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THE designs for the Minnesota State Capitol have all been rejected by the Commission. It will be remembered that the terms offered by the State were not acceptable to the profession generally, and very few architects of much professional reputation entered the competition. The designs sent in were carefully judged, with the help of excellent professional advisers, and, as the result, five equal premiums, of five hundred dollars each, have been awarded to Messrs. Wendell & Humphreys, of Denver, Herman Kretz & Co., of St. Paul, George R. Mann, of St. Louis, W. H. Dennis, of Minneapolis, and Messrs. Radcliffe & Willoughby, of Duluth, but none of the designs have been selected for execution. The Commissioners, who have acted with exemplary fairness and courtesy throughout the affair, the conditions objected to by the profession not being imposed by them, but by the Legislature, explain the rejection of the designs by saying that in some cases the cost would evidently exceed the limit imposed by law, while in others, including two of those which received premiums, the legislative chambers were placed on the first, or main floor, which, in their judgment, was objectionable. As this feature, in the plans otherwise approved, could not be changed in a satisfactory manner, the Commissioners concluded that none of the designs should be accepted for execution, and authority, which has now been given, was asked for holding a new competition, on terms better suited to the ideas of the profession. This competition has now been announced, and, although the time allowed is too short for proper study of the designs, and the terms will still not attract the members of the profession who have their time well employed with regular work, the affair has a more satisfactory look than it has had before. As the Legislature does not meet again for two years, and there is said to be no appropriation for doing any work on the building, and none can be made until the session of 1897–8, it seems a pity to hurry so much the preparation of the designs. Everything, in a great building, depends on a good plan. To make the drawings alone for the competition will take, at least, two months' time, and the study of the arrangement must, of course, stop as soon as the competition drawings are begun, so that the time available for this is only a few weeks, or rather, considering the interruptions from other business, a few days.

A CURIOUS question has come up in Pennsylvania as to the authority for ordering the construction of court-houses. The judge of the County Court of Lancaster thinks, as does the Grand Jury, that it is necessary to have the Court-house enlarged. A day or two ago, he summoned before him the County Commissioners, and asked them why they did not enlarge it. He said that several grand juries had recommended building an addition to it; that such addition was necessary for the business of the Court, but that they had paid no attention to the recommendations. The County Commissioners replied that they had no money. The judge replied that it was false economy to delay the enlargement, and that, if the Commissioners felt any delicacy about carrying it out, they should petition the Court, and he would take the responsibility of ordering the work done at once. What the County Commissioners thought of this proposal can be better imagined than described, but there seems to be no doubt that the judge took the true and legal view of the powers of County Commissioners, and was perfectly right in holding them up to their duty. A similar stimulus, applied by Courts to feeble servants of the public, might do a great deal of good in other places besides Pennsylvania. Not long ago, a police justice, in a rich town near Boston, had occasion to send a sharp letter to the city authorities, on the subject of the city lockup, which consisted of three or four damp, dark, and indescribably filthy cells in the cellar of the city-hall, the stench from which was so offensive in the rest of the building as to require the doors to be kept open to allow the air to carry it away. In this noisome hole a large number of people, men, women and children, mainly witnesses, or children taken up for trespass, or fruit-stealing, were, and are, annually, confined, often remaining for two or three days before their cases can be heard. We once saw, huddled together in one of these cells, so dark that their presence was made known mainly by their convulsive sobbing, three little boys, who had been captured with a bag of apples in their possession, and were to remain there until the Court sat on them the next morning. No doubt, the lesson was good for their souls, but they were fortunate if their bodies did not carry away lifelong injury, and for such things as this a community is justly responsible. The ordinary excuse is that it is nobody's business to attend to it, or that nothing can be done until an appropriation is made, or until the next city Government comes in, etc.; and if judges really have the power to compel the reformation of buildings connected with the Courts, the sooner they exercise it the better.

AN identical programme has this year been used in the competitions for the Rotch Travelling-Scholarship, the McKim Fellowship and the Travelling-Scholarship of the University of Pennsylvania. The same programme was also used for the scholarship in the school at Rome, so that drawings submitted in either of these three competitions might be entered a second time for a second prize, and it was also sent to Paris, so that American students in the École des Beaux-Arts might also, if they cared to, compete for it. Twenty-three competitors submitted designs for this new *Prix de Rome*, which was offered only to graduates of our schools of architecture and to students in the École des Beaux-Arts of two years' standing. Of these competitors, two had taken their degree at Cornell University, three at Philadelphia, five at the Institute of Technology and ten at Columbia College, while three of the designs came from Paris. Nine had not taken part in the previous competitions. The jury were Mr. R. M. Hunt and Mr. W. M. Kendall, of New York, and Mr. F. M. Day, of Philadelphia. They awarded the scholarship to Mr. John Russell Pope, a graduate in architecture from the Columbia College School of Mines, in the class of 1894. They made Honorable Mention also of the work of Mr. Percy Ash, of Philadelphia, who a week before had won the Pennsylvania Scholarship, and Mr. H. G. Emery, a graduate of Columbia College, in the class of 1892. The jury who had judged the McKim competition earlier in the week, consisted of Mr. Hastings, Mr. Whitney Warren, Mr. Howard and Mr. Boring, and of six of the older graduates of the New York school, Messrs. O'Connor, Casey, Kohn, Stoughton, Mann and L. S. Rogers. Each juryman had, during the previous week, made a special study of one of the ten designs and had prepared a written criticism upon it. This jury also reached a unanimous conclusion, and they also placed Mr. Pope's design at the head of the list, making Honorable Mention of the work of Mr. Emery, Mr. Fellows, Mr. Bossange and Mr.

Ayres. The two prizes together will bring to the successful competitor the handsome sum of thirty-five hundred dollars, with the pleasing duty of spending between three and four years in foreign travel and study, about a third part of which is to be spent in Italy, at two different periods, one, it may be presumed, at the beginning and the other at the end of his stay.

WE conceive that this result must be extremely acceptable to the gentlemen who have founded the school at Rome, and to the committee who are administering it. The distinctive characteristic which has marked this enterprise from the moment of its inception, a year ago, has been that it did not undertake to benefit men at the beginning of their studies, but those who, having learned whatever was elsewhere taught, should seek to crown their work by the study of the masterpieces of ancient or of more modern times which make the shores of the Mediterranean at once the richest of museums and, for those who are qualified to profit by it, the most inspiring of academies.

THE National Sculpture Society is already quite a power in New York. To say nothing of its exhibition, about which we may have some remarks to make later, it has been formally applied to by the Park Commissioners "to make an examination of the statues in the parks, and report as to the location of same, suggesting any changes which may be deemed advisable." Some of the best sculpture in New York is hidden away in the parks so modestly as to be almost lost to the public, and the Society will have plenty to do in suggesting improvements in location and surroundings for the advantage of nearly all the statues in the city. There is now hardly a single one, good or bad, which is properly shown. As for the Farragut statue, which, if not the best, is probably the most interesting work of sculpture in the city, it is necessary for a person walking on Fifth Avenue or Broadway to look sharply to distinguish it at all among the shrubbery, where it seems to have been dropped at random; while the beautiful drinking-fountain, at the other corner of Madison Square, which might form the central ornament of the whole square, is treated exactly as if it were a hydrant. So far as we know, no statue in New York has a situation approaching in dignity and appropriateness that of the Washington Statue in Boston. This, simply by its position, in the highest part of the Public Garden, in the axis of Commonwealth Avenue, and forming the centre of a geometrical flower-bed, always strikes the beholder with pleasure; while Story's statue of Everett, backed up against the fence among a lot of tall shrubs and trees, excites a ridicule which it is far from deserving, and which it would escape if its situation were such as to confer dignity upon it.

GENERAL JOHN NEWTON, President of the Panama Railroad, and famous for his great engineering achievement of the removal of the reefs in the East River, at New York, died a few days ago, in that city. General Newton was born in 1823, in Norfolk, Virginia. He was, as a boy, noted for his mathematical attainments, and was appointed a cadet at West Point while hardly more than a child. He graduated, however, at the age of nineteen, second in rank in a class of fifty-six, and was soon afterward appointed assistant-professor of engineering in the Academy. He was next assigned to the construction of fortresses on the Atlantic and Gulf coasts. This work occupied him until the breaking-out of the Civil War, when he was made Chief Engineer of the Department of Pennsylvania. He was subsequently transferred to the Department of the Shenandoah, and thence to Washington, where he served as assistant engineer in the construction of the fortifications around the city. He was engaged in the battle of Gettysburg, and gained so much notice by his bravery and skill that he was soon after raised from his comparatively humble rank of major in the regular army to those, successively, of colonel, brigadier-general and major-general, by brevet. After the close of the war, he was stationed in New York, and made superintending engineer of the military engineering works around the city. While serving in this capacity, he carried out the famous work of removing the East River reefs. In August, 1886, he was, at his own request, placed on the retired list of the army, and was immediately appointed Commissioner of Public Works for the City of New York. This office he held for two years, and then resigned, to become President of the Panama Railroad Company.

A COMMISSION of $25,000 and immortality in the shape of a "bronze bust" are seemingly within the reach of a Philadelphia architect, contingent only on the willingness of the "proper authorities" and the Fairmount Park Art Association to allow the erection in Fairmount Park of a memorial arch to the glorification of the late Richard Smith, type-founder, who has bequeathed $500,000, so that a bronze image of himself may become an important feature in the decoration of a lovely public park. To be sure, the arch is intended to be dedicated to the "memory of Pennsylvanians who took part in the Civil War," and is to be adorned with equestrian statues of Generals McClellan and Hancock, and bronze busts of three or four less-famed military leaders, two admirals, the architect and the executor. Admitting that the design of the arch and its decorative sculpture may be, as a matter of art, all that could be desired, we still must commend to the attention of the "proper authorities" the manner in which the seigniory of Venice treated an even less undesirable bequest, with which Bartolommeo Colleoni had saddled them. The subsidiary bequest of funds for establishing a playground and buildings for children, which seem desirable things to have, may fairly represent to Philadelphians what Colleoni's vast fortune did to the Venetians, and perhaps Philadelphia lawyers, whose astuteness is proverbial, may discover a way of securing the playground without having to associate the heroes of the Civil War with bronze memorials of executors, architects and type-founders, who, excellent and worthy individuals as they are, or were, are not suitable company for generals and admirals with Civil War records.

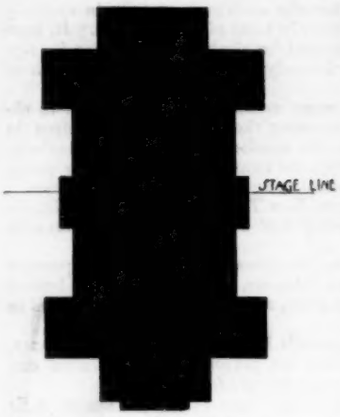
NEW YORK has lost an artist of the best type, in the person of Mr. Henry Le Grand Cannon, who died suddenly this week of an abscess on the brain. Mr. Cannon belonged to an old and rich family, and was surrounded from childhood with the refined and intellectual influences which a sculptor, more, perhaps, than any other artist, needs. In 1884, he exhibited for the first time, sending to the National Academy of Design a medallion portrait in plaster. Since then, he has been represented at many exhibitions, generally by portraits. He was conscientious enough, as an artist, to be willing to devote himself to portrait work, the foundation of true artistic greatness, and his success in it showed what he might have achieved later, if his life had been spared. His favorite subjects were children and young people, whom he represented faithfully and sympathetically.

THE architects who sent competitive designs for the New York City-hall will be glad to hear that there is a chance that, at least, the money prizes offered will be paid. The Legislature of New York has passed a bill authorizing the Board of Estimate to pay six prizes, one of seven thousand dollars, and five of two thousand dollars each, and the bill has been accepted by Mayor Strong. The names of the six prize-winners are still in the envelopes in which they were sealed up by the jury of award. The envelopes have never been opened, but are probably safe, as are also the plans, which are in the custody of the Comptroller.

IT is so rarely that a municipality betrays anything resembling in the slightest degree an emotion of gratitude to professional men who have been of service to it that a recent action of the City Government of Bremen deserves to be noted. A very important work of deepening the channel of the River Weser has been successfully carried out there, under the direction of the Chief Director of Buildings, Herr Franzius. On the completion of the undertaking, the municipality, on the recommendation of the Senate of the city, voted to Herr Franzius a "gift of honor" of one hundred thousand marks, or about twenty-four thousand dollars; while another "gift of honor," of fifteen thousand marks, was at the same time voted to his assistant, Herr Bücking.

THEATRES.[1] — XVI.

THE HAGUE NEW THEATRE AND OPERA-HOUSE.



Plan of Hague Theatre.

HAVING already published illustrations of the two new and magnificent theatres which have lately been erected in Rotterdam from the designs of Mr. Verheul [See *American Architect* of July 28, 1894] and in Amsterdam (the Municipal Theatre) built from Mr. Jan Springer's designs [See *American Architect* of December 15, 1894], I consider myself exceedingly fortunate, thanks to the still further kindness of Mr. Verheul, through the intervention of Mr. Edwin O. Sachs, to be able to publish another of the buildings designed by the architect of the Rotterdam Theatre, and thus complete with the Hague New Theatre the list of the three important theatres which Holland will soon be able to boast of on the completion of the building which is the subject of this chapter.

The laying-out of the adjoining land and open spaces has been studied by the architect as a means of giving dignity and importance to a great public building. By providing adequate approaches, arranged with due regard to the position of the entrances and exit to the theatre, the designer has been mindful of the safety of his foot-passengers as well as of his carriage-traffic. By the arrangement of the roads, carriages can "take up" and "put down" their occupants at the various entrances without any fear of creating a block, and at the same time their direction does not in any way interfere with those who come to the theatre on foot.

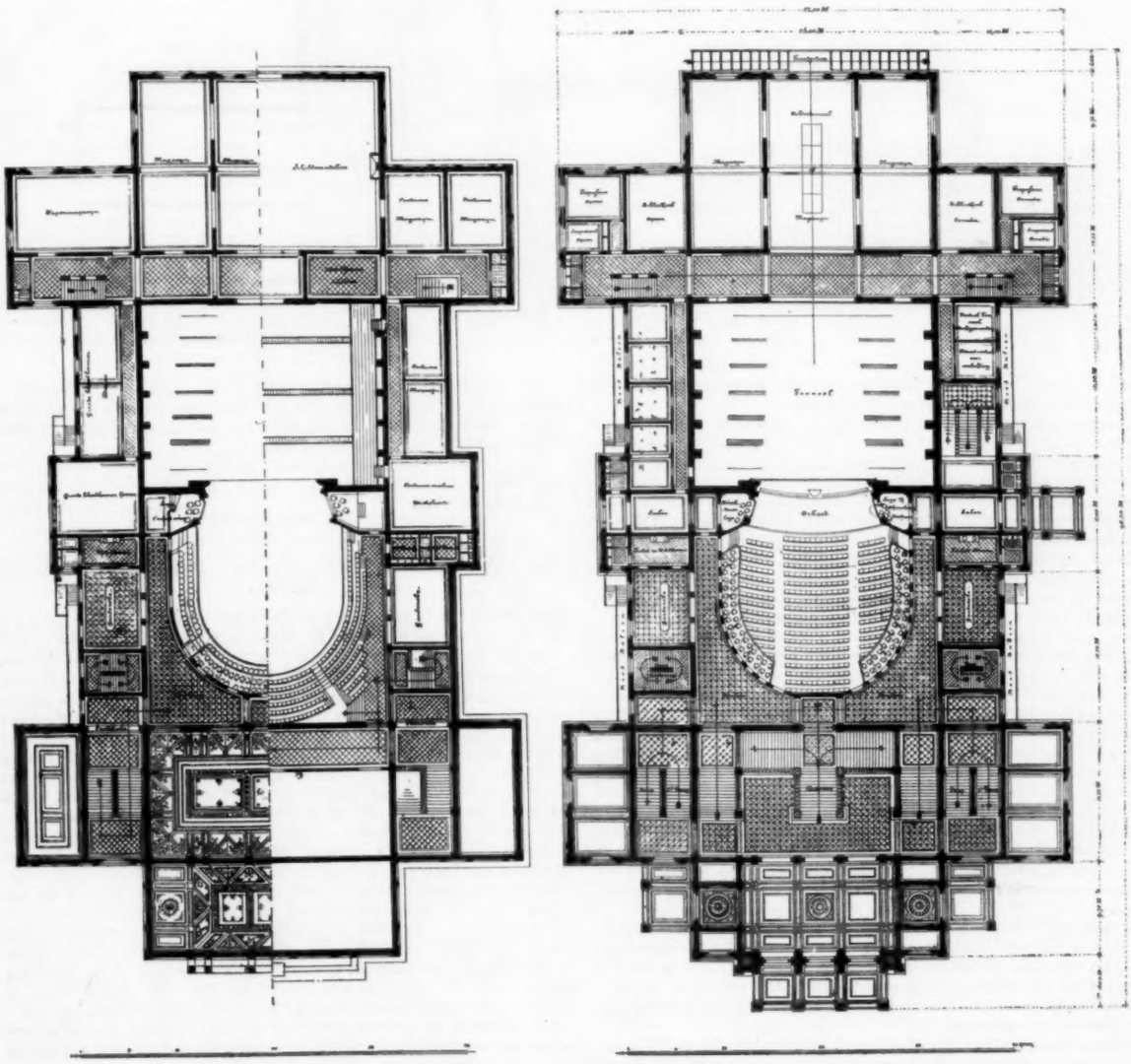
This laying-out of the surrounding land is undoubtedly wisely thought out as a part of the entire design of the theatre, and many architects who build theatres would do well to copy the example set by Mr. Verheul of making the approaches to the house a feature of the planning of their building. Sufficient importance is seldom given to this part of the scheme, which tends both to the safety of the building and the audience, as well as to the architectural dignity of such an important public building as a theatre.

The safety question alone would demand a more careful consideration of the laying-out of the approaches to such a building. In such a case as the Hague New Theatre, access can be readily attained by any number of fire-engines on all sides of the theatre, while the audience have abundance of room to leave the building on three sides into open space, free from all danger of fire and smoke. The building is also placed out of reach of danger arising from fire in surrounding property, and from the fear of alarm being raised by smoke entering the house from a neighboring conflagration.

All these are questions of the most vital importance, and show how wise it is to consider the outside as well as the inside of the building when arranging the plans of a theatre.

The accompanying illustrations are reproduced directly from Mr. Verheul's original drawings and show the minuteness of detail he has displayed upon his plans.

The section is not so complete, but shows that the house is arranged with a "parquet" floor and three tiers above, and is designed for performances of the opera and the drama. The building may be said to be divided into four parts: first, the vestibule with the approaches, staircases and foyer over in the front; second, the auditorium in the centre; then, the stage, and lastly,



[1] Continued from No. 1009, page 37.

the workshops and dressing-rooms at the back: these form four distinct sections of the building.

There is a covered carriage-way leading to the three central doors of the vestibule. This carriage-entrance is somewhat advanced on the plan, so as to leave the side entrances to the vestibule for foot-passengers well out of the line of the carriage-traffic.

From the vestibule, the inner hall is entered by three pairs of doors and this hall contains the grand staircase. Three separate and wide flights of steps lead from the hall to the level of the "parquet" corridor, while the central flight branches off right and left from this level and forms the grand staircase leading to the grand tier of boxes.

On the right and left of the inner entrance-hall, it will be observed upon examining the ground-floor plan, there are two separate staircases leading to the second and third tier, while, in addition, the third tier or gallery is also provided with means of entrance and exit, by separate and distinct staircases, one on each side of the building leading onto the open ground on the right and left of the theatre.

Mr. Verheul has adopted the plan, now universally admitted to be the only "safe" method of designing theatres, of making his building a symmetrical one on plan. I have so frequently pointed out the advantages of this arrangement, that if I omit full mention of them in studying the scheme now under consideration, it is not because this building does not offer every advantage of this method of arrangement, but because it appears to me unnecessary to repeat my general remarks in each individual case.

Another special feature of this design is the ample corridor-space provided behind the circle of seats on each tier, and the large and well arranged cloak-rooms which are placed on each side of the house in the corridors close to the seats, but in no case in line with the exits, so that no crowd collected round the cloak-room waiting for their wraps would obstruct the exits or impede the full and quick egress of the people departing in haste or panic. There is a great deal more in this than would at first appear, even from the safety point-of-view alone. Apart from the comfort under the ordinary circumstances attending a departing crowd collecting their wraps, nothing is more irritating than to find on leaving one's seat in a theatre, that the passage or way out is blocked by a crowd eagerly struggling for their hats and coats, or more aggravating than to have to stand in a draughty passage while the crowd is diminished by the slow delivering to them of their belongings by the attendant in charge. It is impossible for ladies to push their way through this crowd, so the architect who considers these things and places his cloak-rooms, as Mr. Verheul has done, out of the line of exit, does well for the comfort of his client's patrons. The safety question comes in here, too, as many will not leave the building even when an alarm is called without trying to secure their belongings; they run the risk of their and other people's lives rather than lose a hat or coat. This has been known actually to have occurred: a man returned to a burning building to get his hat after he had once escaped in safety; he was then overcome with the smoke and lost his life for the sake of his hat.

Speaking upon this subject of cloak-rooms in Continental theatres, Mr. Edwin O. Sachs observes the Continental theatre-goer has usually to take off his wraps before taking his seat, and it was a favorite plan to provide long counters off the passages, behind which was ample storage-room. These counters were so recessed as not to obstruct the passages.

For cloak-room tickets, the plan for allowing a bin for each seat, and then giving the bins the same number as the seat has been found to work well.

The ladies are by no means so particular abroad as to their retiring-rooms as in England, and there has not been found an objection in placing their retiring-rooms in a conspicuous position; the placing of lavatories off main passages is considered quite *en regle* on the Continent.

The new Prussian regulations as to cloak-rooms reads that: "The cloak-room accommodation for the audience must be in specially provided rooms with ample space in front of the counters. If, however, any part of a passage be used for cloak-room purposes, its regulation width must be proportionately enlarged for the full length of the 'hat and coat' counter."

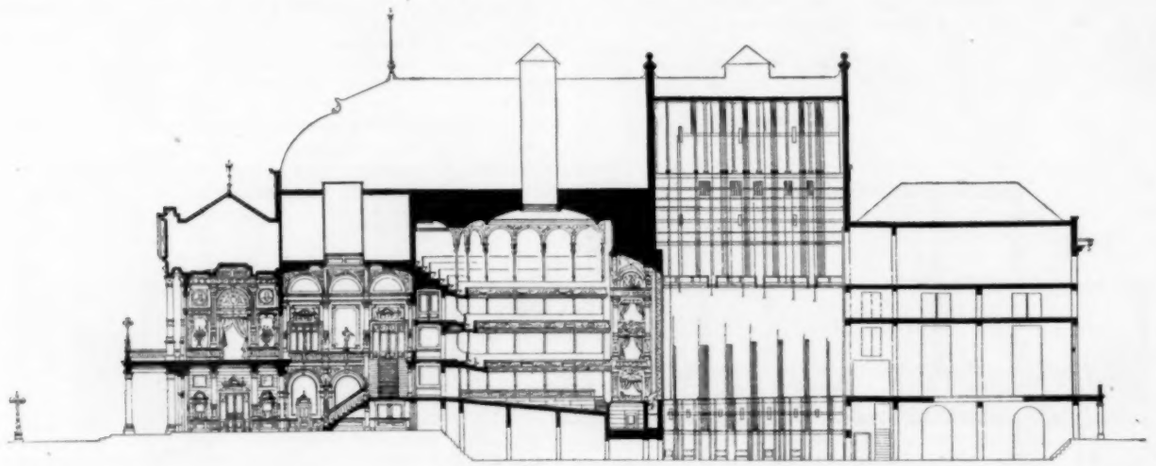
This is a regulation that many architects would do well to observe, thereby materially improving their designs. Too often in places of public entertainment, the cloak-rooms are omitted entirely, and hats and coats are collected and hung up on the walls in passages, on staircases, or landings and in any available nook or corner.

The dimensions of the Hague New Theatre are considerable, the length from front to back being 320′ 6″ and the greatest breadth 170′ 6″.

The auditorium is seated on the ground tier, with stalls, parquet and parterre, to the number of 394 seats, while private boxes behind these seats accommodate 72 persons, and ten others can be seated in the proscenium-box.

The second tier has 92 fauteuils in front of five private boxes, four of which will accommodate ten persons, and the central one twelve people. The proscenium-boxes are for ten more.

The third tier or gallery is divided into 146 amphitheatre stalls and 226 gallery seats.



The stage is the same width between the containing walls as the auditorium, and in the rear of it are extensive scenery stores, workshops, wardrobes, etc. At the sides are the artists' dressing-rooms, offices and administrative departments.

The façade is designed very much in the same style as Mr. Verheul's Rotterdam Theatre, in red brick and stone facings, but with very little carving. E. A. E. Woodrow.

[To be continued.]

THE AMERICAN SCHOOL OF ARCHITECTURE IN ROME.

THOUGH it is hardly a year since the project of establishing a School of Architecture in Rome was first mooted, the school may be said to have already a past, a present and a future. The first season was a brief one. The school opened on the first of November, under the direction of Mr. Austin W. Lord, as Secretary, but it hardly got under way until January, and it was virtually closed on the first of April. But before it closed it had four students in attendance, who had accomplished satisfactory results. It is now on the point of removing from its temporary quarters in the Via dei Condotti to the building known as the *Casino dell' Aurora*, which stands on an isolated plot of ground formerly forming a part of the Ludovisi Gardens, a building well-known to Roman sightseers as containing the famous "Aurora" of Guercino. It is on the Pincian Hill, not far from the French Academy in the Villa Medici. The grounds, comprising about 80,000 square feet, were laid out by Lenôtre. They contain noble trees, and command a fine view over the campagna beyond the city wall. The building is ample in size, and if the School of Archæology which is in contemplation by the Archæological Institute is presently established, it may, perhaps, find a home there also, as a congenial tenant. The coöperation of students of mural decoration and of sculpture has also been invited.

The school is, as the committee say in their circular, one of observation and research rather than of design, aiming to form a correct taste and to impress upon the mind, by the study of great examples, those principles which are essential and enduring, be the style what it may. To this end the founders of the school believe it to be of the greatest value to an architect, before he begins his professional career, to study thoroughly upon the spot the monuments of ancient

architecture and such works of the Italian Renaissance as are their worthy successors. The monuments best suited to this purpose are those of Greece and Italy, and the headquarters of the school are established at Rome rather than at Athens, because of the greater amount and variety of material there at hand of use to the modern student, not only in architecture itself, but in mural painting and in the decorative arts.

The school is founded, as they explain, "for the benefit of advanced students only, and is designed to further the more disciplinary work of other institutions by opening to young men, already well trained by them in drawing and design, certain special lines of study, which at present can be pursued only under great disadvantages. Beginners, accordingly, will not be received. Such work is not suitable to their condition, and it would be a mistake to encourage them to devote their time to it."

The school in the Ludovisi Casino, that is to say, is intended, like its neighbor in the Villa Medici, for *anciens*, not for *nouveaux*. But since it cannot at once command the presence of men already at the end of their studies, such men as the *Grand Prix* brings every year to the French Academy, it must needs, for the present, content itself with such students, however unripe and immature, as our professional schools may supply.

Here the four or five Travelling-Scholarships established in Boston, Philadelphia, Ithaca and New York would seem to afford the most obvious means of selecting from the body of these graduates those who may be presumed to be specially well qualified to profit by the advantages offered. The committee in charge of the school have determined accordingly to restrict its membership for the most part to such beneficiaries. This enables them to try their experiment upon a limited scale and under favorable conditions.

It is true, of course, that some of these elect may not really be very far advanced in professional study, no more so, indeed, than their less fortunate fellows, and that disciplinary work in Paris, or elsewhere, under the guidance of a *patron* and in the stimulating air of an *atelier*, may really be more to their purpose than drawing and measuring the Cancellaria, the Arch of Titus, or the Parthenon itself. This is obviously, and, as one may say, avowedly, the difficult point in the enterprise. It is of course uncertain, under present conditions, whether all the guests will be able to digest and assimilate the feast set before them. But of this the founders of the school at Rome venture to take their chance, believing that even if these prize-men do not, in these first years, get all the good that better-prepared men might get, at any rate they will get no harm, and will spend their time to better advantage than if left, as their predecessors have been, to wander at will, with little other counsel or guidance than what their own inexperience might suggest. "Hitherto," says the circular, "the holders of the scholarships have followed very largely their own judgment as to their travel and study, and have produced, as required, a certain number of carefully measured drawings, which have borne testimony to the diligence of their authors, their facility with pen, pencil and brush, and the evident seriousness of their intentions; but the work has necessarily shown no common purpose and little consistent prosecution along carefully chosen lines. This being their common experience, the past holders of Travelling-Scholarships are general in their approval of the effort to direct foreign travel and study hereafter to more definite and specific courses."

But even two years abroad is, as the holders of the Rotch Scholarship have discovered, too short a time for both study and travel. Even if the whole time is spent in the *Ecole des Beaux-Arts*, it hardly suffices for serious achievement. How a single year, which is all that some of these endowments provide for, can be spent to the best advantage, is a question yet unanswered, and one which the school at Rome can hardly be expected to solve. This being so, it must, as we have elsewhere said, be a satisfaction to the founders of the Roman school, that their first Scholarship should have fallen to a candidate already provided, in the McKim Fellowship, with the means of prosecuting further disciplinary studies which, with the schooling he has already had, may fairly be expected to qualify him, at last, for the full enjoyment of their benefaction.

But while the school at Rome thus limits its sphere of influence, so to speak, by confining the privileges and honors of membership, as does the French Academy, to the winners of prizes, and thus vindicates itself from the suspicion of seeking to draw away to Rome the half-trained youth who had better be at school elsewhere, it is not, in practice, as inhospitable and exclusive as this programme might seem to imply. Though it makes no formal provision for casual or temporary students, and guards itself sedulously from the embarrassments that any recognition of their claims would involve, it is its avowed purpose and intention to exercise as large a hospitality towards the architects and students of architecture whom every winter brings to Rome, as will not interfere with the main purpose it has in hand. Of this the history of the past season, at least in its later months, after the school had got fairly under way, affords ample illustration. Although three out of the four students who were this year in attendance were holders of scholarships, we understand that no one of them was regularly a member of the school, no one of them having been prepared to fulfil the ten-months' residence which, in order to make sure of serious results, the school exacts of its acknowledged pupils. They were all on the footing of guests, enjoying the hospitalities of the library and draughting-rooms, and of such advice and assistance as the Secretary found it practicable to give them. How far these hospitalities can conveniently be carried in the future is very properly left to him to determine, but we have no fear that everything that circumstances will permit will not be done for the waifs and strays. If they go no farther than furnish books to consult and tables to draw on, they will be a great boon to professional travellers.

For the present, circumstances will apparently favor a generous exercise of these good offices. Although, besides the prize-men themselves, the school offers to receive as members the men who specially distinguish themselves in these competitions, and also students of the *École des Beaux-Arts* of three years' standing; the committee in charge plainly do not expect any great number of recruits of this sort. Few young men have either the time or money to spend upon ten months of such study.

"It is evident," says the circular, "that the serious study which the school intends to promote is to be had only from those who devote to it steady and long-continued labor, and that such work is not reasonably to be expected except from young men who go abroad with this special purpose in view." As in most post-graduate schools, as in the Villa Medici itself, the only sure reliance is upon men who receive subsidies. Such men must for the present be few. The McKim Travelling-Scholarship, for graduates of the School of Architecture at Columbia College, is, we understand, permanently attached to the school at Rome, and this secures one student every other year. A second Scholarship also, called the Roman Scholarship, has, as our readers know, this year been offered. This year the Philadelphia travelling student also is assigned to the Roman School. Next year the number of students in attendance must depend in great part upon the action of the Philadelphia authorities, and upon the nature of the advice and instructions given to the beneficiaries of the Columbia, Cornell and Rotch scholarships, and they will presumably in the future, as heretofore, be allowed largely to shape their own destiny. But if the school accomplishes all that is reasonably to be expected of it, additional scholarships will, doubtless, be founded. Meanwhile, over and above the main work of the school, the benefits conferred by this exercise of generosity would of themselves amply suffice to justify its existence, furnish to its public-spirited founders a satisfactory return for their investment, and stimulate and encourage others, both within the profession and outside of it, to follow their example.

The Managing Committee of the American School of Architecture in Rome consists of Messrs. R. M. Hunt, C. F. McKim, Wm. A. Boring, W. M. Kendall, Augustus St. Gaudens, Edward Simmons, Frederic Crowninshield, H. G. Marquand, J. A. Garland and F. A. Schermerhorn, of New York; Messrs. Martin Brimmer, R. S. Peabody and George T. Tilden, of Boston; Messrs. Frank Miles Day and Theodore N. Ely, of Philadelphia; Mr. Samuel G. Ward, of Washington; Messrs. D. H. Burnham and Franklin McVeagh, of Chicago; Mr. George E. Leighton, of St. Louis, and the chiefs of the Departments of Fine Arts or Architecture in the principal institutions which maintain courses in Architecture, namely: Professor Norton, of Harvard University; Ware, of Columbia College; Laird, of the University of Pennsylvania; Babcock, of Cornell University; Chandler, of the Massachusetts Institute of Technology; Ricker, of the University of Illinois, and Brockway, of Syracuse University.

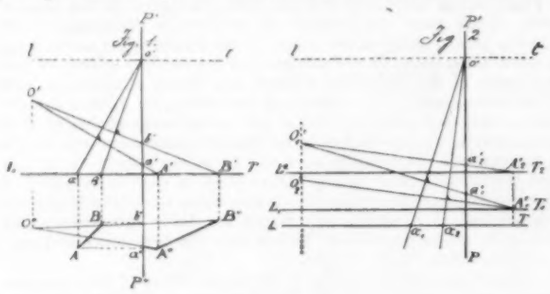
A NEW REDUCING INSTRUMENT FOR PERSPECTIVE.

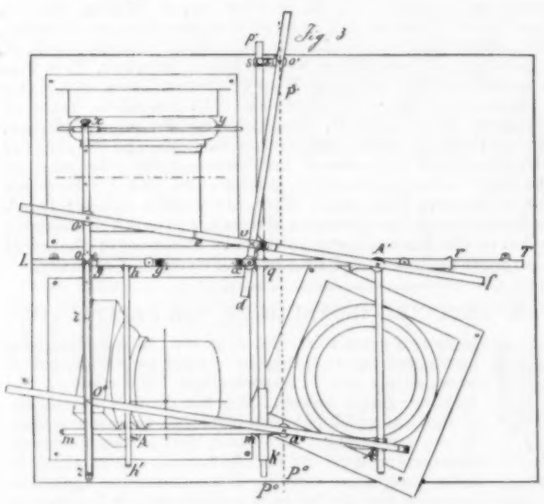
At present a certain interest is excited in Italy by a new instrument for reducing to central projection, called more simply the "Prospectograph," the work of the Engineer Pietro Fiorini. It is not the first instrument of this sort which has been invented; there are others, as you know, which have been used in the studios of architects with greater or less success, one of which is the instrument for perspective drawing from geometrical figures of A. Brix, (*Instrument zum Aufzeichnen perspectivischer Bilder, von geometrischen Figuren:* Patentschrift, n. 27646), which works only on the horizontal projection, drawing perspectives of plane figures parallel to the said projection, and requires the use of two scales, which serve to transfer to the instrument, in centimetres and fractions of centimetres, the various dimensions corresponding to the heights of the vertical projection. Moreover, the instrument Brix is rather complicated. A less complicated contrivance is that of H. Ritter, (*Instrument zum mechanischen Herstellung perspectivischer Bilder aus geometrischen Figuren, etc.:* Patentschrift, n. 29002); but also this is united to the perspective drawing of plane horizontal figures, which are traced by the moving-point of the instrument; and when it is desired to deal with figures in other horizontal planes, it is necessary to have recourse to two scales, copied from the vertical projection, which have to be transferred to the instrument by means of two strips of pasteboard, which by certain combinations, serve as guides. Besides this, in certain cases this instrument requires operations of adjustment which, for the architect, represent a great loss of time. Preferable to the preceding, even in the judgment of the Italian inventor, is the ingenious perspective apparatus of G. Hanck; but also this presents a double series of inconveniences, partly in regard to the mode of operation, partly in the construction, which make it ill-adapted for practical use.

For the inconveniences which the German instruments present, the engineer Fiorini thinks that he has found a remedy, by means of his Prospectograph, about which I write with some detail, as befits a subject of such great importance.

The instrument Fiorini serves to copy designs in central projection, in other words, in perspective, of any body of which the orthogonal projections, that is, for example, a plan and elevation, or a vertical and horizontal section, or two vertical sections at right angles with each other, are given. A tracing-point, a pencil-point, and a straight-edge are so movably connected together that the pencil marks the central projection, or perspective position of any point whatever in space, from one of its orthogonal projections, if the tracing-point is set at this projection, and the straight-edge is made to pass through the other orthogonal projection of the point. The operation of the instrument is based on the following geometrical considerations:

On two coördinate orthogonal planes, — I follow a demonstration kindly given me by the engineer Fiorini, to show me the importance and practical usefulness of his Prospectograph, — whose common line is LT (Fig. 1), let A°, A' and B°, B', be the projections of two points, situated anywhere on the horizontal plane. Let the point of sight be then projected at O°, O', and in P°, P', the trace of the plane of central projection, or plane of the picture. Drawing $O^\circ A^\circ$, $O^\circ B^\circ$, the horizontal projections of the visual rays, and $O' A'$, $O' B'$, the vertical projections of the same rays: (I.) We shall have in the points of intersection, a°, a', b°, b', with $P^\circ P'$ the projections of the perspective positions of the points (A°, A'), (B°, B'); and, imagining $l\,t$, parallel to $L\,T$, at a distance from it equal to the principal distance (or to the distance of $O^\circ O'$ from $P^\circ P'$), if from





any point of this $l\,t$, for example, from the point o', belonging therefore to $P^\circ P'$, the perpendiculars $o'\chi$, $o'\beta$ are drawn to $O' A'$ and $O' B'$, the points of intersection, χ and β, of the said perpendiculars with $L\ T$ will determine the segment $\chi\beta, = a'\,b'$. Consequently, the perpendiculars drawn from a°, b° and $\chi\,\beta$ respectively, to $P^\circ P'$ and $L\ T$ will give, in their points of intersection, A and B, the perspectives of the points (A°, A') and (B°, B') and in $A\ B$ will lie the perspective of the line connecting them.

(II.) Let us suppose that a certain point, A_1, whose vertical projection A'_1 (Fig. 2) is situated in the plane $L_1\ T_1$, parallel to the horizontal plane of projection $L\ T$, moves vertically to a position in another horizontal plane, $L_2\ T_2$; the vertical projection of the perspective referred to the point O'_1 will go from a', on the ray $A'_1\ O'_1$, to a'_2, on the ray $A'_2\ O'_1$, displacing itself by the quantity $a'_1\,a'_2$. Now, such displacement is equal to the segment $\chi_1\,\chi_2$ of $L\ T$, comprised between the two perpendiculars let fall from O' to the rays $A'_1\ O'_1$ and $A'_1\ O'_2$, directed from the primitive projection A'_1 to the point O'_1, and to another point O'_2, situated vertically below O'_1, at a distance $O'_1\ O'_2 = A'_1\ A'_2$.

The scientific principles on which the new Prospectograph Fiorini is based being thus established, it remains to describe to you the instrument in action. The reader is requested to follow with his eye the accompanying drawing, and to keep in mind that, in the designation of the parts which compose it, the same letters have been used which indicate the corresponding elements in Figures 1 and 2. Two bars, $L\ T$ and $p^\circ\,p'$, of rectangular section, are fixed, as guides for the movement, one perpendicular to the other, on a drawing-table, and mark off on it the quadrangular spaces $T\,q\,p^\circ$, $L\,q\,p'$, $L\,q\,p^\circ$, destined to receive, in the two first, the two given orthogonal projections; and, in the third, the sheet of paper on which is to be drawn the perspective. A bar $A^\circ\ O^\circ$ is furnished, at its extremity, with a point, which forms a tracer, and is maintained perpendicular to the plane of the drawing, at a very short distance from the same, by a holder, which rests on the table. Toward the other extremity the bar $A^\circ\ O^\circ$ runs in a guide, which encloses it for a short portion of its length, and is movable around a vertical axis O°, carried by a movable bar, (the running bar), which can be fixed by a set-screw at any point of a guide-bar $Z\ O$. This bar, in its turn, is fixed, by means of two little supports at its ends, upon the drawing-table, parallel to $p^\circ\,p'$, and at an arbitrary distance from it. The vertical axes of the tracer A°, and of the pivot O° of the swinging-guide, determine the longitudinal axis of the bar $A^\circ\ O^\circ$. In the same way, all the other movable guides which I have mentioned are so constructed that the axis of the pivot of each is contained in the vertical plane which passes through the axis of the bars, and of the points guided by them.

A cross shaped piece, $o'\,d\,f\,e\,O'$ is composed of three bars, $o'\,d$, $f\,e$, $v\,O'$, the first of which runs in a guide, pivoted at O', on a support, s, which can be fixed at any point whatever of the guide $p^\circ\,p'$, at a determinate distance from $L\ T$. Through the axis of the pivot O' passes the plane of central projection, or the plane of the picture, whose trace, $P^\circ\ P'$ is parallel to $p^\circ\,p'$. The other two bars composing the cross are attached at v, at a short distance from the extremity d, and in a direction perpendicular to the first, $o'\,d$. One of these is set a little below $o'\,d$, and extends in the direction $v\,f$ to the right, and through the much shorter distance, $e\,v$, to the left; the other, $v\ O'$ is, on the contrary raised above $o'\,d$, and extends entirely to the left of it; this last runs through a short sleeve, which is carried on a pivot, o'. This pivot, o', again, is controlled by a straight bar $z'\,x$, placed above the fixed bar $Z\,o$, and capable of traversing in the direction of its length, maintaining itself with its axis in the same plane, perpendicular to $L\ T$, and passing through O°. Moreover, the bar $Z\,x$ carries, fixed at a right angle to its extremity x, a rod, $x\,y$, resting with one of its sharp points on the surface of the drawing situated on the portion $L\,q\,p'$ of the drawing-board, (this being in ordinary cases either an elevation or a vertical section). An arm $A^\circ\ A'$, passing within a guide movable around the axis of the tracing-point, and fixed, at right angles, to another arm, or sleeve, $A'\,v$, capable of moving along $L\ T$, serves to maintain constantly the axis of the said tracing-point in the same plane, perpendicular to $L\ T$, passing through the intersection of the vertical planes containing the axes of $e\,f$ and $L\ T$. For this purpose the arm $A'\,v$ carries a rotating guide A', within which can move the arm $e\,f$ of the cross. Two arms, $g\,g'$ and $h\,h'$, forming a right angle with each other, are intended, the first to run along the guide $L\ T$, and to sustain at χ, on its prolongation, the pivot of a guide through which passes the arm $o'\,d$ of the cross; the second, fixed perpendicularly to the first, to move, keeping always parallel to its original direction, and to the direction of $p^\circ\,p'$, through the same distance that χ is displaced in the direction $L\ T$. Another right angle, composed of the arm $K\,K'$ running upon the guide $p^\circ\,p'$, and of the longer arm $m\,m'$, perpendicular to it, carries, at a°, on the prolongation of $m\,m'$, a pivot, furnished with a guide, through which can move the bar $A^\circ\ O^\circ$. The axis of this pivot is in the vertical plane passing through $P^\circ\ P'$, and in that passing through the axis of the bar $A^\circ\ O^\circ$. Finally, the pencil-point A, furnished with a spring and lifting lever, is carried by a small frame, running easily on little independent castors, and traversed by the arms $h\,h'$ and $m\,m'$ of the right angle, in such a way as to be forced to move in the same direction, and through the same distance, that the arms themselves, and the pivots a° and χ move.

To set the instrument in operation, it is necessary to fix the straight-edge $Z\ O$, with its running connection O, in such a position that the axis of the pivot o' shall be as far distant from $L\ T$ as O° is from $P^\circ\ P'$. These two distances, representing the *principal distance*, are most readily measured on the rods $O'\,v$ and $o'\,d$, from v toward O' and o' (or also from two notches, cut on the rods, at equal distances from the vertical passing through v), whereupon, after having made the bar $Z\,\chi$ move on the other $Z\,o$, until the pivot O', attached to the first, reaches the point where its axis is traversed by the vertical plane passing through the longitudinal axis of $L\ T$, the arms $o'\,d$ and $e\,f$ of the cross will place themselves in the directions of $P^\circ\ P'$ and $L\ T$ respectively. The two drawings representing the orthogonal projections are fixed with tacks on the drawing-board, one in the region $T\,q\,p^\circ$, and the other in the region $L\,q\,p'$. In ordinary cases the horizontal projection is assigned to the first of these spaces, and the vertical projection to the second. The drawing situated in $T\,q\,p^\circ$ is that whose lines ought to be followed by the tracing-point, and is set in the position of revolution around the trace $P^\circ\ P$ of the plane of central projection, represented in the instrument by the vertical plane passing through $a^\circ\,o'$.

To what has been said only a few observations need be added. The drawing which occupies the position $L\,q\,p'$ may be placed as shown in the figure, or in the reversed position. In this last case, the perspective comes out as well as in the first case, which is the true position, but it is inverted, as if it were reflected in a mirror. For guiding the tracing-point when it has to follow straight lines, it

is of advantage to use a ruler; in this way the operation is made more rapid and exact. It may be added that it is not necessary to have all the projections which determine the object on one sheet; and it is most convenient, in practice, to have the drawings made on transparent paper or cloth, as the engineer Fiorini informs me. He says moreover, and, as it appears to me, truly, that, by the new kinematic dispositions which his instrument presents, its applications extend to other subjects than this principal one, as, for example, to the investigation of geometrical projections; to the correct outlining of shades and cast shadows; to the easy and rapid plotting of conic curves, such as ellipses, parabolas, hyperbolas, etc., of tangents and normals, and, in general, to the investigation of the central projections of any curve whatever; and it can also be applied to reconstruct an orthogonal projection from another orthogonal projection, or from a corresponding perspective view of the object.

I have not yet had occasion to use the Fiorini Prospectograph; but, from what I have seen, I am persuaded that it is an instrument relatively little complicated, and of indisputable practical use. One of my colleagues at Rome, speaking of it, observed that "the simplicity of the mechanism, and the ease of management, rendered the Fiorini apparatus extremely practical, perspective drawings of any figure whatever being executed by it in a short time, and with great fidelity."

ALFREDO MELANI

SOCIETIES

SKETCH-CLUB OF NEW YORK.

THE regular monthly meeting and dinner of the Sketch-Club of New York was held on Saturday evening, May 4th, at Lantelme's on West 33d Street, there being a good attendance. President G. W. E. Field presided.

After dinner, Mr. R. H. Robertson was introduced and entertained the Club with a very interesting and instructive talk on the subject of the American Tract Society's new building on Nassau Street. Mr. Robertson explained in detail, the conditions of the problem involved, and the difficulties overcome in the design and construction of this building which will be one of the tallest in the world and involved engineering difficulties, perhaps, never before encountered. Mr. Robertson's remarks were further elucidated by drawings of the building and all present agreed that they had acquired information of the highest value. The thanks of the Club were extended to Mr. Robertson for his courtesy.

It was announced that the first sketching trip of the season will take place May 18th and 20th, under the guidance of Mr. John P. Nolan. Mr. Hughson Hawley had promised to accompany the party whose destination will be Montville, N. J.

Mr. Wm. H. Hudswell was elected to the chairmanship of the entertainment committee in place of Mr. MacCafferty, resigned.

ALFRED F. EVANS, *Recording Secretary.*

THE ILLUSTRATIONS

[Contributors of drawings are requested to send also plans and a full and adequate description of the buildings, including a statement of cost.]

PHILADELPHIA & READING R. R. STATION, PHILADELPHIA, PA.

[Gelatine Print issued with the International and Imperial Editions only.]

AT the time when the elevation of the Reading R. R. tracks and the construction of the great station was placed in the hands of Messrs. Wilson Bros., of Philadelphia, Mr. F. H. Kimball, of New York, was doing certain work for the railroad, and so it happened that the designing and making the drawings for all that concerns the exterior of the head-house were placed in his hands. All other parts of the great work, including the interior treatment of the head-house, were carried out by Messrs. Wilson Bros.

THE DIOCESAN HOUSE, PHILADELPHIA, PA. MESSRS. BAILY & TRUSCOTT, ARCHITECTS, PHILADELPHIA, PA.

THIS building will be four stories high, the type of architecture being the English Gothic of the Tudor period, the pointed gables and windows in the assembly-room and the diamond pane windows of the bishop's bay, and the entrance doorway with its deep mouldings and appropriate carving, giving it an ecclesiastical character. It will be built of Indiana limestone up to the second-story windows, above which it will be of gray brick with Indiana limestone trimmings around the windows, bays and gables. The roof will be blue slate with gray terra-cotta cresting. Eight clustered columns extend from the second floor of the building to the shoulders of the gables for the purpose of supporting life-size statuary figures.

The foundation-walls have concrete footings extending down 16′ 2″ below the pavement. The basement will be 12′ in the clear and will extend under the sidewalks for coal-bins, etc. It will contain the boilers, pumps and engines for heating and electric lighting, as well as elevator machinery. The structure will be entirely fireproof, the floors being of steel beams and hollow-brick arches. A large proportion of the floors will be supported on iron columns, so as to relieve the outside walls of the floor weight. The roof is also constructed with iron rafters, 2″ plank and slate. The plastering will be laid on expanded-metal lath, and the finish will be natural finish hard-wood throughout.

First floor is to have two stores on Twelfth Street side and corner, each 28′ x 35′, and 16′ high, with private basement accommodations additional of the same area, and 12′ high.

The entrance to the Diocesan House is in the centre of the Walnut Street elevation. The vestibule is to be lined with Indiana limestone, and the spacious hall to have hard-wood wainscot and tile floors. To the east of the entrance is the library, 32′ x 44′, with coffered ceiling and large open fireplace. Adjoining in the rear is the librarian's room, which connects by private iron stair to a large fireproof vault beneath, for the accommodation of valuable church records.

On the second floor is the assembly-room, which is to accommodate 250 people. At the further end is the chancel, robing-room and organ-loft. The chancel can be separated from the rest of the room, when desired, by a curtain. The room will be 20′ high, and will have an effective arched ceiling with plaster ribs and forty-eight ornamental bosses, with an electric-light outlet in each. The ceiling of the chancel will be treated in the same manner. The room will be used principally for meetings of the clergy and laity, or of the Women's Auxiliary; for ordinations occasionally; for quiet days; for meetings of the Clerical Brotherhood, etc. On the same floor, at the corner of the streets, is the bishop's room, provided with comfortable seats in the bays at the corner, fireplace, etc. Adjoining are the secretary's and treasurer's rooms, large board and committee rooms. Adjoining the secretary's room is an ante-room for the accommodation of visitors. A cloak-room is also provided on the second floor.

The third floor provides accommodation for the Women's Auxiliary, with a room accommodating 150; and committee-rooms adjoining, 23′ x 15′ and 23′ x 13′, respectively. These rooms are provided with large closets for storage of books, pamphlets, etc. On the same floor, on the opposite side of the hall, are five large offices, each 21′ x 16′, and a small office adjoining.

The fourth floor contains a reading-room, 30′ x 36′, which may be used for the accommodation of a church club. Adjoining is a large conversation room, 30′ x 27′, and three committee-rooms, each 15′ x 21′. On the same floor, connected with a private hall, are the janitor's apartments, with kitchen, two bedrooms, toilet and store rooms. A stair connects same with fifth floor in the attic, where several additional rooms can be provided if necessary. The fifth floor also contains tanks, steam coil, etc., for ventilation.

Ample toilet arrangements are provided on every floor for the accommodation of the different departments, with perfect ventilation. The main stair, which encircles the elevator, will be built of iron. The elevator will run from the first to the fourth floor.

There is a large area on the rear of the building which gives a flood of light to the stairway and other adjoining rooms. The building will be heated by steam, the direct and semi-direct systems, the latter having fresh-air inlets from the outside walls to each radiator. The building will be lighted by electricity.

THE HUGH HARRISON JOBBING-HOUSE, CORNER OF 1ST AVE. NORTH AND THIRD ST., MINNEAPOLIS, MINN. MR. WARREN H. HAYES, ARCHITECT, MINNEAPOLIS, MINN.

THIS building was erected during 1892-93, at a cost of $130,000. The plinth course is in dressed red Minnesota granite; first-story walls, and sills and belt-courses above are of Lake Superior red sandstone; exterior facing of upper stories of two shades mottled, buff, Roman-shape, St. Louis hydraulic brick; main cornice in cold rolled copper.

The structure is steam-heated, with independent electric-light plant, automatic-sprinkler outfit from basement to roof, freight and passenger elevators, etc.

The floors are modern mill construction with brick fire-walls, dividing the building into equal parts for dry goods and grocery jobbing-houses, respectively.

THE GERKEN BUILDING, NEW YORK, N. Y. MESSRS. GEORGE EDWARD HARDING & GOOCH, ARCHITECTS, NEW YORK, N. Y.

THE building is to be fourteen stories, 51′ 6″ on College Place by 75′ 4″ on Chambers Street.

The first story is to be divided into stores; the second and third will be occupied by the New York National Exchange Bank. The seven stories above are divided into offices, and the upper four stories are occupied by the Commercial Club of New York, whose members are principally comprised of the leading wholesale merchants of the immediate vicinity. The three lower stories are to be faced with old-gold ribbed brick, and the upper stories of light-toned Roman brick and terra-cotta. The building is to be fireproof, steel frame with artificial stone floors.

THE *Express* PUBLISHING CO.'S NEW BUILDING, SAN ANTONIO, TEXAS. MR. ALBERT F. BECKMAN, ARCHITECT, SAN ANTONIO, TEXAS.

THE building will be entirely fireproof and will be the only fireproof building for a private concern in this city of 50,000 inhabitants.

HOUSE FOR W. R. CORDINGLY, ESQ., CHESTNUT HILL, MASS. MESSRS. CHAPMAN & FRAZER, ARCHITECTS, BOSTON, MASS.

THE OSCEOLA SCHOOL BUILDING, PITTSBURGH, PA. MESSRS. BARTBERGER & EAST, ARCHITECTS, PITTSBURGH, PA.

HOUSE FOR ANDREW G. WEEKS, ESQ., MARION, MASS. MESSRS. CHAPMAN & FRAZER, ARCHITECTS, BOSTON, MASS.

[Additional Illustrations in the International Edition.]

A HÔTEL DE VILLE. M. COURTOIS-SUFFIT, ARCHITECT.

[Copper-plate Photogravure.]

SIDE ELEVATION OF THE SAME.

[Copper-plate Photogravure.]

PLANS OF THE SAME.

THE CORRIDOR: GOSFORD HOUSE, LONGNIDDRY, SCOTLAND. MR. W. YOUNG, ARCHITECT.

GREAT HALL AND STAIRCASE OF THE SAME.

NEW BRANCH PREMISES FOR THE LEEK CORPORATORS. MR. LARNER SUGDEN, ARCHITECT.

ALMSHOUSE, BIDDEFORD, ENG. MR. ALEXANDER LAUDER, ARCHITECT.

EXHIBITIONS

BOSTON, MASS. — *Pictures loaned by Quincy A. Shaw; Paintings by Puvis de Chavannes; Works by J. F. Raffaëlli; Japanese Paintings; Color Prints by Arthur W. Dow; Line Engravings, Mezzotints, and Etchings by Rembrandt:* at the Museum of Fine Arts.

South End Free Art Exhibition: at 1151 Washington St., opened April 18.

Paintings by Edwin A. Abbey: at the St. Botolph Club, April 29 to May 11.

Photographs of Historic Revolutionary Subjects, chiefly near Philadelphia: at the Boston Camera Club, 50 Bromfield St., May 6 to 18.

CHICAGO, ILL. — *Annual Spring Exhibition of Water-colors and Pastels:* at the Art Institute, April 11 to May 16.

DETROIT, MICH. — *Exhibition by the Art Club of Works of Architecture and the Allied Arts:* at the Light Infantry Armory, May 18 to June 1.

NEW YORK, N. Y. — *Twenty-eighth Semi-annual Exhibition:* at the Metropolitan Museum of Art.

Seventieth Annual Exhibition of the National Academy of Design: April 1 to May 11.

Paintings by the Old Masters: at the Macbeth Gallery, 237 Fifth Ave.

Modern Italian Paintings: at the Holland Art Galleries, 329 Fifth Ave.

Art Loan Exhibition: at Fifth Ave. Art Galleries, 366 5th Ave., opened April 24.

Exhibition of Sculpture by the National Sculpture Society: at the Fine Arts Building, 215 West 57th St., opened May 7.

Engraved Work of Asher Brown Durand: at the Grolier Club.

East Side Art Exhibition: at the Hebrew Institute, East Broadway and Jefferson St., opened May 8.

NOTES AND CLIPPINGS

THE DOCKS OF CALCUTTA. — We are very fortunate in this country in having no need of the enormous dock works required in many other countries where the rise and fall of the tide is so great that basins have to be provided in which vessels can float while the water is low in the harbor proper. The great docks at Liverpool and London are among the sights which Baedeker marks in his guide-books with the commendatory asterisk designating objects of special note, but other works of the sort of much importance are found in many other parts of the world. Calcutta owns the Kidderpur docks, which are of engineering interest in themselves as well as on account of the accident which happened to them during their construction. Within the limits of the port of Calcutta, the Hooghly River varies in width from 1,300 to 2,000 feet. From March to July, when strong winds prevail, the current at spring-tides attains a velocity of five to six miles an hour and during the rainy season the water carries a large quantity of mud in suspension. The city is about ninety miles from the sea and the tidal range between low water during the spring tides of the dry season and the average high water in the wet season is about 18 feet. Before the construction of the docks, the trade of the port was carried on at a wharf constructed of iron piles and extending 3,000 feet along the river-bank. When further accommodation became necessary, it was decided to construct docks at Kidderpur, the nearest point to the mercantile part of the city, at which land could be obtained at reasonable cost. The entrance to these docks is through a channel 80 feet wide and a lock 60 feet wide, terminating in a basin measuring 600 by 680 feet. Two entrances, 60 and 80 feet wide, lead from this basin into the dock proper, which is 2,600 feet long, 60 feet wide for the greatest part of its length, and covers 34½ acres. Two dry-docks also lead off from the basin, one of them 520 feet long and the other 350 feet. While the river is low, these waterways are supplied with fresh water from a neighboring stream, and elaborate provision is made to remove the mud from this water before it is pumped into the basin. The docks are equipped with 56 movable hydraulic cranes, of which 50 are constructed to lift as much as 1 3-4 tons, while the remainder can handle weights of 5 tons. All of them overhang the quay 29 feet, and are operated by water under pressure, as are also the lock-gates, capstans and swing-bridges about the docks. This water is under a pressure of 700 pounds and is furnished by two pairs of hydraulic engines, each of 230 horse-power. When particularly heavy objects have to be handled, the vessel is brought under a pair of sheer legs capable of lifting one hundred tons. The sheds in which goods are stored cover an area of 432,000 square feet, and about 28 miles of railway of 5 feet 6 inches gauge connect them with all parts of the docks. The accident which happened during construction was due to a failure to follow the engineer's advice. The walls of the basin and dock were built in very treacherous ground. It was impossible to excavate the trenches for the full width of the wall, so earth was only taken out for half the width at one time. When the brickwork was built in the excavated portion up to the level of the bottom of the dock, the second half of the trench was opened and the wall was then completed to its full width and carried up to its full height. The engineer proposed to fill-in earth behind the walls at the same time that water was admitted to the basin, as by doing this it was unnecessary to make them strong enough to act as retaining walls to hold back the earth. Unfortunately, this advice was not followed. The filling was dumped in behind the walls before water was admitted to the dock-basin, and as the masonry was not strong enough to withstand this pressure unaided by the counteracting pressure or the water, a considerable movement of the walls resulted along the length of 2,080 feet. The admission of water has entirely removed the danger of any further movement and no attempt has been made to strengthen the walls. — *Boston Transcript.*

SAFES MADE OF CEMENT. — A safe constructed of cement with steel-wire netting placed in between was tested by order of the Reichsbank, the German Government's banking establishment. The question to be decided was whether it is practical to build vaults of this material for safety against fire. A safe was placed upon a pyre of logs drenched with kerosene, which, after being set on fire, kept the safe for half an hour exposed to a heat of about 1,800° Fahrenheit; that is, a heat in which iron will melt. Two hours after, the safe was opened, and the contents — silk paper, draught blanks and a maximum thermometer — were found to be absolutely uninjured. The maximum thermometer showed that within the safe the temperature at no time during the test rose above 85°. This seems to prove that cement safes within burglar-proof steel vaults fill all the requirements that can be possibly expected. — *Philadelphia Record.*

AMELIORATION OF THE GERMAN EMPEROR. — The German Emperor, wilful as he is, is not altogether incapable of learning a lesson. It is evident that the bitter feeling manifested after the opening of the new Reichstag Building at the omission of the inscription to "the German People" made a lasting impression upon him. It is reported that during his recent visit to Kiel in connection with the opening of the Baltic Ship Canal he remarked repeatedly that he wished the opening ceremony to be a popular festival in the widest sense of the term, with especial consideration for all classes of his subjects. The tribunes and pavilions which had been erected for the reception of the spectators did not appear to him to be sufficiently large, and he expressed the wish that more commodious accommodation should be provided for the masses, and, if possible, that there should be no lack of opportunities for obtaining refreshment. In accordance with his desire, it was determined to extend the area originally allotted for the accommodation of the public. — *N. Y. Evening Post.*

A BALTIMORE ART COMMISSION. — An ordinance for the appointment of an Art Commission was sent to the first branch of the Council by Mayor Latrobe on April 29, and was referred to the Committee on City Property. It provides for the creation of an unpaid commission which shall approve or disapprove designs for monuments, statues, and buildings erected by the city. This commission is to consist of the Mayor and six others, appointed one each by the Maryland Historical Society, the trustees of the Johns Hopkins University, trustees of the Peabody Institute, trustees of the Maryland Institute, the Baltimore Architectural Club and the Park Commissioners. — *Exchange.*

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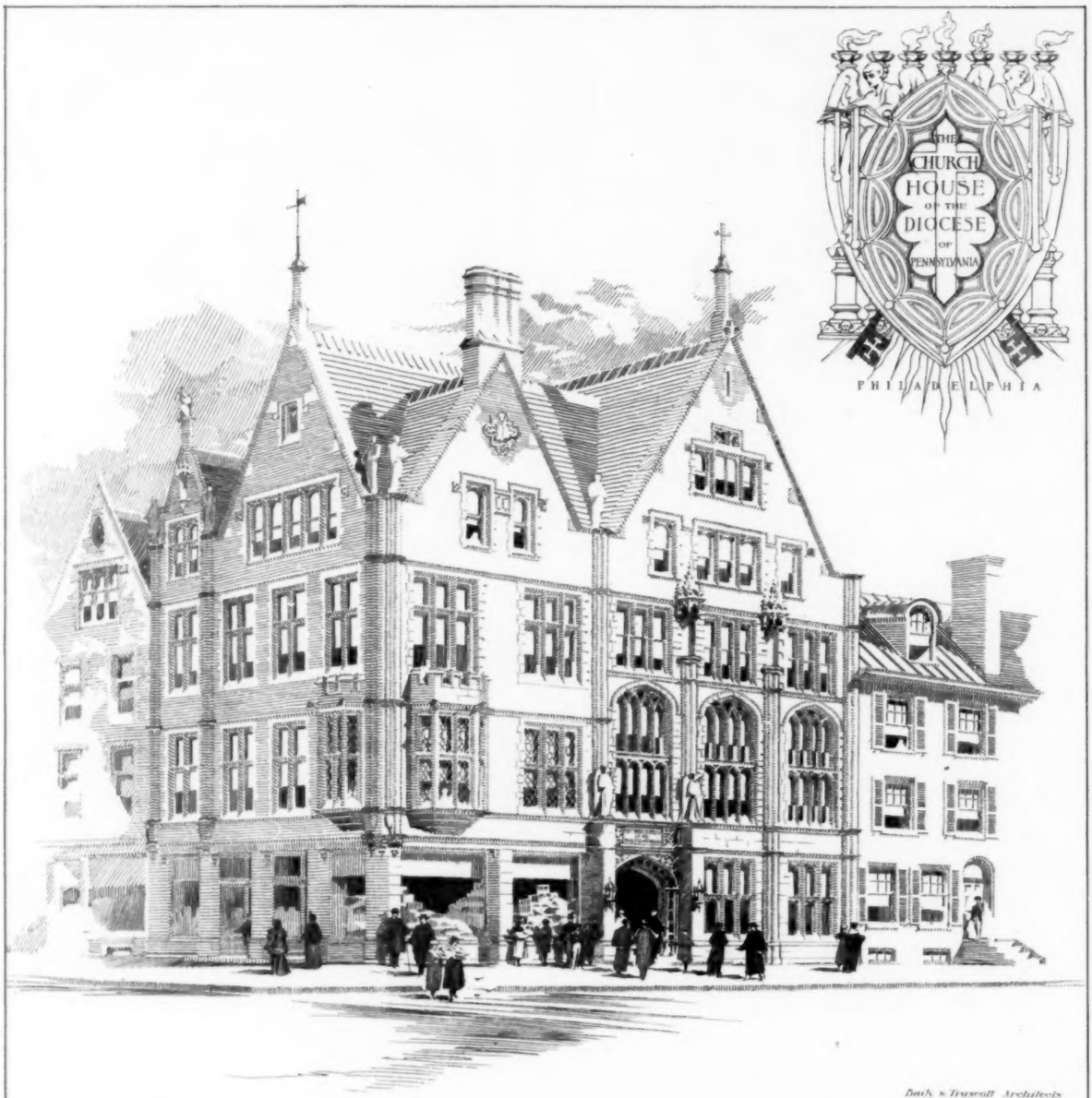

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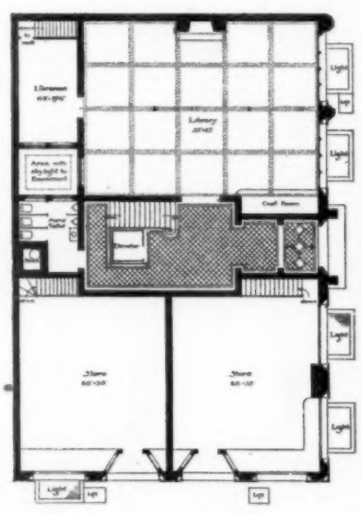
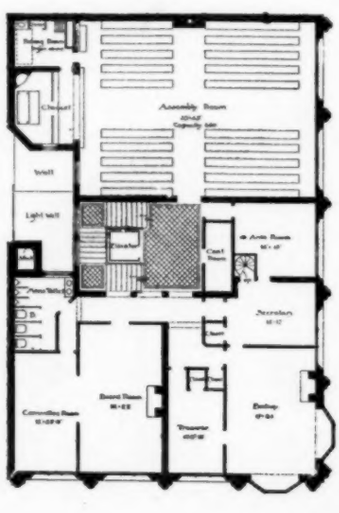
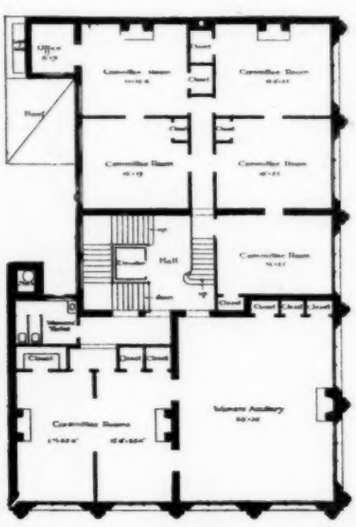


First Floor Plan



Second Floor Plan



Third Floor Plan

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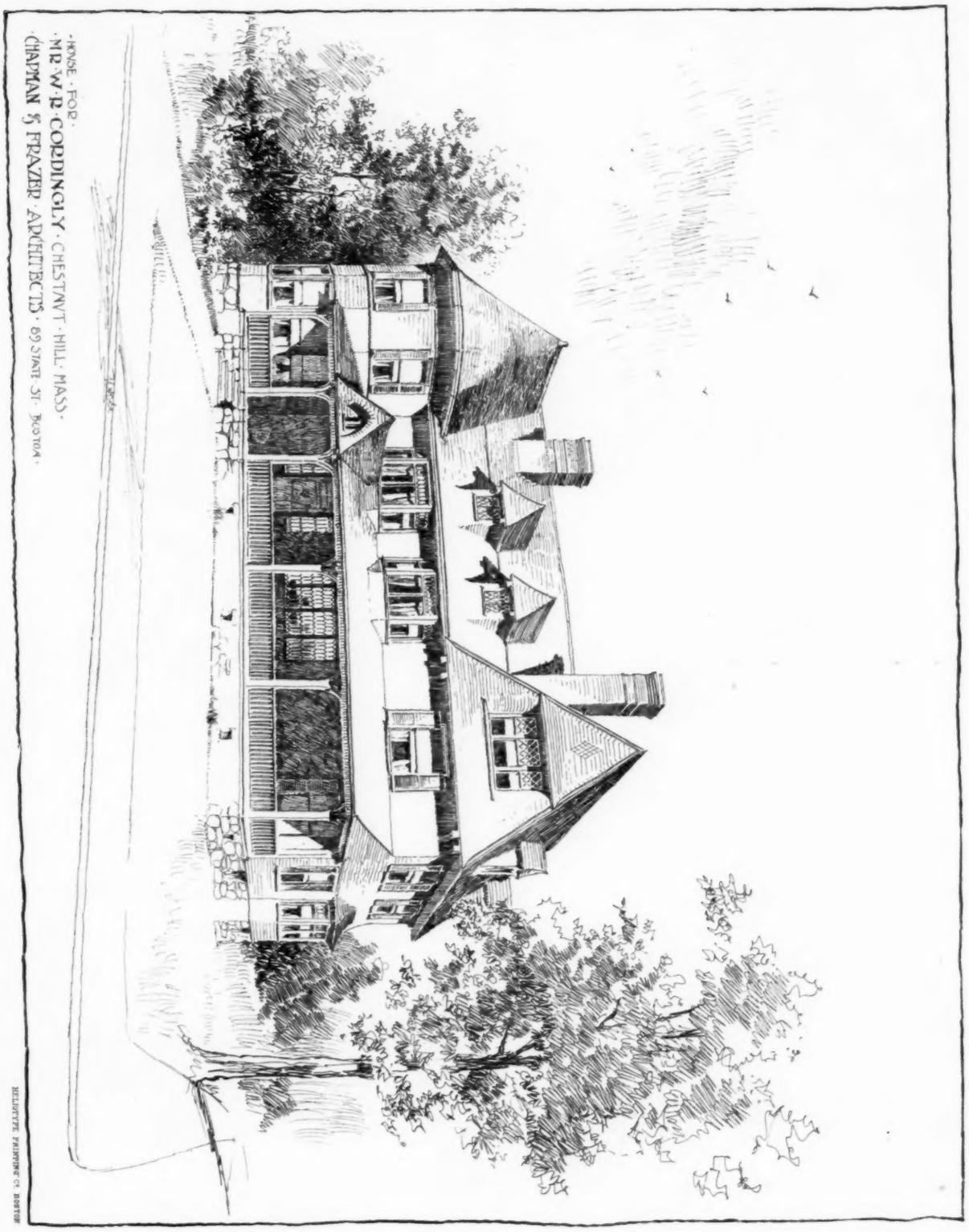

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