

THE INLAND ARCHITECT AND NEWS RECORD

VOL. L

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NEXT CONVENTION AT DETROIT, MICH.

Arraignment of the Skyscraper.

Few innovations have called forth more adverse criticism than has attended the development of the skyscraper. It has been assailed upon every possible ground for complaint. The real estate man condemns it because it concentrates a large volume of business within a very restricted limit to the serious detriment, as he claims, of outlying realty. The physician and sanitarian see grave menace to the health of the occupants from the shutting out of light and air by a succession of lofty buildings. In commenting upon the unhealthful effects of these conditions, it is usually intimated that the victims are those occupying the lower stories. Recently statistics have been quoted to show that the unusual altitude of the upper stories, a height which people are unaccustomed, accounts for the rapid increase of the death rate from pneumonia. With regard to the design of the skyscraper, it has been ridiculed and its effect on the appearance of the streets and sky-line deplored by art critics, artists and architects as well. Some are thought too plain, others overwrought with ornamentation, and still others are charged with misapplied decoration. Its treatment as a tower is applauded by most critics while there are those who would see its height diminished in appearance by numerous horizontal courses. There are fewer criticisms of its features of construction, due doubtless to the fact that they are too technical to be comprehended by the masses. This is the province of the experts, and they are not in full accord upon such questions as the probable extent of injury to the steel frame of buildings from rust, electrolysis, etc. In one particular, at least, the skyscraper was supposed to excel, viz.: in fire proof construction. Now comes Mr. Babb, president of the New York Board of Underwriters, the seer who predicts the ruin of the skyscraper district of New York by fire.

The High Building Not Without Friends.

These attacks notwithstanding, the skyscraper has made its way, and has numerous and powerful defenders even among the classes whose criticisms are the fiercest. These friends point to the great economy in the conduct of business through concentration within a small area, and to the fact that effective ways are being found to reduce the resulting congestion to the minimum. They direct attention to the careful provision in the planning for light, air, and perfect sanitary conditions, and challenge proof of the alleged injury to health. As to the design of the great buildings, these advocates quote from the recent utterance of a great English architect who is not surprised that the streets of lower New York have already attracted the pencil

of artists, and who expects that they will allure before long the pen of the poet. The German court architect also is quoted who finds that America is earnestly striving to meet the problems of buildings suited to her needs, and is succeeding to a surprising degree. It is right he thinks to treat the tall buildings frankly as towers.

**Mr. Babb
and the
Skyscrapers.**

In answer to the Babbs it is affirmed that instead of being a fire menace in itself, the skyscraper is about all that there is to depend upon to check the flames when a city is swept by a fierce fire such as that of Baltimore where the high buildings were a bulwark against the spread of flames beyond them. While the lofty buildings represent the highest type of building construction, it is well at this time when they are under suspicion, that they undergo critical expert examination to learn in what degree they may fall short of being absolutely fire-proof. It is probable that in some, especially among the older ones, it will be found that all the vertical shafts and openings are not properly enclosed and protected against the spread of flames from floor to floor. The window openings may not be protected from external fire by such safeguards as fire shutters or wire glass in metal sash. As these are business buildings any combustible appointments and finish could well give place to that which will not burn. These weaknesses can be corrected at relatively moderate expense. They should not be found in that ideal of modern construction, the absolutely fireproof skyscraper.

Municipal Regulation of Concrete Construction.

There is an evident desire on the part of Municipal Building Commissioners throughout the country to secure greater safety in concrete and reinforced construction. This is due primarily to the failures that have occurred in this construction, and is possibly fostered by makers of other building materials. Whatever the reason, there is not likely to be very strong opposition to building laws that will guard against poor practice in this construction. It is to the interest of all concerned that every possible precaution be taken to eliminate failures from this class of building. A stumbling block in the way of intelligent and effective building laws concerning this construction is the lack of sufficient time-tested data on the action of reinforced concrete under practical conditions. The safe rules for concrete itself are well established, and their transgression should not be tolerated. Concerning the reinforcement, the tendency is for tests under as nearly practical conditions as possible, and data is being gradually obtained in this way that is dependable and is advancing the problems toward a safe solution. In view of these facts, it is important that the best technical advice be obtained in framing any municipal laws governing reinforced concrete construction. It is necessary that this material be not handicapped by requiring absurd factors of safety, but there should be regulations to forbid daring spans and such construction as is not already well established by tests as promoting safe practice. Architects are being called upon to advise with building department officials as to what inspections and tests are necessary to secure safety. Those who have had extended experience with this class of building can be of much help in the framing of just laws for its regulation and may well interest themselves in this cause. In Chicago the building department is considering the making of tests of these

buildings before allowing occupancy, the cost to be borne by the owner. In such tests much care would be needed to prevent injury before the concrete had become well set. The agitation for tests of concrete buildings has caused the concrete builders to ask why limit the tests to concrete buildings, failures having occurred in all other kinds of construction. Unfortunately, building laws, even though adequate and faithfully enforced, cannot secure safe concrete construction without there be constant and intelligent supervision of the work. The number of mechanics that are becoming trained in this construction is not the least important element in the promotion of safer concrete building.

**The Approaching
Convention
of the A. I. A.**

No convention of the Institute has been held in the West in seven years with one exception; that at Cleveland in 1903. The 41st annual convention, to be held in Chicago, November 18, 19 and 20, will do much to stimulate interest in the West in the Institute. The Western members who have found it inconvenient to make the annual pilgrimage to Washington will be influenced by the accessibility of Chicago to come here. Aside from the attractions of the convention, Chicago offers much, in buildings recently erected and now in progress of construction, of interest and value to the profession. These include municipal and office buildings, banks, stores and warehouses, apartment buildings and residences. They are not in the beaten path of design, but are an application of modern ideas to modern needs. Then, too, the subject chosen for the convention papers, "The Artistic Treatment and Expression of Steel and Concrete," is of especial importance to the present day architect. This subject has had considerable discussion at the meetings of engineering and cement manufacturers' associations, but has not been prominent in the conventions of the A. I. A. The papers that are to be presented by F. W. Baldwin, C. E., and Architects A. O. Elzner, C. Howard Walker, Claude F. Bragdon and Irving K. Pond are sure to provoke discussion that will bring out suggestions of value in the designing in these materials. Reference to the program of the convention shows that the meeting of the board of directors, preceding the convention, is scheduled for Monday morning, November 18, at the Auditorium Annex, the headquarters of the convention. In the evening will be given the addresses of welcome and the president's address, the nominations of honorary and corresponding members and fellows, and the reception by the Illinois chapter. The second day will be devoted to the registering of members, reports of standing and special committees, and balloting for officers. The papers on steel and concrete are to be presented at the evening session. Those who attended the last convention at Washington, and listened to the reports of the committees, especially those on Education, Ralph Adams Cram, chairman; the Contracting System, Cass Gilbert, chairman; and Competitions, Robert D. Andrews, chairman, will be eager to learn the conclusions of the committees from their continued labor of the past year. It is probable that they will propose radical recommendations that will be approved, and be of far reaching effect. Wednesday closes the business of the convention, and in the evening the annual dinner will be given. A very interesting convention is planned and an unusually large attendance is expected.

RESIDENCE FIXTURES AND LIGHTING

BY R. C. SPENCER, ARCHITECT



N the course of my practice a few points have particularly attracted my attention in connection with residence lighting. I feel that a great error has been made in the designing of electric fixtures by the blind following of traditional forms which were devised for the use of

gas. Here we have a source of light which passes through a very fine wire instead of through a comparatively large tube, and yet one has but to look into the show windows of the fixture men to observe that, as a general thing, electric lighting fixtures are as clumsy and as tubular in their general character as are the gas fixtures. It seems to me that this is a radical mistake. It is due to our almost universal habit of thoughtlessly imitating the forms which served for one purpose when we have to deal with another problem.



FIG. 1.—INCANDESCENT LAMP FIXTURE OVER DINING-ROOM TABLE.

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Fig. 1 is from a photograph of the dining-room of a house in which I tried to get away from the now very common idea of a sort of umbrella or half globe-shaped lamp hanging over the dining table. The lamp is hung somewhat higher than those hemispherical globes are usually hung, and the only fault I have to find is that the square tube that contains the wires is altogether too large. In fact, it should have been omitted. There should have been simply a pendant cord, because the lantern itself is suspended by a very light chain, consisting of little brass balls jointed together. There is a complete enclosure of the lamps. The design of the bottom is geometrical, which knits in with the top and sides so as to form a complete design. There is also a geometrical design worked out in the flat plain glass which forms a sort of rim reflector, and that is varied with little units of gold and iridescent glass, and there is a border of green glass around it. It

does not offend the eye when one looks up, and it does not give a glare of light, although it gives abundant light for four or six people gathered around, and does it with two or four eight candle power lamps. The sides are sand blasted glass. There are a few points of clear glass, just enough to show the character of the design.

Fig. 2 represents the mirror and side lamps over the lavatory in a bathroom. The lamps are adjustable.

Fig. 3 is an incomplete view of one way of lighting a living room. The room is 19 by 25 feet, with low ceilings, only eight feet high, and about four feet from each corner is a pendant cord with a 32 candle power lamp with a leaded glass shade. When they are all turned on there is all the light necessary for a card party or a little dance.

It is a very good plan in a hall to incorporate the lantern on the newel with the design of the newel itself in some simple way. An example is shown in Fig. 4.

The method of lighting should be made as much a part of the room as possible. Any mechanical appliance or lighting fixture is a perfectly legitimate thing; it is a part of the modern equipment of a building; it has its function; there is no reason why we should be ashamed of it and put it entirely out of sight. The chances are if we do we are going to spend a great deal of money in the effort, and perhaps the very attempt to conceal the thing is going to be more conspicuous than if we let the thing show. This is true of lighting. What we ought to study is the character



FIG. 4.—ELECTRIC LANTERN ON NEWELL POST IN HALL.

of the electric light, the fact that it comes through a wire and not necessarily through a tube like gas, and consider it frankly that way. Modern German and Austrian lighting fixtures frequently are pendant fixtures with the cords visible, the lamps hanging by the cord from some sort of bracket. The cord is frankly in evidence. If architects

*Paper read before the Chicago Section, Illuminating Engineering Society and reprinted from the "Transactions" by permission.

would act on the principle of letting it show they would be more successful, not only in getting pleasing results, but also very often in economizing.

One more word about lighting the larger rooms in the house, particularly the living room. It is the fashion now to build a residence with a large living room instead of parlor, sitting room, library, etc., and people are getting rid of the idea of using one big central chandelier. They are taking to the use of brackets, but these do not light the center of a large room sufficiently. I am adopting the idea of setting the lamps some distance from the corners. Other architects have done the same, and generally very successfully. I think that has perhaps solved the question of general illumination in a residence better than any other arrangement. There are usually about four lamps, one toward each corner, and set at such a distance from the corner that the light is pretty well thrown toward the walls and toward the center of the room. If the room is very large, that will be supplemented by a number of side lamps, and, of course, should be supplemented also by outlets in the floor and baseboard for portable lamp outlets for the piano.

In attempting to conceal the lighting in any of the principal rooms of a residence, all are probably familiar with the scheme of simply placing the lamp behind some sort of a cornice. But if you consider the lighting of a house at all as an economical problem, that method of lighting is barred out, because it involves a lot of extra expense. It does not seem worth while to try to light a room in this manner unless one wants to have a separate system of wiring for indirect illumination for special occasions, and an entirely different system for ordinary every day use.

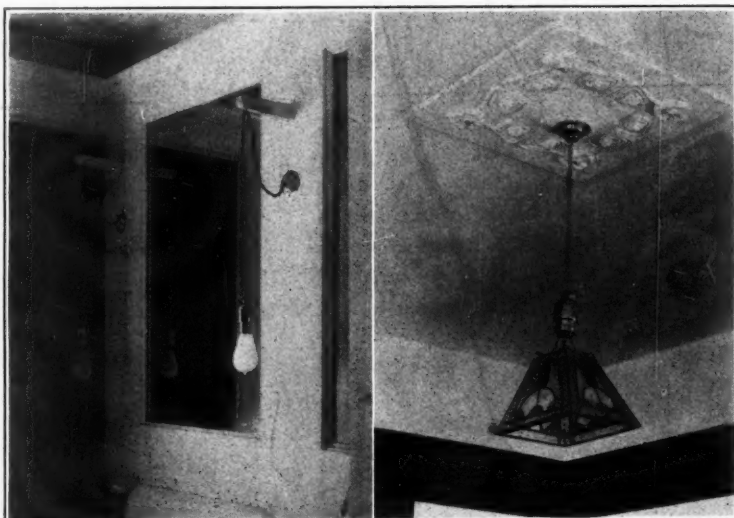


FIG. 2.—ADJUSTABLE DROP OVER LAVATORY IN BATH ROOM.
FIG. 3.—CEILING FIXTURE, ONE OF FOUR, PLACED 4 FEET FROM EACH CORNER.

There is one thing of which I am convinced, and that is that the average house owner, if he is wise, will put in all the outlets that there is any possibility of his wanting, when he wires his house, and put in plenty of switches.

DISCUSSION.

H. K. Holsman.—All lighting by concealed lamps is a mistake; the light in a room should come from definite points and not from "nowhere." That is to say, it is pleasant to feel or realize the direction from which light comes. That is the natural way in the daytime, outdoors. It is the natural way of daylight lighting the house; it comes from points—windows, definite places around the room. It has direction in the room. A wood fixture is good in a large church, where the wood is generally used throughout the building.

A TRIBUTE TO THE WASHINGTON MONUMENT

BY GLENN BROWN, ARCHITECT



RAY in the dawn, brilliant in the sunlight, black in the thunder storm, pink in the after glow, mysterious in the moonlight, vanishing in the mist, lost in the clouds, always majestic, stands the memorial to the Father of his country.

Its phases forcibly remind us of the shifting and changing fortunes of our great chief. Standing alone, simple and dignified, it is as self-contained and practical as was his character and life. Enshrouded in the mists, shadowy, weird, vanishing from sight, a mere suggestion of an outline visible, it recalls the clouded reputation of Washington when surrounded by foes, false comrades and encompassed by the fierce elements. Black in the thunderstorm, it brings to mind dark days and bridled passions. Apparently floating in the air when the base is obscured by the fog, it suggests his struggles without reasonable foundation or hope. Brilliantly illuminated at its base and the pinnacle lost in the clouds, it typifies great victories with the ultimate results in doubt. Piercing the shifting clouds as they float past, with the base and crown illuminated by the sunlight, it vividly recalls the force which enabled him to penetrate the darkest shad-

ows. Reflecting the pink blush of the evening glow, it points to the brightness dawning as his life advanced. A column of light in the moon's rays, it is a beacon leading us, as did his life, to forget self in our country's service. Glorious in the sunshine, scintillating, brilliant against the clear blue sky, it forcibly reminds us of the great results springing from an unselfish life of duty.

The aluminum crest sparkles as a beautiful star, its rays are beams of light, guiding us to patriotic efforts.

A factor in the artistic composition of the city, it is a charming end to many vistas. Viewed from the Capitol, the White House and the Mall, it stands imposing in its grandeur; from the river it rises pure and simple, with the green hills of Maryland as a noble exhedra, and from the heights, visible through the valley, it always produces a thrill of pleasure. In the sunlight and shadow, thunder storm and mist, in the clouds and in the clear sky, against the golden sunrise and the red sunset, against the midday sky of blue, and the midnight sky scintillating with stars, against the bright white clouds and the dark gray clouds, moving with the wind, bowing to the warmth of the sun, receiving the lightning's stroke, ever changing, it is always stately, always beautiful.

ARCHITECTS' RESPONSIBILITIES

BY F. W. FITZPATRICK, ARCHITECT



SOME writers, of more or less authority, would have us believe that the architect incurs as much responsibility vis-a-vis good construction as does the doctor in respect to the cure of his patient, or the lawyer to the successful culmination of his client's case; others again contend that the matter is entirely different and that the architect cannot and is not supposed to "order" his client, but is the latter's mere employe for the time being, under his direction, and employed to do, to the best of his ability, that which the client particularly desires and commands.

The doctor is not called in to *consult* with his patient. He tells the latter what he thinks is the matter with him, prescribes for him and "orders" him to do thus and so. The patient disobeys at his own peril. Admitted that it is also sometimes perilous to obey, but that is another story. The lawyer likewise undertakes a case and *directs* how it is to be carried on. For the client to command what shall be done and said is most unusual and rather a hazardous course to follow.

The architect used to be on this same plane, but his extreme solicitude to not lose a job, his willingness to measure swords, as it were, with all competitors, in presenting tentative and competitive plans to prospective clients, has weakened that position and given the owners of property an upper hand that they had never dreamed of using in dealing with either of the other above-mentioned professions. The conduct of some architects in attempting to secure clientage is positively abject; the estimates of cost made by the average man have been so misleading as to utterly destroy any idea of confidence on the part of the building public, and a lot of other more or less self-inflicted ills have brought the profession of Architecture into, if not discredit, a rather lowly place in public esteem. Men who build, and however little they know about it, feel that the responsibility for the construction, the choice of style, the selection of materials, lies absolutely upon their own shoulders, and they merely *consult* or *direct* their architect as they would a foreman of that construction, one who had a little more extensive knowledge of the details thereof than they themselves possessed, but nothing more.

That in brief is the generally accepted position of the Architect today. There are exceptions, of course, but I don't think any one can rebut the assertion that this condition usually prevails the country over. Why it is so, what brought it about, what is responsible for its existence, etc., have all been touched upon in these columns before, and the matter is quite aside from that under consideration.

Spite of the fact that the average practitioner accepts this position more or less unremonstratingly, he incurs certain responsibilities toward the state the moment he begins the practice of his profession, and in his anxiety to secure the elusive "job" he must not forget the obligations he has assumed. Designing an inartistic, ugly building, even under direction of the owner, is an offense against the public. It places a spot, a blemish, on a city or state that may not be eradicated for years and remains

an eye-sore all during the interim. The act of creating that blemish is and some day will be legally a misdemeanor. To build a structure, even again under direction, that is unsafe, a menace to life and adjacent property, is, in the mildest kind of language, a criminal act, a felonious offense. To contend that the architect may not know any better than to build insecure, flimsy, highly combustible buildings is neither here nor there. The moment he puts out his sign as an architect he proclaims that he does know what is what, and incurs the responsibilities incidental to that profession. Commenting upon a recent collapse of a reinforced concrete building, one of the reports made at the last meeting of the National Fire Protection Association calls attention to the fact that "a well-known authority on fireproof construction has stated that the architect is very largely to blame for poor construction from a fire protection standpoint.

"As a general rule the architect lacks the conservative instinct, and the architects of both the new and the old schools *know less and care less about the fire protection element which enters into the construction of a building than about any other feature*. Carelessness and ignorance in the matter of inspection are also largely responsible for this kind of work." Indeed it is very generally claimed, and seldom does one see an able defense made to the charge, that the architects, as a class, are woefully ignorant of what really constitutes good construction. They go along building in the same old way as a matter of habit; wood was used by their predecessors and little distinction was made between combustible and non-combustible materials, and the custom has stuck. Worse still, I have seen the statement made in print that architects as a class not only knew little about safe construction, but, from interested motives, did not care to see buildings too well, too permanently built! But I would infinitely rather believe that the average sin was ignorance or carelessness rather than think that anyone could be so base as to offend from any such motive.

Granted that the average client is cranky, "bossy" and inclined to peremptorily command his architect, the latter's duty is quite clear. There was a time when, as in the other learned professions, if a man presumed to dictate or be overbearing with his architect, the latter in substance would tell him to go to various and sundry places, and would throw the job after him. That time has gone by. But the architect must be a poor talker indeed, a man of little force, if he cannot *persuade* his client that to build something artistic is wise and to build something durable is necessary. He should arm himself with such statistics and data as to be able to convincingly impress that client with the folly of poor, combustible construction. Heavens! there is matter in abundance and facts galore, readily accessible, matters of common knowledge. Any country that can furnish a million dollars a day for fires when it in its most prosperous times builds but a couple of millions of dollars of new buildings in the same period, can certainly be depended upon to give visible and tangible evidences innumerable of the desirability, the necessity there is for more substantial and permanent construction!

(To be continued.)

THE MODERN SMALL LIBRARY

BY EDWARD L. TILTON, ARCHITECT—Continued



FIGURES 11, 12 and 13 represent a small library at Ludington, Mich., completed for \$15,000, and constructed of monolithic cement concrete walls. The exterior quoins

and moldings were formed by strips nailed to the wood cribbing. The surface of the walls was then thoroughly wet and coated with a thin layer of cement and lime. This coating was rule-lined, which served as expansion joints to prevent cracks.

The coved forms for the large win-

ent access to a lecture room on the second floor with a domed ceiling, into which the dormer windows form penetrations.

Figures 14, 15 and 16 represent the Miles Park Branch

Library at Cleveland, Ohio, located at the upper end of a narrow park, which compelled the adoption of a somewhat awkward rectangular plan, 70x100 feet.

The "open shelf" system alone being used, the books are arranged on wall shelving, with free standing stacks added as required.

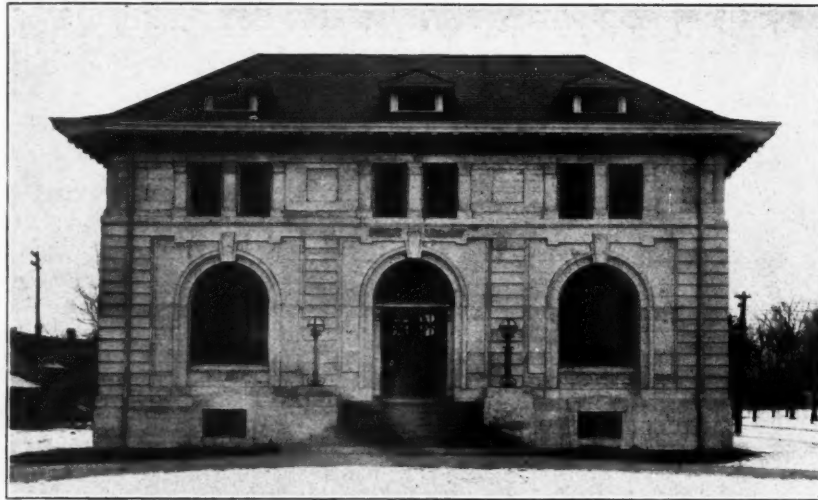


FIG. 11. PUBLIC LIBRARY, LUDINGTON, MICH.

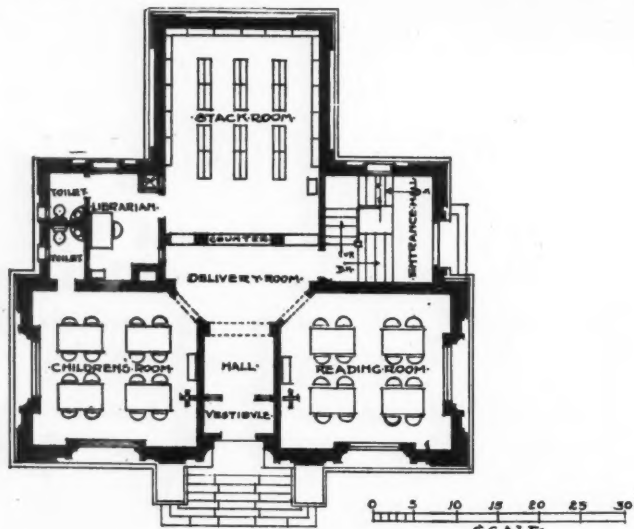


FIG. 12. FIRST FLOOR PLAN.

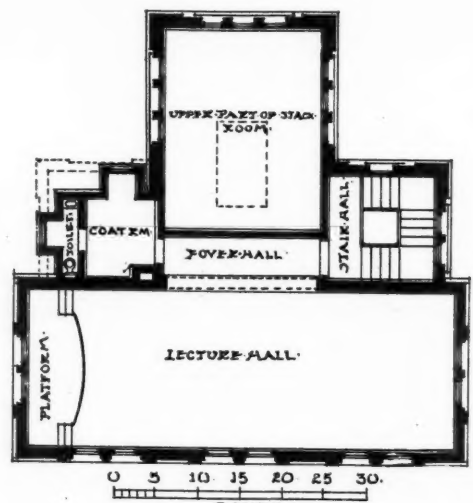


FIG. 13. SECOND FLOOR PLAN.

dows were made of sheet metal; but all other molded forms had square arrises and were made of wood.

The plan is an inverted "T" with accommodation in the stack room for 12,000 volumes in each tier of seven shelves. The recesses at sides of large windows in reading rooms are for additional wall shelving.

The side entrance and stairway give independ-



FIG. 14. MILES PARK BRANCH LIBRARY, CLEVELAND, OHIO.

Figure 17 is a view of the delivery room, taken from a corner alcove.

Side entrances at a lower level admit the public to the lecture room without disturbing those in the library. The lecture room seats 500 people. The building is of light pressed brick, with Cleveland sand stone cornice and trimmings and sloping roofs, covered with tile. The cost of building, furnished complete, was about \$38,000.

View of
Delivery Room
From
Corner Alcove



Miles Park
Branch Library
Cleveland
Ohio

FIG. 17.

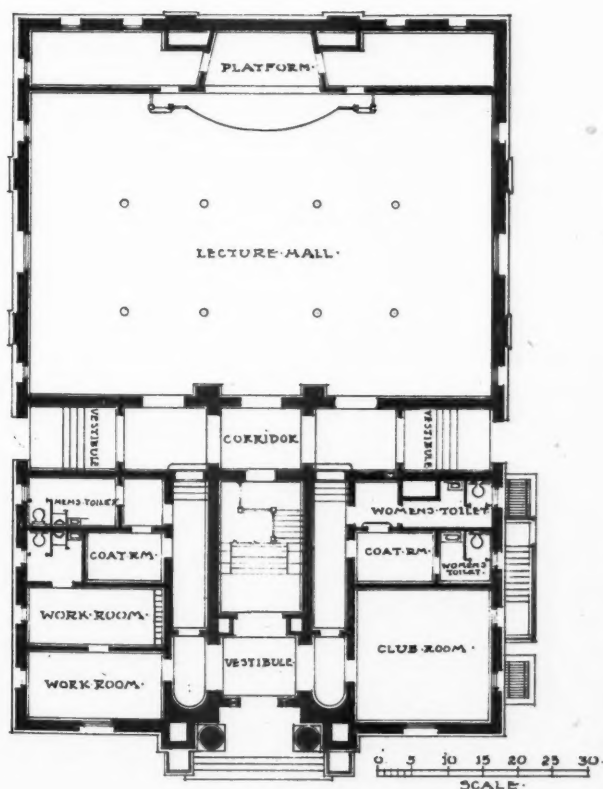


FIG. 15. FIRST FLOOR PLAN.

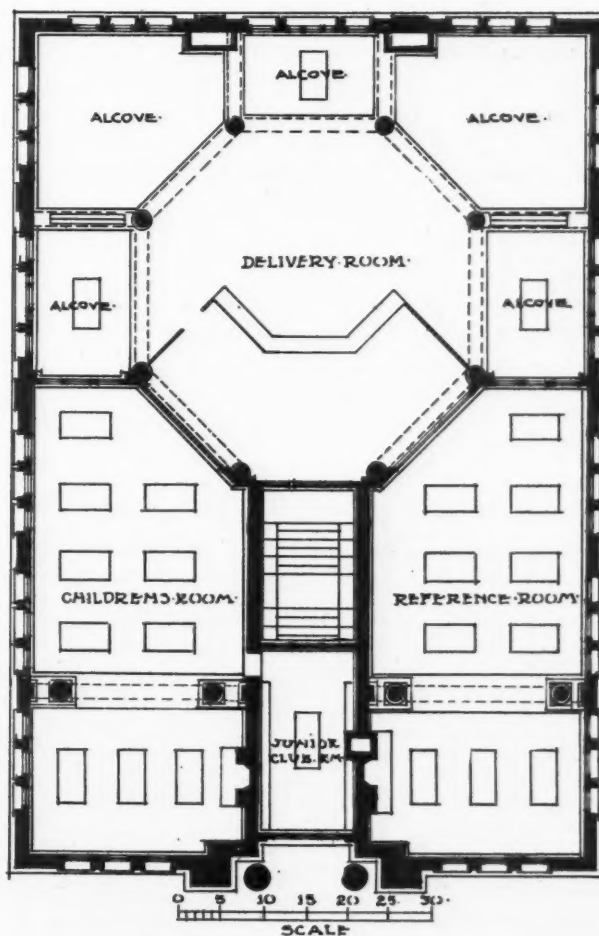


FIG. 16. SECOND FLOOR PLAN.

PLANS MILES PARK BRANCH LIBRARY.

MUNICIPAL IMPROVEMENTS— HIGHWAYS

BY ALBERT KELSEY, ARCHITECT—Continued from August



WOULD Napoleon's funeral or the entry of the Prussians into Paris have been so magnificent but for the direct route they had to traverse? And again today, no matter how animated the crowd may be, the great Arch of Triumph closes the perspective effectively and compels the attention of approaching throngs, and, moreover, the larger and the noisier the crowd the more impressively it dominates.

Camille Silte writes, "The more impressions are limited the more beautiful will the picture be. One feels at ease in a space where one's sight cannot lose itself in the infinite."

Processional Road, now building in London, and known as the Victoria Memorial, while not quite organically precise, will have the advantage of having its story well confined, so that the procession of events as told in the statuary to represent Her Majesty's dominions in the Eastern and Western Hemispheres, will have a chance to crystallize in the beholder's mind before his thoughts are distracted by other sights on other highways.

In Catholic countries this idea of concentration is well illustrated in many a cemetery screened often with cypresses, among which are interspersed niches on either side containing carvings of the Fourteen Stations of the Cross, while a big black cross at the head of the avenue, with a silver Christ on it, forms the focal point to which the accessories line up step by step and on which they help to focus attention.

There will be less difference of opinion on whether such thoroughfares should be straight or curved, in that every one realizes that the more devious the path the more uncertain its effect; while a straight thoroughfare is as positive and as convincing as it is direct, providing, of course, that it is not too long. Therefore the Champs Elysée, the Sieges Alle and the Paseo de la Reforma are straight, for, as M. Herand says, "One can only obtain grand and majestic effects by repetitions and sameness."

The objects of interest, or the chapters in the theme must succeed one another, episode by episode, arranged in geometrical order.

There is a broad thought suggested by the companion stories told by the Lucerne Bridges. Why not utilize and give expression to groups of radiating streets in a connected series or in succeeding cycles.

For instance, in a sylvan park from a central point the solitude might be peopled with the creations of the great poets. One green alley devoted to Burns and his influence upon Scotch life, another to Goethe and his influence upon German life, another to Shakespeare and his influence upon the lives of Anglo-Saxons, etc. But there is danger in elaboration. Let us go to the other extreme and think of a street of streets in which only flowers, foliage and plants would dominate. If done well, it might have a pleasure yielding quality hitherto unsuspected, especially if the story of the flowers were well interpreted—or if the old Hindoo idea of life, death and

eternity were suggested somewhere in it by trees for a background.

While parking was not meant to come within the domain of this article, it has been necessary to refer to horticulture and especially to arboriculture, for without trees no street is what it should be. In this connection, and in the interest of verdure, it is scarcely necessary to add that the authorities in all our towns and cities should have control of all thoroughfares from building to building line, and not from curb to curb, which is too often the case. This rule is being adopted, and fortunately we have gotten beyond the merely horticultural form of decoration.

Kansas City has completed a wonderful transformation, but with too much haste. Little art is evident in the architectural embellishments of her "Paseo." The advantages of "the clean up" cannot, however, be overestimated.

While constitutional restrictions limit improvements of magnitude, and a sentiment opposed to the increase of municipal indebtedness prevails in the United States, it is remarkable, nevertheless, with what a rush of enthusiasm improvements are carried through after such obstacles have been overcome. But time is needed to do really good work, and until this is understood municipal art will lag.

The suggestions offered in this paper, it is true, are somewhat out of the line of American municipal custom, where we, like the people of Berlin, who glory in an ugly park monument built of stolen French cannon, are too prone to run to military monuments, but here, as there, such unpleasant reminders are destined to be of less and less importance in all civic themes of the future. But even a warlike theme is beyond every day usage here, though Gettysburg offers no better opportunity, and for this reason it will require some reiterations before the value of a connected theme is fully understood and ready for acceptance.

There are, however, shadowy legends from Alaska to Yucatan, suggested by the mythology of the North American Indians, in which warfare is too picturesque and remote to be allowed to be forgotten, which could well be perpetuated without offense, though doubtless the Christ of the Andes, standing for peace and replacing a fort on the boundary line between Argentina and Chili, sounds the highest note and recalls the most truly modern thought in the embellishment of highways.

What has succeeded elsewhere is in itself a recommendation, and it cannot be doubted that our leading cities, at least, are awakening to a desire to rank well with the fine capitals of the world.

I may then repeat what has gone before by saying in conclusion that many a poignant theme of peace or of war could be evolved without vaingloriously overestimating local history and local resources. Indeed, offer any localism to a great artist, no matter how commonplace it may appear, and he will draw from it an interesting theme. He will see what is beyond our vision, since with most of us "the real, the great miracle begins where our power of vision ends"—but the artist will help us to see and perhaps to understand.

REINFORCED CONCRETE WORK

BY F. D. WARREN, ARCHITECT—Continued



O realize an increase of strength, by raising the percentage of steel, not only must the steel be of like quality in all cases under comparison, but the concrete must be uniform as regards composition, mixing and placing.

To keep the location of the neutral axis at a point that will not cause the maximum compressive stress to exceed a given amount under a changing loading, should call forth careful study as to the quantity and the quality of the reinforcement. Many will concede that the amount of steel required should be sufficient to keep the tensile stress in the same considerably less than that generally figured. In other words, in order to insure a factor of safety of four against failure by crushing of the concrete, it seems unjustifiable to impose a stress on the steel that allows a factor of safety of only two or three in respect to the elastic limit of the steel. After the elastic limit of the steel in a beam is reached, which, from the design, often happens by increasing the loading twice or thrice its normal amount, it should not be claimed that the section still has a reserve on the side of safety of once or twice the normal loading. Experiments show that once the elastic limit of the steel has been reached, the neutral axis raises very rapidly, thereby exposing a smaller area of the section to resist compression, and failure by crushing of the concrete in the upper layers results after a slight increment of load. It is therefore misleading to proclaim a nominal factor of safety of four based on the stress in the concrete when, due to the high working stress in the steel this cannot be actually realized.

Causes Requiring Higher Percentages of Reinforcement.—Granting the effect of the reinforcement upon the strength of reinforced concrete as just outlined, it may be well to consider some of the facts that justify an increase of metal.

First, as regards the mixture of the concrete. A rich mixture is conceded to withstand a higher ultimate stress than a lean one; accordingly, the former either demands a larger amount of reinforcement or a quality of steel having a higher elastic limit, in order to realize the advantage and worth of rich mixtures. This may appear too elementary for consideration, yet how often do we see the same percentage of reinforcement used over and over again regardless of the mixture.

Second, as regards consistency. Experiments have shown that moderately wet concrete mixtures will withstand higher ultimate stresses than excessively wet or sloppy ones. While the excess of strength may not be appreciable after a lapse of two or more years, it should be recognized in practice where such periods of set are impossible. For this reason, a concrete of the first class, although it may have the same mixture of ingredients composing the concrete, should require a higher percentage of reinforcement.

In the third place, good workmanship in placing the concrete and the steel certainly justifies an increase of steel over that required for poor workmanship, in order to make the strength of the tensile side of the concrete balance that of the compressive side.

(To be continued.)

THE MCKINLEY MONUMENT, BUFFALO

DESCRIPTION BY CHARLES E. ILLSLEY



WHENEVER in this strenuous land and age a public monument is projected, to commemorate some great name or event, it is cause for grave concern to the citizens on whom it is to be conferred or inflicted (rather oftener the latter, perhaps, than the former). Aesthetic discrimination is not universal, even with folk rich enough to buy monuments, and as such things are usually donated by some benevolent person or persons, and it is bad form to search the mouth of a gift horse too closely, however lame, the recipients, voluntary or involuntary, of monuments must perforce look pleased whether they feel so or not.

Thus posterity inherits a raft of "storied urns and animated busts" so common and so commonplace as to perpetuate the old lament that good taste and good will are not oftener twins. Still, a genuine work of art is evolved at times, and the community must then be congratulated alike for what it has escaped and for what it has received. Such was the good fortune of the city of Buffalo and of the state of New York when, September 5th, 1907, this monument was unveiled and dedicated as a memorial to the nation's third martyred president, William McKinley.

Referring to the crowning feature of the monument, it is noteworthy that the obelisk is the oldest funereal form known, that it comes from Egypt, and that, while the

Pharaohs left us no architectural remains of value except their tombs, these are as unsurpassed today as are the temples of ancient Greece.

The general plan of the McKinley monument embraces an irregular octagonal fountain in two levels, stepped up from a paved circular dais about two feet high and ninety-six feet in diameter. This is surmounted by a low, square pedestal and a slender, tapering shaft, seven feet square at the base and sixty-nine feet high. In its shape and graceful proportions this shaft is not unlike the obelisk of Luxor in the Place de la Concorde, Paris. The total height of the monument is ninety-six feet.

The shaft, like every other part of the structure, is of sawn, rough finished Vermont marble, and is perfectly plain. At its base are sculptured garlands, which both serve as decoration and to divert attention from the gaping horizontal joint between the foot of the shaft and the pedestal—a joint necessarily left open to guard against the spalling of the stone work which a close joint would endanger.

The pedestal is crowned with a light moulded and carved cornice and has a moulded and carved base of bold projection. On its four moulded sunk panels are inscriptions in gilt incised letters stating that this monument is erected by the State of New York in honor of William McKinley, giving a brief outline of his very active and patriotic career and stating its tragic close as follows:

"William McKinley died in Buffalo, September 14, 1907, victim of a treacherous assassin, who shot the president as he was extending to him the hand of courtesy."

From each face of the pedestal a sheet of water flows into a marble basin and overflows into a lower and larger basin, whose edge is five feet above the stone platform below. At each corner of the base of the pedestal extends diagonally a broad flat marble block or buttress supporting a colossal carved marble lion *dormant*. These lions are said to have been modeled by a New York sculptor from the finest lion in the New York City Zoo.

Behind the lions and slightly above them are carved dolphin heads, each spouting into a special basin of its own. Beneath the tail of each dolphin hide two tortoises spouting into the larger basins. A circular ring of thick marble posts with heavy bronze chains between accents the outer rim of the dais, to which four carved flights of

marble steps ascend. Between the steps are convenient stone seats with a balustraded reredos and flanked by heavy square piers moulded and paneled.

A monument requires a proper setting to give effect to its charms just as much as a diamond does. The setting of the McKinley monument is as unusual (in this country) and as admirable as the monument itself. It will recall to travelers the setting of the Colonne de Juillet in the Place de la Bastille, Paris. But there is no encircling fence in Buffalo as in Paris, and the zones of closely cut lawn thirty to sixty feet wide are a marked improvement as well as the row of handsome boulevard lamps all around the outmost circle which adds new charm and grandeur.

The monument was begun June 30, 1905, and finished July 1, 1906. The setting was completed August 1, 1907. The architects were Carrère and Hastings of New York.

"THE MOSAIC" IN MODERN ARCHITECTURE

BY J. L. SMITHMEYER, ARCHITECT



ANY combination of minute portions of any material which can by connection of parts be so arranged as to convey a feeling of unity or of variety of design, may be designated by the word 'Mosaic'.

In its narrower sense, however, it is limited to the employment and arrangement of various stones, marbles and even precious gems, vitrified and enameled bricks, tiles, terra cotta, majolica, glass, onyx, metals, mother of pearl, oxides, cements, wood, etc., and is susceptible of very extensive uses for (both interior and exterior) architectural decorations.

Mosaics have been employed by the Egyptians, Persians, Greeks and Romans, down to the period of Constantine the Great and during the epoch of the adoption of the Christian worship. They were also employed during the revival of classical learning in the fifteenth century and include all the varieties of incrustations from the days of Raphael and Michelangelo to the present time.

The earliest Mosaics consisted of small marble cubes called "Tesserae" laid out in geometric figures, generally used for pavements and for decorations of walls and vaulted ceilings. The best known specimens of this kind are found in Pompeii. Another kind is made of sliced marbles, called "Crusta," which produced a very pleasing effect by the different shapes and color contrasts of the slabs. This species dates back to 50 B. C.; the best known specimen of this kind is at the Pantheon in Rome. At the time of the Roman Empire slabs of opaque glass, with colored marbles were very commonly used for floors. Just when glass was introduced into mosaics is not known, but they have from time to time been unearthed at Pompeii. The most beautiful one discovered is in the house of the Faun, which is composed of small pieces of glass paste, of various colors, mixed with Tesserae or semi-precious stones and costly marbles.

During the mediaeval period, to the end of the 13th century "Glass Mosaics" obtained very generally in Italy. They were primarily used upon floors, but vanished from the floors to appear upon walls and vaults. The pieces of glass employed were of irregular shapes and sizes;

of all colors and tints; the ground tint; mostly prevailing, was of gold. They were most always large, somewhat coarse and passed out of use by the close of the 14th century. Another species of Mosaic consists in inserting into grooves of white marble slabs, onyx and other suitable stone, small cubes of variously colored and gilded Smalti. Probably the earliest of this specimen, is in the Basilica of S. Lorenzo, at Rome. Another pleasing variety is known as the "Italian Church Paving Mosaic." It is composed of small cubes usually of porphyry or serpentine, of geometrical patterns and put into grooves of white marble slabs.

Other species which probably were the result of a desire for a more extended scale of shades and colors, is composed of silex and alumina, colored by the addition of metallic oxides. These species originated in northern Italy (Venice). Being easily given any desired form and variety of color (and being produced at less cost than marbles) they rapidly advanced into great popularity. If enriched with small fragments of marbles, glass, oxides, and gems, they constitute a variety which is used for wall decorations in imitation of figures, ornaments, pictures, Arabesques and works of that sort.

And still another species is made by putting together all sorts and kinds of small pieces of marbles and similar materials in irregular shapes; uniting them into a mass with cement and laying them down for pavements. It is often embellished with borders in geometrical figures and with center ornaments, also with various diaper-designs and is given a polished surface by rubbing; it is very much like the Italian "Terrazzo" and is much used at the present day.

Among the most beautiful specimens of Mosaics found in pavements, walls and vaults of crumbling ancient buildings, which deserve to be mentioned, is the one from a chamber of Adrian's Villa near Tivoli, now in the museum of the Capitol at Rome called Pliny's doves, and the one at Palestrina (which is supposed to be the first Roman Mosaic) also those from the Villa Albani, representing a "School of Philosophers" and "the daughter of Priam;" likewise the one found in the house of "Pansa," representing the battle of Issus. Also those in the Churches of S.

Lawrence and S. Ambrose in Milan and the one on the walls and vaults of the mausoleum at Ravenna. The walls of the Apse of the Cathedral of Parenzo in Istria, are covered with the most precious mosaics of porphyry, serpentine, onyx, and mother of pearl mixed with glass. The exterior of the gable facing the atrium is decorated in a similar manner.

The glass-Mosaic of the interior of Santa Sophia at Constantinople is a wonderful creation built and ornamented in the reign of Justinian. The vaulting throughout was covered with gold glass-Mosaic; a jeweled cross expanded its arms on the zenith of the dome, with a background strewn with stars; the walls were decorated with figures, inscriptions, and ornaments of majestic beauty. The work was done between 532 and 537 A. D. The whole interior of S. Vitale, at Ravenna, was originally decorated with mosaics. Various fine specimens of mosaics have been found at Carthage. The mosaics of the Capella Palatina at Palermo, are unrivaled. The interior of the Dome of the Baptistery at Florence presents a beautiful specimen. Fine specimens of mosaics have been found at Vienna, Austria, Rheims, Lyons, London and many other places, some of them dating back to the time before Christ.

Mosaics also obtained at Agra and Delhi in the form of inlaid work, made of marble, precious stones and colored compositions. Turkey, Asia Minor, Spain, Morocco and Mexico (at Mitla), possess beautiful mosaics and inlays.

After the 13th century the Mosaic gradually passed out of use; but it revived with the church of S. Marks at Venice, the church of the Savior at Constantinople, and in Sicily. Since that time it has gradually regained its favor and become again popular. The effect of that revival was, however, not confined to the eastern hemisphere, it spread across the ocean to the western hemisphere where it was welcomed by the pioneer artists and art devotees of those days. And it is very gratifying to state that there have since been very encouraging successes achieved in this art, and further, that it bids fair to subserve (ere long) a more extensive use in our architectural efforts—both internally and externally.

It is safe to say that, through the aid of our progressive art-industry, the cost of the production of "mosaics" will ere long be brought within the scope of general use, and will thus hasten the approach of "a new epoch of noble designings" as the forerunner of "an American style of architecture." There are already some very good specimens of various "exterior mosaics" scattered all over the land, made of bricks, marble slabs, tiles, glazed terra cotta, Tesserae, glass mosaics and cements, too numerous to describe or even to be mentioned here.

The "Inlay" species of Mosaics (being made of shallow and (some of them) of perishable and costly materials such as rare woods, ivory, high-grade metals, precious stones, mother of pearl, etc.), are obviously used for interior decorations to embellish altars, reredos, lecterns, pulpits, baptismal fonts, chancel rails, sedilias, friezes, cornices, also utensils, arms, trophies, jewelry, etc. It is very gratifying to state that there also are some fine specimens of this species found in some of our modern churches.

As our modern architectural efforts are becoming more artistic in design; more diversified in form and character and more permanent in construction; the nature of the decorations will obviously have to conform to them.

(To be continued.)

NEW PUBLICATIONS.

CONCRETE COUNTRY RESIDENCES, Second Edition, 1907. Published by The Atlas Portland Cement Company, New York. Price, \$1.00.

Opening with a large plate of the sumptuous Hotel Blenheim at Atlantic City, Price & McLanahan, architects, the book proceeds to illustrate concrete residences, covering the full range of size and cost, selected from the work of the most successful architects of concrete structures. A feature of great value is the floor plans which are given with practically all of the designs illustrated. The work is a faithful demonstration of the adaptability of concrete construction to the highest class of residence architecture. It is, as well, a powerful presentation of the remarkable progress of this construction in popular esteem. The publishers have rendered a distinct service to the architects in bringing into one volume at nominal cost the best examples of present day concrete residences.

THE BUILDING MECHANIC'S READY REFERENCE, Stone and Brick Mason's Edition. By H. G. Richey, Superintendent of Construction United States Public Buildings. New York: John Wiley & Sons; London: Chapman & Hall, Limited, 1907.

The author keeps steadily in mind his object to supply the stone and brick mason with a work of ready reference for practical use on the job. The every-day necessities of all branches of these trades are met in the descriptions, tables and illustrations of the book. Enough explanation of the terms of the trades and of the rudiments of construction are given to aid the beginner and refresh the memory of the experienced mason. The book is compiled from the latest tested information, and is profusely illustrated from specially prepared drawings. The binding is in substantial Morocco. The book is pocket size, and uniform with the author's previous volumes for superintendents of construction and for carpenters and woodworkers. The book is published at the popular price of \$1.50. It is a practical man's compilation for the use of practical men.

A PORTFOLIO OF CARNEGIE LIBRARIES, Being a Separate Issue of the Illustrations from "A Book of Carnegie Libraries," by Theodore Wesley Koch, Librarian, University of Michigan. George Wahr, Publisher, Ann Arbor, Mich., 1907. Price, \$2.50 net.

It is of especial architectural interest that a publication is in preparation that will be a fitting memorial to the great benefaction by Mr. Carnegie in the contribution of funds for the erection of hundreds of libraries for public use. This book is to be entitled "A Book of Carnegie Libraries," and will contain, besides illustrations of the exteriors, interiors and plans of these libraries, historical and descriptive letter press. It was thought that the architectural interest centered so strongly in the illustrations as to make desirable the issuing in advance of a portfolio of the designs. There are one hundred and twenty plates in the portfolio, including exteriors, interiors and plans. The designs are by many of the foremost architects. This is the most extensive collection of modern library designs yet published, and affords an invaluable opportunity for the study of the library problem.

CONCRETE FACTORIES, An Illustrated Review of the Principles of Construction of Reinforced Concrete Buildings, Including Reports of the Sub-Committee on Tests, the U. S. Geological Survey and the French Rules on Reinforced Concrete. Compiled by Robert W. Lesley, Associate Am. Soc. C. E. Published by Bruce & Banning, New York.

Reinforced concrete has been most largely used in America in factory construction. Its adaptability to such buildings is clearly shown by the illustrations and descriptions in this book. Views of many of the most notable buildings of this class ranging from two to ten stories in height are shown and their construction described. The latter part of the book contains a symposium on The Value of Concrete as a Structural Material. Much experience of practical value is thus recorded from architects and engineers who have devoted unusual attention to the subject. The French rules are based upon an investigation by a Government commission covering five years. The tenor of these rules is stated to favor the use as far as possible of large sections of ribs, small diameters of reinforcements and close-spaced stirrups. Every architect, engineer and builder will find in this book in concise form the answer to many troublesome questions concerning Reinforced Concrete Construction.

OUR ILLUSTRATIONS.

Residence, Pittsburg, Proctor & Wass, architects.

Residence, Los Angeles, Cal., John Parkinson, architect.

Macon Public Library, Brooklyn, Walker & Morris, architects.

McKinley monument, Buffalo, Carrere & Hastings, architects, New York.

Acme White Lead & Color Works, Detroit, Donaldson & Meier, architects.

Landscape accessories for Dr. Schiffmann, Pasadena, Cal. By Stanford White.

St. John's Roman Catholic Church, Philadelphia, Watson & Huckel, architects.

View in stairway hall and in dining room, residence at Indianapolis, Foltz & Parker, architects.

Residence of Charles Nugent, Kingsbury Place, St. Louis, Barnett, Haynes & Barnett, architects.

The Elleadville School Building, St. Louis, William B. Ittner, architect. Exterior and floor plans are shown.

Residence for W. R. Nash, Pasadena, Cal., Myron Hunt and Elmer Grey, architects. The entrance front and arroyo side are shown.

Building for the American School of Correspondence, Chicago, Pond & Pond, architects. The design of this building, presented by line drawings in our April number and reproduced from photographs of the finished building in this issue, was dictated primarily by its use and, secondarily, though almost equally, by its location. The building is rather an office building than a school, being the headquarters of a new and distinctly modern feature in the educational scheme. Its proximity to the Chicago University dictated a treatment in harmony with the buildings of that institution. The materials of the exterior are brick of two shades and Bedford stone for enrichment, and a green tile in the roof. The brick of the basement and projecting courses of the rustications is of a purplish red, a trifle darker than that used in the body. The body brick is warm red, variegated, giving it life and pleasing texture. The note of green is carried throughout the interior wood finish of the building, the notes of purple and red appearing in the wall decorations. The sash and frames, except at the entrance, are white, both upon the exterior and in the interior. The combined effect it was sought to produce in the design of the exterior was of the picturesqueness appropriate to collegiate architecture and the dignity required in an office building. The scheme is worked out in the utmost simplicity. An interior and two exterior views are shown.

Village Hall, Kenilworth, Ill., George W. Maher, architect, Chicago. The Kenilworth Assembly Hall represents an evolution of the old New England village meeting house. The plan contemplates under one roof the housing of all the civic requirements of a small village, as well as providing for its educational and its amusement features. The arrangement consists of a large assembly hall, with a stage at the end to be used for theatricals, amusements and lectures. The library room provides for the caring of books, also a meeting place for the village trustees. The Kenilworth Club meets in this library room. Adjoining this room is an up-to-date kitchen, provided with all modern arrangements for culinary purposes. The building in design is low, with strong horizontal lines predominating. This effect is intended to assist in broadening the general landscape treatment and park adjacent. The trees around about rise high above the roof of the building, thus creating a naturalistic effect of exterior so necessary in park work. The elm tree at main entrance rising from amidst the Pergola forms the motif of decorative design. Here is the symbol of growth and in the design this is typified throughout by means of a geometric form rising organically from a base and capped at the top. This motif form appears throughout in the exterior and interior design, varying in ornateness according to materials employed. The color scheme of the building consists of a soft gray green, wood browns and a deep blue. These three colors are placed

in harmonious relations and assist in adding value to the design. Two exterior and two interior views are illustrated.

The Johnstone apartment building, Chicago, S. N. Crowen, architect. The building occupies an area of 80.3x65.10 and contains three 6-room, three 5-room and three 4-room apartments. The floor plan shows that the aim was to utilize the area to the best possible advantage: Apartment buildings are usually erected by owners in response to a commercial demand, and therefore the income guides the planning and designing of same, viz.: to produce as much in brick and mortar as it is possible at a minimum cost. This building being bounded by two streets and a private alley in the rear, the question of light was simple.



FIRST FLOOR PLAN, THE JOHNSTONE APARTMENT BUILDING, CHICAGO. SAMUEL N. CROWEN, ARCHITECT.

By leaving one large rectangular court in the center and grouping all of the rooms around this court, there was afforded an abundance of sunlight into every room. The treatment of the exterior does not run into ornament, but is strikingly different from the conventional type of the Chicago apartment building, due to simplicity of outline, and being built of light yellow brick for the body and trimmed with gray brick for the base and other features, thus presents a pleasant mass of color scheme. Each apartment has a private porch, emphasizing the privacy and seclusion of the tenants. The aim in designing this building was to preserve the domestic character of the neighborhood, it being largely surrounded by residences. The usual vertical lines of bay windows is absent in this design and the horizontal line of treatment is further emphasized by a broad overhanging plaster cornice in order to introduce a strong shadow. The absence of a suitable grass plat on the street fronts is quite a detriment to the appearance of the building, and is due to the fact that the owner utilized the rear end of this lot for building private residences years ago, and it was therefore impossible to set the building back from the front to afford a good perspective.

WANTED—Draughtsman to do perspective and birdseye view work on industrial plants in office of large engineering firm in Chicago. Position permanent to right man. Address "Perspective," care of The Inland Architect, Chicago.



Illustrating a Concrete Block House of Dr. H. C. Howard, Champaign, Illinois, Prof. F. M. White, Architect, roofed with Asbestos "Century" Shingles, laid French Method.

A LIFETIME WITHOUT REPAIRS

Asbestos "Century" Shingles

will outlive the building without
either Paint or Repairs

EXPOSED to the action of the atmosphere and elements for a short period, the hydration and subsequent crystallization which takes place, converts Asbestos "Century" Shingles into absolutely impermeable roof coverings, which, as such defy all changes of climates, and thus become greatly superior to other forms of roofings.

Asbestos "Century" Shingles are 5 cents per square foot at Ambler, Pa.

Asbestos "Century" Shingles

Reinforced Asbestos Corrugated Sheathing

FACTORS: The Keasbey & Mattison Co., Ambler, Pa.

Competition for Plans for the Capitol of Porto Rico

San Juan, Porto Rico

By Act of the Legislative Assembly of Porto Rico, dated March 14th, 1907, the Commissioner of the Interior is authorized to announce a competition for a building to be known as the "Capitol of Porto Rico," the cost of such building not to exceed \$300,000.00.

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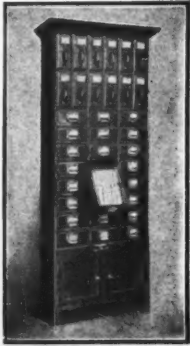
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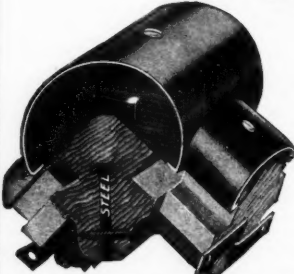
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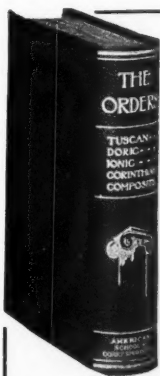
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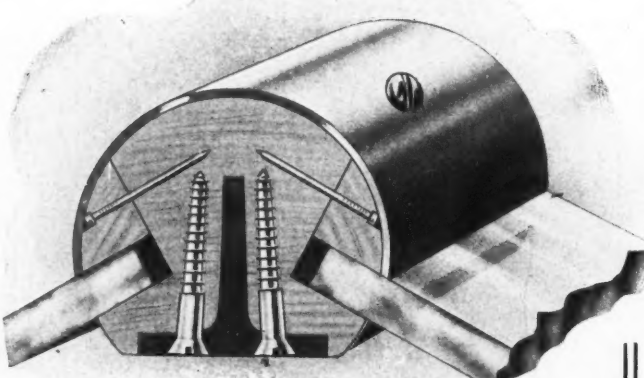
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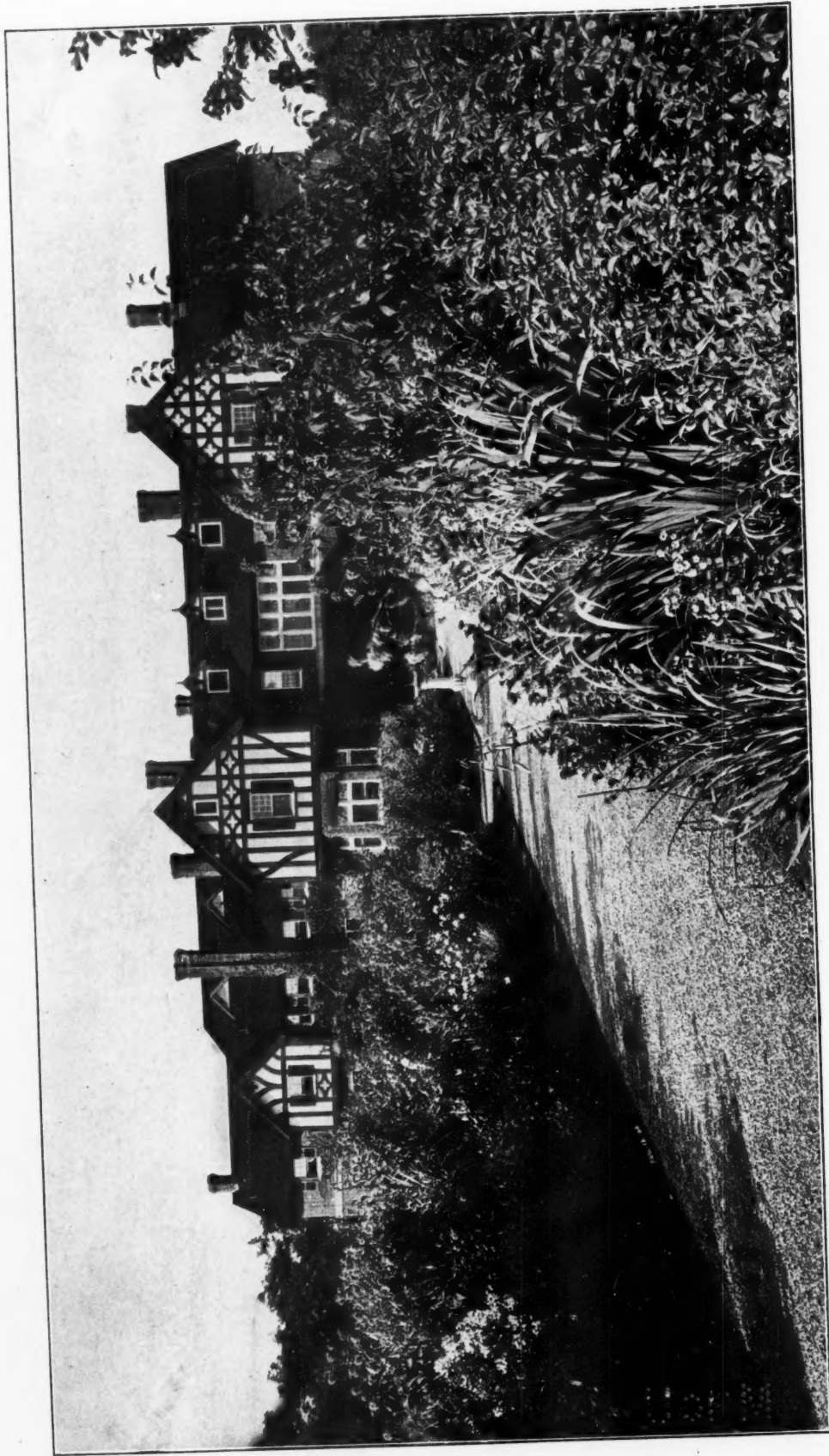


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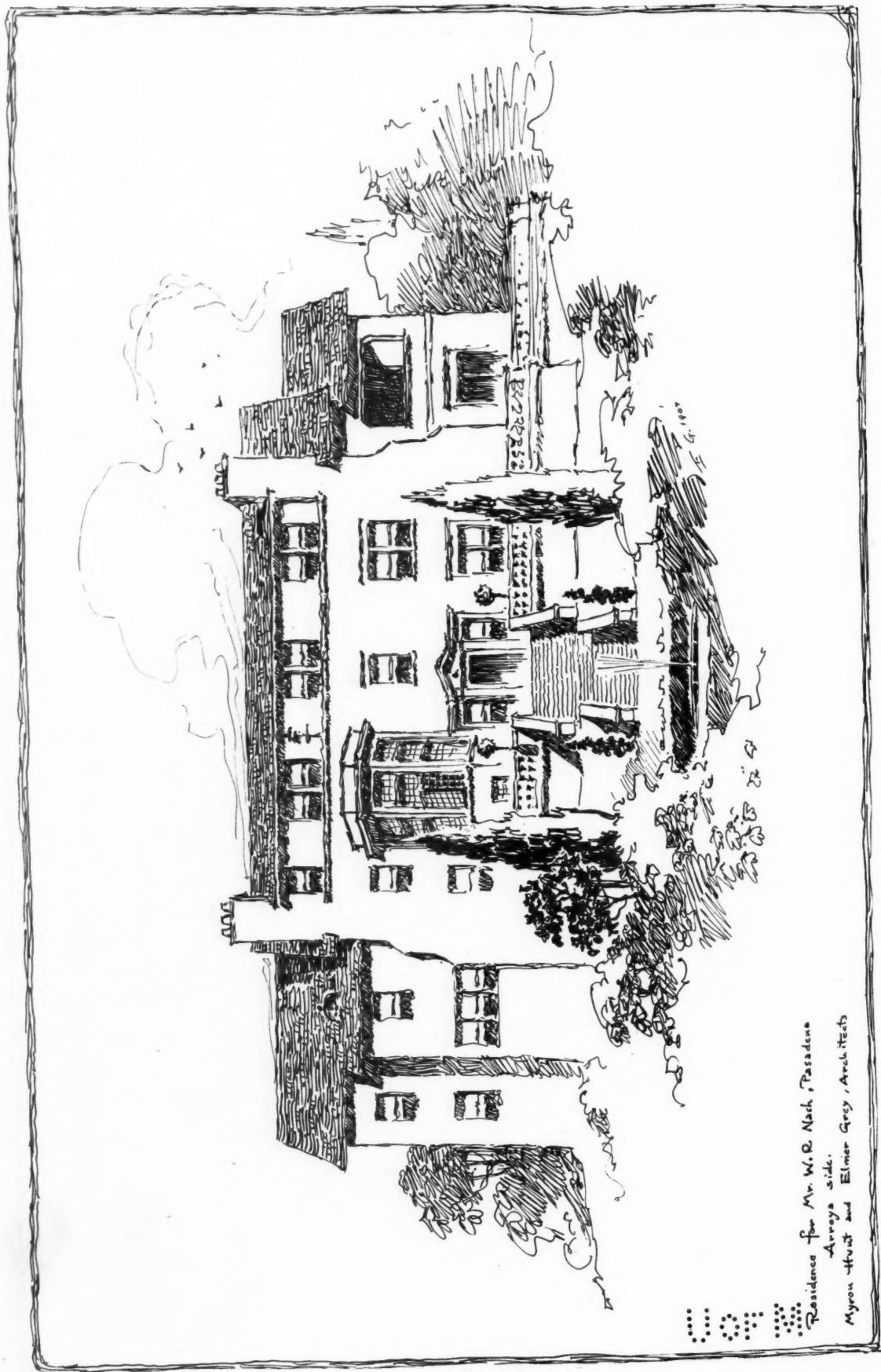
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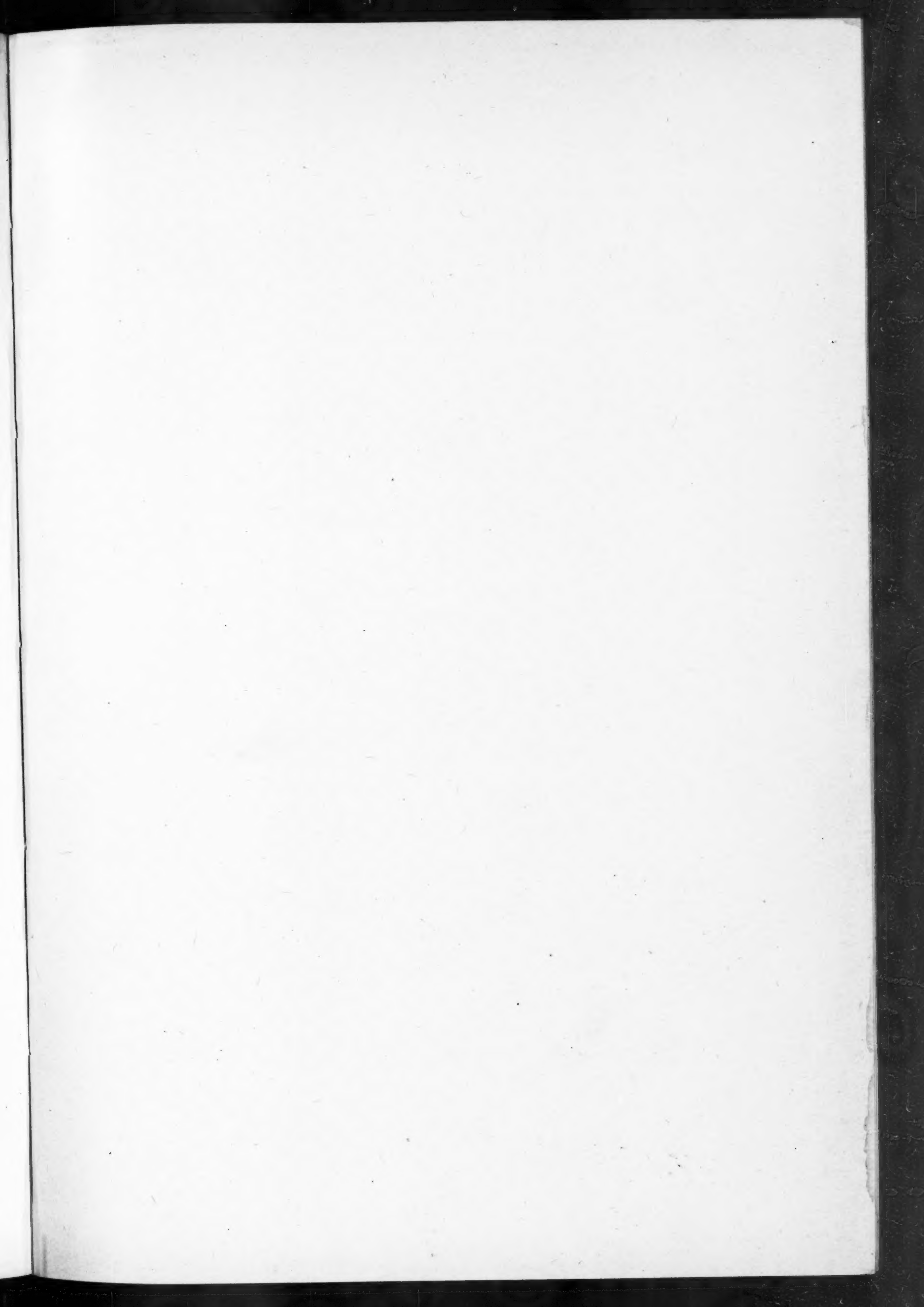
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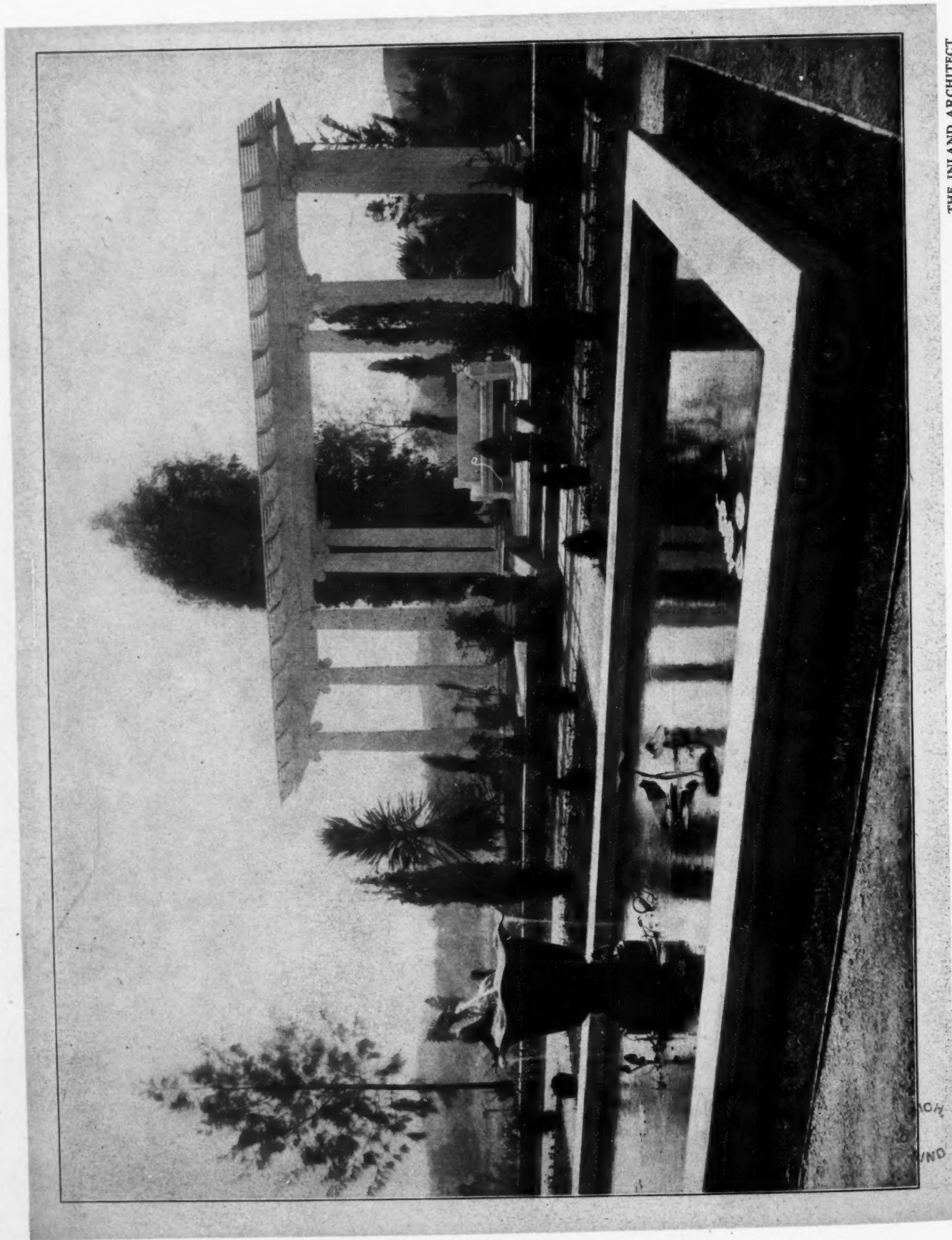
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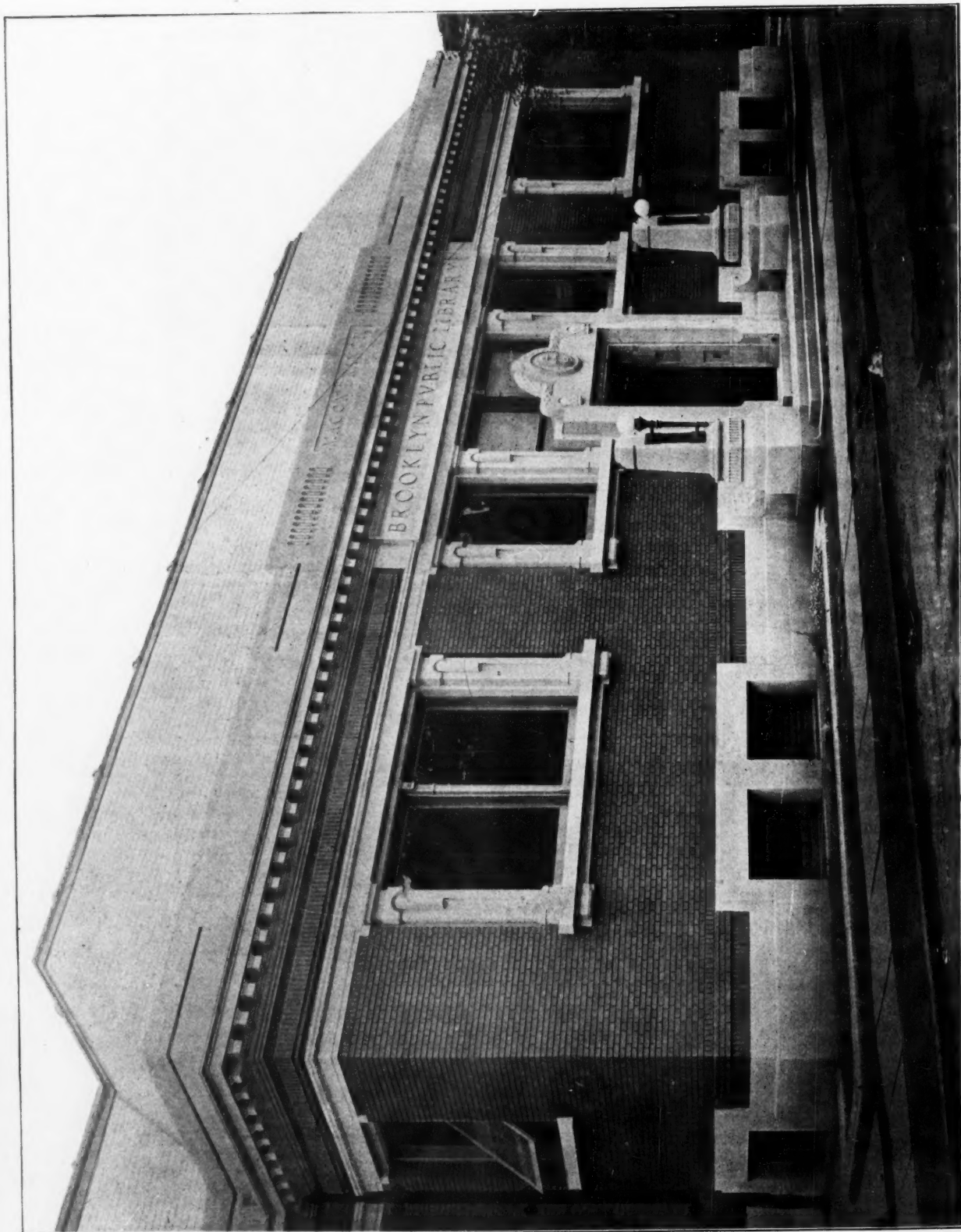




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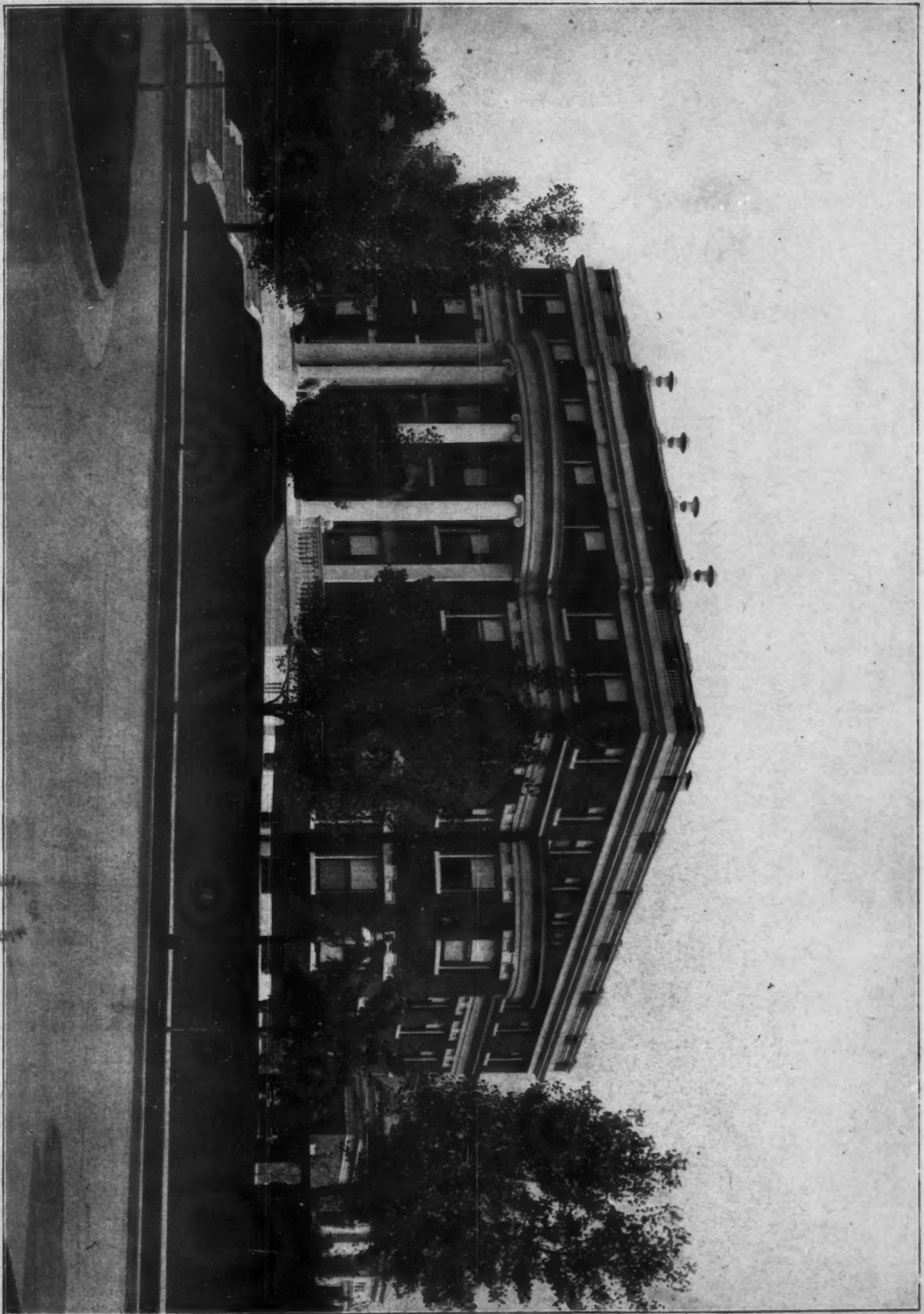




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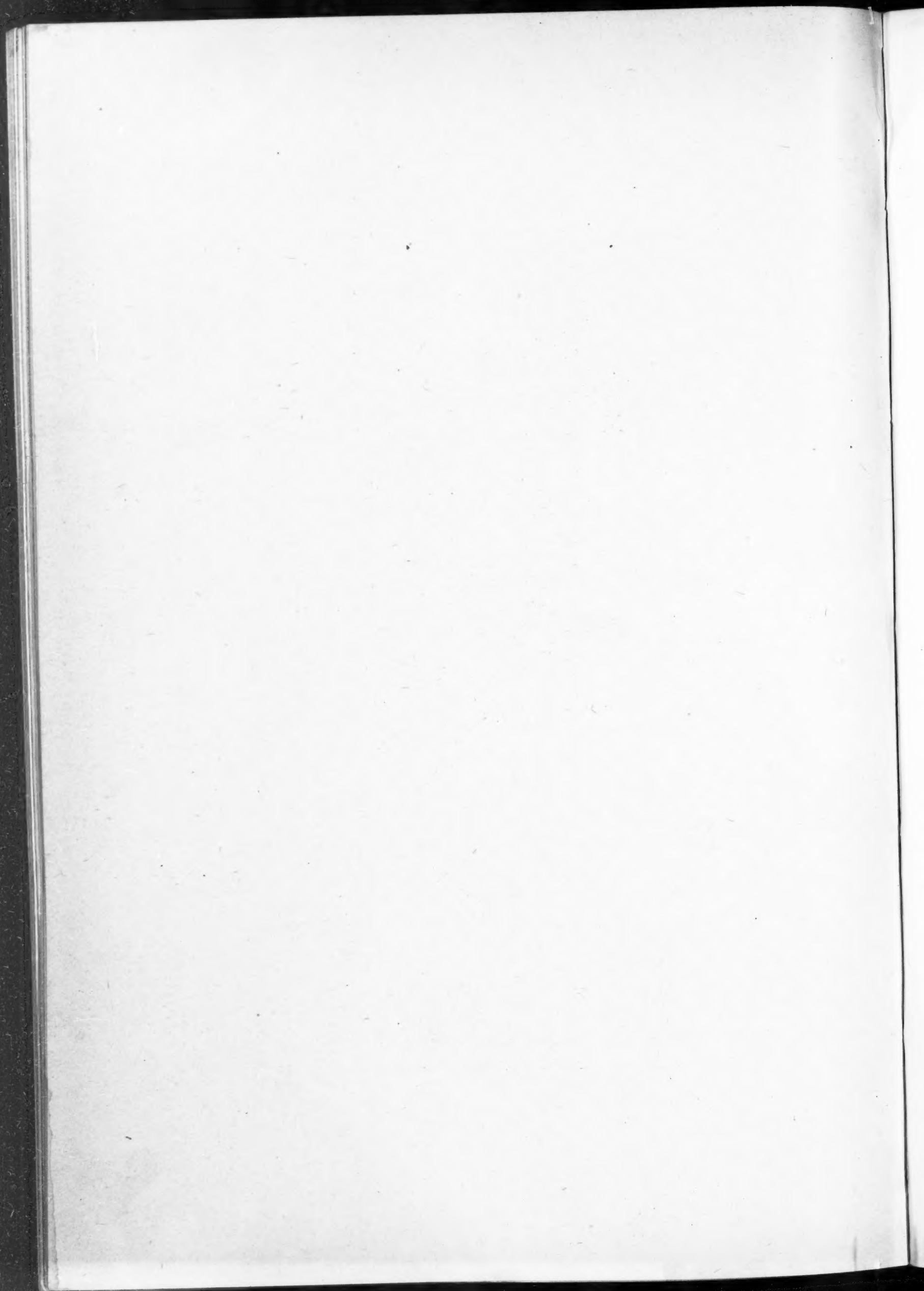
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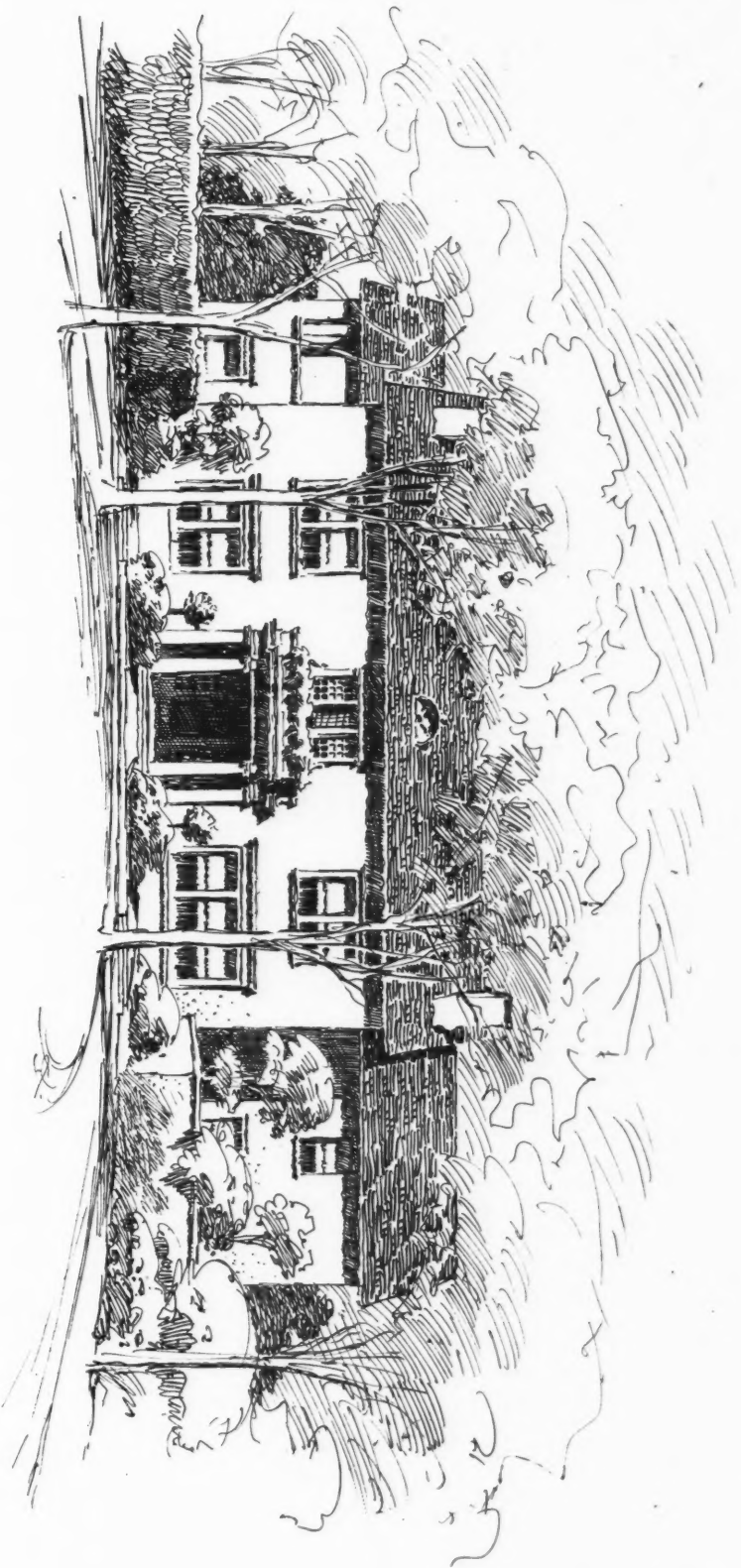




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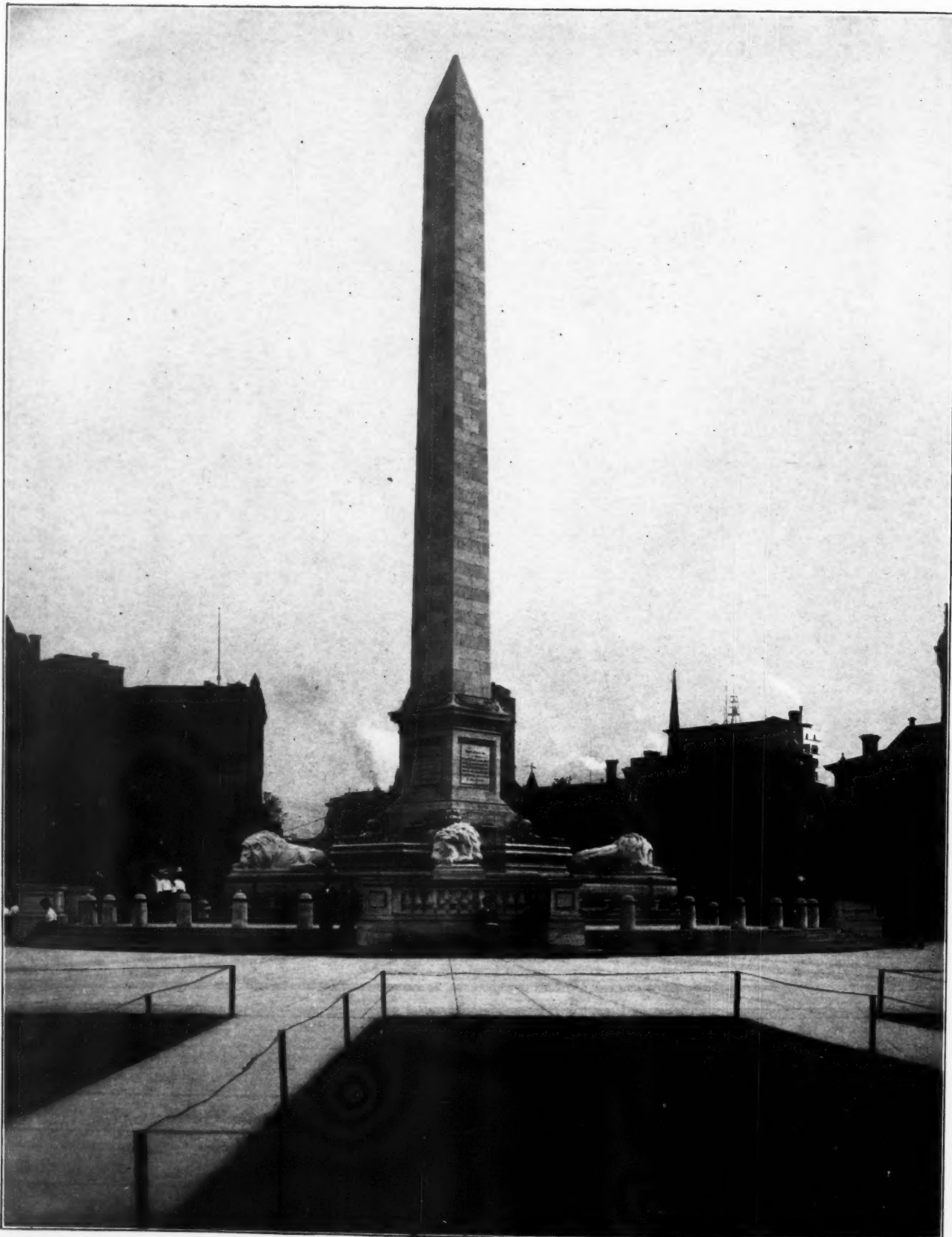
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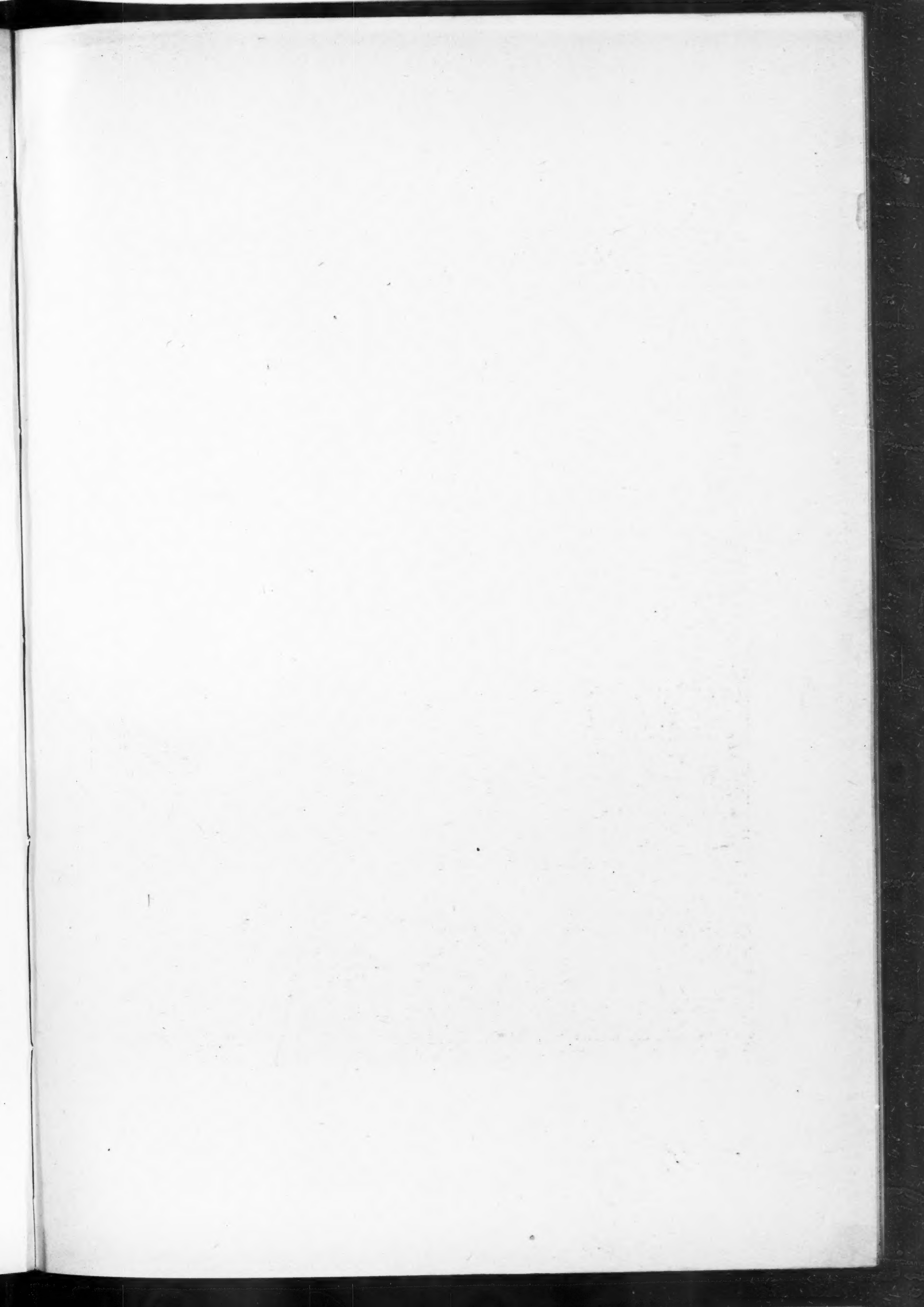
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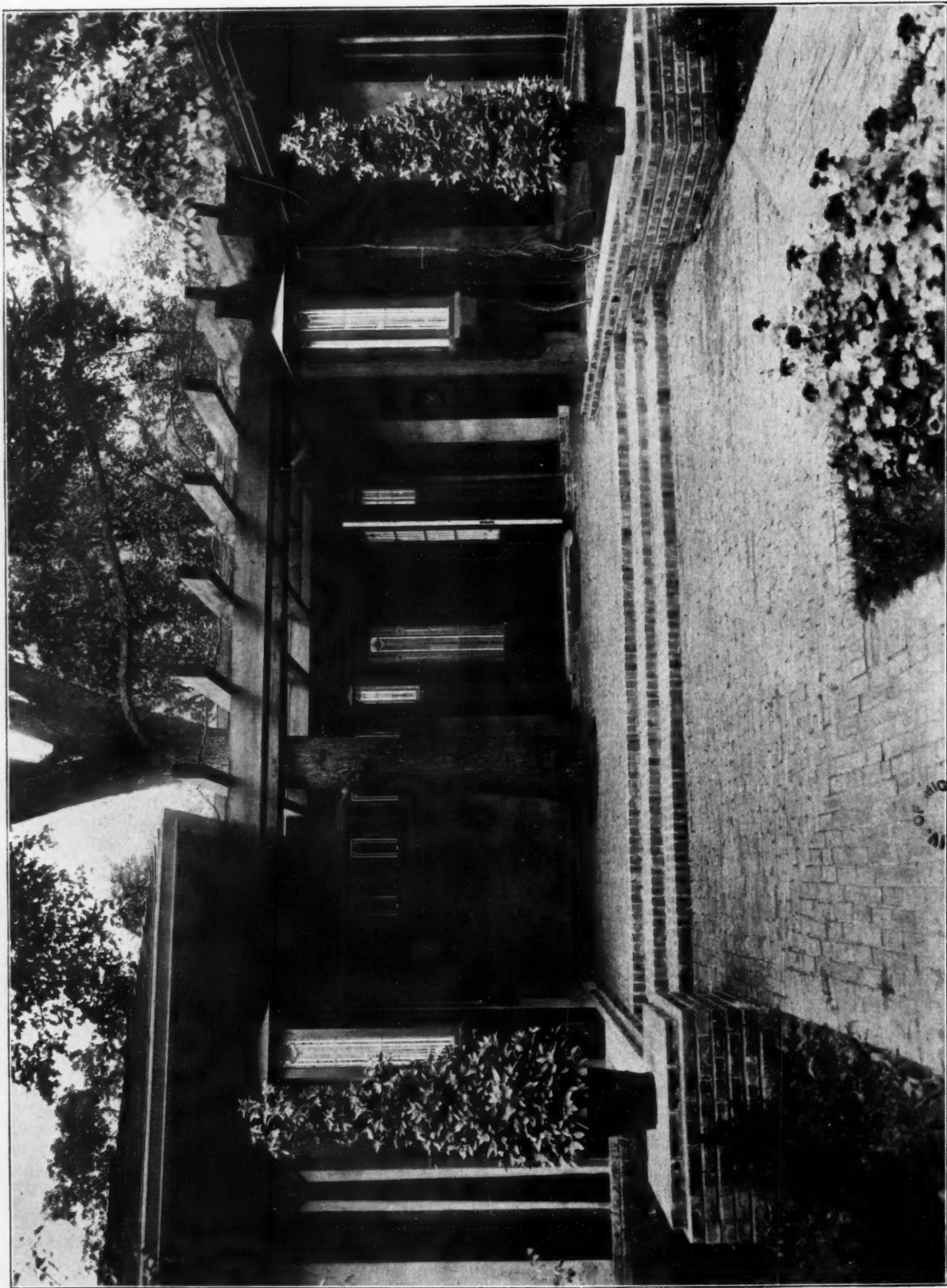
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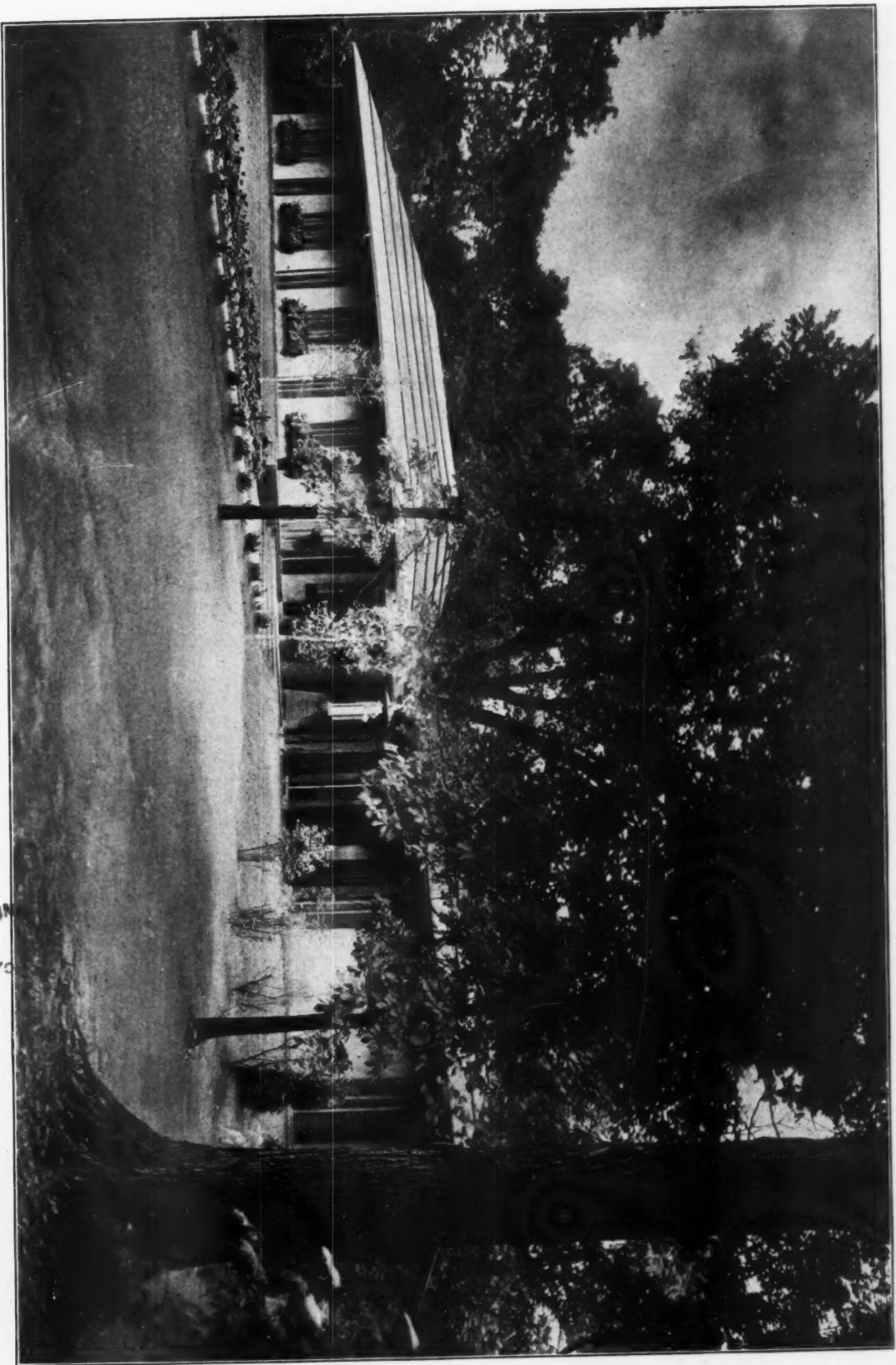
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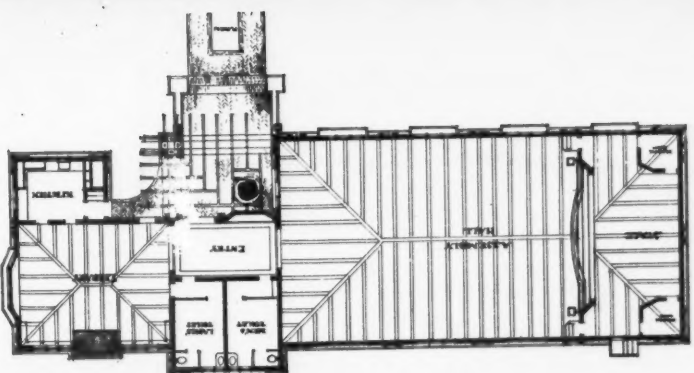
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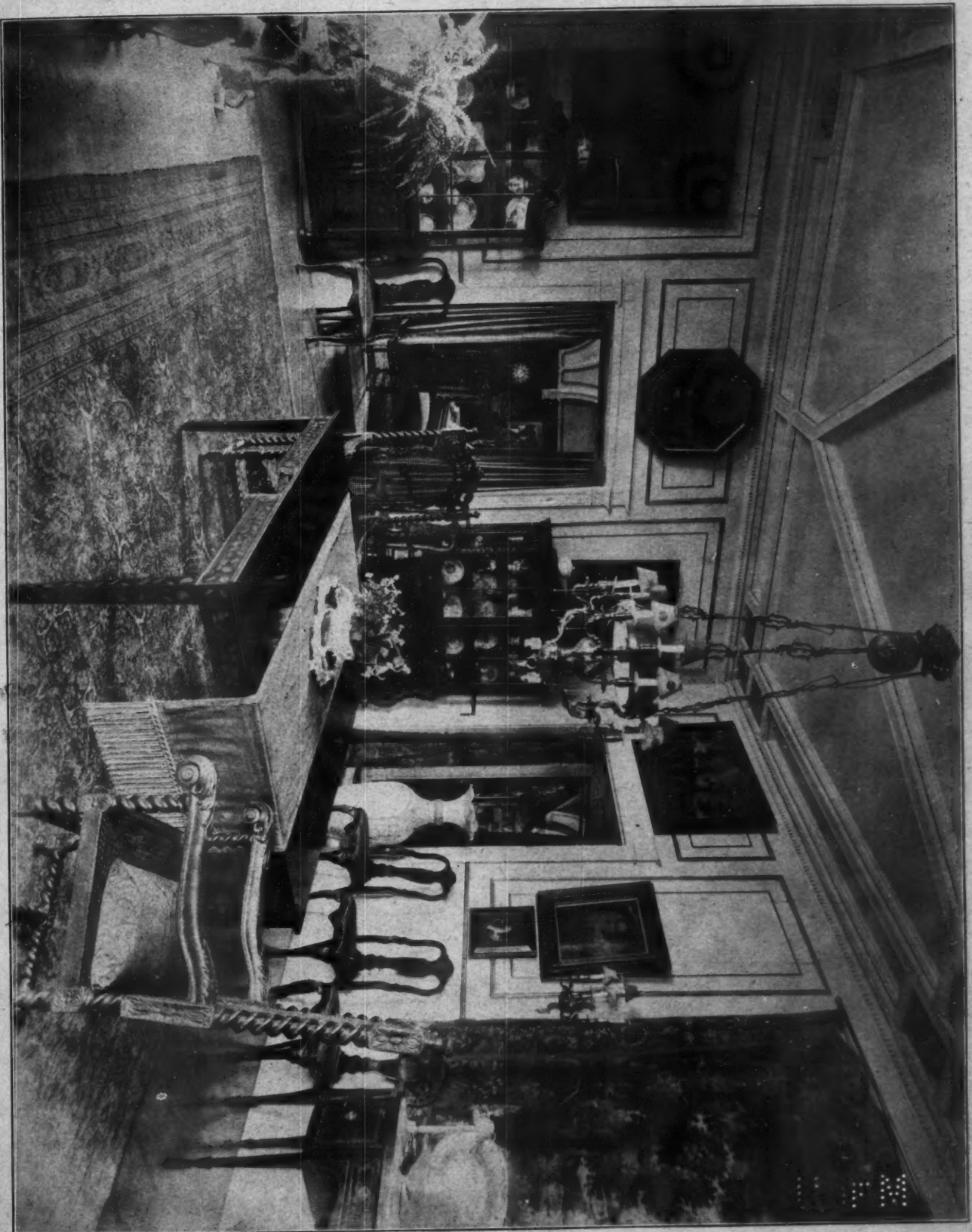
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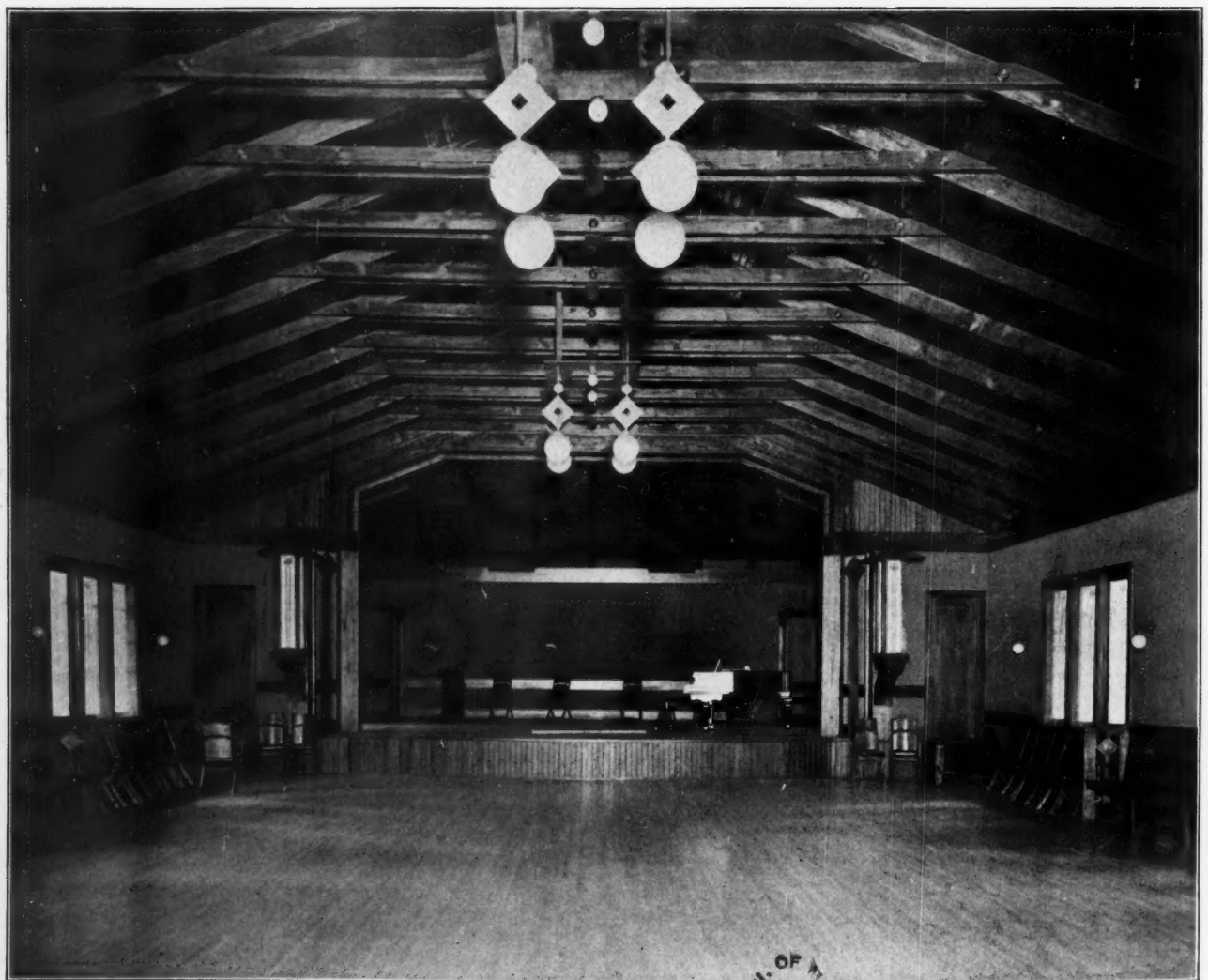


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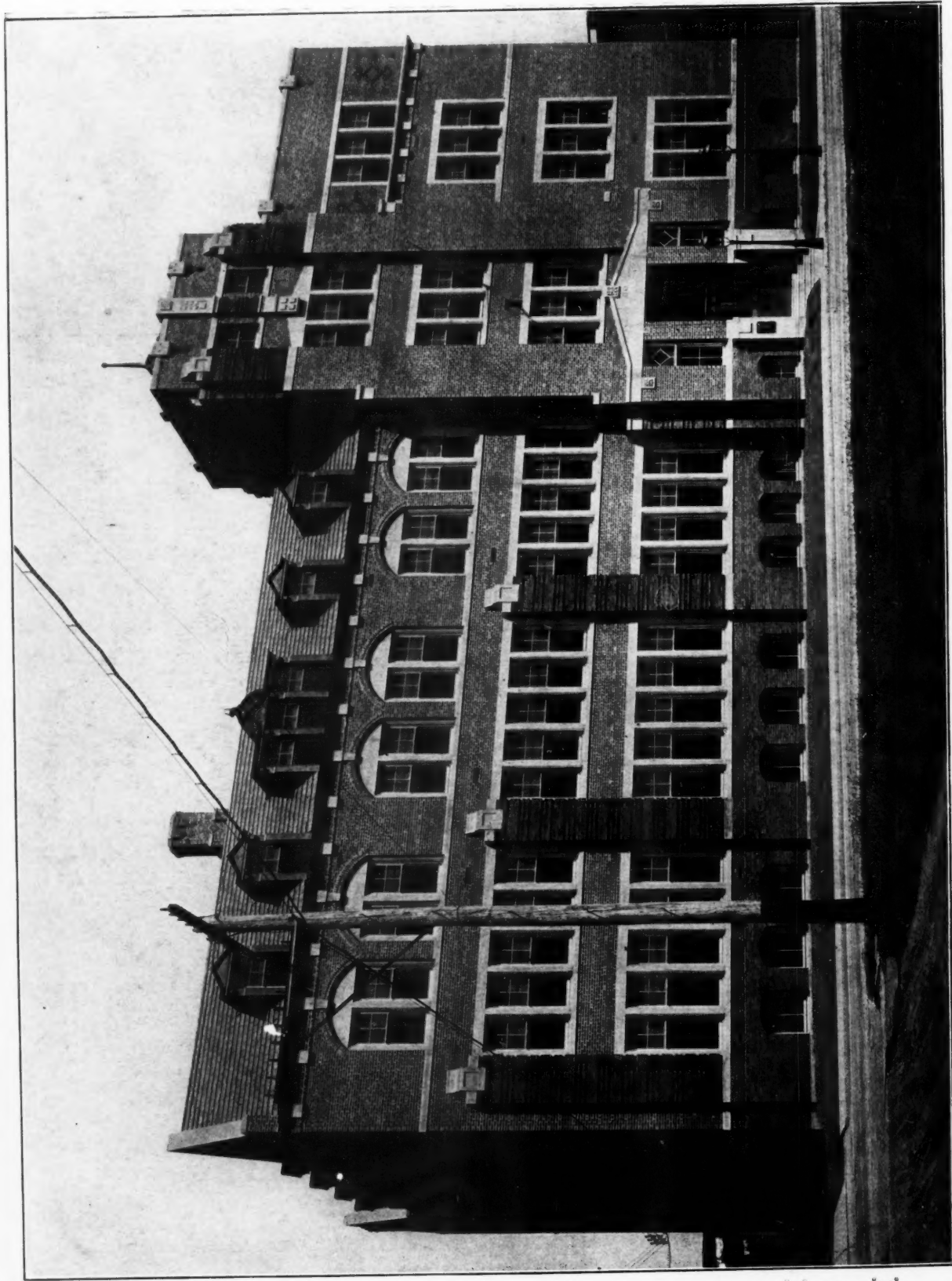


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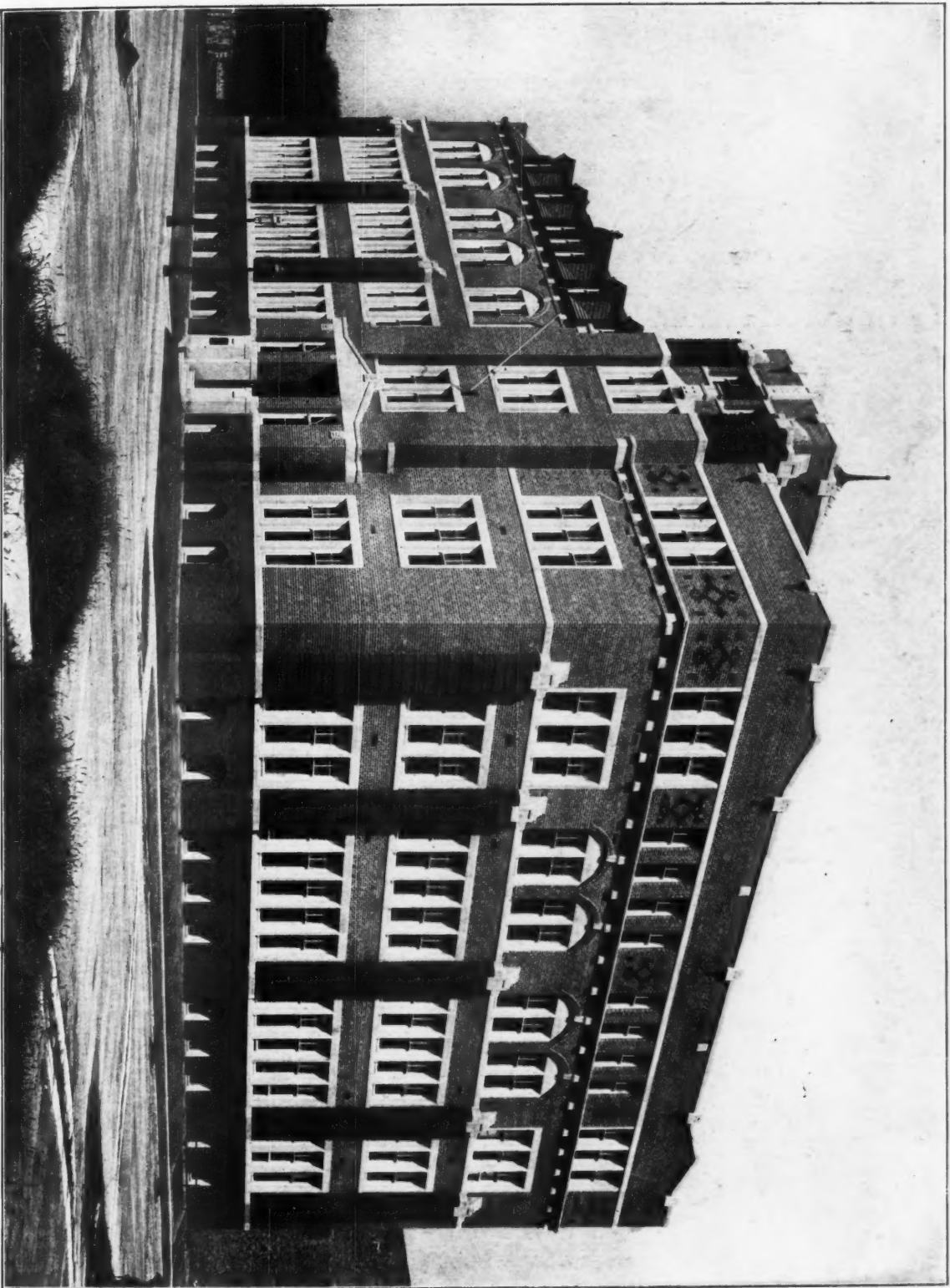
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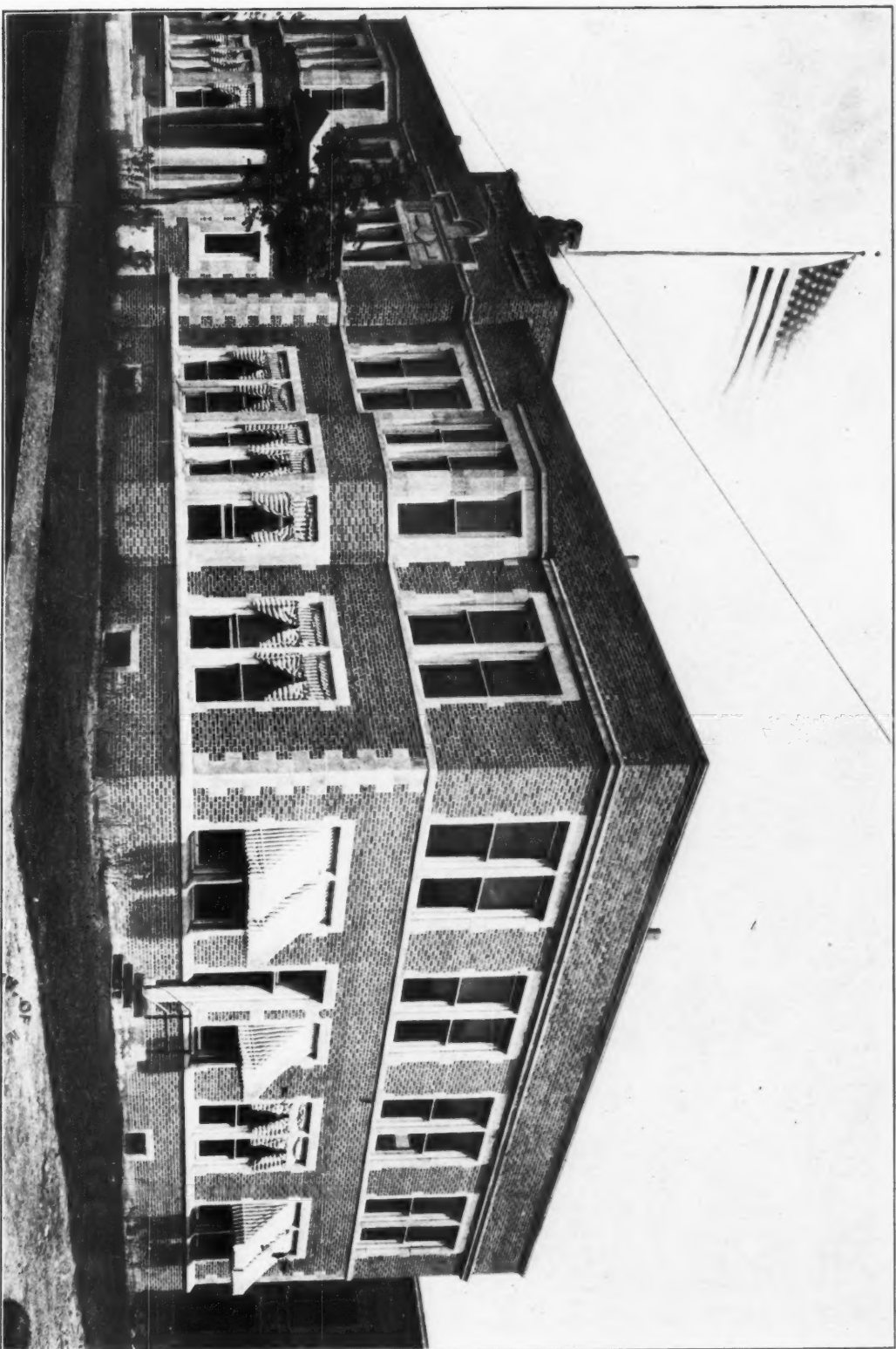


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