

# THE AMERICAN ARCHITECT

FOUNDED 1876

MONTGOMERY PLACE, BARRYTOWN, NEW YORK

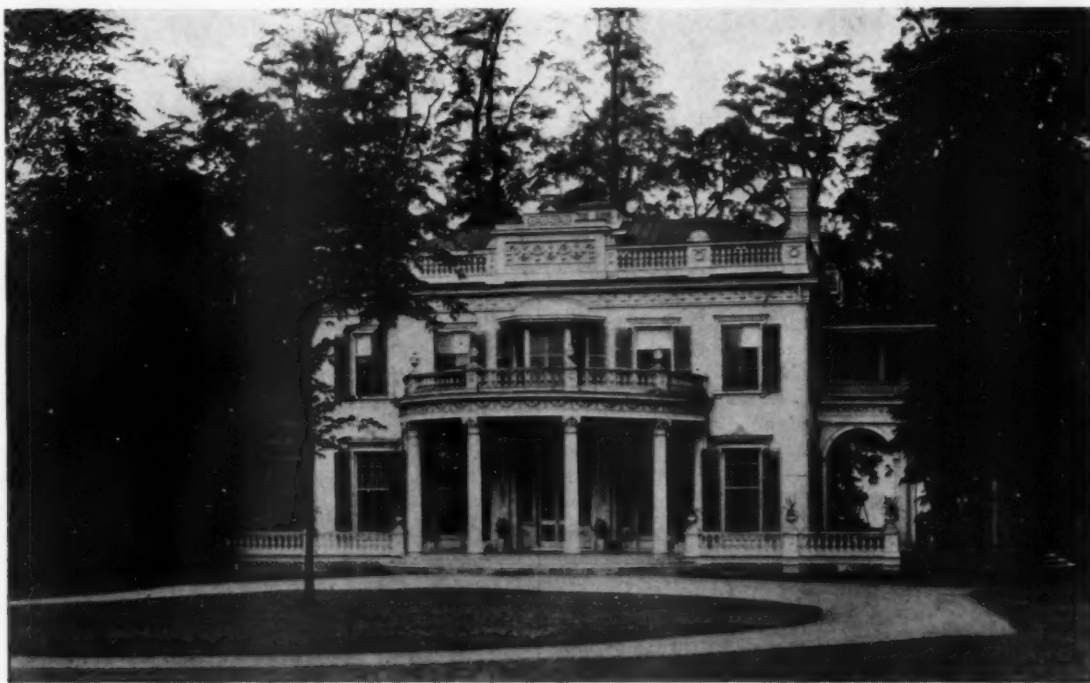
By BRIGADIER GENERAL JOHN ROSS DELAFIELD, A. M., LL. B.

*Restored by the Owner—DWIGHT JAMES BAUM, Architect, Consultant*

ON a beautiful day in July, 1818, a steamer flying many flags at half mast, stopped in midstream between the banks of the Hudson while a United States Army band played a funeral march and the salute to the dead was given. No human habitation was at first visible along the wooded shores, but on further search one saw a house of good taste and moderate proportions set back from the shore in a cove of the river with rocky shores and islets. On the veranda stood a lady, alone, watching as it

passed the boat bearing the remains of her beloved husband. Brigadier General Richard Montgomery who had been killed leading his troops in the attack on Quebec in 1775. Before the boat went by she had fallen unconscious.

After her husband's death Mrs. Montgomery could no longer be happy in the home she had planned with him and built at Grasmere, Rhinebeck. Her mother, Margaret Beekman, then the widow of Judge Robert R. Livingston, wishing to



EAST ELEVATION

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have her daughter nearer to her home at Clermont, helped her to buy a farm of more than two hundred acres on the east bank of the Hudson River at the mouth of the Sawkill about twenty miles above Poughkeepsie. Here Mrs. Montgomery built and completed in 1804 her home, a rectangular four-chimneyed Colonial house, about 40' x 60', with stuccoed stone walls more than two feet thick and having the kitchens and service quarters in the basement, dining and drawing rooms, library and one bedroom in the high ceilinged first floor, bedrooms on the second, and maids' quarters in the dormer windowed top floor under the steep sloping roof.

Into this house, with its many great windows and white painted woodwork carved and moulded

gomery's invitation and remained there as her guest for many months. Finally, after announcing his own approaching sudden death because, as he said, he had heard the family banshee cry that night, Jones was found dead in his room the following morning.

Mrs. Montgomery died in this house in 1828. She left Montgomery Place, as it had come to be called, to her brother, the Honorable Edward Livingston, who had always taken great pleasure in it. He made improvements to the house, added to the portraits there and took there some furniture brought back from France with him in 1835. After his death there in 1836, the house came to his widow, the accomplished and beautiful Louise Davezac. She added to the house the eastern portico



NORTH ELEVATION

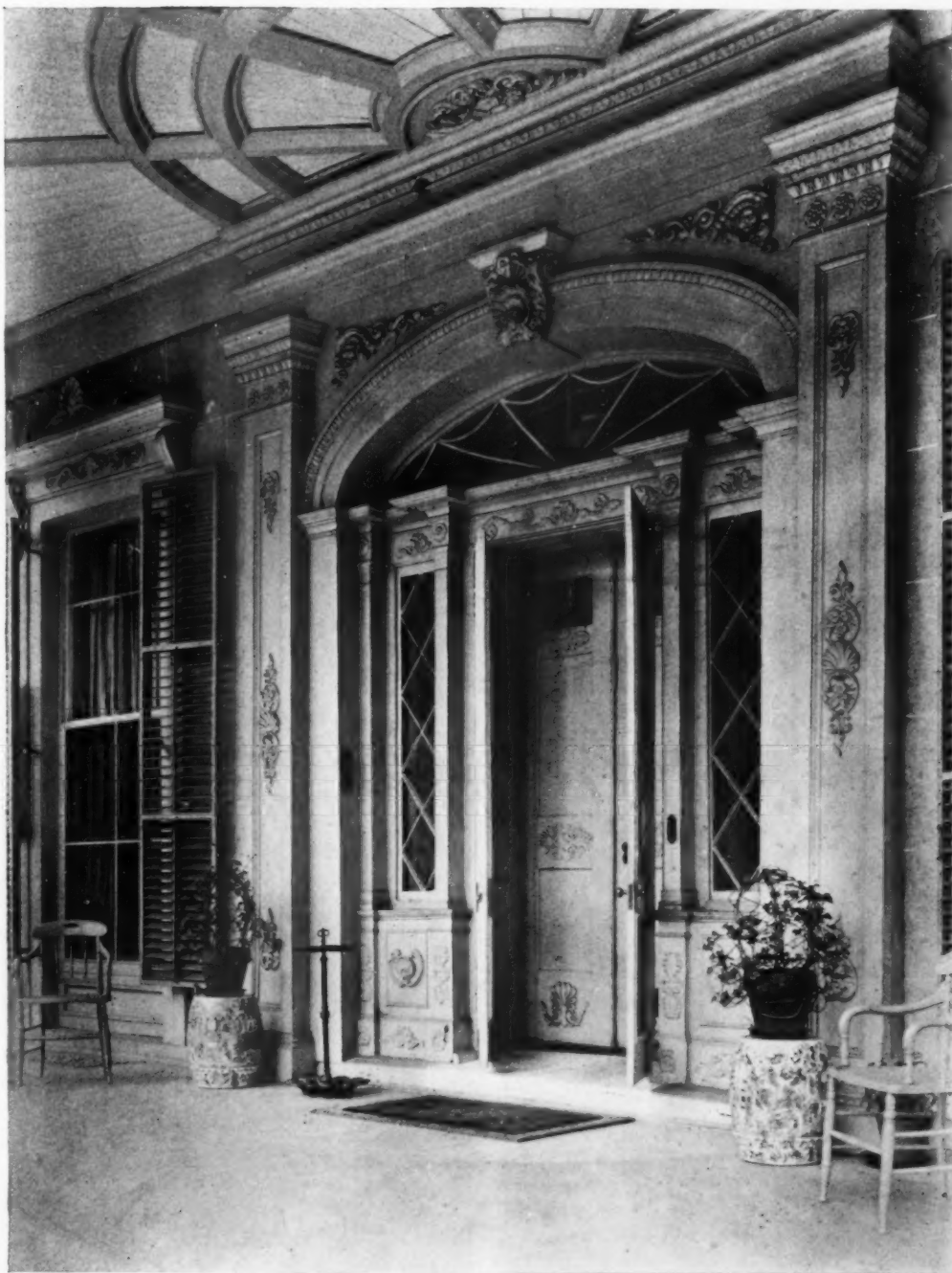
according to the American Colonial fashion of the time, Mrs. Montgomery moved the furniture from her small home at Grasmere, and this not being enough her celebrated brothers, Chancellor Robert R. Livingston and the Honorable Edward Livingston, gave her fine American furniture and also sent her furniture and ornaments from France.

Many celebrated men were guests at this house. Her brother, Edward Livingston, spent much of his time there in summer when not required by his work to be in Washington or New Orleans. Lafayette, an old friend of her family, stayed there in 1824, and President Van Buren, also a friend of her brothers, sometimes stopped there for the night on his journeys along the Hudson. William Jones, brother of the Earl of Ranelagh, who had married General Montgomery's sister, came at Mrs. Mont-

and the north porch and south wing and much of the detail ornament, combining and harmonizing the whole with such skill that it seemed to be the creation of one mind. She also added to the estate, purchasing the beautiful woodland to the north of the house from her late husband's brother-in-law, General John Armstrong.

After her death there in October, 1860, her daughter, Coralie Livingston, wife of Thomas Penant Barton, continued to improve the grounds. It was before this time that Andrew Jackson Downing, the greatest of our early landscape gardeners, in *Rural Essays* written in 1847, described Montgomery Place in these words:

"If we have not sooner spoken at large of Montgomery Place, second as it is to no seat in



ENTRANCE DOORWAY, EAST SIDE

MONTGOMERY PLACE, BARRYTOWN, N. Y.

RESTORED BY THE OWNER—DWIGHT JAMES BAUM, ARCHITECT, CONSULTANT

DETAILS OF  
SOUTH WING

RESTORED BY  
THE OWNER

MONTGOMERY PLACE,  
BARRYTOWN, N. Y.

DWIGHT JAMES BAUM,  
ARCHITECT, CONSULTANT





America for its combination of attractions, it has been rather that we were silent—like a devout gazer at the marvelous beauty of Apollo—from excess of enjoyment than from not deeply feeling all its varied mysteries of pleasure grounds and lawns, wood and water.

"Montgomery Place is one of the superb old seats belonging to the Livingston family:"

\* \* \*

"Here is the entrance gate, and from it leads a long and stately avenue of trees like the approach to an old French chateau. Halfway up its length the lines of splendid trees give place to a tall

"Without going into any details of the interior, we may call attention to the unique effect of the pavilion thirty feet wide, which forms the north wing of this house. It opens from the library and drawing-room by low windows. Its ribbed roof is supported by a tasteful series of columns and arches in the style of the Italian arcade. As it is on the north side of the dwelling, its position is always cool in summer; and its coolness is still further increased by the abundant shade of the tall old trees, whose heads cast a pleasant gloom, while their tall trunks allow the eye to feast on the rich landscape spread around it."



VIEWS IN THE DINING ROOM

NOTE THE TAPERING COLONNETTE

wood, and this again is succeeded by the lawn which opens in all its stately dignity with increased effect after the deeper shadows of the vestibule-like wood. The eye is now caught at once by the fine specimens of hemlock, elm, ash, and fir, whose broad heads and large trunks form the finest possible accessories to a large and spacious mansion, which is one of the best specimens of our manor houses, built many years ago in the most substantial manner. The edifice has been retouched and somewhat enlarged within a few years, and is at present both commodious and architectural in character.

Mr. Barton, a noted Shakespearean authority and collector, added much to the already fine library at Montgomery Place.

Mrs. Barton, who died there in 1873, devised the beautiful estate to her cousins, the Honorable Carleton Hunt and his sister, for life, remainder to Maturin Livingston Delafield. The Hunts and their family made it their summer home for many years. Mr. Hunt was a distinguished lawyer in New Orleans and a member of Congress. After his death in 1921, and Mr. Maturin Livingston Delafield having died before him, the property came by devise to the author.

Each successive owner has added to the beauty of the house and its surroundings and contents and little that was best in it has ever been removed or destroyed.

**EDITOR'S Note:** What we largely lack in this country is proper respect for tradition. We tear down the most beautiful examples of our early architecture, and we build in their places the most blatant types of architecture. Our historical landmarks are disappearing, until today it is only those of most dramatic historic importance that remain.

Few men in this country have today the heritage of a past that finds its setting in one of these fine old landmarks. Few know the feeling of pride of birth, of long ancestry spent amidst such dignified surroundings. And when it is possible to combine this heritage with the means to perpetuate it, the modern tendencies of daily living seem to dull appreciation.

To own, venerate and care for a house like Montgomery Place, is to achieve the very highest desires of man or woman who clings to the traditions of this country and finds in a dignified retirement the compensations of a well spent life.



CORNER IN ENTRANCE HALL

## SACRED HEART SEMINARY, DETROIT, MICH.

DONALDSON & MEIER, Architects

THE phenomenal growth of Detroit, dating from 1910, naturally resulted in a tremendous increase in its Catholic population. Existing institutions were taxed to capacity, and it soon became apparent that unless large accessions were made to the body of the clergy they would be unable to cope with the situation. Rt. Rev. Michael J. Gallagher realized the seriousness of the crisis when taking possession of his see in 1918. Guided by his vision of Detroit as a great center of population, he determined upon the erection of a preparatory seminary.

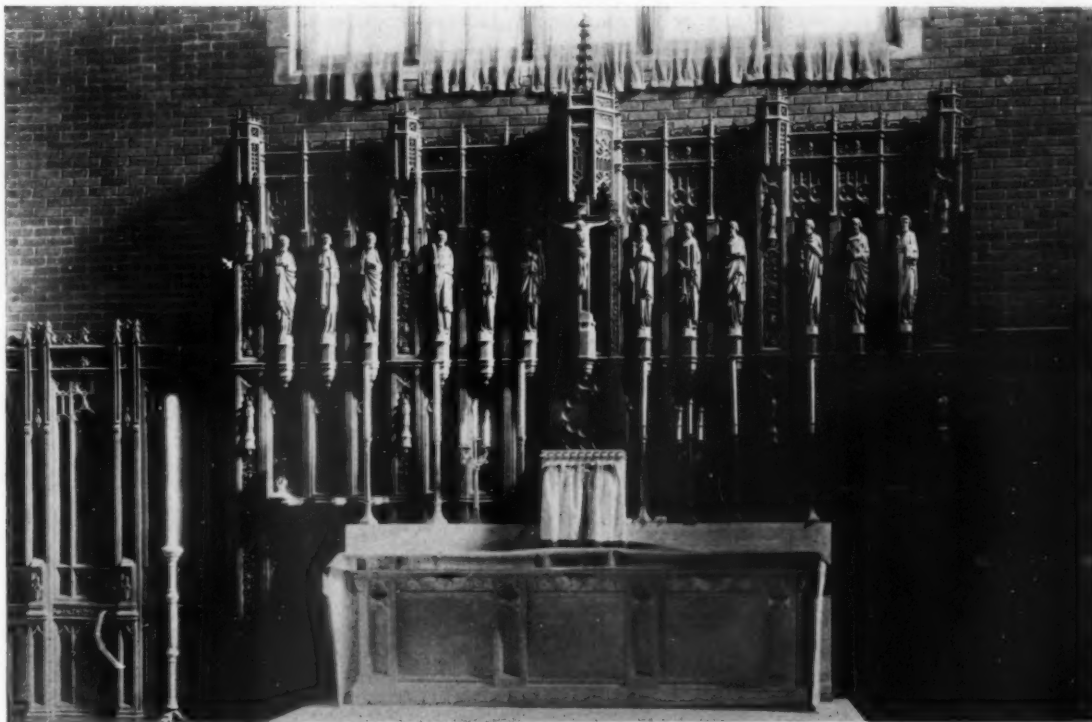
This type of school is a traditional one in the Church and serves the important purpose of recruiting the ranks of the priesthood. It receives boys who, after finishing the primary grades, manifest an inclination toward a religious life. They are given the usual high school and college courses lasting eight years. The courses of study not only meet all the standards set by secular agencies, but are moreover correlated and directed in a way to keep before the young seminarian the purpose to which he has consecrated himself. A greater emphasis is laid upon discipline than is found in the ordinary school since self-control and self-discipline are held to be basic virtues of the priestly life.

Essentially, the preparatory seminary is a testing-ground wherein the neophyte makes certain of his fitness or unfitness for the priesthood. He learns to know his own mind and is mature enough to begin his final four year course in theology at any of the major seminaries.

It was decided to erect the Detroit seminary in the city itself, and to allow the city boys to attend as day scholars for the first six years of the course. A plot of ground was purchased containing about twenty-four acres and situated four and a half miles from the center of the city on convenient car lines. An idea of the magnitude of the task involved in the building of the seminary, and of the problems to be solved, is gained from the following condensation of the program placed before the architects.

### PROGRAM:

1. The buildings required shall be planned and designed for secular and religious education.
2. Accommodations for 500 students, of which 250 will be day scholars.
3. Accommodations for 54 philosophy students each having private bedroom and housed in a separate wing under the discipline of 6 proctors having each a private suite.



MAIN ALTAR

4. Accommodations for 25 resident professors having each a suite comprising bedroom, study and bath; also a number of guest rooms and suites with suitable conveniences; also faculty recreation rooms.
5. Convent for 25 resident nuns who will have charge of all housekeeping operations. Convent chapel shall have balcony accessible to convalescent patients from infirmary.
6. Infirmary with single rooms and small wards with provision for isolation cases.
7. Quarters for female help.
8. Chapel to seat about 600 with 8 side altars in addition to the usual three main altars. Chapel to contain balcony sufficiently large to accommodate nuns.
9. Twenty class rooms to seat 25 each; 4 study halls to seat 125 each; physics, chemistry and biology lecture rooms and laboratories; large library and recreation rooms.
10. Auditorium to seat about 600 with music section in connection comprising 20 individual practice rooms, orchestra and instrument rooms, stage equipped for theatricals, etc.
11. Administration offices and visitors' reception rooms; Rector's suite.
12. Large gymnasium, handball and basketball courts, spectators' gallery and accessories

such as locker and shower rooms, toilets, etc., boxing, special exercise, etc.

13. One main refectory, two faculty refectories, convent, male help and female help refectories, diet kitchens, main kitchen, stores, refrigerating system, bakery, etc.
14. Dormitories having locker, lavatory and toilet rooms.
15. Mechanical plant, comprising boilers, coal bunkers, laundry and quarters for male help.
16. Athletic field for baseball, football, tennis, etc.

It was decided that for the maintenance of proper discipline and control it would be necessary to arrange for close connection of the units and wings of the group by means of enclosed passages and corridors.

It seemed reasonable, as well as symbolical of the purpose of the structure, to place the chapel in the heart of the group, giving to it a certain air of monastic seclusion and protection from disturbance. The administrative and public reception sections grouped themselves naturally near the main entrance and these influenced in turn the placing of the auditorium at the northeast corner of the property. The school occupies the west half of the main facade as well as the entire wing of Unit A. The position of the mechanical plant was influenced by the prevailing winds which are from the west



CHOIR STALLS IN SANCTUARY





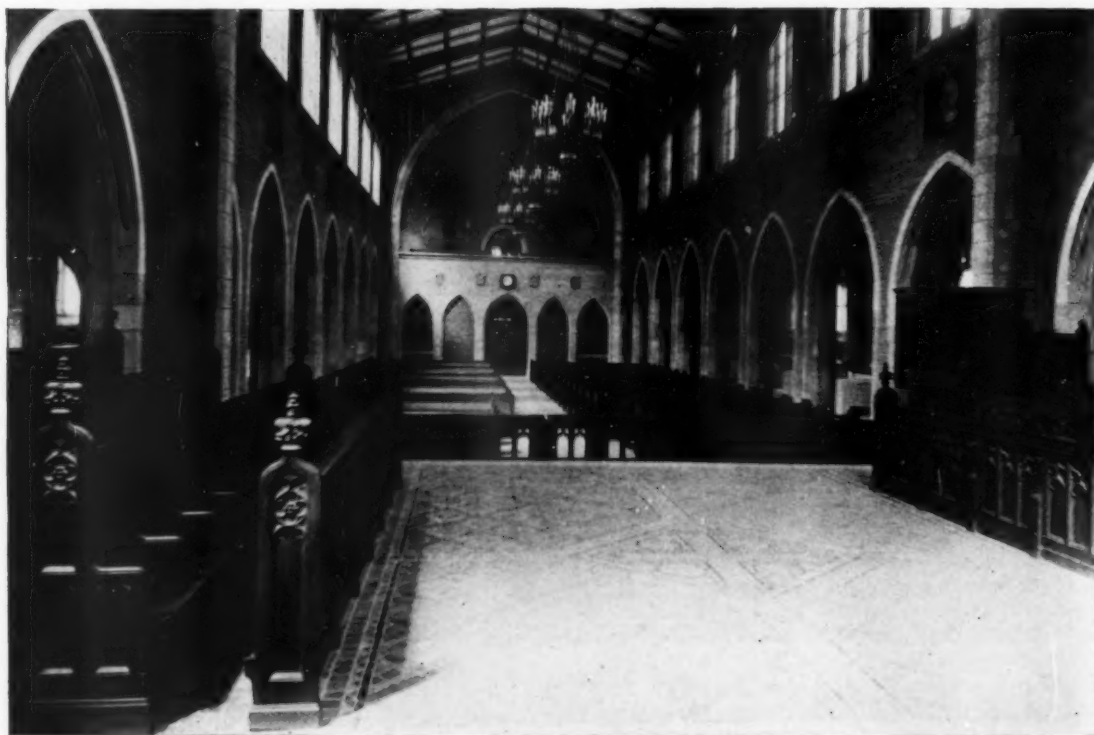
GENERAL VIEW, REAR FACADE



GENERAL VIEW, MAIN FACADE

SACRED HEART SEMINARY, DETROIT, MICH.

DONALDSON & MEIER, ARCHITECTS



VIEW IN CHAPEL LOOKING TOWARD NARTHEX



INTERIOR OF CHAPEL

SACRED HEART SEMINARY, DETROIT, MICH.

DONALDSON & MEIER, ARCHITECTS

and by accessibility to a paved thoroughfare on the east side. As the laundry is located in the mechanical plant and the main kitchen in the southeast corner of Unit A (both in charge of the nuns) it seemed advisable to place the convent within close reach. The gymnasium took its place near the school section balancing the convent while the students' recreation rooms and promenade seemed well placed overlooking the athletic field. The philosophy wing occupies an isolated position at the west end of the main facade, balancing the auditorium at the opposite end.

A particularly difficult problem was presented in the arrangement of the main kitchen, services and storerooms as related to the various dining rooms, the following being served from the main kitchen: convent refectory, female help's dining room, infirmarium diet kitchens, male help's dining room, main refectory, and guest and faculty dining rooms. The solution of this problem is indicated by the plans and has proved satisfactory.

The dormitories are large rooms about two stories high at the center with ceilings of polygonal section divided at the structural lines under the trusses by arches of elliptical section.

The dormitories have adjoining dressing and locker rooms where each boy has a large specially constructed locker adequate to contain his seasonal changes of garments as well as clothing not in use. In addition to this, large trunk storage rooms are provided in various roof spaces.

The system of construction is in general fire-proof, being a combination of protected steel, reinforced concrete joist-hollow tile floors, masonry walls, and tile and gypsum partitions. Red oak has been used for trim in the main portions of the building and southern pine in sections of lesser importance. Floors are of Pewabic tile throughout the chapel sanctuary and aisles and corridors of Unit A; mastic in school rooms, dormitories and philosophy wing; magnesite in auditorium, ground floor and third floor corridors; linoleum in residential section of second floor corridors; oak in professors' suites and throughout convent and under pews in main chapel; terrazzo in showers, lavatories, and toilets; quarry tile in main refectory and on terraces and porches; asphalt in kitchen and service section; and cork in library.

The exterior treatment is of red rough texture face brick of variegated shades laid with raked joints and trim of Gray Canyon Ohio sandstone, except door sills and steps which are granite and blue Indiana limestone respectively. The roofing materials are graduated variegated slate and copper for flashing, gutters and conductors. Drives and walks have been constructed of brick with concrete curbs.

The architects endeavored to design the seminary group in a spirit of dignity and in harmony with the traditions of the Church, giving to it an atmosphere of culture and an architectural quality that might produce a lasting influence on the semin-



ONE OF THE DORMITORIES

ary students during the impressionable years of their youth. Owing to the fact that little time is found in such institutions for instruction in the arts (if in reality such studies are not entirely neglected) it was believed that certain lessons could be imparted by surrounding the boys with an environment conducive to the appreciation of the fundamental principles of architectural design.

The heating plant is detached from the main buildings with all steam, water and electrical conduit carried in a system of connecting tunnels.

Three 300 H. P. water tube boilers with mechanical stokers are installed in boiler room. Coal is delivered direct to an underground storage room from which it is conveyed by hand trucks and an electric hoist to an elevated coaling platform and dumped to the hoppers above the stoker furnaces. The ashes are carried from the furnace ash pits by means of a steam operated vacuum conveyor to an overhead ash storage bin from which they are discharged by gravity to trucks at the driveway level.

Boiler feed pumps and vacuum return pumps are installed in duplicate. Automatic feed water regulators control the flow of water to the boilers. The operation of the stokers is automatically controlled to meet the steam demand.

Steam is distributed at 125 lbs. pressure with reducing stations in the various building units supplying the heating system at low pressure.

The buildings are heated and ventilated by means of the so-called "split system," direct radiation being installed in all rooms and tempered air

supplied where required for ventilation. The chapel, auditorium and gymnasium unit have separate fan supply and exhaust systems. The main building is provided with two supply units delivering air for ventilation to the class rooms, laboratories, refectory and shower room, locker room and wash rooms. Exhaust systems are provided for the locker, shower, toilet and wash rooms and for the chemical laboratories and the kitchen. The supply fans are steam driven, the exhaust steam being utilized in the heating system. A complete system of automatic temperature regulation is installed in connection with the direct radiation and the ventilating system, room temperatures being controlled by individual thermostats. A constant temperature of the air delivered by the various fans is maintained through the installation of thermostats in the various discharge ducts.

Separate automatically controlled steam water heaters are provided for the gymnasium unit, the laboratory and class room wing, wash rooms in connection with the dormitories, kitchen and laundry.

Electrical energy for light and power is purchased from the local power company. The service enters the boiler house underground at 4,600 volts and is stepped down at this point to 460 volts for distribution through the tunnel system to the various building units. Separate transformer installations are provided in each unit for supplying 110-220 volt service for lighting. The power system is 460 volts throughout.



VIEW INTO SANCTUARY



DETAIL OF SANCTUARY





ABOVE: VIEW OF SIDE CHAPEL  
AT RIGHT: PULPIT AND CHOIR STALLS



GENERAL VIEW OF THE MECHANICAL PLANT  
SACRED HEART SEMINARY, DETROIT, MICH.  
DONALDSON & MEIER, ARCHITECTS

The lighting system throughout the building is installed in accordance with the best standards of modern illumination. The auditorium and stage are provided with modern electrical equipment, including remote control switchboard and dimmer equipment.

The buildings are equipped with a pneumatic clock system with secondary clocks throughout the various units controlled from an automatically wound master clock in the main building.

The plumbing system is supplied by gravity from a 12,000 gallon tank located in the main tower, to which the water is pumped from the mechanical plant. All built-in and inaccessible piping 2½" in diameter and under is brass. An 8-ton refrigeration plant furnishes circulating ice water and refrigeration for the main kitchen and diet kitchens.

The chapel furniture was designed in the office of the architects.

The consulting engineers in charge of the heat-

ing, ventilating and electric wiring systems were McColl, Snyder & McLean. The general contractor was the W. E. Wood Company. Contractors for plumbing, heating and ventilating were Harri-gan & Reid, and for the electric wiring Miller-York, Incorporated.

The total cost of the building was \$2,794,194.14. The cubic contents amount to 6,807,000 cu. ft.; cost per cu. ft., exclusive of architects' fees, 41c. This figure comprises, in addition to all of the trades of the general contract and mechanical trades, all items of equipment such as laundry machinery, lockers, kitchen and bakery equipment, refrigeration, elevators, chapel furniture, lighting fixtures and stone altars.

*The illustrations accompanying this article and also appearing in our duotone plate section are reproduced from photographs made by Tebbs & Knell, Inc., and Thomas Ellison.*

#### INNOVATION

THE above word is not one of the most encouraging character where architecture is concerned, according to *The Builder*, London. In a city, or where there are other buildings to be considered, the architect cannot wisely disregard what is around him, for he builds not only for the site and his clients' requirements, but for the city and the society of which his building is to become a part. National characteristics in building, the traditions represented by the locality in which the new building is to be erected call for some consideration. We have in mind a building in a principal thoroughfare of a great continental city, recently built by, we understand, an English architect for a commercial company, which in its form is not architecture but advertisement. No doubt the commercial company for which it was erected had this in view, but it is a pity when the high traditions of architecture yield themselves to commercial exploitation in this way. In the case of a picture, the vagaries of excessive individualism are at least confined within its frame, nor need we look at it unless so inclined. But a big building in a prominent thoroughfare is always with us, whether we will or no, and in this sense the responsibility of the architect is greater, so that we look to him for a restraint and appreciation governed by the nature of the demands his profession makes upon him.

#### HADDON HALL MODERNIZED

HADDON HALL, once the home of Dorothy Vernon, is, we learn from press despatches, now aglow with electric lights. In accordance with plans to make it a habitable, modern dwelling, the Duke of Rutland has thoroughly renovated the hand-

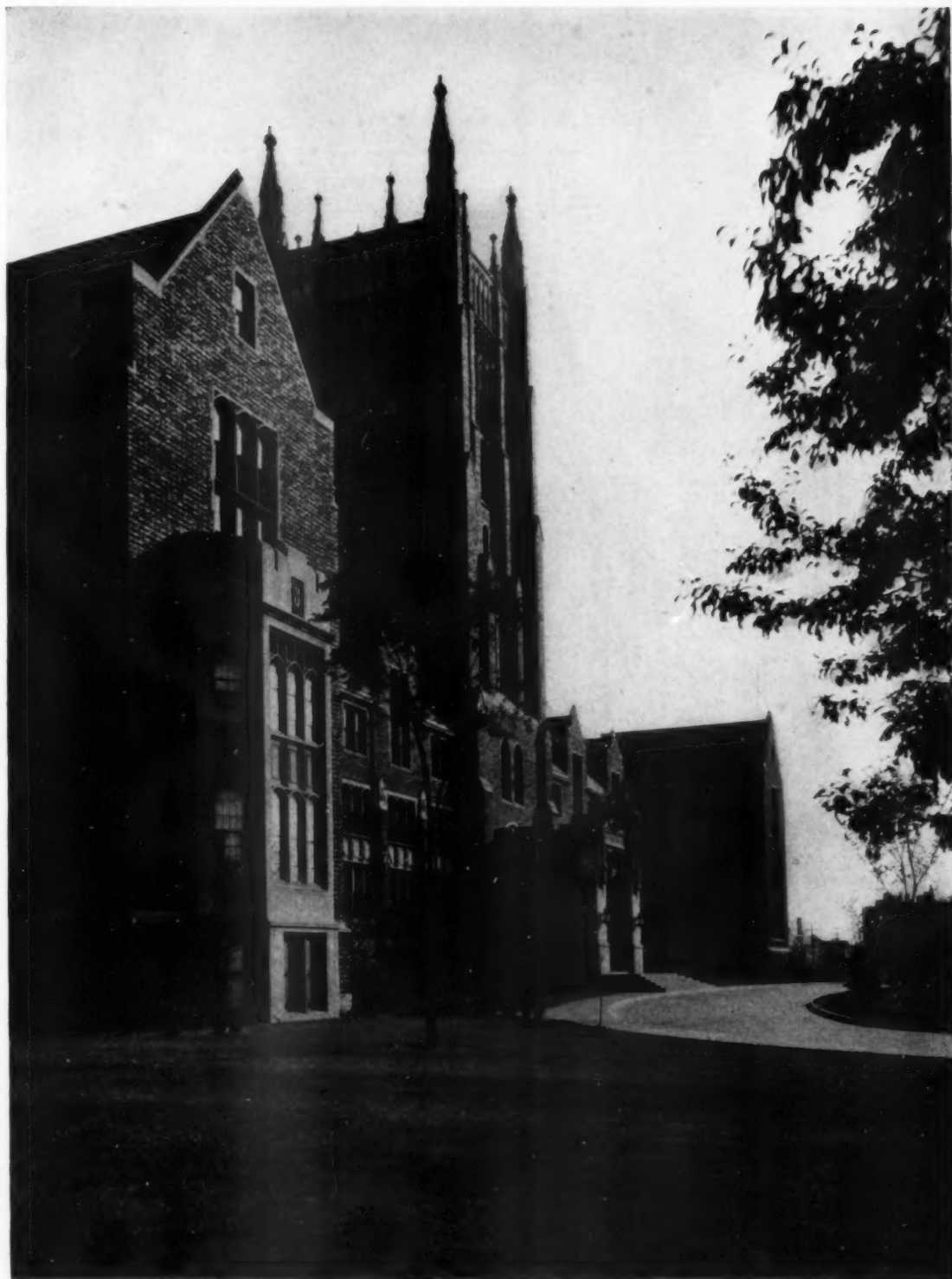
some old place, which stood silent and untenanted for two centuries. It was recently opened to the public upon the occasion of a charity bazaar and garden fete held in the spacious grounds.

The Duke, whose title dates back to 1641—when a grandson of Dorothy and John Mannus succeeded to the earldom of Rutland—now occupies the hall with his family. Little has been changed in the interior of the handsome ivy-covered mansion that so richly reflects the grandeur of old England. The fine panelling has been restored and the old furniture recovered either with antique brocade or with textiles faithfully reproducing old patterns. The charm of antiquity has even been preserved in the electric fittings that take the form of silver sconces.

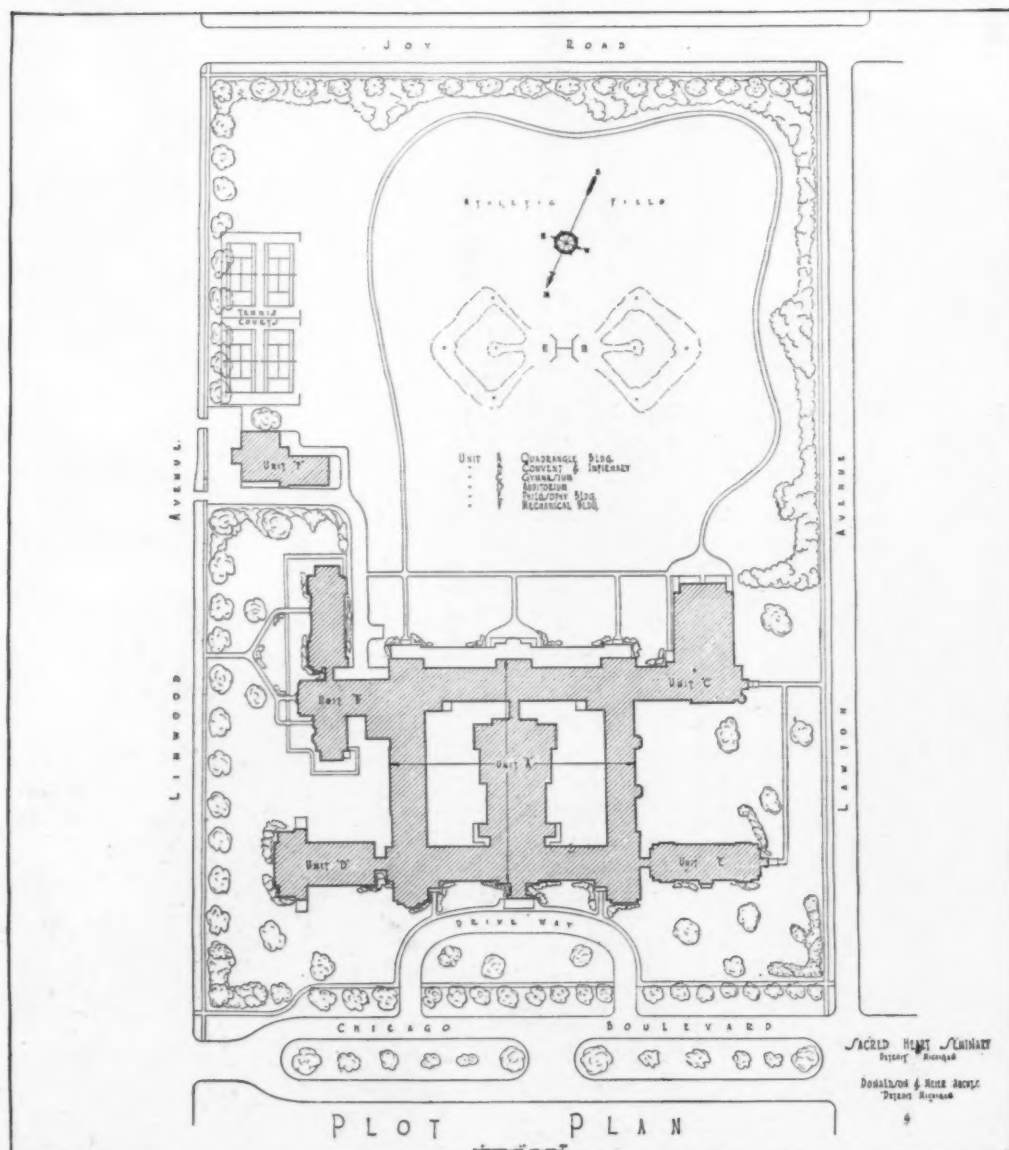
The work of renovation and repair was entrusted entirely to local craftsmen. Some of the old fireplaces had to be removed, but they have been replaced by copies made in the nearby village of Bakewell. All the intricate ironwork has been re-worked by hand.

Haddon Hall had its beginning in the eleventh century and is one of the oldest residences in the British Isles. A Norman touch is still visible in the chapel and in the Peveril tower at the northeast corner. The banqueting hall, in which a ponderous seventeenth century refectory table still stands, and the enormous kitchen adjacent date from the fourteenth century. The ballroom is early seventeenth century. The present arrangement of the terraces and gardens dates from the same period.

To Haddon belong some of the most famous and beautiful tapestries in England. The Flemish ones, hanging in what is now a writing room, are 400 years old; others date from the sixteenth and seventeenth centuries.



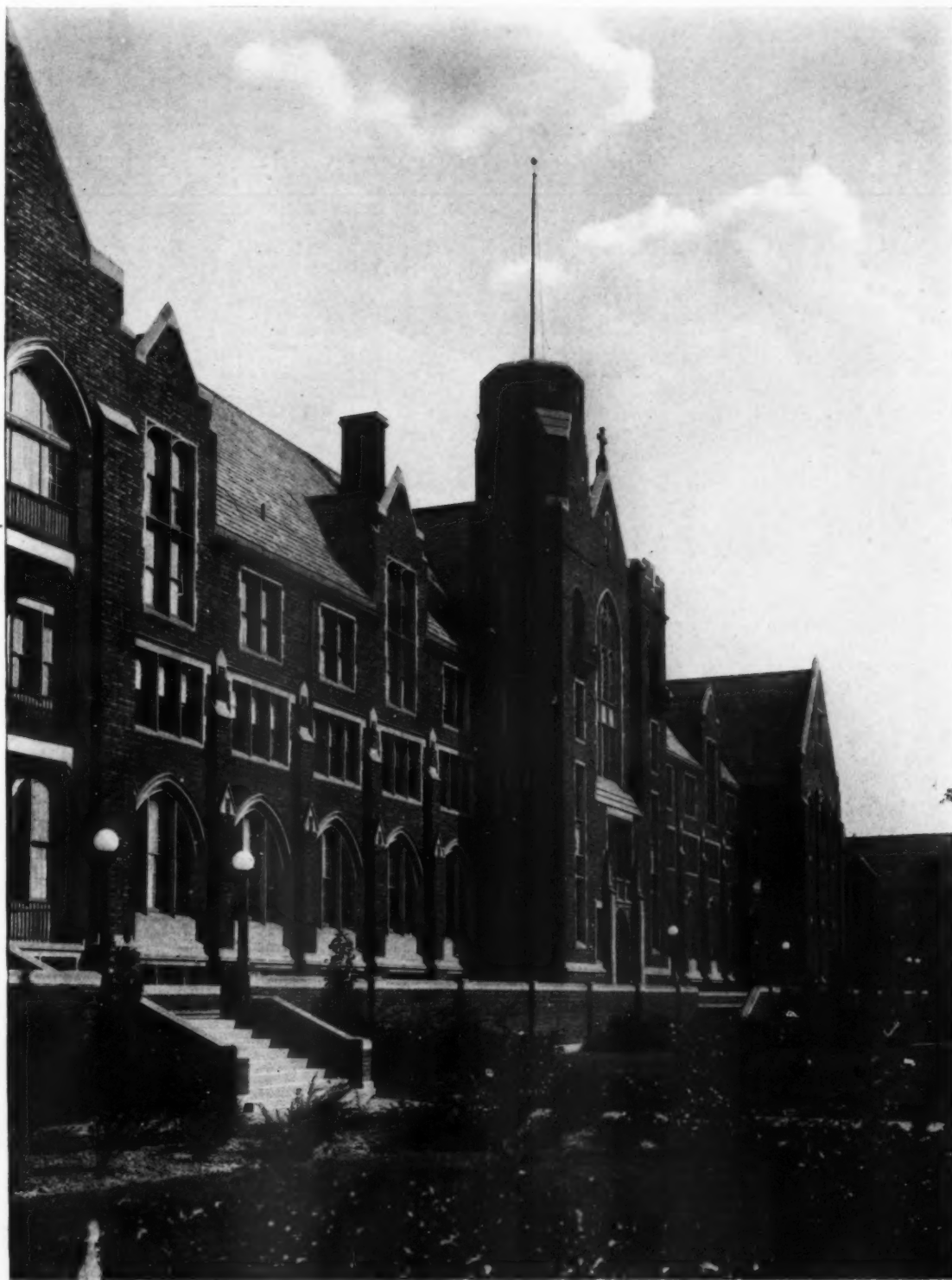
CENTRAL SECTION, MAIN FACADE  
SACRED HEART SEMINARY, DETROIT, MICH.  
DONALDSON & MEIER, ARCHITECTS  
(See plot plan on back)



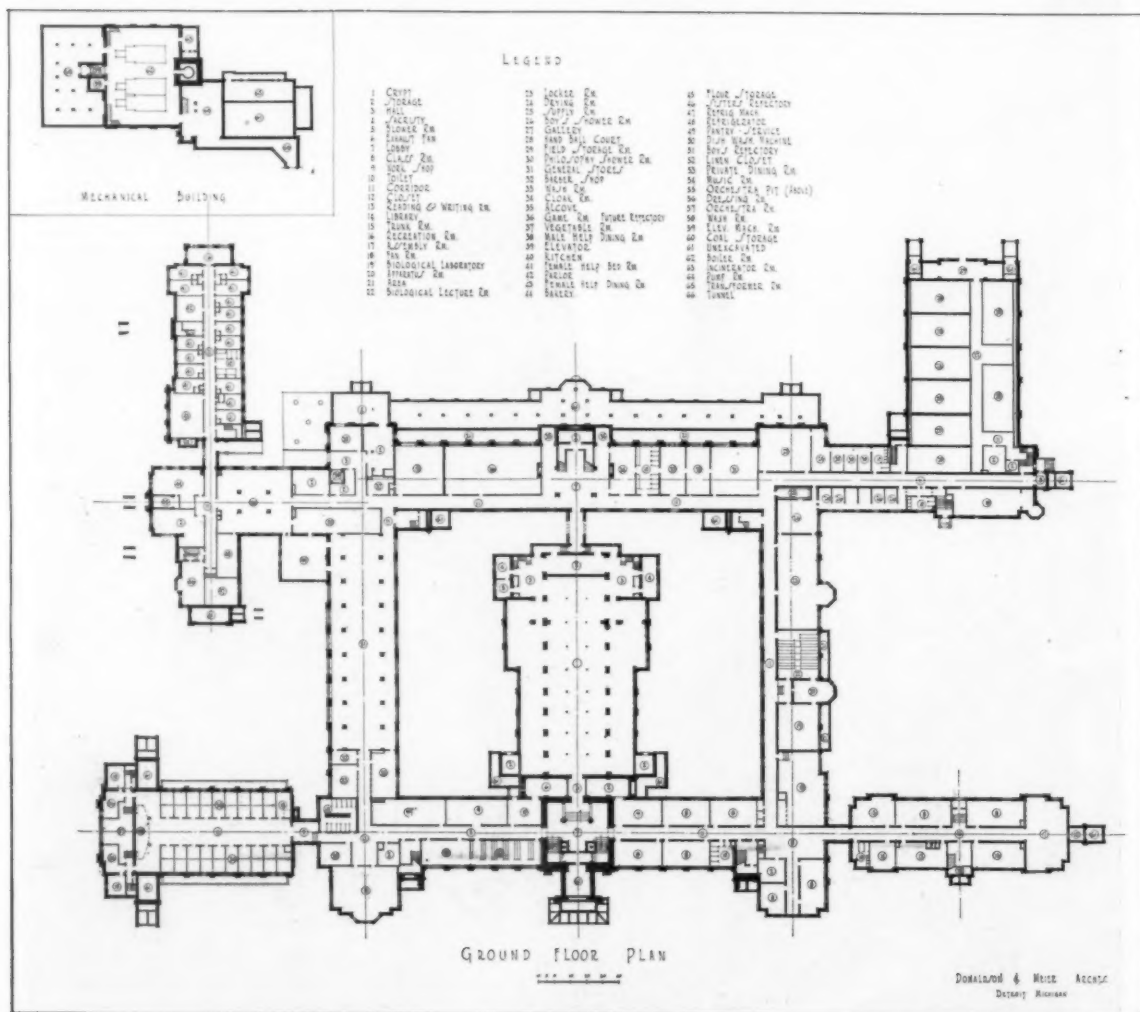
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CENTRAL SECTION, REAR FACADE  
SACRED HEART SEMINARY, DETROIT, MICH.  
DONALDSON & MEIER, ARCHITECTS  
(See plan on back)



SACRED HEART SEMINARY, DETROIT, MICH.

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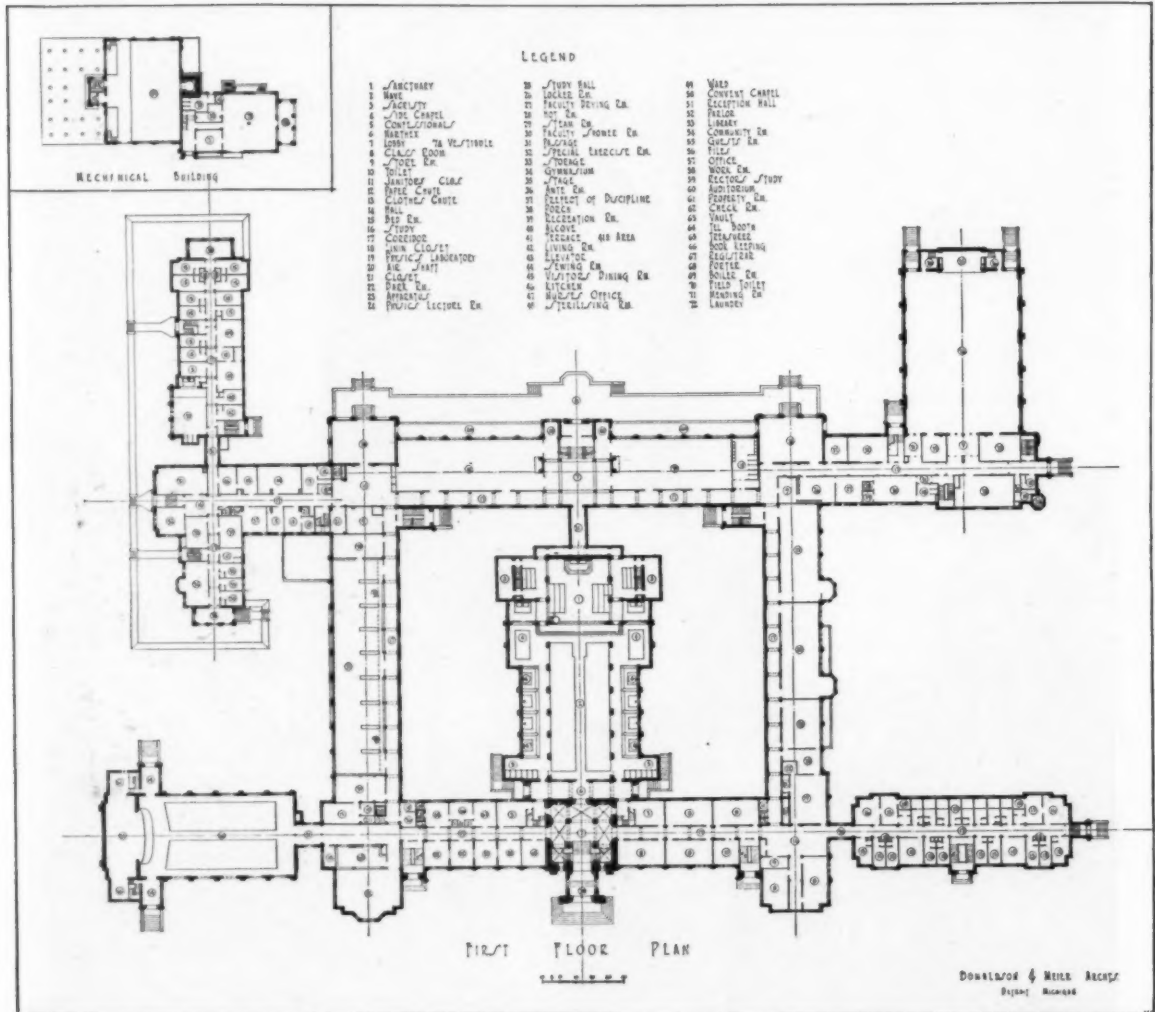


VIEW IN COURT

SACRED HEART SEMINARY, DETROIT, MICH.

DONALDSON & MEIER, ARCHITECTS

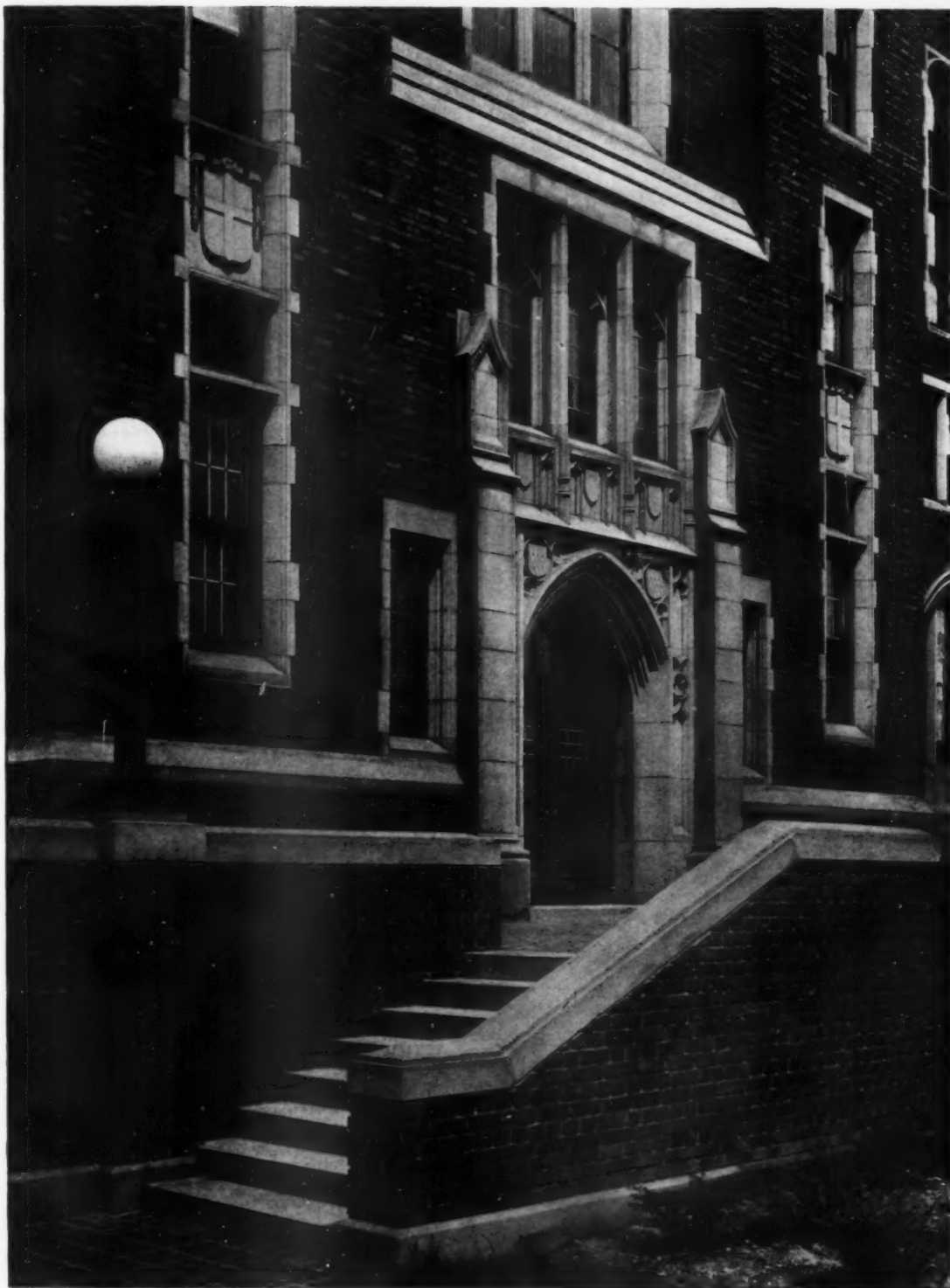
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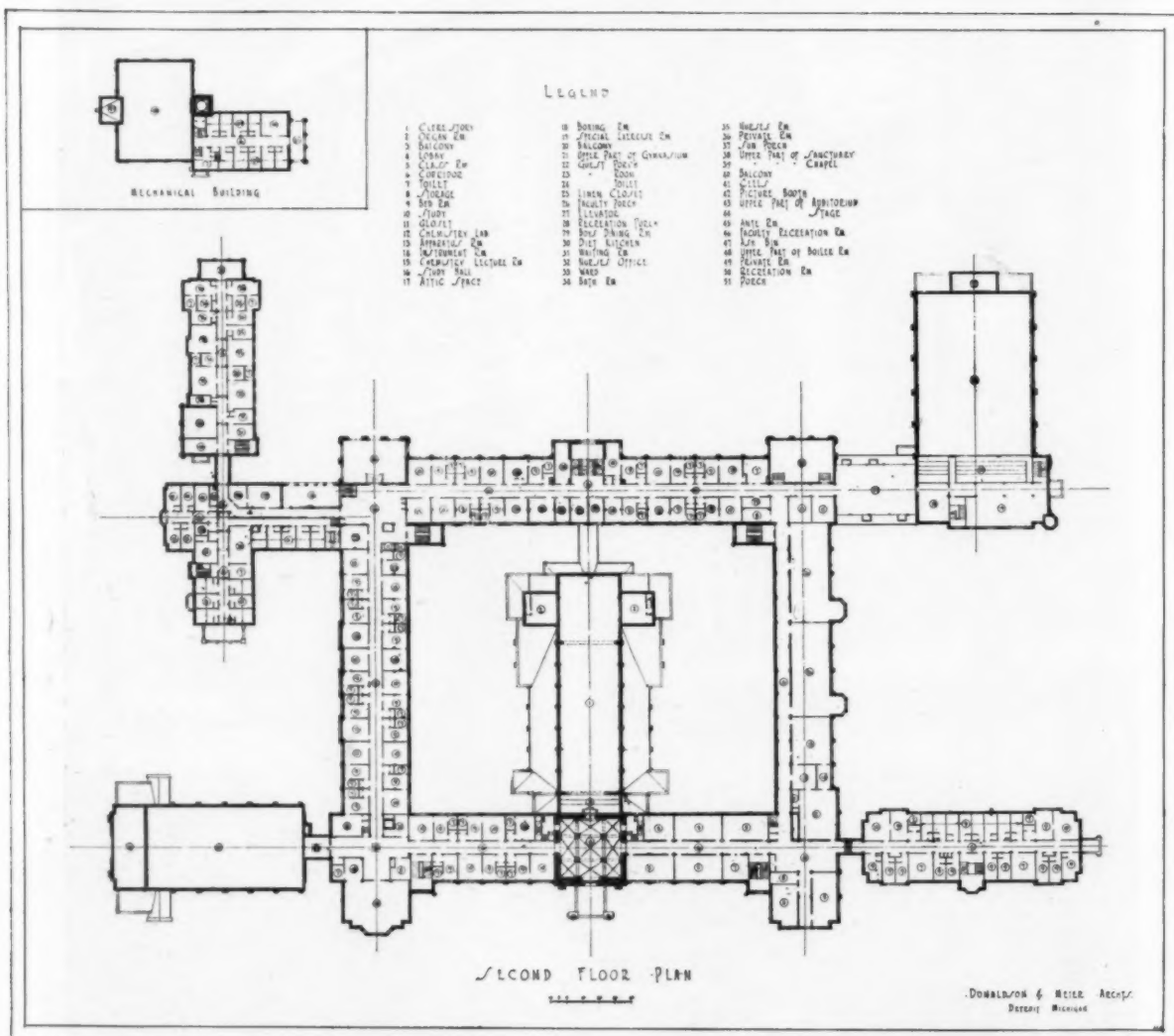
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DONALDSON & MEIER, ARCHITECTS



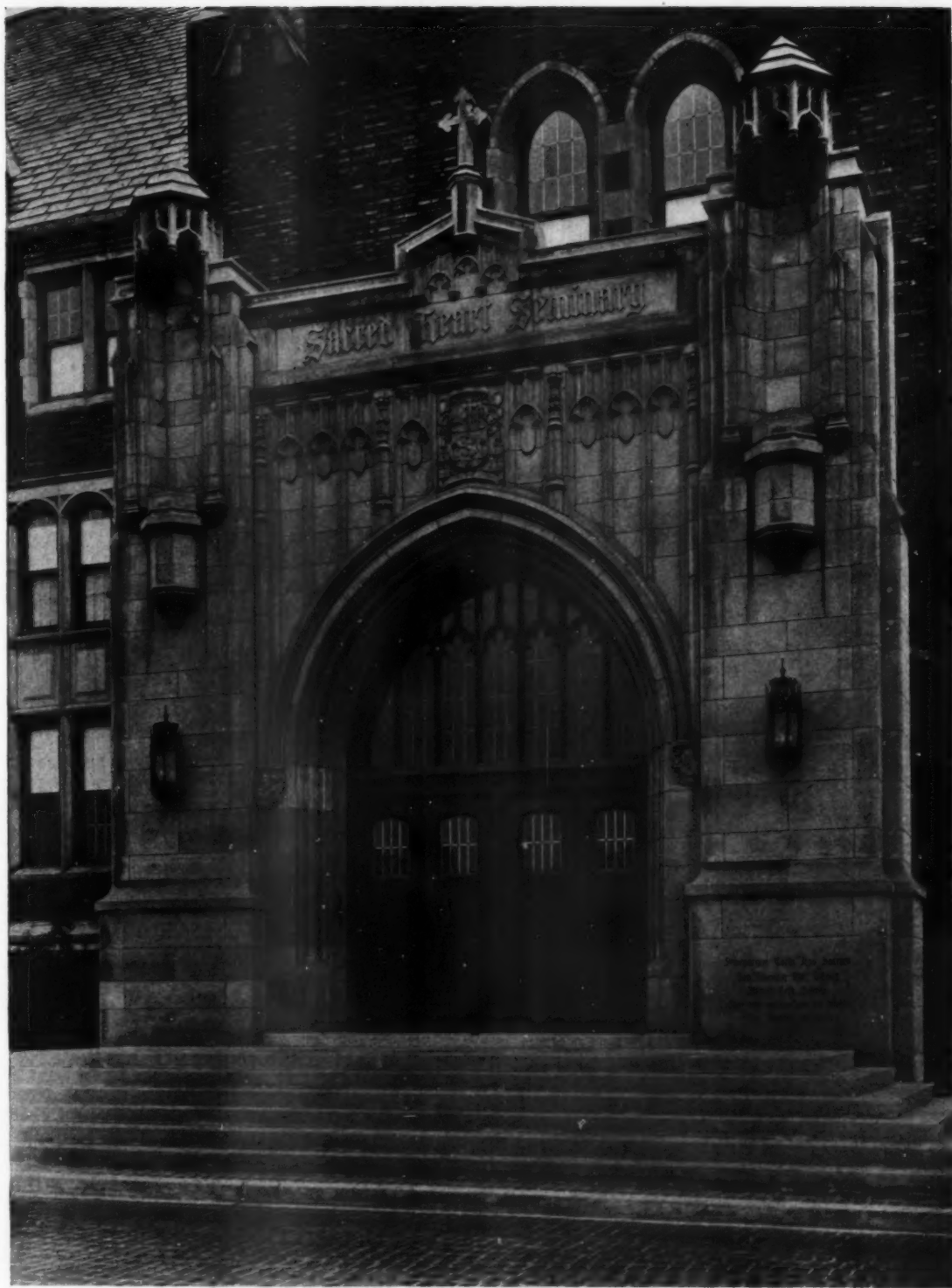


MAIN ENTRANCE FROM TERRACE  
SACRED HEART SEMINARY, DETROIT, MICH.  
DONALDSON & MEIER, ARCHITECTS  
*(See plan on back)*



SACRED HEART SEMINARY, DETROIT, MICH.

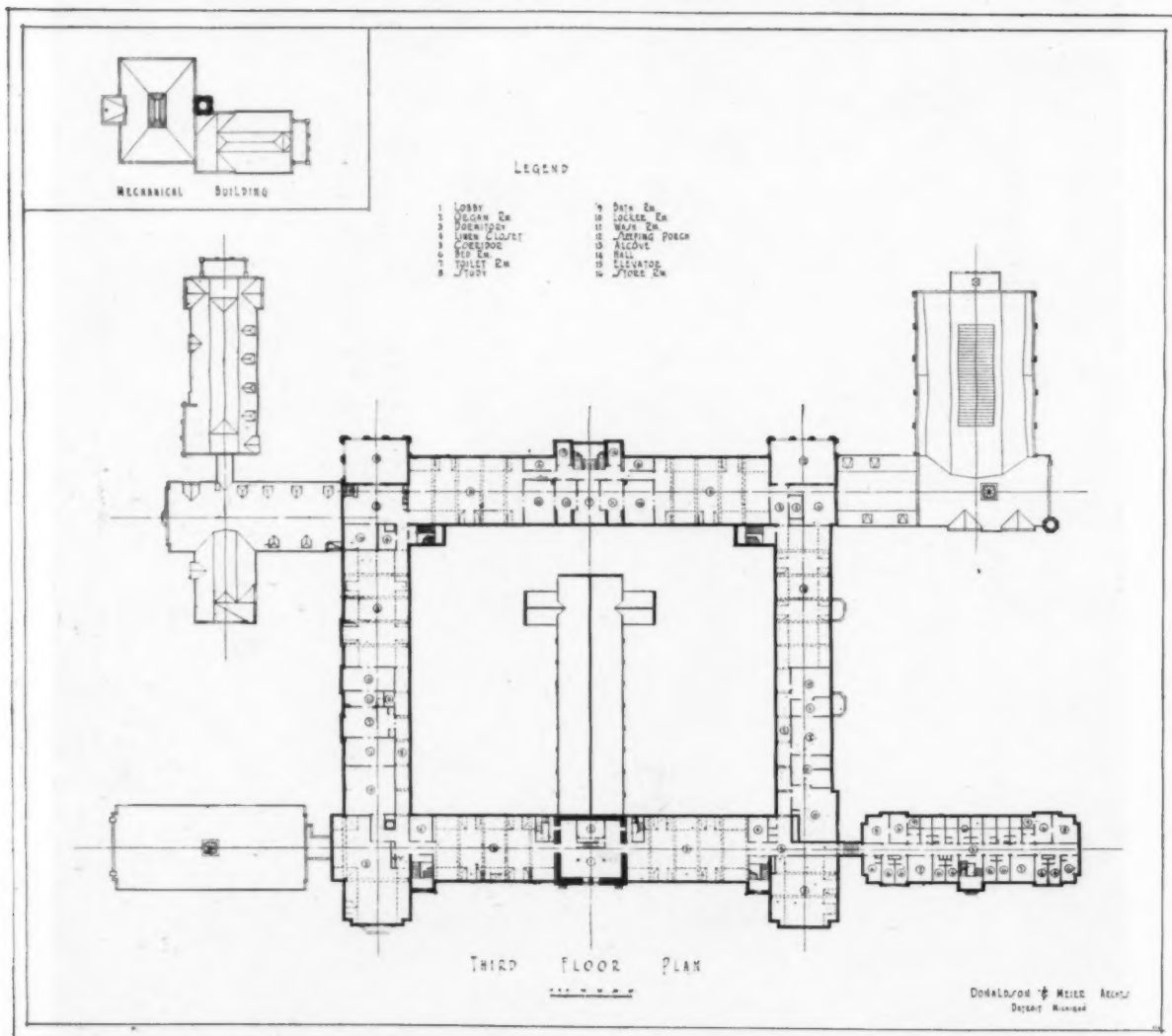
DONALDSON &amp; MEIER, ARCHITECTS



SACRED HEART SEMINARY, DETROIT, MICH.

DONALDSON & MEIER, ARCHITECTS

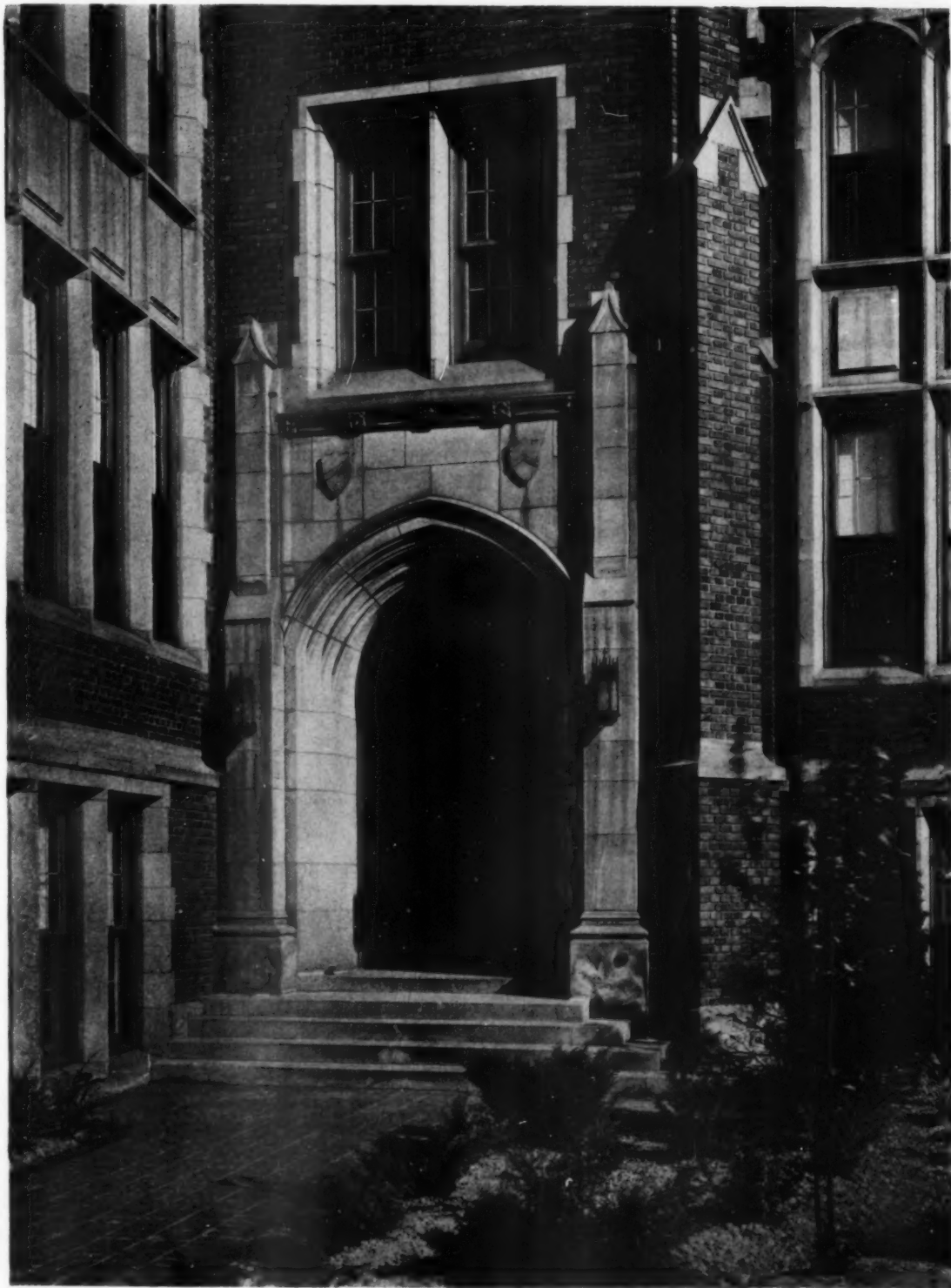
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SACRED HEART SEMINARY, DETROIT, MICH.

DONALDSON & MEIER, ARCHITECTS



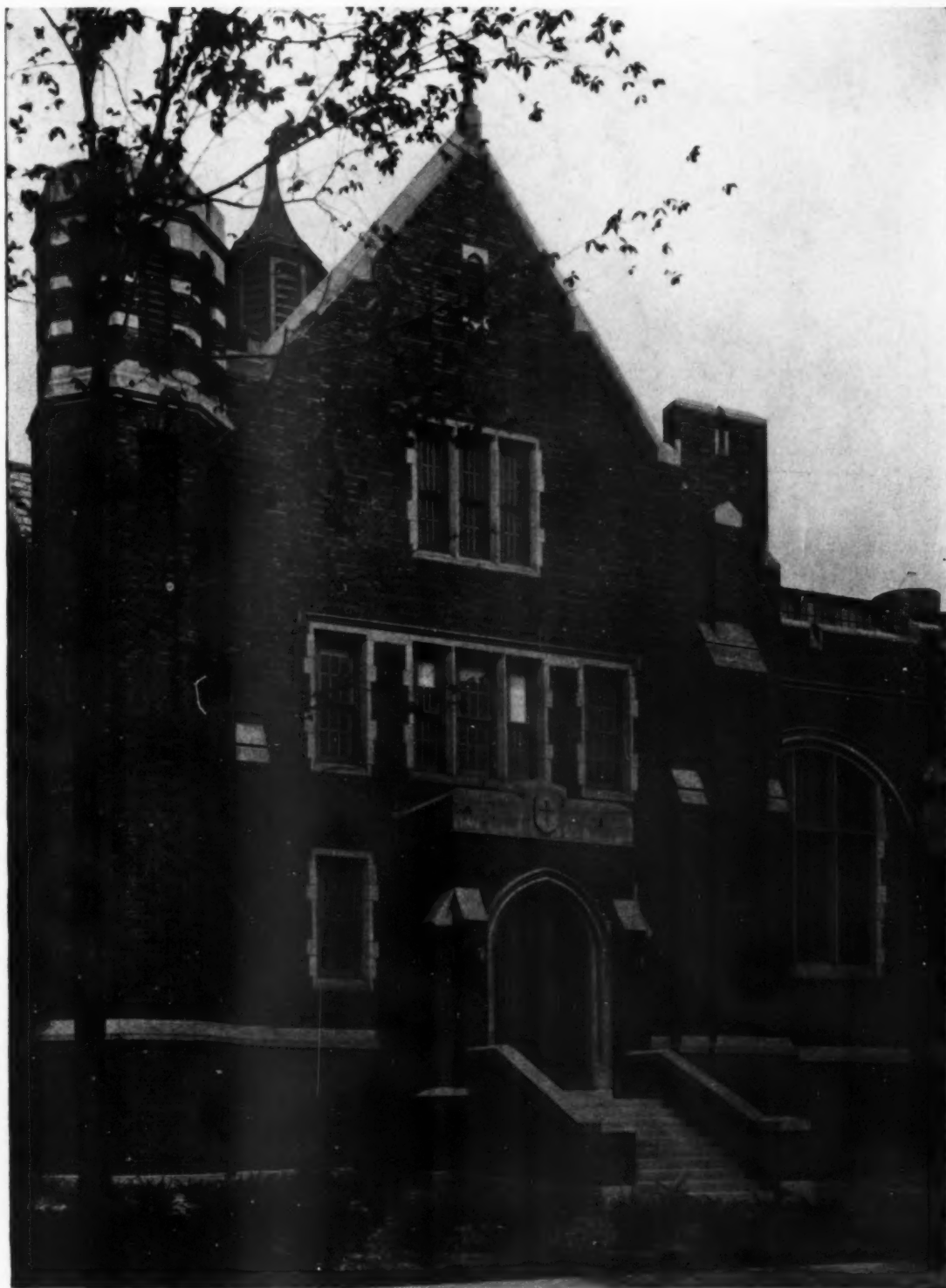


SIDE ENTRANCE

SACRED HEART SEMINARY, DETROIT, MICH.

DONALDSON & MEIER, ARCHITECTS





SACRED HEART SEMINARY, DETROIT, MICH.

DONALDSON & MEIER, ARCHITECTS







GYMNASIUM

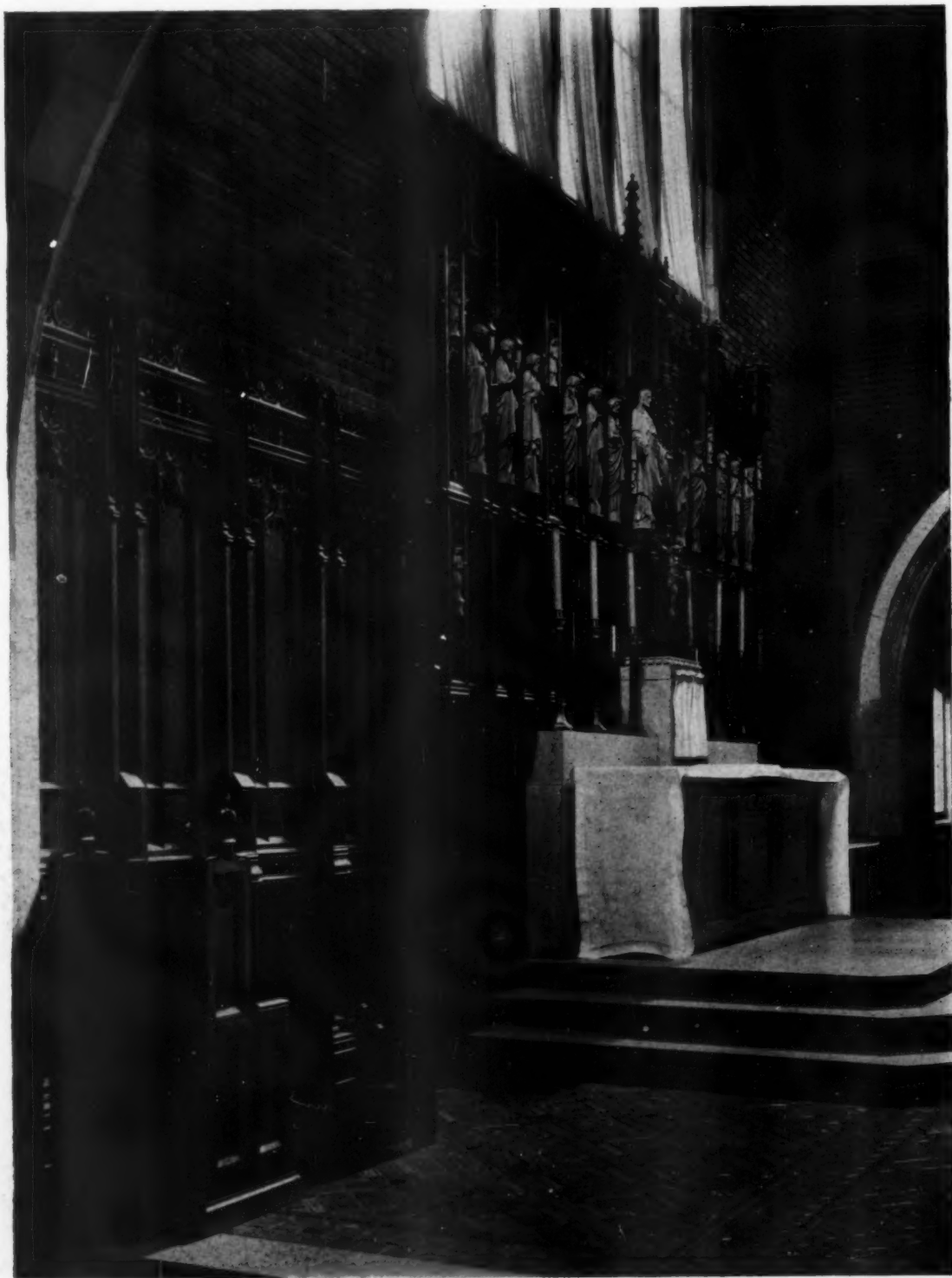
SACRED HEART SEMINARY, DETROIT, MICH.

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CONVENT CHAPEL  
SACRED HEART SEMINARY, DETROIT, MICH.  
DONALDSON & MEIER, ARCHITECTS



MAIN ALTAR  
SACRED HEART SEMINARY, DETROIT, MICH.  
DONALDSON & MEIER, ARCHITECTS





## INTERIOR ARCHITECTURE



### INTERIORS OF SACRED HEART SEMINARY, DETROIT, MICH.

FROM a decorative point of view, the library of the Sacred Heart Seminary is probably one of the most interesting rooms in the entire group. The old-fashioned idea of the purpose of a library was to preserve, in quiet and seclusion, for the use of scholars, something that was very rare and precious. Few persons were expected to use the library and few did. The modern library, however, is a very different type of room. There is no compulsion to enter it. Rather the room itself—its arrangement and its architectural treatment—should create a desire on the part of the people to enter and to make use of its facilities. In the auditorium the proscenium arch, following the line of the ceiling, takes its place logically in the treatment of that wall. The gymnasium, too, is fitted with a stage and proscenium. The decorative treatment of these two rooms is based on structural conditions.



VIEWS IN LIBRARY, SACRED HEART SEMINARY, DETROIT, MICH.

DONALDSON & MEIER, ARCHITECTS



THE AUDITORIUM



THE GYMNASIUM

SACRED HEART SEMINARY, DETROIT, MICH.

DONALDSON & MEIER, ARCHITECTS

## GLASS AS A DECORATIVE AND STRUCTURAL PRODUCT

THE value of relief glass from an architectural standpoint lies not alone in the fact that it so successfully diffuses light rays, eliminating transparency and glare, but that, in addition, through design and color, it provides unusual decorative possibilities. The use of glass is naturally associated with light, daylight or artificial. We use glass to admit greater light. Relief glass is similarly used, but as we admit light with the use of relief glass, we gain in decorative effect as well. Further than that, its diffusing properties allow of the installation of intense light in back of it, for by the form in which it is produced, all transparency is eliminated, while practically perfect diffusion results. Although relief glass has only recently found its way into this country, it is not by any means a novelty in Europe, where, during the last twenty-five years, it has been found to possess opportunities in various phases of architectural design. It is interesting to note that the man who first introduced the product in Europe, and whose efforts met with such success, is now fostering its distribution here.

So far the use of relief glass in this country has been practically limited to ceilings. Hung in iron frames attached to the walls at any desired height, with electric bulbs installed so as to send their intense rays of light through the glass, it transmits an even glow of light over the entire room below. By the use of amber colored glass, all the disturbing blue rays are eliminated, so that a most pleasant atmosphere is obtained without loss of visibility. But by no means is the use of relief glass confined to ceilings. It may be successfully employed for friezes and cornices, introducing design and color, and eliminating the use of wall brackets and chandeliers.

While there are certain limitations to the design of the glass, these limitations are of such a nature that, except in certain very unusual cases, it is possible to produce practically any design or mo-

tive, so that the glass feature may harmonize thoroughly with other elements of the architectural scheme no matter what style or character it may suggest. For, actually, relief glass is cast glass. Heated to a liquid, the solution is poured into moulds and allowed to cool. Upon removing, the glass retains the form of the mould. It is later subjected to an annealing process to give the product greater durability and make its color permanent. The design is built up in units. It is desirable that these units do not exceed sixty or seventy square inches in size. The various units are held together by electrolytic copper glazing into plates or sections

which may be as large as ten square feet. These plates are finally installed on the job by resting on iron frames hung to the wall or from the ceiling, as the case may be.

So far no mention has been made of the use of relief glass with daylight. Owing to the fact that there is bound to be a certain amount of light lost in the diffusing of the light rays, relief glass may prove even more satisfactory to transmit daylight to a room. It very often happens that there is too much daylight allowed to enter a room. It is never true, however, that there is too much artificial light. Very often certain units of artificial light may be too intense, but the amount of light is never too great. The daylight that is thus lost by being diffused through

the glass may often allow of more satisfactory light in the room and procure a better result.

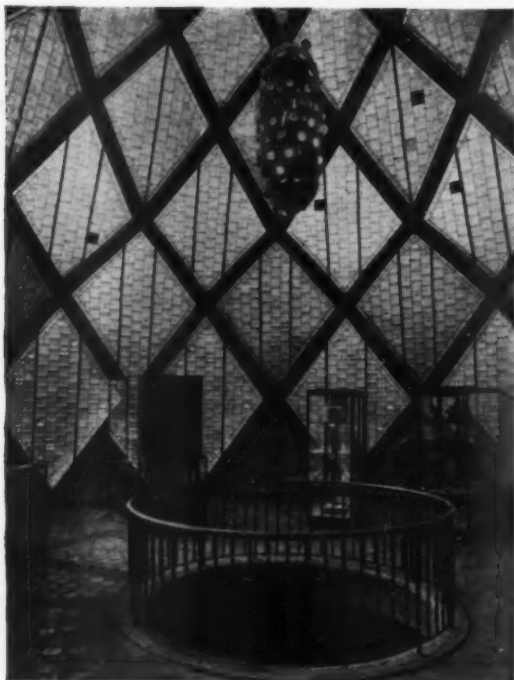
Relief glass gives an effect of substantiality that is not generally associated with glass. It does not appear that it is merely used to allow light to enter, but actually seems to bear a structural quality, which immediately gives it an architectural, as well as a decorative value. It is the opinion of those who have made, or are now making, use of relief glass that it holds unusual and interesting opportunities. We look for relief glass to play an important part in the development of architecture.



CEILING IN AMBER COLORED RELIEF GLASS IN ELEVATOR LOBBY OF A COMMERCIAL BUILDING AT 271 MADISON AVENUE, NEW YORK

BUCHMAN & KAHN, ARCHITECTS

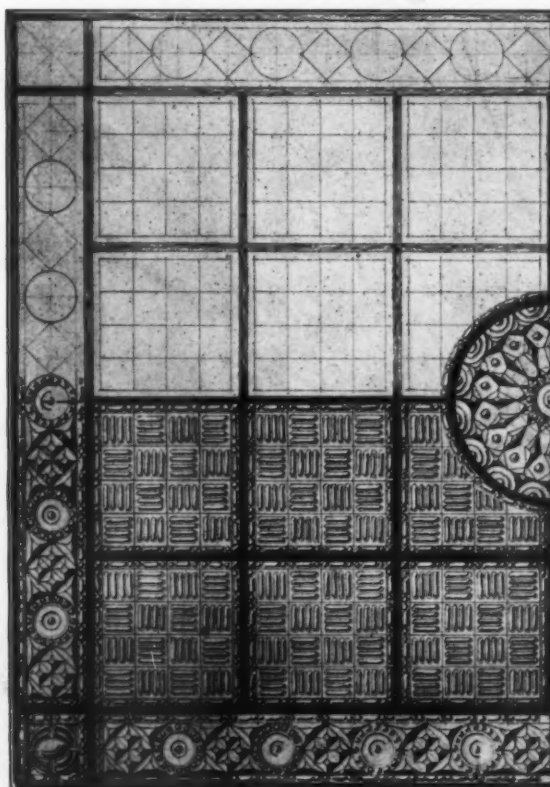




INTERIOR OF DOME IN GLASS AND CONCRETE BUILDING  
EXHIBITED IN COLOGNE IN 1914



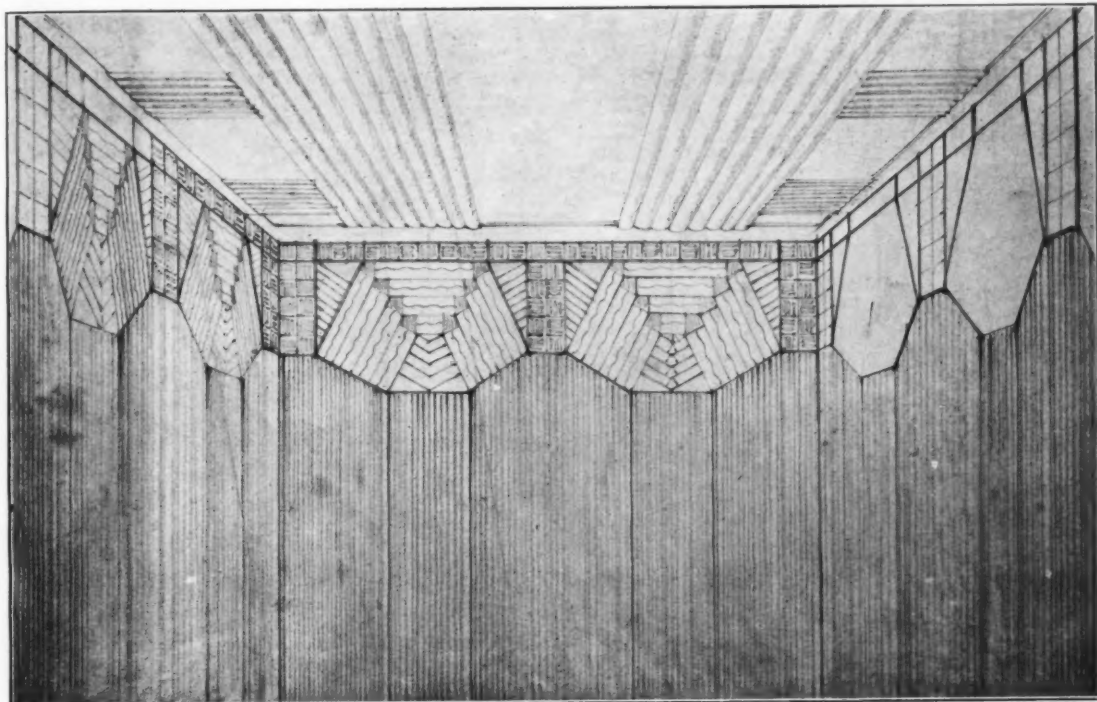
INTERIOR OF UNION THEATRE, SAARBRÜCKEN, IN WHICH  
THE DOME IS CONSTRUCTED OF RELIEF GLASS



A RELIEF GLASS CEILING IS FIRST OF ALL A DECORATIVE FEATURE OF THE ROOM IN WHICH IT IS INSTALLED. THE IRON FRAMES WHICH SUPPORT AND CARRY IT MARK CERTAIN LIMITATIONS TO THE DESIGN, JUST AS THE STRUCTURAL REQUIREMENTS MUST BE CONSIDERED IN THE DESIGN OF LEADED GLASS WORK. BUT OTHERWISE THE FORM GIVEN TO THE GLASS IS ONLY RESTRICTED AS IN ANY CAST PROCESS. FOR, IN REALITY, RELIEF GLASS IS CAST GLASS. THE PRODUCT IS POURED INTO FORMS IN A LIQUID STATE, AFTER HEATING, RETAINING THE SHAPE OF THE FORM WHEN IT IS REMOVED, AFTER BEING ALLOWED TO COOL. UNITS, WHICH MAY RUN AS LARGE AS SIXTY OR SEVENTY SQUARE INCHES, ARE WELDED TOGETHER INTO PLATES APPROXIMATELY THREE FEET SQUARE. THESE PLATES ARE THEN HUNG IN IRON FRAMES ATTACHED TO THE WALLS OF THE ROOM

*(Reproduced from an original design  
by Keppler Relief Glass)*



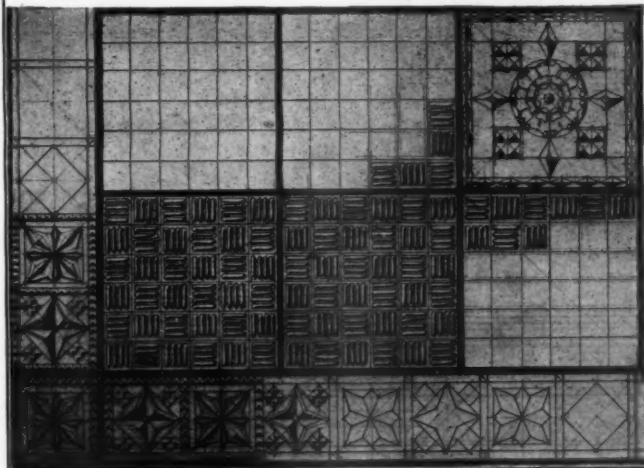


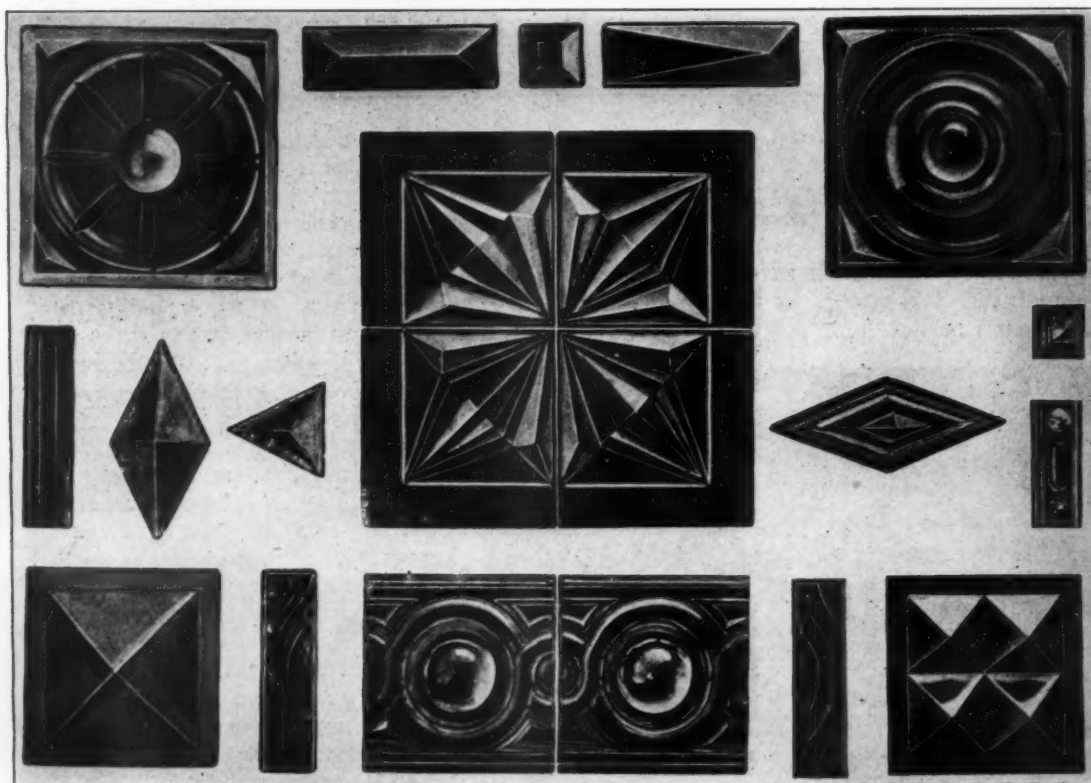
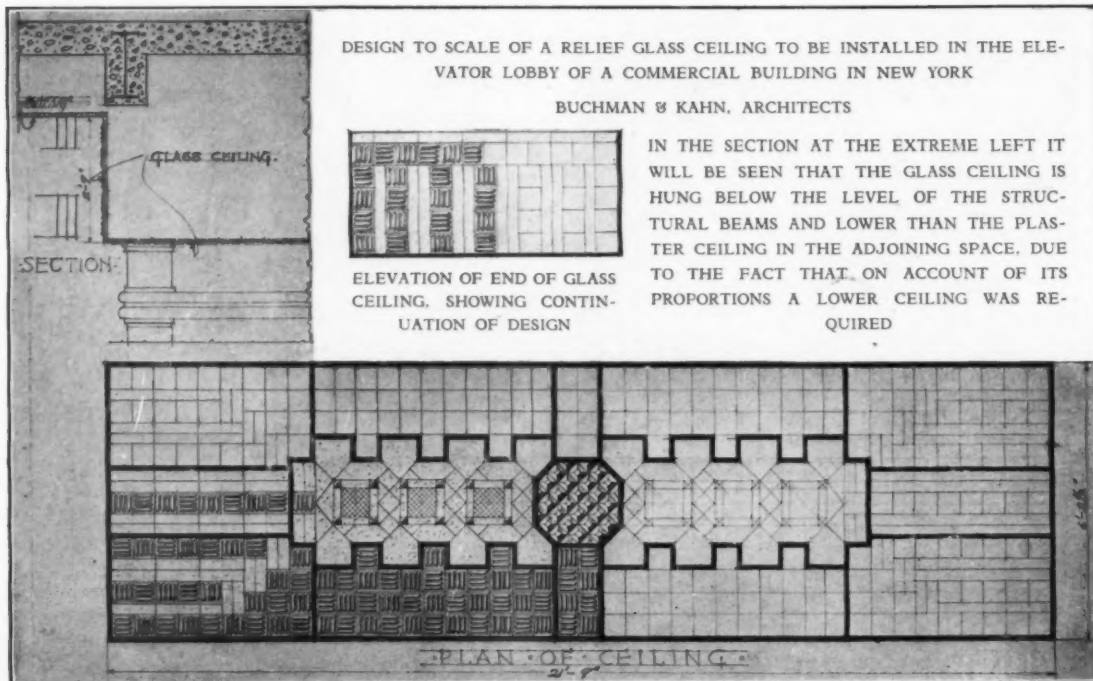
SKETCH SHOWING WALL FRIEZE AND CORNICE IN RELIEF GLASS  
REPRODUCTION OF ORIGINAL DRAWING BY E. VAN DER WOERD

A RELIEF GLASS CEILING MAY BE DESIGNED IN KEEPING WITH THE SURROUNDING ARCHITECTURAL TREATMENT AND CONSTRUCTED AS A PART OF THE STRUCTURE OF THE BUILDING. THE GLASS IS DESIGNED IN UNITS AND ASSEMBLED IN IRON FRAMES ATTACHED TO THE WALLS AT THE DESIRED HEIGHT. ELECTRIC BULBS AND REFLECTORS ARE INSTALLED BETWEEN THE GLASS AND THE STRUCTURAL CEILING, SO THAT LIGHT IS THROWN AGAINST THE GLASS AND TRANSMITTED TO THE ROOM BELOW. THE GLASS ITSELF IS CLEAR, BUT ITS FORM IN RELIEF DISTORTS THE LIGHT RAYS IN SUCH A WAY THAT ALL TRANSPARENCY IS ELIMINATED, AND PERFECT DIFFUSION RESULTS. BY THE USE OF AMBER COLORED GLASS THE EFFECT OF WARM SUNSHINE IS OBTAINED, LENDING A MOST PLEASANT ATMOSPHERE TO THE ENTIRE ROOM. WHILE SUCCESSFULLY AIDING IN

THE SOLUTION OF THE ILLUMINATING PROBLEM, A RELIEF GLASS CEILING SERVES AS AN INTERESTING FEATURE OF THE DECORATIVE SCHEME. WE SELDOM CONSIDER GLASS IN A STRUCTURAL SENSE. WE USE IT PRINCIPALLY BECAUSE IT ALLOWS LIGHT TO PASS THROUGH IT. RELIEF GLASS, HOWEVER, POSSESSES A STRUCTURAL APPEARANCE WHICH GIVES IT GREATER ARCHITECTURAL VALUE. WHILE IT IS DECORATIVE AND SO SUCCESSFULLY DIFFUSES RAYS OF LIGHT, IT IS SUBSTANTIAL AND APPEARS TO BE ACTUALLY A PART OF THE STRUCTURE. ITS POSSIBILITIES ARE THUS INCREASED

(Reproduced from an original design by  
Keppler Relief Glass)

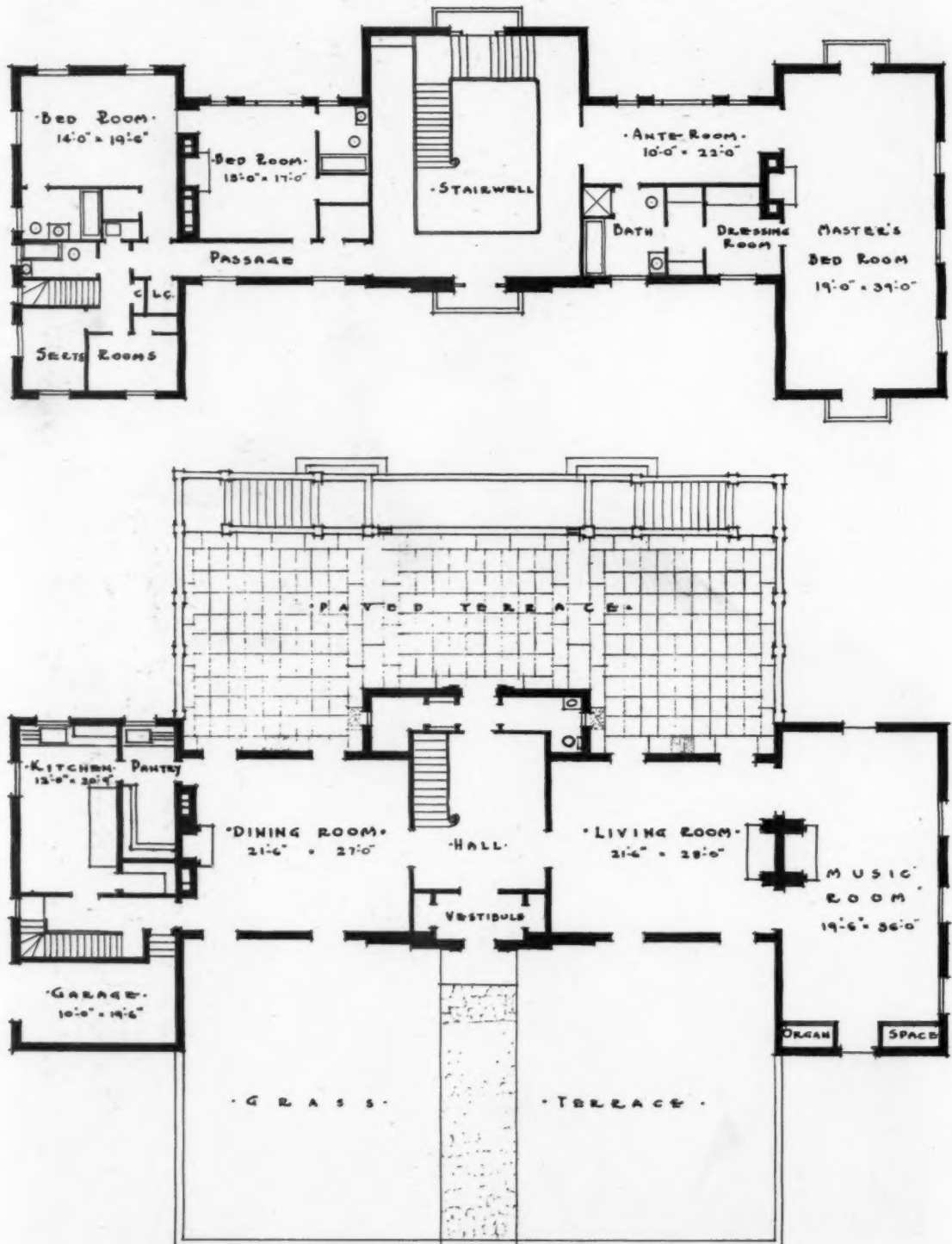






WEST ELEVATION

HOUSE OF DR. R. J. FORHAN, MAMARONECK, N. Y.  
WM. HARMON BEERS, ARCHITECT; FRANK C. FARLEY, ASSOCIATED



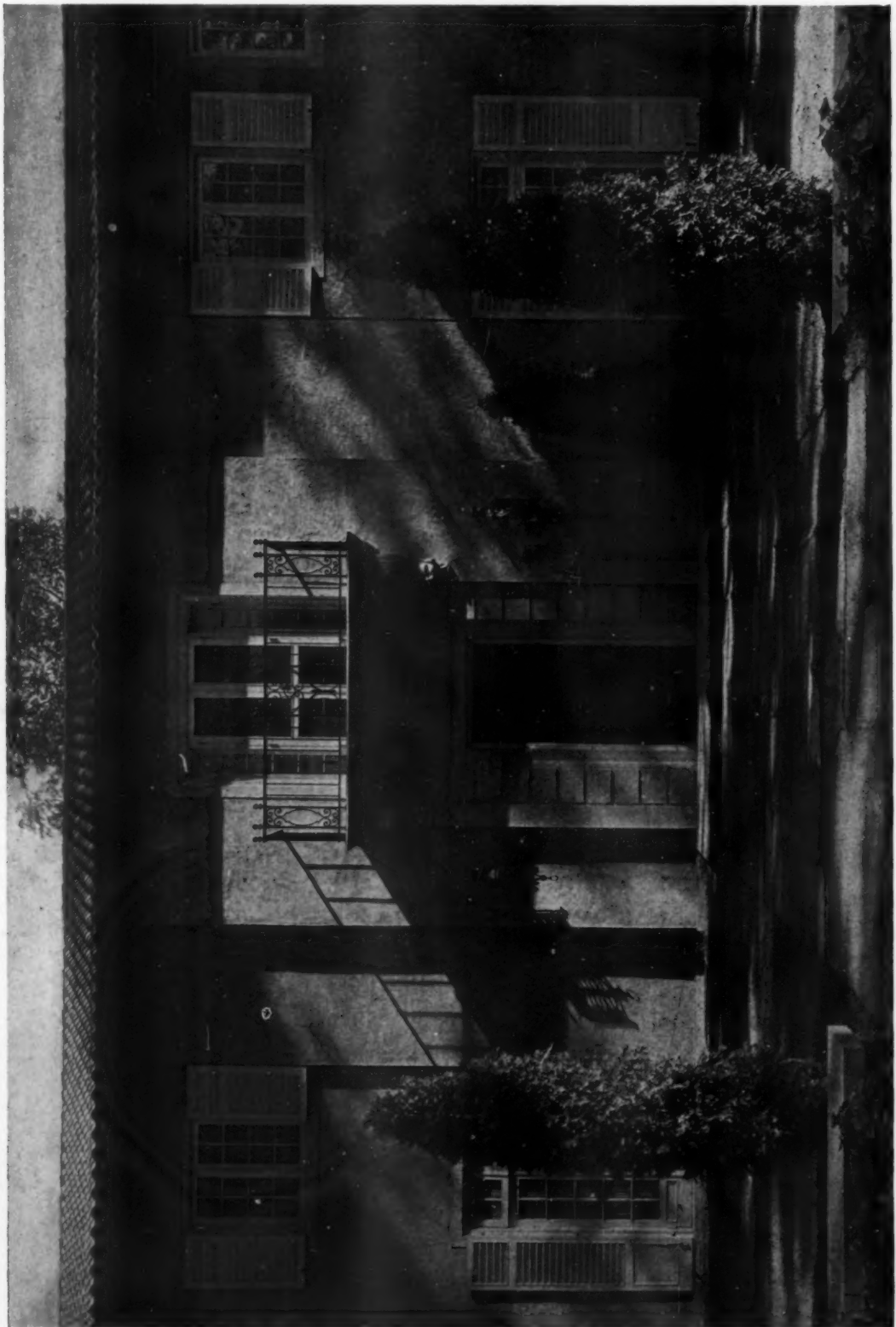
HOUSE OF DR. R. J. FORHAN, MAMARONECK, N. Y.

WM. HARMON BEERS, ARCHITECT; FRANK C. FARLEY, ASSOCIATED





GENERAL VIEW FROM EAST  
HOUSE OF DR. R. J. FORHAN, MAMARONECK, N. Y.  
WM. HARMON BEERS, ARCHITECT; FRANK C. FARLEY, ASSOCIATED



DETAIL OF WEST ELEVATION  
HOUSE OF DR. R. J. FORHAN, MAMARONECK, N. Y.  
WM. HARMON BEERS, ARCHITECT; FRANK C. PARLEY, ASSOCIATED



WINDOW DETAIL

HOUSE OF DR. R. J. FORHAN, MAMARONECK, N. Y.

WM. HARMON BEERS, ARCHITECT; FRANK C. FARLEY, ASSOCIATED



ENTRANCE GATES



TERRACE, EAST ELEVATION

HOUSE OF DR. R. J. FORHAN, MAMARONECK, N. Y.  
WM. HARMON BEERS, ARCHITECT; FRANK C. FARLEY, ASSOCIATED



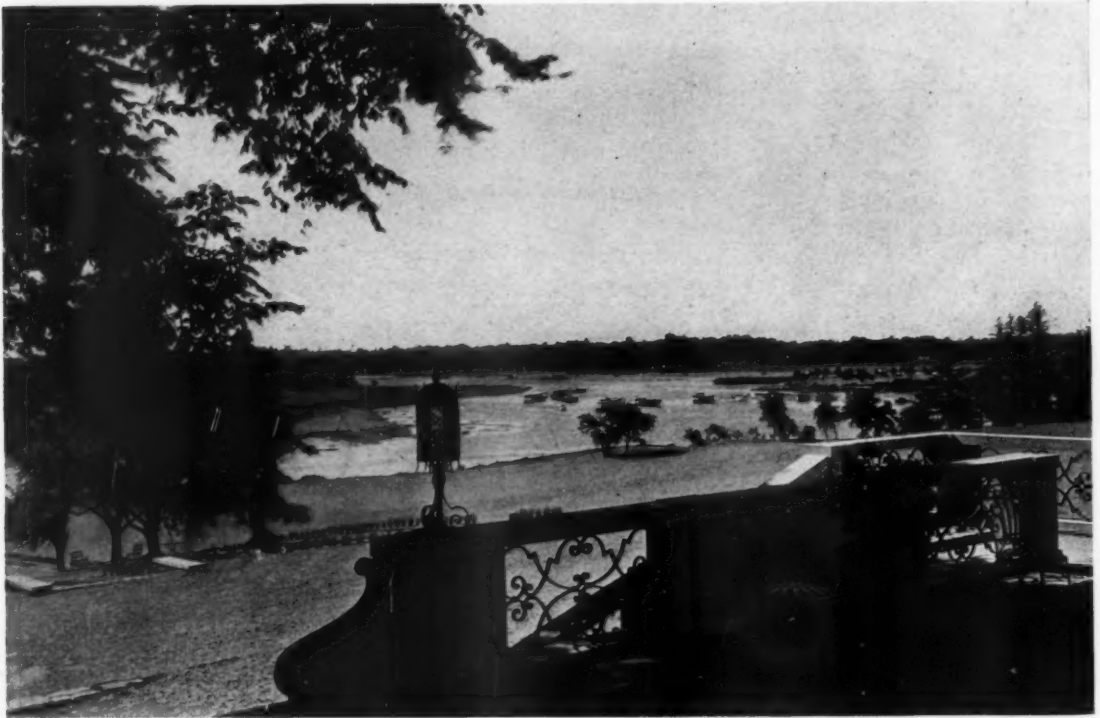


DETAIL OF DOOR



DETAIL OF TERRACE

HOUSE OF DR. R. J. FORHAN, MAMARONECK, N. Y.  
WM. HARMON BEERS, ARCHITECT; FRANK C. FARLEY, ASSOCIATED



VIEW FROM TERRACE



EAST TERRACE

HOUSE OF DR. R. J. FORHAN, MAMARONECK, N. Y.  
WM. HARMON BEERS, ARCHITECT; FRANK C. FARLEY, ASSOCIATED



## EDITORIAL COMMENT



EVERY day we see evidence of the converging of architecture and craftsmanship. A recent conversation with an architect disclosed the fact that, in order satisfactorily to design certain ornamental features to be executed in machine cut stone, he had spent two days in a factory studying the physical possibilities of the material and the results that might be attained by its method of production. He came back to his drawing board with a thorough knowledge of the opportunities and limitations of cut stone. The designs which he eventually worked out were such that they could be executed without the slightest variation.

In these days of specialization, certain of the larger manufacturers offer and even ask permission to submit designs for that feature of the work on which they are estimating. Architects occasionally, realizing the saving of time and the opportunity for accuracy in figures, eagerly accept these services. It stands to reason, however, that the manufacturer will seldom be able to embody in his design the correct architectural spirit, and thus the detail is made to stand out apart from its surroundings and lacks the harmonious qualities that should rightfully be included.

THE AMERICAN ARCHITECT has published from time to time illustrated articles on the various processes by which certain work of craftsmanship is produced, for it is realized that it is almost impossible for architects to familiarize themselves with all the details of the many materials with which they come in contact. An occasional trip of inspection to a factory or plant is of tremendous value, and it is recommended that such expeditions, as that referred to above, be made whenever possible. A successful architect readily appreciates that character and individuality are undoubtedly given to architectural design not only by consideration of the purpose which the building is to serve, but also by the choice of materials in which the building is to take form. Design is governed by the material and method by which form is given to it; similarly, form stipulates to a very great extent the material. The beauty of a wrought iron detail, for example, lies not alone in its decorative quality, but in that it suggests the material and method of craftsmanship by which the design has been interpreted into iron. Similarly with a piece of carved wood or cast bronze. For these reasons it can readily be appreciated that a knowledge of craftsmanship is necessary to an architect if he is to attain success.

THE speed with which results are now accomplished may well be looked upon with wonder. Buildings in the modern city appear to spring up over night. Builders have studied the co-ordination of the work of the various trades so that each follows the other in rapid succession. Producers are so equipped that supplies through a gigantic network of transportation facilities are moved rapidly from factory to site.

The rehabilitation of Florida after its recent hurricane disaster served to bring to attention a remarkable instance of modern speed. The motors operating a Bascule bridge on one of the main traffic arteries broke down. An urgent call was sent to a large and well-known manufacturer of motors and sample coils were sent to the factory and received by air mail on a Wednesday. The manufacturer's service department at once organized to work in twenty-four hour shifts. The first set of motor coils was shipped by express on Thursday and the second set was sent the following day with personal tracers. The bridge was again in operation and open for traffic early the following week. This happens to have been an engineering structure. The same speed would doubtless have been in evidence had it been a building seriously handicapped through failure of one of its parts.

THE practice of architecture has always kept, and continues to keep, architects "on their toes" and alive to the application of invention to the greater usefulness of buildings. The rapidity with which certain phases of building construction and equipment have developed within the last half century, has but increased the complexity of the architect's work and added to the numerous items that must be considered as a part of a building to give unity to the structure. Without due consideration, equipment added after the building is completed takes on the appearance of an afterthought, which it all too evidently is, or possibly an unhappy appearance of unintended and temporary decoration, decidedly not architectural.

Among other equipment of this nature to which we allude is the amplifier used to convey sounds to remote portions of places of assembly. The use of amplifiers is rapidly developing as an application of modern invention. Today we see this equipment as added features to auditoriums, banquet halls and various other places to convey sound from a central point to practically any desired distance.

This equipment in itself can hardly be considered an architectural adornment. Suitable concealment of this equipment should be possible without impairing its usefulness and would have the effect of increasing both the usefulness and appearances of halls and rooms where such equipment is desired. We believe that architects will do well to study the problem and in the future give proper consideration to the incorporation of the now visible part of amplifiers in the design.

The use of "loud speakers" by no means solves the acoustical problem. On the other hand, it probably intensifies this problem and requires an even more careful study of the size and shape of rooms and the materials used in their construction. In addition, it becomes necessary to determine in advance the correct location of amplifiers to accomplish the desired result and without adding a new source of annoyance to the listeners due to incorrectly located or designed electrical speech amplifying systems. The introduction of these systems offers many new problems that necessarily require study and investigation to carry them through to a successful solution. The best results are to be expected through the co-operation of architects, acoustical experts and electrical engineers.

FOR many years it was the custom of manufacturers engaged in the production of a similar line of products to consider each other as competitors. They fought one another tooth and nail. All their efforts were centered on outselling and outstripping each other. Quite naturally, this fighting spirit

had its effect on estimates submitted by contractors. In the attempt to underbid opponents, estimates were pared to a minimum, so that the quality of the work was often jeopardized. As a consequence, a group entirely outside of their ranks, the architects, suffered most. Architects accepted these estimates as the lowest figure at which the manufacturer or contractor could execute to the best of his ability and in the best manner of workmanship, the work specified and called for on the drawings. But, in the scramble to beat his competitor, the contractor, in computing his bid, was obliged to look for certain loopholes where he might, without knowledge of the architect, save a few dollars, trusting that the discrepancies, which would be bound to result, would never be discovered.

Fortunately, all this has now changed. Perhaps every other manufacturer and contractor in the country today is affiliated with some association, his fellow-members—formerly his competitors—being producers of a product of a similar nature or in a similar material, or operating in the same field as he is. These associations were devised in a spirit of co-operation to give contractors and manufacturers opportunity to profit by another's efforts and to promote a higher standard of workmanship throughout the crafts. Estimating has been made honest again through the efforts of these associations, and as a result craftsmanship has come again into its own. We heartily endorse the efforts of these associations and stand ready to assist them in any way we can to further better craftsmanship.

THE ARCHITECTURAL FIVE-FOOT SHELF  
Editor, THE AMERICAN ARCHITECT:

RESPONDING to your suggestion, I enclose a list of books. They would go on a five-foot shelf for I've tried it. The shelf would have to be some 24 inches high, that's all.

Good plates—that's what the architect wants.

GUY KIRKHAM.

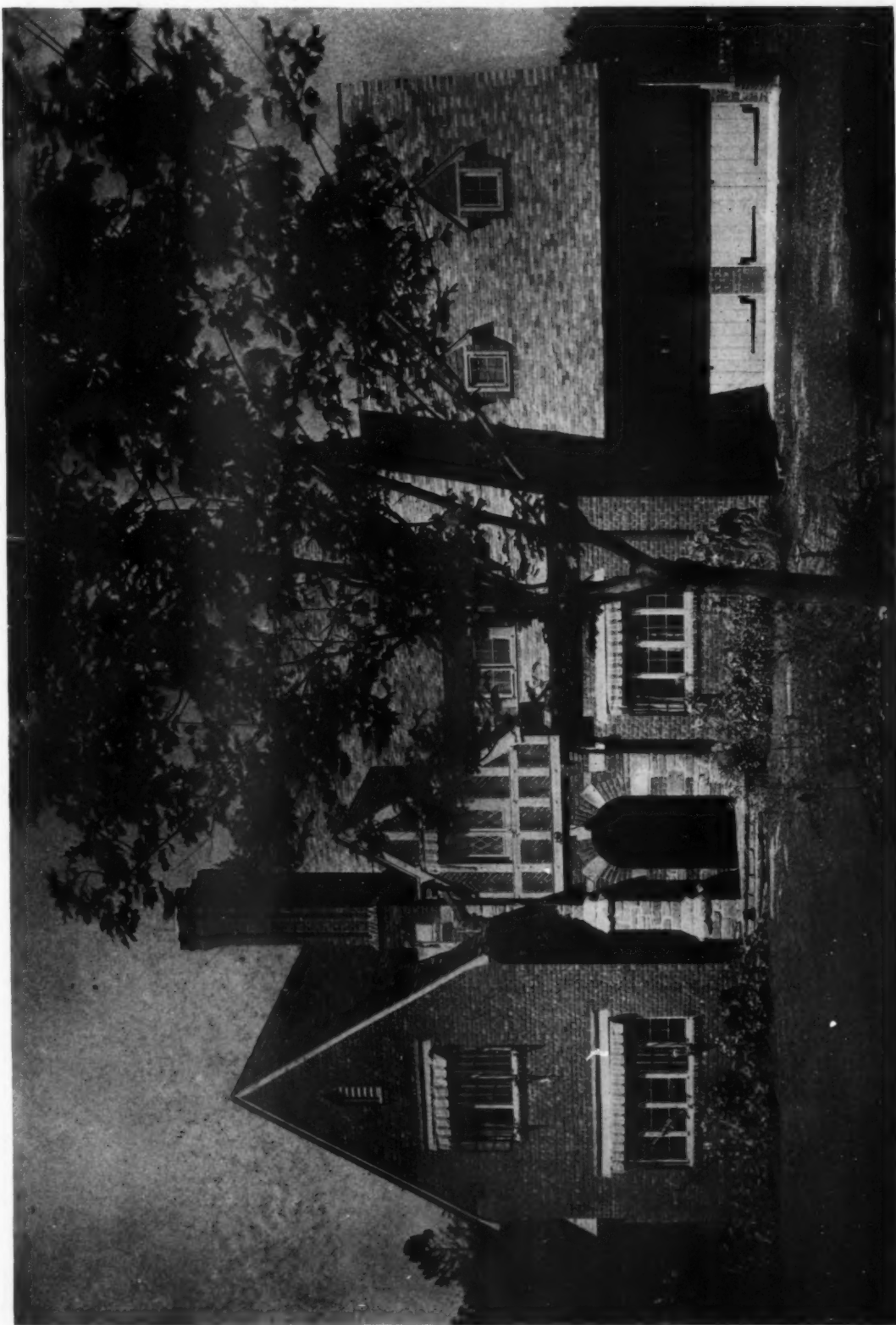
Springfield, Mass.

The list enclosed is as follows:

1. Sturgis—Dictionary of Architecture
2. Vignola—The Five Orders
3. Buehlmann—Classic Architecture
4. Montigny & Famin—Architecture Toscane
5. Strack—Brick Architecture in Italy
6. Letarouilly—Edifices de Rome Moderne

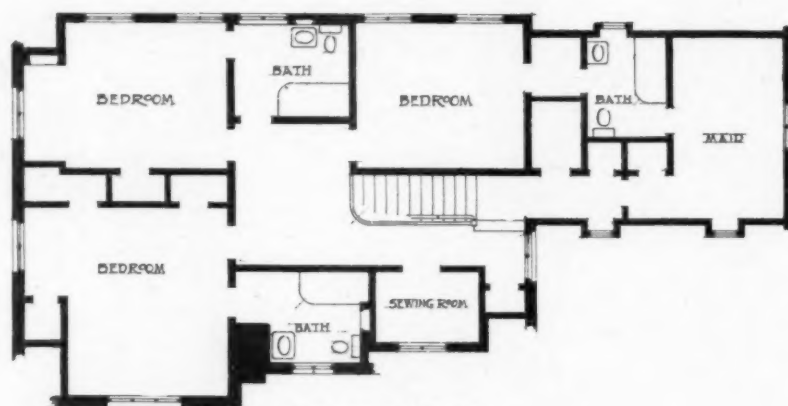
7. Letarouilly—Le Vatican et St. Pierre
8. Revoil—Architecture Romane
9. Porter—Medieval Architecture
10. Pugin—Examples of Gothic Architecture
11. Pugin—Specimens of Gothic Architecture
12. Cesar Daly—Motifs Historiques
13. Gotch—Renaissance Architecture in England
14. Garner & Stratton—The Tudor Period
15. Belcher & Macartney—Later Renaissance in England
16. Prentice—Renaissance in Spain
17. Ware—The Georgian Period
18. Fiske Kimball—Domestic Architecture of American Colonies
19. Goodhue—Architectural Drawings
20. Owen Jones—Grammar of Ornament
21. Kidder—Building Construction
22. Taylor & Thompson—Concrete, Plain and Reinforced



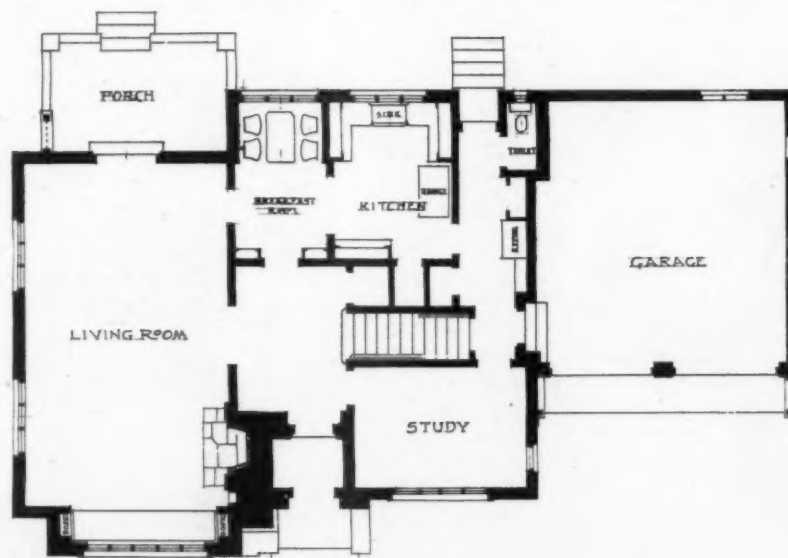


HOUSE OF WILLIAM PLUMMER, SCARSDALE, N. Y.

JOHN C. MOORE, ARCHITECT



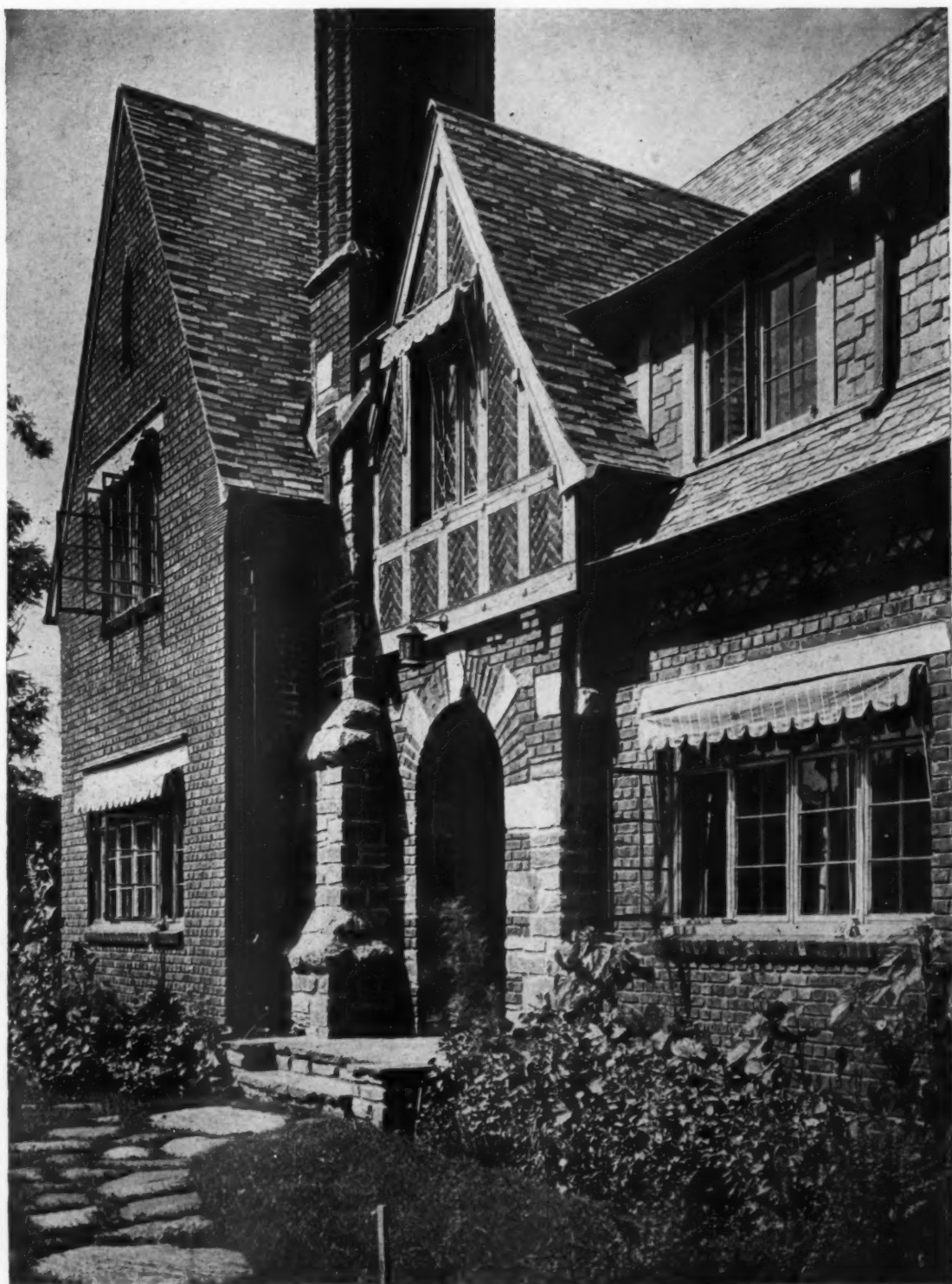
SECOND FLOOR PLAN



FIRST FLOOR PLAN

HOUSE OF WILLIAM PLUMMER, SCARSDALE, N. Y.

JOHN C. MOORE, ARCHITECT



HOUSE OF WILLIAM PLUMMER, SCARSDALE, N. Y.

JOHN C. MOORE, ARCHITECT

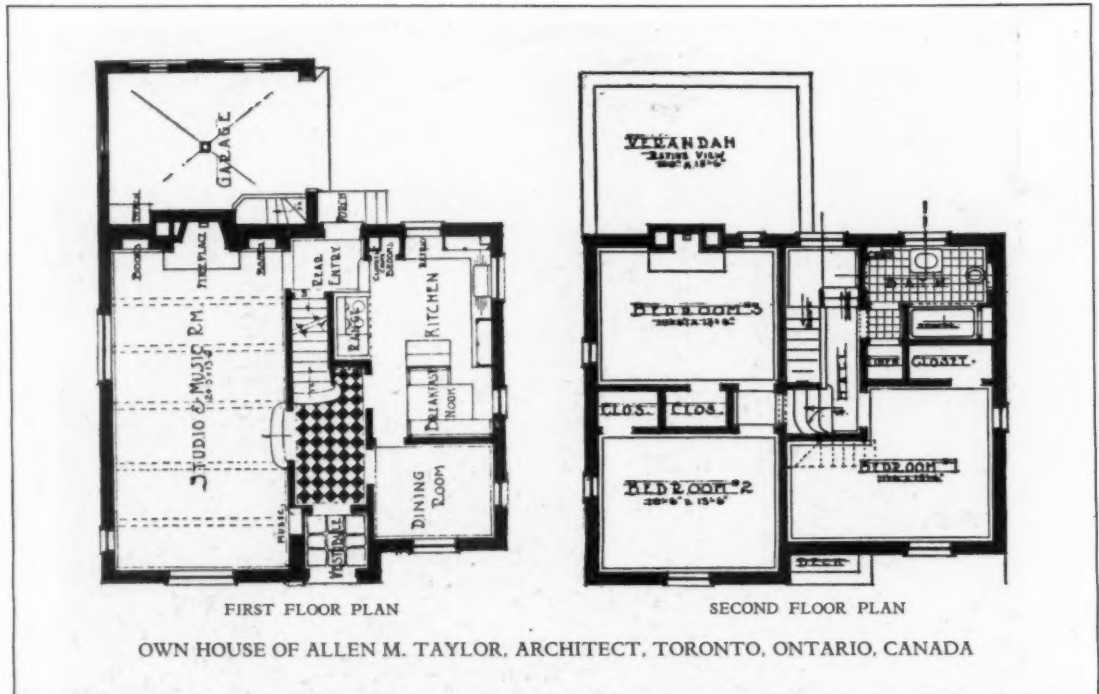


OWN HOUSE OF ALLEN M. TAYLOR, ARCHITECT, TORONTO, ONTARIO, CANADA





OWN HOUSE OF ALLEN M. TAYLOR, ARCHITECT, TORONTO, ONTARIO, CANADA



#### HISTORIC ENGLISH BUILDING TO BECOME WAREHOUSE

ONE of England's historic buildings is soon to live only in history. Clerkenwell Sessions House, where many of the famous trials in the stormy periods of English history were held, is to be altered and used for a warehouse. It was here that the executioners of Charles I were tried and condemned to death. It was also the scene of many trials of Titus Oates's victims. Oates was famous for discovering plots that in reality never existed and many innocent people were railroaded to prison from this court.

many of the farmers are loath to give up the traditional implements of the past, a gradual change has taken place and the use of modern tools is increasing.

#### CANDLES STILL LIGHT GEORGE TAVERN ROOMS

THE old George Tavern is about the only hotel left in London where a guest is shown to his room by the light of a candle.

The ancient tavern contains many relics of Charles Dickens, and pictures and photographs of London as it appeared in his day. It is situated in a courtyard which is reached by turning up a narrow lane at of Borough High Street, near London Bridge.

All bedrooms are furnished with huge old-fashioned fourposter bedsteads. It is the only remaining hostelry in England's capital with an open wooden balcony running along outside the bedroom windows.

Shelves behind its tiny bar are laden with old pewter quart pots, relics of the old coaching days when thirsts were big and capacities unlimited. Hung upon the walls are cumbersome pistols, which were carried by the old night watchmen.

#### MODERN METHODS COME TO ESTATES IN ITALY

THE large landed estates of Italy often comprise thousands of acres, whereas the holdings of individual peasant farmers are usually very small. Between the two extremes are many middle-sized farms, ranging from ten to 100 acres, some of which are worked on a basis of shares.

During the war efforts were made by the Italian Government to bring about a more extensive use of mechanical methods in agriculture. And while

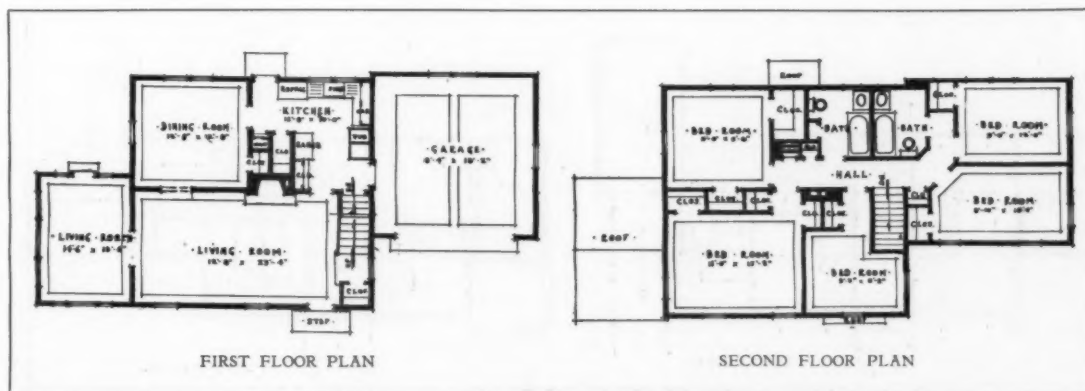
# A GROUP OF BUILDINGS OF MODERATE COST WITH DETAILS OF CONSTRUCTION, MATERIALS AND CUBIC COST



HOUSE IN HEMPSTEAD, N. Y.

GEORGE ROGER THOMPSON, ARCHITECT

A FRAME HOUSE IN WHICH THE EXTERIOR WALLS AND THE ROOF ARE COVERED WITH SHINGLES. DOORS AND WINDOWS THROUGHOUT ARE OF WOOD. THE HOUSE IS HEATED BY VAPOR. DRAINAGE IS SUPPLIED BY A SEPTIC TANK. WATER IS SUPPLIED BY PUBLIC WATER SUPPLY. PLUMBING FIXTURES ARE OF ENAMELED IRON, AND PIPES ARE OF WROUGHT IRON AND IN CERTAIN INSTANCES OF BRASS. THE MANNER IN WHICH THE SKETCH IS RENDERED GIVES THE CLIENT A VERY DEFINITE IDEA OF HOW THE HOUSE WILL LOOK COMPLETE IN ITS SURROUNDINGS. THE LINES AND PROPORTIONS OF THE COLONIAL HAVE BEEN LARGELY INFLUENTIAL IN ITS DESIGN. WHILE THE HOUSE APPEARS SMALL, OWING TO ITS PROPORTIONS, IT EMBODIES A LIVING ROOM APPROXIMATELY 13' x 24', BESIDES A DINING ROOM, LIVING PORCH AND KITCHEN, AND FIVE BEDROOMS AND TWO BATHS ON THE SECOND FLOOR.

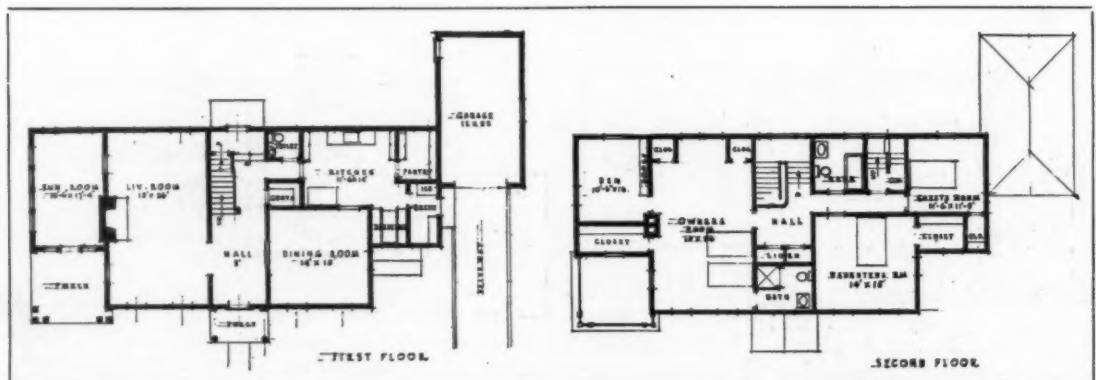




HOUSE IN WHITE PLAINS, N. Y.

H. L. HALLOCK, ARCHITECT

A FRAME HOUSE WITH A ROOF OF COMPOSITION SHINGLES. INTERIOR PARTITIONS ARE OF WOOD STUDS, METAL LATH AND PLASTER IN A HARD WHITE FINISH. FLOORS ARE OF WOOD THROUGH-OUT, EXCEPT FOR TILE IN BATHS AND TOILETS. DOORS AND WINDOWS AND INTERIOR TRIM ARE OF WOOD. THE HOUSE IS HEATED BY STEAM; A SEWER DRAINAGE SYSTEM IS INSTALLED, AND WATER IS SUPPLIED FROM PUBLIC SUPPLY. THE HOUSE WAS ERECTED IN 1926 AT A COST OF 42 CENTS PER CUBIC FOOT. THE HOUSE IS LOCATED ON A COMPARATIVELY LEVEL SITE, SO THAT NO ESPECIAL DIFFICULTIES WERE AFFORDED BY CONTOUR LINES. THE GARAGE, ADJOINING THE HOUSE AT THE RIGHT, IS EASILY APPROACHED FROM THE STREET



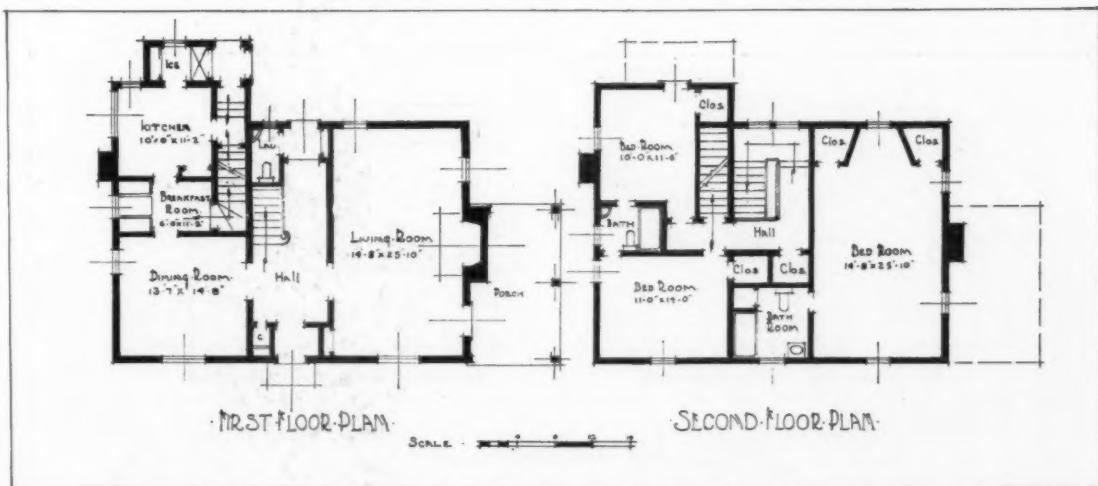




HOUSE IN SHAKER HEIGHTS, CLEVELAND, OHIO

CHARLES C. COLMAN, ARCHITECT

A FRAME CONSTRUCTION HOUSE WITH EXTERIOR WALLS AND ROOF OF WOOD SHINGLES. INTERIOR PARTITIONS ARE OF WOOD STUDS AND PLASTER. THE FLOORS ARE OF WOOD, EXCEPT IN THE PORCH AND ENTRIES, WHERE STONE IS USED. ALL DOORS, WINDOWS AND INTERIOR TRIM ARE OF WOOD. THE HOUSE WAS ERRECTED IN 1924 AND COST APPROXIMATELY \$19,500. THERE ARE THREE GOOD SIZED BEDROOMS ON THE SECOND FLOOR AND TWO BATHS

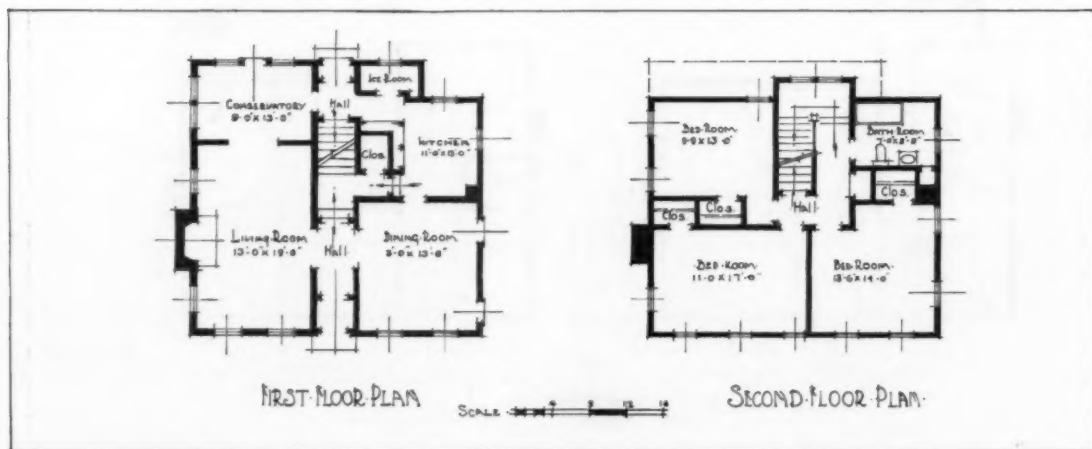




HOUSE IN SHAKER HEIGHTS, CLEVELAND, OHIO

CHARLES C. COLMAN, ARCHITECT

A FRAME HOUSE WITH OUTSIDE WALLS AND ROOF OF WOOD SHINGLES. INTERIOR PARTITIONS ARE OF WOOD STUDS AND PLASTER FINISH, IN CERTAIN CASES PAINTED AND IN OTHERS PAPERED. FLOORS AND TRIM ARE ALSO OF WOOD. THE PLAN INCLUDES A CONSERVATORY WHICH OPENS FROM THE LIVING ROOM. THERE ARE THREE GOOD SIZED BEDROOMS ON THE SECOND FLOOR, AND ONE BATH. THE HOUSE WAS ERRECTED IN 1921 AT A COST OF APPROXIMATELY \$14,000. THE PLAN IS BASED ON CONVENTIONAL LINES—AN ENTRANCE DOOR IN THE CENTER, WITH LIVING ROOM ON ONE SIDE AND DINING ROOM ON THE OTHER. THE FIRST FLOOR LEVEL IS ONLY A STEP OR TWO ABOVE THE GROUND





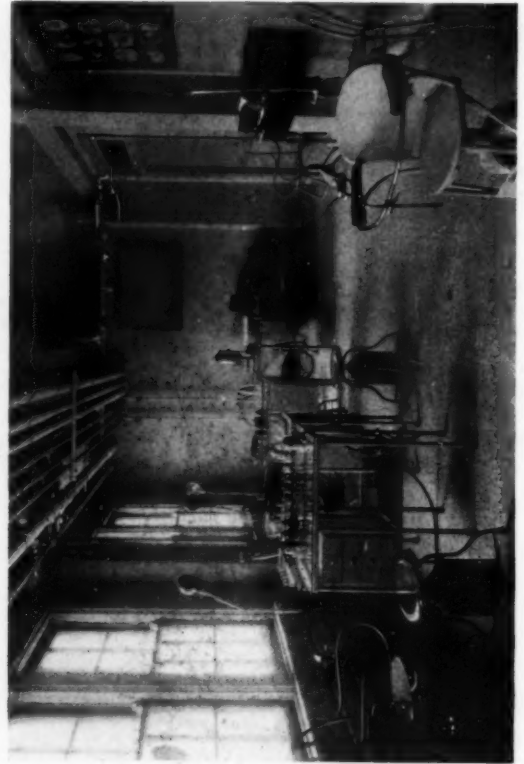
MEMPHIS EYE, EAR, NOSE AND THROAT HOSPITAL, MEMPHIS, TENN.

JONES & FURBRINGER, ARCHITECTS

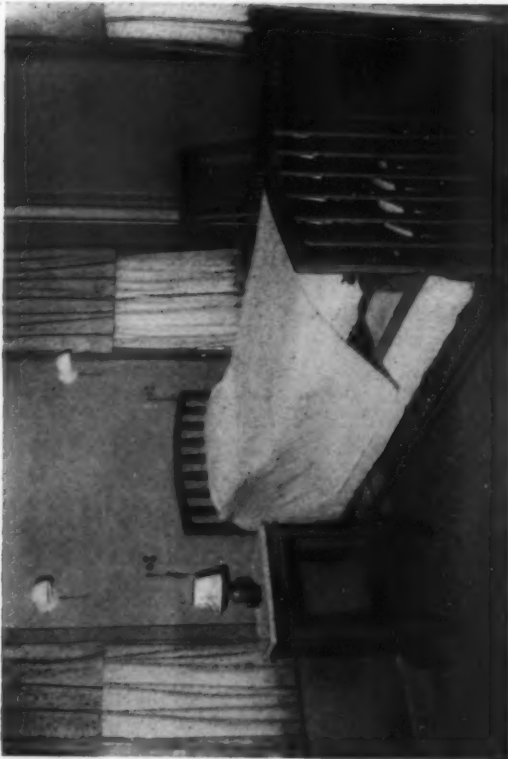
THE BUILDING IS OF REINFORCED CONCRETE CONSTRUCTION. THE EXTERIOR WALLS OF THIS BUILDING ARE OF FACE BRICK WITH HOLLOW TILE BACKING. THE ROOF IS OF COMPOSITION, TAR AND GRAVEL. THE INTERIOR PARTITIONS ARE OF HOLLOW TILE AND FLOORS ARE OF TERRAZZO, EXCEPT IN THE TOILET ROOMS. THE INTERIOR TRIM IS OF GUM WOOD. THE BUILDING IS HEATED BY A LOW PRESSURE STEAM SYSTEM, AND, NATURALLY, LIGHTED BY ELECTRICITY. PLUMBING FIXTURES ARE OF THE HOSPITAL TYPE, KNEE CONTROL. ELECTRIC ELEVATORS ARE INSTALLED. THIS BUILDING WAS ERECTED IN 1926 AT A COST OF 78 CENTS PER CUBIC FOOT. IT IS PLANNED FOR A BED CAPACITY OF SEVENTY-FIVE PATIENTS, ARRANGED IN SINGLE AND DOUBLE ROOMS AND WARDS. THE BASEMENT STORY CONTAINS A PUBLIC CLINIC, DRUG ROOM, WAITING ROOMS FOR WHITE AND COLORED PATIENTS, BOILER ROOM, ETC. ON THE FIRST FLOOR ARE THE RECEPTION ROOM, OFFICE AND LIBRARY; ALSO, THE NEGRO OPERATING ROOM AND ROOMS FOR NEGRO PATIENTS. ON THE WEST END OF THE FIRST FLOOR, COMPLETELY SEPARATED FROM THE REST OF THE BUILDING AND WITH SEPARATE ENTRANCES AND RECEPTION ROOM, ARE OFFICES FOR DOCTORS WITH PRIVATE TREATMENT ROOMS ARRANGED IN SUITES. THE SECOND AND THIRD FLOORS ARE DIVIDED INTO ROOMS AND WARDS FOR ONE, TWO AND FOUR PATIENTS, AND ON THE THIRD FLOOR THERE ARE FOUR OPERATING ROOMS IN ADDITION, WITH STERILIZING ROOMS, DOCTORS' WORK ROOM, ETC., ADJACENT. THERE IS A DIET KITCHEN ON EACH FLOOR, CONNECTED WITH THE MAIN KITCHEN IN THE BASEMENT BY A DUMBWAITER. A COMPLETE X-RAY ROOM AND LABORATORY ARE LOCATED IN THE BASEMENT. EACH FLOOR HAS AN ELECTRIC SIGNAL CALL SYSTEM FROM THE PATIENT'S BED TO THE SUPERVISOR'S DESK ON THE FLOOR. A REFRIGERATING SYSTEM PROVIDES ICE FOR THE USE OF THE HOSPITAL AND SUPPLIES ICE WATER FOR THE DRINKING FOUNTAINS ON EACH FLOOR.



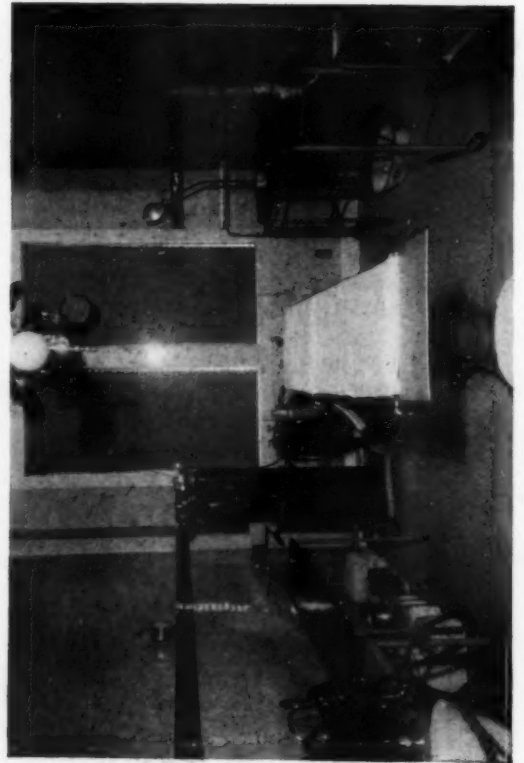
RECEPTION ROOM



DOCTORS' OFFICE



TYPICAL BEDROOM

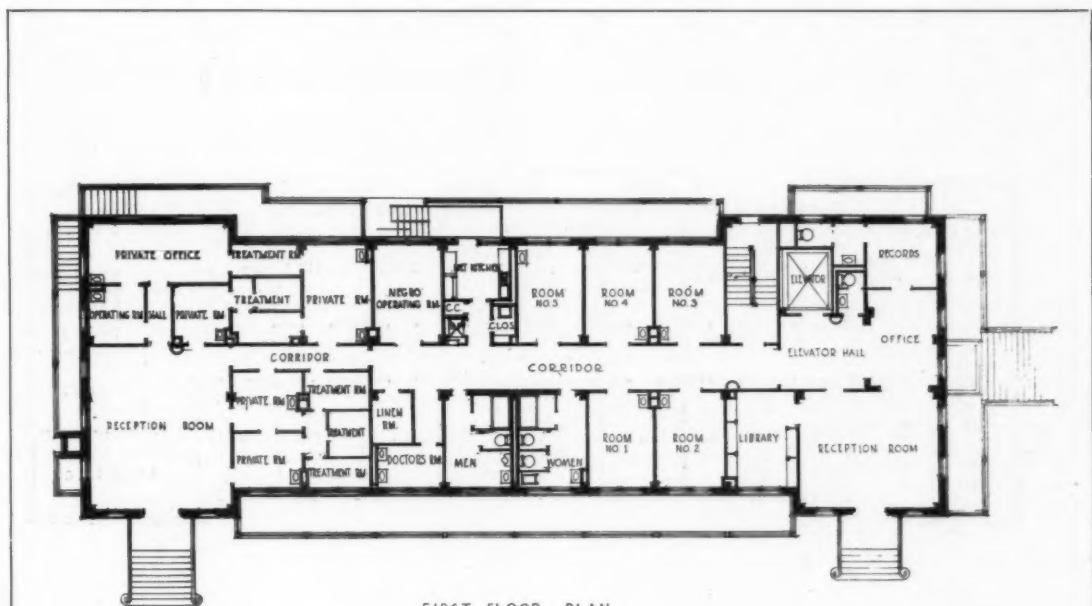


OPERATING ROOM

MEMPHIS EYE, EAR, NOSE AND THROAT HOSPITAL, MEMPHIS, TENN.

JONES & FURBRINGER, ARCHITECTS



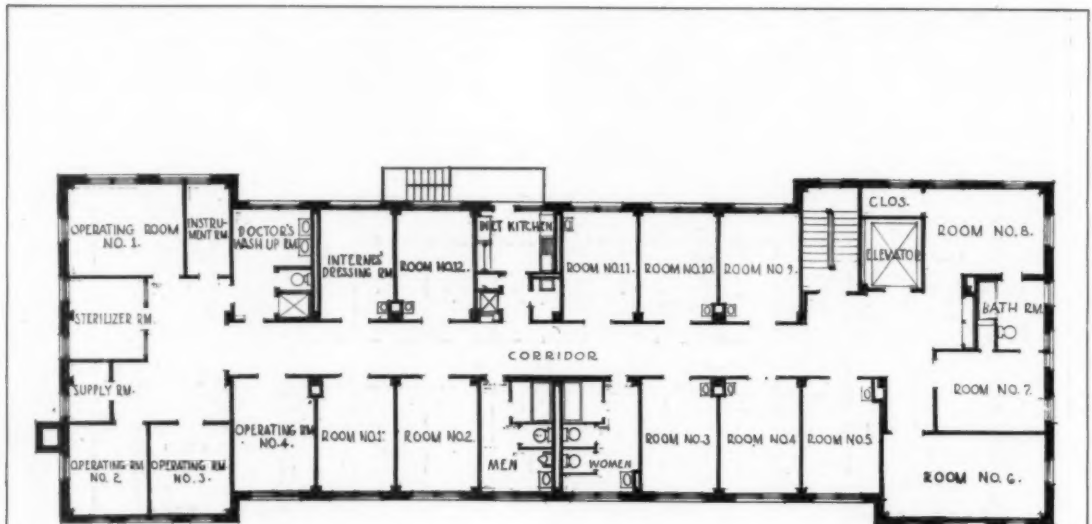


FIRST FLOOR PLAN

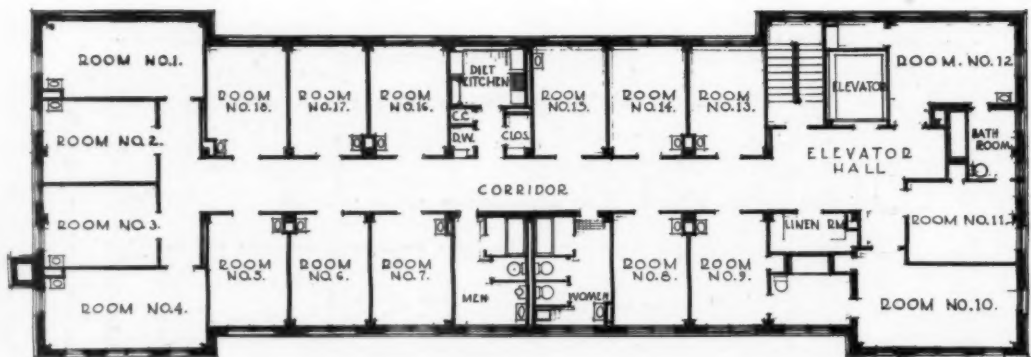


BASEMENT FLOOR PLAN

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THIRD FLOOR PLAN



SECOND FLOOR PLAN

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MEMPHIS, TENNESSEE  
JONES & FURBRINGER, ARCHITECTS

## COMMERCIAL OIL BURNING

By HARRY F. TAPP, *Technologist, American Oil Burner Association*

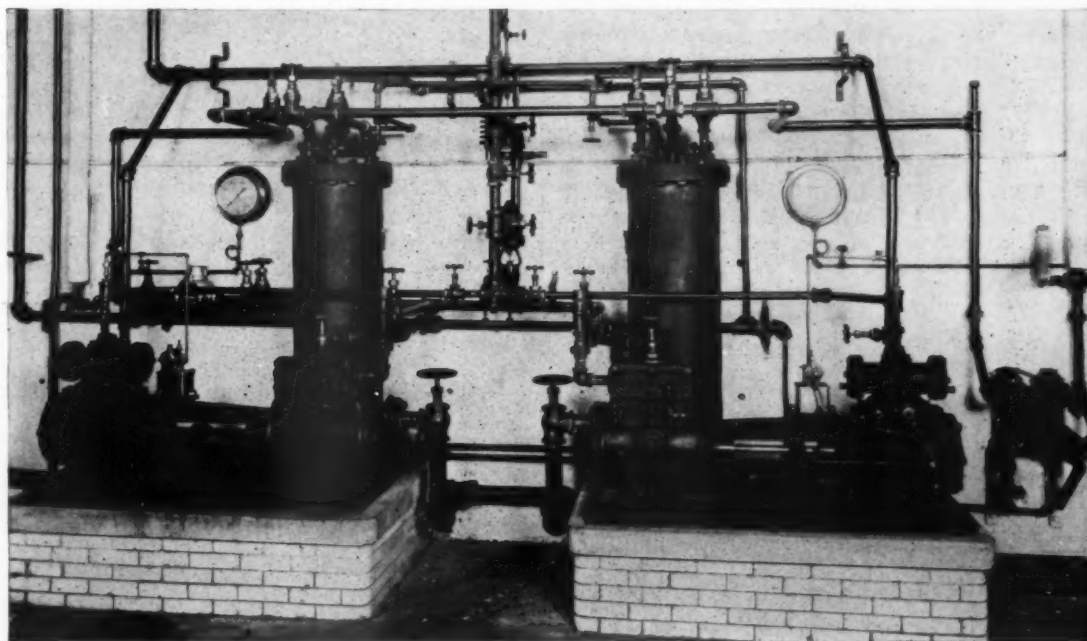
THE term commercial oil burning is used to designate the application of oil burning to boilers used primarily for heating in commercial buildings, such as office or factory buildings and large schools, hotels, theatres and apartments.

The fuel used in most commercial installations is heavy oil, designated as 14 plus or 14-16 gravity. This oil is very viscous at ordinary temperatures and requires preheating for successful atomization and clean burning. Because of this requirement, installations burning this grade of oil cost more than installations using lighter oil for fuel, but the greater heat content per gallon of the heavy oil and its lower price justify its use.

It is practically impossible to make an accurate comparison of the cost of using oil as against the other fuels in a general way. This is because there are so many factors that enter into this problem, such as the varied heat content of the various coals, their ash content, the ability to successfully burn it in given applications and the cost of handling. With the present market prices of the grades of

coal and oil used in commercial applications, the cost of the fuel alone will be very nearly the same. Therefore, any saving can be attributed to the method of handling and utilizing the fuel. Where oil is used, the labor for stoking, cleaning fires and handling ashes is eliminated so that the labor required for attending oil fired boilers is only about one-fourth that required where coal is used in a manually fired plant. Even where coal is handled by the most modern equipment, the oil still holds a good advantage, as it is readily moved by means of pumps which cost less than the equipment for handling coal and ashes. The saving in labor and handling, by the use of oil, will usually offset a difference in the actual cost of fuel.

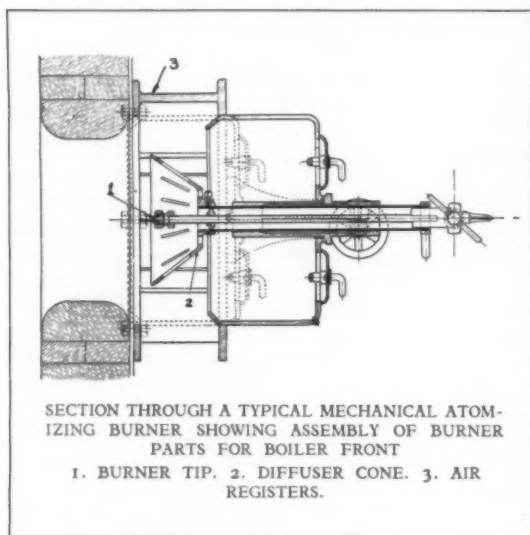
Oil in the congested business districts may be conveniently stored, and delivery is quick, quiet and efficient. As the storage tanks are all underground, it also makes available in many instances, the space that would ordinarily be used for storage of coal. Of course, this is not true in every instance; as a matter of fact, the coal bunkers are



TYPICAL OIL PUMPING AND HEATING EQUIPMENT

often used to accommodate the storage tanks for oil fuel where plants are converted from coal to oil burning.

Atomizing burners are used practically exclusively for installations with heavy oil. There are generally three types of burners—steam atomizing burners—air atomizing burners and mechanical atomizing burners.

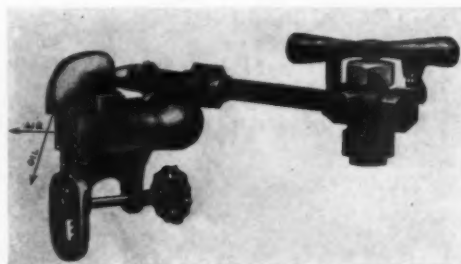


The steam atomizing burner has two classifications, the outside mixing and the inside mixing type. With the outside mixing type, the oil is forced through an orifice at a comparatively low pressure and just as it emerges from this orifice it is struck by a jet of steam traveling at a high velocity from direction at right angles with the flow of oil. The steam jet breaks the oil and injects it into the combustion chamber in a fine spray or mist. The inside mixing type has a turbulence mixing chamber between the steam orifice and the burner opening. The mixing inside the burner permits some vaporization of the lighter hydrocarbons from the heat in the steam so that the mixtures

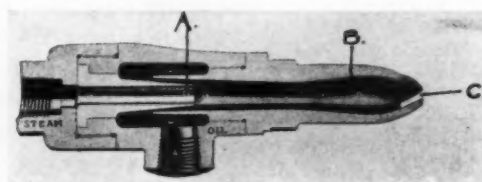
issuing from the burner opening lights readily and maintains a steady burning flame. Steam burners require from 1.5% to 5% of the total steam generated for atomization; 2% to 2.5% being a good average. This average can be maintained by correct adjustment of the burners. For the best results the steam should be dry, as all moisture introduced into the combustion chamber causes a loss in efficiency.

Air atomizing burners using high pressure air are similar in design to those using steam. This type is not used as much as low pressure air burners. Ordinarily, high pressure air burners are used where a supply of compressed air is available. Low pressure air burners use comparatively large volumes of air under pressure of  $1\frac{1}{2}$  lbs. to  $2\frac{1}{2}$  lbs. per square inch. Air atomizing burners are efficient and if the blowers or compressors supplying the air are steam driven, they will require approximately  $2\frac{1}{2}\%$  to  $3\%$  of the steam generated for the motive power, but the exhaust steam is available for use in the preheaters, so that the steam consumption compares very favorably with steam atomizing burners. The first cost, however, is greater with air atomization than it is with steam atomization.

Mechanical atomizing burners are those which atomize the oil without the aid of air or steam, although it is common practice to use air under low pressure in connection with mechanical atomizers to further atomize the fuel, but this is not necessary. The high pressure atomizer forces the oil through the small orifice under high pressures (100-200 lbs. per square inch). The oil is given a rotary motion by slots cut tangentially to the diameter of the orifice of the burner, so that the centrifugal force of the oil leaving the orifice acts as an aid in atomizing the fuel. Another type of mechanical burner is the rotary cup burner. In some burners the cup is positively driven by an electric motor or steam turbine and has a fan mounted on the same shaft so as to provide a portion of the air for combustion under pressure to aid in the atomization of the oil as it leaves the edge of the rotating cup. In another type of rotary



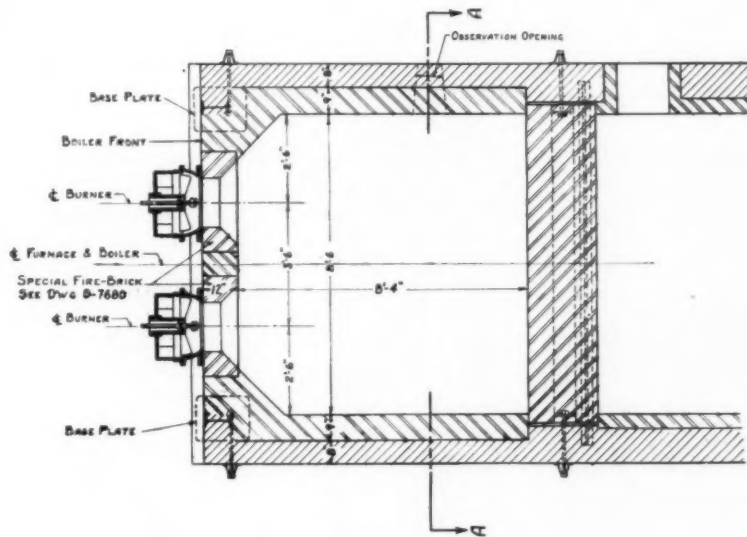
OUTSIDE MIXING TYPE LOW-PRESSURE AIR BURNER



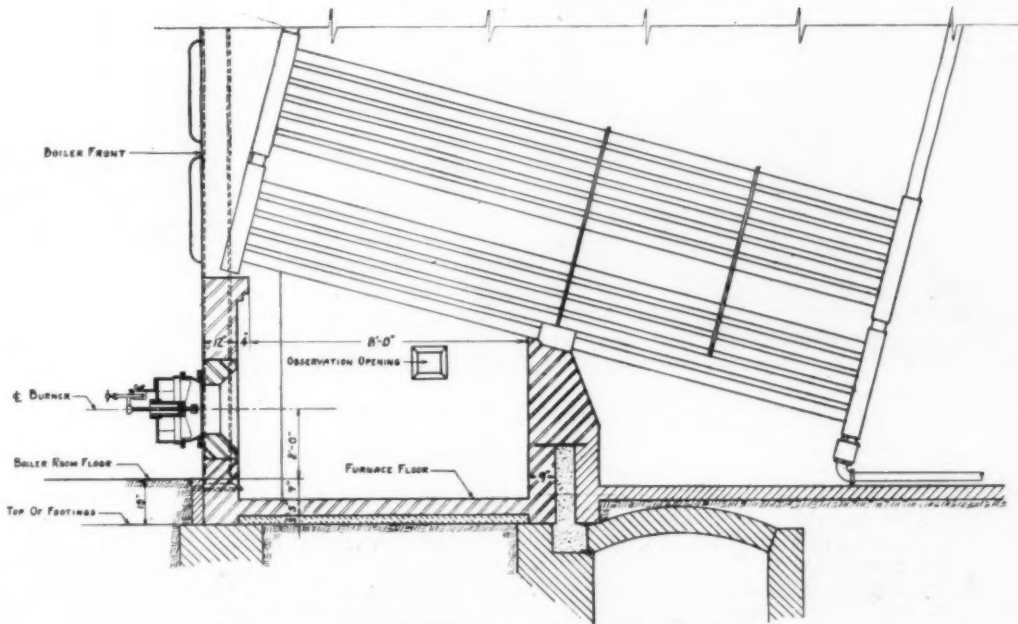
INSIDE MIXING TYPE BURNER

- A. STEAM ORIFICE
- B. TURBULENCE MIXING CHAMBER
- C. BURNER OPENING





PLAN AT & BURNERS

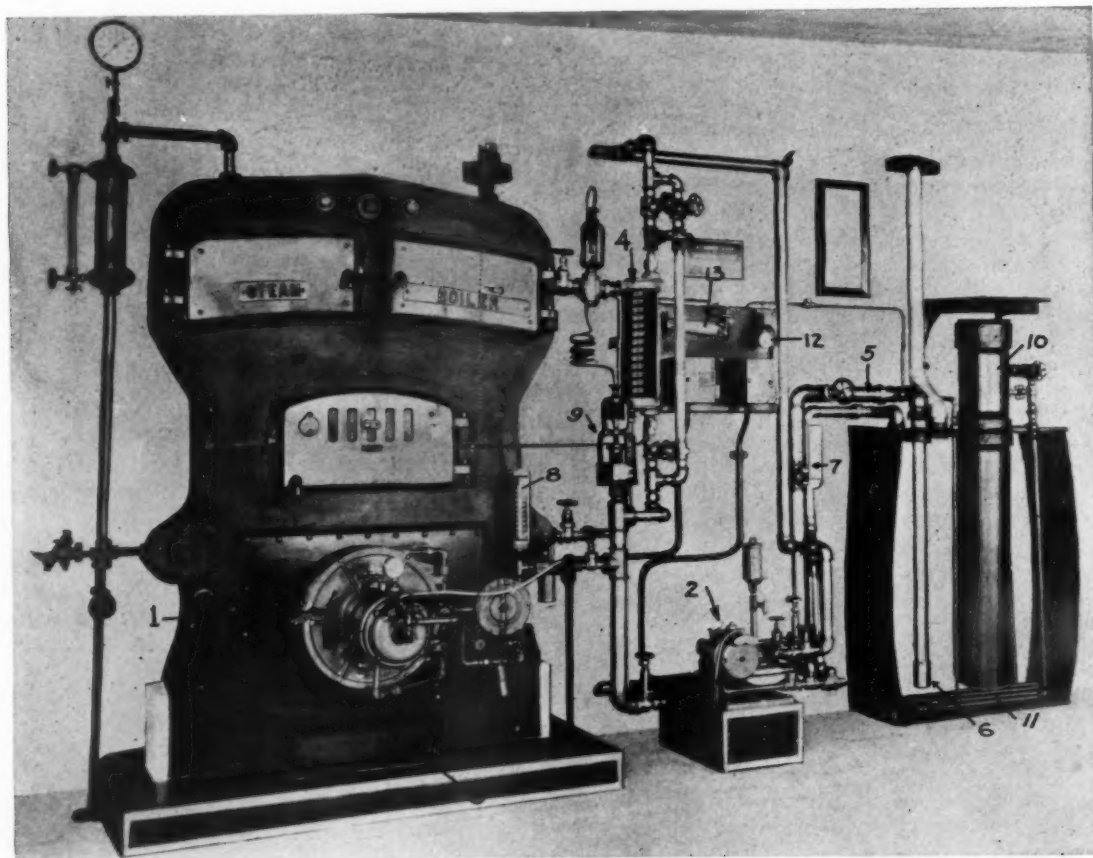


LONGITUDINAL SECTION THROUGH & BURNER

DETAIL OF TYPICAL MECHANICAL OIL BURNER INSTALLATION SHOWING BOILER SETTING

cup burner the cup is driven by an air turbine utilizing the velocity of low pressure air from a blower. This blower is usually located at a remote point from the boiler and is of sufficient capacity to supply all of the burners in the battery, although there are some installations where each burner has its own individual blower. While the first cost of mechanical atomizing burners is usually comparatively high, they have the advantage

damper. With other burners there is an air register which admits the air by natural draft through adjustable vanes, usually giving a rotating motion to the air as it enters the combustion chamber about the atomizer. Some burners are installed through a small port in the firing door admitting a small amount of air about the burner tip and the balance of the air is admitted through openings arranged in the refractory hearth. These openings



TYPICAL SINGLE BURNER APPLICATION FOR THE USE OF HEAVY OIL

- |                         |                                        |
|-------------------------|----------------------------------------|
| 1. OIL BURNER           | 8. DISCHARGE THERMOMETER               |
| 2. OIL PUMP             | 9. AUTOMATIC OIL TEMPERATURE REGULATOR |
| 3. AUXILIARY AIR DAMPER | 10. TANK FILL PIPE                     |
| 4. OIL HEATER           | 11. TANK HEATER WATER COILS            |
| 5. SUCTION LINE         | 12. TANK GAUGE                         |
| 6. FOOT VALVE           | 13. DRAFT GAUGE                        |
| 7. SUCTION THERMOMETER  |                                        |

of returning all the steam used for pumping and heating as boiler feed water. Further advantages of this type are simplicity and economical operation with uniform combustion regulation.

For some burners, the air for combustion is partially supplied from a blower and is used to aid in the atomization of the fuel, the balance being induced by the natural draft through a regulating

are usually arranged to conform to the shape of the flame from the burner so that the air comes in contact with burning fuel and is not permitted to escape unused through the boiler passages and up the stack. Some installations are provided with forced draft by connecting the air register to a duct from the blower.

Slightly less draft is required with oil burning

equipment than is necessary where coal is used as a fuel. In designing the chimney for use with oil fuel, however, it is advisable to follow the recommendations of the boiler manufacturers on account of the draft loss through the fuel bed, and other variables such as the draft loss through the boiler. Where oil installations replace coal, excessive chimney draft may be controlled by steam operated damper and burner regulators that vary the air and oil to meet the load fluctuations.

There are many factors that should be taken into consideration when selecting burners for application to a particular installation. A good burner should be flexible in its adjustments, it should be easily adjusted over a considerable capacity range and its design should permit the shaping of the resulting flame from the burner so that the flame will fit the combustion chamber closely. A flame that does not properly fit the shape of the combustion chamber permits air to escape around the flame without properly mixing with the fuel and is therefore responsible for inefficient combustion results. If possible, it is best to use a single burner, rather than burners in multiple, wherever the shape of the flame can be adjusted to meet the combustion chamber requirements and the burner has sufficient capacity and flexibility to meet the variable loads imposed on the boiler. Single burners ordinarily will satisfactorily meet the requirements of buildings such as schools, theatres, churches and apartments. For large office and commercial buildings the boilers are usually of such size as to require two or more burners per boiler in order to obtain the required flame application and flexibility of control.

Regardless of the type of burner used, the installation of the oil system, which includes the

tank, heaters, strainers, pumps and piping, is important.

Tanks should be installed in accordance with local rules for the storage of oil fuel, but in the absence of local regulations it is suggested that rules and regulations of the Underwriters Laboratories be followed. A small heater is usually installed in the storage tank around the suction inlet. This heater is used to reduce the viscosity of the oil so that it can be readily pumped. The oil heaters are usually steam coils, but some jurisdictions require that this heating be done by hot water only. The oil is delivered from the pump to the supply line for the burners and is passed through larger heaters where the temperature is raised to a point that insures the viscosity being low enough for atomization. This temperature is variable for different oils but will usually be between 150° and 200°F. Care should be taken to keep the temperature below the flash point of the oil. This is usually done by means of automatic temperature regulators which open and close the steam supply valve to the heater coils. From the heaters the oil is delivered as directly as possible to the burners for atomization. As all fuel oils contain a certain amount of foreign matter in suspension, it is important that the oil line have large strainers with sufficient screen area to permit their being used for some period of time without the screens becoming clogged and preventing the flow of oil. The best practice calls for strainers in duplicate on the suction side of the pump and additional strainers, known as discharge oil strainers, on the delivery side of the pump. It is important that strainers be located where they are readily accessible for cleaning. For small commercial installations, the oil pumps are usually of the rotary type driven by elec-

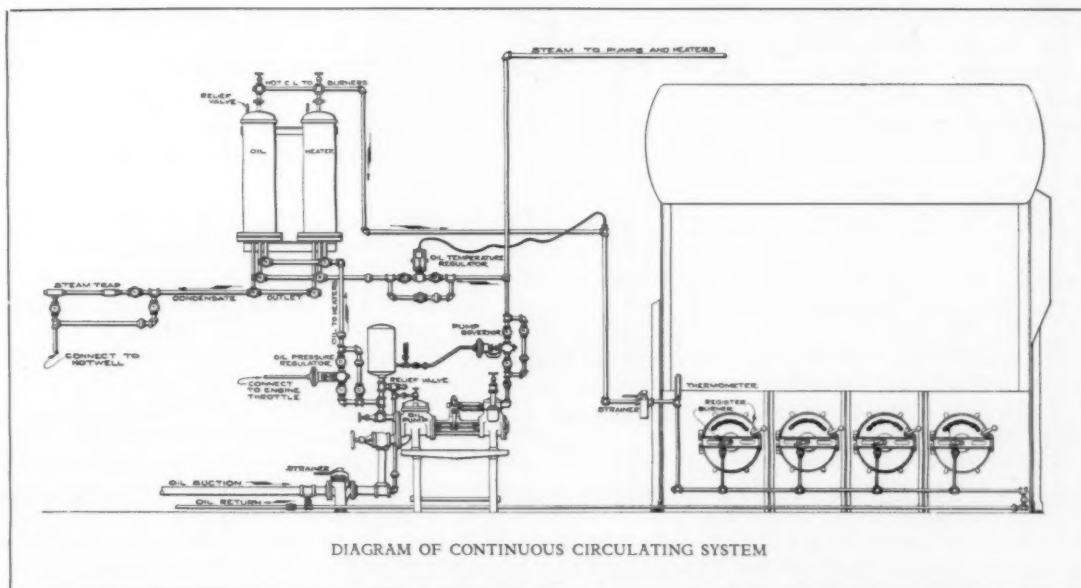


DIAGRAM OF CONTINUOUS CIRCULATING SYSTEM

tric motors and are sometimes incorporated into the design of the burner. For large installations, the steam operated piston type pump is commonly used. It is recommended that pumps and heaters be installed in duplicate. This is required in many jurisdictions where the boiler service is used in connection with the fire protection apparatus.

With the various types of burners that are being used, there have been developed systems which differ in their construction and arrangement of piping, pumping and tank equipment. Probably the most widely used oil system at the present time

is the continuous circulation system. In this system the oil is pumped from the tank by the oil pump and is delivered to the burner supply line; any excess oil is by-passed through a regulating valve back to the tank or to the suction side of the oil pump. In this way the proper atomizing temperature of the oil is maintained and choking or accumulation of sediment in the supply line is avoided. In the layout of the piping it is important to keep the oil supply pipe below the level of the burner to prevent the formation of vapor pockets which are liable to shut off the fuel supply.

#### COMMERCIAL TESTING AND COLLEGE RESEARCH LABORATORIES

THE Department of Commerce, Bureau of Standards, has issued as Miscellaneous Publication No. 90, a Directory of Commercial Testing and College Research Laboratories. Laboratories are listed by geographical location and there is included in addition to their names and addresses, a list of the commodities and nature of tests conducted at each institution. A list of Bureau of Standards pamphlets on testing is also given. Bureau of Standards Miscellaneous Publication No. 90 contains 40 pages and may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., at the price of 15 cents per copy.



#### BULLETINS OF UNIVERSITY OF ILLINOIS, ENGINEERING EXPERIMENT STATION

THE following bulletins may be obtained from the University of Illinois, Engineering Experiment Station, Urbana, Illinois, for the price noted.

An Investigation of the Fatigue of Metals, by H. F. Moore and T. M. Jasper, Bulletin No. 152, 92 pages, price 50 cents. This bulletin covers the fatigue strength and static strength of steel at elevated temperatures; effect of fatigue strength of stress intensification at a small hole; magnetic analysis as a test for fatigue strength of steel; the fatigue strength of non-ferrous metals and cast-carburized steel; testing machines, for repeated stress; miscellaneous test results for metals; and a summary of conclusions.

The Cause and Prevention of Embrittlement of Boiler Plate, by Samuel W. Parr and Frederick G. Straub, Bulletin No. 155, 62 pages, price 35 cents. This bulletin covers the occurrence of embrittlement and laboratory reproduction test data and discussion of results; and conclusions.

Tests of the Fatigue Strength of Cast Steel, by Herbert F. Moore, Bulletin No. 156, 20 pages, price 10 cents. The scope of tests, methods of testing and results and conclusions on the ability of steel castings to resist repeated stress without being fractured are given in Bulletin No. 156.

#### TRANSMISSION OF SOUND THROUGH VOICE TUBES

THE Department of Commerce has issued through the Bureau of Standards, Technologic Paper No. 333, entitled "Transmission of Sound Through Voice Tubes," by E. A. Eckhardt, V. L. Chrisler, P. P. Quayle, and M. J. Evans. This paper gives the results of an investigation made by the Bureau of Standards of the transmission of sounds through voice tubes such as used on board ships. The work was initiated by the Bureau of Construction and Repair of the Navy Department. An abstract at the beginning of this paper states:

"A good voice tube should transmit speech with as little diminution as possible in intensity and with a minimum of distortion of articulation. Each of these qualities was separately tested, and tables and diagrams of comparative results are given. Tests were made upon straight tubes, curved sweeps, flexible tubes, fittings, elbows, and terminal cones. A brief discussion of sound filters is given and a note on the absorption in rigid pipes is appended."

This paper is illustrated and contains numerous diagrams and curves. Technologic Paper of the Bureau of Standards, No. 333, may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., price 15 cents.



#### UNITED STATES GOVERNMENT MASTER SPECIFICATIONS

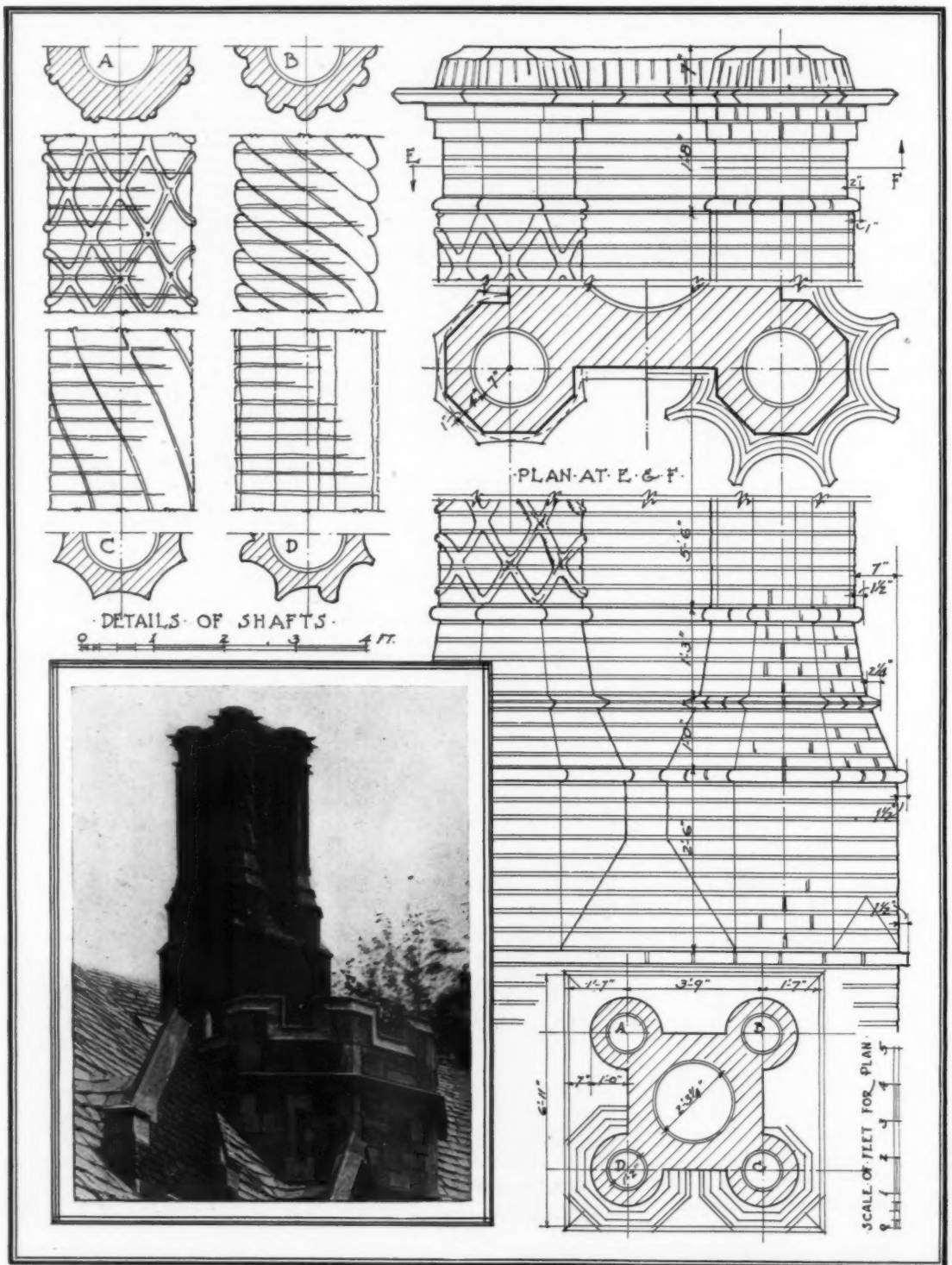
TWO circulars of the Bureau of Standards, No. 321 and 322, have recently been issued. These are U. S. Government Master Specifications No. 443 and 444 respectively. Specifications for cement used in conjunction with sand in the making of mortar for laying units of masonry construction above grade are covered in Master Specification No. 443. Master Specification No. 444 is for integral waterproofing material, water-repellent type for use with Portland cement mortar or concrete. These specifications cover general requirements, methods of inspection, sampling and testing, and packing and marking, and can be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C. Price five cents per copy.





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## BOOK NOTES

### MEXICAN ARCHITECTURE

REVIEWED BY ARTHUR T. NORTH

THE Vice-Regal period of Mexico, 1521-1821, was a period of unexampled prosperity, free from war or civil discussion of any kind. The great increase in the wealth of Mexico was naturally reflected in its architecture. It was truly a golden age. Its architectural development was made possible to a great extent by a plentiful supply of cheap and skilled Indian labor. The Indians learned all of the crafts with remarkable facility and were very amenable to control. The union of church and state was especially effective because the Indians were informed that their allegiances to their new Sovereigns, the Emperor and the Creator, were inseparable. Thus Mexico was enriched with an ecclesiastical architecture that is unsurpassed in many ways by that of any other country.

The introductory text of this book is historical, tracing back to Europe the source of many of the architectural manifestations and it also makes clear the influence of the local conditions. Interesting references are made to the outstanding architects of the period. It is interesting to note that this fine architectural expression was made and finished before the people of the United States had evolved anything worthy of architectural consideration.

At the end of the Mexican Vice-Regal period we had in this country merely produced a cold, sterile architecture embracing the various Colonial styles which are not comparable with the Mexican work in the power to arouse pleasurable and inspiring emotions. It is an interesting subject of speculation as to what would have been the result had several of the richly ornamented and brilliantly colored Mexican buildings been transplanted to the United States. Of course the colorful richness of the Mexican ecclesiastical buildings would have been taboo with our religious ideas of those, and to a great extent of these days. Perhaps our people would have feared to have introduced grace and color in their dwellings.

Today, in this country, religion is becoming humanized and color is beginning to be considered as a necessary concomitant of a cultured existence. With this in mind we can turn to a study of the Mexican architecture illustrated and described in this book. The result cannot but bring about a desire to enrich our own architecture and make it more beautiful.

The Mexican architecture is naturally a manifestation of its Spanish source, and of all peoples these Latins could make a plain wall to be very beautiful. With this unique ability they confined their ornamentation to doors, windows and cornices, the degree of ornamentation depending largely on the

character and general size and shape of the structure. It is the correct theory of ornamentation, in the opinion of many, in that it serves as an accent to important and necessary openings in or to parts of the enclosing walls. This is the reverse of our all too common practice of plastering on all sorts and conditions of orders all over a building with no apparent reason or excuse.

The Mexican scheme of ornamentation is one of intricate detail and of a fineness that gives the effect of texture by the diversity and proportioning of the lights and shades. This scheme of ornamentation is integral with the structural wall and not the mere applied excrescence that characterizes our scheme of ornamentation.

The readers of this book, both lay and professional, will find it of the utmost interest. The illustrations are adequate for their purpose and the subjects possess such rare and unexpected beauty that one can happily pass an hour in studying a few of them. Gradually the reader can acquire a sense of the style and may be influenced, not to copy but rather to enrich and beautify our own architecture in detail and in color.

Mr. Kilham has produced a valuable book and one of unending interest. The eighty-four illustrations are carefully selected and include all kinds of buildings, giving one a complete survey of the subject. It is a readable book of convenient size, and while the illustrations are smaller than is usual in this kind of books, they are entirely adequate for their purpose. With the increasing interest in all of the phases of Spanish architecture this book should have a ready sale among architects, especially so as it so finely illustrates an American architecture. To the layman it will present an interesting and important phase in the history of our Southern neighbors and perhaps help to give a deeper insight into their life and character.

*Mexican Architecture of the Vice-Regal Period.* By Walter H. Kilham, S. B., F. A. I. A. 224 pages, 6 x 9 in., cloth, fully illustrated. Longmans, Green and Company, New York. Price \$5.00.

30

### NEW BACKGROUNDS FOR A NEW AGE

IN a book bearing the above title, Edwin Avery Park, the author, assistant professor of design and architecture in Yale University, states that "the modernist movement is not self-conscious, but is the work of individuals unconsciously expressing themselves, or the life of their age through themselves, in various mediums." He claims that, due to our present policy of stipulating that our designs must follow ideas of some historic period or style, people today are thinking artistically in dead terms. "If it would appear ridiculous for us to go garbed, some as Romans, some as gentlemen of the court of





Photograph by Annet, 34

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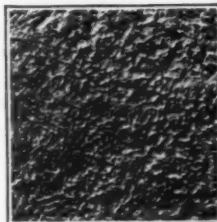
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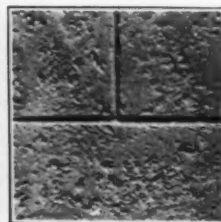
... a duplication of the handsome old plasters that will give new and more beautiful values to your early American or Colonial furniture.

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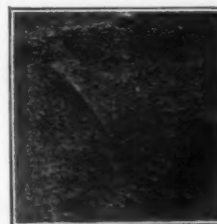
... for the delicately toned bedrooms and nurseries there are subtle finishes that combine with light, gaily colored fabrics to delight guests and owners alike.



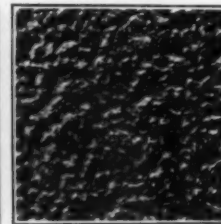
Mediterranean—Heavily brushed in irregular strokes, slightly smoothed.



Stone Finish—Fairly heavy coat, textured, then smoothed and scored.



Colonial Plaster—Medium heavy coat, brushed on, textured, then smoothed.



Flame Stipple—Medium coat, textured with sponge or brush.

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

Charles V. or Crusaders, why is it not equally ridiculous to move against a setting just as inconsistent from the same point of view?" We agree with him when he says that it is not what style, but what material shall the designer use for his carving—his building? But we do not heartily endorse his statement that the time is now ripe for the development of a new style that shall express our needs and our life. Many of his suggestions may be good, although somewhat radical, but Mr. Park does not seem to appreciate that a new style must and will be evolved naturally and logically, and both his word descriptions and his original drawings of what the new style will consist of are

not always convincing. Many of his illustrations are good, too, but we fail to connect the *moderne* movement in France and other European countries with modern tendencies here. He deplores the searching of ideas and motives of the historic periods of Europe, but actually suggests we familiarize ourselves with the work of modern French and German designers. The prevailing idea of the book is logical. It is interesting reading, and it may inspire artists with creative ability to give expression to their inmost thoughts.

*New Backgrounds for a New Age.* By Edwin Avery Park. Two hundred odd pages, illustrated with full page plates. Board covers, 6½ x 10 inches. Harcourt, Brace & Co., New York.

## OVERBUILDING TALK DISPELLED BY FACTS

HUGE CONSTRUCTION VOLUME BASED ON WELL DEFINED DEMAND  
THROUGHOUT COUNTRY

THE talk of overbuilding has disappeared into thin air, because such talk was founded on insufficient consideration of the situation," says W. J. Moore, president of American Bond and Mortgage Company, in a recent interview.

"Continued analysis," says Mr. Moore, "has made clear that the volume of construction shown during the past few years has been in answer to a well defined demand rather than the result of blind speculations founded on the hope of creating the demand after the building has been completed.

"Furthermore," he continued, "the time has come when the mind of the public as well as of the experienced operator has realized the significance of the astonishing figures covering the past few years of construction history.

"Most economists and statisticians back in 1921 to 1925, and even more recently, had not gone far enough with the analysis of building figures to realize that the huge totals which they had amassed were by no means indicative of the new buildings produced but showed rather the amount of new building plus the rehabilitating of the old.

"Later conclusions have shown clearly that in point of fact the new building volume which the country requires for a normal year stands at about five billion dollars, but that the figures of eight and a half or nine billion dollars made available during the past twelve months include buildings replaced where destruction has occurred by fire; also repairs and maintenance on already existing structures.

"Thus for the past seven or eight years we find that the supplying of new housing has gone forward at a steady rate, gaited about as fast as the demand has shown itself.

"There is, of course, a great force at work to-

day which has gained surprising velocity since the war. This is the force which makes us continually better our standards of living. The greatest accelerator of this force is advertising. Advertising makes us want better bathrooms; better kitchens; better heating plants; better furniture; better radios; pianos; foods and so on through the whole gamut of the luxuries and necessities which make up the framework of modern living. Advertising in turn keeps business active. It stabilizes demand and continually forces the producer of merchandise to keep alert to maintaining the standard of his product at the highest possible point.

"Those who believe that we may by some black magic of the mysterious arts return to the lower standards of living of fifteen or twenty years ago, do not take into account the changes which have come over business during the past decade—even some laws of economics have suffered change.

"The general prosperity which is now in full view must of necessity affect favorably the entire population. This condition, of course, makes an increasing demand for new housing, better working conditions, greater office space.

"The problems of today in the business world are not so much those of immensely increased production, but rather those of keeping the growth of this production from increasing too rapidly.

"In the matter of housing there is today a definite demand for moderate priced apartments in certain sections while in others apartment hotels, theatres and hotels show greater urgency.

"The situation today calls for more careful surveys and more thoughtful planning on the part of the builder than ever before and he is recognizing that the demand must exist before the building."

Constant use means  
constant wear



### Did you use them to pry up thumb tacks?

Here, truly, is an antique. Note the home-made handle. One almost expects to find ancient hieroglyphics carved on the metal. They are the property of Mr. H. A. Wittekind of Starrett and Van Vleck, Architects, designers of the Equitable Life Assurance Society Building. They are now discarded in favor of a new and shining pair of the latest design.



Ball Bearing Butts give  
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DEAR Mr. Wittekind:—Those Bow Compasses lasted you a long time, didn't they? And, when you decided you needed a new pair, you didn't go to much trouble, or travel far, to get them.

But it's a different story with butts. Butts must be *installed*. No walking around the corner to buy a new pair. And the cost of the new butts, plus the replacement expense, greatly exceeds the first cost of Stanley Ball Bearing Butts.

Government tests show that ball bear-

ing butts stand up under extremely hard usage. They are the only type of butt that will outlive *any* building on which you use them. Consequently (and we are sure you will agree), it pays to install Stanley Ball Bearing Butts in the first place.

Have you a copy of the Architects Manual of Stanley Hardware? We will gladly send one to you or to any architect who writes for it. Also see Sweet's Catalog.

THE STANLEY WORKS, NEW BRITAIN, CONN.  
New York Chicago San Francisco Los Angeles Seattle



The Stanley Wrought Steel Half-Surface Template Ball Bearing Butt. Ideal equipment for Kalamein Doors with Pressed Steel Jams.

# STANLEY BUTTS

## BALL BEARING

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

FRANK C. WIGHT DIES

FRANK C. WIGHT, editor of *Engineering News-Record*, who had served that journal and its predecessor, *Engineering News*, in an editorial capacity for twenty-one years, died recently at his home in Summit, New Jersey.

Born in Washington, D. C., in 1882, Mr. Wight studied at Columbian (now George Washington) University, and later at Cornell, where he received the degree of Civil Engineer in 1904. After graduation he spent three years in the office of the engineer of bridges of the District of Columbia, his previous summer vacations having been spent in the District Surveyor's office.

Mr. Wight's entry into the field of technical journalism dated from December, 1906, at which time he became associate editor of *Engineering News*. For six years his main assignments were in the fields of concrete, general construction and river and harbor work. In 1913 he was promoted to the managing editorship of *Engineering News*, a position which he held until *Engineering News* and *Engineering Record* were consolidated in 1917. Four years later he became managing editor of the consolidated journal, and on January 1, 1924, upon E. J. Mehren's withdrawal from editorial service to devote his time to executive management of the engineering unit of the McGraw-Hill publications, Mr. Wight was made editor of *Engineering News-Record*. This position he held at the time of his death.

Mr. Wight was a man of brilliant attainments and remarkably broad understanding and sympathies. On these qualities and on his great administrative talents was based his success in his chosen vocation.

NEW YORK LANDSCAPE ARCHITECT APPOINTED TO FINE ARTS COMMISSION

FERRUCCIO VITALE, a landscape architect with offices at 101 Park Avenue, New York City, was recently appointed by President Coolidge as a member of the Fine Arts Commission, succeeding James L. Greenleaf of New York. Mr. Vitale has done important work in and about New York City. He is a Fellow of the American Society of Landscape Architects, which recently awarded to him its gold medal, and an honorary member of The American Institute of Architects.

PERSONALS

Romolo Bottelli, architect, has moved his office from 207 Market Street to 45 Branford Place, Newark, N. J.

Clarence L. Harding, architect, is now located in his new offices in suite 603, Insurance Building, 907 Fifteenth Street, Washington, D. C.

Wm. I. Hohauser, Inc., architects and engineers, have moved their offices to 17 West Forty-fourth Street, New York City.

James William Kideney, architect, has moved his office from the White Building to 21 Cleveland Avenue, Buffalo, N. Y.

H. Clyde Miller, architect, has moved his office from 5 North La Salle Street to 300 West Adams Street, Chicago, Ill.

A. L. Seiden, architect, is now occupying new offices at 407 West Thirty-fifth Street, New York City.

DeLaHaye & Roberts, architects, are now located in suite 12, Shelley Building, Daytona Beach, Fla., having moved their offices from the Davis Building, that city.

Alexander Mackintosh, architect, formerly located at 55 Bible House, Astor Place, is now occupying new offices at 101 Park Avenue, New York City.

Simpson & Rolston, Inc., architects and engineers, have moved their offices from the Essex Building, 31 Clinton Street, to 45 Walnut Street, Newark, N. J.

F. H. Dewey & Company, architects and engineers, are now occupying their new offices in the Architects' Building, 101 Park Avenue, New York City, having moved from 175 Fifth Avenue, same city.

Jacob S. Pettebone and Stanley K. Walborn, architects, have formed a partnership under the name of Pettebone & Walborn, architects, and are located at 610 Second National Bank Building, Wilkes-Barre, Pa.

Charles J. & Chris Rieger, architects and engineers, have moved their offices from 421 Wood Street to 1218 Fulton Building, Pittsburgh, Pa. Manufacturers are requested to send catalogs and samples.

Alexander B. Trowbridge announces that he is now occupying new offices at 40 East Forty-ninth Street, New York City, where he will resume the general practice of architecture and will also continue his special practice as a consultant.



5



# TERRA COTTA



*Clothes  
the  
Entire  
Exterior*

AMERICAN Insurance  
Union Citadel, Columbus,  
Ohio. C. Howard Crane,  
Architect, Elmer George  
Kiehler and Ben A. Dore,  
Associates.

The massive character of this intensely virile piece of architecture called for a facing material whose structural implication, color and texture would fittingly express this feeling. It is enhanced by the play of light upon its rugged texture which gives effects both by day and at night which distinguish this building from all other structures in the city. Send for our literature upon the light reflecting properties of Terra Cotta and the possibilities these offer.

**NATIONAL TERRA COTTA SOCIETY**

19 WEST 44TH STREET

NEW YORK, N. Y.

## Satinets

Semi-matt Wall  
Tiles in five deli-  
cate pastel tints

NORSE BLUE  
SEA GREEN  
SCOTCH GRAY  
BLUSH PINK  
CASTLE VELLUM



## Pleasing Mass Effects...

*produced in semi-matt tiles in five new pastel tints*

WHEN colored tiles are chosen from individual specimens or small panels, it is not easy to foresee just what will be the appearance of the finished room. For the intensified color impression given by larger areas can never be fully anticipated. This difficulty is obviated with Rossman perfected SATINETs.

SATINETs are semi-matt tiles made in five harmonizing pastel tints, developed from careful studies of wall effects rather than of samples or of color in the abstract.

The SATINET hues are so chosen as to harmonize in any combination and so delicately modified that they can not clash with any colors that may become neighbors

to them. When laid up on the wall, these tints become so reinforced as to assume a pleasing freshness and strength.

SATINET interiors are bright and cheerful without being garish. The semi-matt glaze reflects just the right contrast of light and shadows to lend life and interest to the wall.

With all these artistic qualities, SATINETs are highly practical. Dust and grime find no lodging place on their hard, smooth surface, and cleaning is particularly easy.

*Send for descriptive circular, illustrated in full colors.*

ROSSMAN CORPORATION  
New York, N. Y.

# Rossman Satinets

*Semi-matt wall tiles in five tints*

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42

# THE AMERICAN ARCHITECT

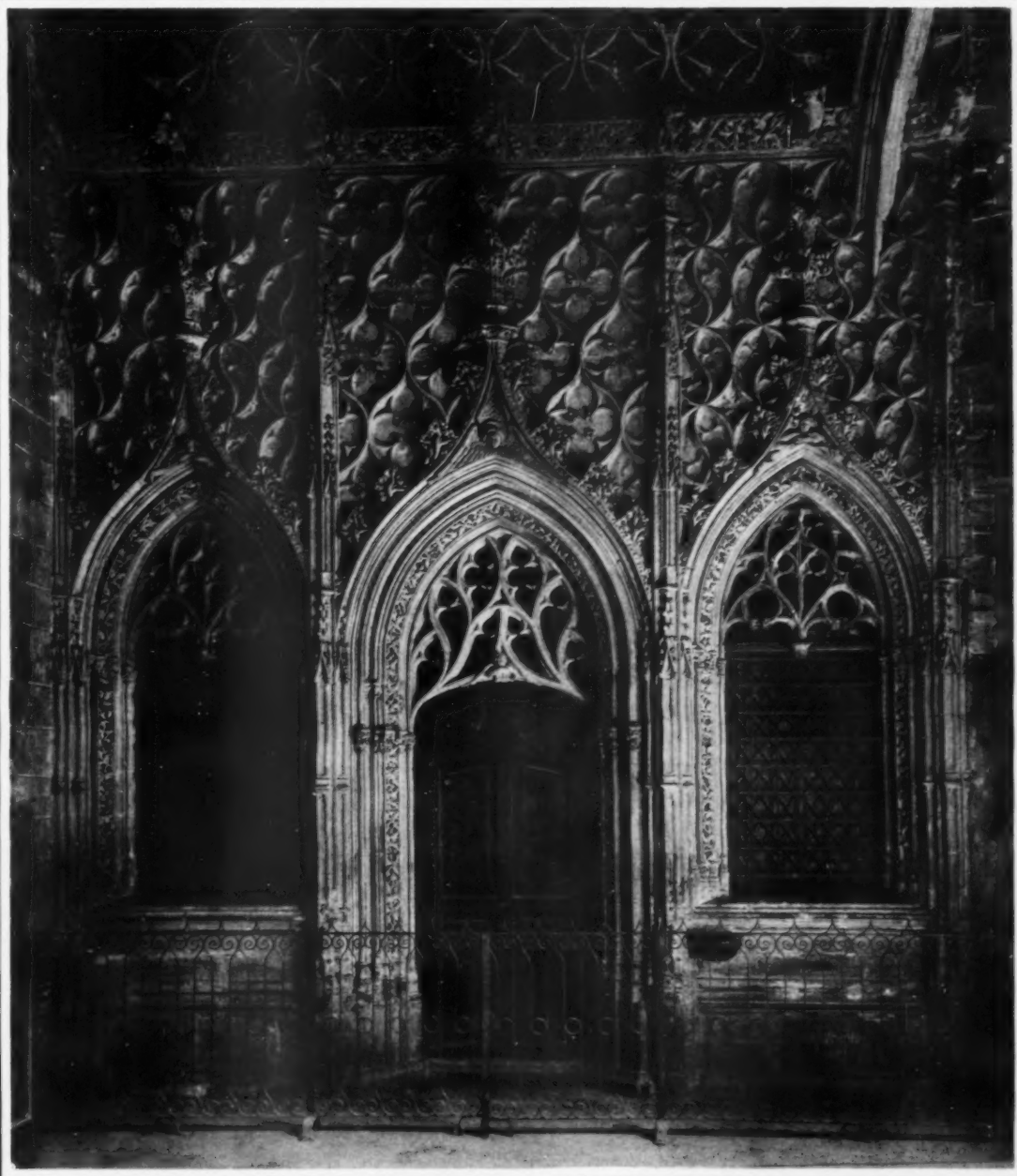
IN TWO PARTS

PART II

OCTOBER 5, 1927

TOPICAL ARCHITECTURE SECTION

SPANISH DOORWAYS



DOORWAY, CHAPEL OF ST. GEORGE, BARCELONA, SPAIN

(Copyright, 1927, The Architectural & Building Press, Inc.)



GATEWAY IN OLD CITY OF AVILA, SPAIN





DOORWAY IN CLOISTERS OF THE CATHEDRAL, TARRAGONA, SPAIN



DOORWAY, CONVENT OF OUR LADY OF THE SIERRA, SEGOVIA, SPAIN







## THE PUBLISHERS' PAGE

WE rather imagine that architects who subscribe to an architectural publication do so in hopes that at least occasionally they will find within its pages an idea which they may embody in some design on which they may be working, or which may serve as inspiration for the solution of some problem on which they may be engaged. We select our illustrations, and text articles for that matter, with this thought always in mind. We may show, for example, a photograph of a church which may not in every detail of its design meet with our approval. And yet the cupola of that church may, according to our ideas again, have been very successfully treated. Or, perhaps, it may be a tall office building, in the design of which the stipulations imposed by the zoning law may have been particularly well complied with, although certain of its other details may be mediocre. And yet, naturally, we must show the building in its entirety in each case, in order that the particular feature can be correctly appreciated by seeing it in its relation to the complete composition of which it is a part. After all, many architects are limited in the development of their designs by conditions which do not appear when seeing a photograph only of the completed structure. It is to be our policy in the future to make mention of the more important of these controlling conditions whenever possible, and thereby eliminate much of the criticism that is now placed on the architect's shoulders by not knowing what the conditions of the problem were. In fact, it is our ambition to reduce the photographic illustrations of the finished building structure somewhat, and elaborate on the problems involved in the design, and illustrate and describe their solution. Drawings or photographs necessary to make these clear will be shown. In considering material to send us for publication, contributors are requested to please keep this in mind. We want the "inside story"—what were the conditions governing the problem and how was it solved? Another architect, a subscriber to THE AMERICAN ARCHITECT, may at some future time be confronted with a problem governed by certain similar conditions as yours, and your solution may be of value and interest to him. If it is, you may be sure that your reputation in the profession has been enhanced.

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It is said that mental impressions resulting from what we see are retained longer and are more vivid than those produced by what we hear or read. These impressions, transferred to the printed page or related as personal experiences, are often of unusual interest. Dwight James Baum, architect, of New York, recently enjoyed a prolonged visit through the West and Northwest. On this journey

Mr. Baum personally photographed many buildings of excellent and unusual architectural interest in these sections of the United States. We consider ourselves fortunate in being able to present to the readers of THE AMERICAN ARCHITECT a series of articles by Mr. Baum, accompanied by reproductions of many of the photographs referred to. These articles record Mr. Baum's impressions of what he saw, with reference to architecture in general and ecclesiastical architecture in particular, in California and the Northwest, and will appear in early issues of this journal.

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While on the subject of impressions we are reminded that L. W. C. Tuthill has prepared an article on a layman's impressions of brickwork. While on a trip through the early settled districts of Virginia, Mr. Tuthill was attracted by the character of the brickwork which predominates in those districts. These impressions, as related by Mr. Tuthill, we trust, will be found interesting and valuable.

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If wars are primarily destructive, it is also true that they may be constructive. Constructive lessons learned from the world conflict have been and are noticed from time to time. An advance, important from the humanitarian, medical and architectural point of view, that can be cited in this connection is the matter of hospital design. One of the destructive effects of the war served to center attention on the housing and care of the sick, injured, and wounded. As a result, those engaged in the design or operation of hospitals have learned the value of good hospital design and the importance attached to their location and environment. The various departments in the hospital must function quickly and smoothly. Many institutions or portions of them have special requirements. It has been learned that the proper housing of the hospital staff is of equal importance to the comfort of the patients. Now that the war is a decade behind us, it seems an opportune time to review the progress that has been made in hospital design. In a future issue Edward F. Stevens, F. A. I. A., of the firm of Stevens & Lee, will write on "What the Past Fifteen Years Have Taught Us in Hospital Design and Construction."

The leading article in the November 5th issue, "The Design of Airports," by George B. Ford, an expert in this line, will present to architects certain fundamental principles on which the layout of a flying field is based. On account of recent efforts in the development of aviation in this country, this material is especially timely and is of great value to architects.



OLD CHURCH AT MIDDLEBURY, VT.

WORKING PHOTOGRAPHS—SERIES II

FROM THE ORIGINAL NEGATIVE BY DWIGHT JAMES BAUM, ARCHITECT

*THE AMERICAN ARCHITECT*