

THE INLAND ARCHITECT AND NEWS RECORD

VOL. LI

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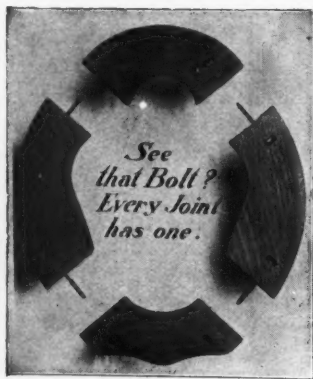
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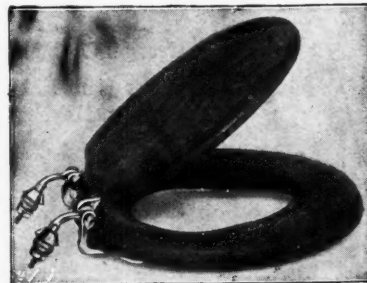
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Convention Industrial Education Society.

Of great interest to all concerned in improvement in the work of artisans was the convention of the National Society for the Promotion of Industrial Education, held in Chicago in January. It was the first annual convention of the society and was attended by heads of public schools, leading universities, technical and trade schools. Prominent manufacturers also were there, and told of their experiences with the old apprenticeship system, and with the modern substitutes. Some of the most carefully prepared papers were delivered at the banquet. That of Dr. Charles W. Eliot, president of Harvard University, is published in this number and will well repay the careful consideration of all those interested in the material and moral welfare of the country. Another address of especial importance was that of James W. Van Cleave, president National Manufacturers' Association, the largest association of manufacturers in the world. President Roosevelt showed his interest in the object of the society by a letter which was read at the banquet. The letter well expresses the sentiments of a large majority of the members of the society, and much of it is here given:

"My interest in this cause arises not only out of the important results to be achieved by industrial education both for the wage-earner and the manufacturer, but more than all else out of the desire to see the American boy have his best opportunity for development. Today the boy of fourteen who leaves the public school finds the door to industrial efficiency closed. The apprenticeship system has practically disappeared. Unless he is given an opportunity for industrial training by a combination of school and shop instruction his chance for such training is small, and he is likely to continue to spend, as he does today, the years between fourteen and eighteen in minor occupations of an unfruitful character—occupations which neither minister to his intellectual nor his moral betterment. In the interest, therefore, of the American boy I welcome the efforts of any society like this to focus public attention upon the question and to suggest practical methods for solving it."

Various Views on Industrial Education.

Three classes were prominent in the convention; each expressed convictions based largely upon observations from its especial point of view. The educators or schoolmen urged the value of more general culture among those learning trades; the manufacturers laid most stress upon shop work, but recognized the importance of teaching the theory of a trade along with its practice, while others such

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NEXT CONVENTION AT DETROIT, MICH.

as Prof. H. Schneider of the University of Cincinnati, attached equal importance to school and shop work. The course in operation at the University of Cincinnati requires that the student devote alternate weeks to shop and school work, and the contract with manufacturers provides for a payment to the student for his shopwork which is increased at a stated rate periodically. This system has worked so successfully in practice that over 2,000 applications were made in one year for admission to the course while less than 100 could be accommodated. This system it would seem could be applied successfully to the teaching of the building trades, and should result in well nigh ideal mechanics for the execution of building plans.

**Trade Unions
Must Be
Considered.**

It was well recognized by the convention that any system of teaching the trades must take into consideration the attitude of the trade unions. A representative of a trade union addressed the convention, and stated emphatically that the unions were not antagonistic to the teaching of trades by trade schools, provided all branches of the trade were taught so that the student would learn not only some but all of the parts of the trade. The unions do object decidedly to an apprentice being kept upon a limited class of operations for an unlimited time with the object of greater profit to the manufacturer. It was pointed out that some trades were taking the initiative to train apprentices to become proficient in all parts of the trade adopted. The unions denounce the trade schools that claim ability to turn out skilled mechanics by a few months' instruction; the experience of the skilled artisan is that years rather than months are required to thoroughly learn a trade. The drift of the convention was toward the establishment of schools that would teach the theory and practice of trades, and that these should be maintained at public expense. The successful operation of agricultural schools was thought to establish a precedent for these trade schools. The great interests, educational and commercial, that are striving for the best solution of the problem of industrial and trade education give assurance that in the near future adequate provision will be made for the American boy to become proficient in any trade that he may elect to follow.

Awards in Competitions, Old and New.

It is not many years back when the awards in competitions depended largely upon the beautiful rendering in colors of the exterior perspective. It was the time when the judges of competitions were men of any profession or calling save that of architecture. Such judges knew no standard by which to measure the proportions, adaptability, harmony, or cost of a design. Naturally the beautiful picture was favored, and a design often selected, poorly adapted to its object, and the unexpected cost of which was a burden grievous to bear. With the advent of the professional adviser, now usually demanded, much of the haphazard procedure of former days has disappeared. The new conditions have emphasized the importance of the plan in competition awards, and the possible influence of the beautiful picturing of the design is minimized or entirely eliminated. Architects now find that too much care cannot be given to the study of the practical requirements of the plan, that it may best meet the objects for which the building is intended. In a somewhat recent competition for a great municipal building, one of the competitors

spent several weeks with the heads of the various departments to learn wherein the planning of the old building could be improved upon, and what better provision could be made for economy and efficiency of administration. Two other designs were pronounced preferable as to the exterior appearance, but the building was awarded to the competitor who had so carefully studied and worked out the plan. Another similar example is found in the competition lately decided for the new county building for London. No competition in recent years in England has been of greater importance. The competitors numbered many architects of the highest professional reputation, yet the award was won by a young man of 29 with no previous work of importance to his record. He, however, was fortunately situated to obtain accurate information as to the requirements of the service for which the building is to be used; he worked out the most adequate plan and won. His exterior while direct, well balanced and of architectural interest, is a disappointment to those who think the building should be an imposing structure, expressive of the commanding position of London, the metropolis of the world.

**Architects As
Ministers of
Beauty.**

The graceful title of Ministers of Beauty that has been applied to the architects as a body is far from inappropriate. Scarcely a day passes that the architects, either as individuals or as members of architectural clubs and societies, are not called upon to suggest and work out problems for the improvement and beautification of municipalities. In many of these the organic side requires first attention and there is a natural development toward greater civic harmony. Chicago may be taken as an example of what is occurring in a greater or lesser degree throughout the country. Here the great projects for municipal improvement and beautification, based upon the plans of architects seem near realization. Already a great public park on the Lake Front is nearing completion; a continuation to the south by a connecting boulevard to Jackson Park with the lake at the east and a series of lagoons along the west is a growing possibility. A further scheme under consideration for the improvement of the Lake Front is the building of a great harbor at the mouth of the Chicago river. The questions of public comfort stations and of street lamp posts of attractive design are engaging public attention, and competitions are under way by the Architectural Club to provide acceptable designs for these purposes. The lamp post competition foreshadows the execution of the project by property owners along various business streets to join in elaborate plans for street lighting that will give beauty and distinction to the streets so treated. These are some of the important subjects depending largely upon the local architects for solution. Similar conditions prevail the country over, and cannot but add prestige to the profession of architecture. They tend to educate the public taste, and must result in greater opportunities for architects.

The splendid record of results achieved by the Chicago convention of the American Institute was a tribute to the intelligent and untiring efforts of the committees working under the direction of President Day. The list of committees for 1908 to act with President Gilbert gives the utmost promise for efficient service and a continuation of the vigorous policy of the past year.

THE ORGAN ARCHITECTURALLY CONSIDERED

BY GEORGE ASHDOWN AUDSLEY, LL. D., ARCHITECT



It is much to be regretted that so little attention has been paid to matters connected with the nature and requirements of the pipe organ by architects and others more or less directly interested in its proper position and accommodation in churches, concert rooms, and dwelling houses. It has for many years past been a cause of lamentation to organ builders that so little interest has been taken and regard paid by architects to these very important matters, and a builder feels, under these adverse circumstances, that he has the right to be congratulated when he has the opportunity of erecting a fine organ in a place suitable, both in size and general treatment, for its accommodation.

First, respecting matters connected with the church organ and its proper position and reception, we may say, in substance, what we have more fully remarked elsewhere.* The plans of churches vary so considerably both in general dimensions and in the disposition of their parts, that it is impossible to formulate hard and fast rules or definite instructions respecting the location or accommodation of the organ. In churches already erected the provisions made by their architects practically settle the question of location in almost every case, and we are compelled to say that, owing to the very general ignorance of the architectural profession on all matters pertaining to the organ, inadequate provisions are made and unsuitable places are provided for the reception of the instrument in the majority of modern churches.

It is only just to remark, after what has been said, that architects are sometimes blamed without valid reason; for even when they have succeeded in providing ample accommodation for organs of sufficient size for their churches, they are blamed by those over-ambitious wiseacres who have been induced to order instruments out of all proportion to the places they occupy. Cramping, crowding, and smothering, and a host of other evils attend such unreasonable proceedings and the architects get condemned for faults they have not been guilty of. It is, however, highly necessary that architects should acquaint themselves with the nature, construction and requirements of the organ sufficiently to enable them to provide proper accommodation for the instruments (of adequate size) to be placed in their churches. Even a rudimentary knowledge would prevent mistakes being made. Why architects should give the organ so little attention has long been a matter of surprise to all interested in church building, for it certainly is a most important piece of church furniture. It is quite as necessary that the organ as that the altar or pulpit should be properly placed. Apart from this, it may, and certainly should, be made a most beautiful and effective feature in a church interior. To secure this the external design of the organ should never be left to the "tender mercies" of the organ builder.

"The organ can go anywhere; any sort of a place will do for the organ!" are ideas which have been only too prevalent among church builders; and only too often acted upon when the slightest difficulty with regard to space has presented itself, or when peculiarities of site have called for special ingenuity and care. The organ is not an instrument that can be packed away in any place which is, in the opinion of the architect who is ignorant of the demands of the organ, unsuitable for any other purpose. An organ, if it is to be of any real value, must be carefully treated from an acoustical as well as an artistical point of view; for it must be borne in mind that an organ which cannot be properly *seen* cannot be properly *heard*; and that an organ which cannot be properly heard is practically a valueless instrument. This may be accepted as an axiom of general application.

We are disposed, from our own observations, to believe that some church architects have looked upon the organ as a necessary evil—a thing with which they had little to do, except it was to take care that it was made as little of as possible, and kept well out of sight; unfortunately this meant out of hearing also. When it is realized that an ordinary church organ can, and commonly does, range in cost from \$5,000 to \$20,000, it is surely evident that adequate provision should in all cases be made for its reception in a position well calculated to enhance its tonal qualities. A church architect should be sufficiently conversant with all the important details relating to organ requirements and appointments, as to be in the position to dictate the size of the instrument necessary for any church designed by him, and to provide everything requisite for its accommodation, proper display, and sustentation, as we have before remarked in part. This knowledge would not only enable but dispose him to keep the designing of the external case-work of the organ in his own hands, thereby preventing the perpetration of such monstrosities as too frequently leave the workshops of modern organ builders. This branch of the church architect's obvious duties have been so much neglected that it is, perhaps, not too much to say that there are not a dozen properly treated and thoroughly artistic organ cases to be found in churches in this country today. A very different state of affairs obtain in Europe. On the subject of organ case designing we shall offer a few suggestions in another article.

While we are expected, in the dissertation of which the present article is chiefly an introduction, to confine our remarks to matters architectural and practical, it cannot be out of place to briefly explain what a church organ properly is or should be. A church organ to be thoroughly serviceable and appropriate, from both a tonal and an artistic point of view, must be schemed and constructed to suit the place in which it is to be erected and the work it will have to do. This is a golden rule which can never be neglected with impunity, but which is very commonly violated.

[To be Continued.]

*In "The Art of Organ-Building."

NOTES ON THE ART OF BUILDING

BY FREDERICK BAUMANN, ARCHITECT



It need not be emphasized that rust is a nuisance. Innumerable ways of protecting iron have been advanced, and all are more or less efficient. Iron is never free from rust and there are no ready means for cleaning it. Rust is apt to grow under any coating and scale it off. This condition is furthered by the ever prevailing expansion and contraction, which causes innumerable slight crevasses in the coating. The remedy known as "Bauer-Barffing"—coating the surface with a film of Fe_2O_3 , through exposure to a heat of 650° ,—is expensive, and, besides, it has proved to be so difficult to bring about that good results were not always accomplished. Painting, and again painting, has been the principal remedy—where iron is exposed.

Where constructive iron parts are to be shielded by fireproof envelopes the required permanent protection of them appears to be far more assured. It becomes possible to bring all surfaces in positive contact with the protecting materials. To effectually bring this about I offer the following suggestions:

FIRST. The construction of all parts be such that all iron surfaces can readily be protected. This means that, above all, the usual hollow spaces in them be abolished for the plain reason that their inclosures are never airtight, so that renewed air will constantly be in contact with them and produce rust.

SECOND. Rust be removed from surfaces as far as it is practicable, and all be covered with protecting lime-water. For a long time it has been known that this, as well as other liquids of basic reaction, has the property of shielding iron against rust.

THIRD. Upon this be put a heavy coat of lime or cement wash.

FOURTH. Then all faces be plastered and lined to a certain thickness with some proper material.

The column is now ready for receiving pipes and may be finished to suit. Girders to be correspondingly enveloped. In case they are double the intervening spaces should be filled. No serious difficulty appears to be in the way of thoroughly accomplishing the object in view.

A few years ago a few columns in a large building about ten years old, had been dismantled and were found to be thickly covered with a threatening rust. The architect in the case ever since constructs columns as above indicated.

FIRE PROTECTION.

The conflagrations in Baltimore and in San Francisco have shown how utterly wanting is the general protection on the part of "fireproof" buildings of the ordinary kind. Not merely that they are visited through their openings by flames from neighboring buildings, but that soon thereafter streams of lurid flames are liable to pour out from these openings which may and do spread fires in every direction. Only here and there were such buildings found to be so situated and in such condition that they retarded and even stemmed the general fire.

In consequence there prevails an opinion to the effect that the entire exterior of a fireproof building should also be made fireproof, and further that all its furniture be incombustible.

The former demand, important that it is, can readily and should in all cases be complied with. The latter demand, however desirable, can be but an additional safeguard, especially in buildings where combustible goods are stored. My opinion is that in all buildings, private residences only excepted, each and every story should in a manner be shut off by itself. There can be no difficulty in doing this and when done it offers the most gratifying advantage of confining a fire to the one story wherein it arises. If all buildings of more than two stories high were so remodeled, fire losses would probably be reduced to less than one-half their present amount, and insurance rates cut down accordingly.

THEATERS.

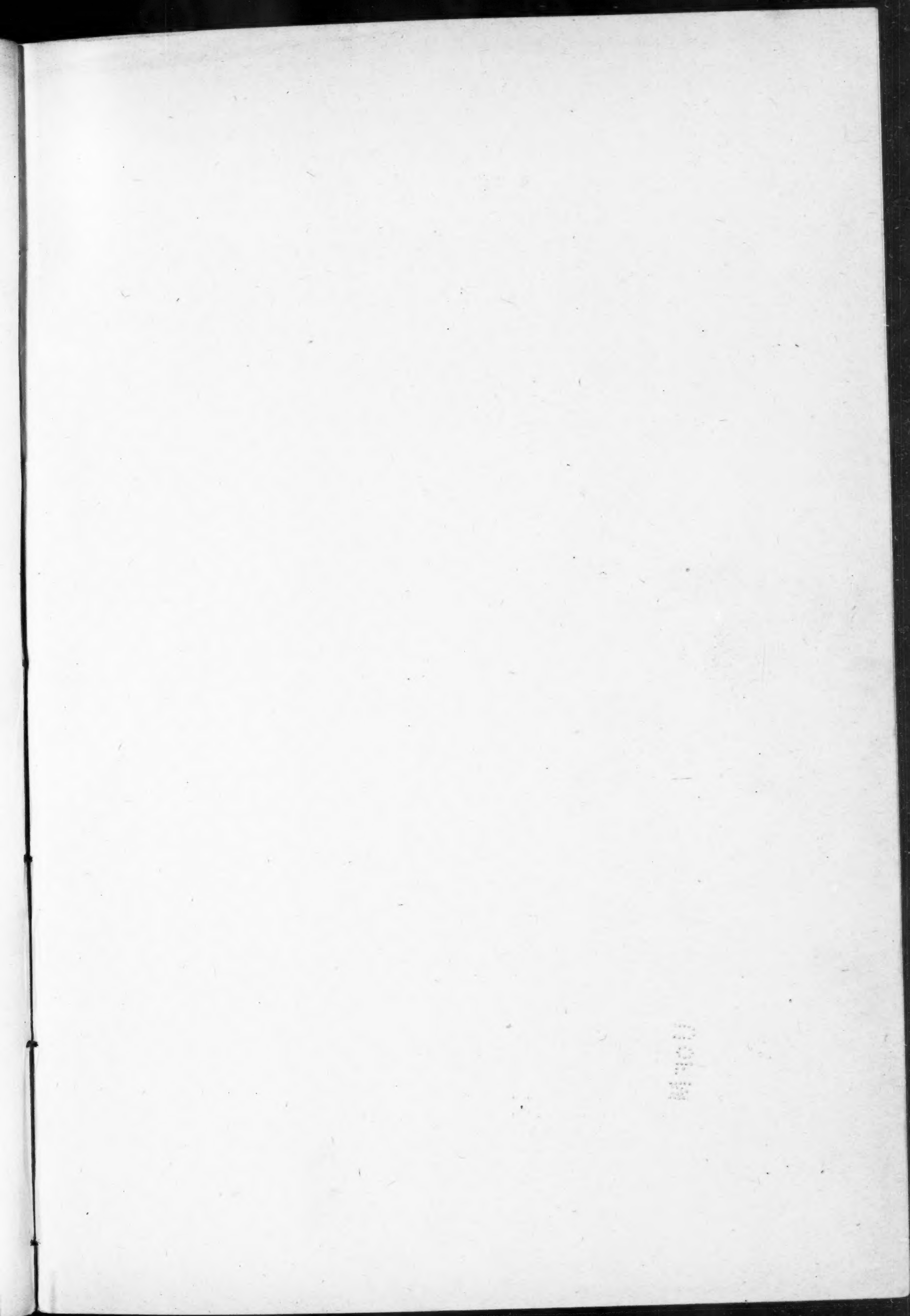
Little attention was paid to the adequate fire protection of theaters prior to the horrible catastrophe in the Iroquois which had but recently been erected as the most perfectly arranged and constructed theater in Chicago. Immediately after that event conferences were held between aldermen, department heads and experts with the intent of enacting new and proper building laws for the erection of wholly new theaters as well as for the thorough improvement of all existing ones. A great deal was done in this regard; but time was pressing and this condition was the more embarrassing because of the serious and complicated problems which had suddenly arisen. Abundant time has passed for considering such problems on all sides and in all their bearings and now a better solution can be expected. This being the case I offer my suggestions:

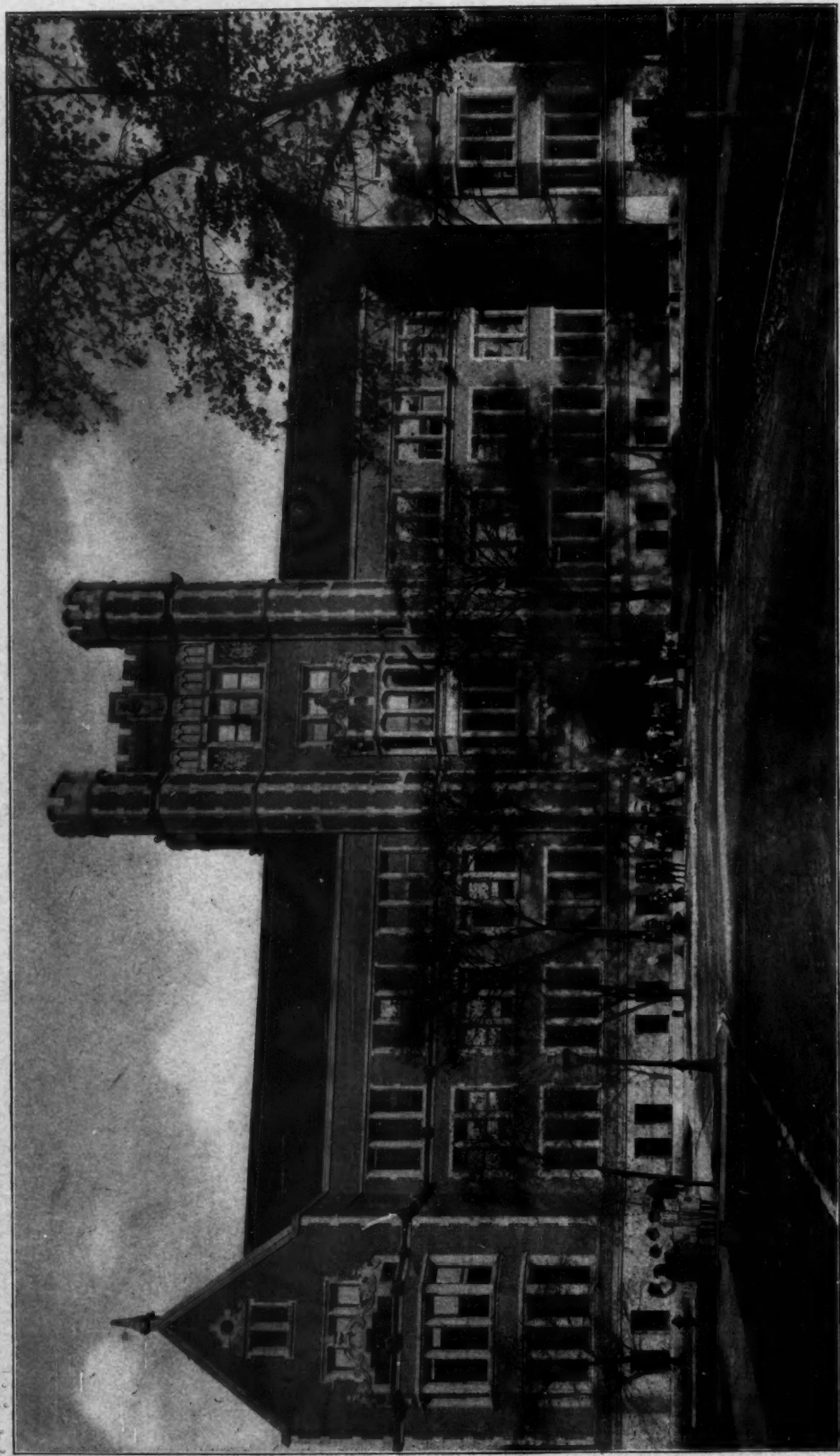
FIRST. There should be no restriction as to the lot. Any lot of sufficient size will do. An inside lot with frontage sufficient for adjoining to the theater an affiliated building at both or even at but one of its sides, can readily be the fittest for the purpose. Now, by implication, this best of conditions is excluded. Approved doors in party wall could be had, leading from ground floor and from balconies into this adjoining building, so that within a very brief space of time every inmate could safely withdraw. As a matter of course every site offers its own way for arrangement of the theater to be built, and it can not fail to happen with positive laws, that in many regards they will and do forbid what in plain fact may be the really preferable arrangement. Hence:

SECOND. Plans for a theater should be submitted to a special expert committee under the building inspector. This authority to specifically investigate the problem, and order the particulars governing its solution. The plans and specifications to be then accordingly completed for final submission.

A number of the prevailing provisions concerning theaters undoubtedly are very proper, while others appear to be insufficient, even objectionable.

(To be Continued.)

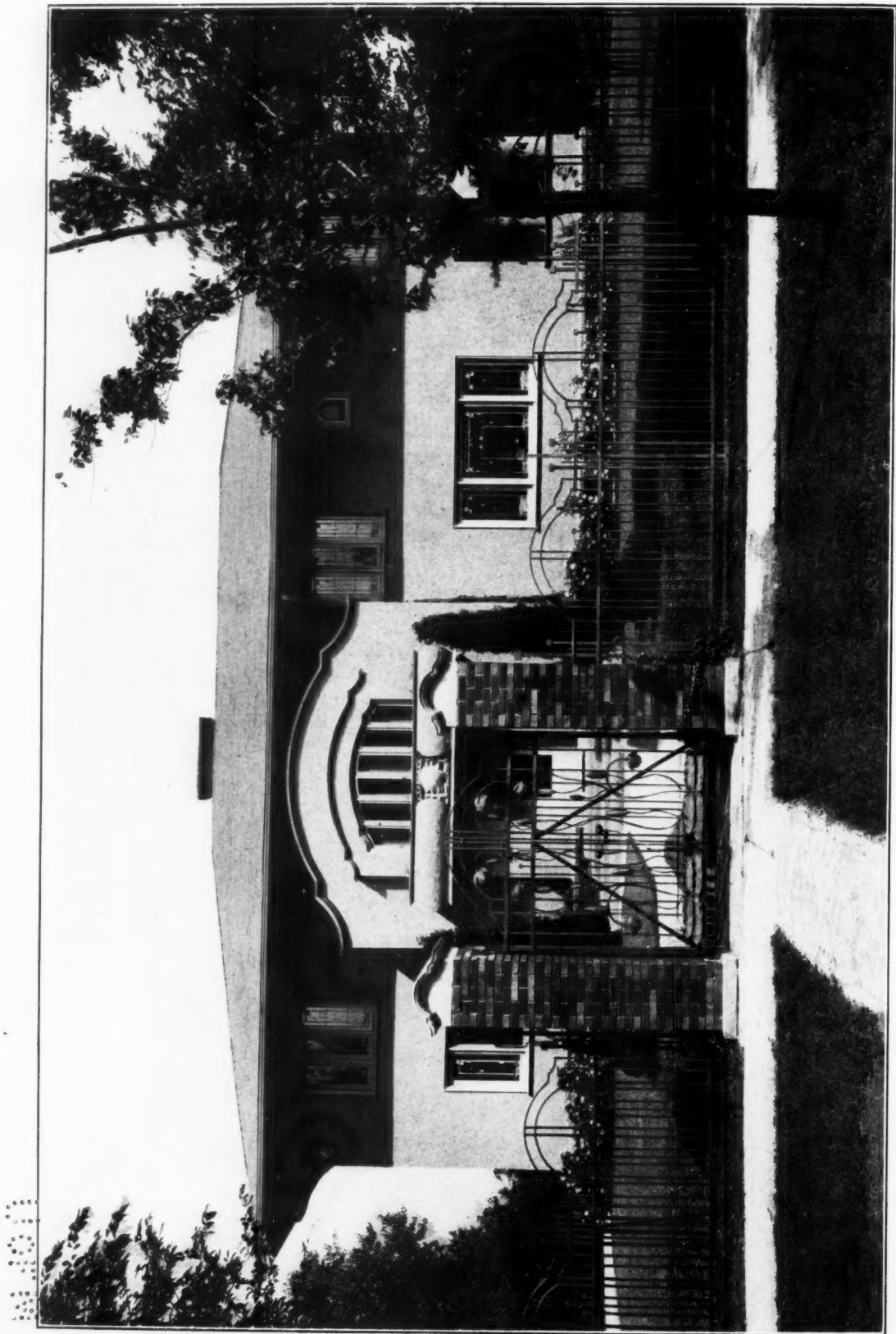




ENGLEWOOD HIGH SCHOOL CHICAGO.
Dwight H. Perkins. Architect for Board of Education.

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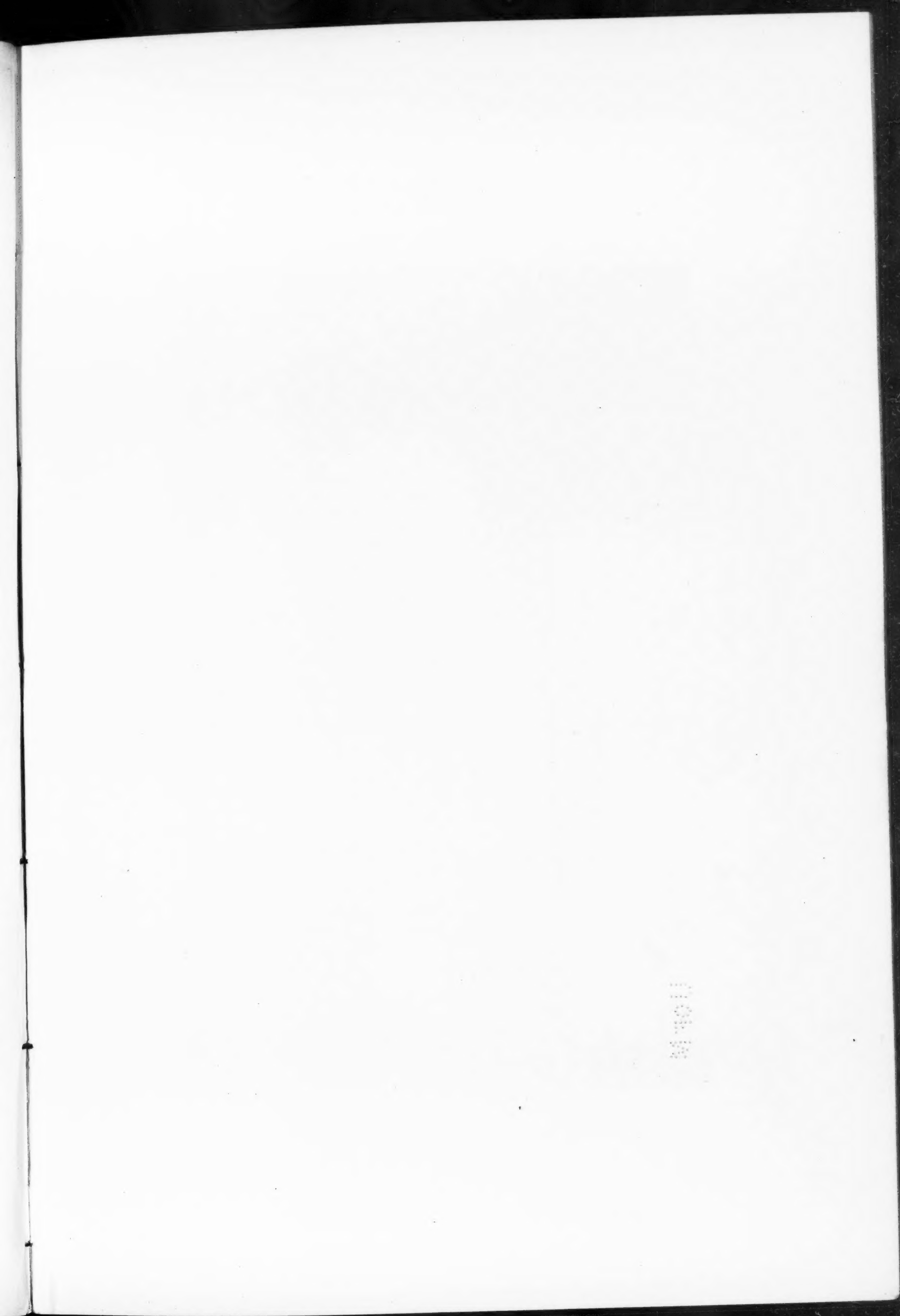
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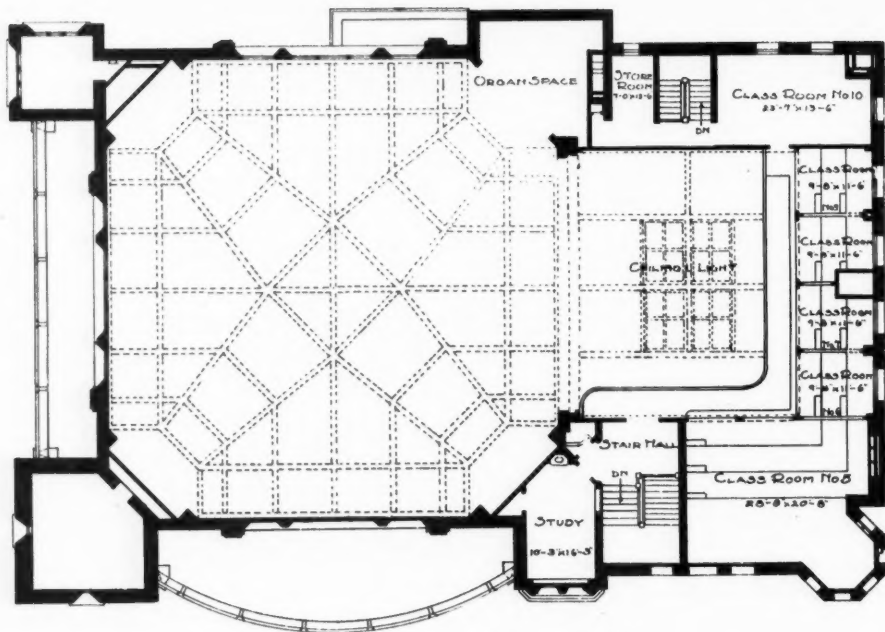


HOUSE OF C. R. ERWIN, OAK PARK, ILL.
George W. Maher, Architect, Chicago.

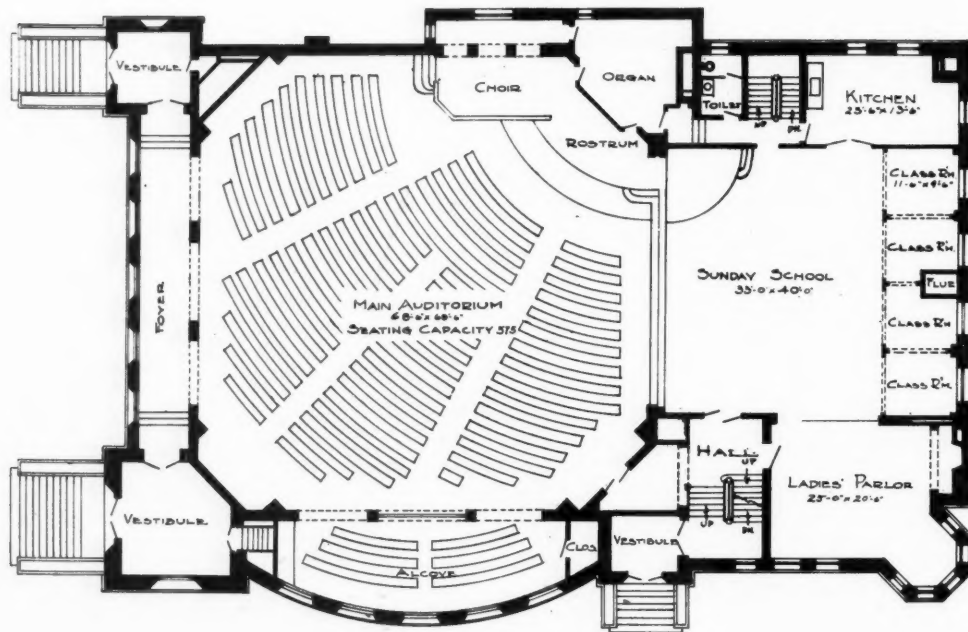


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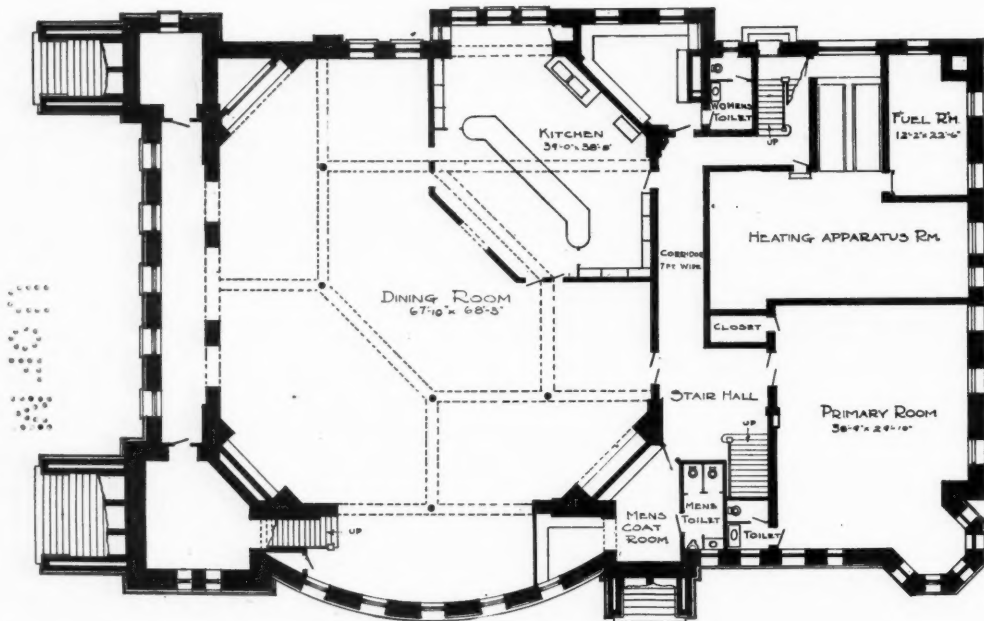




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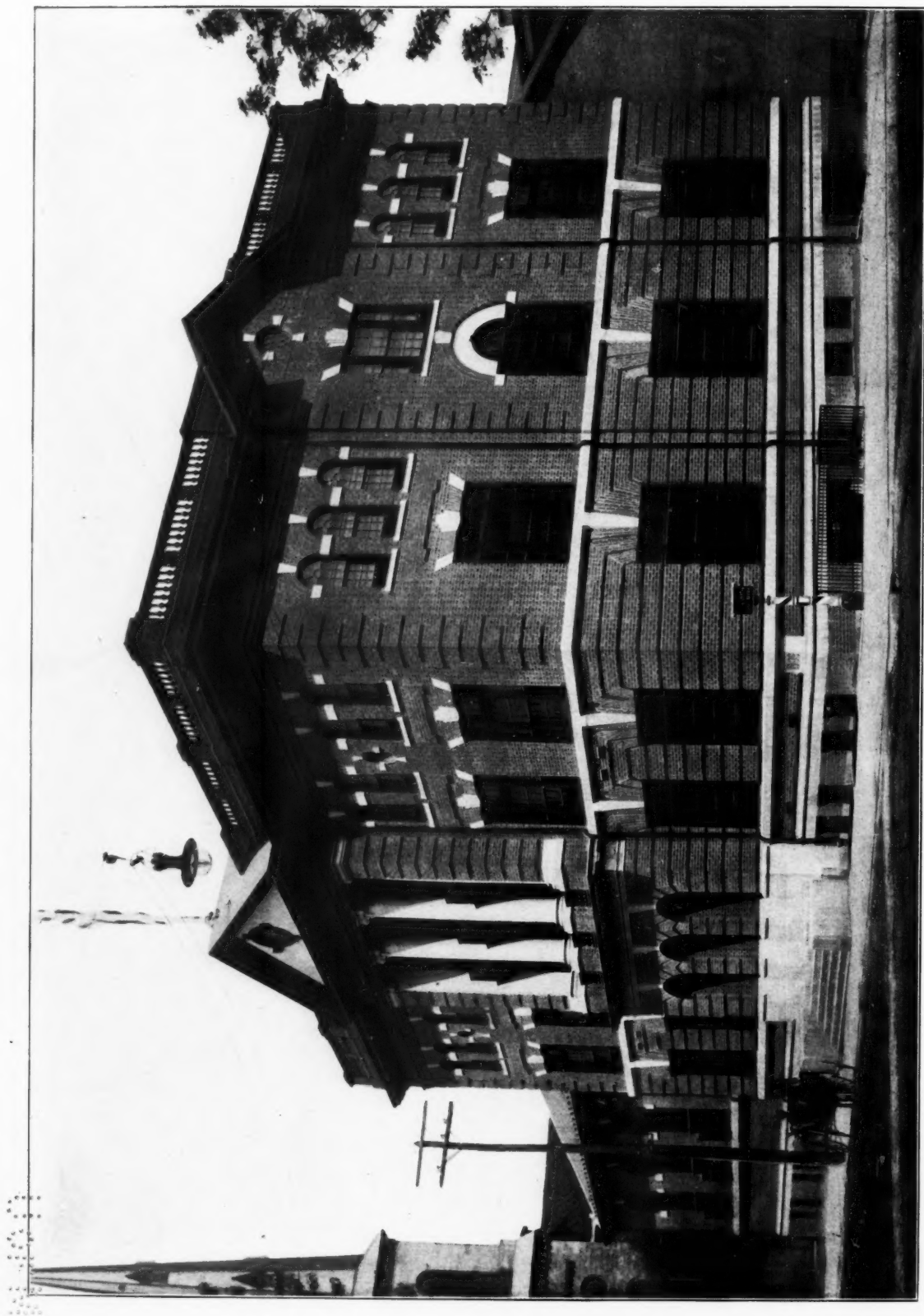


MAIN FLOOR PLAN



BASEMENT PLAN

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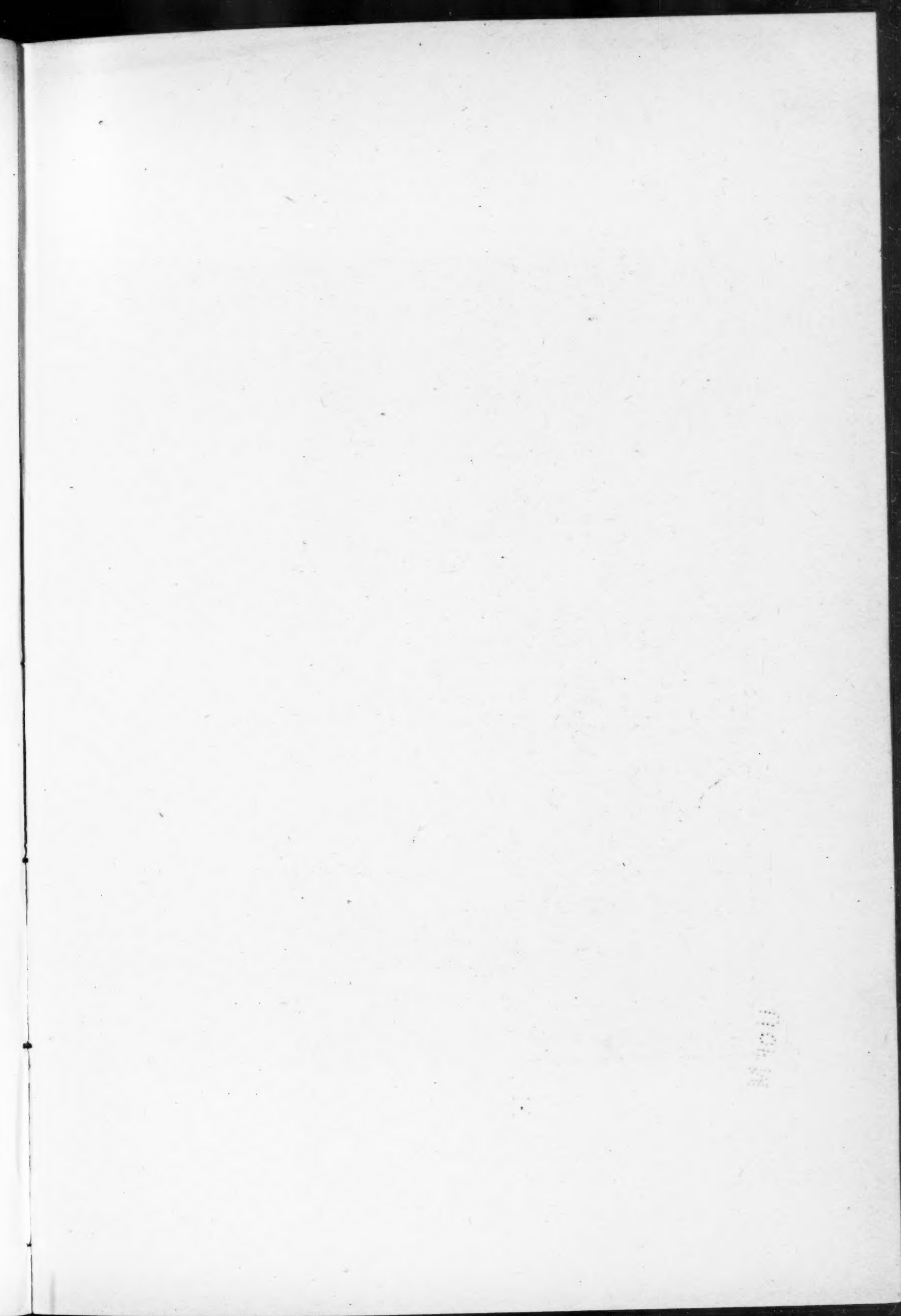
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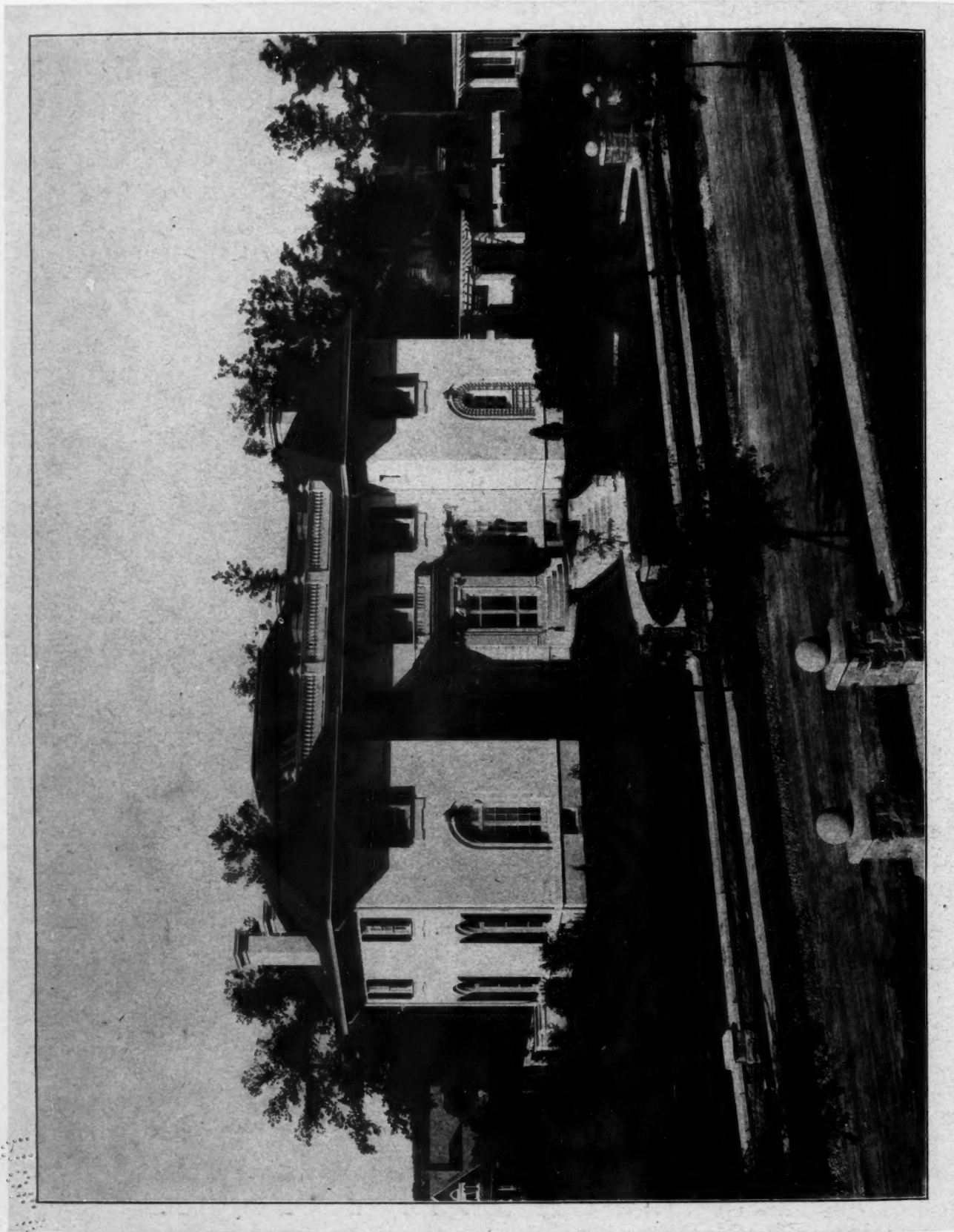
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VIEW IN HALL AND LIVING ROOM, HOUSE OF J. E. GREINER, ROLLAND PARK, MD.
Ellicott & Emmart, Architects, Pittsburgh.





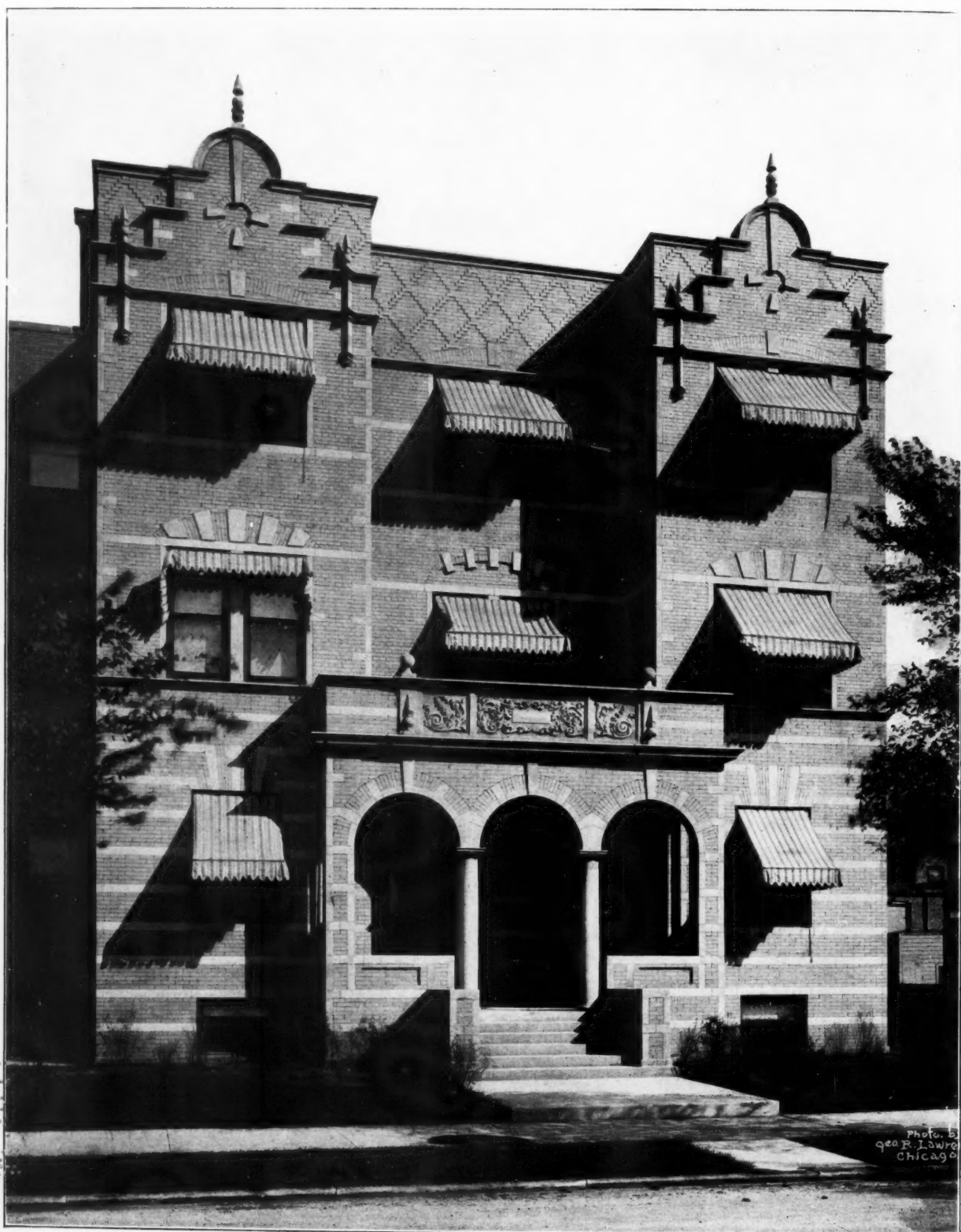
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DRAWING ROOM, HOUSE OF J. E. GREINER, ROLLAND PARK, MD.
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APARTMENT BUILDING, CHICAGO.

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COMMERCIAL BANK BUILDING, CHICAGO

D. H. Burnham & Co., Architects

Lanquist & Illsley, General Contractors

Terra-Cotta Fronts Manufactured and Laid by The Northwestern Terra-Cotta Co.

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VIEW IN BANK DIRECTORS' ROOM, THE COMMERCIAL BANK BUILDING, CHICAGO.
D. H. Burnham & Co., Architects

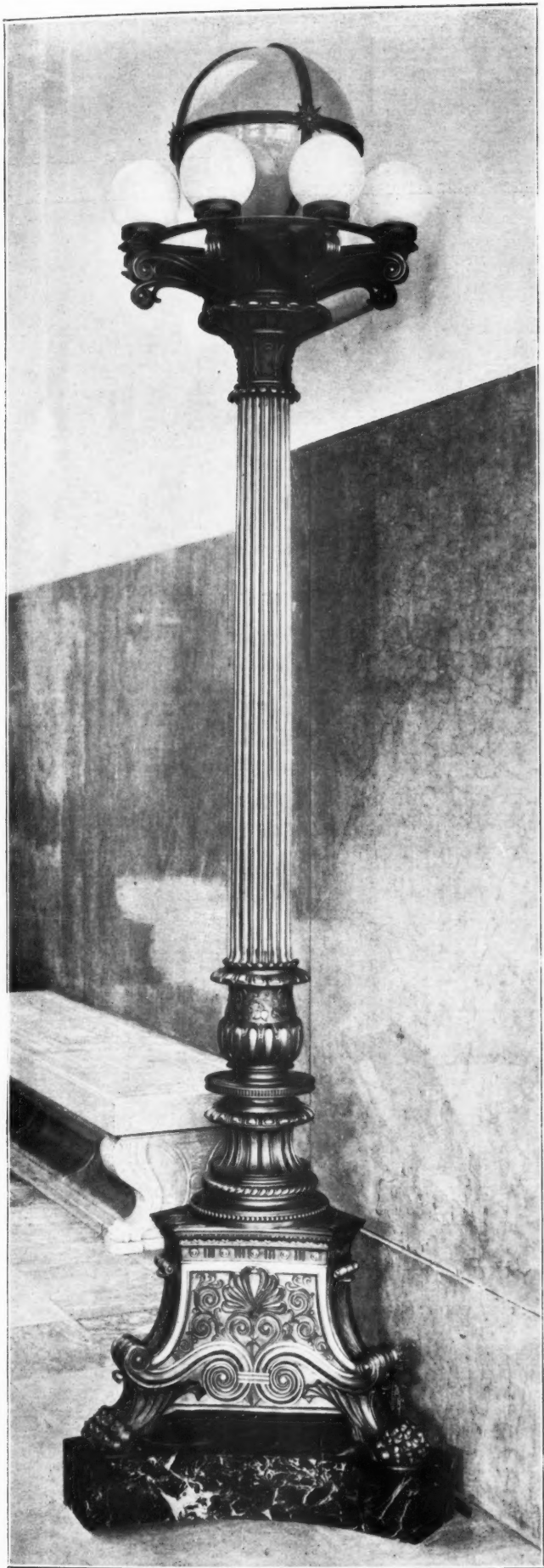
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VIEW IN BANKING ROOM, THE COMMERCIAL BANK BUILDING, CHICAGO.
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One of the Candelabra, F. P. Dinkelberg, Designer
DETAILS, COMMERCIAL BANK BUILDING, CHICAGO
D. H. Burnham & Co., Architects

The Candelabra and All Lighting Fixtures Furnished by Willy H. Lau Company, Chicago



Example of the Special Furniture



Detail of the Grand Stairway

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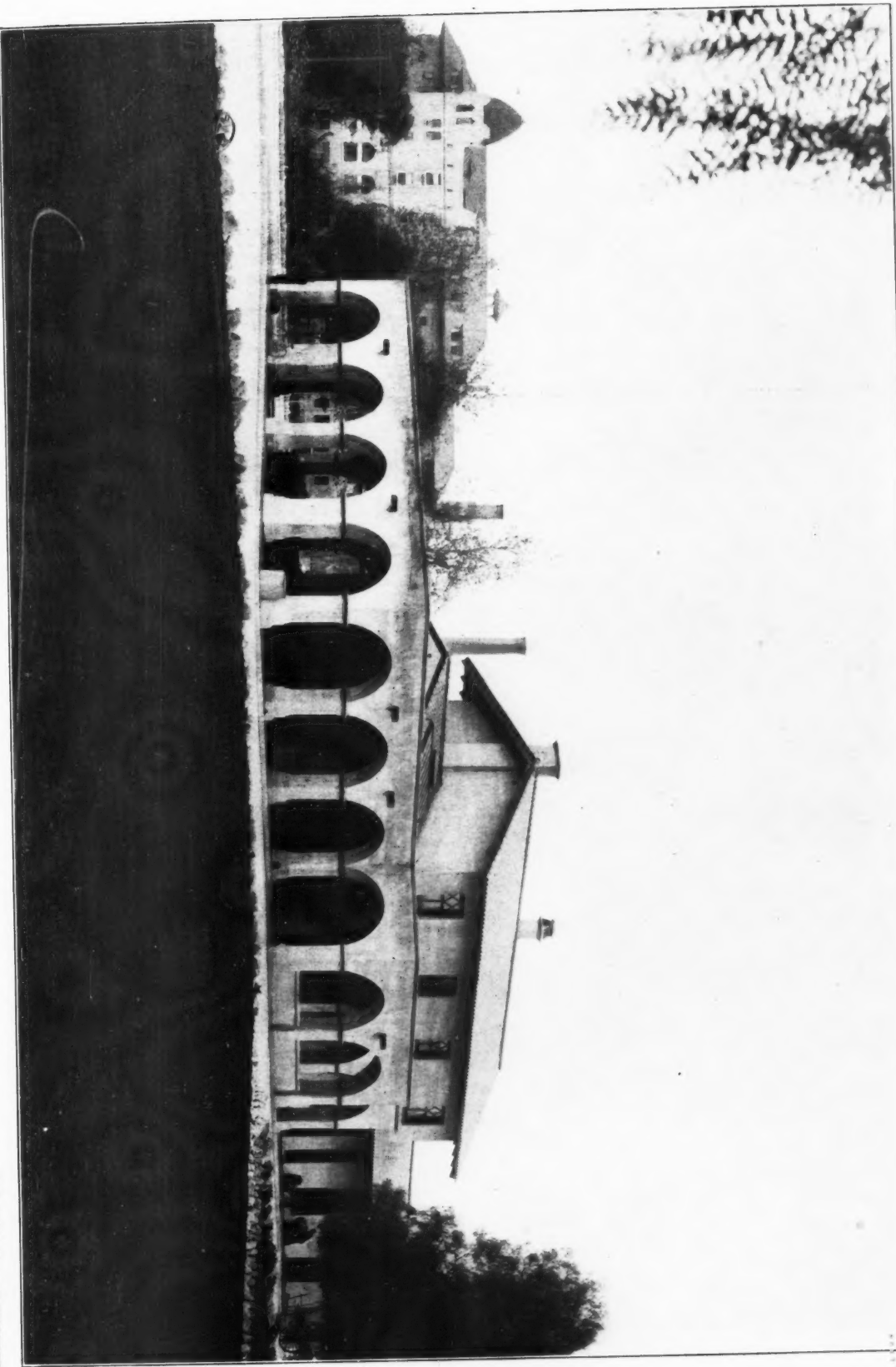
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U. S. POSTOFFICE, OAK PARK, ILL.
J. Knox Taylor, U. S. Supervising Architect.

THE INLAND ARCHITECT
AND NEWS RECORD
FEBRUARY, 1908

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STATION, SANTA BARBARA, CAL. FOR SOUTHERN PACIFIC RAILWAY

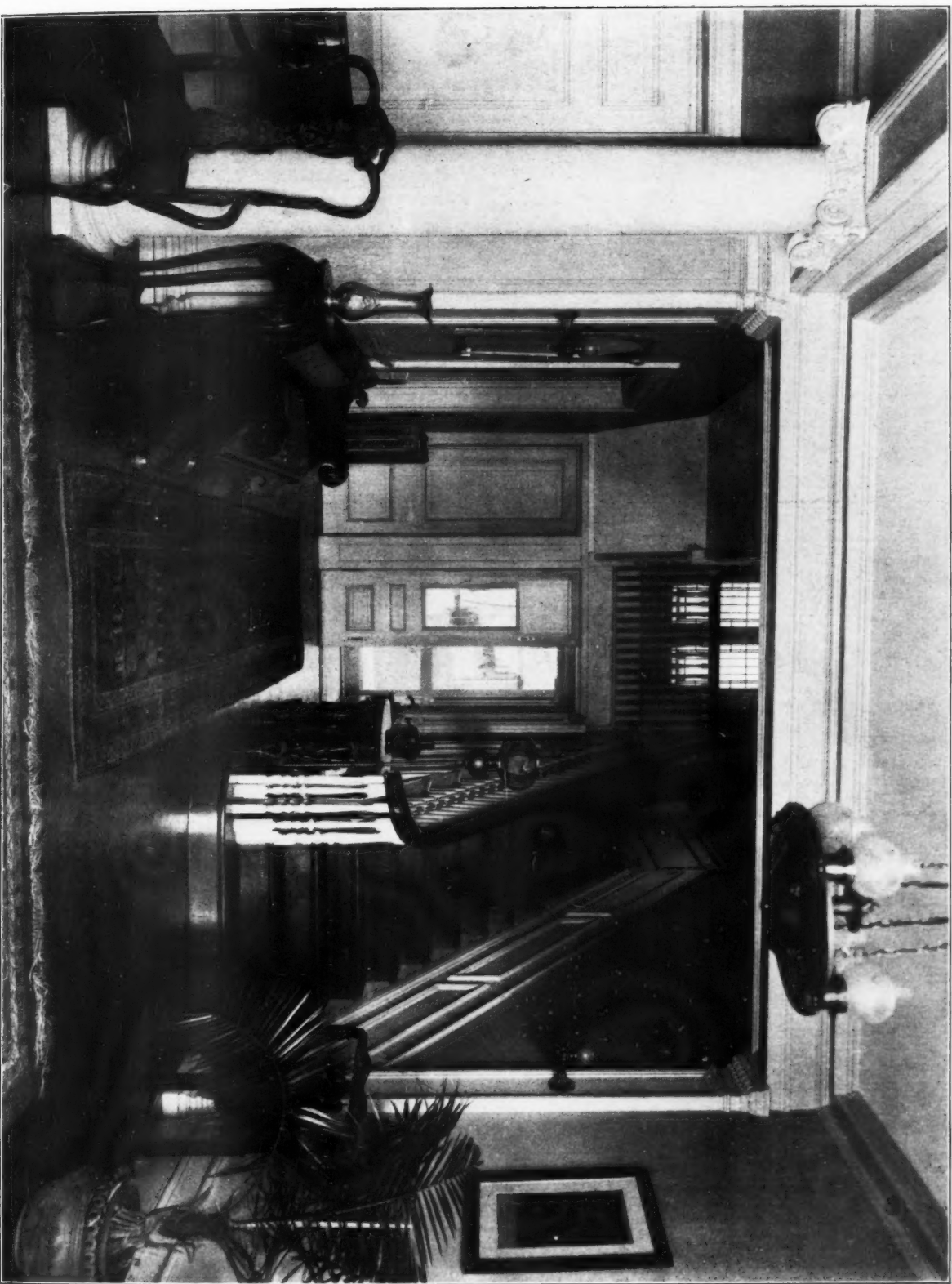
THE INLAND ARCHITECT
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FEBRUARY, 1906

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HOUSE, OAKLAND, CAL.
Charles M. McColl, Architect.

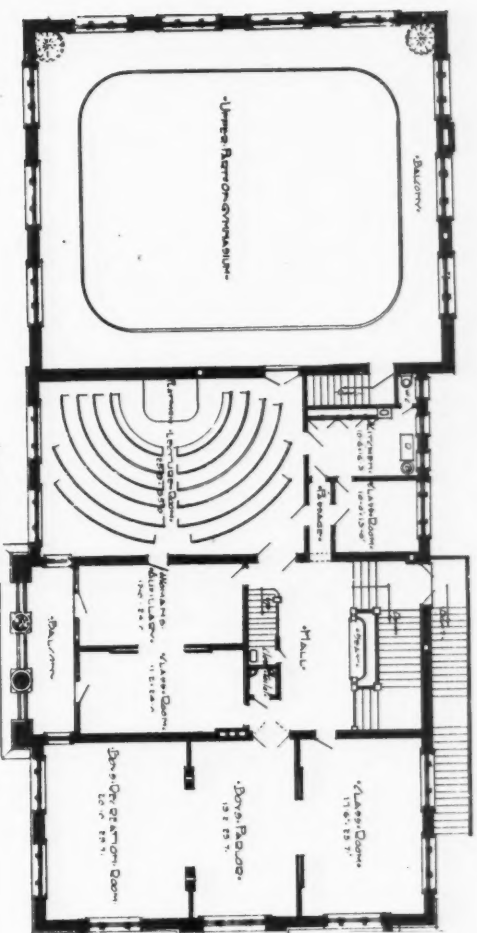
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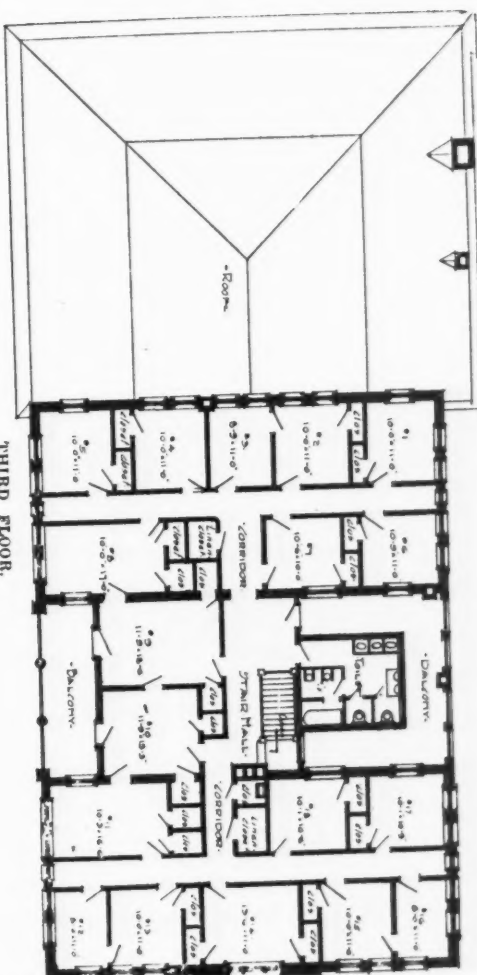
VIEW IN HALL, HOUSE OF J. E. GREINER, ROLLAND PARK, MD.
 Elliott & Emmert, Architects, Pittsburg.

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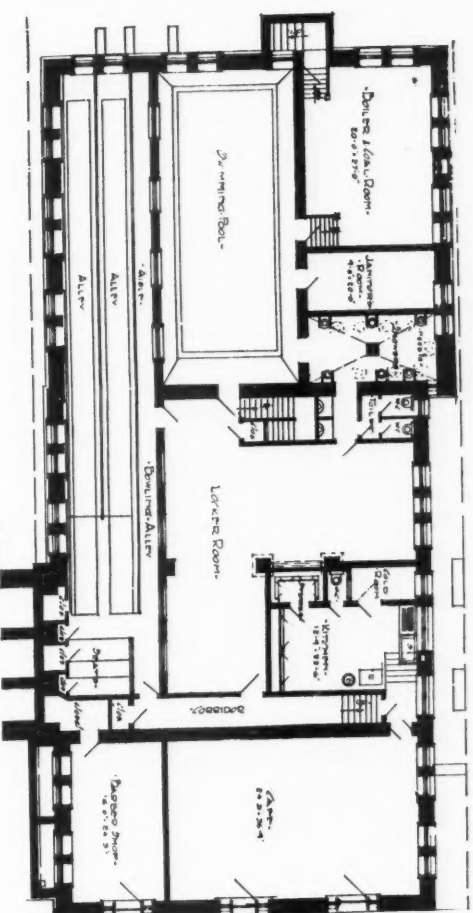
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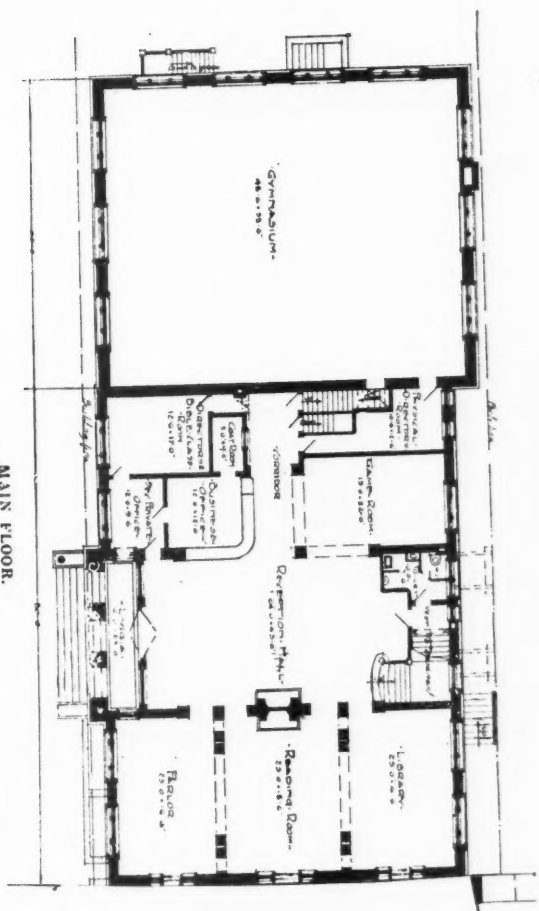
SECOND FLOOR.



THIRD FLOOR.



BASEMENT.

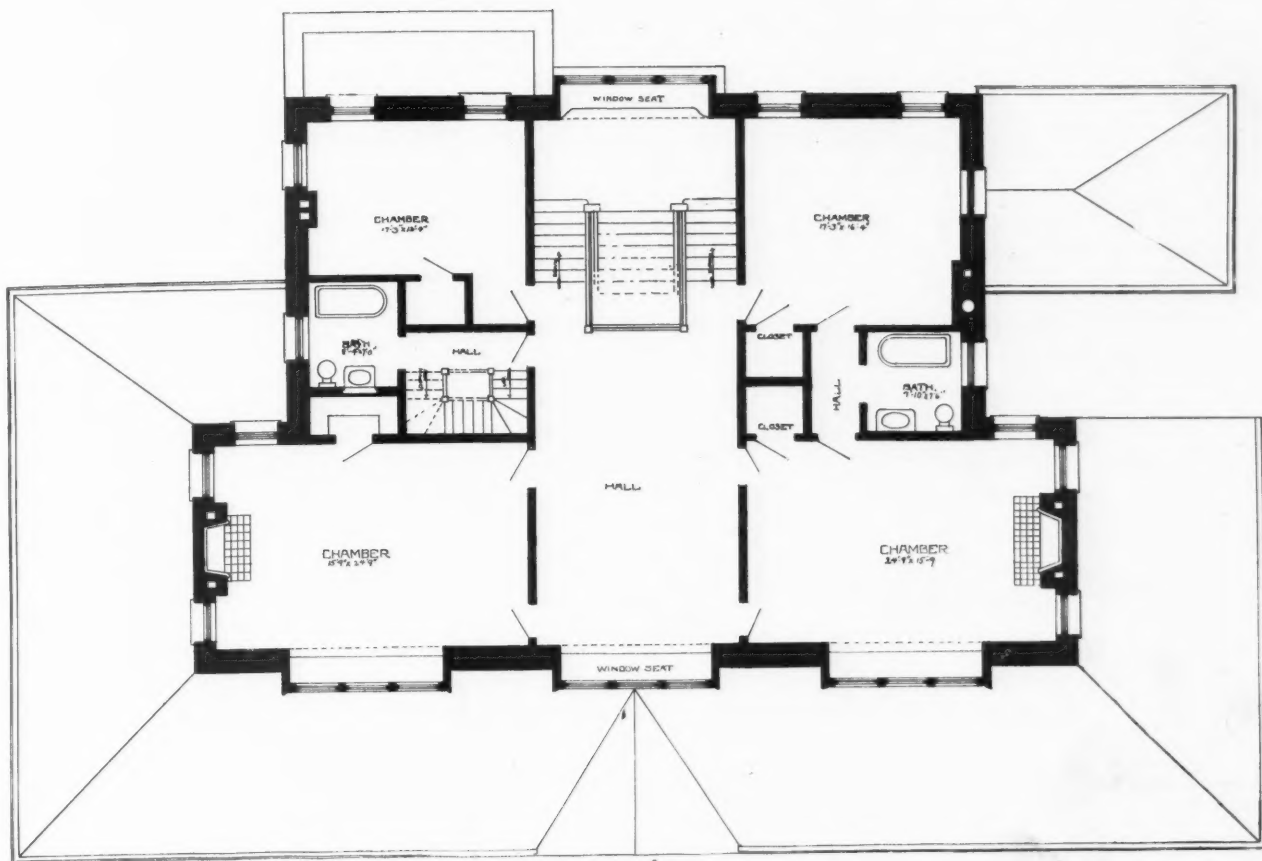


MAIN FLOOR.

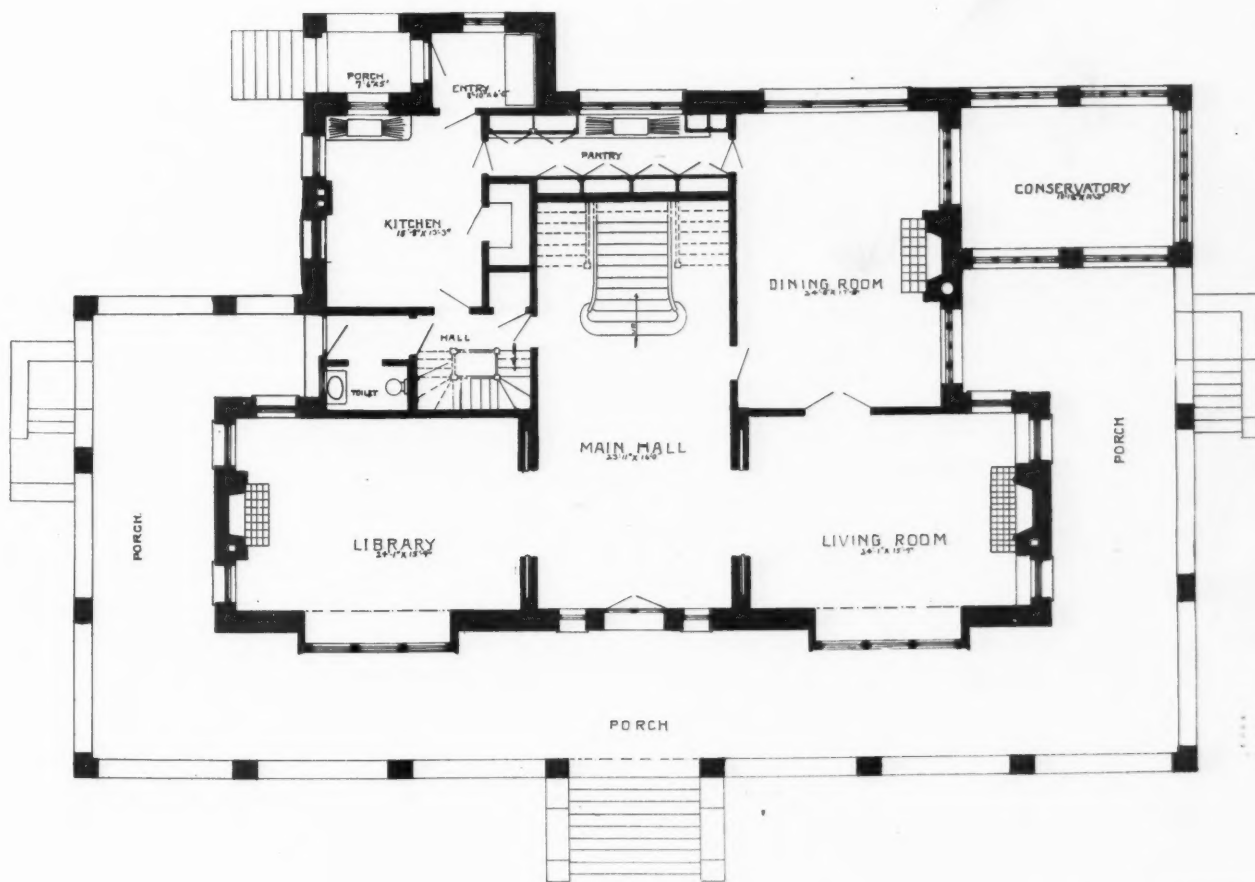
FLOOR PLANS, Y. M. C. A. BUILDING, LEBANON, PA.
A. A. Richter, Architect.

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FEBRUARY, 1908

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SECOND FLOOR PLAN



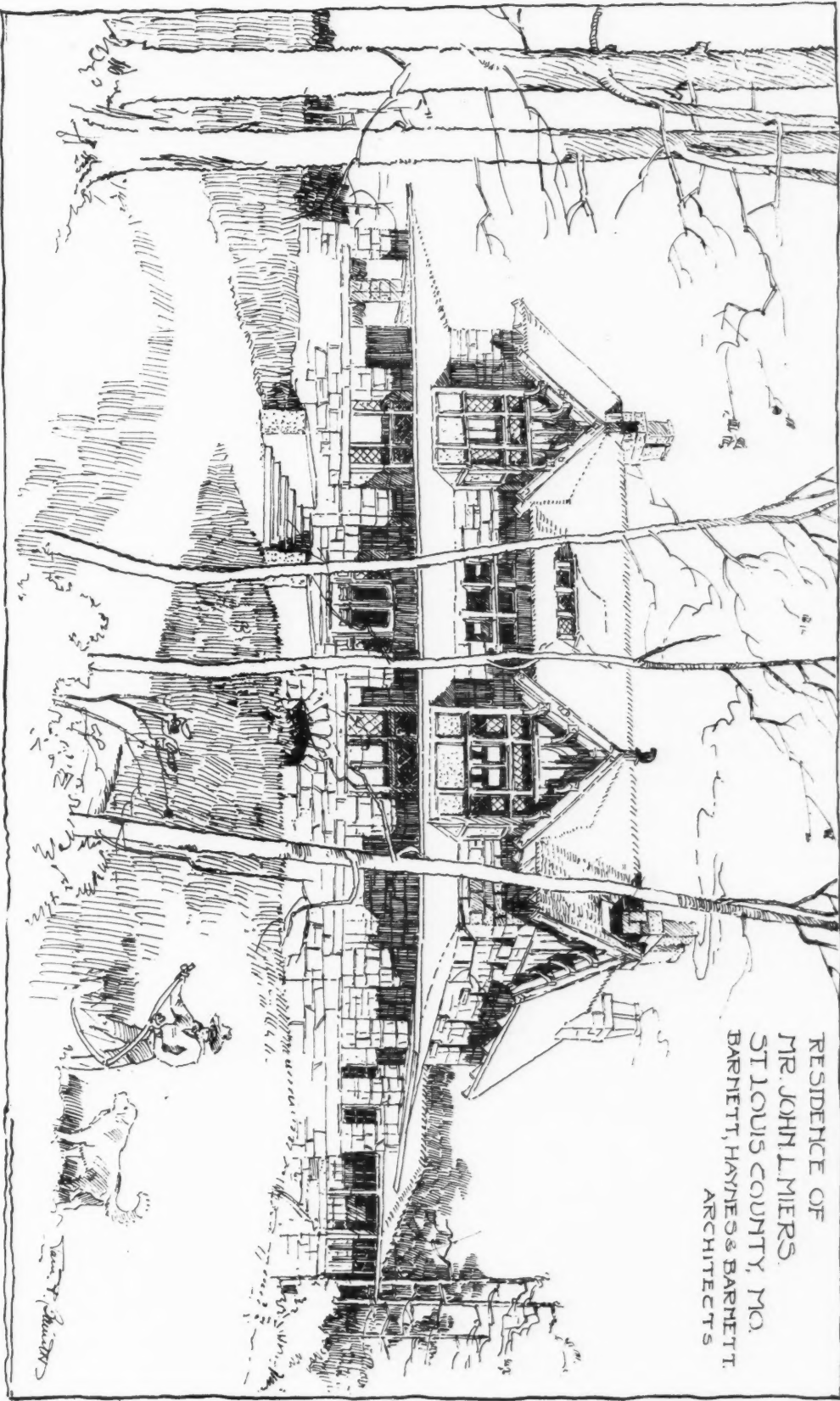
FIRST FLOOR PLAN

FLOOR PLANS, HOUSE OF JOHN L. MIERS, ST. LOUIS COUNTY, MO.
Barnett, Haynes & Barnett, Architects.

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FEBRUARY, 1908

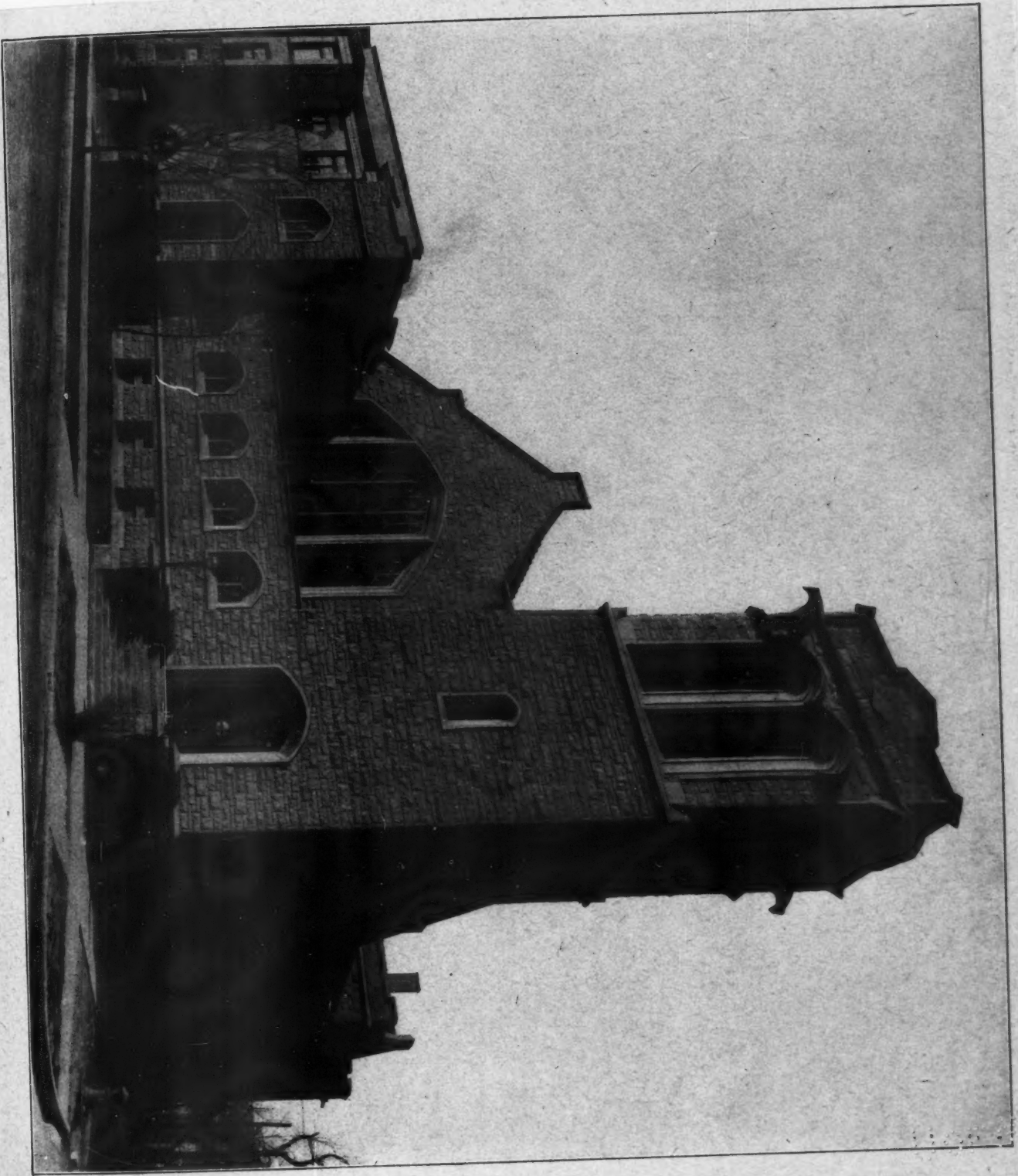
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RESIDENCE OF MR. JOHN L. MIERS, ST. LOUIS COUNTY, MO.
Barnett, Haynes & Barnett, Architects.



RESIDENCE OF
MR. JOHN L. MIERS,
ST. LOUIS COUNTY, MO.
BARNETT, HAYNES & BARNETT
ARCHITECTS

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NORTH SHORE CONGREGATIONAL CHURCH, CHICAGO.
Patton & Miller, Architects.

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REINFORCED CONCRETE WORK

BY F. D. WARREN, ARCHITECT—Continued from December



HE variation of this latter is so slight and the factor of disagreement so fractional that it is generally, and may well be, considered uniform; hence the origin of the so-called "Straight Line Formula." This formula, or some modification of it, it is safe to say, is held in greatest favor by designers at the present time and bids fair to become a standard of wide, if not universal, scope. For practical methods as well as theoretical reasons, no better solution has been proposed, and regulations based upon this method of figuring, if made flexible by allowing the amount of reinforcement to determine the location of the neutral axis and this latter to fix the maximum compressive stress, should be a welcome solution of the problem to those who have the best interest of the construction at heart.

This method of computation, unless zealously guarded from pitfalls and shortcomings, cannot give the best of practice, principally for this reason, namely, the use of an insufficient amount of reinforcement. In many cases, by choosing certain sizes, the intent and purpose of this formula may be followed to the letter and yet unreliable and impractical values will result. With certain shapes, provided an allowable compressive stress of only 500 pounds per square inch and a tensile stress in the steel of 16,000 pounds per square inch or more be used, the percentage of reinforcement to care for tension may fall as low as five or six-tenths of 1 per cent. This is barely sufficient to care for stresses caused by temperature changes through a range of 70 degrees Fahrenheit, without allowing for additional stresses caused by shrinkage in setting when this latter works in unison with the former. That these stresses should be considered in addition to the tension caused by bending and the diagonal tension caused by shear is a fact upheld by many of the conservative designers of the day.

Furthermore, experiments have shown that the strength of reinforced concrete beams, within limits, varies nearly in proportion to the variation in the percentage of reinforcement. This fact alone should tend to show that no hard and fast limits can be imposed upon the limiting working stresses of the concrete and the steel as determined by the straight line formula, without sacrificing the many elastic possibilities that may be derived by changes of mixture, percentages of reinforcement, etc.

Results of Regulation.—Should city regulations place such restrictions upon the use of reinforced concrete as has already been done, it may be well to consider some of the results. First, the construction, in order to accomplish certain results and guarantee a factor of safety of 4 or 5, will meet with ill favor on the part of the public on account of unnecessary bulkiness. Second, increased bulkiness means increased cost of the materials and of form work, which burdens fall directly upon the owner. Large sizes cause extra weight upon the footings to be resisted by the soil; hence in poor soils the expense of footings and foundations will be greatly increased. Third, increased cost puts it out of competition with other materials.

Right here it may be interesting to compare reinforced concrete, restricted to the stresses noted above, with hard pine lumber. The working stresses of the latter have been constantly increased until, at present in many

cities, 1,500 pounds per square inch is allowable for both tensile and compressive stresses. This means that, provided the neutral axis of a comparative concrete beam were at its central axis, as is the case with modern wooden beams, the strength of the latter would be three times that of the former. Actually in such a case, were the steel stressed to 16,000 pounds per square inch, the neutral axis would be well above the central axis and thus the strength of the wooden beam might be considered four or more times that of the concrete one of like size. On the other hand, if more reinforcement were used in the tensile side and the concrete beam properly reinforced to care for diagonal tension, shear, continuity over supports or at fixed ends, a reinforced concrete beam may be designed as strong and even stronger than a hard pine one of equal size.

Another disadvantage is that larger beams reduce head room or require higher stories, resulting in increased storage rates, and loss of space, the extra cost of which, capitalized, represents a loss that must necessarily result because of such limitations.

History.—In the history of skeleton steel construction similar difficulties have been met and all such trying experiences passed through. During the first few years following the discovery of the application of steel for structural purposes, the uses were very limited and its value held far inferior to wrought iron. It was also universally held as too brittle and the element of carbon in its composition was generally looked upon with suspicion. Gradually has its value become recognized until today there are manifold uses for high carbon steels as well as low carbon ones, while its uniformity and regularity of composition has become so reliable that its demand has far outshadowed that for wrought iron. Doubtless public opinion and confidence will be won in the years to come and the future history of reinforced concrete will resemble that of steel. In the meantime let it be hoped that the flexibility and adaptability of the construction will become enhanced so that it will gain in favor as has steel over wrought iron.

During the ascendancy of steel, the unit stresses have been constantly increased through the persistent efforts of its champions; may this be the case with reinforced concrete, attained through the zealotry of designers who recognize the merits that may result from increased percentages of reinforcement, rich mixtures, proper proportion of ingredients, moderately wet mixing, and care in placing. Only by increasing the compressive stress in proportion can these merits attain the high regard and value that belongs to them; therefore, in the light of skeleton steel construction, is it scientific to blight equal possibilities in reinforced concrete by restrictive regulation.

Effect of Reinforcement.—Another well-known phase of the situation may be brought out by the effect of steel upon the compressive stress of concrete columns. Without reinforcement, a concrete column of any considerable height is very weak in resisting compression and its safe resisting stress may be as low as 150 pounds per square inch, or less.

(To be Continued.)

THE COMMERCIAL BANK BUILDING

A SPLENDID BUSINESS STRUCTURE OF THE BEST MODERN AMERICAN TYPE

D. H. BURNHAM & COMPANY, ARCHITECTS

THE Commercial Bank building, located opposite the Federal building, on the Northeast corner of Clark and Adams streets, occupies about 40,000 square feet of the most valuable space in the financial center of Chicago, and is one of the most impressive office buildings in the city.

The front of fine granite extends to the fourth floor. The mass of semi-glazed terra cotta, extending to the fifteenth story, is so nicely toned to the granite in color as to give the effect of a continuation of the stone, while the ornamental terra cotta above completes the facade with artistic effect that is most agreeable and satisfactory.

The grand entrance on Adams street opens into a corridor from which one may go to the stores and offices on this floor, take the elevators on either side, or ascend the great stone stairway to the banking floor above. This stairway is noticeable for its unusual height, and ornate bronze columns and rail.

The bank floor is most simple and dignified in impression. The only decorative features lie in the scheme of lighting, which is a combination of immense skylights, 60x100 feet in area, supported by massive square piers which relieve the space from all obstacles. The lighting scheme is enhanced greatly by the large number of beautiful candelabra some ten feet in height set in regular order about the corridor and close to the marble wall. These candelabra are richly chased in elaborate design.

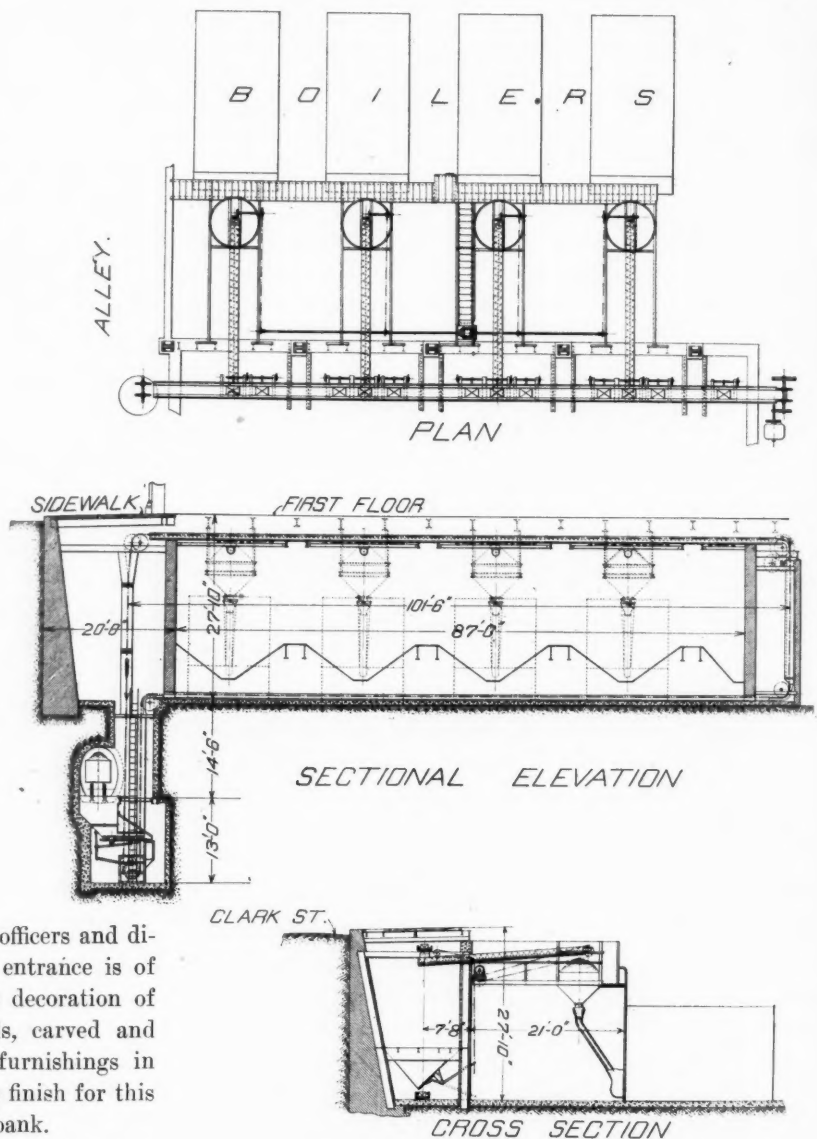
In passing from the banking floor to the suite of rooms devoted to the use of the officers and directors the change is quite striking. The entrance is of Italian marble after the Greek style. The decoration of the rooms is in the most costly of woods, carved and paneled in beautiful designs with all the furnishings in perfect harmony, making a most appropriate finish for this more private and individual portion of the bank.

The basement proper contains the safety deposit vaults, which are large and commodious, fully equipped with all modern appliances to safeguard the vast amount of property and moneys entrusted to their keeping.

The foundations of the building, like most of its class, are set upon bed rock 110 feet below the surface, ninety caissons, from five to ten feet in diameter, forming the initial course. Following this comes the great steel superstructure, about 300 feet in height. Some 30 feet below grade is the floor of the sub-basement, reserved for the mechanical plant, which is arranged by the engineer with the greatest care and skill, and herein lies one of the most difficult problems in construction of these great commer-

cial buildings. The slightest miscalculation would cost endless trouble and expense, which would embarrass the management by increasing the difficulties of economical operation.

The equipment in this instance consists of all the highest order of mechanical devices, for electric lighting, heating, ventilating, cleansing and cooling the air, and cleaning the building and all its furnishings, with adequate



THE COAL HANDLING MACHINERY.

power for the numerous modern elevators. This equipment is considered by engineers to be one of the most complete installed in buildings of its class in the country. One of the very interesting details is the plant of the modern coal handling machinery installed by the Link-Belt Company, an illustration of which is shown in these columns.

The coal is delivered to the building in the cars of the Illinois Tunnel Company, is dumped from these cars into a hopper beneath the track, and passes over a reciprocating feeder to the elevator conveyor. The hopper and feeder are important factors in equipment, as by means of these

the coal is automatically delivered to the elevator at a uniform rate. The elevator conveyor delivers the coal to the 500-ton storage bin under the Clark street sidewalk. As required for immediate use the coal is drawn off through gates in the bottom of the storage bin to the elevator conveyor, which elevates it and discharges it to either of four-screw conveyors leading to circular steel hoppers of 5-tons

capacity each, located above and in front of the boilers. From these hoppers the coal is delivered through gates and spouts to the magazines of the mechanical stokers.

The great height of the building, eighteen stories, or 260 feet above the street, and its fine proportions, make it a striking and interesting sight for the stranger as well as a matter of much local pride.

INDUSTRIAL EDUCATION*

BY DR. CHARLES W. ELIOT



TO ME there seems to be a great deal of confusion about the meaning of the term "Industrial Education," and I propose, therefore, to endeavor to state to you at once what I understand by industrial education, what I believe to be the right meaning for that term, and therefore the right definition of the aim of this society.

Industrial education ought to mean, I think, trade schools, and nothing but trade schools. That is, schools directed primarily and expressly to the preparation of young men and women for trade, and at not too long an interval. They should be either full time schools or partial time schools; that is, all such schools should be capable of being used in both ways, by some boys and girls who devote their whole time to the schools, just as they do to an ordinary high school, or by other children who, being already at work, are allowed by their employers to give from six to twelve hours a week to the trade schools. They will be what we call continuation schools.

In recent times we have begun to take a rather different view of education in general from what we used to take. We used to think of education as something which was going to last perhaps up to the eighteenth year, or in extreme cases, to the twenty-fourth or the twenty-sixth year. But, as I say, this has stopped. We no longer think of education in that way. Education is continuous throughout life, and particularly it should be continuous during the years of youth in these trade schools for the children, who have already been alluded to in President Roosevelt's letter and by the chairman of these meetings; these schools would particularly be continuation schools for those children who are unfortunately obliged to leave the regular public school system by the time they are fourteen years of age or even earlier.

Since they would be schools distinct from the ordinary public schools, they necessarily involve additional cost; but beside that, they involve something else,—new requirements on the part of society in the way of compulsory education. Requirements of compulsory education later than we have been accustomed to require them. In most of our states 14 years is the limit of compulsory education. These trade schools will require that children be kept under the observation of the community up to the seventeenth or eighteenth years, and be absolutely required to attend these continuation schools, if no other.

Here is a considerable departure from former practice in American legislation. There is hardly a reform now

demanded, gentlemen, that does not require additional legislation; and yet we are hearing all over our country the cry: "Give us some quiet; give us some stability in legislation. No more new laws. Let us first live up to the old ones."

That is not an unwholesome doctrine perhaps, under many circumstances, but it will not do if we are to effect this reform in education, and I must admit that there is another reform which must ante-date most of the reforms now discussed in the American committees; a reform, namely, in the laws of taxation, because we have not the means of raising the revenue in just ways to give us the means of establishing this reform and many others much needed.

But to return to the nature of these schools. They would have to be trade schools in a very strict sense. They would, for instance, deal with arithmetic, but all the examples in arithmetic would be applicable to the particular trade for which the school prepared. If it were carpentry, all the examples in arithmetic would be taken from carpentry. If it were the machinist trade, the examples in geometry, all the teaching of geometry would be directly illustrated by instances from machinery, and so forth. Many trades nowadays involve for men who are really to understand them and rise in them, a knowledge of drawing, and there is a subject which would enter into the curriculum of many of the trade schools, but always with direct application to the trade for which the school prepared.

Such, then, is the nature of these schools, the schools which this society for the promotion of industrial education has in mind or should have in mind. You see how they differ from and go further than manual training. Manual training has been introduced into a great number of American schools within a few years past, and rightly. It is a very useful element in the curriculum of any school. In my opinion it does not hold the place it should in most of our American schools, whether the elementary, the secondary or the preparatory. All schools should contain a considerable element of manual training. But we are not thinking of manual training in connection with these trade schools as in any way characterizing them.

The labor unions, to which reference has already been made, have welcomed manual training in all schools. They have very seldom, however, welcomed trade schools, because they believed they were some sort of a short cut to a trade. Such is not the intention of industrial education. We have already in some of our American cities schools called "The Mechanical Arts High Schools," very useful institutions, but again not at all what this society has in mind. They

*Address delivered by Dr. Eliot, President, Harvard University, before the National Society for the Promotion of Industrial Education, Chicago, January 23, 1908.

are not distinctly trade schools preparing the youth for a life work of manual labor, skilled manual labor. Industrial education should produce, not foremen or managers, except as skilled workmen may grow up to these positions, but the actual journeymen of a trade. That is the object of industrial education.

Such being the meaning of the term, what is our present situation? I need say but a few words upon the present situation, because it has already been described in President Roosevelt's letter. The old apprenticeship has gone, not altogether by design. Gone perhaps more in consequence of the change in our industries. For instance, there is a very great division in many of our industries, and men who have worked for many years in a given ship or factory may not know the whole of that industry by any means, and may be quite incapable of teaching anything but some nearly infinitesimal part of it. They may really have no acquaintance with the methods by which the finished product is produced. This is a very different condition of things from the old teaching by a workman of a trade of which he knew every part, and a trade in every part of which his own hand was skilled. But, for whatever cause, the apprenticeship of the old sort has disappeared. Moreover, the occupations in which a boy or girl of fourteen, coming out of what in Massachusetts we call the grammar school, and here the eighth grade, can go into, are, as President Roosevelt has said, trivial, unskilled, uninforming, preparing them for nothing better as they grow older.

It is a matter of common observation that the longer a young person is trained in preparation for a subsequent career, the better the spirit in which that subsequent career is entered upon and will be dealt with. It is one of the advantages of a long training at college or the university that a young man goes forth from that training into his occupation in life, whatever it may be, with a trained sense of honor and of his obligation to the community at large. He almost always goes out with a serious purpose to be of service in the world and to do his part. That result was very common in the olden time when a long apprenticeship was served and a long journeymanship followed. There was a long discipline which informed the character as well as the hand.

If such be our situation, what remedy have we? What have we that we may try to do? In the first place we want these industrial schools, these trade schools, for children of from fourteen to seventeen or eighteen years of age. But how are we going to get the children into those schools? Suppose we organize them: how are the children to be gotten into them?

In the first place by the help of law. But how shall the decision be made that these children are to go into industrial schools, and those are to go into the ordinary high schools, and those again are to go to the mechanical arts high schools? Where is that decision to be made? It is a choice, it is a selection. We come here upon a new function for the features in our elementary schools, and in my judgment they have no function more important. The teachers of the elementary schools ought to sort them and sort them by predestination. I am afraid that strikes you at once as an undemocratic idea, but let us see whether it is undemocratic or not. Does democracy mean that all people are alike? Does it mean that all children are equal?

We know that they are not. Many of us have seen that in the same family, with the same inheritances and the same environments the children are often astonishingly different. Just the brothers and sisters will often illustrate an astonishing variety of disposition and capacity. If democracy means to try to make all children equal or all men equal, it means to fight nature and in that fight democracy is sure to be defeated. There is no such thing as equality among men of natural gifts, of capacity for training, of intellectual power.

Germany, which is not generally conceived of as a democratic country, and Switzerland, which is a true democracy, have both discovered how to sort their children. It is done by the teachers and parents in combination, and it is the very best thing that a teacher can do for a child, to tell him or her in what line he or she can have the most successful and the happiest life. We have got to get rid of the notion that some of us were brought up with, that a Yankee can turn his hand to anything. He can't, in this modern world; he positively can't. We have got to learn that the government of this country can be carried on satisfactorily only by men trained to it; only by experts in the several professions which the correct administration of government needs. (Applause.)

Of course, the reason for this change, perhaps, in the capacity of the Yankee is that one hundred years ago there did not exist the astonishing variety of complicated occupations based on applied science, which we are now confronted with on every hand. This variety of occupations was nonexistent, and we all know that the work of government was an entirely different thing fifty years ago from what it is now. Nothing whatever in our country is now done as it was fifty years ago. I defy you all to name a trade or industry, or a portion of government work which is now done at all as it was done fifty years ago.

We live, gentlemen, in a new world, in an astonishing variety of senses, and the doctrine that a Yankee can turn his hand to anything does not fit this new world. We have got to conform to nature in regard to the training of our children, and guide each child into that path in life in which he can be most successful and happiest, and none of us can be happy in any line of life unless we have the power to achieve something in that line. (Applause.)

There is the teachers' guide in sorting children. Put them in a way in which the teacher knows that child can achieve. It used to be the way to set children to do all the things they could not do well, but that doctrine I am thankful to say is now outgrown. We have learned that the way in education is to find out what the line is in which the child to be trained can do best, and then give him the happiness of achievement in that line.

And here we may come back to the notion of democracy. Democracy, as has been said, is that order in the state which enables each individual to put forth his utmost effort. A very useful sentence that, to hang up in all the rooms where labor unions meet. (Laughter and applause.) An excellent doctrine that, in every school and college in this country. "Democracy enables every individual to put forth his utmost effort," and that, ladies and gentlemen, is the democratic way of securing public and private happiness.

INDUSTRIAL TRAINING AT UNIVERSITY OF CINCINNATI*

BY PROF. H. SCHNEIDER



As your committee has requested me to make a simple statement of the work which we are doing at the University of Cincinnati, I assume that it may be suggestive and of a little aid in solving some of the problems which confront this organization.

We have what is probably the first practical co-operation between a school and a number of manufacturers. The courses which we have are called the co-operative courses in engineering, and they are for the making of mechanical and electrical engineers. This course contemplates that the young man taking it up shall work alternate weeks at the corporations in Cincinnati and at the university of Cincinnati. There are about seventy-five of these young men with us now, and this week, for instance, about half are in the shops and half are in the university. Next Monday morning they will shift, those at the University this week will go to the shops and those at the shops will come to the university. A contract is signed in triplicate by the shop, the university and the boy, and the boy's parents of course representing him, by which his course through that shop is determined. We generally aim to put him through from the raw material to the finished product, that is the man begins at the bottom of the work and goes up through the various departments until he finally reaches the designing and sales department.

The course is six years long. The regular college course, you know, is four years long. The young men in our six-story co-operative course therefore spend three years in the university and we have omitted nothing, we have abridged nothing, but on the contrary we have added something to the course. That is to say, the class of men we are creating can do more work in three years than others can do in four years. To illustrate, in the month of November we had an examination and in order to make it a good, fair test we had the instructor in chemistry make the examination on Saturday afternoon when he could get the boys from the shops. We had co-operative students and regular students in the room and they all answered the same questions practically. Ninety per cent of the co-operative boys passed that examination, 69 per cent of the regulars passed it, and the co-operative students had been there just half the time the regulars had been there.

You will see the reason when I tell you the way we get them in there; we pay more attention to our raw material than to anything we get. We believe as to the proposition of getting raw material to work up into engineers that men who are mentally and physically adapted for engineering abound, but the problem is to find them. Any young man who wants to enter this course must enter the shops on the 1st day of July preceding his entrance into the university and remain a certain period in the shops. If he is then recommended to us by the employer, he is accepted by the university. The first year seventy-five young men applied and we put forty-five of them into the shops and by the time the college opened we had twenty-eight left. The second year we had eight hundred ap-

plications; we put fifty into the shops on the 1st of last July and in September we had forty-five left. So you can see why the co-operative students can do more work in half the time than the regular students do.

These young men are paid for their shop work on a scale of wages which begins at the rate of ten cents an hour and increases at the rate of a cent an hour every six months. They are paid only for the time in the shop, every alternate week during the school year and every week in the summer except the two weeks' vacation. A number of shops find these men so efficient that they are now paying them also for the week they are at the university, and they still are working the thing on the original commercial plan. Commercially it is a good proposition for the manufacturer. That is to say, the shops can pay these men on that scale for the week they are at the university as well as the week they are at work and make money upon their services.

The wage at which they are started is lower but it does not take more than a couple of months to demonstrate that it ought to be raised. The total earnings of the student during the six years is about two thousand dollars. That pays his college expenses or tuition fees and so on about five times over. It is not enough, however, to enable him to pay his board and lodging during that time, although it will pay the whole expense of his being in Cincinnati for the last three years of the course.

You will note in our course that we have an elimination process of the men during the summer. We find these students are working an elimination process themselves in our factories. We find, for instance, that these young men go into these shops as regular employes and they are shown absolutely no favors except that they are by contract transferred to different parts of this work.

The whole system is that the young man can be taught engineering in such a way that when he leaves college he has a good practical knowledge of the profession which he has chosen; he has a definite understanding of the labor situation; he has a good business sense and he has a thorough knowledge of the scientific principles underlying his profession.

A. I. A. COMMITTEES FOR 1908.

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Committee on Allied Arts.—Irving K. Pond (chairman),

*Address by Prof. H. Schneider, dean of the College of Engineering, University of Cincinnati, delivered before the National Society for the Promotion of Industrial Education, Chicago, January 24, 1908.

Edward G. Garden, Myron Hunt, John R. Rockart, Charles Z. Klauder.

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Committee to Nominate Fellows.—Wm. B. Mundie (chairman), J. L. Mauran, Robert Stead, Nathan Wyeth, Thomas Hastings.

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Committee on Schedule of Charges.—(Incomplete.)

Committee to Consider Relations to Other Societies.—Edward L. Tilton (chairman), Louis C. Newhall, C. C. Zant-zinger, S. B. P. Trowbridge, Ralph Adams Cram.

Committee on the Proposed Bureau of Fine Arts.—S. B. P. Trowbridge (chairman), Geo. B. Post, Glenn Brown, Wm. A. Boring, Robert S. Peabody.

Committee on Institute Seal.—(To be finally named.)

Committee on Registration of Architects.—William B. Ittner (chairman), D. Everett Waide, Peter B. Wight, A. F. Rosenheim, Charles P. Baldwin.

Delegate to National Conference Electrical Code, and to National Fire Protection.—Alfred Stone (delegate), Walter Smedley (alternate).

Delegates to the Advisory Board for Testing Materials, Appointed by the Secretary of the Interior.—Geo. B. Post, William S. Eames.

ASSOCIATION NOTES.

WASHINGTON (D. C.) CHAPTER, A. I. A.

At the annual meeting of the chapter the following officers were elected for the year 1908: President, E. W. Donn, Jr.; vice-president, W. J. Marsh; treasurer, F. B. Pyle; secretary, Percy Ash. Committee on admission: J. R. Marshall, Robert Stead, Snowden Ashford.

DETROIT ARCHITECTURAL CLUB.

The club membership now numbers 100. There are classes in Drawing from Casts; Rendering in Water Colors and the Design of Steel Construction. A series of lectures is given on Principles of Design and History of Architecture. Lectures on other subjects are given frequently. To create an interest in keeping up in the reading of the Architectural Periodicals, the president offers a cash prize for the best short review submitted during the season on current articles appearing in these periodicals.

THE NEW JERSEY CHAPTER, A. I. A.

Has inaugurated a competition for draftsmen. The subject is: The Street Front of a Three-Story Dwelling on a City Lot 25 Feet Wide. The general treatment of the design, as well as the choice of materials, to be left to the designer. The treatment of the basement story below the three stories named above, to be left likewise to his discretion. The floor of the basement may be either below or at the sidewalk level and the main entrance of the house may be either at the first story level or at the basement level, as preferred by the designer.

CHICAGO ARCHITECTS' BUSINESS ASSOCIATION.

The regular meeting of the Association took place Tuesday evening, January 28, at the Art Institute. Dinner was served at 6 o'clock p. m. Commissioner Evans of the Health Department addressed the meeting on the subject, "The Obligations of Municipalities to Safeguard Health in Great Centers of Population." Doctor Evans gave statistics to show that better health conditions in buildings had caused improvement in most of the diseases due to bad air. He pointed out that architects were an important factor in safeguarding health through their planning of the sanitation of buildings.

PORTLAND (ORE.) ARCHITECTURAL CLUB.

The club is young and in its second year of work. The success of its first annual exhibition, held in January, bringing as it did the examples of work from many of the coast cities, means, it is hoped, an organization of a Pacific Coast League. There were nearly five hundred entries in the exhibition, mainly from the Pacific Coast. The character of the exhibits and of the catalogue would do credit to an older and more favored organization. At the last meeting the following officers to serve for the current year were elected: President, Emil Schacht; vice-president, Joseph Jacobberger; secretary, Otto Kleeman; treasurer, C. C. Robbins, and trustee, Carl Sick.

THE GARGOYLES OF NEW YORK.

The January regular meeting and dinner of The Gargoyles, at the Hof Brau Haus, developed nineteen contributions to the collection of competition drawings for a club pin. The judges of the competition were: Messrs. John Petit, Fred Hirsh and S. B. Warren—awarding first place to Carl Hollers, second place to L. I. Stockton, and third place to A. H. Hubbard, and recommending at the same time that those to whom first and second places had been awarded should collaborate and combine the features of both designs into one, to be used as the club pin. At the next meeting there will be a lecture on color, a lecture on sculpture, a buffet supper and special music.

CHICAGO ARCHITECTURAL CLUB.

The activities of the club for a month or two have been largely enlisted in two competitions for municipal improvements. The competition for a Public Comfort Station was judged January 6; that for Cast Iron Lamp Posts is in progress. The subject for the Traveling Scholarship competition, now under way is, "Public Gymnasium and Baths." The annual exhibition of the club will be held at the Art Institute from March 31 to April 19, inclusive. The exhibition this year is to be more local in character than those held heretofore, and it is planned to include more exhibits of the auxiliary arts of sculpture and painting than usual. It would be of much interest to have coöperative exhibits of subjects that included the work of architects, sculptors and mural painters, as was successfully done at this year's exhibition of the Architectural League of New York. The programme, however, of the Chicago Club does not provide for such coöperative exhibits.

CLEVELAND CHAPTER, A. I. A.

The Cleveland chapter of the American Institute of Architects held a banquet at The Hollenden recently. The report of the educational committee by C. S. Schneider received much attention. It dealt with the venture inaugurated last year in establishing for Cleveland draughtsmen an atelier modeled after the Beaux Arts ateliers of New York and Paris. The Cleveland Atelier club is equipped with all the necessities of a draughting room. Architectural problems are given to the draughtsmen dealing with building designs and decorative work. Problems are presented requiring one, two, three or four weeks to finish, and also sketch problems to be rendered in four hours. The drawings are criticized by practicing architects of Cleveland, who give out the programs and judge the work. The patrons at present are F. W. Striebing, J. Milton Dyer, and C. S. Schneider, A. Garfield, William D. Benes, and A. M. Hannon. The chapter voted to render some financial aid to the Atelier Club of Cleveland and to give it moral support. A paper was read by R. G. Hubby upon the use of the insignia of the institute by all fellows and associates of the Cleveland chapter.

ILLINOIS CHAPTER, A. I. A.

The President of the chapter, Dwight H. Perkins, is arranging a programme for the year that promises to engage the

best efforts of the chapter members, and result in the accomplishment of much of value. A closer relation is sought between the chapter and the other local associations: The Chicago Architects' Business Association, and the Chicago Architectural Club. Committees are at work to this end, and it is probable that joint meetings with important lectures will be held during the year. The establishment and maintenance of an atelier for draftsmen is favored. There is some sentiment favorable to the coalition of the Chicago Architects' Business Association with the chapter, which would greatly strengthen the membership of the chapter. At the meeting of February 10 quite an earnest discussion was provoked by the motion to appoint a committee to consider and recommend the standard of professional practice that should be required for membership in the chapter. It was decided that the first step necessary would be to settle upon the definition of the terms "professional" and "honorable" practice. A committee on these subjects was authorized, and its report will be awaited with much interest. At this meeting Frederick A. Delano, President of the Wabash Railroad, addressed the chapter on "The Railroad Situation in Chicago." It proved so popular a subject that its announcement brought out nearly double the usual attendance. The discussion that followed the address gave evidence of much study by architects of the subject of railway termini.

MINNEAPOLIS ARCHITECTURAL CLUB.

The Twin City Architectural Club, which for some time maintained a nominal existence, was in reality killed when a few of the old members met about a year ago and formally separated the club into two divisions, a Minneapolis and a St. Paul branch. The dual nature of the club having always been a source of trouble, it was decided that the division with occasional joint meetings would be for the best interests of the members from each city. The Minneapolis division for the greater part of last year held small monthly meetings in various drafting rooms and drifted along until October. Early in that month it was voted to raise the annual dues from two to ten dollars and rent a room. Twenty-five men signed an agreement to pay the dues and support the club and with these men as charter members the Minneapolis Architectural club was inaugurated. A big, dingy, dirty room was transformed into three, a workroom for the atelier, carpenter work and modeling, a smoking room and a cloak room. A fireplace in the smoking room may be a future acquisition.

The Minneapolis atelier of the Society of Beaux Arts Architects has been taken up by the club, with Mr. Edwin H. Hewitt, a graduate of L'Ecole des Beaux Arts, of Paris, who formerly maintained the atelier at his office, as patron. An effort is being made to arouse a greater interest among local draughtsmen in the work of the society. The club has regular weekly meetings Wednesday evenings for work on the finish and furniture of the rooms and for sketching, short sketch problems, etc. Special programmes and lectures are arranged. The new officers are: A. R. Van Dyck, president; N. E. Mohn, vice-president; G. E. Wiley, secretary; L. O. Kirk, treasurer; M. F. Maine and B. H. Stahr, directors. The clubrooms are in the Arcade Building, 114 South Fourth Street, Minneapolis.

ARCHITECTURAL LEAGUE OF NEW YORK.

The inauguration at the annual exhibition of the League of a coöperative competition among groups composed of an architect, a sculptor and a mural painter was stimulative of unusual interest, and marked an epoch in architectural exhibitions. In this competition women played a prominent part in the competition for the special prize. Besides Mrs. Whitney being a member of the team to whom first rank was awarded, Miss Evelyn S. Longman was one of the second team. The prize of \$300 was divided among the members of the second team. The work submitted by Gertrude V. Whitney, sculptor; Hugo Ballin, mural painter, and Grosvenor Atterbury, architect, owing to the fact that Mr. Atterbury was a member of the committee, was entered *hors concours*. The design included an out-of-door swimming pool and pavilion, Mrs. Whitney's contribution being a statuette of Pan cast in green bronze. This forms the only sculptural ornament in the composition and is designed to be placed at the source or fountain from which the water is to be fed to the pool. The president's prize for mural painting was awarded to Hugo Ballin, but Anna T. Lang of Philadelphia

might have had it had she not been disqualified by reason of the fact that she is not a member of the League. The Henry C. Avery prize for sculpture went to Charles Carey Rumsey of New York. Noteworthy among the architectural exhibits were the sketches and plans of the Singer Building, submitted by Ernest Flagg; the Plaza Hotel plans in the exhibition of H. J. Hardenburgh, a series of drawings for St. Thomas's Church by Cram, Goodhue & Ferguson, and the Church street terminal buildings by Clinton & Russell. Much interest was manifested in the collection of Italian palaces designed to house the Manhattan and Brooklyn police. The First Precinct station is another Pitti, while the Palazzo Vecchio is very fairly reproduced in the Nineteenth. The Sixty-eighth street branch of the fire department is another Florentine fortress, and the new headquarters are a veritable state capitol à la Renaissance. It was the general opinion that the laurels in the sculpture exhibition went to Daniel C. French for his two groups, "Jurisprudence" and "Commerce," designed for the new Federal Building, Cleveland, Ohio. Although the competitions for the various prizes were unusually good, no one of the submitted architectural designs was considered worthy of the gold medal. The silver medal in architectural design was awarded to Herman Kahleo of Columbia University. Honorable mention was made of the Maryland Institute, by Pell & Corbett.

PHILADELPHIA CHAPTER, A. I. A.

The officers of the chapter are: President, D. Knickerbacker Boyd; first vice-president, John Molitor; second vice-president, E. Perrot Bissell; secretary, Arnold H. Moses; treasurer, William C. Pritchett; executive committee, the above officers and Albert Kelsey and Charles L. Borie. The chapter has inaugurated a campaign of greater publicity, believing that the more news is given out of the local chapters the more it will arouse interest in the work of the Institute itself and therefore enhance its value to the profession. It has been resolved to increase the number of meetings from four to eight a year. Admirable provision has been made to care for the year's work of the chapter by the appointment of the following committees, their duties to be, for the present, about as stated:

Committee on Public Information.—To consist of three public spirited architects who (whenever the occasion requires) will be willing to give their time for any of the following purposes: To constitute a standing Bureau of Information for the newspapers of Philadelphia and give them information on all matters pertaining to architecture and buildings in general whenever consulted by them; to assist them in describing buildings and to furnish them with the architect's name, an "incidental" to the proper description usually overlooked. To write reviews, etc., for newspapers and periodicals. To further the better appreciation of architecture by the public and to inform the latter more thoroughly as to the work and duties of the architect along the lines suggested by Mr. Grosvenor Atterbury at the Chicago Convention; to generally increase the usefulness of the chapter.

Committee on Competitions.—To be a committee to which all matters concerning progress of competitions can be referred by architects and owners alike. This committee would constitute, when requested, the professional adviser provided for by the American Institute when it adopted the following resolution:

"Resolved, It is unprofessional conduct for a member of the American Institute of Architects, even for payment, to submit drawings knowingly in competition with another, unless under conditions explicitly approved by a competent disinterested professional adviser, either a member of the American Institute of Architects or of some foreign Architectural Association of equal standing."

It is hoped that this committee may be able to do much in regulating the indiscriminate resort to competitions now so often obtaining.

Committee on Arbitration and Practice.—This to be another committee that can be resorted to by the profession and by the public alike on any subject of difference. It is possible also that the functions of this committee will be extended so that it may be referred to in contracts or other documents as a standing Board of Arbitration.

Committee on Municipal Improvements.—This committee will deal with matters of civic betterment and will seek in every way to stimulate a desire for the city beautiful and the city

practical. Attractive promenades in the city's midst, a continuous system of outlying parks and the beautifying of some of the watersides are easily obtainable for Philadelphia if the right forces are put into action. The architectural fraternity will, through this committee, come out of itself, as it were, by striving for and winning such a permanent and inestimable good as the beautifying of Philadelphia. To this end the members of this committee will be glad to confer at any time with the city authorities and with all others interested.

Committee on Legislation.—Part of the duties of this committee will be to watch all pending legislation affecting architecture and building construction and to keep the profession and the public informed thereon that the voice of either or both may be heard for or against as best interests may dictate. To consider the advisability of so amending the charter of incorporation of the Philadelphia chapter that it may be possible to discipline any member guilty of unprofessional conduct or to expel any member for cause. To whom any legal matter of general interest may be referred or reported by any member of the chapter or of the profession, not a member of the chapter. To consider and arrange any alterations in the by-laws which, from time to time, may be found advisable or necessary.

Committee on Education and Programme.—To arrange for lectures and addresses to be given by or for the chapter to the public or to the members. To aid or act with all educational bodies or public institutions when requested or when matters of instructional nature are referred to the chapter.

Committee on Affiliated Societies.—To arrange for friendly intercourse and closer relationship between all kindred societies. To unify all forces working in the same direction. To bring all chapters of the Institute together by exchanging minutes of their meetings and otherwise, thus benefiting by the results of each other's experience.

Committee on New Membership.—To single out all desirable persons in Philadelphia, not now members of the chapter; and, if eligible, seek to enroll them. To arouse interest in the work of the Institute itself on the part of all desirable persons in Philadelphia, not within the jurisdiction of the Pittsburgh chapter, and seek to enroll them as members of the Institute in new chapters yet to be formed or, if not, then as non-resident members of the Philadelphia chapter.

NEW PUBLICATIONS.

STRUCTURAL DRAWING. By C. F. Edminster, Director of the Fine Arts Department at Pratt Institute. Supplied by David Williams Company, New York. Price, \$2.50.

This book is an important aid to accurate and finished draftsmanship in connection with structural steel work. The 74 full-page plates not alone represent superior reproduction, but provide a thorough and well graded course of instruction, beginning with the standard forms and leading progressively through the more complex drafting as applied to columns, girders, trusses, and the details of framing. The considerable number of isometric views that are interspersed serve a very practical purpose in illustrating various phases of the work in a graphic way, and thus materially assisting the student. The work throughout shows careful attention to the theoretical and practical needs of the student of structural drawing.

REINFORCED CONCRETE IN FACTORY CONSTRUCTION. By Sanford E. Thompson. Published by The Atlas Portland Cement Company, 30 Broad street, New York. Price, 50 cents.

While opinions vary as to the classes of buildings best adapted to reinforced concrete construction, there is unanimity that it is especially desirable for factories. The thoroughness and intelligence that characterize all of the publications from these publishers are shown in no greater degree than in this latest of their works. The author's name is a guarantee that the treatment of the subject embraces the most advanced and best methods in this construction. Important details of this construction and description of typical examples selected to include the work of representative builders in various sections of the country are given prominence in the book. Complete measurements are given throughout, and the figures may be used safely as a guide in new construction work. The book should be in the hands of every architect, engineer and manufacturer.

"AMERICAN COMPETITIONS," the work recently published by the T-Square Club of Philadelphia, contains an interesting collection of drawings submitted in important American competitions of the past year or two. There are one hundred sixty-two pages of plates, including over two hundred ninety drawings, eleven of which are double-page illustrations of such size as to bring out all detail possible in a half-tone reproduction. The less important drawings are shown by plates at a smaller size. The publication includes in all forty-nine sheets of competitive drawings. They are of much importance as examples of draftsmanship, and of unusual value as studies in design. The comparisons afforded between the methods of leading architects is of great interest. No advertising and no text, other than a short preface and thirty-four pages given entirely to the reprinting of the schedules of the various competitions illustrated, is contained in the work. The publication may expect the support of architects generally, and especially those who are hopeful of securing a measure of important work. As a guide in future competitions it offers much valuable data. A sample plate will be mailed by the T-Square Club, on request.

OUR ILLUSTRATIONS.

Apartment building, Chicago.

House, Oakland, Cal., Chas. M. McCall, architect.

House of C. R. Erwin, Oak Park, Ill., G. W. Maher, architect, Chicago.

Railway station for Southern Pacific Railway, Santa Barbara, Cal.

House for B. W. Corkran, Rolland Park, Md., Ellicott & Emmart, architects.

U. S. Postoffice, Oak Park, Ill., J. Knox Taylor, U. S. supervising architect.

Hall in house of J. E. Greiner, Rolland Park, Md., Ellicott & Emmart, architects.

Englewood High School, Chicago, D. H. Perkins, architect for Board of Education.

Drawing room, house of J. E. Greiner, Rolland Park, Md., Ellicott & Emmart, architects.

North Shore Congregational Church, Chicago, Patton & Miller, architects. Exterior and plans.

House, John L. Miers, St. Louis county, Mo., Barnett, Haynes & Barnett, architects. Exterior and plans.

Hall and living room, house of J. E. Greiner, Rolland Park, Md., Ellicott & Emmart, architects.

Commercial Bank Building, Chicago, D. H. Burnham & Co., architects. Exterior and interior views. Detailed description in another column.

Y. M. C. A. building, Lebanon, Pa., A. A. Ritcher, architect. The gymnasium, on the main floor of the Association building, is about 48 feet in width and 58 feet in length, with a little over 2,800 square feet of floor space. It is lighted by ten large windows and is well ventilated in winter by direct-indirect radiation. The locker-room, conveniently located and easy of access from the main floor, gymnasium and shower bath room, contains 200 modern steel lockers, with fronts providing good ventilation. The pool is 15 feet in width and 40 feet in length; varying in depth from 4½ to 6½ feet. The sides are lined with white enamel tile. The shower bath room above is equipped with eight nickel plated showers, with hot and cold water, and with anti-scalding device. There and shower bath combined.

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