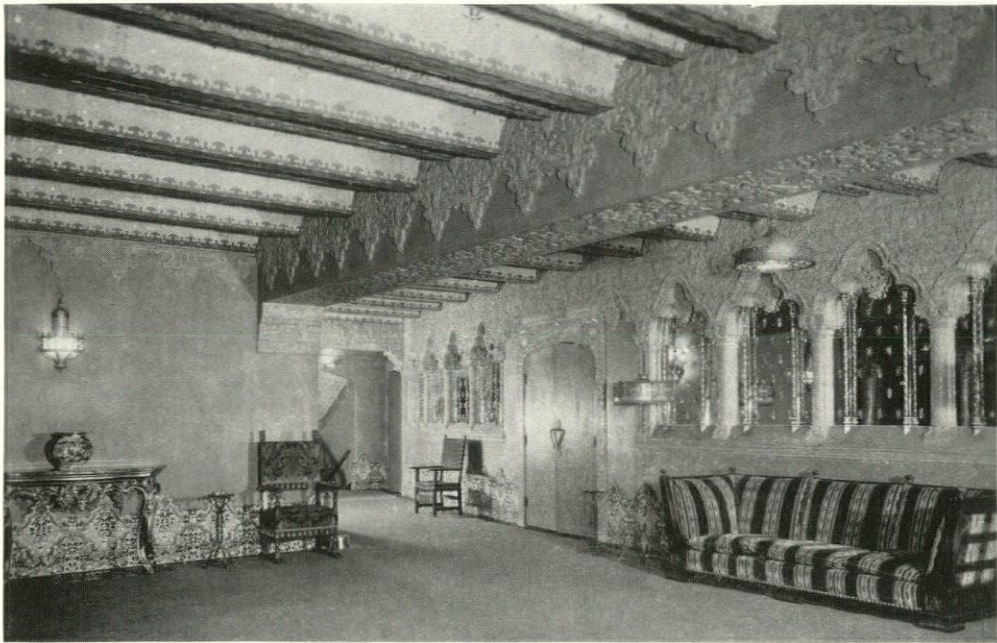
Morgan, Walls & Clements, Architects



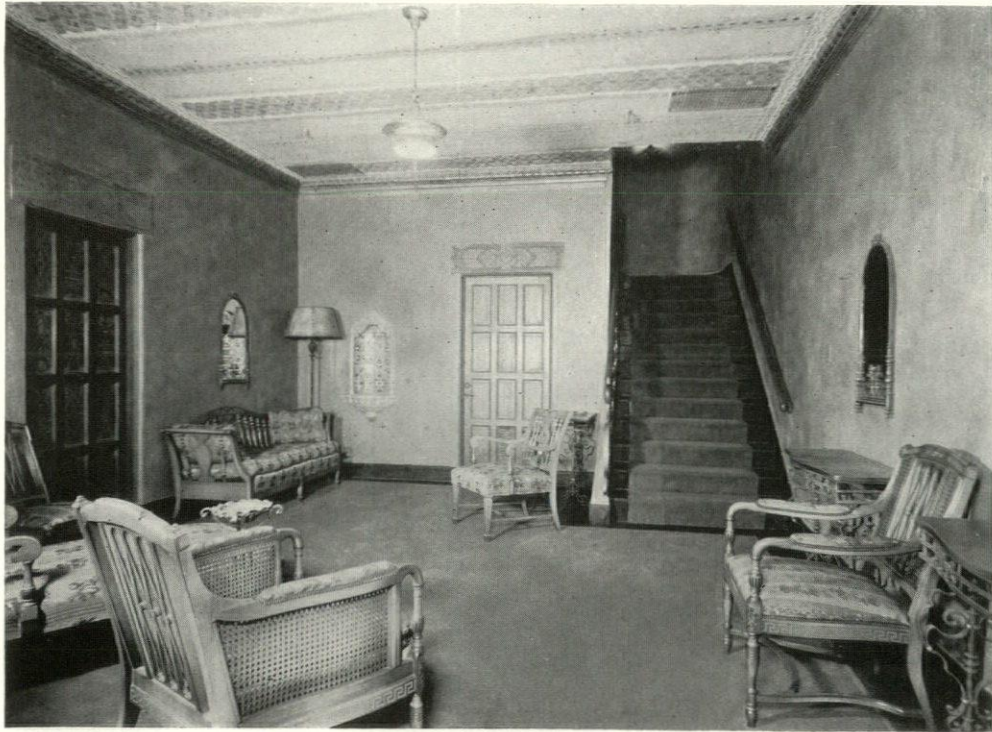


The Green Room  
BELASCO THEATRE, LOS ANGELES, CALIFORNIA  
Morgan, Walls & Clements, Architects





Foyer

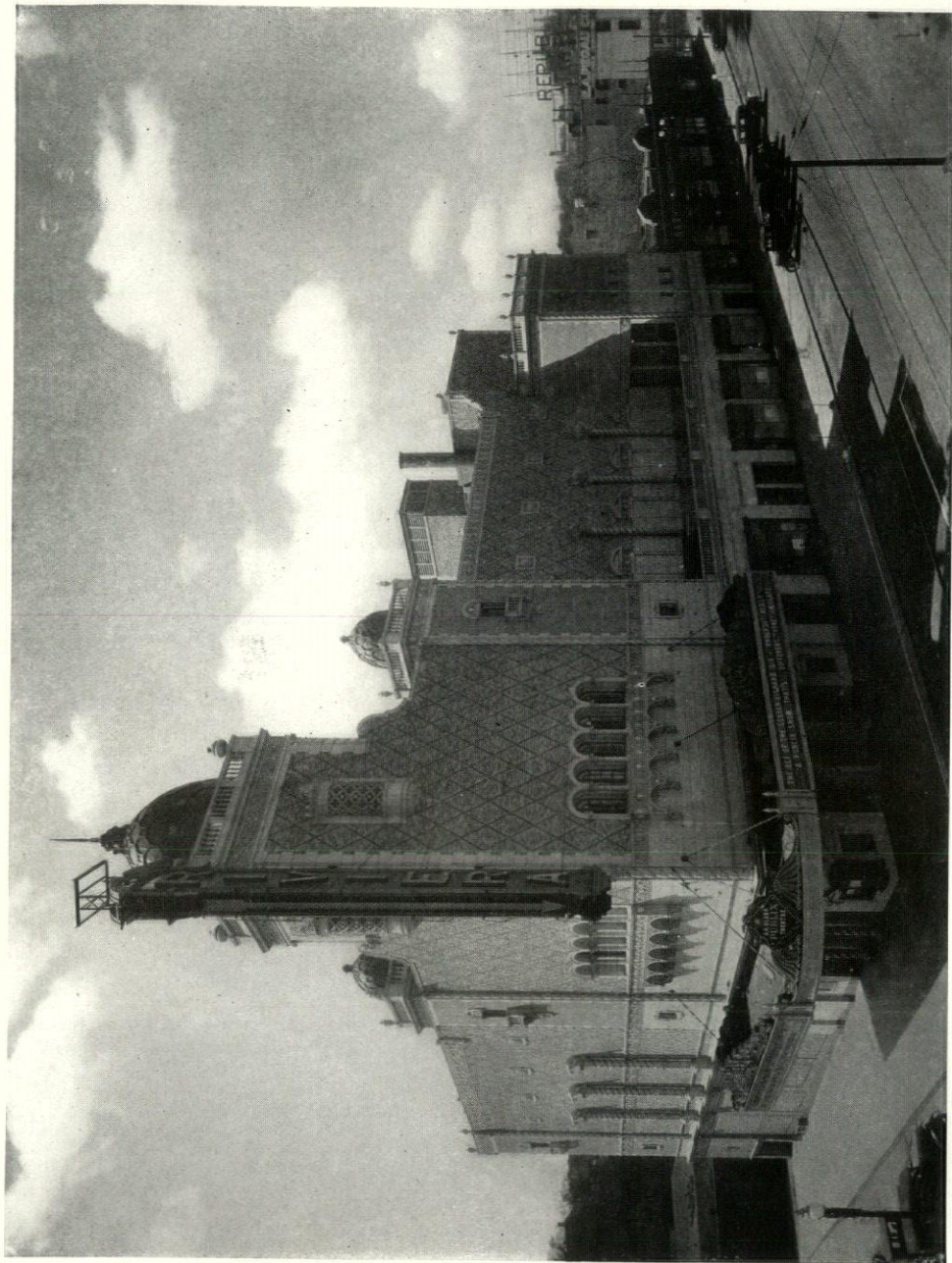


Ladies' Rest Room

BELASCO THEATRE, LOS ANGELES, CALIFORNIA  
Morgan, Walls & Clements, Architects

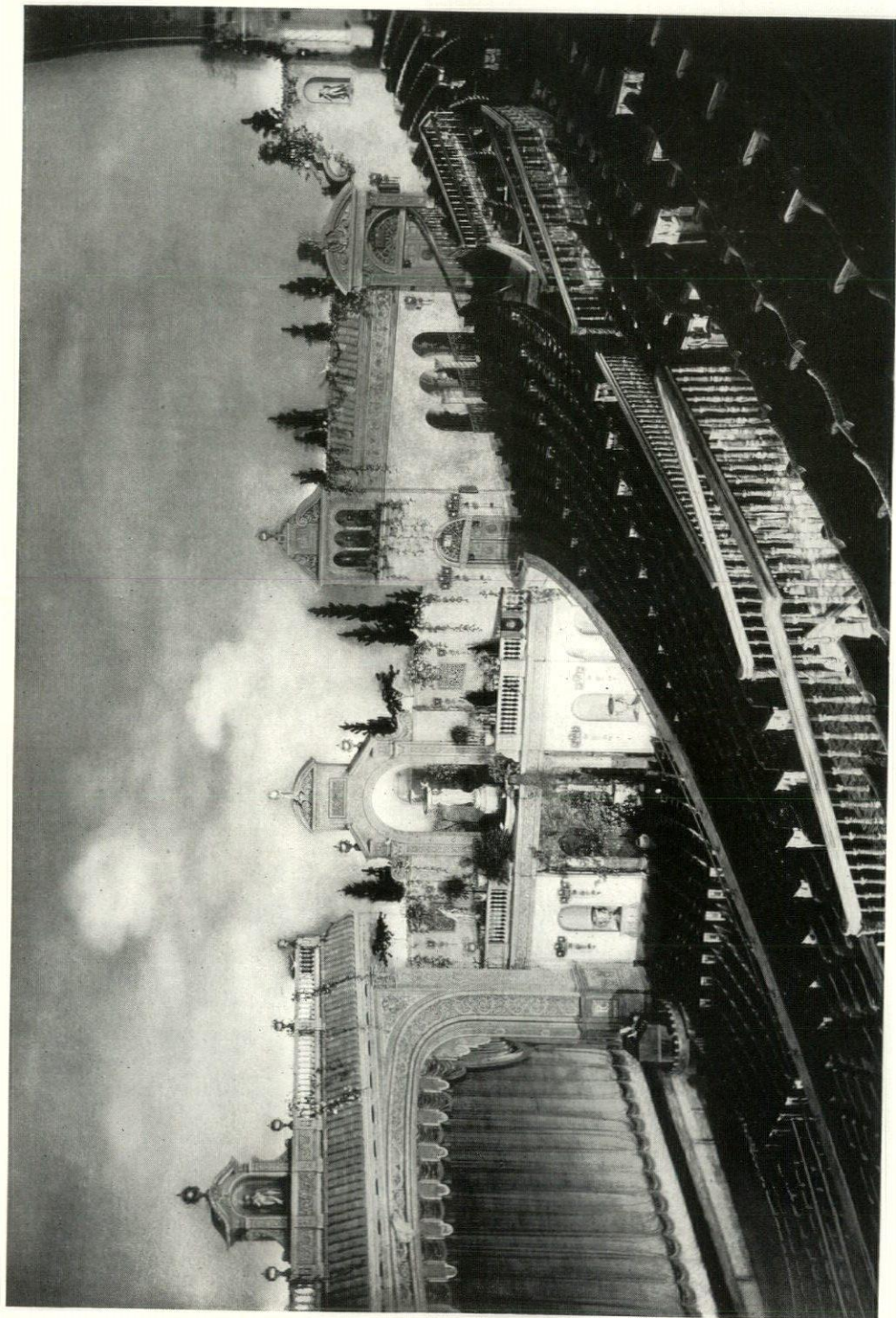






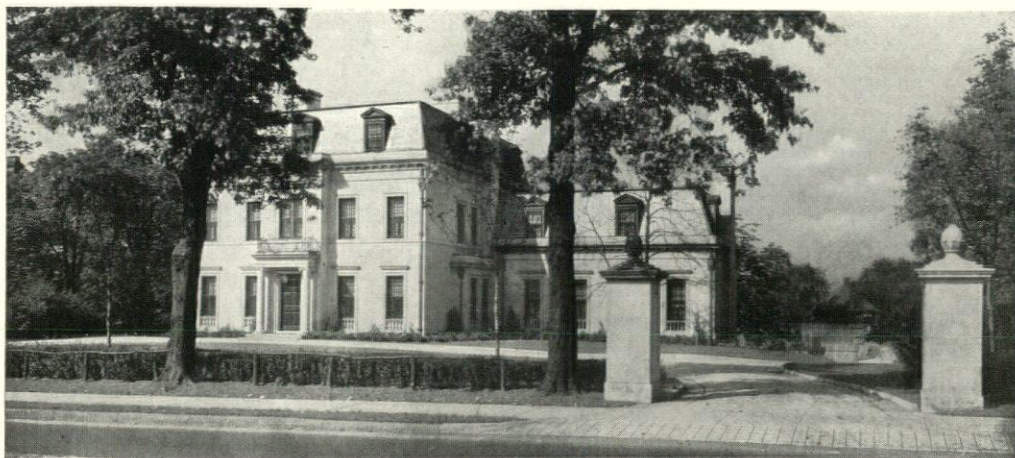
RIVIERA THEATRE, OMAHA, NEBRASKA  
John Ebersson, Architect





RIVIERA THEATRE, OMAHA, NEBRASKA  
John Ebersson, Architect





## ALTERATIONS to a LATE VICTORIAN HOUSE IN PITTSBURGH, PA

E. P. MELLON, *Architect*

SITUATED IN THE DISTRICT which is considered the main residential section of the City of Pittsburgh, the property illustrated has a frontage on the Avenue of one hundred and forty one feet, and a depth of four hundred and eighty feet to a street.

The original house was erected during the late eighties and was considered at that time as being typically Late Victorian and unusually substantially built. All the interior walls were of solid brick twelve inches thick and the exterior walls twenty inches thick. The first floor ceilings were thirteen feet, and the second floor ceilings eleven feet in height. Inside, the house was finished throughout with fine, well seasoned walnut of rather elaborate design. All rooms were exceedingly large and well lighted.

In purchasing this property, the present owner intended to raze the old building and erect in its place a modern residence containing conveniences and comforts of the most approved type. When plans were drawn, however, estimates showed that the cost would be much greater than had been contemplated, so the idea was abandoned.

In the architect's opinion modern con-

struction or finish such as existed in the old building are no longer procurable and, aside from the prohibitive cost entailed, it seemed to be entirely the wrong procedure to destroy material of such fine quality. He suggested, therefore, that plans be prepared for the alteration of the old building, retaining the old walls and material but adding to the plans sufficient additions to meet the requirements of the family. This suggestion met with the owner's approval.

The only addition made to the original house was the one-and-a-half story ell at right angles to the old house, containing a large living room with bath rooms and dressing rooms above and a garage beneath. The height of this new living room was planned to conform to the height of the ceilings in the old house.

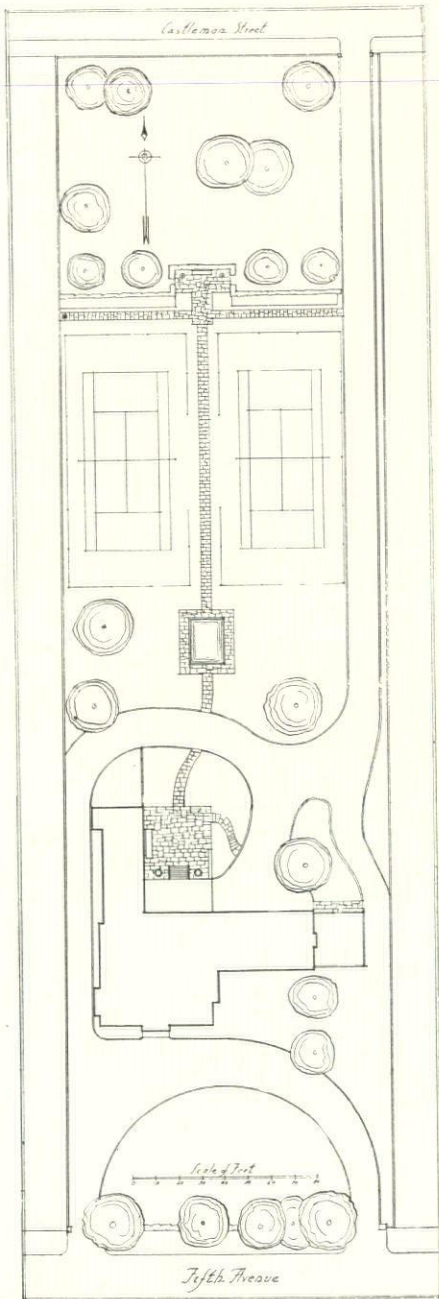
No changes were made in the walls or in the arrangement of the old house, excepting in the domestic quarters. All interior trim was retained with the exception of a few flamboyant details. The old varnished finish was taken from the woodwork and an oil finish substituted. Wooden mantels which were of poor design were rejected throughout and old marble mantels purchased.



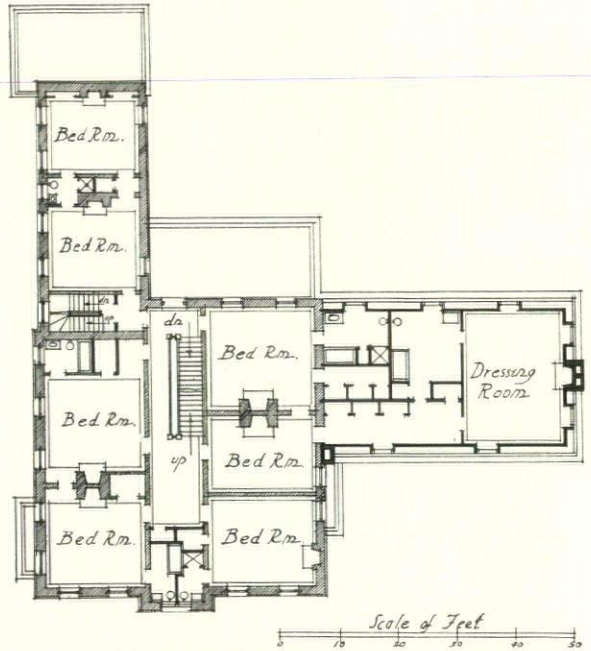
Front View of House—Before and After Alteration  
RESIDENCE OF J. H. HILLMAN, ESQ., PITTSBURGH, PA.  
E. P. Mellon, Architect



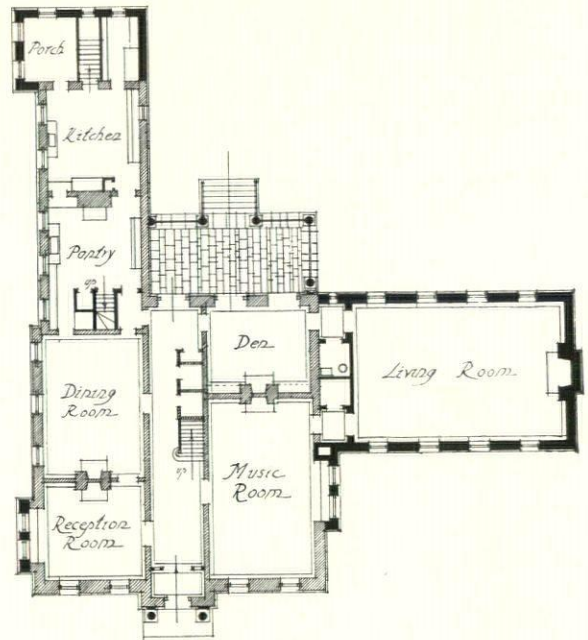
Rear View of House—Before and After Alteration  
RESIDENCE OF J. H. HILLMAN, ESQ., PITTSBURGH, PA.  
E. P. Mellon, Architect



Plot Plan



Second Floor



First Floor

RESIDENCE OF J. H. HILLMAN, ESQ., PITTSBURGH, PA.  
E. P. Mellon, Architect



As the exterior dimensions of the old building were not to be changed, it was found desirable to adopt a style of architecture which would conform to the existing proportions and conditions, a style which would be as simple and plain as possible. "English Georgian" was therefore adopted. This necessitated the altering of the design of the roof of the old house and changing somewhat the locations and proportions of the existing windows. To carry out the design and to give a modern appearance it was deemed advisable to reface the old brick house with stone.

As always in such operations, it is difficult to determine the ultimate cost. It was finally decided, therefore, to let the contract on a cost plus basis. The time occupied for the alteration consumed about one year, and after the entire completion of the building, it was found that the total cost involved was thirty three and one third per cent less than the esti-

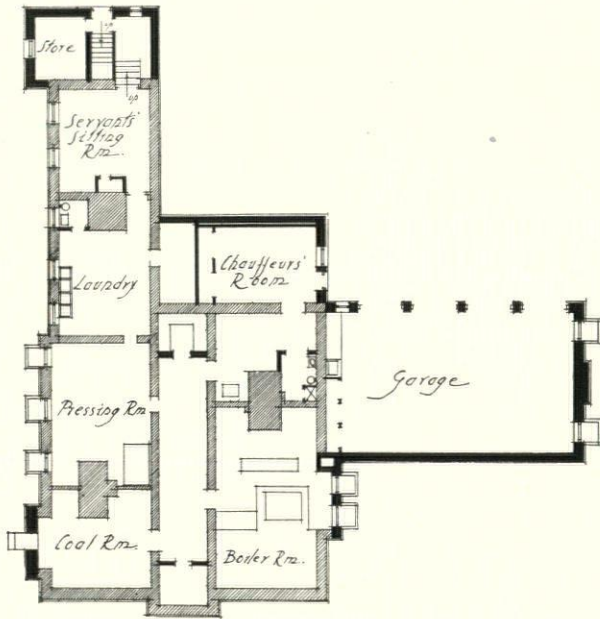
mated cost for an entirely new structure.

The result is a house containing all modern comforts and conveniences and which possesses, in addition, qualities of construction and material which cannot be produced today. Therefore, regarding

construction, appearance, and finance, there is complete satisfaction.

One of the most regrettable sights today is that of witnessing the demolition of fine old residences erected in this country previous to the present century, and the demolition of fine old materials and construction the equal of which is not produced today. In altering such buildings, not only is the quality preserved but it proves cheaper and more satis-

factory to the owner than the erection of a new home containing the present quality of unseasoned wood and other inferior standardized materials which are so often hastily put together without any comprehension or knowledge of what good workmanship should be.



*Basement*

# PILGRIMAGE THROUGH PUGLIA

By  
*John Van Delt*

Opinion about what is beautiful depends much on the point of view. It seems to depend even more on that restriction of the point of view, Fashion. Ten years ago the Adam brothers' style enjoyed a revival. Twenty-five years ago Louis XVI was thought lovely, Empire and Adam's, dry, prim, emasculated and in bad proportion. There is no market for Louis XVI today. Every so often there has been a renaissance of Gothic. It has recruited valiant defenders. So valiant has been one of the chief spokesmen in its behalf, with such skill, brilliancy and vehemence has he insisted that Gothic is the only style that can architecturally express religious emotion that a large part of the lettered American public believe it to be true. An argument in support of this bit of architectural fanaticism is that the people of England, France and Italy during the thirteenth and fourteenth centuries were peculiarly imbued with spiritual devotion and expressed this fervor in lines and forms of stone. Such a quick and pleasantly sentimental method of settling the manifestations of a large part of humanity for many generations is attractive and offers delightful opportunities for word pictures; but it is neither scientific nor accurate.

As a matter of fact several thousand years would be a small span in which to measure biological change in humans unless there were new intermixtures of divergent races.

There was no intrinsic change in the inhabitants of France and Italy from Gothic to Renaissance days. The difference between emotional reactions of the average normal individual in the two periods would have been so slight as to defy measurement. What caused the apparent difference between these types?

The same kind of thing that today makes a difference between the illiterate Russian peasant and his American progressive son. We have it more quickly now, because the individual is transplanted from one environment to another.

What was this vaunted religious expression? If it did not come from some biological peculiarity of the human specimen (while he does not say so, the Gothic enthusiast usually implies it), what was its source?

Its source was largely political. The church was strong. It was the only refuge from the oppression of the unscrupulous barons. The barons levied taxes and stole to build castles. The church accumulated land, imposed its tithes, received its dues of labor to build churches, abbeys, monasteries and convents.

If we had gone among them and their dirt and smells and vermin I doubt that either the serf or the baron of the thirteenth century would have proved more religious or devout than the illiterate peasant of today. A shade more credulous perhaps—certainly not more credulous or fanatic than the witch burning Puritan who produced no aspiring shafts or lofty groined vaults. Yet heaven was supposed to be high up over the head of each.

Methinks true honesty exists in the endeavor to perceive and feel the skill, beauty and sincerity discoverable in the best work of every period of art. We may gain something by refusing to let our ears be deafened and our eyes blinded by pyrotechnics, verbal or visual. If he forget the lessons he has learned about Greek mythology, the Jewish laws and prophets and the Christian saints and martyrs and desires a setting in which his thoughts may rise to God, a man may find it at Segesta or Bitonto as well as at

Amiens. It is good to remember that humanity has had the same pains, hopes and joys at all periods of its history and that it has at all periods found a similar relief from sorrow.

The tower of Trinity Church in Boston and the porch of St. Bartholomew's in New York are evidence that two architects whose pencils were mightier than their pens were able to clothe religious expression in a style other than Gothic. They went to a font purer even than Notre Dame, or Bourges.

No one, unbiased, can contemplate the impressive grandeur of Bitonto without uplift. It is a revelation to come upon it from the south east, out of the small side streets of the town, its transept rising in simple masses, the wall of the side aisle paralleling the nave, crowned by the glorious arcade that leads to the women's galleries. After seeing several of these wonderfully moving and withal beautiful Romanesque buildings one has a feeling that, after all, the Gothic architects had become a little too scientific, that the skill shown in gathering thrusts into slender piers, counter-balanced by flying buttresses, was a little too obvious and obtrusive, and that the Gothic façade errs in being either too full of squares in its masses, as at Notre Dame, or a bit too lacelike for stone, as at Rheims.

Comparisons are odious. I would not give up my remembrance of Notre Dame as one sees it against the evening sky from the Pont de l'Archeveché for much fine gold; neither would I be satisfied to lose my recollection of the impression created by Bitonto's nobler mass.

I have ventured the foregoing discussion as preface to a description of our trip in the Puglia district because in so many persons I find a deeply seated and most unfortunate Gothic prejudice and on all sides I meet with such deplorable ignorance and consequently so little real appreciation of the equally beautiful and, to my mind, even more inspired Romanesque. Only a few days before sailing, a brother practitioner, one of New York's foremost architects, diplomé of the Ecole

des Beaux Arts, commented: "What are you going there for? I was quartered at Brindisi during the war, planning hospitals. There's no architecture there worth seeing."

"How about Bari?" I parried.

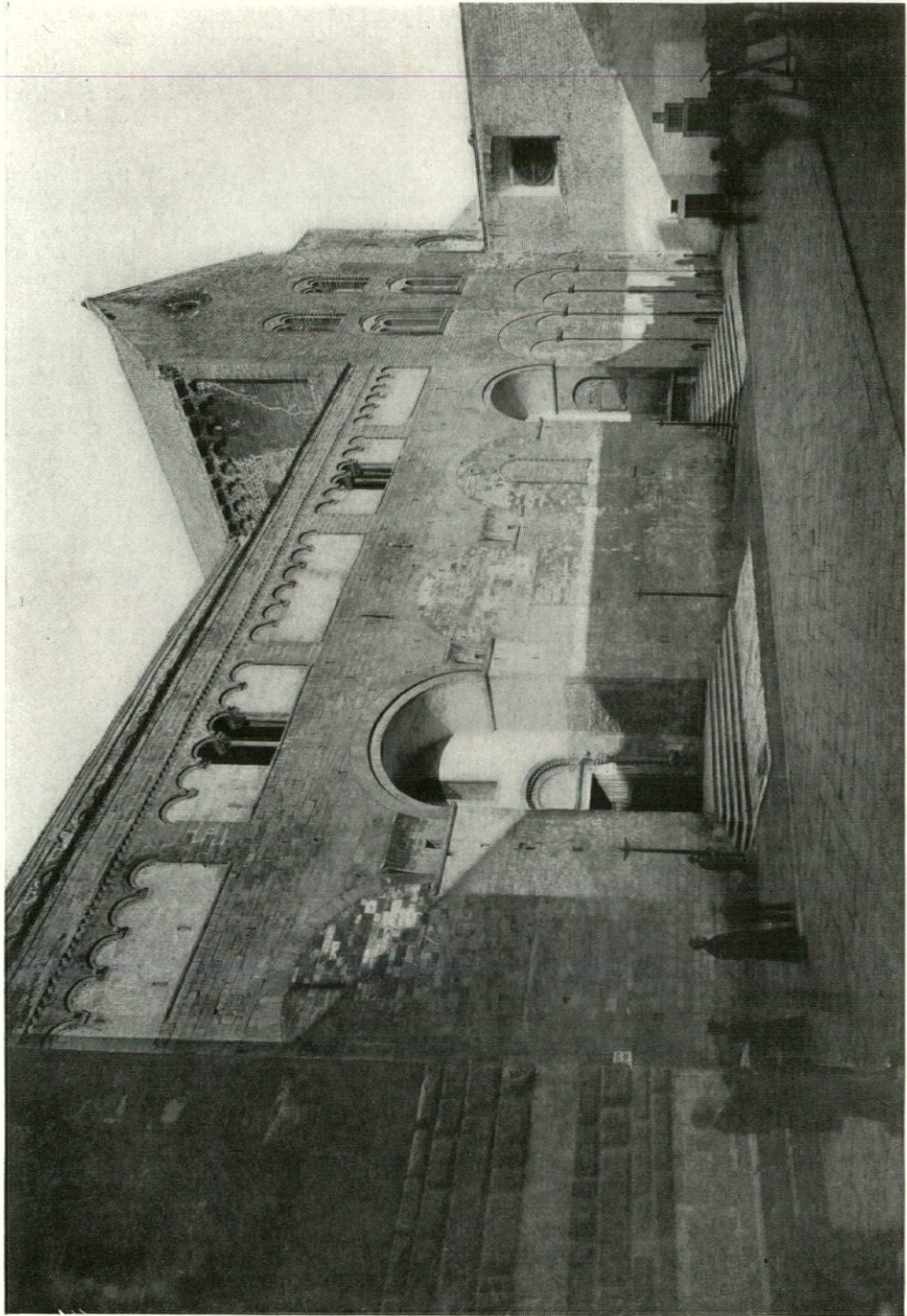
"Why I was at Bari. I don't remember anything much. How far up are you going?"

"Manfredonia", I said. "I believe there's some good stuff to be seen near it."

Manfredonia seemed to waken a memory, but it was evidently dim. There he had been, with Bari's cathedral and St. Nicolas in the same town and had not known enough to go and study them. And twenty minutes from Bari by automobile is Bitonto. I myself was not much wiser about distances at that time, so I kept still; but I hope now he may happen on this article and read my reply.

Many of the most interesting towns in Puglia—Bitonto, Ruvo, Canosa and the Monte S. Angelo—are off the main railway and are reached by a small sub-line or in the case of the last, by diligence. We made the trip in an automobile. It could be done by bicycle, both economically and conveniently, if one did not mind putting up at small hostelrys and were impervious to fleas. I am still uncertain whether citronella is a protection against the latter as I used up all mine on the first day and met the great flea army later.

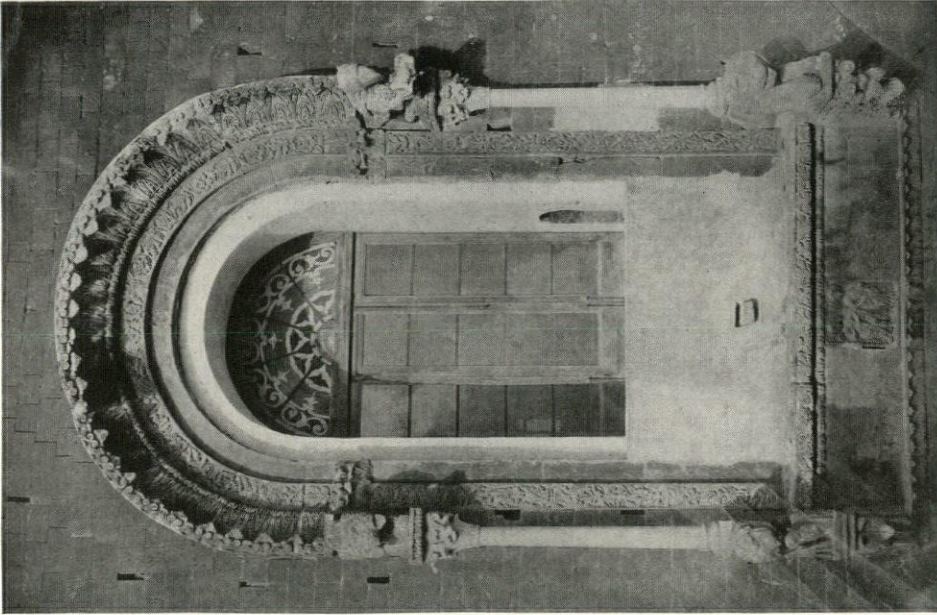
Inquiries at the Hotel Internationale at Brindisi elicited no suggestions of automobiles so we entrained for Bari with assurances that at that "large metropolis" plenty would be forthcoming. At the Hotel Cavour a really sympathetic porter, who won our esteem on the spot and whom we still remember with affection, recommended Michaelé. Him we should never have taken without our porter's reassurance, for he looked like a devil. Later he acted somewhat like a devil, cursing and cuffing the young lad he took along to do the dirty work; but he drove well, like the wind whenever the road gave him half a chance, and he supplied all our wants



*The Architectural Record*

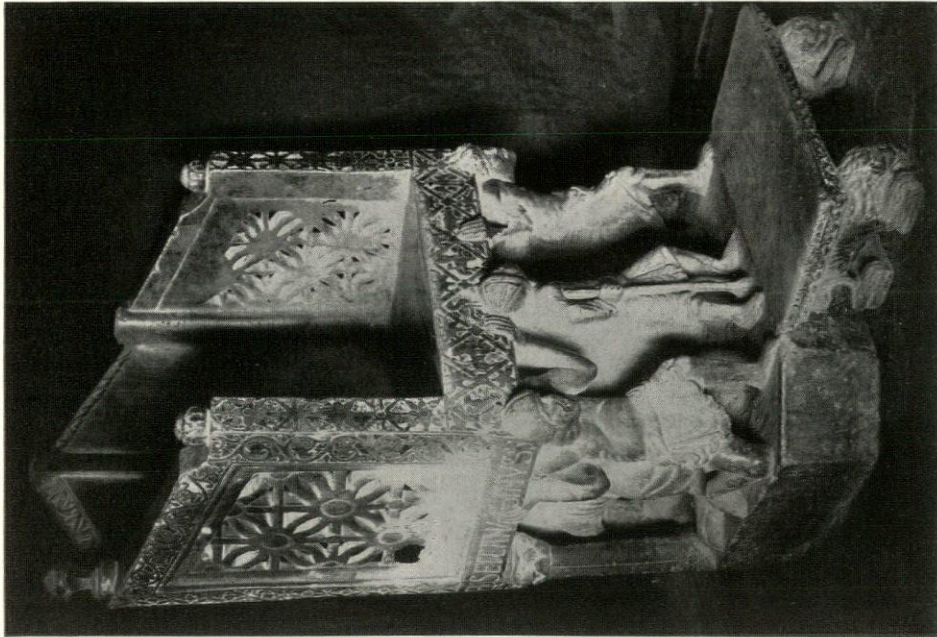
BASILICA OF S. NICOLA, BARI

*August, 1927*



August, 1927

NAVE WINDOW, BITONTO



*The Architectural Record*

BISHOP'S THRONE, S. NICOLA, BARI

and actually justified the good things that had been said of him.

Although the suggestions that I may make must necessarily be tinged by my personal opinion I shall not stint myself because I hope that they may be helpful to others who are intent on the same thing. It would be possible to start at Benevento, go by train to Foggia, take in Manfredonia, the Monte S. Angelo and Lucera as separate excursions, then zig-zag down to Brindisi, and, if time permitted, go on to Lecce and Taranto. With no limit to the number of days spent, I should not fail to see Benevento. For a short stay, however, I think the loop we followed was the most comprehensive compatible with economy and a measure of comfort.

Perhaps a word about the historical development of this country may be useful. Although Greek Art persisted in Sicily and on the southwest coast of Italy, it did not crystallize as definitely in Apulia, and the early classic influence in the development of Mediaeval Architecture was almost entirely Roman. The important arch of Trajan is at Benevento with remains of the ancient theatre, walls of the tower and entrance arch to the Appian way. At Bitonto the Roman walls of the old city of Butuntum are still in a state of good preservation. After Rome came the Ostrogoths and Lombards. Bari was wrested from the Saracens by the Venetians in 1002.

In the eleventh century, after 1042, the Normans conquered all of the southern part of Italy and Sicily. The Hohenstaufen family, through marriage, laid claim to the country and Henry VI, son of Frederick Barbarossa, subdued it in 1197. Manfred, the last of this house, lost it at the battle of Benevento in 1226, when it passed under the dominion of Charles of Anjou. It is interesting to note that San Nicola at Bari was begun in 1087 and finished 1139, that the cathedral of Bari was begun in 1024 and rebuilt 1170-78 and that Bitonto was constructed about 1200. Thus Romanesque architecture in Puglia ran the gamut of three political ascendancies.

The typical original plan of the Terra di Bari churches was that of a main aisle with side aisles, the apse vaulted by a quarter of a sphere in stone, the transepts as high as the nave and the nave at the triforium level lined by two galleries for the women. The naves of many churches appear to have had apparent wooden trusses, but usually a flat wooden ceiling, run under the trusses, has been painted with absurd panelling. Unfortunately few of the interiors show much of the original work. Sometimes the columns remain; but with capitals covered over by stuccoed Renaissance Corinthian effigies. Sometimes this Renaissance work is not bad in itself but usually it is horrible and, always, it makes one regret the original.

Our first interest was Bari and we began with S. Nicola. The main façade with its twelfth century main portals and charming northerly side portal are characteristic of the style and the sculpture is very beautiful. On the exterior the stone of the walls is of a rough texture, Travertine in character, but the portals and similar work are of marble. The illustration on Page 152 shows the interesting south side of the church. The details of the west façade can be found in the excellent Italian work on this style, *Architettura e Scultura Medioevale Nelle Puglie*.

San Nicola's nave has been less disturbed than is usually the case and the beautiful capitals of the columns in the women's galleries, all different of course, are a valuable mine of detail.

The baldaguino over the simple table altar is an original of the period and has served as a model for modern designs in some of the other churches of Puglia and the bishop's throne behind it (Page 153) is equally full of the spirit of the time. The Cathedral of Bari, San Sabino, is hemmed in by other buildings but the details of the exterior are particularly fine. One of the loveliest windows of the whole of Romanesque endeavor is to be found high up at the back of the apse.

The towers of the Romanesque churches of this district are distinctive.

Standing on a foundation independent of the body of the church, they rise on a square plan till they reach a pyramidal stone spire. The last may be either square or octagonal. The mass of the tower is usually surprisingly slender and in height is divided into stories with perhaps two windows or a double one in the next to the lowest story, a triple one above that and a group of four openings in the division below the spire. The spires are not elongated.

In the later part of the afternoon of the day on which we saw San Nicola and San Sabino, we ran out to Bitetto (on the Taranto road) where the cathedral has a Gothic portal, (1435), that shows a strong Romanesque influence. On the way we passed through Modugno and were delighted with the proportions and detail of the tower of the village church, a bit of Romanesque that can hold its own very creditably with the better known cathedrals. Returning toward Bari I told Michaele that we must find the remains of two old churches or chapels near the former village of Balsignano. They are on a *podero* or farm and the directions given by the shopkeepers in Balsignano were contradictory and hard to unravel. When we reached the vicinity of the farm I doubt that we should have succeeded in our quest if a peasant, out for a walk with his wife and pretty daughter, (as usual it was festa) had not turned his back to the frowns of his better half, with an offer to conduct us. These small churches are peculiarly valuable to the student of Romanesque as examples of the early development of the style. The little domes of San Pietro in the corner of the vegetable garden of the farm remind one of the cupolas, Byzantine and Romanesque, on the Norman churches of San Giovanni degli Ermiti and San Cataldo at Palermo. Santa Maria, nearer the main farm buildings (the latter are old as well), is less distinct, but it still contains some remains of fourteenth century paintings.

We had planned our trip in the form of a loop, going north as far as Barletta

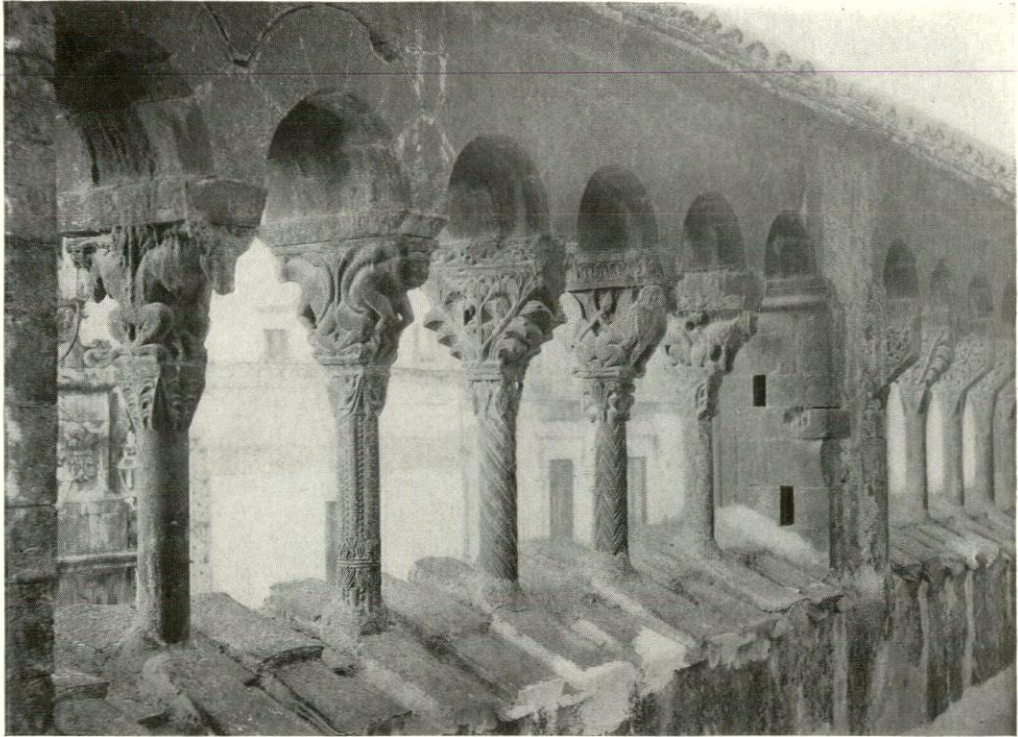
on a line inland and returning through the coast towns. Thus from Barletta the trip north to Manfredonia became a parenthesis. We might have taken a good road north from Canosa through Cerignola to Manfredonia and only have passed through Barletta on the way back, but that meant very uncertain hotels.

On the morning following our Bitetto excursion we left Bari bright and early and after half an hour of mad careering over a bumpy road ran into the narrow streets of Bitonto.

It is impossible to transmit through words the emotions roused by beautiful architecture. Victor Hugo has woven Notre-Dame into a whole book, Ruskin and Henry Adams have written in glowing rhapsodies or with sensitive insight in their chosen themes; but five minutes in front of the buildings themselves would have made their apostrophies as sounding brass or a tinkling cymbal. In any event it would be futile for me to try to describe Bitonto. You can see excellent photogravures of it in the book on Puglia before mentioned, but these do not give any real impression of the church.

The scale of the detail of Bitonto is finer than that of the other Romanesque masterpieces of this district. Perhaps that has something to do with it. It is noticeable in the illustrations herewith. Of course the color and texture of the stone are also important. One great secret of the Romanesque designers was their delicate appreciation of contrasts, not only between ornamented and plain surfaces, but between adjacent pieces of ornamentation. Moreover, the continual variation of minor elements in repetitive motives keeps interest alive, continually growing. It is marked in the succession of capitals of the arcade outside the women's gallery as shown in the illustration on Page 156.

The interior of the church is very impressive. Also it contains a wonderful bishop's throne and two ambones or pulpits with small mosaic inserts in the stone carving (Pages 159 and 160). The church was built about 1200 and is prob-



ARCADE LEADING TO THE WOMEN'S GALLERY, BITONTO

ably the best example of Lombardo Byzantine, as this phase of Romanesque is at times defined.

Though our pilgrimage was devoted to the quest of Romanesque we were only too glad at Bitonto to seek out a particularly charming little court in early Renaissance. It has a staircase that reminded me of the Podesta in Florence. It forms part of what is called the Palazzo Spada and hides in one of the narrow streets of the town.

From Bitonto our road passed through Terlizzi where there is an old church, now unused. Its portal is interesting but not of the best type.

Eleven miles from Bitonto lies Ruvo di Puglia. The main entrance of the cathedral is very fine, although excellent heads in the cornice on the outside of the north aisle are late work in imitation of the original style. Particularly characteristic and to my mind applicable to modern use in buildings not necessarily

ecclesiastical are the simpler corbelling and stone work of the lateral façade, illustrated on Page 162.

We followed our digression at Bitonto by a second, for, leaving Ruvo, we turned left from the main road to Andria and began an ascent to the early Gothic (1240) tower of the Castel del Monte. The building was a mediaeval fortress and stands on top of a conical hill. Its plan is a regular octagon with projecting turrets at the corners. In fair preservation it has some good windows, and the ornament has a Romanesque parentage. From the top one commands a wonderful view of the surrounding country, Andria, and the blue line of the Adriatic to the North, Ruvo on the East, the valley of the Ofanto river on the west and the Monte Vulture, an extinct volcano, somewhat southwest. On the slope of the latter, by the way, nestles Melfi with a cathedral I have not yet seen. Manfred's sons were imprisoned at the castle, but



we found a less gruesome use for it, appropriating the grassy slope in front of its entrance as our luncheon table and enjoying the beautiful vista while we partook of bread, butter, cheese, strawberry jam and goat's milk.

Our next point of attack was Andria. It has a cathedral of which some portions possess considerable interest. The crypt, part of an older church into which one descends through a trap door, is really little more than a dirty cellar, though there are small fragments of early Byzantine paintings to be seen by the flickering light of a candle. In the town is the old church of S. Agostino and outside the town I believe two old churches, Santa Croce and the pilgrimage church of Madonna dei Miracoli with remains of some Byzantine paintings. We did not finally discover the last two, as the directions given our chauffeur by unarchitectural shopkeepers proved erroneous, and—anyhow—they are not of the first importance. Beside, our time ran short in the quest, the vital matter of reaching a possible hotel before nightfall looming large. The real way to make a trip of this sort is to turn it into an extended sketching tour and take the different towns separately from such bases as Bari, Trani and perhaps Foggia. The stepped streets, small piazzas, and innumerable and excellent small Renaissance buildings would warrant several weeks dalliance.

Canosa di Puglia lies about fifteen miles almost due west of Andria. San Sabino is exceedingly interesting with its fine entrance and an interior determined by an eleventh century Byzantine plan. It has five domes. At the back of the choir is a marble Episcopal throne carved before eleven hundred. The seat is supported by two elephants and there is a fine marble pulpit in the nave. South of the church and reached through it, is the early twelfth century tomb of Boemund which has some very beautiful old bronze doors. It is a small building a few feet square with a domed vault.

An altercation now developed between our chauffeur, who wanted to spend the night at Canosa to take the better road

to Manfredonia on the morrow, and his lords who distrusted the Canosa hotel. The lords won and were properly punished by the primitive conditions at Barletta. However, the hotel was technically clean and the one at Canosa might not have been.

As the trip to Manfredonia and the Monte Sant' Angelo would be long we left Barletta's cathedral for our return. On the way north Michael took the coast road past Margherita di Savvia with its miles of evaporating pools for the extraction of salt from the sea water and lines of rectangular pyramids of the product. Then the roadway became execrable and the flat reedy sea land made us regret the previous night's decision. A bright spot for mid-morning was afforded by an exhibition of some spirited goat chasing, instigated by an effort on our part to have the milk bottle filled and resulting in a blown goat herd and a small quantity of milk. Evidently the nannies, probably Union goats, did not approve of being bothered out of hours. Our interest was also challenged by the differing types of circular hut in which the *contadini* live. In the stony lands through which we had passed on the preceding day they are built of flat stones and have the form of large hay ricks, the outer wall leaning in slightly for some seven feet, the roof then drawing to a point, in a slightly domed cone. Along the coast these structures were actually built of straw or possibly of reeds, the conical roofs carefully thatched. That the walls were not very strong was shown by the marked slant some of them had developed; but even in the more solid I should hardly care to live without something more potent than citronella.

Before reaching Manfredonia we passed the deserted but beautiful Santa Maria Maggiore di Siponto. On this side of the town nearer Foggia is the church of San Leonardo, also closed, but in a group of farm buildings, part of which housed an old Teutonic order of monks who turned them into a hospital during the crusades. The main exterior door of San Leonardo (in a vegetable garden) is one of the loveliest bits of

Romanesque architecture I have ever seen, and some of the windows on the side of the church are quite charming.

Beyond Manfredonia a new experience awaited us. The road began a steep ascent and wound back and forward on the spur of the mountain always with the blue Adriatic at our feet and the shore of the Gulf of Manfredonia stretching away on either side. The spurs of the mountain were richly cultivated, in steep terraces supported by stone walls. At times the declivity on the free side of the car was so precipitous that we felt as though we might at any moment topple over into nothingness with only the distant shore and sea far below.

At the top we ran into a small town, also in terraces, with steep streets, and finally stopped in front of a church portico, from the southern end of which long flights of steps descend to the famous grotto of San Michele. In the grotto it is dark and dripping with water but next to the miracle dispensing statue of the saint which stands above a sort of altar, is a wonderful eleventh century bishop's throne. The bronze doors of the grotto are noteworthy. They were made in Constantinople and bear the date 1076. There is also some good Romanesque stone work about the entrance.

We were particularly annoyed by beggars at Monte Sant Angelo, in sharp contrast with other parts of Puglia; but in the grotto itself our sympathies were wrenched by an occurrence that must be common enough there. A woman, come on pilgrimage to the shrine, evidently too poor to pay the verger an adequate fee for separate admission to the grotto, was allowed to enter behind us. After the shrine and throne had been displayed by the flickering light of the verger's torch we turned aside to see some old paintings. As we paused, a dark form crawled on hands and knees over the sopping stones of the rock floor, from the door to the shrine. Then mounting the few steps before the railing the poor woman poured out a sobbing petition to the saint. It was heart rending, so painful in its communication of the woman's mental anguish that we were in haste to

get away. In that, unwittingly, we were cruel, for, going through the door, the verger called roughly to the woman to come along. Her suffrance and the success of her suffering must be measured by the pleasure of the *rico Americanos*.

There are two other Romanesque edifices at Monte Sant Angelo, the Church of Santa Maria, built about 1200, and the Tomba di Rotari. The former has a fine portal and the latter a domed building, some good ornament and sculpture.

Geographically and emotionally the Monte Sant Angelo was the climax of our pilgrimage. From the architectural point of view this did not hold true. Barletta alone repaid us for the long trip back, the road farther inland a little, but not much, better than the shore road. Its cathedral Santa Maria Maggiore with a lovely tower is beautiful in itself, though the choir is early fourteenth century Gothic of lesser interest. In this choir however is a thirteenth century tabernacle that it is valuable to study in comparison with the one at Bari.

The church of Sant' Andrea has an interesting thirteenth century portal, and in the town are other buildings of later date that merit inspection.

Barletta was well worth while, but the high spot of our return trip was the cathedral of Trani. Its fine west portal and its noted bronze doors (See Page 161) were originally enclosed by a portico. One sees the springing stones of the arches embedded in the wall. The slender tower is particularly charming. Slight changes to strengthen it have been made in the lowest story. There are two churches below the cathedral. A very large crypt, the largest in the world, Baedeker says, was built about 1100, while below it is an early edifice, St. Lenций, dating from 670. In Trani are also the Ognissanti and two other small Romanesque churches San Francisco and San Giacomo. The Gothic palace of the Simone, Cacitta and the Fortino Sant Antonio are interesting.

On the short run back to Bari we passed through Bisceglie which has a thirteenth century cathedral, the church



AMBONE, CATHEDRAL AT BITONTO

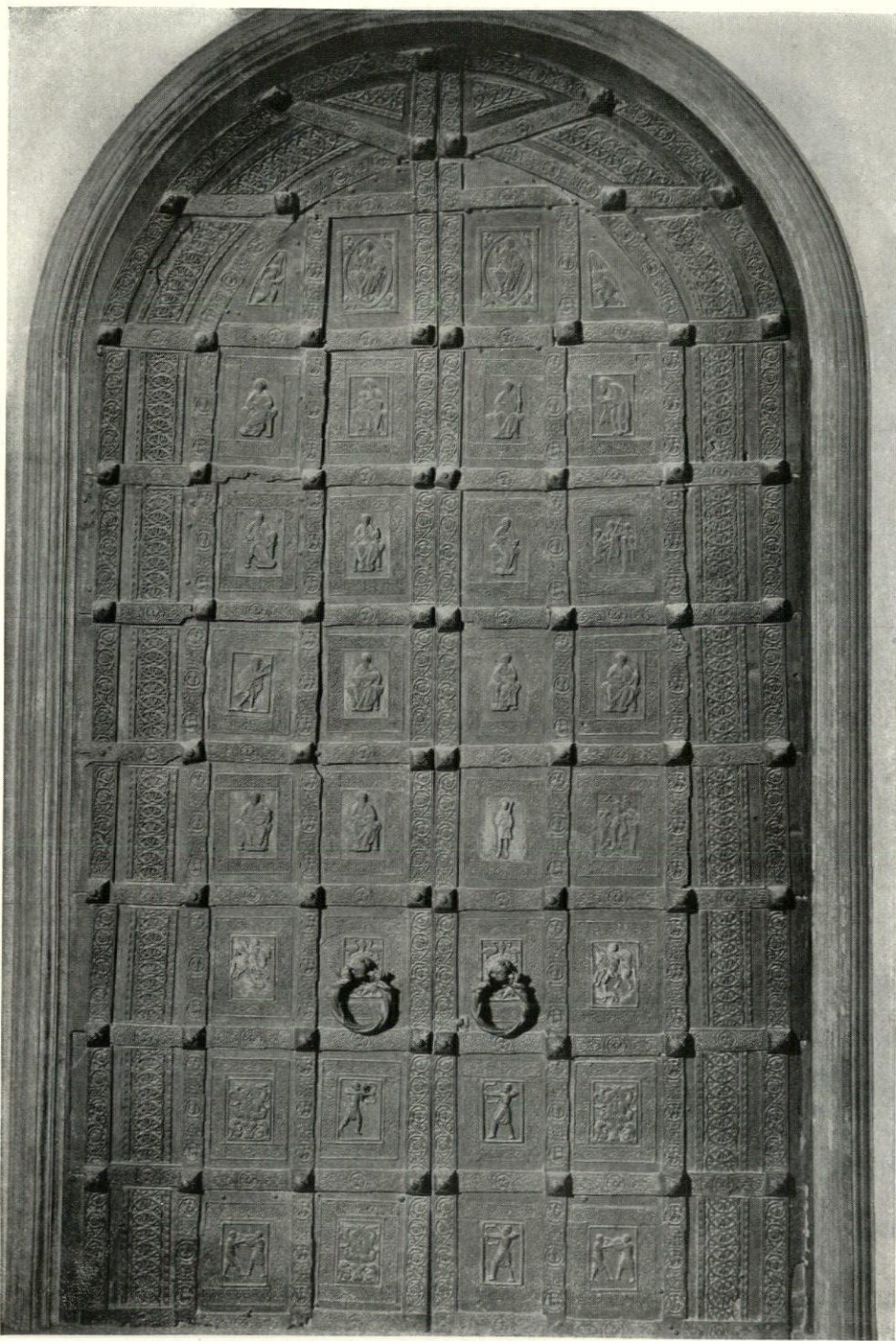


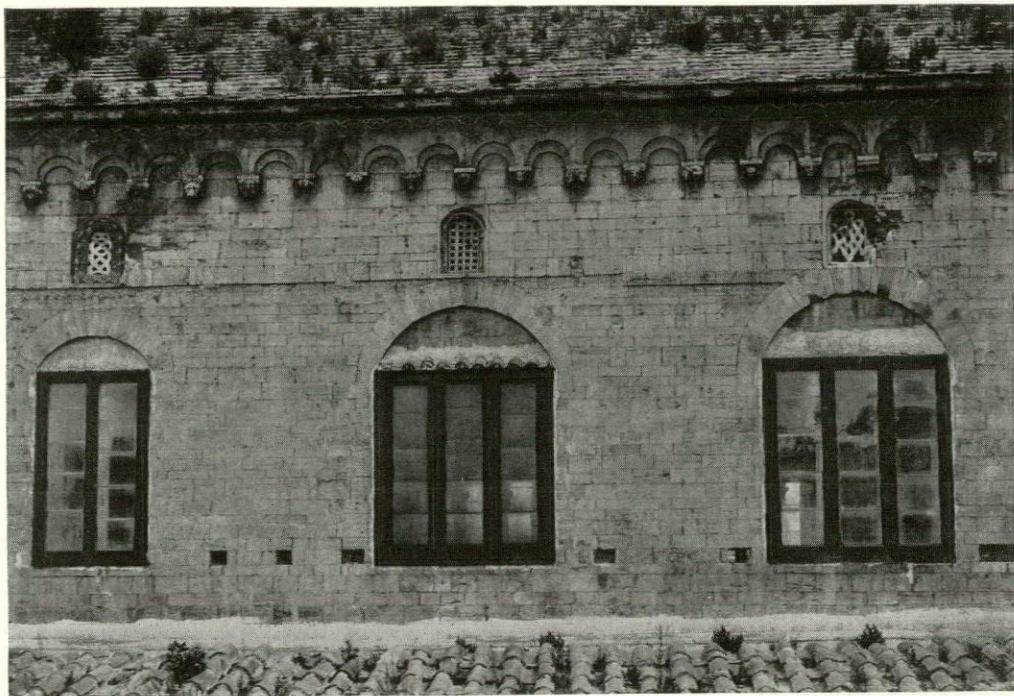
*The Architectural Record*

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DETAIL OF AMBONE, BITONTO

[160]





CLERESTORY AT RUVO

of Santa Margherita (begun in the twelfth century) and a ruined castle of the Hohenstaufen. After that the trip was broken by a visit to the former cathedral of Molfetta, San Corato. It is particularly worthy of study as it has three cupolas. It was built during the end of the twelfth century.

In Brindisi, before we sailed away to Constantinople, we saw the cloisters of San Benedetto, the balcony of the Casa Balsama, the very interesting San Giovanni Rotundo (now a museum), and only missed Santa Maria del Casale about two miles outside the town.

When one remembers that near Foggia (which lies slightly south of Manfredonia and about twenty miles west of

the coast) are Lucera and Troja, that Benevento (about half way between Naples and Foggia) has an especially beautiful Romanesque Cathedral, that Melfi is in the foothills at the west of Puglia, and as one proceeds into the heel of Italy one finds Altamura, Taranto, Lecci and finally Otranto, one can hardly agree that this district has no value from the architectural point of view.

Of the towns we visited, if one has only time for one or two places, I advise selecting Bitonto, Trani and Bari. But a sketching trip in May with bicycles or a small car would be the real way to go, with many days to compare, study and assimilate the wonderful beauty of this wonderful period.

# *In the* CAUSE OF ARCHITECTURE

*By*  
*Frank Lloyd Wright*

## PART III. STEEL

STEEL IS THE epic of this age.

Steel has entered our lives as a "material" to take upon itself the physical burden of our civilization.

This is the Age of Steel. And our "culture" has received it as ancient Roman culture received the great gift of the masonry arch. For centuries the Romans pasted the trabeated Greek forms of their "culture" on the arch in front as architecture, while the arch did the work behind.

Finally the noble virtue of the arch overcame the sham culture of the period and came forth and lived as a great and beautiful contribution to mankind.

Steel is still smothered in aesthetic gloom, insulted, denied and doomed by us as was the masonry arch by the Romans. Inherent virtue will triumph here, too, in course of time. So much wasted time!

This stupendous material—what has it not done for Man?

What may it not yet do for him with its derivatives and associates as the glare of the converters continues to mount into the sky, day and night.

Now, ductile, tensile, dense to any degree, uniform and calculable to any standard, steel is a known quantity to be dealt with mathematically to a certainty to the last pound; a miracle of strength to be counted upon!

Mathematics in the flesh—at work for man!

A mere plastic material, thin and yet an ultimate rigidity, rolled hot or rolled cold to any desired section of any strength unlimited in quantity; or, continuously night and day, drawn into thin strands of enormous strength and length as wire—enough to wind the world into

a steel covered ball; or, rolled in any thickness into sheets like paper, cut by the shears into any size.

A rigidity condensed in any shape conceivable, to be as easily bored, punched, planed, cut, and polished, too, as wood once was. More easily and cheaply curved or bent or twisted or woven to any extent and the parts fastened together. A material that in the processes already devised not only takes any shape the human brain can reduce to a diagram but can go on producing it until the earth is covered with it—and there is no escape from it. No, none!

For it is cheap.

Cheaper in its strength and adaptability than anything man ever knew before—thousands of times over.

But it has it in its nature to change its volume with changes of temperature.

It has a fatal weakness.

Slowly it disintegrates in air and moisture and has an active enemy in electrolysis. It is recovering from this weakness. It is only fair to say that it may become, soon, immune. Then, what?

Meanwhile, owing to its nature it may be plated with other metals or protected by coverings of various sorts, or combined with them. In itself it has little beauty, neither grain, nor texture of surface. It has no more "quality" in this sense than mud. Not so much as sand. It is a creature wholly dependent upon imaginative influences for "life" in any aesthetic sense at the hand of a creator.

So is terra cotta. So is concrete, although both these friable materials have certain internal possibilities of texture and color.

So also relatives of steel have beautiful permanent surfaces—bronze, brass, sil-

ver, gold, aluminum, copper, tin and zinc and others. It would be interesting to write about them all.

But the weaknesses of steel are not fatal to beautiful use, nor is the lack of individuality in texture other than an opportunity for the imagination.

Yet, how or where is steel evident in our life as a thing of beauty in itself? In tools? Yes, in knives and saws and skates: in hardware. In engines, in the rails of the railroad, in the locomotive, the submarine, the torpedo boat, the aeroplane. In bridges? Yes, but only where the engineer was inspired and allowed his stresses and strains to come and go clean in the members, innocent of any desire or intent on his part to "ornament" them. Used honestly by engineers, steel has something of the beauty of mathematics.

Remember, however, that music is but sublimated mathematics. And the engineer is no more capable of giving steel structure the life of "beauty" it should have than a professor of mathematics is capable of a symphony in music.

The principles of construction which find in steel a medium that will serve with safety economically in various designs as support for enormous loads to span wide spaces, or supporting enormous loads to enormous height, are, as long as they are really kept scientific and clean, showing as such, the best work we have to show.

And it is much.

But it is not the architect who can show it.

When the architect has dealt with it what has he done? The skyscraper and lied about it. The modern Cathedral, lifeless, dummy, supported from within to appear "life like" without. Anything you wish to name as architecture will be likewise.

Anything you may name as engineering where architects coöperated will be similar, probably.

An exception here and there is now manifest, already late. This era is fast and furious in movement. But all movement is not progress. Architecture has not progressed with steel. "Architecture"

has all but died of it while architects were singing their favorite hymns and popular Christmas carols to the medieval antique.

Incredible folly! "Tower" Buildings, East River bridges, St. John the Divine's, States Capitols, and all. How all of them mock integrity! Wherein lies the artist grasp of the "masters" who design such structures?

Had Bach or Beethoven made music the mathematics of which would be like the principles of construction in such edifices, what would such music sound like? Pandemonium, requiring hideous grimaces and falsities of tone and absurdities of concatenation with no rhythm, obvious or occult, outrage to the mind. Inconceivable!

For the principles of construction now find in steel because it is a strictly calculable material of miraculous strength, ideal expression as the sinews and bones of structure.

The architect has been satisfied to leave the mathematical sinews and bones unbeautiful, although serviceable as such, and content to hang garments over them rented from some costumers or not even that—pawed from the scrap heap of antiquity.

It is superstition or plain ignorance to believe these sinews and bones incapable of beauty as such—if such, to be clothed with a flesh that will be living on them, *an expression of them!*

Is it reasonable too to go further and say "sinews and bones"? Yes, but not as in the human frame but as a new world of form in themselves capable of being beautiful in themselves in a new sense, so devised in construction that flesh is unnecessary.

Why should not the structural principle be expressed artistically as well as scientifically for its own sake in this ideal material? Expressed with a knowledge of rhythm and synthesis of form that a master musician would bring to his mathematics? Can we not imagine a building to be serviceably beautiful and beautifully serviceable as it is naturally made—in steel? Glass is all that is needed really



after we have honestly insured the life of the steel.

And, added to this immense possibility, here enters a vital modern probability:

Steel is most economical in tension; the steel strand is a marvel, let us say, as compared with anything the ancients knew; a miracle of strength for its weight and cost. We have found now how to combine it with a mass material, concrete, which has great strength in compression. The co-efficient of expansion and contraction of both materials is the same in changes of temperature. The more bulky material protects the slighter material from its enemy, disintegration. The heavier material, or protector, strangely grows stronger as it grows older. Permanent "flesh" if we care to so regard it.

A valuable partnership in materials in any case more congenial to the architect than steel alone for he can do more richly with flesh and sinews than he can with sinews and bones, perhaps. Certainly, if regarded as such by him.

Here we have reinforced concrete, a new dispensation. A new medium for the new world of thought and feeling that seems ideal: a new world that must follow freedom from the imprisonment in the abstract in which tradition binds us. Democracy means liberation from those abstractions, and therefore life, more abundantly in the concrete. This is not intended as a pun. It happens to be so literally, for concrete combined with steel strands will probably become the physical body of the modern civilized world.

Here again and especially has the machine liberated the creative architect.

And he prefers his bonds!

The old structural limitation that took form as masonry, lintels and arches, "natural" posts and beams, is all gone. There is in their place a science of mathematics applied to materials of marvelous new properties and strength, here to the architect's hand instead—"mathematics materialized at work for man."

What are we, as architects, going to do with it? For as yet, we have done nothing

with it on principle. We have merely "made shift." Architects have avoided an open break with the powers that be, on the ground of impotence, only by psalm singing and caroling in the name of tradition. But, enough.

Here in addition to the possibility of steel alone, is a perfect wedding of two plastic materials. A wondrous freedom! Freedom worthy of ideal democracy. Astounding! That upon so simple a means such a vast consequence to human life depends. But so it does. And just so simple has the initiation of far reaching changes brought by evolution always been.

The limitation of the human imagination is all that ties the hands of the modern architect except the poison in his veins fostered by "good taste" for dead forms.

His imagination now must devise the new cross sections for the machine more suitable for use in harmoniously framing steel. Rivets have interesting effects as well as facts. Steel plates have possibilities combined with posts and beams. And now there is electric welding to make the work more simple and integral. Posts may become beautiful, beams too. The principle of the "gusset" has a life of its own, still. Strangely, here is plastic material delivered by the Machine in any rigid structural form to be fastened together as members in a structural design.

The design may emphasize the plastic as structural or the structural as plastic. What that means in detail is a liberal education in itself. It must be had by the young architect. He will have to go to work at it himself.

And again, easier to comprehend are the new forms brought to hand by reinforced concrete.

First among them is the slab—next the cantilever—then the splay.

To be able to make waterproof, weather-proof slabs of almost any size or continuity is a great simplification. A great means to a great end. To be able to make these slabs so they may be supported beneath as a waiter supports his tray on the fingers of his upraised arm, leads to another marvelous release, a new freedom.

This is the economic structural principle of the cantilever. A new stability as well as a new economy. The most romantic of all structural possibilities is here.

And last, there is the splay or sloping wall, used as a slide from wall into projections or from floors into walls or used in connection with the cantilever slab. It may be used as an expression of form in itself for protection or light. For economy it may be useful as support in both cases and enhance the plastic effect of the whole.

There is nothing in architecture ready made to meet these sweeping new "freedoms."

What a release is here! The machine brought it in the ubiquitous ductile steel-strand with its miraculous strength and the fortunate wedding of that strength with poured concrete.

What a circumstance!

Here, "young men in architecture," is your palette. The "foyer" of your new world.

Let us of the former generation see you at work on it, in it for all you are worth.

And here again, the password is the word "plastic." "Structuralities" as such must be forgotten. If you will take paper and fold it and bend it, or cardboard sheets and cut them and fit and arrange them into models for buildings, you will see the sense of the new structure in its primitive aspect. And then, after this superficial external view, get inside and make the whole line as one plastic entity—however the slabs tend to separate or fall to themselves.

And never lose sight of the fact that all in this new world is no longer in two

dimensions. That was the old world.

We are capable of a world now in three dimensions; the third, as I have said before, interpreted as a spiritual matter that makes all integral—"at one."

How life may be blessed by the release this simple development of its viewpoint will bring to mankind.

Paintings and sculpture for use to enrich and enhance the work, still live. They now live a detached life as things apart, for and by themselves. It is a pity, for they can never thrive in that separate life.

Unfortunately, there is a conviction in certain quarters—if it amounts to a "conviction,"—chiefly European,—that ornamentation is untrue to the Machine in this, the Machine Age. That the use of ornamentation is a romanticism and therefore inappropriate.

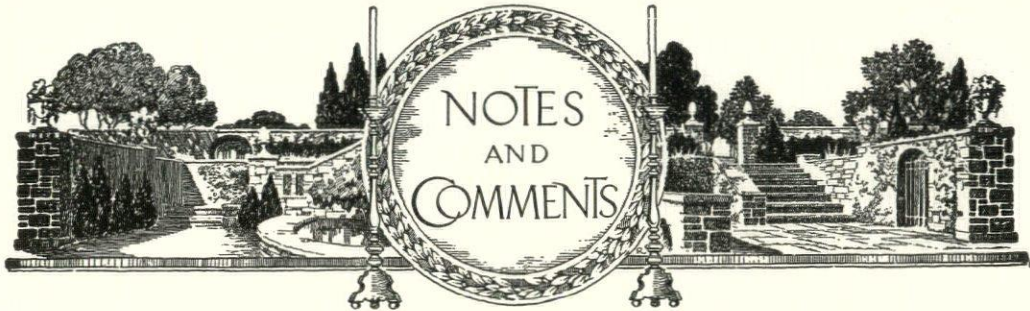
The contrary is the case.

But it is true that ornamentation in the old sense as an "applied" thing, as something added to the thing superficially, however cleverly adapted or "composed" is dead to this new world.

Ornamentation in the plastic sense\* is as characteristic of the thing we call the machine as ornamentation in the old sense was a characteristic feature of "The Renaissance"; more so, because it is the imagination living in the process and so woven into the life of the thing. A matter of the "constitution" of the thing. The trace of human imagination as the poetic language of line and color must now live *in* the thing so far as it is natural to it. And that is very far.

\* \* \*

\*This phase of the machine as the creative architect's tool will be treated next as *Fabrication and Imagination*.



### Prof. Kocher Joins the Architectural Record Staff

A. Lawrence Kocher has resigned as head of the School of Architecture at the University of Virginia, to join the editorial staff of THE ARCHITECTURAL RECORD. Succeeding Joseph Hudnut at the University of Virginia last year, he is himself succeeded by Edmund S. Campbell. Prof. Kocher is known to readers of this magazine as a writer of catholic artistic sympathy informed by practical experience and accurate scholarship. His first contribution was a notable example of research work—The Early Architecture of Pennsylvania, a series of fifteen articles published by THE ARCHITECTURAL RECORD in 1920-22; he has been a contributing editor since August, 1926.

Prof. Kocher was graduated from Leland Stanford University in 1909 and from Massachusetts Institute of Technology in 1912, and became Professor of Architecture at Pennsylvania State College in 1918. In 1926 he resigned his position as head of the Department of Architecture there, to go to the University of Virginia.

He is chairman of the Committee on Preservation of Historic Monuments and Natural Resources of the American Institute of Architects, chairman of the Virginia State Art Commission, a member of the State Board of Examiners of Architects and Engineers for Virginia, a member of the Society of Technology Architects, and a member of the Salmagundi Club, of New York.

Prof. Kocher is the author of a number of monographs and articles, his most recent study (in collaboration with Guy C. Rothery) being "Chimney Pieces of England" (Tiranti & Son, London, 1927).

He is the architect of the University Club at State College, Pa., the Joseph Priestley Memorial Museum, Northumberland, Pa., and Christ Church Parish House, Charlottesville, Va., besides fraternity houses, school houses and private residences.

### Edmund S. Campbell to Teach at University of Virginia

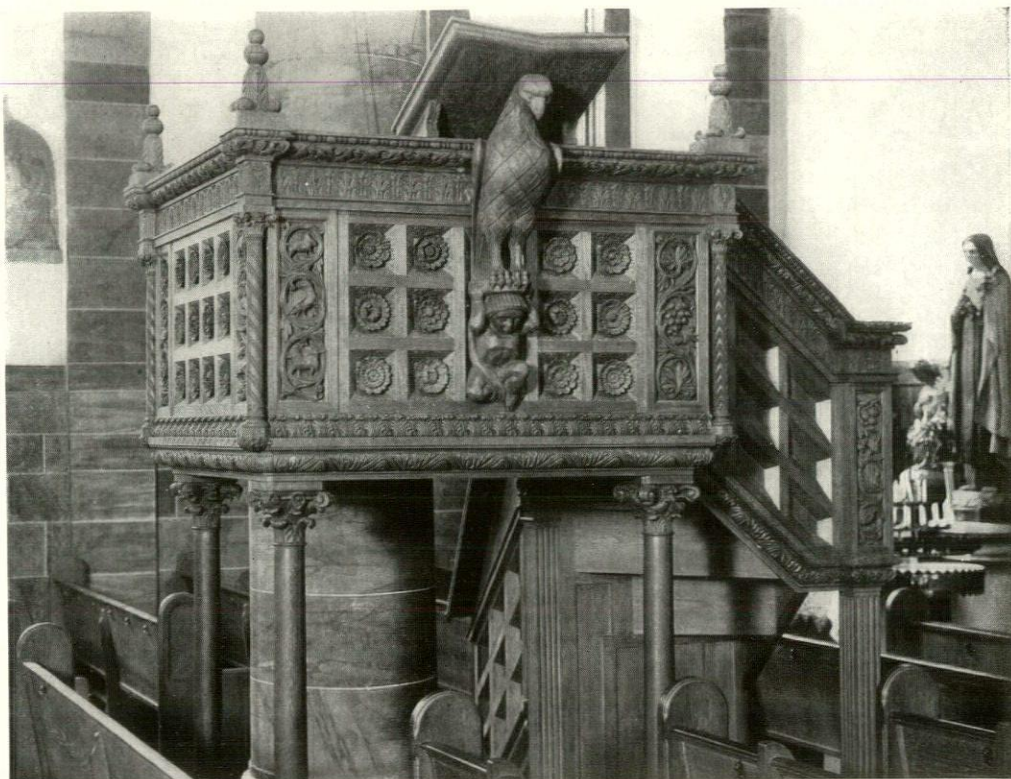
Edmund S. Campbell has resigned as Dean of the Beaux Arts Institute of Design to accept the Professorship in Architecture at the University of Virginia. Under Campbell's Deanship, since 1924, the educational activities of the Institute have been thoroughly reorganized, a systematic method of recording student competition awards has been instituted and the conduct of the Paris Prize competition has been improved. Not the least important of his achievements is the creation of "The Beaux Arts Bulletin," which is issued ten times a year and which illustrates the prize-winning and otherwise worthy drawings of students in architecture, interior decoration and mural painting as well as sculpture. Recognition of the constructive services of Mr. Campbell to the Beaux Arts Institute was embodied in a resolution of the Association of Collegiate Schools of Architecture at their annual meeting in 1926 when the reorganized manner of training draftsmen and students in architecture was commended.

The loss of Mr. Campbell to the Institute will be keenly felt, but in the reluctant words of Whitney Warren, "the regrettable loss will be the gain to the schools of a notable teacher of architecture."

### Result of Competition for Princeton Architectural Prizes

This year the design chosen for the Princeton competition was for a Memorial Group of Buildings on a University campus, consisting of an Auditorium, a Library, an Art Museum, and a Tower, arranged around a court to be dedicated to the Liberal Arts.

The jury, which met at Princeton on June 16th, found that the drawings submitted were of a high quality, showing excellent grasp of the problem. Prizes were awarded to Martin L. Back of New York City and John A. Nelson of Watertown, Mass., entitling them to spend a year in the Advanced Class of the Princeton School of Architecture.



PULPIT IN CHURCH OF ST. JOHN OF NEPOMUK, NEW YORK CITY  
 Adapted from the ambones of Bitonto, Puglia (See Pages 159 and 160)  
 John V. Van Pelt, Architect

**Pulpit for the Church of St. John of Nepomuk, New York**

Italian Romanesque being the style chosen for the Church of St. John of Nepomuk, New York, (published in the *Architectural Record* for December, 1925) the architect, John V. Van Pelt, was inspired by the ambones of the Cathedral of Bitonto, Puglia, (see Pages 159 and 160 of the current issue) in his design for the pulpit illustrated above.

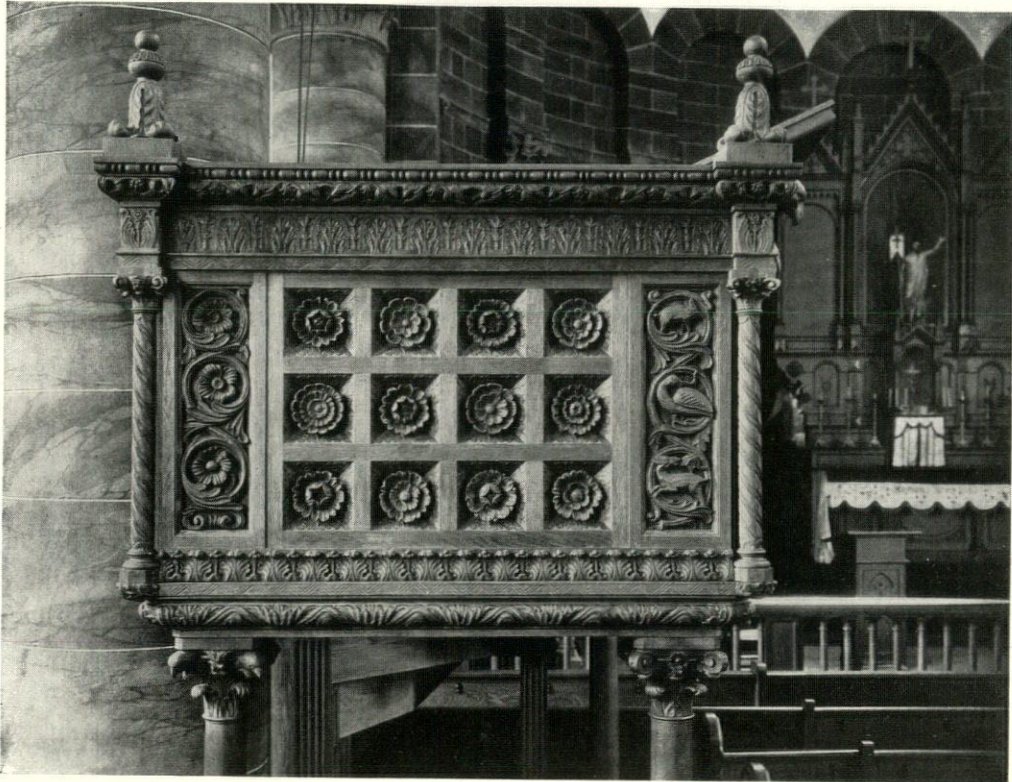
Not only is the composition appropriate to the general style of the church, but the desire expressed by the rector for a pulpit in front of the sanctuary to enable him to get closer to his congregation, has thus been met.

A stone pulpit, such as those seen in Puglia, was out of the question, so oak was the material selected and an endeavor made to approach as nearly as possible to the work of a carver of the Romanesque period. The details have been refined, although the stone work of that time is somewhat smaller in scale and in many examples mingles delicacy with its quaint archaic character.

Much of the actual modelling was the work of the architect, though Dabrowski, a Polish modeller and carver, managed also to catch the spirit of the architecture. In the large scale detail of the end of the pulpit, the grotesque animals are treated with a simplicity of workmanship that is enhanced by the manner in which the tool marks are allowed to show. Each one of the little rosettes is different as would be the case if they had been carved in the twelfth century. The oak is slightly darkened, was filled with Wheeler's Patent Wood Filler and waxed.

**Correction**

In the *Architectural Record* for June, 1927, pages 507-509 contain illustrations of the Automobile Sales Building for Whitehill-Gleason Motors, Inc., Pittsburgh, and pages 519 and 520 illustrate Mr. Fred W. Henninger's residence. In each case credit for the design of the building should have read as follows: M. Nirdlinger, architect; Raymond M. Marlier, associate architect.



DETAIL OF PULPIT, CHURCH OF ST. JOHN OF NEPOMUK, NEW YORK CITY  
Adapted from the ambones of Bitonto, Puglia (See Pages 159 and 160)  
John V. Van Pelt, Architect

### The Octagon

The contemplated auditorium on the Octagon property revives interesting recollections. Some years before I became secretary, a proposed resolution was presented by the Washington chapter to the board, recommending the Capital as the place for Institute Offices, and suggesting the Octagon as a suitable home for the institute. I found this resolution in my hand writing when I became secretary. There was written across the face in large letters the word "Tabled." Nothing further was heard of the Octagon for several years, until the Washington chapter presented a similar resolution during the administration of George B. Post (1896-1898). It recommended the Octagon as headquarters and suggested the advantages of Washington for permanent offices saying: "that it offered the broadest field for the Institute to cultivate national legislation in relation to art and construction; that the Institute could here more effectively advocate the establishment

of a government testing station, and a National Architectural Museum. It would be in position to make its influence help in the methods adopted by the government for procuring designs for national buildings which have been so successfully inaugurated by the Secretary of the Treasury, Lyman J. Gage."

The board acknowledged the influence of the chapter's plea and at the convention in 1896 "Resolved that the permanent headquarters of the Institute of Architects be located in the city of Washington at as early a date as possible." A committee was appointed by George B. Post, President, to rent the Octagon for a term of five years at a rental of three hundred and sixty dollars a year with the privilege of an extension. Frank Miles Day, Robert Stead and Wilson Eyre were appointed to execute this authorization.

At the time the Institute took possession of the building it was occupied by ten negro families—so low had this section of the city fallen in the public estimation. Dirt, broken plaster, missing stair balusters, broken furniture and un-

polished stoves, gave it a disreputable appearance. Fortunately no damage was done that patching and painting would not remedy. Every fifth baluster in the stair rail was iron bolted to rail and carriage; otherwise, it would have been destroyed by rough usage. Bonds, purchased by members of the Institute, were issued to secure the money to pay for the necessary cleaning, painting, and repairs. The American Institute of Architects took formal possession when the Board met in the drawing room, Jan. 1st, 1899. This occupation was contemporaneous with my term as secretary and for fifteen years here I strove for the advancement of design and practice and to make the American Institute of Architects an instrument of public service. Robert Stead, Glenn Brown and Frank Miles Day, as the Committee on House and Library, were in charge of the property. Robert Stead zealously undertook the planting in the garden. The present box hedge which so many think old, was part of this planting. Mrs. Glenn Brown enthusiastically undertook the planting of old-fashioned flowers, and gave them faithful care and attention for years.

The next step of interest was the purchase of the House and Grounds. While many schemes were proposed none was successful until Charles F. McKim (1902-1903) became President. Although I have told before of McKim's methods in buying the Octagon, I believe it is well worth repeating. In my first interview with him as Secretary, he said: "We should own our headquarters. What would the Octagon cost?" My reply was: "I believe we could buy it for thirty thousand dollars." "Make them an offer of thirty thousand, ten thousand cash," said McKim. "Mr. President," I said, "we only have five hundred dollars in the treasury. He told me to make the offer and if he could not get others to join him he would give me his personal check for ten thousand. The offer was made, accepted, and the Octagon became the property of the American Institute of Architects. It was during the administration of W. S. Eames (1904-1905) that the present scheme of sidewalks and grass plots was designed and put in place.

The next step was to clear the property from a mortgage of twenty thousands dollars. Cass Gilbert, during his energetic administration (1908-1909), accomplished this desirable end. It was also during his term that the Institute became owners of the two lots north of the Octagon property. This was purchased so the Society could have a much needed auditorium, to give the Institute and affiliated associations a place of meeting. It was thought in such a building offices might be arranged not

only for the Institute but for other National Fine Arts Associations, thus bringing together for coöperation the men who did artistic work on buildings. Cass Gilbert started a reserve fund hoping to secure enough to take care of the property independent of the Institute's income. When Bert L. Fenner was Secretary (1915-1916), the old stable, which was rapidly disintegrating, was made safe by underpinning, new foundations and roof repairs.

Frank Millet, that zealous supporter of all public service and coöperative movements in the Fine Arts, took great interest in the Octagon. He brought from his studios some fine old furniture of the period in use when the Octagon was built and laid an Aubusson rug upon the floor. Gray was the dominant color of the rug. It might have been used by John Tayloe, for he was a man of taste and culture. The drawing room never looked so well. Millet intended, I believe, to present it to the Society, but his loss on the Titanic prevented this valuable gift.

The Institute first called their property "The Octagon House," but they learned from the family that their grandfather resented any other title than "The Octagon." This suggestion was gladly accepted by the Board.

GLENN BROWN

#### British Architects Co-operate with Building Research Board

The Building Research Board, a British Government Department that is carrying out a number of scientific experiments, has recently established close relations with the Royal Institute of British Architects. Architects are being circularized with a view to obtaining particulars of their experiences in the matter of the decay and preservation of building materials. It is hoped to develop a scheme of co-operation between architects and those engaged in the scientific study of building science in order to facilitate the collection of scientific information. Experiments are underway at the Research Station at Watford, regarding heat transmission through walls of different sizes and materials, on concrete exposed to sea water, on acoustics, on materials which resist the deleterious effects of smoke and on strains and stresses on steel buildings. Specialists will shortly lecture on:

1. Strength of Materials.
2. Materials, their use and nature.
3. Design in Steel, Concrete, Timber, etc.
4. Heating, Lighting and Ventilation.
5. Gas and Electric Installations.
6. Building Acts and By-laws.
7. Light and Air and other Easements.

B. S. TOWNROE



### A Short History of the Building Crafts\*

There seems to be no other book of this kind in English, and Mr. Briggs has gone freely for his material to the great volumes of Choisy's *L'Art de Bâtir*. The distinction between architecture and building is not easy to draw; in fact, no exclusive distinction is possible. But building in Mr. Briggs' sense is the technical art of the carpenter and mason, the plasterer and the plumber—how joists are fitted, roofs held up and bricks laid. It has to do with glazing and grills, with locks and keys. It is not a matter of what Roman buildings looked like, but how Roman walls were constructed (of cement mostly and faced with brick or marble)—concrete proper is very modern. The builders of the old cathedrals called themselves master builders, but they were essentially architects. The apprentice system of education has some advantages over the school system. Occupations tend to specialize as society grows more complex and the work of supplying its demands follows suit. Rivoira says that nearly all Roman architects were also military engineers. But nowadays architecture is a profession, engineering another profession (several in fact), whereas building is a craft or trade.

It is perhaps not builders who will be apt to buy and read this book, but rather architects and engineers. Mr. Briggs would persuade us to forget for a while the romance of crumbling ruins. "Age is not the only criterion of merit, lichen and ivy are not architecture." He has no use for maudlin sentimentalists. He would like more enthusiasm for purely constructional problems, even if there were less for things that are merely old. Not but that time adds its genuine values to good building, softens the hard lines and mellows the raw tones. But part of the charm of the old building comes from the materials and the way they were handled. It was good building when it

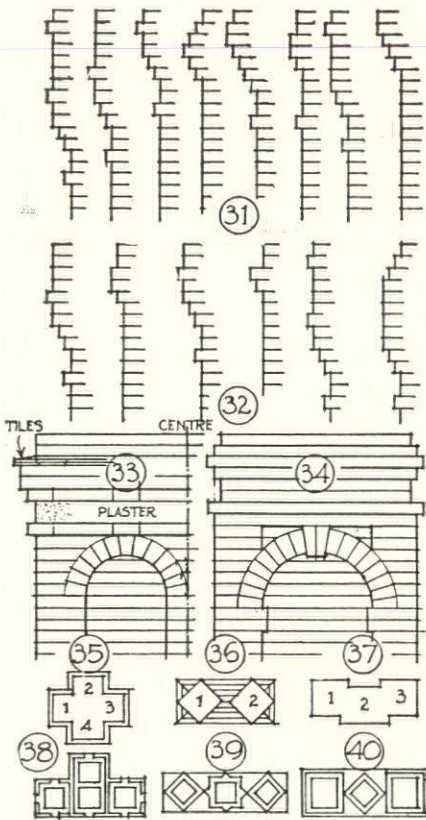
was new. The study of the craftsmanship that went into it is profitable. Art is not all emotional contemplation. It is also knowledge, skill and ingenuity.

The goal of the study of the old building crafts is not their revival today. Something has been lost, but it is definitely lost. It is only cranks who expect to bring back old conditions or reverse the current of time. The artisan of the middle ages was in some respects fortunate; he was something of a creative artist while he fashioned his iron or glazed his leaded windows; but he was not a poseur; he was a bread and butter workman who toiled long hours for little pay. Two factors have emerged since those days to alter conditions fundamentally and finally: machinery and the professional architect. The day of the master mason is over. The modern architect must be to a large extent a sedentary worker. The danger is the possibility of his losing touch with the craftsman and becoming a mere draughtsman. He must be a master builder as well as a draughtsman. Modern construction as well as modern design is based on tradition. The three factors, tradition, design and construction, form an inseparable whole, and good architecture of all periods, old and new, is simply a glorification of good construction.

The ten chapters following the introductory one are respectively on Brickwork, Masonry, Concrete, Carpentry, Joinery, Ironwork, External Plumbing, and Glazing.

Brick is one of the oldest of building materials. The first buildings in Egypt and Mesopotamia were of sun-dried brick. The objection to "bricks without straw" is that Nile mud crumbles and needs stiffening. They seem to have been laid in the common English bond, and often in concave form to prevent sliding. Burnt brick seems to have been little used—the best example of old English brickwork near London is Hampton Court, but the climax of English brick is the later 17th century. Moxon's "Mechanick Exercises," published in

\*A Short History of the Building Crafts by Martin S. Briggs, Oxford University Press (American Branch, New York). Net \$3.50.



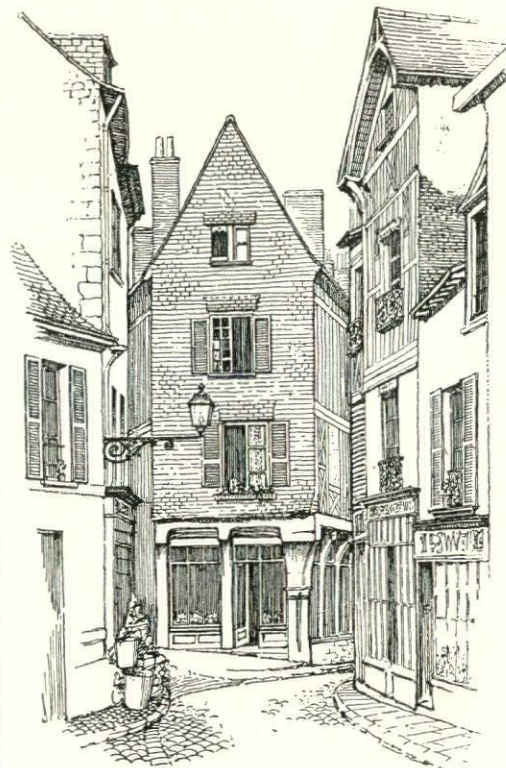
From *A Short History of the Building Crafts*

1678, gives fifty pages to brick construction—it is peculiarly difficult to draw a distinction between construction and architecture as regards masonry. “Whether in Greece of Hellenic times or in England of the Middle Ages, architecture and building in stone were synonymous.” The most intelligent masonry was probably the Greek and the Gothic. Roman masonry followed Greeks, and Romanesque masons were less skilful in controlling thrusts than their Gothic successors. Roman and Romanesque was more distinguished for work in rubble and concrete. Even Gothic masonry was not all good. “There was scamping then as now, and for the sins of our medieval masters we are now paying the penalty.”—Roman so-called “concrete” in walls consists of small stones and lime mortar in alternate layers, faced with brick or stone. There were five styles of facing: with rough stones unarranged, with stones arranged diagonally, with triangular

bricks, with marble slabs, and with masonry proper. The word “concrete” was first applied to a building material about 1811 but it seems to have meant rubble. Portland cement appears to have been discovered in the same year, and may be said to constitute the most important innovation in building in modern times, unless we except structural steel. The carpenter’s tools, his materials, his joints and his whole theory of work have altered surprisingly little in centuries. We now use methods of framing woodwork that were in vogue three thousand years ago in Egypt. Nowadays carpentry includes the framing of roofs, floors and partitions; joinery, the framing of the lighter woodwork, doors, windows, cupboards, panelling, etc. But formerly carpentry meant all the woodwork of a building, while the joiner was a maker of portable furniture. In the time of Wren, carpenters and joiners were disputing about their functions.

One of the most interesting chapters is the one on ironwork.

ARTHUR W. COLTON



From *A Short History of the Building Crafts*



### Smaller Houses and Gardens of Versailles\*

The Smaller Houses and Gardens of Versailles is devoted to a particular aspect of French domestic architecture in the seventeenth and eighteenth centuries. It is concerned with the small private houses of the courtiers in residence at Versailles during three of the great reigns of French history, those of Louis XIV, Louis XV and Louis XVI. These houses came into being as a solution of a problem that is probably unique, and aside from the intrinsic merit of the work itself, this alone would make the subject interesting historically.

The courtier in residence at Versailles, while assigned lodgings in the Palace, of which prerogative he was duly jealous, must have often sighed for relief from that continual ceremony and pomp that made up his life at court. In response to this demand for something simple, for a home where he could order his life according to his own dictates, where for some hours at least of each day he could escape from the court, there came into being this remarkably attractive group of houses. They are designed with all the refinement and taste that one would expect to find in so polished a period.

Aside from the houses, the development of the site by the arrangement and relation of house, garden and dependencies into a unified scheme, should be of particular interest to this country and generation where a comparable problem exists in the creation of small suburban houses with gardens attached.

One of the elements most conspicuous in all of this work is the attainment of privacy. This is, of course, very typically French but it would be hard to find a group of houses elsewhere, where this quality is so gracefully achieved. The houses are most of them formal in plan, but this formality was a natural result of the outlook upon life of courtiers schooled in the polite life and right etiquette of Versailles.

\*The Smaller Houses and Gardens of Versailles from 1680 to 1815. By Leigh Hill French, Jr., and Harold Donaldson Eberlein. Pencil Points Press, 1926. \$6.00.

The gardens are particularly interesting as examples of what some of the great French architects such as Le Nôtre, Mansart and Gabriel could do with a small problem.

In almost every example the houses are either directly on the street or very near it and in most cases there is a forecourt which is generally distinct from the garden. The forecourt is usually walled on all sides, and occasionally the wings of the house form the sides of the forecourt. A most attractive example of this scheme is seen in La Lanterne. Saint Vigor presents another clever forecourt scheme. Walled along the street the small wings which form the sides of the forecourt are separated from the main building by short arcades which lead to the garden. The entrance front and main door are particularly charming. They are done in native limestone rubble, finished with painted stucco, and there is a delightful sundial in a panel over the main door.

Of the arrangement and relation of house, court and garden there is a remarkable

diversity, each scheme in its way interesting. From the exceedingly clever, small and intimate scheme, such as 16 Rue d'Angoulême and 93 Rue Royale they run the gamut through all sorts of intermediate sizes and shapes to the more imposing schemes such as the Château du Chesnay and Louveciennes le Pavillon. It would be difficult to find, by the way, a more lovely setting and approach than is seen in the *tapis vert* of the latter. In a study of the gardens themselves one finds a history in little of the art and usages of French garden design during the centuries treated. In many examples something of the Grand Manner survives, as exemplified in the work of Le Nôtre, that ordered form and symmetry of plan and balance, where effects are obtained by the use of alleys and hedges and the introduction of architectural motives such as balustrades, fountains and vases. In other examples are seen the effect on French garden design of the "romantic" movement in England, with its studied irregularities and vagaries of all sorts. In still others one finds the humble vegetable



From *The Smaller Houses and Gardens of Versailles*

garden given its place as a respected neighbor and not a poor relation of the garden proper, which was made possible by the Frenchman's insistence that form and plan was the most important element in garden design. Aside from the plans and schemes, many of the details of the gardens and the use of materials are worthy of study. Among these are the *parterres de broderies*, edged with low box, the use of small trees and the shrubs in tubs and pots as accents, as well as the more familiar alleys of pleached trees, the creation of patterns of design by the use of vari-colored sands and pebbles, of stone and brick pavements, and various sorts of edgings.

The houses are all built of the native limestone, in many cases stuccoed and painted; in some cases finished in dressed ashlar. Where the painted stucco is used, masonry joints are often lined off to obtain a desired scale. The roofs are generally slate or lead and the kick-up at the eaves, aside from its grace of line, serves a practical purpose in shedding the water well clear of the walls onto the stone wash that surrounds the buildings. The exterior woodwork is generally quiet in tone, finished in white, grey or some other neutral color, and the fenestration and glazing is worthy of particular note, as well as the use of iron work in grilles, fences, gates, balconies and transoms and some of the very charming staircases.

The main rooms of the interiors are generally wood panelled, finished in neutral colors with mouldings picked out in different shades, relieved with decoration or the insertion of mirrors, paintings and tapestries, and the mantels are generally done in marble.

Of particular note are the portico of the Château de Voisins, details of the Bonaparte House, the entrance court of the House at Viroflay, the general scheme and use of the dependencies and outbuildings at La Ranchère in relation to the garden scheme, the panelling in certain rooms at the Pavillon de Madame, and last but not least, the exquisite restraint and refinement of detail of the House of Madame Elizabeth.

Altogether the book is refreshing and stimulating throughout and should prove of great interest both to the architect and layman.

JOSEPH PATTERSON SIMS

**An Outline History of Architecture of the British Isles.** By P. L. Dickinson, F. R.I. A.I. & M. T. P. I. Boston, Mass. Houghton, Mifflin Co. 1927. 1st ed. 320 pp. Ill. 5½ x 8 in. Cloth. \$5.00.

American architecture has found both inspiration and model in British examples. Mr. Dickinson's text is shrewd and authoritative; combined with a great number of line drawings and no less than sixty-four important and beautiful half-tone illustrations, it makes a book of distinct value to the architect or student.

**The Church School Building.** Philadelphia, Pa. and Chicago, Ill. The Bureau of Architecture of the Methodist Episcopal Church. 1927. 1st ed. 32 pp. Ill. 6 x 9 in. Paper cover. 50c.

The booklet describes the departmentalization plan now considered so essential to any successful program of Religious Education, and contains 29 cuts illustrating department and class rooms and floor plans, although illustrations of rooms are featured rather than plans.

**Proceedings of American Concrete Institute.** 22nd Annual Convention. Detroit: American Concrete Institute. 1926. 1st ed. 796 pp. Ill. 6 x 9 in. Cloth. \$8.00.

**RECENT PUBLICATIONS**

issued by manufacturers of construction materials and equipment.

[These may be secured by architects on request direct from the firms that issue them, free of charge unless otherwise noted.]

**Casement Sash Adjuster.** "Everlock," for any out-swinging sash in any building, operated from the inside without disturbing the screen. Manufacture and method of operation. Section drawings of various styles. Directions for installation. Concealed transom operator. W. E. Putnam Co., Inc., 667 West Boylston St., Worcester, Mass. 3½ x 6 in. Folder. Ill.

**Floors, Oak.** 30th ed. How and where to use oak floors. Grading rules; standard thicknesses, widths, measurements, counts of oak flooring and the use of different grades. How to arrive at the amount of oak flooring required. Handling oak flooring. Information as to laying, surfacing, finishing and care. Oak Flooring Bureau, 839 Hearst Bldg., Chicago, Ill. 3½ x 6¼ in. 16 pp. Ill.

**Doors, Vanishing.** Catalog J. 5th ed. A. I. A. File No. 28b33. Information and particulars of vanishing door wardrobes, lockers, etc. Detailed drawings and directions for installing door hinges. Particulars and information. W. L. Evans, Washington, Ind. 8¼ x 11 in. 48 pp. Ill.

**Wall Paints and Finishes.** Series of 7 folders. Indelible cold water paint. Calcimo sanitary wall coating, Muralo patching plaster, Muralo relief compound, Salamander interior cold water paint, Muralo wall size. Description of products, directions for mixing and using and application. Mural-Text period textures. Method of use and advantages. The Muralo Company, Inc., Staten Island, N. Y. 3¾ x 6¼ in. Ill.

**Heating, Water.** Characteristics and advantages of Chicago automatic electric water heater. Section diagram and method of operation. Installation instructions. Chicago Automatic Electric Boiler Co., 1966 South-

port Avenue, Chicago, Ill.  $3\frac{5}{8} \times 8\frac{1}{2}$  in. 4 pp. Folder. Ill.

**Blowers and Exhausters.** Catalogue 110 A. I. A. File No. 30dl. Uniblade blowers and exhausters. Constant and variable speed. Motor and pulley driven types. Correct ventilation. General construction specifications and data. Typical installations. Engineering data, tables and detailed drawings. Autovent Fan & Blower Co. 730-738 W. Monroe St., Chicago, Ill.  $8\frac{1}{2} \times 11$  in. 48 pp. Ill.

**Steel Windows,** doors, mechanical operators and lintels. Truscon Drafting Room Standards. A. I. A. File No. 16e. Catalog No. 717. 4th ed. Specifications. Typical installation details. Dimensions and combinations. Features and full information and description of products, with details of types and sizes, for assembling. Truscon Steel Co., Youngstown, Ohio.  $8\frac{1}{2} \times 11$  in. 128 pp. Ill.

**Columns and Pergolas,** Metal. A. I. A. File No. 12M. Catalogue No. 50C. Advantages of Union Metal Columns. Architectural and construction details. Dimension chart. Specifications. Attractive column entrances. Typical installations. Installation details. Various types of pergolas with full particulars and information of each. The Union Metal Manufacturing Co., Canton, Ohio.  $8\frac{1}{2} \times 11$  in. 56 pp. Ill.

**Heaters,** Thermodyne Unit. A. I. A. File No. 30C4. Catalog No. 127. Complete information about the Thermodyne Unit Heater, including construction, dimensions, piping arrangements, capacities. Installation information. Tables and detailed drawings with layouts. The Modine Manufacturing Co., Heating Division, Racine, Wisc.  $8\frac{1}{2} \times 11$  in. 24 pp. Ill.

**Heaters.** "Healthful Warmth." International heavy duty warm air heater for schools, halls, churches, apartments and other large buildings. Detailed description and advantages. Detailed drawings of furnace and ducts and floor plans. Ratings. International Heater Company, 101 Park Ave., Utica, N. Y.  $7\frac{1}{2} \times 10\frac{5}{8}$  in. 16 pp. Ill.

**Electric Motors.** Bulletin No. 144. High power-factor of Fynn-Weichsel Motors. Starting and running characteristics. Overload characteristics. Cost. Full and detailed information of construction, use and service. Wagner Electric Corporation, 6400 Plymouth Ave., St. Louis, Mo.  $8 \times 10\frac{1}{2}$  in. 16 pp. Ill.

**Metal Lath.** A. I. A. File No. 20B1. Massillon Metal Lath for walls, ceilings, partitions, floors and roofs. Different methods of manufacture and the uses of each. Recommendations for forcement for concrete slabs and walls considering rigidity, weight, type of key and spacing of supports. Massillon lath accessories. Samples of lath and acces-

sory items sent on request. The Macomber Steel Co., Canton, Ohio.  $8\frac{1}{2} \times 11$  in. 8 pp. Ill.

**Floors, Oak.** 14th ed. The story of Oak Floors. The use of oak through the ages. The beauty and service of an oak floor. Modern finishes to harmonize with room decorations. Durability, cleanliness and economy of oak flooring for every purpose in schools, hospitals and public buildings. Oak Flooring Bureau, 839 Hearst Building, Chicago, Ill.  $6\frac{1}{8} \times 9\frac{1}{4}$  in. 24 pp. Ill.

**Doors, Flushwood.** A. I. A. File No. 19E12. Construction details and section diagrams of doors. Advantages as compared with an ordinary flush door. Full description and illustrations of birch, mahogany, red gum, white and red oak doors. Information and particulars of sash and mirror doors, The Morgan Sash & Door Co., 2287 Blue Island Ave., Chicago, Ill.  $8\frac{1}{2} \times 11$  in. 16 pp. Ill.

**Gypsum Plaster.** "Brief on Gypsum Plaster," by H. J. Schweim, chief engineer, The Gypsum Industries. Fully informative sections I—general data, II—acoustics, III—soundproofing. The Gypsum Industries, 844 Rush Street, Chicago, Ill.  $8\frac{1}{2} \times 11$  in. 8 pp.

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