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Separate Contracts on Government Work.

As recommended in this journal, Secretary Gage has decided to let the contracts for the Chicago building separately. The main contract will include outside walls, roof, steel construction and fireproof floor arches, the latter being necessary in order to stiffen the floors during construction. All other contracts, such as fireproof partitions, heating, plumbing, etc., will be let to specialists in these departments. It is probable that this will continue the policy of the Supervising Architect's office in regard to other buildings. The contract for the structure of the Chicago building will be let in April.

Location of Institute Headquarters Probable.

The decision at the recent meeting of the Board of Directors of the American Institute of Architects to hold the next annual convention in Washington will probably result in that city being chosen as the permanent headquarters of the Institute, to which the abandonment of the rooms so long held in New York was a preliminary step. It is urged as a good reason for locating the Institute in Washington that it is the national capital, and here are being centered the art and educational institutions of the country. But it is also urged that the location of such headquarters should be central. While the Institute held its New York headquarters it is doubtful if ten members outside that city ever knew that such existed except through the item in the treasurer's report referring to the rental paid for the rooms. It will be somewhat different in the future, probably; but the advantages that will accrue will not be commensurate with the disadvantages to those who live west of the Allegheny mountains and who will be obliged to travel a thousand miles to attend meetings of directors or to visit the headquarters for any other purpose. It will be well for each member to carefully consider the question of location before the next annual convention, as it will be certain to be brought forward at that time. Then each member will vote with a full understanding of the subject, so that wherever the headquarters is located it will be satisfactory to the greatest number.

Unprofessional Conduct Alleged by the Institute.

It is encouraging to see that the directors of the Institute show a disposition to discipline members who violate ethical canons, but the cases which were brought before the recent meeting of the directors hardly call for too pronounced censure. In both, the architects involved are among the most creditable in the profession; and also in both, the cause was the excessive venality of public servants, coupled with the actions of other architects whose sins were of a character much more censurable. While the effect in both is bad and tends to lower the esteem in which the profession should be held, it should not be forgotten that in both cases they will carry out the work intrusted to them in a manner that will give to the people all that their high attainments as architects will command. They have each by their action made it impossible for the profession to be discredited through incompetent or dishonest service, although in the opinion of the Institute its ethics have been violated.

A MODERN CREMATORY.

BY THOMAS W. PIETSCH, A.D.G.



Crematory at Zurich Fig. 1

French revolution, it found little encouragement and achieved no material progress until some forty years ago. Then this idea was reconsidered for the first time in a really systematic way, both in Germany and Italy. In a way it had forced itself to the front, abreast with the new problems in hygiene, to which immense city agglomerations have given rise. The presence, in fact, of cemeteries on the outskirts and in the very precincts of many populous towns constitutes a real menace and danger to general health, and today hygienists recognize beyond a doubt the advantages that cremation offers in this respect.

It is not necessary to enter here into the moral and religious questions that naturally arise, for which everyone has his own particular views, but there is a point of paramount interest and consideration and one that has significantly retarded the progress of cremation and its official recognition, and that is the post-mortem examination in view of criminal investigation. In fact, a body is sometimes exhumed a long time after burial in order to determine the cause of death, and it is of course true that a burial permit should not be delivered in the case of proposed incineration except under a much more thorough examination than that now customary in coroner's inquests.

However, be it said that a search for mineral poisons could be as easily effected among ashes as in a body in decomposition; and as for poisons of an organic nature, it is very doubtful whether it be possible to vouch for their presence in a corpse several days old. These poisons are, in fact, always alkaloids, but the body itself in decomposition incurs the formation of ptomaines, which are, indeed, alkaloids, and are very difficult to distinguish from the vegetable poisons.

In any case, granting the possibility of some unpunished crimes incurred, this is not sufficient reason, says Mr. Kümler, to discourage cremation should hygiene find here a real and necessary benefit.

More than this, however, is necessary to make incineration the customary "ritual ceremony" of the dead, and there is more to contend with in time-honored traditions than in the statute precepts of religion or philosophy. Then, too, a care should be had for our inborn natural susceptibilities, our nervous impressions and impressionable nerves.

Neither customs nor morals should be shocked by the operation, which, with this in view, should be conducted quickly and without grievous, painful incident or delays. The progress of modern science has rendered the solution of such a problem pos-

It is only during the past few years that the question of cremation has become a matter of serious consideration with many of the cities of Europe, and that its solution from an architect's point of view has developed into a new and promising problem, that of "A Modern Crematory."

Previous to 1850, the subject was broached in a purely theoretical way, and from the moment it first met with any recognition in France, under the Directory, during the days of the

sible. The primitive methods still extant in India and China and among other oriental people are totally incompatible with our ideas. There the funeral pile is the unique means of incineration. Combustion is never complete, and the operation of several hours' duration presents inevitably a painful spectacle.

The complete combustion of the human body is indeed a really difficult matter, for the liquid elements, present in large quantities and saturating the tissues, make it necessary to proceed with a preliminary drying process before attempting an actual burning. An intense heat from the first would produce a distillation and consequent release of infectious gases. The body, once dried, must be carbonized and burned; and lastly, the mineral parts, such as the bones, reduced to ashes.

The programme to be fulfilled may be resumed, in the conditions presented, by the international congress assembled at Dresden, in June, 1876, for the purpose of studying the question of cremation. These conditions are as follows:

1. Cremation must be complete; there should be no charred residue.
2. The operation should be direct, and should not take place in other than apparatus exclusively reserved for the cremation of human bodies.
3. There should be no escape of gas or vapors having any odor whatsoever.
4. It should be possible to gather the ashes without difficulty. They should be pure, of a whitish gray color.
5. The minimum possible time should be given to the incineration of a corpse.
6. The apparatus should be so constructed as to permit of several successive cremations. This as much out of deference due the dead as in the interest of general salubrity.
7. The body should be burned in the coffin, this being, of course, of combustible material.
8. The crematory furnace should be accessible from all sides to parents and friends of the deceased while cremation is going on, and these latter should be able at any time to watch the progress of the operation.
9. All operations, such as the introduction of the bier into the furnace, and gathering of the ashes, should be performed as quickly as possible.
10. The workings of the furnace, properly so-called (introductions of combustibles, regulation of air supply and drafts), should be unseen, and take place without the public's knowledge.

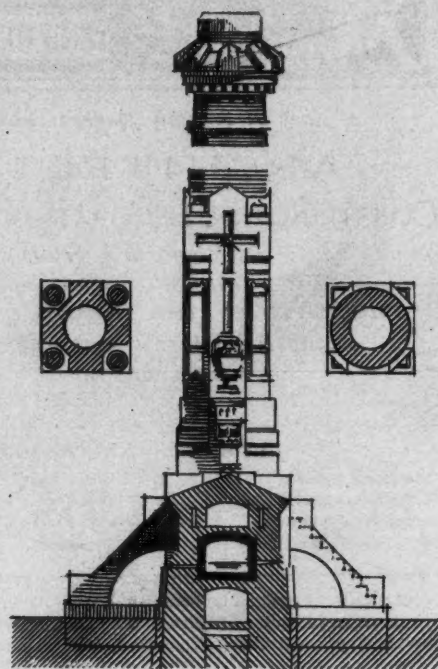
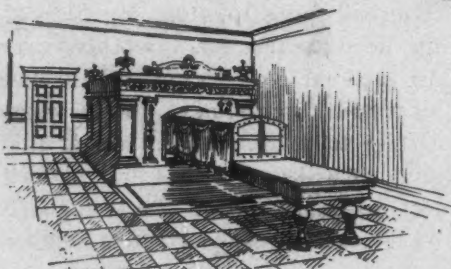


Fig. 3



Crematory at Zurich Fig. 2



Crematory at Lodi Fig. 4

11. The combustible should in no way come in contact with the corpse.

12. The outlay in fuel for incineration should be as little as possible.

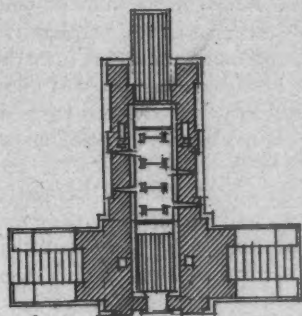


Fig. 5

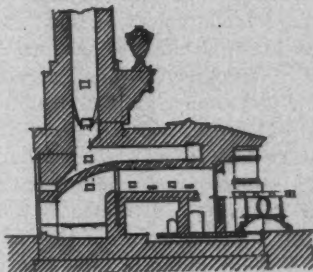


Fig. 6

13. The combustible itself should in no case give off smoke or any odor whatsoever.

14. All parts submitted to high temperature should be of refractory materials, inoxidizable and enduring.

As to what concerns the successive phases of the operation, they must be regulated by observation of the phenomena occurring during the process of incineration.

The immense volume of water contained in the organic matter (about 75 per cent) necessitates a corresponding expenditure in heat for its vaporization, which should be complete before attacking the combustible parts. It is easy to understand that the bones protected by the muscles are preserved a very long time against the direct action of the heat, and that their reduction to ashes constitutes an important period of the operation. There are, therefore, two distinct operations to be considered: 1. Distillation; 2. combustion.

During the second phase of cremation, i. e., when the vaporization is complete, a large supply of hot air must be introduced to consume the carbon in the organic matter. It is to be remembered that too high a temperature is detrimental, would involve vitrification of the bones, rendering them no longer friable, and impossible to reduce to ashes. An apparatus is, therefore, needed capable of enduring intense combustion, and easily regulated. There are a

number that respond to these conditions, differing in particular details, but alike in fundamental principles. The crematory furnace of Siemens, at Dresden, has served as a type to many others. It is really little more than the usual recuperator furnace so much used in industry, the principle being to heat the air necessary to combustion as well as the gas which forms the combustible by passage over a refractory matter previously heated by gases at high temperature, a product of the combustion.



English Crematorium Fig. 7

At Zurich, Mr. Emile Bourry constructed the "Crematorium" on these principles, but introduced some noted improvements. Here, as in Siemens' furnace, flames do not consume the body, which burns in an excess of oxygen.

But while Siemens makes use of a recuperator in brick to transmit the heat produced by a gas flame to the atmospheric air, Bourry utilizes an oxide of carbon gas generated in a coke furnace only during the first heating; and lastly, while incineration is going on, he employs it for the exterior heating of the space in which cremation takes place. The flame works around the outside of the interior vault-shaped oven and heats it. The hot gases which escape are conducted, before reaching the smokestack, through a series of conduits placed beside the incoming fresh-air ducts. In this way a very economic utilization of heat is insured. Only hot air is allowed to come in contact with it and no other gas. In Siemens' apparatus, when the brick base has given up its provision of heat, another previous heating is necessary for a

second incineration, unless two furnaces are coupled together in the process known as regeneration.

In Bourry's furnace, when one cremation is finished a second body can be introduced at once. Cremation itself affords the constantly renewed initial heating necessary in such a way that the gases escaping from the stack are no longer at a high temperature. The initial heating, or firing up, in Bourry's apparatus as in Siemens' lasts several hours (eight or ten generally), in the case of a first or single cremation.

The expenditure in combustibles for a single incineration amounts to between 40 and 50 francs. Succeeding cremations taking place immediately afterward require less than a tenth of this outlay.

In the furnace the stack requires little height and can, at the will of the architect, be dissembled in the structure. In the Zurich crematory this is done so effectually as to arouse no suspicion of the veritable character of the building. If this is clever artifice, it certainly is not rationalism pushed to extremes.

When crematories were first established two different tendencies showed themselves. Some wished cremation to recall in its outward form the act of burial, as at Gotha, where in the hall where the ceremony takes place the coffin is lowered into an opening in the floor, the same as in an open grave. In the subterranean place it is invisible to the public, thanks to the arrange-

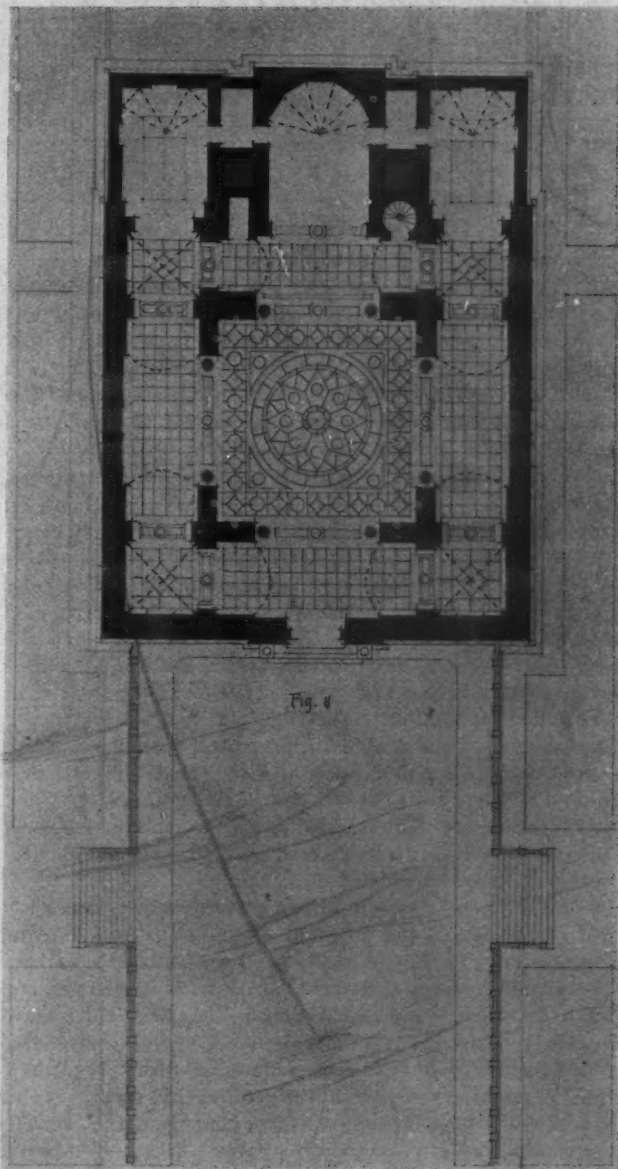


Fig. 8

ment of the means of incineration. Others take an opposite and more rational view, arguing against the use of old forms with a new process, and in truth it seems little fitting to lower a coffin, as it were into a tomb implying slow decay, when the object is to consume it rapidly by fire.

The disadvantage at Gotha is that the public does not see how the body is brought to the place of incineration nor in what

manner the ashes are collected. There is no possible means for the public to actually account for the genuineness of the ashes, nor if they result from the cremation of the body in question. No other surety is offered than implicit confidence in the employees.

At Zurich, however, everything passing "open and above board" may be witnessed by those present. The place in which incineration takes place is surrounded with monumental drapery resembling a sarcophagus; access to this inclosure may be had on all sides. The coffin containing the corpse rests upon a special table connected with the apparatus (see Fig. 2) until the close of the religious ceremony or funeral orations. The door of the furnace then rises slowly; automatically the bier moves forward,

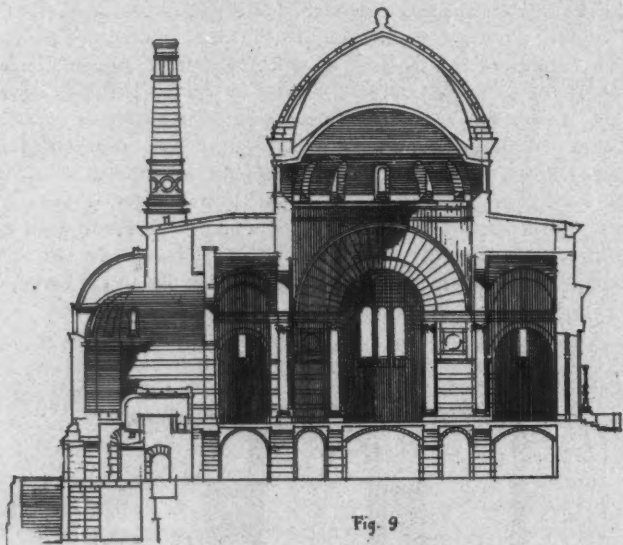


Fig. 9

enters completely, and the door closes. Only a slight crackling sound is audible while the wooden coffin burns and an absolute silence follows. An opening provided with a heavy glass filling at the back of the crematory furnace makes it possible to follow the process of incineration. The time required here for the cremation of an adult body is between two and three hours. This is excessive and inadmissible in the new models of crematory furnaces. The ashes are gathered by mechanical means and collected in a pottery urn. The procedure from the beginning is automatic.

Other methods of incineration are current in Italy, in some of which the ordinary gas for lighting purposes is used. Another principle remarkable for its originality is that adopted by Gorini. The body is no longer incinerated, but dissolved, as it were, in a bath of artificial lava in fusion. The ashes resulting, being of less density than the mass, float to the surface and are so collected. From a constructive point of view, the Guidini Crematory at Lodi is of considerable interest. (See Figs. 3, 4, 5 and 6.)

The solution of the problem is presented here in a rather elementary but compact and rational way. There is certainly no deception. This is not a church, chapel or seminary, though the stack suggests a sort of lighthouse parentage, and, to judge from the pedestal, it was evidently crossed in its purpose, and can throw no further light on the subject.

In England people look at things through other glasses. The Gothic revival is still the poignant stimulant to an architectural appetite, and if you want a really good art course dinner served with an entrée of groin vaults and buttresses with ribs and moldings à la Tudor, seek a London house. The firm will treat you sumptuously, table d'hôte or à la carte. The bill of fare is wonderfully pliant, and Gothic sauce suits every dish. Fig. 7 shows an English crematory design and illustrates this point. It seems to us about as irrelevant as a Chaucer poem in the mouth of an Apache, but appeals to the innate susceptibilities and form-traditions of our English cousins. The bell turret is no turret, but a chimney stack, while the inside walls below the sills are honey-combed with pigeonholes forming columbarium or urn depository. This last, however, be it said in justice to the architect, has an excellent decorative effect.

The question of a depository for funeral urns with their commemorative inscriptions is naturally allied to that of cremation. Actually sufficient space is provided in many crematories within those edifices themselves for a certain number of receptacles.

This space, necessarily of limited area, however, cannot suffice beyond immediate requirements. It does not provide for the future, and today the architect's programme should certainly be prepared to meet with what might be called a growing demand, not only to answer the natural progression of death, but the consequent development necessary with the growth and propagation of the cremation "doctrine." The columbarium seems to be the most fitting solution of the question and provides for a vast number of receptacles. That in connection with the cemetery in Paris (not shown on the plan, Fig. 8) is one of the most important in Europe, and provides for several thousand urns. The crematory itself (Figs. 8, 9, 10), built in 1887 by M. Fournigé, architect, is an edifice of real monumental worth and character. Its crematory furnaces, constructed by Toisoul and Fradet, give excellent results. The situation of this crematory is an ideal one. Placed on the high ground of the Père la Chaise Cemetery, it overlooks Paris toward the west, and an abundance of pines and cedars add to the impressive character of the place. Unfortunately, however, this monument has not been completed and a temporary shed does service for the proposed dome-covered chapel. The crematory furnaces and stacks are all that has been put up in stone. Here, as in America, money is sometimes the bugbear of architecture. Never theoretically, however, as testified by the "projet" shown in the plates. The design given is a thesis work at the École des Beaux Arts, constituting a part of a set of diploma drawings, and, of course, knows no financial, legal or ground limitations. The subject is worked out under the best possible conditions, that is to say, "no conditions at all," as shown by the following programme:

A CREMATORY.

The edifice, to be erected on the heights overlooking a great city, should comprise on the main floor, elevated at the height of ten or twelve feet:

1. A large hall for the congregation of those who come to pay their last tributes to the dead, and where funeral orations may be given and religious services performed. This hall should be preceded by a porch, affording shelter but in no sense obstructing a large and easy access to the interior.

A mortuary chapel, or *chapel ardente*, where the body is laid out. This chapel should be arranged in such a way as to permit its isolation from the hall by means of curtains or tapestries.

Space necessary to contain the furnaces. Two furnaces are required, one or the other being in constant use, so that in case of accident necessitating repairs in one furnace the other may at once take its place.

There should be a direct exit from these crematories communicating with the adjoining columbarium. This columbarium should be designed to receive upward of five thousand urns. In the ground within the general inclosure there should be a certain amount of space provided for individual monuments; and, in the building itself, inscriptions, bas-reliefs, urns, etc., should recall the names of the illustrious dead.

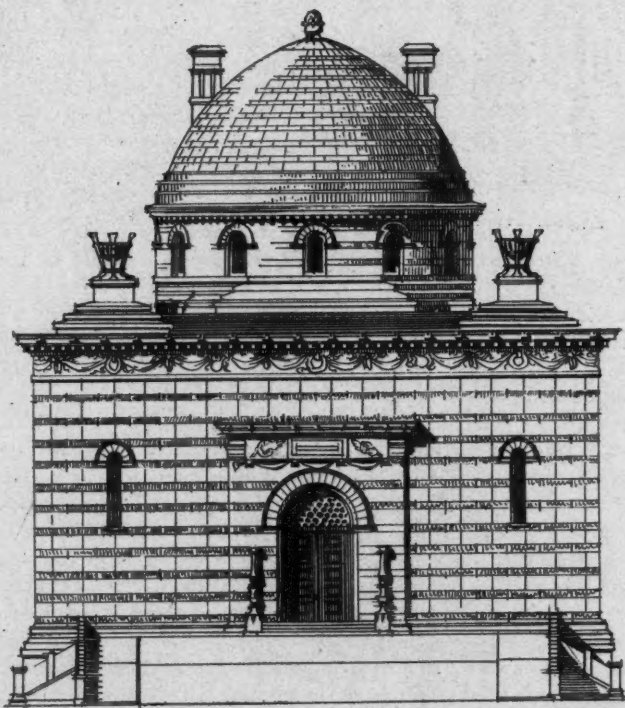
2. Space should be found on the ground floor for:

Coalroom.

One or two rooms for officials.

A lodging for a night watchman.

Gas generators, smoke consumers, furnaces, W. C., etc.



Crematory in the Père-la-Chaise Cemetery, Paris. Fig. 10

3. In a sub basement so contrived as to obtain good furnace draft, there should be space allotted for the deposit of unknown bodies and the dead from the general hospitals, with lifts adjoining the furnaces and staircases for the mechanics.

The crematory furnaces designed for this project are similar to those used in Paris, system Toisoul and Fradet. A gas generator in the sub-basement supplies oxide of carbon gas by the incomplete combustion of coke, which, ignited by special burners on entering the furnace, gives a very high temperature at minimum expense. The hot air is provided by a recuperator. This system is inexpensive and expeditious. The cost of an incineration is from 60 to 80 cents, and the time required less than an hour.

A great deal more might be said in detail, but this matter is perhaps more the domain of the engineer and constructor, and of secondary interest to the architect. Perhaps I have already spun my story beyond fair limits. The subject of cremation is not a happy one to dwell on, and it is not well to insist thereon. I cannot say that any of us will care to deal with it "hereafter."

THE AMERICAN ARCHITECTURAL STUDENT IN PARIS.

BY HARRIET MONROE.

THE young American architect of the present day is beginning to think himself improperly equipped for his profession unless he can show a diploma from the Beaux Arts. Year after year our young men come to Paris to get in training for this difficult course. They remain here one, two, five, seven years, and sometimes carry the precious parchment back to America. The question is, is the game worth the candle? What do they give, and what do they acquire? I have asked these questions of two Beaux Arts men, one of them a recent graduate and the other a student who hopes to graduate this year. I have asked them also of a young architect who has been traveling for the past year on a scholarship from the architectural department of one of our most prominent universities, and who has familiarized himself with Beaux Arts work.

On certain points the three were agreed—none of them could deny the severity of the ordeal. "If you are bent upon putting a boy through the Beaux Arts," said one, "I advise you to bring him over here at fourteen. For in the first place he has to learn the language; he has to become thoroughly familiar with not only conversational but technical French, and that is no slight task."

"Then you must warn him that foreigners have a very slight chance, compared with Frenchmen, to enter the academy. In order not to be overrun with outsiders, the government has recently limited to ten the number admissible each year. As the number of applicants is constantly increasing and only the ten who stand highest are admitted, it has come to pass that the standard for foreigners is much more difficult than for Frenchmen, and sometimes all ten of them enter more creditably than the ablest Frenchman in the class. The result is that clever Americans come over here and linger around for years trying to get in. Every six months comes an examination, and there is heavy betting among all the fellows on the success or failure of each candidate. Usually he fails and has to wait another six months, picking up what he can outside. There are men here—good ones, too—who have been trying every examination for three years and are not in yet. The mere difficulties of the language are almost insurmountable."

"And if they get in?" I inquired.

"Well, the training is very good so far as it goes"—it was my friend the traveler who spoke—"provided you can keep a man from getting crazy over it. But the moment he begins to think, as he rather generally does, that there is nothing on earth but the Beaux Arts, he should be sent back to America and set to work on skyscrapers. A man is strictly and thoroughly taught there along very narrow lines, but it is useless to say that he is thereby prepared for the practice of his profession in America. He learns the development of architecture, from the classic Greek to the modern French Renaissance—the mediæval Gothic is a mere barbarity, an aside in his course which he may study or not as he chooses. He gets soaked through and through with the system of design and construction now in vogue here, and graduates prepared to practice in Paris. But as the jobs are only to be found in America, he usually goes home. There he finds that French Renaissance is not the only style for a country whose building materials, in place of this accommodating French stone which

cuts like cheese when new and hardens when old, are plain brick and the most refractory stones. He finds also that the system of construction which he has been at such pains to acquire is of no use to him whatever; he has to learn another and quite different one. And gradually he has to learn also that while the scholasticism of his art is a very good thing to know, the really progressive architectural work of our own time is being done in America outside scholastic lines. For a real Beaux Arts man, this last is an extremely painful process."

"If a boy comes over here at fourteen, how soon can he hope to get into the Beaux Arts?" I asked.

"Well, Frenchmen enter at seventeen or later; he would probably be later."

"And his education would be entirely architectural?"

"Entirely. The best thing for a man who wants to know anything besides architecture would be to take his college course in America first. But coming over here at that age, he would find it much harder to learn the language. Of course he might go through the Beaux Arts first and then through an American university; but what Beaux Arts graduate, with all his budding laurels on his head, is going to be modest enough for that?"

The two Beaux Arts men could not deny the traveler's points. They granted the difficulty of getting into the academy and the inadequacy of the training as a preparation for work in America, but they defended the school as the best in the world—one of them was almost ready to say the only one in the world—for giving an architect the bone and sinew of his profession. "It is a good foundation," said one, "provided a man will not think he knows everything when he gets through. If he begins with it and does not end with it, an American architect is the stronger for the Beaux Arts course. But I doubt if it is worth the time it costs him to get in under the new rules."

Recent French architecture strengthens this doubt. The French designer is safe enough so long as he keeps to the path marked out by his predecessors. The building laws of Paris hold him rather closely to the old rut, and consequently the avenues of the modern metropolis are usually so decorous and harmonious that one forgives them for missing the finer qualities of the style, the vitality and poetry which one may find in many a façade and court along the older streets. But the moment the French architect begins to allow himself some latitude one wishes him back in his groove. There are new hotels and apartment houses along the Champs Elysées which are so covered with tubercles and excrescences in stone that one holds one's breath in passing them for fear of catching some dire disease. I think especially of two or three in the neighborhood of the rue Washington, almost under the shadow of the Arc de Triomphe—monstrosities in enduring stone for which the associated insurance companies proclaim themselves responsible, and which regularly qualified and officially approved French architects must have designed.

When a new church has to be built one never knows what will happen. Ten to one it will be a machine-made specimen of French Renaissance, and if it is not, one wishes it were. There is a costly new church in Tours, built to enshrine the bones of St. Martin, which was designed, I am assured, by a Beaux Arts graduate. It is a vagary into the Byzantine, so intended, and it is such an incredible barbarity, such an architectural outrage, that one would never accredit it to a man of scholastic training, not to speak of ordinary common sense and taste. The new basilica of the Sacré Coeur, whose scaffolding is now so conspicuous on the heights of Montmartre, promises to add nothing to the architectural dignity of a race which once built the noblest churches in the world.

All the recent work leads one to question the propriety of foreign training for our architects. Foreign travel, the study of old monuments, is doubtless an advantage, but the advantage of submitting an impressionable youth for years to foreign masters of an art unquestionably decadent is extremely doubtful. American architecture, however crude and chaotic and undeveloped in its present stage, is at least alive. It is honestly attempting to answer the needs of our own time, of our own conditions. Already this honest effort has produced a few masterpieces; properly encouraged it will produce more. And now, just in this critical stage of development, our young men are encouraged to submit themselves to severe discipline in a system of design and construction which responds to modern needs about as adequately as stage coaches would fit modern railways, and which is forced out of its true proportions when it makes any effort to serve our

purposes. Men trained at the Beaux Arts are in danger of forgetting that styles grow not by imitation of previous styles, but by a faithful adjustment to new conditions. The fashion which sends them there is the present cry for classicism. But it is a foolish fashion which forgets the one great lesson to be learned from the classics — the lesson that all great art is a fulfillment of the need of one's own people, done in the spirit of one's own time.

FIREPROOF CONSTRUCTION OF DOMESTIC BUILDINGS.*

BY THOMAS POTTER.

BY domestic buildings I mean buildings used wholly or mainly for habitation. Public buildings, where many people congregate, warehouses, and structures containing large quantities of inflammable goods, and other places of a similar character, require greater precautions than are necessary to render domestic buildings practically fireproof, and these time will not permit me to deal with.

The constantly recurring and gradually increasing loss of life, and of much valuable property by fire, is not realized as it should be; nor, I submit, are sufficient precautions taken to diminish in the future the risk that is now to a great extent easily attainable in the erection of habitable buildings.

The chief officer of the Metropolitan Fire Brigade stated, in his annual report for 1896, that during that year there had been in his district 3,616 fires, more or less of a serious character, to which the brigade had been called; that 106 lives had been lost, besides serious injuries to 110 firemen, of whom two died, and that, in addition, the number of persons injured little or much through fires could not be ascertained.

This is a startling report, and rendered all the more serious when we gather therefrom that our lives, apparently hang as it were on the result of an occasional spark, or a lighted match carelessly used or thrown away, for 198 fires resulted from the former, and 363 from the latter.

The loss of life in traveling and in following dangerous vocations has been lessened in a remarkable degree during the last century. Our forefathers were, we are told, in the habit of making their wills previous to undertaking a journey, by reason of the danger incurred, their homes being considered the safest places. At the present time this order of things is reversed, for, whereas — as just stated — 108 persons lost their lives from fire in the metropolis alone in 1896, and in their own homes, only eight passengers met their death from circumstances beyond their own control through traveling on all the railways in Great Britain during the same period.

The serious loss of life from fire in the metropolis would undoubtedly have been increased but for the skillful organization of the fire brigade, and the improvements that have been made of late years in means for checking fires and saving life. If as much care had been bestowed in the past, and was still practiced to make our houses fire-resisting as has been expended in extinguishing fires, there would be comparatively but few serious fires at the present time or in the future, so far as domestic buildings are concerned.

We shall be told possibly that many of the houses in which fires take place are old, and that much wood was used in their construction. This is so, but nineteen houses out of every twenty in the course of erection at the present time within the metropolitan area are being built in the same dangerous manner.

The only domestic buildings which the London building act compels to be to any extent fire-resisting, are those belonging to or occupied by different families, such as hotels and flats, dwellings over stables, buildings used partly for workshops and partly for habitation, and others which are beyond certain dimensions in superficial or cubical area. The great-majority of buildings are allowed to be built to burn, except so far as regards external walls, chimneys, party walls, and roof coverings.

The building owner is at liberty to deal with the inside of his house almost as he likes — i. e., he may use wood for floors, partitions, wall linings, stairs, skirtings, roofs, and other things that could be as well formed of incombustible materials and at comparatively little increased cost; these form a standing menace to the occupiers of, at least, the upper stories of every dwelling built in the usual way.

If a certain amount of timber were allotted to be used in the construction of a dwelling house, and the instructions were that it was to be distributed in a way that, should the window curtains or carpets take fire from a spark, a lighted match, or the upsetting of a paraffin lamp, some portion of the timber would be fairly certain to catch alight and the fire to spread with the greatest rapidity, no better arrangement could be devised than the one usually adopted in house building.

As the first step in this direction we have wood joists, about twelve inches apart, reaching from wall to wall over the entire area of the buildings, and resting on wood wall plates; wood floor boards to form a walking surface cross these at right angles on top, and wood plastering laths cross at right angles beneath to form the ceilings of rooms below; a similar arrangement is, as we know, adopted for lighting coal fires in ordinary grates, the crossing and recrossing and the space between affording excellent facilities for the fire to play round the wood, and air to circulate

and so assist combustion. This arrangement, which begins with the ground floor, is repeated every three or four yards in height to the top of the building, where the roof, constructed with wood ceiling joists, wood rafters, and wood ceiling and slate laths, is ready to supply its quota of combustible materials on the slightest provocation.

Wood partitions for dividing the floor area into rooms are often formed of timber quarterings placed twelve inches apart, cross-lathed on both sides and affording unusual facilities for carrying the flames upward from floor to floor. Bricks are sometimes built in between the wood uprights, and these to a great extent lessen the danger.

Wood skirtings, dados, match boarding, or wainscoting, are fixed round rooms to wood battens nailed to wood plugs, driven into the mortar joints, and sometimes into the chimney flues. A space is usually left between the back of this woodwork and the wall to prevent decay; the air having unchecked circulation through this space, a fire is rapidly communicated from room to room.

Wood stairs commence at the lowest floor and finish at the highest, and, it may be said, as a rule, there is practically no disconnection of wood between the bottom floor of a house and the top floor, and no severance or barrier to check ascending flames; a strong upward current of heated air is provided at the bottom by the well hole of the stairs, and when once the latter are well alight all escape from the upper rooms is cut off, and a leap from the windows or the fire escape is often the only means of avoiding one or other of the most horrible of deaths, suffocation from smoke or being roasted alive. I have not overdrawn the description of the way houses are being built by the thousand every year, even within the metropolitan area. It was nothing of an unusual character that caused the loss of 106 lives in 1896; it was pretty evenly distributed among 77 different fires, nearly all of which appear to have been in buildings of the domestic class, and almost without exception the fires originated from the most trivial cause.

Another startling statement is to be found in the annual report alluded to, namely, that for the last thirty years the number of fires and the loss of life therefrom have gradually increased; the total number of fires in 1866 was 1,338, 44 lives being lost, as against 3,494 in 1896 and 106 lives lost.

The expression "fireproof" has a conditional meaning; no building can be said to be absolutely fireproof; sufficient time and material for prolonged combustion are all that is necessary to reduce the most fire-resisting building to ruins. It has, however, become usual to designate those buildings fireproof where the materials used in construction are incombustible. Fire-resisting would be more appropriate, but, except in the building act, it is seldom used.

The puzzle is why domestic buildings in crowded streets are still allowed to be constructed in a way that may bring death in its worst form to the inmates at any moment and with no warning. There may be a certain amount of prejudice and a corresponding antipathy to anything that savors of novelty, still architects I believe, as a rule, agree that compulsory fireproof construction of a sufficient character to render our domestic buildings of all classes practically safe from fire is only a matter of time, and is a condition with which they have in many instances no sufficient authority to deal.

The only explanation that can be given why fireproofing is comparatively so little adopted at the present time is that the great majority of houses are erected to sell, or to let at an annual rental; building owners desirous of obtaining a large profit on the sale, or high rate of interest in the shape of rent on their capital outlay, object to spending money for special purposes which are not in evidence on completion, and concerning which purchasers or occupiers appear indifferent, and, as buildings can be insured for their full value, the owner is secured against a monetary loss.

A good deal of misconception exists as to which portions of a house should be rendered fire-resisting, and also an exaggerated notion as to the extra cost.

There is no reason why structures used mainly as dwellings should be built with the same regard to fire-resistance as large shops stored with inflammable goods, warehouses, public buildings, and others used for extensive trade and manufacturing purposes.

An ordinary house in which each apartment is so far fire-resisting that its contents and such structural woodwork as cannot well be dispensed with, or which there is a desire to retain, are together insufficient as combustible materials to spread a fire beyond the limits of the apartment in which it commences, may be said to be practically fireproof.

The external walls of houses are almost without exception compelled to be built of incombustible materials, but the two factors in construction which are the main cause of loss of life by fire in domestic buildings are the wood stairs and the wood floors, and assuming these to be formed of materials that will resist a moderate fire for a couple of hours at most, the skirtings, doors, door surroundings, windows, fittings, carpets, curtains and furniture combined would not in themselves be a source of much danger beyond the apartment containing them, and may therefore be considered as factors of secondary importance in connection with fire-resistance.

But so far as regards skirtings they would always be better if constructed with Portland, Keene's or Parian cement, because in connection with the wood architraves of doors, skirtings form an almost, and in some cases entirely, unbroken line of woodwork

* Paper read before the Society of Arts, January 26, 1898.

from end to end of corridors and passages and round all rooms, and along which fire may possibly travel.

There is no objection to cement skirtings that I am aware of, except that they cost somewhat more than wood; they are far more durable, solid, not readily damaged and nonabsorbent, and even on sanitary grounds alone should, I submit, become more general than is the case. Stairs should be of concrete, stone is unreliable; the collapse of stone stairs when exposed to a severe fire has occurred on several occasions. The cost of concrete stairs is more than wood stairs, but unless they are of intricate design it is by no means a serious item. The construction of concrete stairs was well known to both Romans and Normans, and specimens of their work are still in existence.

Concrete stairs are constructed by casting each step in a mold, or by casting the whole flight *in situ*, and the principle of construction is now well understood. The best materials for concrete stairs, both for strength and fire resistance, are Portland cement and crushed bricks—fire brick by preference—clinker from furnaces or slag from iron ore. Oak and other hardwood stairs of a defined thickness are classed as fire-resisting under the London Building Act, but given sufficient fire they add fuel to the flames. Wainscoting, dados and wood cornices can be entirely dispensed with where protection from fire is of paramount importance, or if necessary formed with cement. Wood liftings and boxing shutters can well give way to revolving shutters of steel or hardwood. There is but trifling danger in the latter because the amount of wood required is so small that it need scarcely be taken into account. Considering the neatness and efficacy of revolving shutters it is strange they should not be more generally adopted for houses where shutters are considered necessary, especially as the cost is less than the ponderous boxing shutters. The woodwork necessary for the windows of a room is scarcely likely to take fire except under provocation, but it appears that curtains and window blinds are often the cause of an outbreak through a lighted lamp or candle being upset or placed near thereto. In ordinary sashes or casements there is but little wood to burn; in the frames there is somewhat more. The portions of sash frames more exposed than others are the inside linings, pulley stiles, heads and sills, and if these were made of teak, which would resist any moderate fire after the paint on the surface had burned away, another element of danger would be avoided. The extra cost would be, possibly, from 8s. to 15s. per window, according to size.

Architraves to doors and windows and window jambs or linings can be formed of cement at a somewhat increased cost, where the use of wood is not desirable, but door jambs, doors, windows and fittings, such as cupboards, dressers, linen presses, shelving and the like, must apparently still be of wood, for there is no other material that I am aware of which serves the purpose equally as well for habitable buildings. The wood I have just named in an ordinary building is classed under the general term of joinery, and is mainly exposed to view. But the dangerous factor in a building is the hidden timber, which is of much greater proportion, and being practically out of sight, may smoulder and burst into flames without any previous warning whatever.

Under this head we get floor joists, partitions, wall plates, templates, lintels, roof timbers, occasionally wood battening fixed against brick walls for lathing thereto, or for match boarding.

It is common knowledge to everyone engaged in building operations, that all these can be dispensed with, and incombustible materials substituted with no more trouble, but at some increase of cost, and the latter is the crux of the whole matter. In place of partitions formed of wood and lath and plaster, they can now be constructed in various ways of materials that will not burn, such as iron uprights, metallic lathing and ordinary plaster—solid plaster with iron rods imbedded therein—fireproof blocks, breeze concrete, and other materials, all of which are light and fire-resisting. Fireproof coke breeze lintels, in which small metal tension rods are embedded, for use internally over doors and windows, are readily obtainable. Coke breeze blocks or bricks to insert in walls for fixing joinery thereto, are in every way preferable to and better than wood, and if new or old walls require to be battened for plaster, as is practiced in external walls of some seaside houses to prevent rain from penetrating, metallic lathing can be fixed to metal lathing bars secured by galvanized wall hooks. Externally, the roof is the dangerous factor in construction; where barge boards, dormer windows and skylight frames are in evidence danger exists, if a fire is in progress in the neighborhood, through sparks being carried by the wind.

Under the old building act, windows had to be set back at least four and one-half inches from the face of any wall, but now they may be flush therewith. All the outside wood window linings in this arrangement can now be exposed; under the old act they were almost entirely out of harm's way in the brickwork reveal.

Fireproof roofs are obviously more difficult to construct than the usual wood type, except a flat form is substituted, and although objections may be made to flat roofs for country houses and suburban villas on the ground of appearance, there can be but few reasons why they should not be adopted in towns.

In addition to safety from fire, flat roofs do away with the great danger in towns arising from tiles and slates being deposited on the heads of foot passengers during high winds; they also save the annual recurring cost of tile and slate repairs, and the danger of flooding from choked lead gutters and down pipes. They have other advantages in connection with workmen's flats and similar buildings where the laundry is on the top floor, in being available for drying places, and there is no reason why flower beds and gardens should not be established thereon, a proposition made by

the late Doctor Richardson. On a very high flat roof within a few minutes of the Mansion House, excellent grapes are grown in a small, artificially heated vinery.

Flat roofs are usually constructed in much the same way as fireproof floors, but laid to a slight inclination to carry rain water away into the stack pipes, and covered with the best mineral asphalt. Concrete and cement alone, with the greatest care, will not form a water-tight roof.

A roof of this description should be more durable than others, and entirely avoid the necessity of repairs for almost an indefinite period. The cost, too, would in many positions not exceed that of the ordinary slate or tile roof, lead gutters and other accessories taken into account, while, as regards security from fire, not a particle of wood need enter into the construction.

Fireproof roofs are being adopted for some buildings, but by far the great minority, and but little difference of opinion exists as to what materials should be used and how they should be applied; but a fireproof roof is of no avail if the floors are constructed of wood, and when we come to fireproof floors we have to deal with a factor in construction upon which opinion differs to a very great extent; as a result, except where building acts and by-laws compel their adoption, they are, comparatively speaking, but little used. The reasons for this are many. By some persons they are supposed to take up much more space than wood; that even if covered with wood they are still cold to walk upon; that the weight is excessive; that they conduct sound more readily than wood, and other objections which do not or need not exist; but the principal one is, as in so many other matters connected with the erection of new buildings—cost. They are regarded as a "luxury" in construction, and when estimates have to be reduced it is often the case that the first thing to go (if the building act permits) is the fireproof floors.

We have heard of many wide estimates as to the cost of fireproof construction above that of ordinary construction, ranging from ten to fifty per cent of the cost of the building. It is quite certain that there will always be a considerable difference in the ratio of cost, for a building with no pretensions to internal decoration or external architecture, such as workmen's flats, requires equally as much flooring as a mansion costing twice as much but of the same size. Taking average buildings of moderate pretensions, I think it will be found that wood floors complete, including the wood lathing for ceilings, cost on an average about five to seven and one-half per cent of the total outlay, and that fireproof floors average about double that of wood floors. Assuming, therefore, that a house costs £2,000 to build, and is of the annual value of £150, the fireproof floors at the very utmost should work out at a cost not exceeding £150 in excess of wood floors, and this at five per cent would increase the rent by £7 10s. a year. Fireproof roofs, as I have said, cost but little more than the usual kind, and the extra expenditure on stairs and all the other details of construction which I have enumerated, except architraves to doors, which are unnecessary to be of cement, would be well covered by another £150; so that for £15 a year, at most, increase of rental on a house of the estimated annual value of £150, the owner would gain by having fewer repairs to pay for, and the tenant would gain by reason of its healthfulness, freedom from insects and vermin, and security against fire.

If a large reduction of fire insurance premium on both house and its contents was obtainable—and it ought to be, through danger from fire being almost *nil*—there should be practically very little increased rental necessary.

On hygienic grounds, I submit that fireproof floors have not received the consideration they should do. The space between the floor boards and ceiling of the usual type of wood floor is a receptacle for the dirt and dust of generations, and in the majority of houses a refuge for rats, mice, beetles and other domestic pests.

Floor boards may be grooved and tongued, but the floor sweepings and floor washings together convey the fine dust through the joints of floor boards of ordinary houses, let them be ever so closely fitted when first laid.

In external walls of buildings it is sometimes the practice to insert ventilating bricks to admit air to the floor timbers, with a view to prevent their decay. Where the floor boards have shrunk or been badly laid, an imperceptible current of air to the room above is the result, bringing with it a return of some portion of the impalpable dust that has found its way beneath the floor, and the housewife wonders where all the dust on her furniture comes from.

If the floor timbers acquire dry rot—by no means an uncommon occurrence, even in well-built houses, the initial stage often developing before wood leaves the docks—a rank fungus is the result, which spreads with alarming rapidity and is in a high degree dangerous to health.

If the space between floors and ceilings of many houses, even of a superior class, erected, say, twenty to fifty years since, could be exposed to view, a condition of affairs would be revealed that would lead more surely to the disuse of wood floors than any description or any amount of persuasion can effect.

It must be conceded that fireproof floors are to some extent a costly item in a building; on the other hand, it is my object to convince you that no building is reasonably safe which has wood floors and stairs, and that, on hygienic grounds alone, fireproof floors are worth the extra cost, even where cost is the paramount factor in construction. Very much less is known in a general way about fireproof floors than about most other details of

building construction, and they do not possess any attractive features whatever.

The Romans formed them of brick and concrete, the latter as much as 20 feet span, with no intermediate supports, and specimens of their concrete floors still exist in various places; but, so far as I know, nothing of a fireproof character, except brick arches, which were confined to basements and underground rooms where injury from outward thrust could be guarded against, was attempted in this country until quite modern times.

This is to be accounted for by reason of suitable materials for the purpose being practically unknown a century ago. Portland cement had not been discovered, rolled iron and steel were unknown, and concrete itself, so well understood by the Romans, was not in use in this country even for foundations.

In 1775, a patent was granted to Mr. Hartley for fireproofing wood in buildings, by nailing thin iron sheets round floor joists and other timbers, and Parliament voted a sum of money to continue the experiments; but the result was a failure, and, a little later, Earl Stanhope proposed to fill in between wood joists with rough mortar laid on wood laths—what is known as pugging, and used at the present time not so much with the object of making floors fireproof as to prevent sound from passing through.

Since then, I believe I am correct in saying, Parliament has made no further grants for a similar object.

Spasmodic attempts were made subsequent to Mr. Hartley's scheme, but they were all more or less unsuccessful.

(To be continued.)

MEETING OF BOARD OF AMERICAN INSTITUTE OF ARCHITECTS.

THE first meeting of the Board of Directors of the American Institute of Architects was held at the office of R. D. Andrews, No. 6 Beacon street, Boston, January 6, 1898; no quorum present and adjourned to meet in New York, February 11.

The adjourned meeting was held at the office of the president, No. 33 East Seventeenth street. Present: President George B. Post, First Vice-President W. L. B. Jenney, Second Vice-President C. Howard Walker; Messrs. Warren, Day, McLaughlin, Andrews, Donaldson, Ferry, Scofield, Rogers, Preston, Rapp, Brown, Frederick and Secretary Alfred Stone.

The records of meetings September 27, 28 and 30, and December 6, 1897, and January 6, 1898, were read and approved.

The secretary read his report:

Since the meeting of the Board at Detroit, and the Detroit Convention, the proceedings of that convention have been issued and mailed to every Fellow, except a few delinquents of four years' standing; to all living honorary and corresponding members; to each Chapter of the Institute; to the principal libraries of the country—several of which now have a complete set of the same which have been collected from contributions by the Fellows; to foreign and domestic affiliated societies, and to architectural and engineering journals both at home and abroad.

Application has been received for an exchange with the Engineering Association of Venezuela, and copies are sent to every country in Europe, to South Africa, New South Wales, Hawaii (to which place one of our Fellows has removed during the past year), to Australia and to Japan, where we have one honorary and two corresponding members.

The wide circulation of the proceedings suggests the hope that more papers will be prepared and read at the next convention in order that the position, thoughts and doings of the profession may be more widely and favorably known in our own and other countries.

It is evident that something should be done through the influence of the Institute, its Chapters and its individual members, to instill a just appreciation of the ethics of the profession, to awaken a more lively conception of its demands and to inculcate a practice consistent therewith.

Since the convention, where we wrestled with the Harrisburg Capitol Competition without success, so far as procuring fair treatment for the successful competitors and arbiters was concerned, complaints have been received against no less than six Fellows of the Institute for unprofessional practice, and there are two old cases which have been brought over for your consideration, as well as one case of complaint at the conduct of a competition on the part of the promoters of the same.

There have been two deaths, both occurring on December 1, 1897—Mr. Oliver C. Smith, of Austin, Illinois, and Mr. F. A. Coburn, of Cleveland, Ohio.

In times like those which have been experienced since 1893, many worthy members who value membership in the Institute are forced, against their wishes, to neglect the payment of their dues, and no way seems open under the by-laws by which such can be reinstated if they are dropped, even if they pay up all past dues, nor is any provision made for remitting dues provided delinquents become able to resume the payment of their dues and yet are not able to pay those upon which they have been delinquent.

The Ohio State Chapter has asked for a formal recognition of the change of name to the Central Ohio Chapter, which was suggested at Detroit and assented to by the Board.

Mr. W. T. Comstock has presented a proof print of the late Dr. Thomas V. Walter, for ten years president of the Institute, which was duly acknowledged by the secretary.

The communication of Frederick Baumann in regard to a memorial chapel to General George Washington, at Mount Vernon, was referred to the Executive Committee. Since the convention, the secretary has had further correspondence with Mr. Baumann, suggesting that he communicate with the regents at Mount Vernon, who have agreed to give the matter consideration at their meeting to be held in May.

The Washington Chapter has sent a formal invitation to hold the next annual convention in the city of Washington.

The special committee on the revision of the constitution and by-laws, it is understood, will report at this meeting.

A letter from one of the officers of the Master Builders' Association has been received, expressing the wish that the Institute would arrange to meet in the same city and at the same time as that of the Master Builders' Association, and that one day could be set apart for joint discussion of subjects of mutual interest. Also calling attention to an address by Mr. R. D. Andrews, a member of our Board of Directors, expressing a wish that the ideas therein suggested could be put in practice.

Many of the Chapters of the Institute have replied to the appeal to indorse the bill known as the "Squire Bill," favoring an appropriation for timber tests, and resolutions and letters have been sent to members of Congress favoring the passage of the bill.

Your secretary has also written to Senator Proctor, chairman of the committee, on the subject.

The treasurer, not being able to be present, sent a letter with a list of persons who had not paid their dues for four or more years, with the request that some action be taken thereon.

President Post reported verbally that a great deal of work had been done by him, especially since the present administration came into power, and that already three Government competitions had been held, the names of the competitors and experts having been selected from the lists of names presented by him to the Secretary of the Treasury. He had made it a rule to nominate for competitors those whom he considered the best equipped, residing in the neighborhood of the work to be done, without reference to whether they were Fellows of the Institute or not, and for experts he had informed the Secretary that any officer of the Institute would be willing to assist him by serving in that capacity. Three competitions have been inaugurated: one for a customhouse at Norfolk, Virginia, in which President Post, D. H. Burnham and Mr. Kemper, of the Supervising Architect's office, were the experts; one for an immigrant station on Ellis Island, in which Mr. R. S. Peabody, T. P. Chandler and the Supervising Architect were the experts, and Boring & Tilton were the successful competitors; one for a post office at Camden, New Jersey, in which Mr. Alfred Stone, William Aiken and the Supervising Architect are the experts, and plans for which will be due on March 1.

The selection of the Supervising Architect was made by a special civil service board consisting of President Post, Messrs. D. H. Burnham, R. S. Peabody, J. M. Carrere and T. P. Chandler. This board reported to the Secretary of the Treasury three names, from which the Secretary selected Mr. J. K. Taylor, of Philadelphia.

President Post reported that he had received a letter from Mr. Burnham saying that on account of professional work he was not able to be present, and that the limited funds in the treasury of the Institute, together with the fact of an existing lease of the New York Chapter, had heretofore prevented moving the headquarters to Washington, and read a letter from Mr. Robert Stead, president of the Washington Chapter, saying that the Octagon House could still be obtained, and suggested the possibility of the joint occupation of the same with the Washington Chapter; pending decision thereon no action had been taken, but urged the importance of something being done by the Board in regard to the matter.

On motion of Mr. R. D. Andrews, it was voted:

That a committee of three be appointed by the president to secure a lease of the so-called "Octagon House," Washington, D. C., for a term of five years if possible, for a rental not exceeding \$360 per year, and with further power to formulate a plan, obtain funds and put the house in condition for occupancy.

On motion of Mr. Day, it was voted:

That the committee be authorized to issue debenture bonds of small denomination to an amount not exceeding \$5,000, and that the form of the bond is to be approved by the Executive Committee before issuing the same.

The president appointed as such committee Messrs. Frank Miles Day, Wilson Eyre, Jr., and Robert Stead.

The secretary was directed to issue a new charter to the Central Ohio Chapter.

Communications from the Boston Chapter in reference to the conduct of W. G. Malcomson and W. E. Higginbotham was read by the secretary:

Mr. Alfred Stone, Secretary, A. I. A.:

BOSTON, February 5, 1898.

DEAR SIR.—The undersigned members of the Board of Directors, A. I. A., beg to draw your attention to the inclosed correspondence relating to a statement made by Mr. William Rotch Ware at a recent meeting of the Boston Chapter, A. I. A. From this it will appear that it is currently reported that Mr. William G. Malcomson and Mr. William E. Higginbotham, both Fellows of the A. I. A., have under their firm name of Malcomson & Higginbotham given bids to do the designing of school buildings in Detroit for one-half of one per cent.

We therefore request that Messrs. Malcomson and Higginbotham be asked whether this is true, and whether they wish to be heard in defense of their action before the forthcoming meeting of the Board of Directors in New York on the 11th instant.

We have sent a copy of this letter and of the inclosures to Messrs. Malcomson and Higginbotham.

C. HOWARD WALKER.

W. G. PRESTON.

H. LANGFORD WARREN.

In reply to the charge, Messrs. Malcomson and Higginbotham sent a communication to the Board of Directors saying:

We have no justification to offer for the low rate of one-half of one per cent made by us. We realize now that it was a great mistake and would under no circumstances repeat the error, realizing its far-reaching and demoralizing effects.

The circumstances which misled us and tended to make us do in heat what we much regret, were briefly as follows: We had, as you know, been doing the Board of Education work here for several years and had gradually raised the standard of the structures somewhat above the mediocrity into which they had drifted. Four men on a board of sixteen members, and one officer, combined for some petty personal reasons to "throw us out" under pretext of securing the work from other parties at a lower rate and thus saving the taxpayers money. A year previous the same thing had occurred and we did not reduce our price, and our friends, who were largely in the majority, voted us in at a rate in advance of some other competitors. We ascertained, however, that some citizens spoke to several members of the board and commented unfavorably for their action in paying more money for the service than they could get it done for.

This year, though our friends were still in majority and would have allowed us schedule rate, we did not think it just to submit them to the criticism (though ignorant) which they stood last year, so we decided to practically donate the plans for the present season to the Board of Education; but outright donation would not be considered, so we quoted a rate which is next to nothing, simply to avoid compromising our friends or permitting our enemies to have their way. Looking at the matter now after conference with our Fellows we realize that what we should have done is to have written a dignified letter to the Board of Education and gone down if necessary with colors spiked to masthead.

Had not certain parties made open boast that they were going to throw us out and thus forced some bad blood into the matter I believe the unwise action would not have been taken by us. We certainly should not be induced to make so foolish a move under similar conditions again.

On motion of Mr. Warren it was voted:

That W. B. Malcomson and W. E. Higginbotham, in evidence of their own letter be expelled from the American Institute of Architects for unprofessional conduct in endeavoring to secure work in competing for fees.

On motion of Mr. Rapp, the invitation of the Washington Chapter to hold the next convention of the Institute in the City of Washington, D. C., was accepted.

The resignation of Mr. G. W. Lloyd was read by the secretary, and accepted with regrets.

Mr. Carrere asked in regard to the connection of Mr. Henry Ives Cobb with the designing of the Pennsylvania State Capitol Building. After some discussion it was voted:

That a committee of three be appointed to report to the Board upon the professional propriety of the action of members of the American Institute of Architects in entering the so-called second competition for a Pennsylvania State Capitol.

The president appointed as such committee, Messrs. R. D. Andrews, C. Howard Walker, and E. M. Wheelwright.

Mr. R. D. Andrews, chairman of the Committee on the Revision of the Constitution and By-Laws, presented a draft of the Constitution, which was discussed, amended and adopted for letter ballot.

The secretary read the names which had been forwarded to him by the treasurer, of Fellows who were behind in their dues four or more years. The secretary was requested to write to secretaries of Chapters and to individuals in regard to these delinquents, and if satisfactory replies were not received, he was directed to notify them to appear before the Board, by letter or personally, to show cause why they should not be dropped from the rolls for non-payment of dues.

The letter ballots were opened, and W. T. Downing, of Atlanta, Georgia, and Vincent C. Griffith, of New York City, were found to be elected. The applications of Mr. Benjamin A. Marshall, of Chicago, and Prof. A. B. Trowbridge, of Cornell University, were read, and drawings examined and approved, and the secretary was directed to issue a letter ballot containing the name of Mr. Marshall, and also that of Professor Trowbridge, provided he is a practicing architect, and is eligible under the by-laws.

On motion of Mr. Glenn Brown it was voted:

That a committee of five be appointed to examine and report on the advisability of the American Institute of Architects having their president one of the commission of proposed bill advocated by the Public Art League of the United States. And that this committee have power from this board to examine the whole bill and report on its merits to the Board of Directors.

THE UNIVERSITY OF CALIFORNIA COMPETITION.

THE Phoebe Hearst memorial competition for the University of California is attracting general attention and the defects in the plan are being pointed out. These are so many and the importance of the project so great that it would seem proper for the trustees to recall the original programme and remodel it more in those lines which will add to its attractiveness and practicability. The *Builder*, of London, suggests the following:

Bearing in mind that in the above statement of the requirements for the various blocks we have only given the principal items, and omitted a great quantity of minor detail, it will readily be seen that this is a scheme which no man can adequately consider and sketch out plans for, even on the small scale demanded, between now and July 1, unless he put aside everything else that he was doing and devoted his whole time and thought to this one competition; and it is likely that any man who has a practice and has his living to make by it will abandon all his regular work for the sake of the chances offered to him here? The only people who are likely to go in for it are ambitious young men who have not got into practice, and who have enough to live on to support them while they are engaged in working out the California scheme; so, at least, the probability appears to us; and we do not suppose it was that class of architect which the promoters desired to attract. The promoters, in fact, seem to have been a little bitten with that disease of *megalomania* which is said by Nordau to be a special weakness of the present day; they have desired to have an architectural competition on such a scale as should throw all others into the shade; and they have gone beyond the limits of what it is possible to expect from competitors. They should have asked for a block plan of the site, with a sketch elevation and section, and detailed plans of perhaps two of the blocks, as an indication of the author's efficiency in the details of planning. With such a programme they might have attracted some of the most eminent architects from all countries. As it is, we very much doubt whether they will attract any such men. There may be still time to reconsider the matter and to announce such a modification of the conditions as we have suggested, through the press, in such a manner that it should come under the eye of all actual or possible competitors; and the trustees or their professional advisers would probably do well to take this point into consideration before it is too late, if they wish the competition to be a success.

OUR ILLUSTRATIONS.

View in Foyer, University Congregational Church, Chicago. Pond & Pond, architects.

Improvements for Robert N. Marvin, Jamestown, New York. E. G. W. Dietrich, architect, New York City.

A Crematory. Thesis work at the Ecole des Beaux Arts, Paris, by Théo W. Pietsch, architect. For description see article in this issue.

Selections from Catalogue for 1898: T-Square Club Exhibit, Philadelphia. Alterations to house near Glenside, Pennsylvania, for M. M. Swabb; Frank A. Hays, architect, Philadelphia. A house on West Chester pike, Pennsylvania; sketch by Frank A. Hays, Philadelphia. Two Interiors of a Library, bench and chairs, for Mask and Wig Club, and interior of a dining room, by Wilson Eyre, Jr., architect, Philadelphia. T-Square competition, an arrangement of terraces and steps, with a wall fountain and seats; first mention—David Knickerbacker Boyd, Philadelphia. Residence for F. G. Bourse, Oakdale, New York; Ernest Flagg, architect, New York. Competitive design for proposed St. Paul's Church, Rochester, New York; Cram, Wentworth & Goodhue, architects, Boston. House for E. L. Farr, Wenonah, New Jersey; William L. Price, architect, Philadelphia. Residence of R. M. Hogue, Pelham, Germantown, Pennsylvania; David Knickerbacker Boyd and Laurence Visscher Boyd, associated architects,

Philadelphia. The Crozer Building, Philadelphia; Frank Miles Day & Bro., architects. Dome of St. Luke's Hospital, New York, by Ernest Flagg, architect.

Interior view of the general office of the Western Electric Company works, situated on the blocks bounded by Clinton, Jefferson, Van Buren streets and Jefferson place, Chicago. Samuel A. Treat, architect. This office will be located in the eighth story of the building, known as "O" building, which is now under construction. The building will be 54 by 175 feet, and eight stories in height. The area of the large general office shown will be 40 by 80 feet, and this represents only one-sixth of the area devoted entirely to the offices of the company, as the eighth floor of the Jefferson street building is also devoted to the executive department. The new building will be strictly fireproof in its construction, as are all the buildings erected by the company during the last five years. The interior finish, such as wainscoting, mantel, door and window trimmings, etc., will be in mahogany. The elaborate ceilings shown in the view will be constructed of expanded metal, on metal furrings, and plastered. Four large skylights will give additional light during the day, and when artificial light is required concealed electric lamps above the ceiling lights will serve the same purpose. The floor will be laid with rubber tile, in ornamental design. An interesting feature in connection with the erection of the building will be an illustration of the two methods of construction of outside walls. Two years ago the building was commenced and carried up to the ceiling of the second story, with piers and windows alternating, about equally dividing the area. Here a temporary roof was built. To secure the greatest amount of light the skeleton construction has been adopted from this level upward. Sills of double 18-inch I beams are laid on the top of the brick piers, and upon these plates rest the outer Z bar columns which carry a portion of the floors and inclosing walls. A careful computation shows the new system of construction affords twice the glass area of the old construction, and additional strength as compared with the brick walls and piers. The work will be completed during the summer.

Photogravure Plate: Refectory, South Park, Chicago. D. H. Burnham & Co., architects.

Correction: In February number the building described as the Art Club, of Philadelphia, Frank Miles Day & Brother, architects, should have been Fine Arts League Building, New York, Henry Hardenbergh, architect.

PHOTOGRAVURE PLATES.

Issued only with the Photogravure Edition.

Residence of Capt. James D. Parker, Cincinnati, Ohio. William Martin Aiken, architect.

Interior views of Hull Memorial Chapel, for First Unitarian Society, Chicago. W. A. Otis, architect.

Interior views University Congregational Church, corner Fifty-sixth street and Madison avenue, Chicago. Pond & Pond, architects. An exterior view in color from a drawing by the architects, was published in THE INLAND ARCHITECT for May, 1895. In construction the floors, galleries and roof are of the "mill" type with heavy timbers widely spaced and floors and roof sheathing four inches thick. The vaulted ceiling, as well as the level ceilings and wall finish, is of strong plaster on heavy metal lath and framework. About the boiler room and under the organ and pulpit platform, the construction is of masonry, tile and steel beams. The decoration, while temporary, is deep and glowing in color and is very effective in conjunction with the brown-black of the woodwork, which is of oak and whitewood stained. The glass is to be replaced by rich memorial designs, and the panels and capitals of the great supporting piers, which are of brick, remain to be carved in harmony with the newels and flanking posts of the choir screen.

ASSOCIATION NOTES.

COLORADO SPRINGS ARCHITECTURAL ASSOCIATION.

The architects of Colorado Springs, Colorado, held a meeting on February 12, in the office of Douglas & Hetherington, looking toward the formation of a county architectural association. The firms represented at the meeting were Barber & Hastings, Pease & Dawson, Douglas & Hetherington, Weston & Frost, T. MacLaren, A. J. Smith, and E. McConnell.

Mr. Hetherington was elected temporary chairman, and Mr. Dawson temporary secretary. A committee was appointed, including the two officers, with Messrs. MacLaren and Barber, to draft a scheme of organization, to be reported at the next meeting, and a long discussion was indulged in regarding the present building ordinance, rules of practice, and many other important subjects.

PERSONAL.

THE time for submitting drawings in the competition announced by the Luxfer Prism Company has been extended to April 15.

THEODORE O. FRAENKEL and Allyn A. Packard announce that they have formed a partnership, with offices in the Marquette building, Chicago. Mr. Fraenkel has been known to the profession for a number of years, through his delicacy of rendering, as well as his correctness in design. Mr. Packard, the surviving partner of O. C. Smith, is also the publisher of that much appreciated brochure, "European Architecture." Their talents lie in the direction of residence designing, and the joining of forces is to be congratulated.

SYNOPSIS OF BUILDING NEWS.

Architects are invited to furnish for publication in this department monthly or occasional reports of their new work before the letting of contracts. Reports of buildings costing less than \$5,000 are not published.

Chicago, Ill.—Architects Belden & Higginson: Making plans for golf club, 55 by 70 feet in size; to be erected at Glenwood; to be of frame construction, to have plumbing, shower baths, etc.

Architect Henry Ives Cobb: For Dr. Swank, a three-story and basement residence, 20 by 58 feet in size; to be erected at Arlington place and Hamilton court; to be of pressed brick and stone front, have the modern plumbing, hardwood finish, mantels, sideboards, consoles, etc. For Chicago Canal & Dock Company, a one-story warehouse, 128 by 438 feet in size; to be erected at the river-side; cost about \$75,000. Also made drawings for State Capitol, to be erected at Harrisburg, Pennsylvania; it will be part three and part nine stories high; to be constructed of white marble steel construction and thoroughly fire-proof, have marble, mosaic and tile interior finish, electric light plant, engines, boilers, dynamos, elevators, steam heating, cement basement floors, sidewalks, etc.

Architects J. T. Nicholson & Son: Made plans for three four-story apartment buildings, to cost about \$70,000; to be erected at 4901-4903 Lake avenue; they will have handsome granite fronts, hardwood interior finish, mantels, sideboards, consoles, hall trees, gas and electric fixtures, gas ranges and fireplaces, steam heating, electric light, electric bells and speaking tubes.

Architect J. T. Fortin: For Dr. W. R. Vanpell, a three-story store and flat building, 50 by 80 feet in size; to be erected at the southwest corner of Colorado and Turner avenues; to have pressed brick side and stone front, hardwood finish, gas and electric fixtures, gas ranges and fireplaces, electric light, steam heating, electric bells, speaking tubes, marble and cement work; cost \$15,000. Also making plans for Sacred Heart church; to be erected at Aurora; it will be 46 by 90 feet in size, of pressed brick, etc. Same architect is making drawings for a hall, 31 by 150 feet in size; to be erected at Vernon Park place and Sibley street, for Notre Dame church; to be of pressed brick and stone, have wood and iron trusses, gas fixtures, etc. Same architect is making plans for three-story flat building, 22 by 50 feet in size; to be erected at 422 Cuyler avenue, for Mrs. V. C. Scott; to be of pressed brick and stone front, oak finish, mantels, sideboards, gas fixtures, etc.

Architect Morrison H. Vail: For W. R. Kellogg, a two-story, basement and attic frame residence, 22 by 54 feet in size; to be built at Paulina street, Ravenswood; brick basement, oak finish, mantels, sideboards, gas fixtures, hot-water heating, gas ranges and fireplaces, etc. Also making plans for remodeling Congregational church at Ravenswood, corner of Montrose boulevard and Hermitage avenue.

Architect Fritz Foltz: For Frazer & Chalmers, a one-story erecting shop, 105 by 320 feet in size and 75 feet high; to be built at Twelfth street and Wash-tenaw avenue. Also blacksmith shop, 50 by 155 feet in size; to be of common brick, have the necessary plumbing, electric light, steel truss roof, etc.

Architect Robert S. Smith: For Frank S. Lenert, a two-story and basement flat building, 24 by 74 feet in size; to be built at the west side of Michigan avenue between Fifty-sixth and Fifty-seventh streets. It will have a buff Bedford stone front, oak finish, mantels, grill work, sideboards, consoles, gas and electric fixtures, steam heating, electric light, etc.; cost, \$12,000. For Thomas Byrne, a four-story apartment house, 150 by 192 feet in size; to be erected at Fifty-fifth and Green streets. It will have pressed brick and stone fronts, hardwood interior finish, mantels, sideboards, gas and electric fixtures, steam heating, electric light, marble and tile work, cement sidewalks, etc.; cost \$75,000.

Architects Bishop & Colcord: For A. R. Clark, a three-story and basement apartment building, 70 by 148 feet in size; to be erected at Sixtieth street and Prairie avenue. It will have two fronts of Bedford stone, all hardwood finish, mantels, sideboards, consoles and hall trees, best of modern plumbing, steam heating, tile bathrooms, marble vestibule, gas ranges and fireplaces, cement sidewalks; cost \$50,000. Same architects made plans for a three-story flat building, 22 by 54 feet in size; to be built at 344 Colorado avenue; pressed brick and stone front, oak finish, mantels, sideboards, steam heating, gas fixtures, electric bells, speaking tubes.

Architects Fowler & Wright: For R. A. Perkins, a two-story, basement and attic frame residence, 26 by 45 feet in size; to be built at Berwyn; stone basement, oak finish, mantels, gas fixtures, etc.

Architects Brainerd & Holman: For J. H. McEldowney & Brothers, a block of stores, 100 feet front; to be erected at Chicago Heights; to have pressed brick fronts, some plumbing, gas fixtures, etc. For Prof. E. H. Barber, at Lincoln, Nebraska, a two-story, basement and attic frame residence, 28 by 40 feet in size; stone basement, hardwood finish, heating, gas fixtures, mantels, etc.

Architect S. M. Seator: Made plans for a two-story and basement residence, 20 by 60 feet in size; to be built at 6508 Kimbark avenue; Bedford stone front, hardwood finish, furnace, mantels, gas fixtures, gas ranges and fireplaces, the best of open plumbing, tile mansard, etc.

Architect L. G. Hallberg: For P. S. Ronberg, a three-story store and flat building, to contain eight flats and one store; to be erected at Sixtieth street and Center avenue; pressed brick and stone front, modern sanitary improvements, gas fixtures, steam heating, oak and pine finish, mantels, sideboards; cost \$15,000. For O. M. Carson, ten two-story frame residences, 9 and 10 rooms each; to be erected at Oak Park. They will have stone basements, oak and pine interior finish, hot-water heating, electric light, mantels, sideboards and grill work, cement basement and sidewalks, gas and electric fixtures, electric bells, etc. For C. G. Hamilton, a three-story flat building, 50 by 65 feet in size; to be erected at Wrightwood and Florence avenues; to be of pressed brick and stone front, have oak finish, mantels, sideboards, gas and electric fixtures, steam heating, gas ranges and fireplaces, etc.

Architect W. H. Milner: Making plans for a one-story dining hall, 100 by 117 feet in size; to be erected at Dunning; to be of pressed brick and stone, have steam heating, electric light, marble floor in the halls and approaches, steel girders and columns, concrete foundations and hall floor, plumbing, etc. Also will make plans for a \$40,000 consumptive ward and another building, to cost \$20,000. Same architect has made drawings for a handsome apartment building, 100 by 161 feet in size; four stories and basement; to be erected at the corner of Indiana avenue and Forty-eighth street, for Charles R. Cave. It will have two fronts of Roman pressed brick trimmed with stone and terra cotta, the interior to be finished in oak and pine, have the best of open plumbing, gas and electric fixtures, specially designed mantels, consoles, sideboards and hall trees, electric light, tile bathrooms, gas ranges and fireplaces, laundries and driers, cement basement floors and sidewalks, steam heating, etc. It will contain thirty-two apartments and cost about \$70,000.

Architect C. A. Strandell: For Charles F. Norberg, a three-story and basement flat building, 22 by 55 feet in size; to be erected at 1065 Osgood street; to have a front of buff Bedford stone, oak finish, mantels, gas fixtures, steam heating, gas ranges, open plumbing, tile bathrooms, cement sidewalks, etc.; cost \$8,000. For John Lowen, a four story and basement factory, 26 by 33 feet in size; to be erected at 162 Gault court, common brick, plumbing, gas fixtures.

Architect W. J. Van Keuren: For M. Collins, a two-story, basement and attic frame residence, 31 by 55 feet in size; to be built at Austin; oak finish, mantels, sideboards, furnace, fine plumbing, etc. Also, two-story residence at Oak Park, 31 by 45 feet in size; frame, stone basement, oak and pine finish, gas fixtures, mantels, sideboards, etc.

Architect J. Sindorf: For Isidore J. Munzer, a three-story flat, 22 by 50 feet in size; at 807 North Western avenue; Roman pressed brick and stone front, open plumbing, gas fixtures, steam heating, electric light, mantels, sideboards, etc.

Architect A. G. Lund: For Engstrand, Lothgren & Co., three two-story, basement and attic residences, each 32 by 50 feet in size; to be erected at Castledown Terrace, Lake View; they will have fronts of pressed brick and stone, all the modern improvements, furnaces; cost \$20,000.

Architect Paul Hansen: For J. C. Jensen, a three-story and basement apartment house, 45 by 147 feet in size; to be erected at the corner of Hermitage and Lawrence avenues, Ravenswood; to be of pressed brick, stone and terra

cotta front, have the best of modern plumbing, gas fixtures, mantels, sideboards, steam heating, gas ranges and fireplaces; cost \$30,000.

Architect Perley Hale: For T. L. Morris, a four-story apartment house, 48 by 69 feet in size; to be erected at 1036-1038 Jackson boulevard; pressed brick front with buff Bedford stone trimmings, modern open plumbing, gas and electric fixtures, oak and pine finish, steam heating, electric bells and speaking tubes, cement work, tile bathrooms; cost \$30,000.

Architect M. L. Beers: For Montgomery Ward, a four-story store and apartment building, 142 by 145 feet in size; to be erected at the southeast corner of Forty-seventh street and Lake avenue; to be of pressed brick and stone, have copper bays and cornices, the best of sanitary improvements, steam heating, electric light, elevator, laundry fixtures, electric bells, speaking tubes; cost \$50,000.

Architect L. J. Ostling: For John Z. Anderson, two three-story and basement flat buildings; to be erected at the northwest corner of Southport and Belleplaine avenues; pressed brick and stone fronts, oak and pine finish, mantels, sideboards, steam heating, gas and electric fixtures, laundries, electric bells, etc.; cost \$28,000.

Architect Robert Rae: Prepared drawings for Kenwood Presbyterian Church; to be erected at Forty-seventh street and Drexel boulevard; it will be 60 by 100 feet in size; of pressed brick with terra cotta trimmings, slate roof, oak finish and pews, organ, gas fixtures, steam heating, cement and marble work, will have two galleries, Sunday-school basement, etc.

Architect J. H. Wagner: For Joseph T. Ryerson, a six-story building, 40 by 80 feet in size; to be erected at Lake street and Milwaukee avenue; it will be of pressed brick and stone front, steel construction, have some plumbing, steam heating, elevators, electric light, etc. For Rindge, Kalmbach & Co., an eight-story factory, 100 by 100 feet in size; to be erected at Grand Rapids; to be of pressed brick front, steel construction, have elevators, electric light, steam heating, etc.; cost about \$75,000. For Link Belt Machinery Company, a five-story factory, 50 by 178 and 65 by 101 feet in size; to be erected at Jefferson street; to be of stone and pressed brick front, have steel girders and columns and mill construction, elevators, electric light, steam heating, etc.; cost about \$150,000.

Architects Woolacott & Co.: For Mrs. E. J. Gamet, a three-story flat at 43 Elaine Place; stone and pressed brick, plumbing, gas fixtures, steam heating, etc.

Architect C. F. Sorenson: For W. J. Holsen, a three-story apartment house, 71 by 100 feet in size; to be erected at 85 to 93 Hazel street; to be of stone and pressed brick, have hardwood finish, mantels, sideboards, gas and electric fixtures, steam heating, electric bells and speaking tubes, laundries; cost \$30,000.

Architects D. E. & O. H. Postle: For Jacob Beidler, one-story and basement store building, 60 by 130 feet in size; to be built at the corner of Washington and Desplaines streets; iron, brick, plate glass, plumbing, steel beams and columns, cement work; cost \$15,000.

Architects Huehl & Schmid: Made plans for a two-story store and flat building, 53 by 68 feet in size; to be erected at the corner of Wilson avenue and Clark street, Ravenswood; pressed brick and stone, modern plumbing, hardwood finish, etc.

Architects McMichael, Morehouse & Brinkman: For F. J. Brown, a two-story residence, 35 by 55 feet in size; to be erected at Glenwood; frame, stone basement, oak finish, hot-water heat, nickel-plated plumbing, gas and electric fixtures, mantels, sideboards, laundry fixtures, electric bells, etc.

Architect Fred Ahlschlager: For Charles C. Snyder, a two-story and basement residence, 22 by 55 feet in size; to be built at 5481 Washington avenue; to be of stone and pressed brick, slate roof, have hardwood finish, furnace, gas and electric fixtures, electric light, etc.

Architect Niels Buch: For Fred Bauer, a three-story apartment building, 48 by 58 feet in size; to be erected at the corner of Wrightwood avenue and Burling street; to be of buff Bedford stone first story and the rest of pressed brick and stone; slate towers, hardwood interior finish, mantels, sideboards, gas and electric fixtures, steam heating, laundries, etc.; cost \$16,000. For Mr. Lang, remodeling four-story flat building at Chicago avenue, east of Dearborn avenue; will put on new front of Bedford stone, steam heating, gas fixtures, new plumbing, etc. For C. L. Ibsen, a two-story, basement and attic residence, 29 by 50 feet in size; to be erected at Sheridan Park, Ravenswood; frame, pressed brick and stone basement, hardwood finish, gas and electric fixtures, heating, laundries, electric bells, speaking tubes, etc.; cost \$8,000.

Architects Lapointe & Hickok: For L. W. Beganza, a three-story apartment house, 32 by 100 feet in size; to be erected at Park avenue, between Homan and Kedzie avenues; Bedford stone front, hardwood finish, gas and electric fixtures, steam heating, hot-water supply, mantels, sideboards, consoles, hall trees, laundries, cement basement floors and sidewalks, electric bells, speaking tubes, etc.

Architect S. S. Beman: For Gates Iron Works, 646 Elston avenue a one-story machine shop, 70 by 336 feet in size; steel construction and common brick, plumbing, electric light.

Architect Jules De Horvath: For J. L. McKeever, a one and two story building, 120 by 125 feet in size, at Kedzie avenue and Lake street; pressed brick and stone, steam heating, modern plumbing, electric light, fixtures, etc.; cost \$30,000.

Architect W. L. Klewer: Two two-story residences at 2417-2419 Hermitage avenue, Ravenswood; pressed brick and stone, beams and plaster, modern plumbing, heating, etc.

Architect John R. Stone: For M. Hicks, three-story livery stable, 50 by 90 feet in size, at Sixty-third street and Greenwood avenue; pressed brick, plumbing, etc.

Detroit, Mich.—Architects H. C. Varney & Co: For Charles W. Moore, four-story Gothic apartment house, containing eight suites of apartments, 40 by 77 feet in size; the exterior to be of brown sandstone; cost \$20,000. For Gustav E. Borsekowsky, terrace of three residence, 56 by 60 feet in size; of pressed brick and stone trimmings; cost \$12,000. For Charles W. Moore, four-story, brick apartment building, with eight suites of apartments; 45 by 60 feet in size; steam heat, gas and electricity; cost \$18,000. For William Schilke, block of two two-story, brick stores, with residence flats above; cost \$5,000. For John Young, brick double residence; cost \$6,000. For Hugo Erichsen, two-story, brick double residence; cost \$6,000.

Architects Spier & Rohms: For Charles H. Werner, three-story, brick store, 65 by 100 feet in size; sandstone trimmings; cost \$10,000. For University of Michigan, Ann Arbor, Michigan, new library building for University of Michigan and remodeling present library, 120 by 200 feet in size; cost \$50,000.

Architect William S. Joy: For Charles E. Lynch, six-story apartment building, with twelve suites of apartments, 50 by 78 feet in size; constructed of stone, brick and terra cotta, the cornice being of terra cotta; cost \$35,000. For G. G. Jansen, two-story, brick double store and residence flats; cost \$8,500. For Mr. McConville, three-story, brick apartment building; cost \$8,000.

Architect F. J. Grenier: For William J. Newton, terrace of seven two-story, brick-veneered residences, 50 by 120 feet in size; cost \$14,000.

Architects Rogers & MacFarlane: For Estate of Emil Heineman, three-story, pressed brick store, with cut-stone trimmings, 50 by 120 feet in size; cost \$10,000.

Architect Norval Wardrop: For Matthew H. Finn, three-story, brick double residence, 35 by 70 feet in size; cost \$14,000.

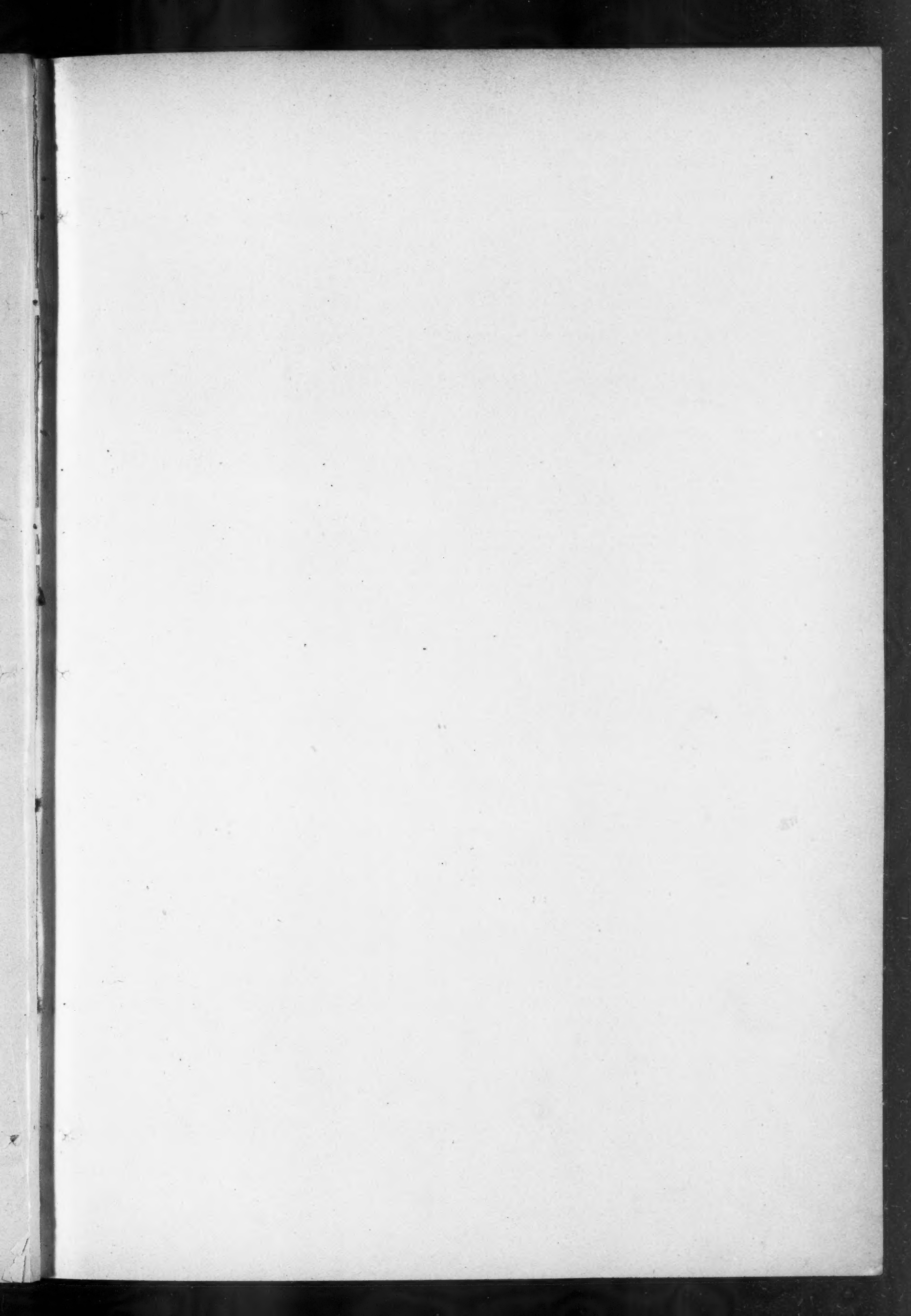
Architect Alphonso Van Deusen: For F. E. Gregory, two-story, brick double store and residence flats, 40 by 75 feet in size; of buff pressed brick and cut-stone trimmings; cost \$5,000. For L. J. Corey, terrace of four two-and-one-half-story, brick-veneered residences; cost \$6,000.

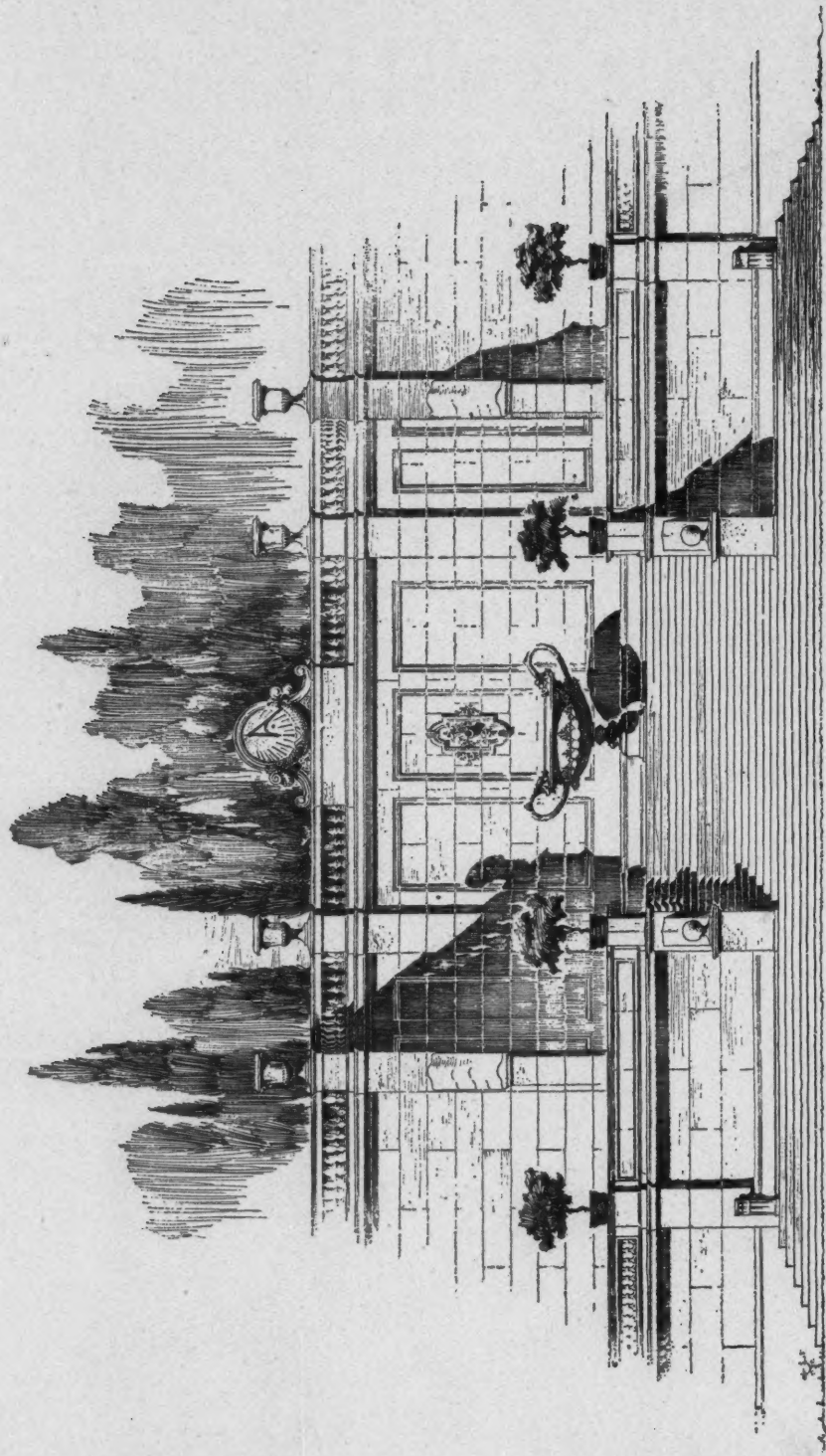
Architect R. Arthur Bailey: For John Moore, two two-story, brick stores; cost \$10,000.

Architects Malcolmson & Higginbotham: For Alex Lewis, remodeling double store; cost \$5,000.

Architects W. D. Butterfield & Co.: For First Congregational Church Society, addition to church edifice; of field stone and brick, tile and tin roof, stained glass windows and steam heat; cost \$10,000. For Lincoln Avenue M. E. Society, Gothic church edifice, 90 by 112 feet in size; of brick and stone, slate roof and stained glass windows; cost \$30,000.

Architect John Coughlan: For F. L. St. Amour, block of three-story, frame residences; cost \$5,000.



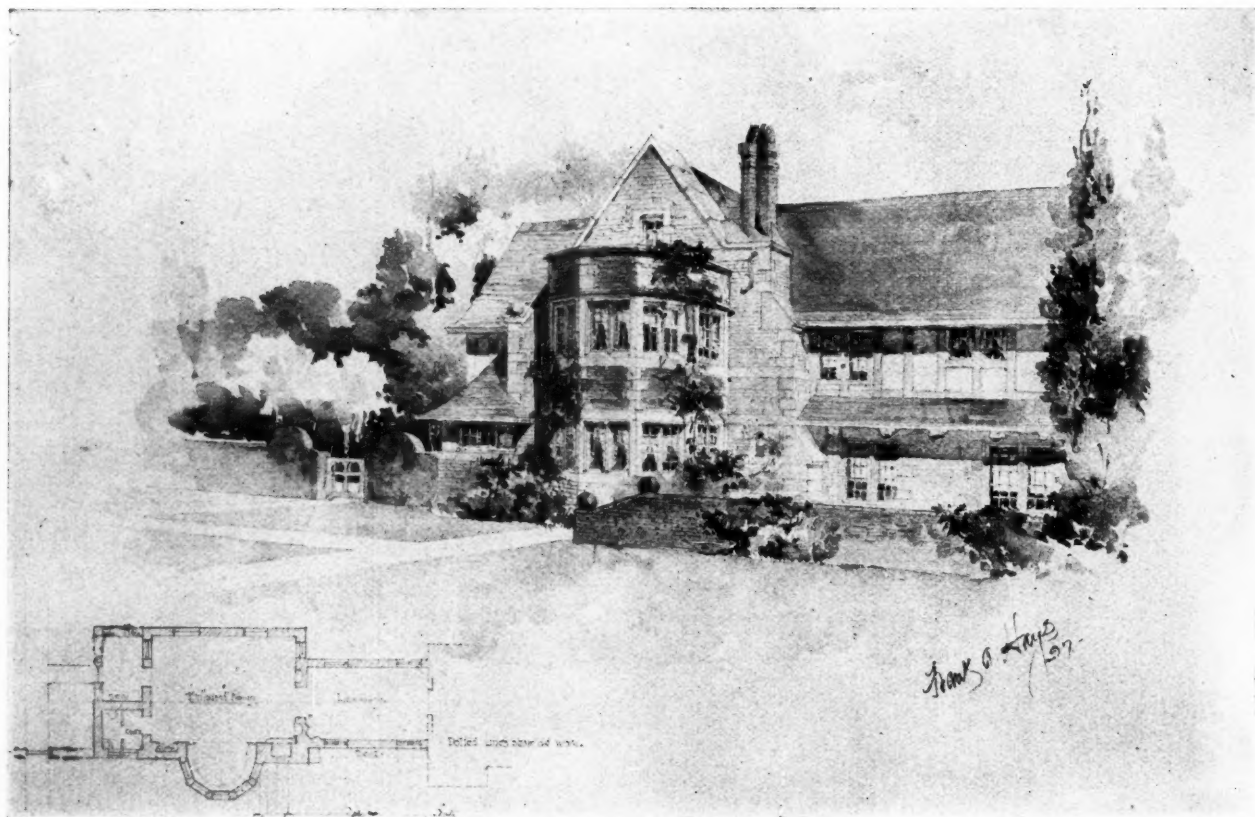


Front Elevation.

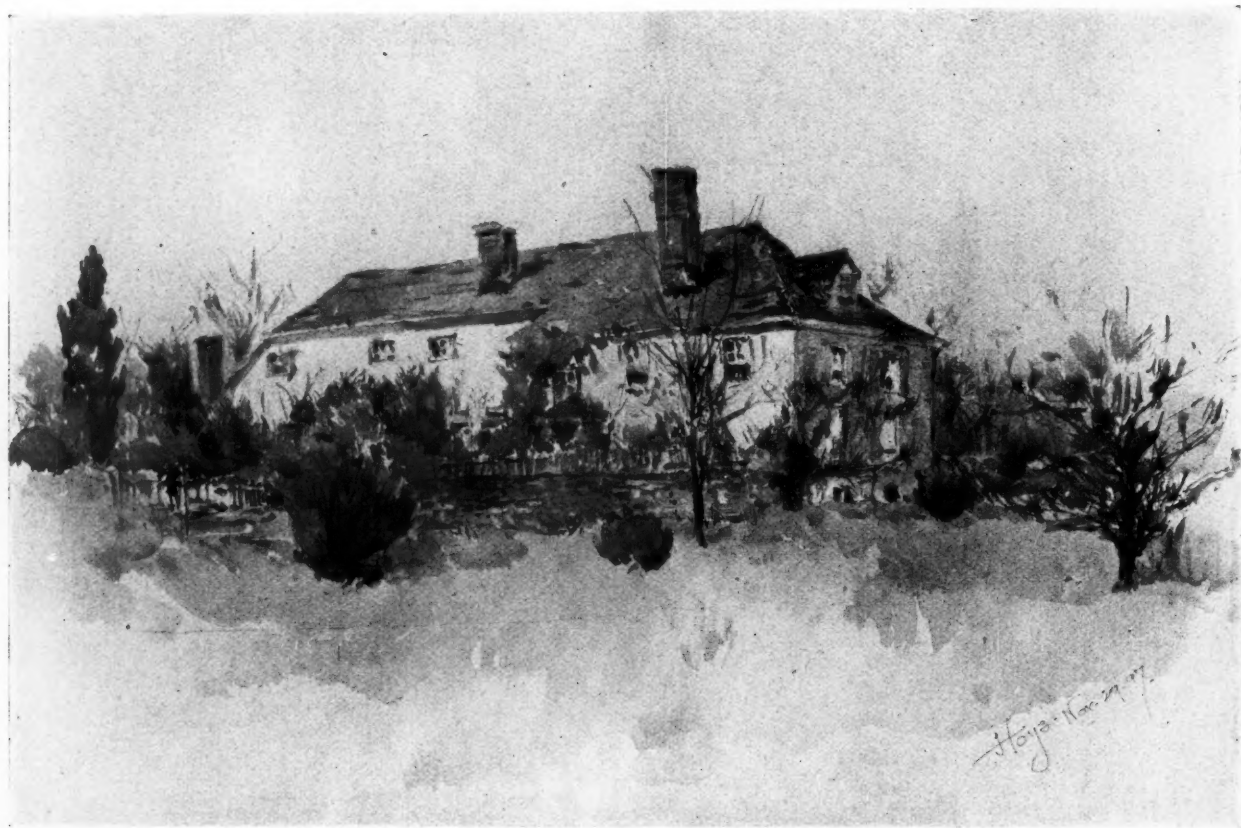
T-SQUARE CLUB COMPETITION.

AN ARRANGEMENT OF TERRACES AND STEPS WITH A WALL FOUNTAIN AND SEATS.

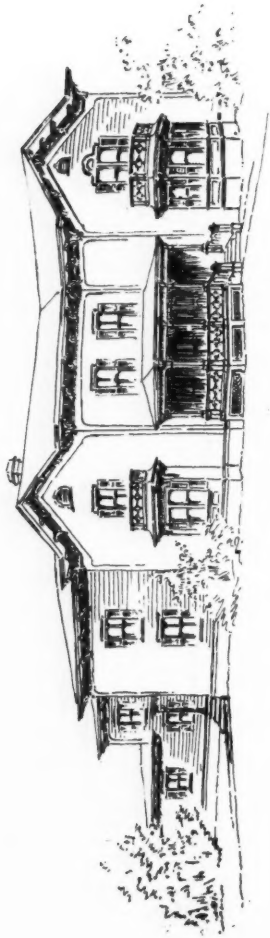
First Mention — David Knickerbacker Boyd, Philadelphia, Pa.



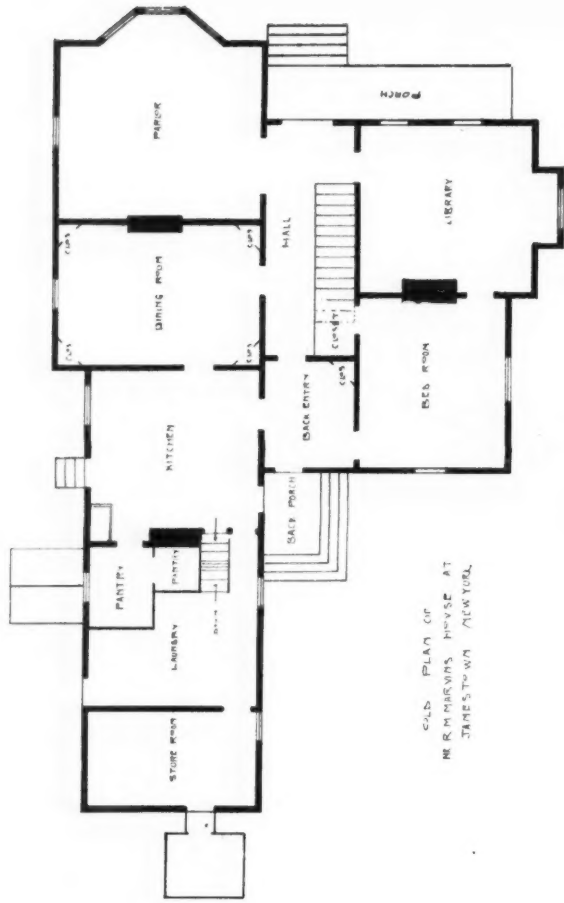
ALTERATIONS TO HOUSE NEAR GLENSIDE, PA., FOR M. M. SWABB.
FRANK A. HAYS, ARCHITECT, PHILADELPHIA.



A HOUSE ON WESTCHESTER PIKE, PA.
SKETCH BY FRANK A. HAYS, PHILADELPHIA.

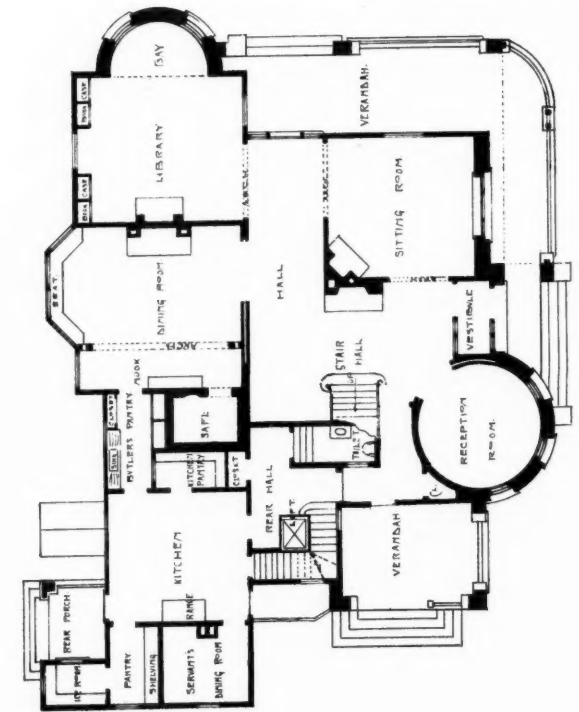


OLD HOUSE

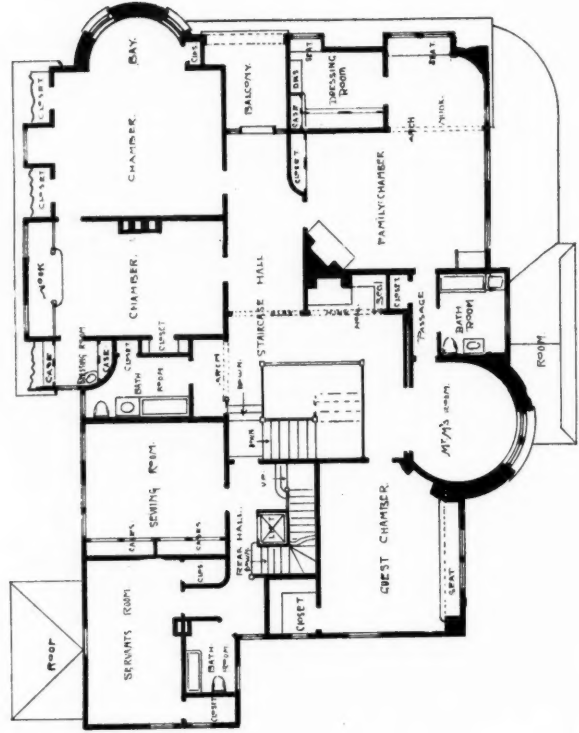


OLD PLAN OF
MR MARVIN'S HOUSE AT
JAMESTOWN, NEW YORK

FIRST FLOOR



FIRST FLOOR PLAN



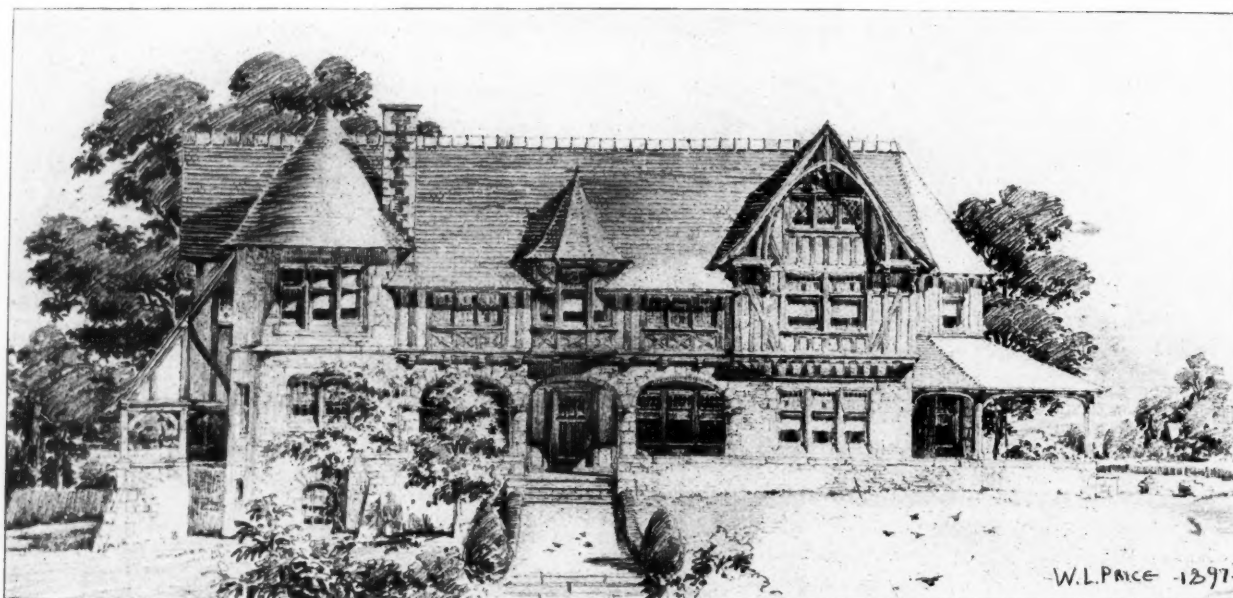
IMPROVED PLAN OF
MR MARVIN'S HOUSE

SECOND FLOOR PLAN



VIEW IN FOYER, UNIVERSITY CONGREGATIONAL CHURCH, CHICAGO.

POND & POND, ARCHITECTS.



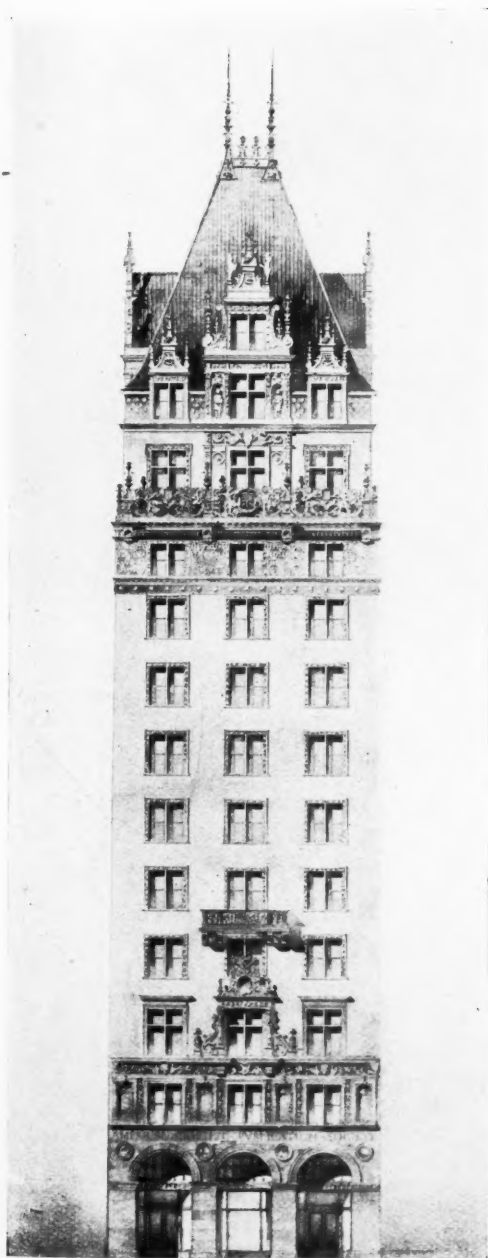
HOUSE FOR E. L. FARR, WENONAH, N. J. (FRONT ELEVATION).

WILLIAM L. PRICE, ARCHITECT, PHILADELPHIA.



RESIDENCE OF R. M. HOGUE, PELHAM, GERMANTOWN, PENNSYLVANIA.

DAVID KNICKERBACKER BOYD, LAURENCE VISSCHER BOYD, ASSOCIATED ARCHITECTS, PHILADELPHIA.



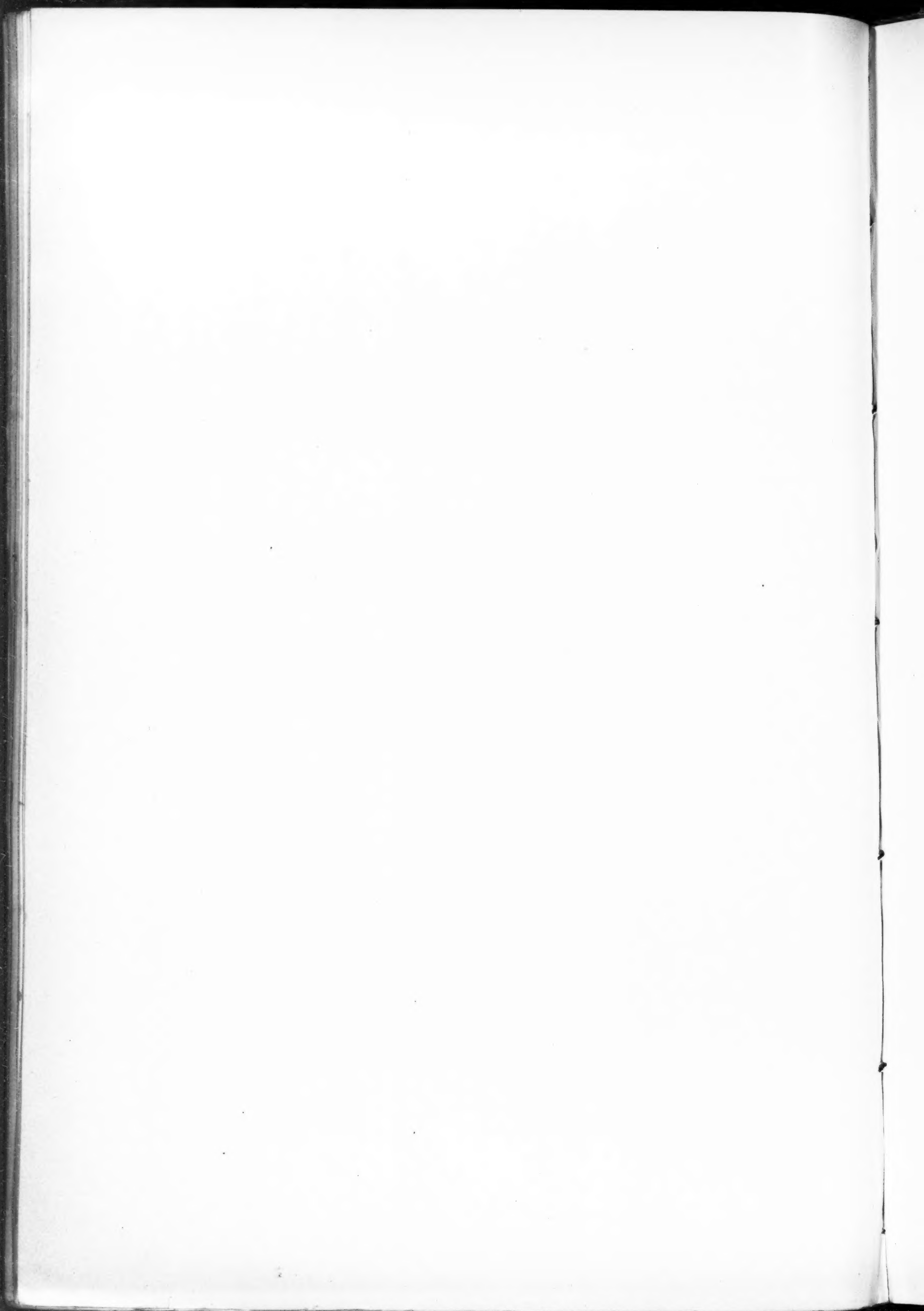
THE CROZER BUILDING, PHILADELPHIA.

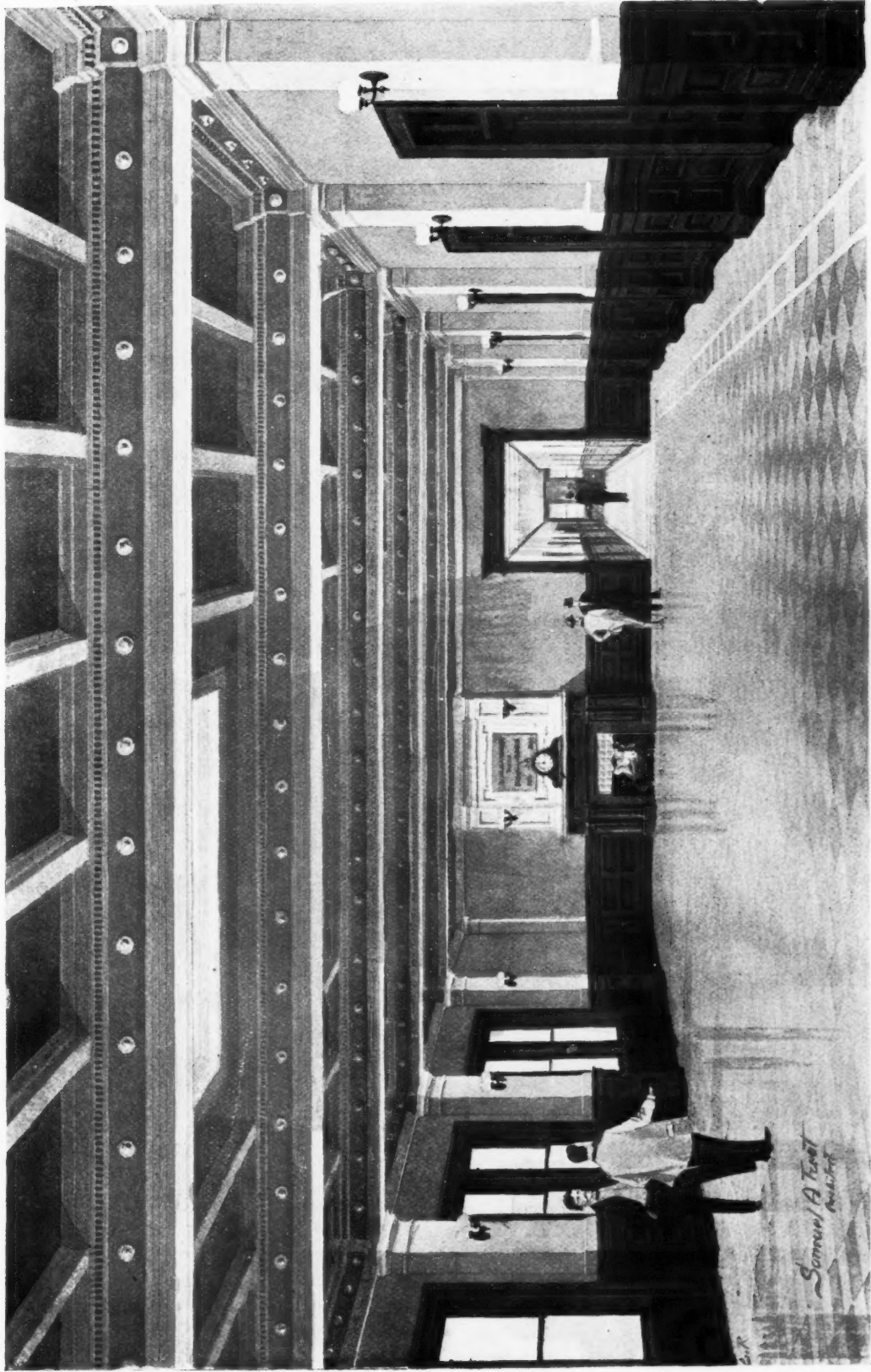
FRANK MILES DAY & BROTHER, ARCHITECTS.



ERNEST FLAGG ARCHT.
DOME OF ST. LUKE'S HOSPITAL, NEW YORK.

ERNEST FLAGG, ARCHITECT.

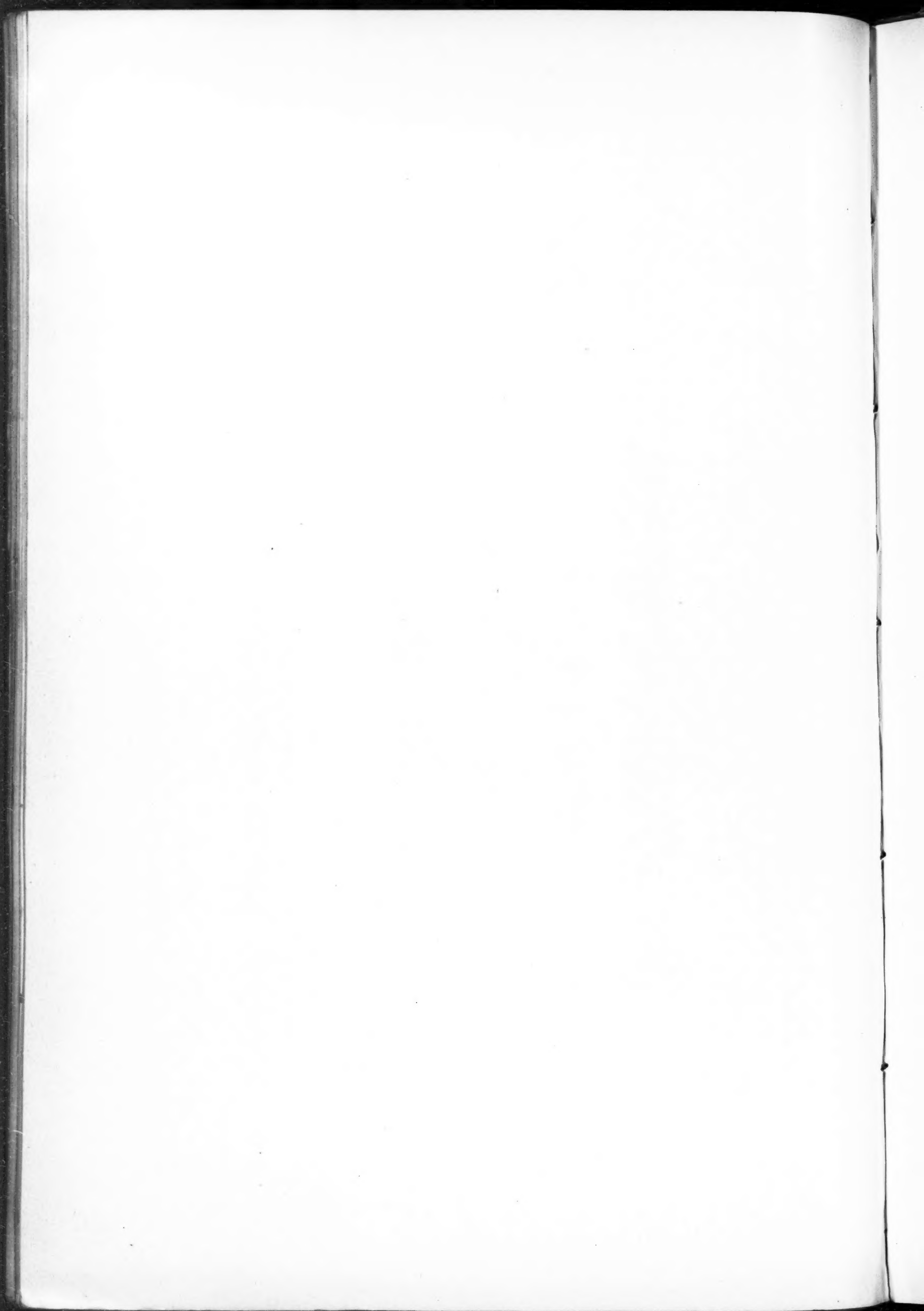


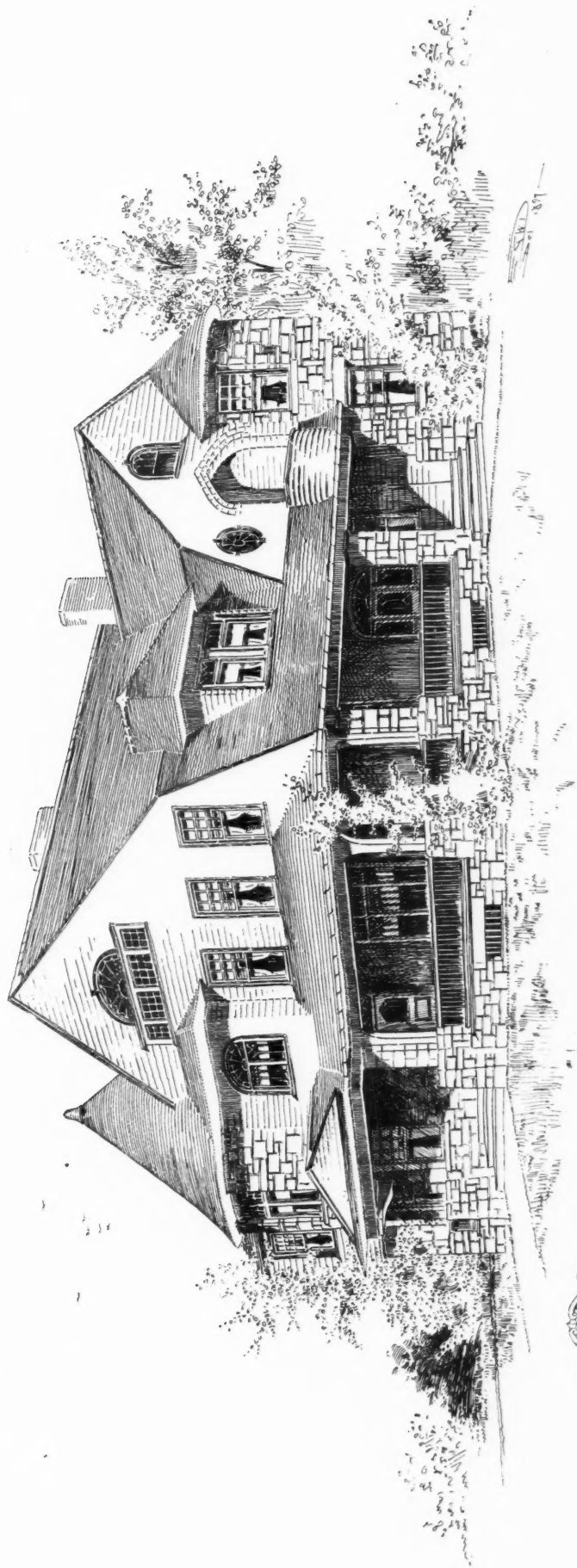


GENERAL OFFICE, WESTERN ELECTRIC CO., CHICAGO.

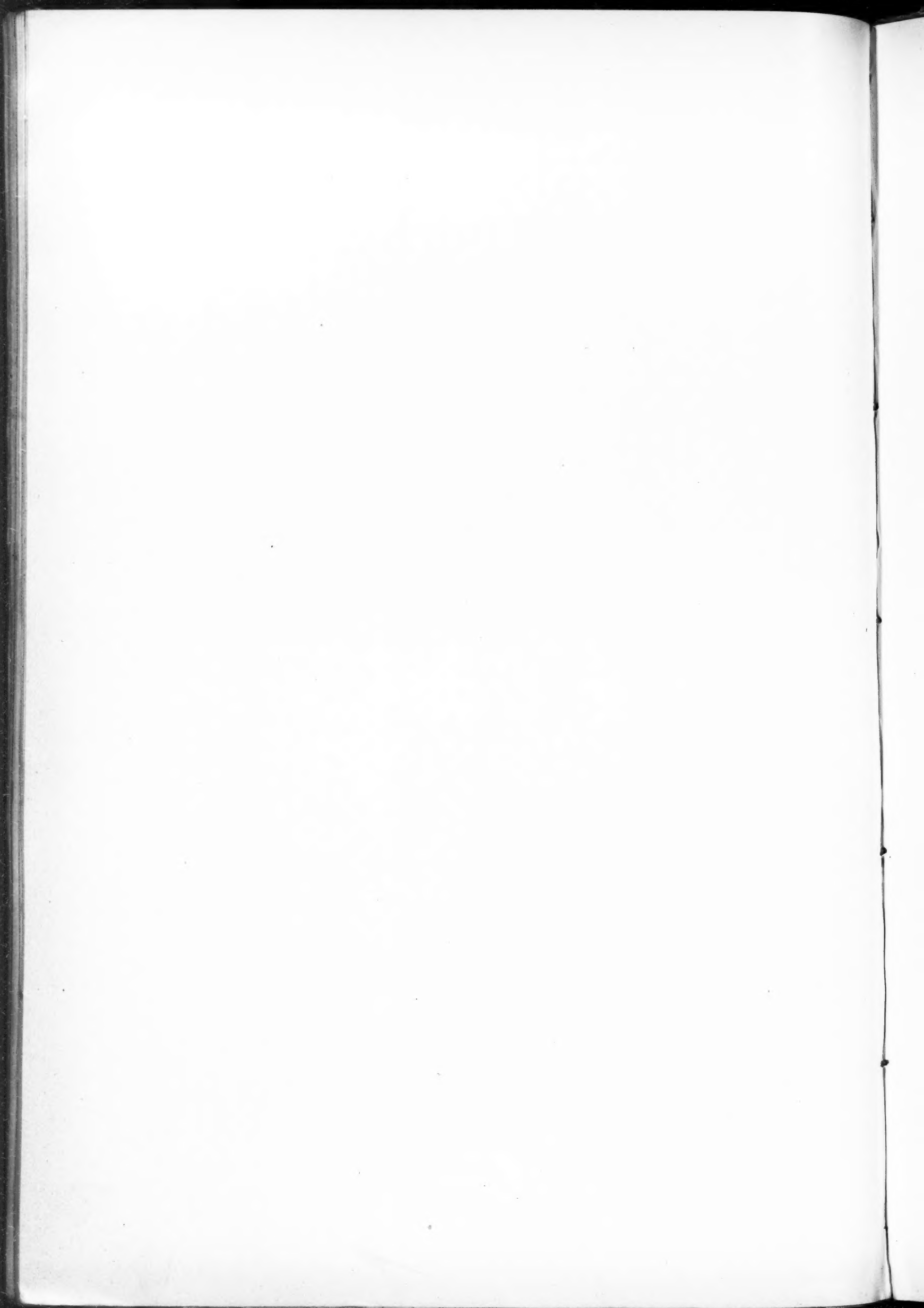
SAMUEL A. TREAT, ARCHITECT.

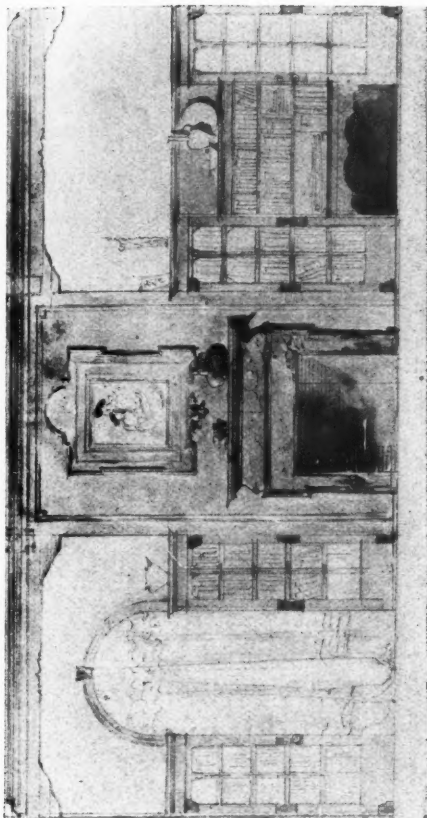
*Samuel A. Treat
Architect*





IMPROVEMENTS FOR
ROBERT A. MARVIN, ESQ.
JAMESTOWN, N.Y. E.G.W.
DIETRICH, ARCHT. & C.
18 BROADWAY, N.Y. CITY.

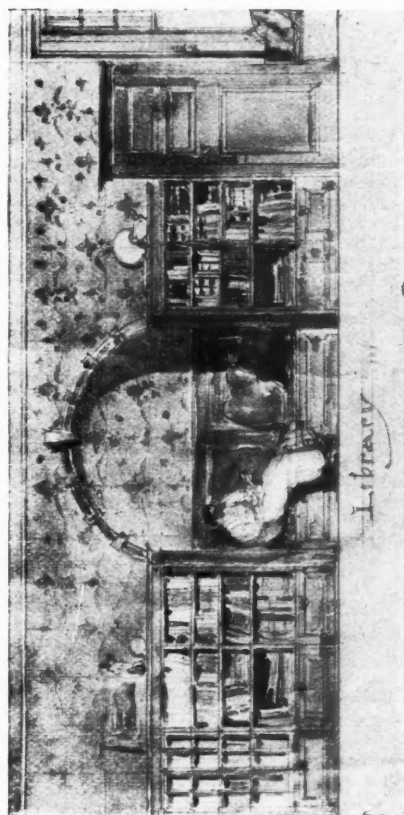




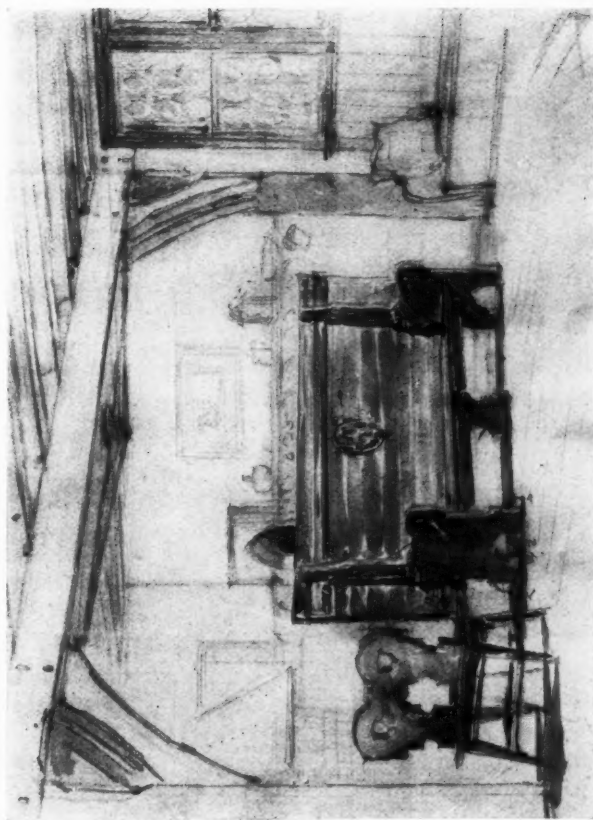
INTERIOR OF A LIBRARY.



INTERIOR OF A DINING ROOM.
 SKETCH DESIGNS BY WILSON EYRE, JR., ARCHITECT, PHILADELPHIA.

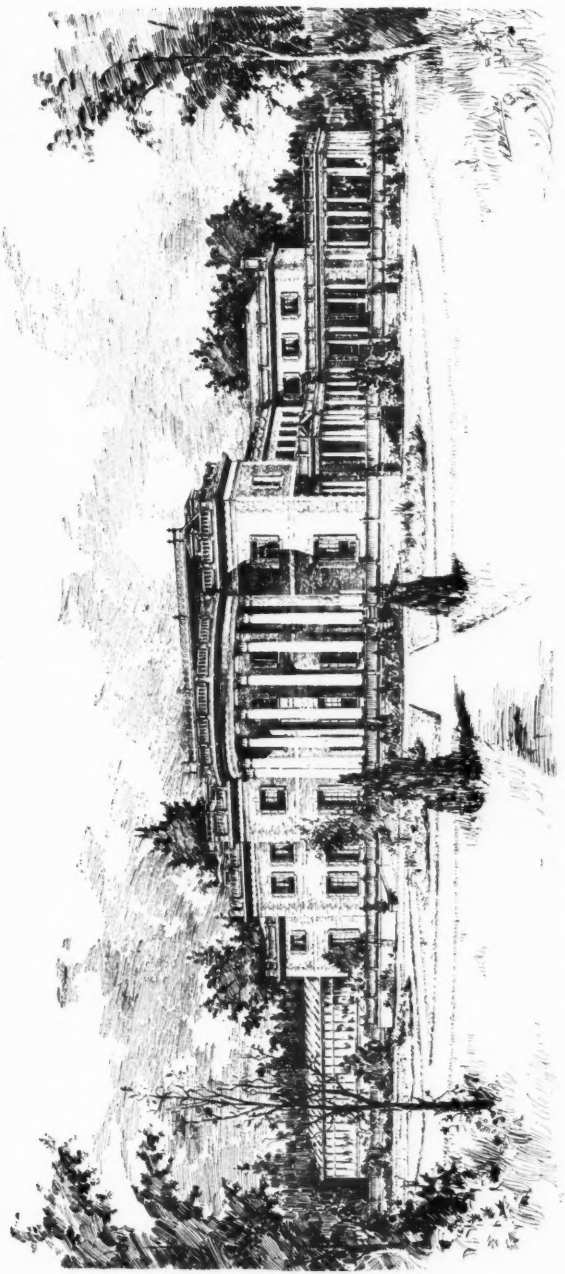


INTERIOR OF A LIBRARY.



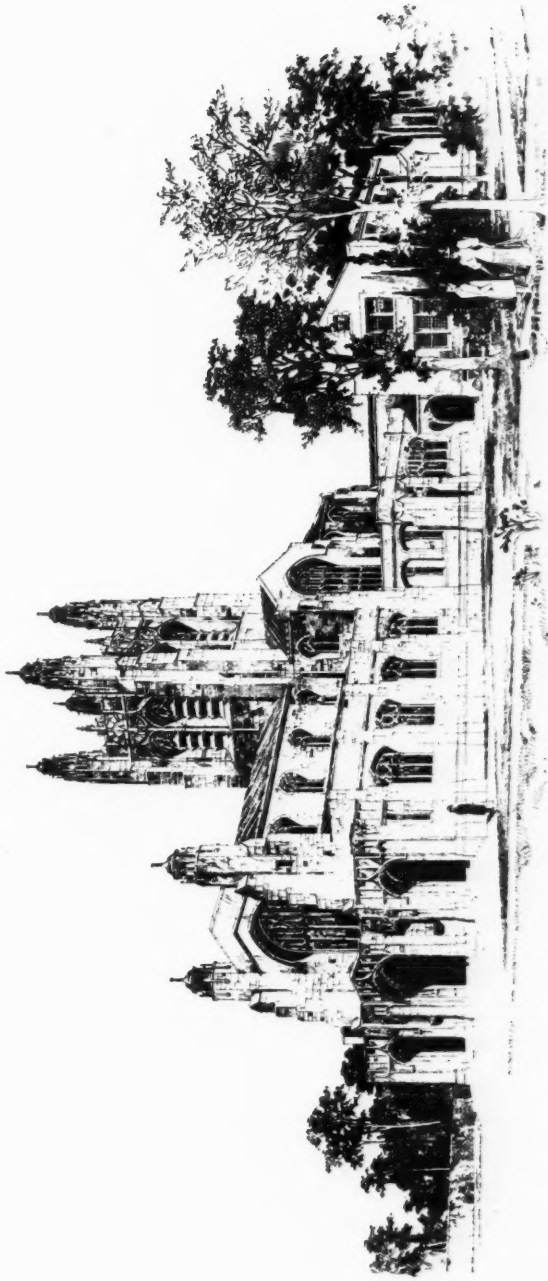
BENCH AND CHAIRS FOR MASK AND WIG CLUB, PHILADELPHIA.

Selections from Catalogue for 1898.
 T-Square Club Exhibit, Philadelphia.



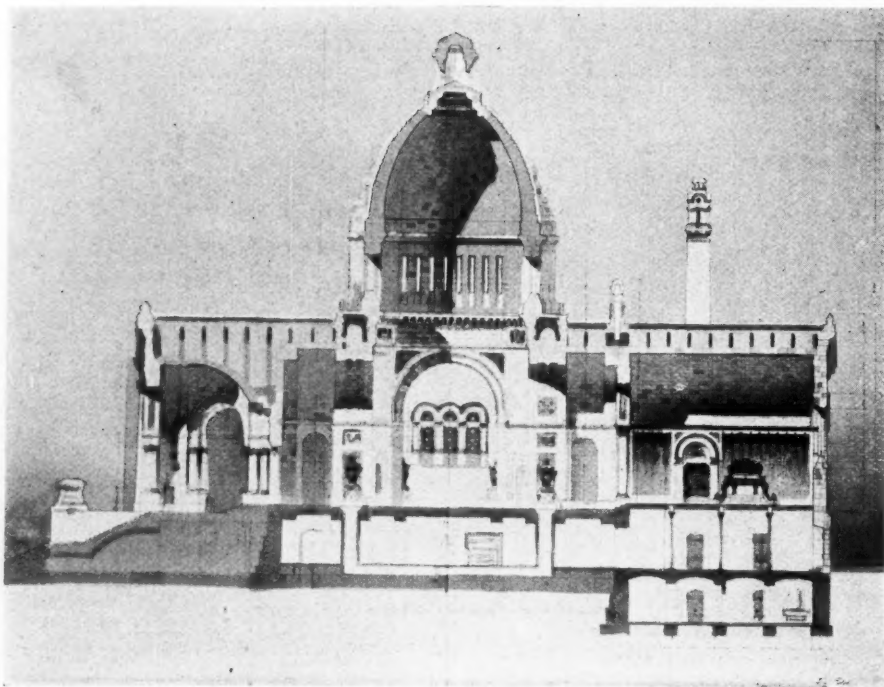
RESIDENCE FOR F. G. BOURSE, OAKDALE, N. Y.

ERNEST FLAGG, ARCHITECT, NEW YORK.

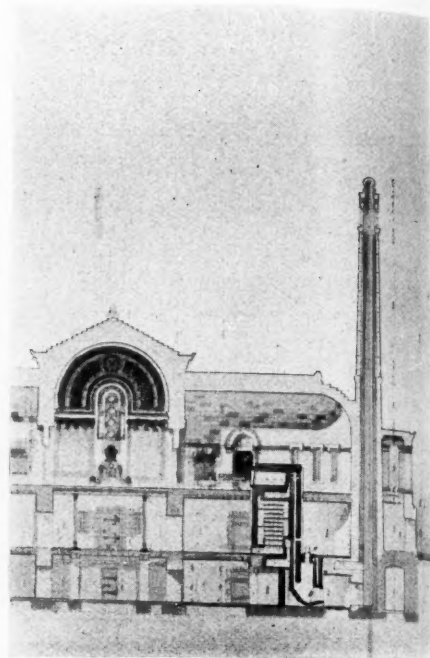


COMPETITIVE DESIGN FOR PROPOSED ST. PAUL'S CHURCH, ROCHESTER, N. Y.

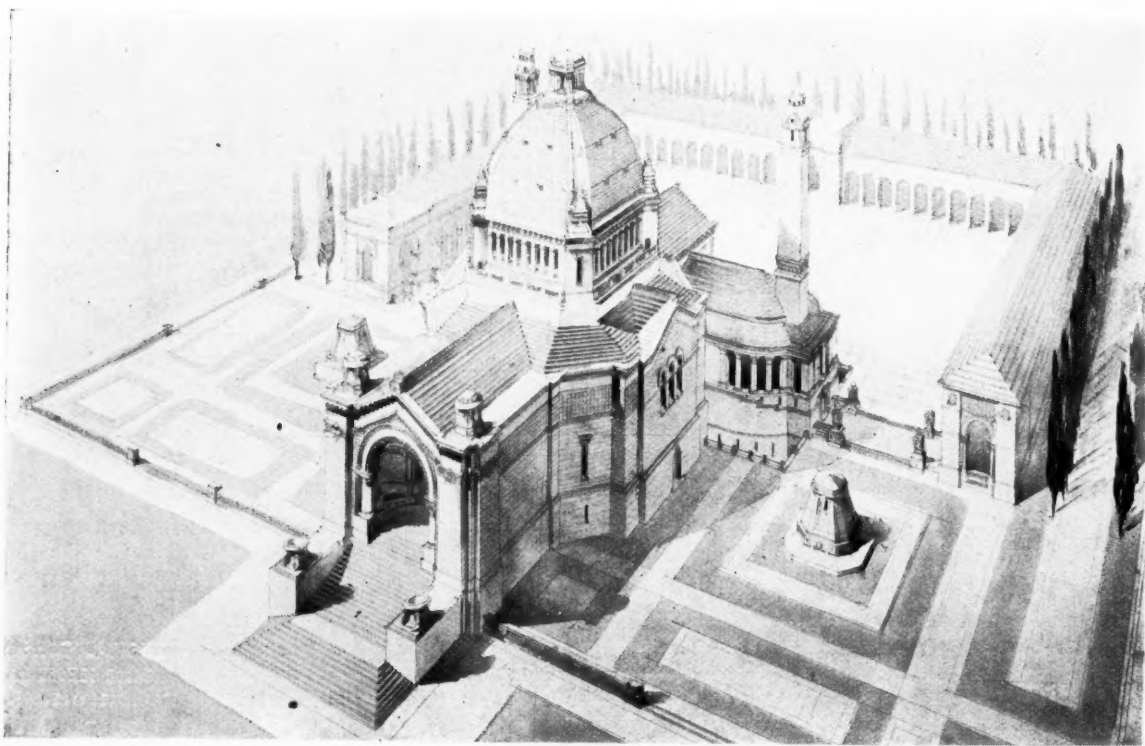
CRAM, WENTWORTH & GOODHUE, ARCHITECTS, BOSTON.



LONGITUDINAL SECTION.

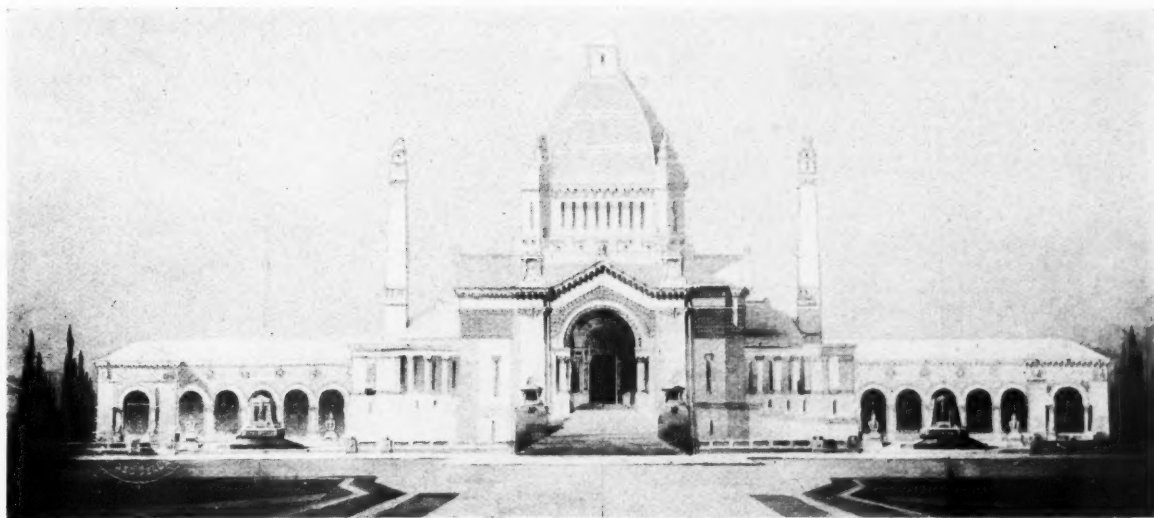


TRANSVERSE SECTION.

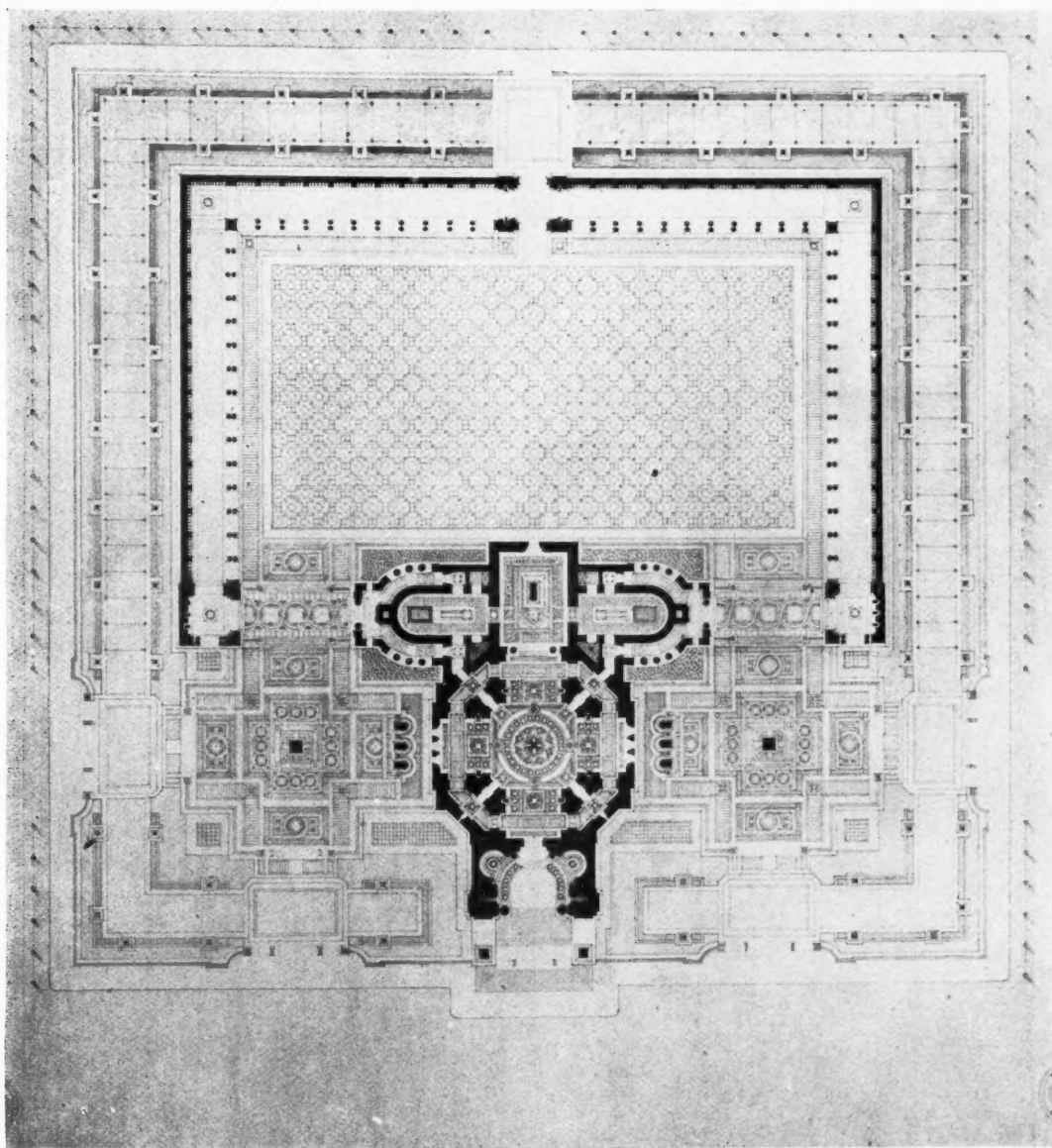


PERSPECTIVE VIEW.

A CREMATORY. THESIS WORK AT THE ECOLE DES BE



PRINCIPAL FACADE.



GENERAL PLAN.



RESIDENCE OF JAMES D. PARKER, CINCINNATI, OHIO.
WILLIAM MARTIN AIKEN, ARCHITECT.

INLAND ARCHITECT PRESS.

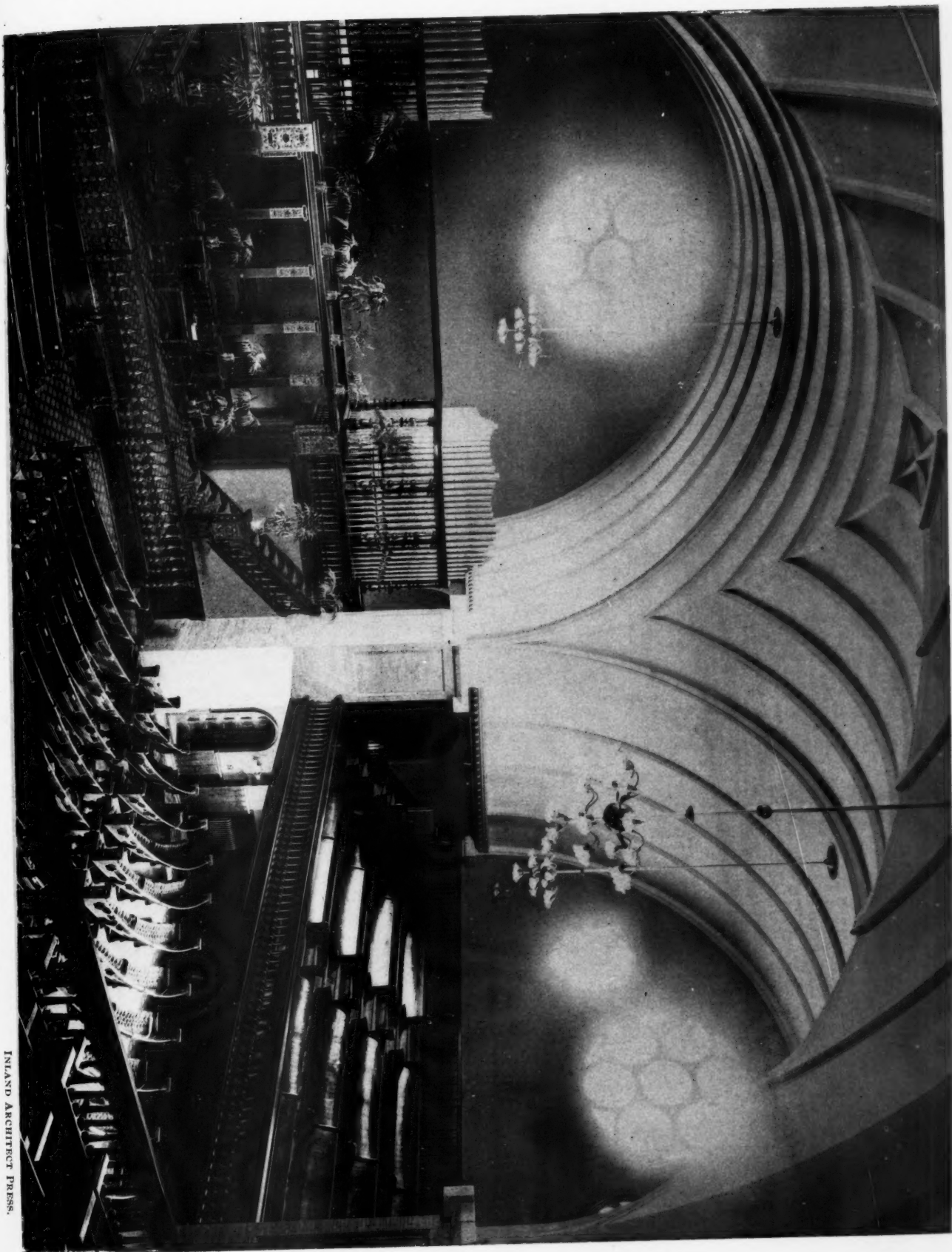
100



INLAND ARCHITECT PRESS.

VIEW IN UNIVERSITY CONGREGATIONAL CHURCH, CHICAGO.

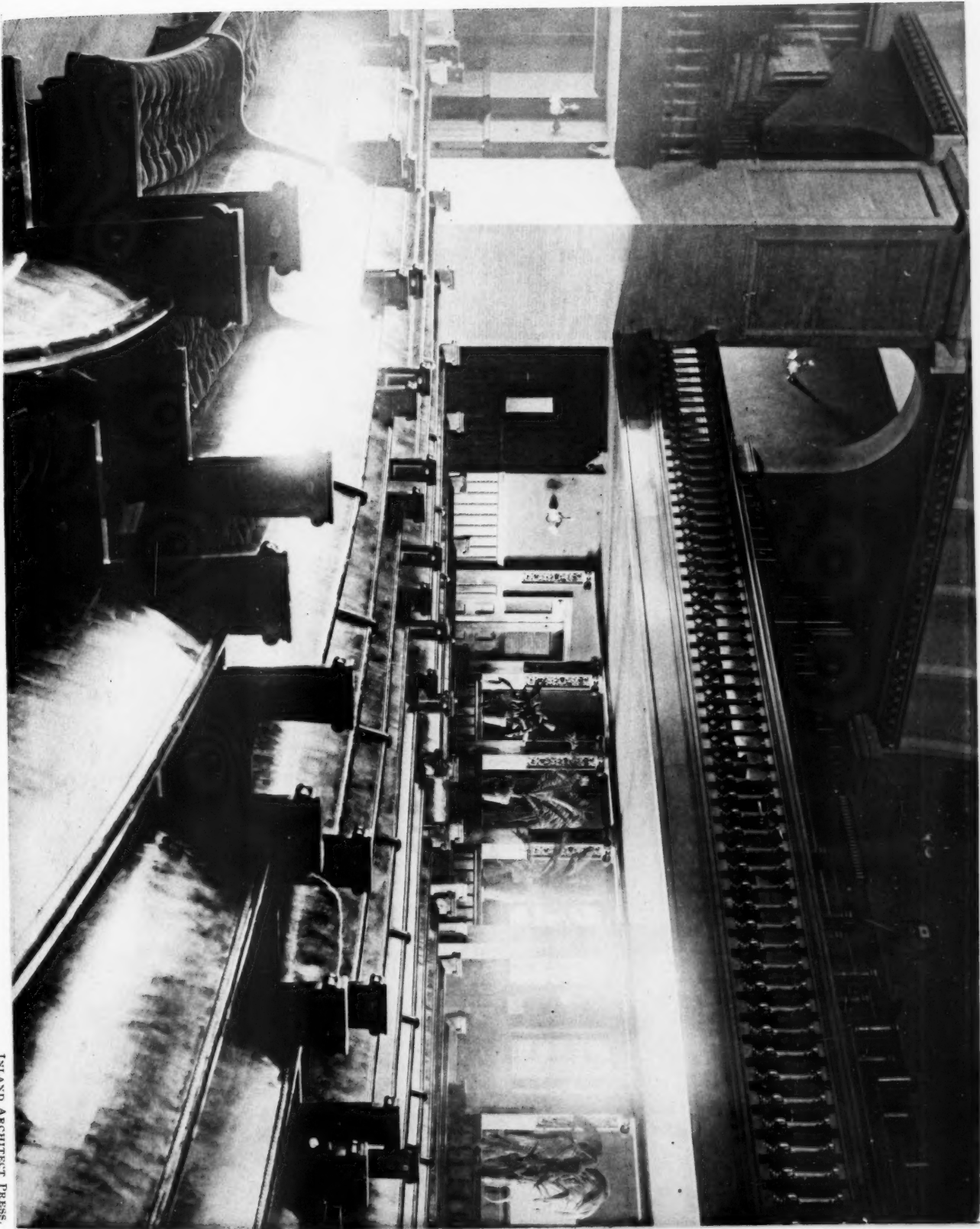
POND & POND, ARCHITECTS.



VIEW IN UNIVERSITY CONGREGATIONAL CHURCH, CHICAGO.
POND & POND, ARCHITECTS.

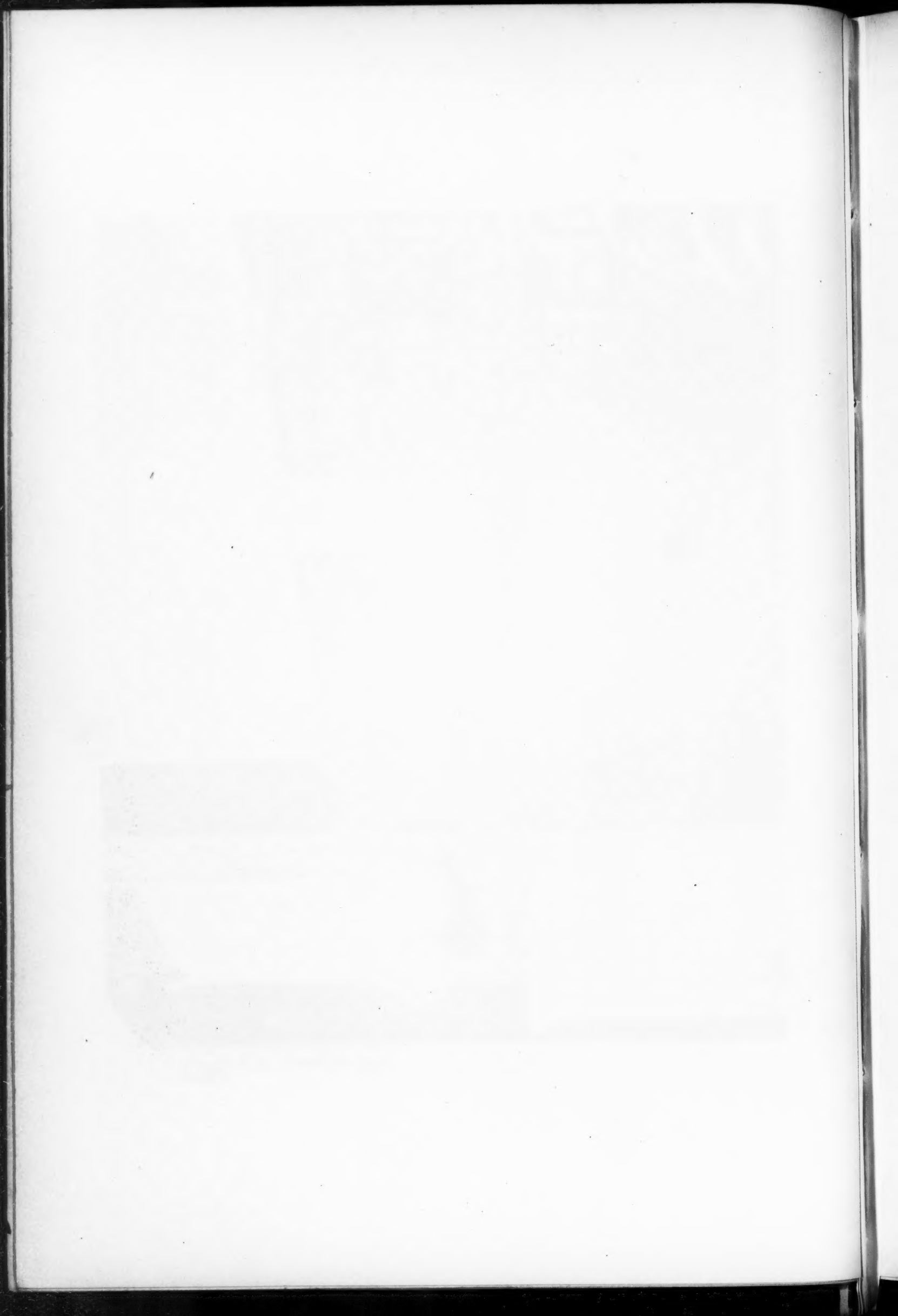
INLAND ARCHITECT PRESS.

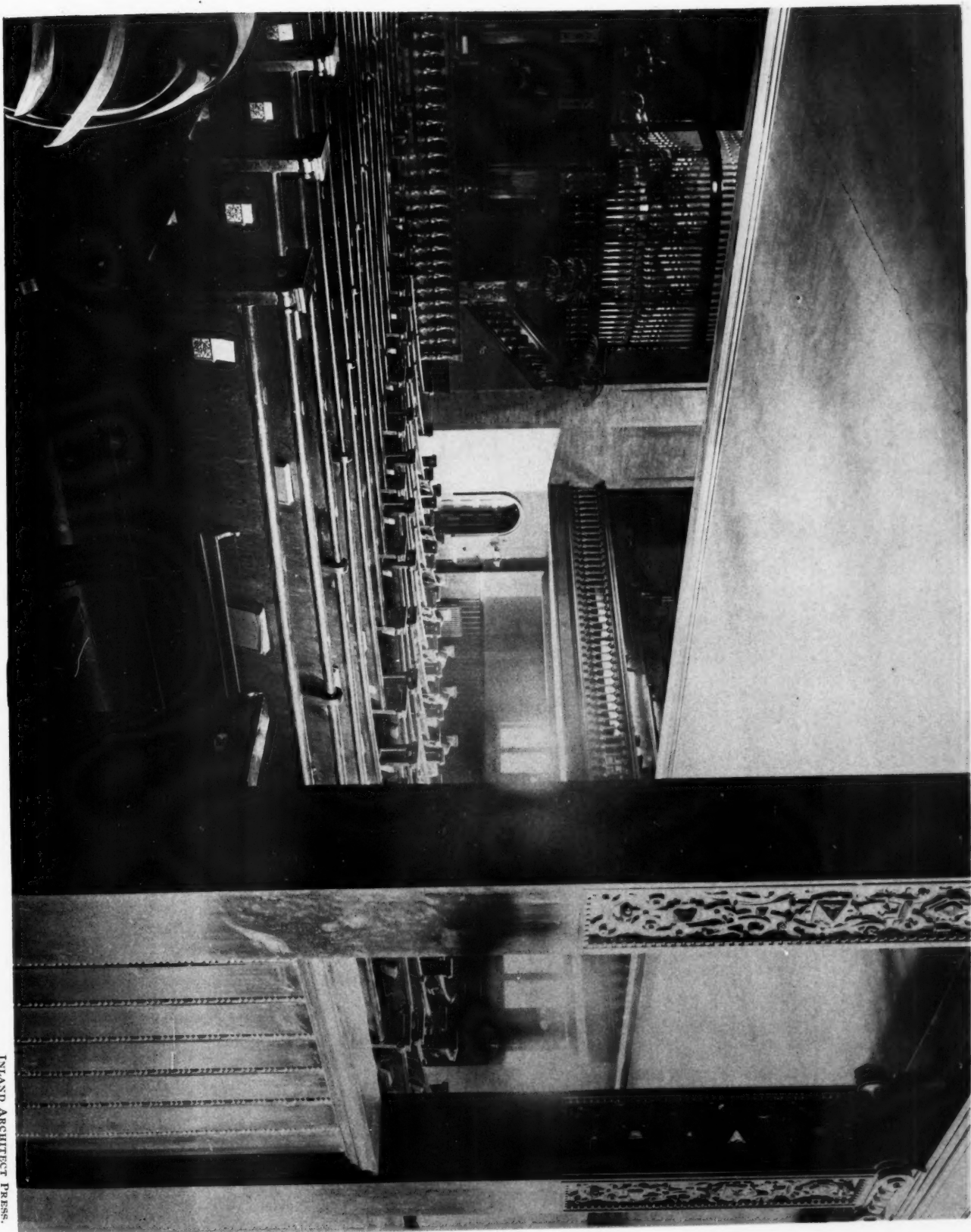




VIEW IN UNIVERSITY CONGREGATIONAL CHURCH, CHICAGO.
POND & POND, ARCHITECTS.

INLAND ARCHITECT PRESS.

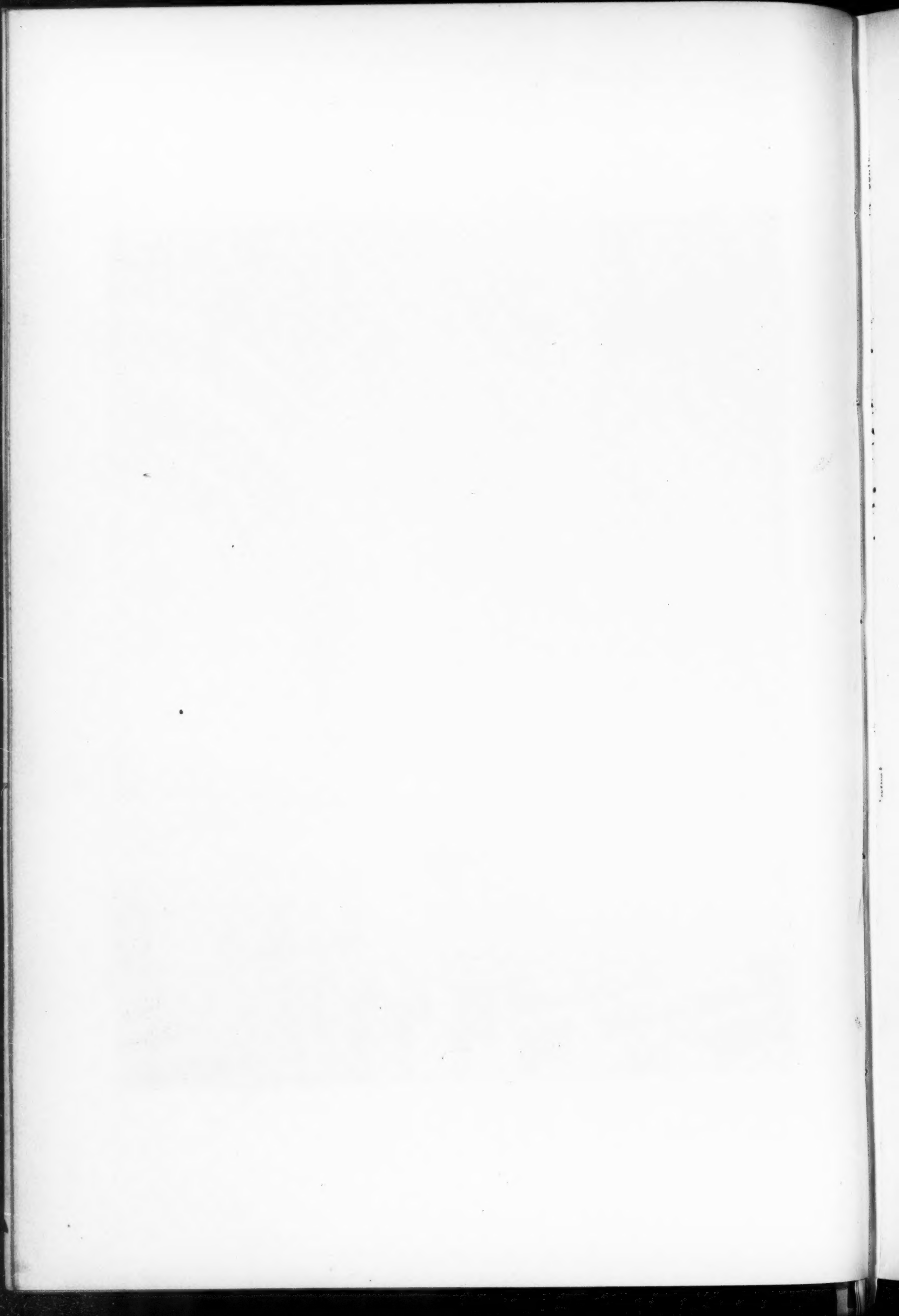


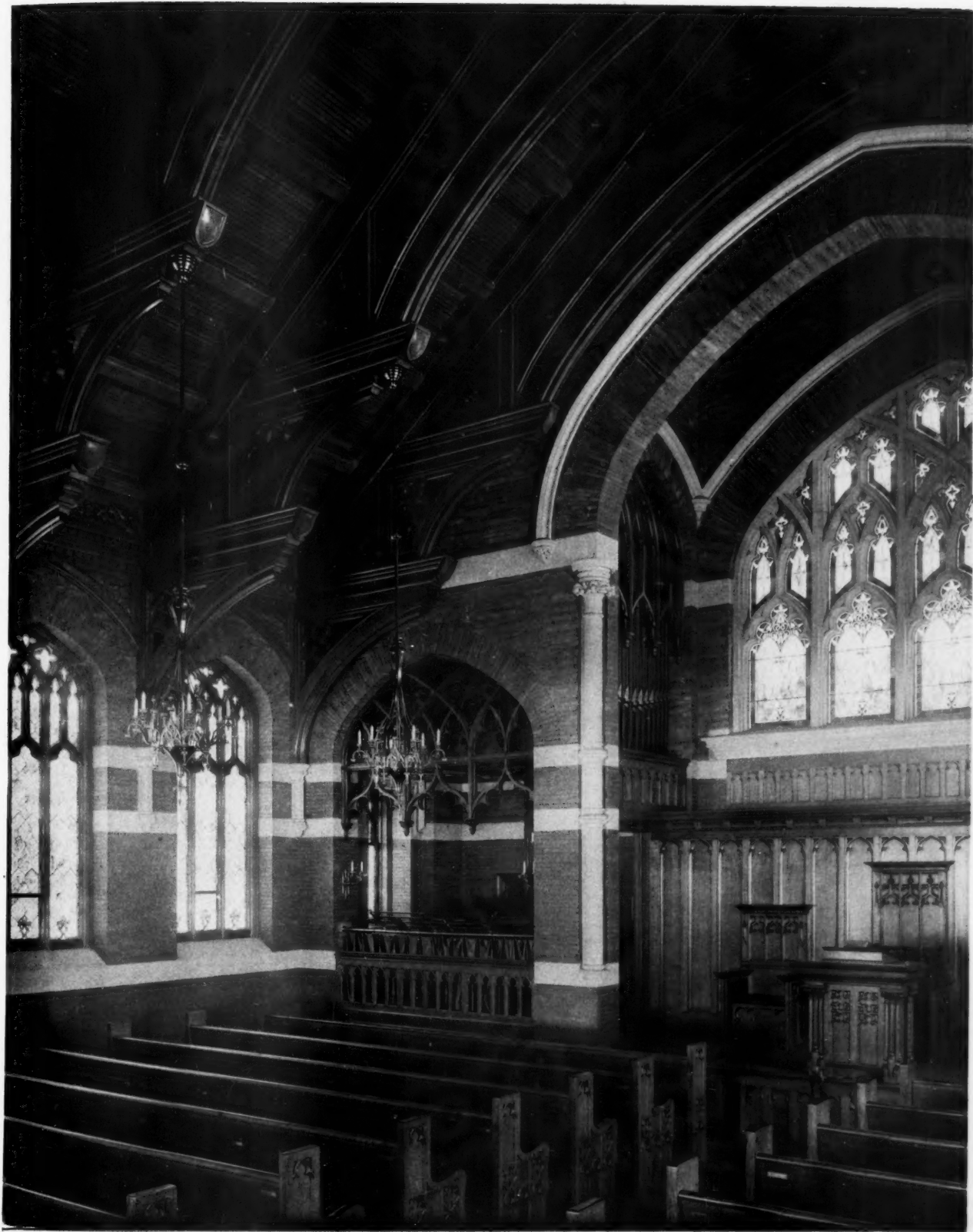


VIEW IN UNIVERSITY CONGREGATIONAL CHURCH, CHICAGO.

POND & POND, ARCHITECTS.

INLAND ARCHITECT PRESS.





INLAND ARCHITECT PRESS

VIEW IN HULL MEMORIAL CHAPEL FOR FIRST UNITARIAN SOCIETY, CHICAGO.

W. A. OTIS, ARCHITECT.



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VIEW IN HULL MEMORIAL CHAPEL FOR FIRST UNITARIAN SOCIETY, CHICAGO.

W. A. OTIS, ARCHITECT.



REFECTORY BUILDING, SOUTH PARK, CHICAGO.
D. H. BURNHAM & CO., ARCHITECTS.