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CONSTRUCTION

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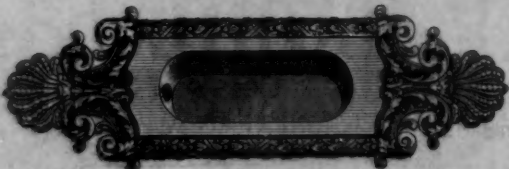
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THE AMERICAN ARCHITECT AND BUILDING NEWS.

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MARCH 5, 1898.



SUMMARY:—

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THE contract for the new Appellate Court-house in New York stipulated that a certain sum should be allowed for external sculpture, and for internal mural paintings, to be executed under the direction of the architect, Mr. James Brown Lord. In accordance with this provision, which, by the way, is an excellent, and perfectly legitimate, means for procuring works of art for a municipality, without invoking the aid of the Legislature to pass laws allowing cities to purchase such things directly, Mr. Lord has selected nine of the most distinguished artists in New York, already known for their decorative work, and has assigned to them the execution of portions of a general decorative scheme, which is to be planned, as to its main features, by the artists themselves, in council, with Mr. John La Farge, who has studied for many years the relations of painted decoration to architecture, as "arbitrator," to reconcile diversities of opinion, if they should arise, and aid with his judgment the study of the scheme. The painters chosen are Messrs. E. H. Blashfield, Edward Simmons and H. O. Walker, for the panels in the court-room, opposite the judge's platform; Messrs. Kenyon Cox, Alfred Collins and Joseph Lauber, for the frieze in the same room; and Messrs. H. Siddons Mowbray, Robert Reid and W. L. Metcalf, for the entrance-hall. It is hardly necessary to say that the highest anticipations may be entertained of the result of the coöperation of these gentlemen, and the rest of the country will envy New York the possession of the building.

ALTHOUGH mural decoration, in this country, has been taken up in earnest only within a few years, its development has been astonishingly rapid. Without reckoning the well-studied, and often very successful, bits of decorative work, such as those at Bowdoin College; Trinity Church, in Boston; St. Thomas's Church, and the "Brick Church," in New York, and a few others, which were insufficient to produce a very serious impression on the public, the first decorations which compelled general attention were those of the Exhibition buildings at Chicago. Next came those of the Public Library in Boston, and, almost contemporaneously with them, those of the Hotel Waldorf and the Court-house in New York; and, after a year or two of ambitious and successful private work, came the Congressional Library at Washington. Except the Boston Library, these decorations have been carried

out, since 1893, by about the same group of artists, a few recruits having been added, from time to time, to the little band which undertook to paint the Chicago buildings; but the advance which they have made in their own work has been enormous; and no one can now compare the Hotel Waldorf, for example, with the Congressional Library, without feeling that a great art has come into being in this country. Of course, even the Congressional Library falls far short of the dreams which every architect who has a fancy for colored decoration occasionally sees floating before his imagination; but it at least suggests the possibility that those dreams may now be realized, and inspires a desire for an opportunity to try for such realization; and if architects will take so seriously to visions of painted ceilings as to plan for them, and persuade their clients to pay for them, there is no limit to which this great American art may not be carried. In Mr. Lord's new building, besides the lovely coloring, and the beautiful figure-painting, which we know that we may expect from Messrs. Blashfield, Reid, Cox and Simmons, and from Mr. Lauber and Mr. Mowbray, two artists, Messrs. Collins and Metcalf, who have been known hitherto for their easel pictures, particularly, in the case of Mr. Collins, for portraits, are to show what they can do in architectural decoration; and every one will watch them with interest.

ONE suggestion, which we will take this opportunity to make, is that we hope, in the interest of the artists themselves, as well as of American art, that the decorations in the Appellate Court will not be copyrighted. To say nothing of the very doubtful legality of a proceeding which cannot put many dollars into the pockets of the artists, and which is, as we believe, considered by people generally to be a discreditable piece of sharp practice on the part of artists paid for their work by public subscription, or from the public treasury, it is clear that the way in which the taste for great decorative work is to be encouraged among the people is to disseminate as widely as possible the knowledge of the examples of such work. Of course, an architect in San Francisco, who has a music-hall to design, or a mine-owner in British Columbia, who wishes to endow a cathedral, can make a pilgrimage to New York or Washington, and look upon fine decorations, supposing him to be aware of the existence of such things there; or can, perhaps, by employing a detective agency, or by advertising in the "personal" columns of the newspapers, ascertain where authorized representations of the copyrighted objects are to be had; but he is not likely to think of doing either; and as the photographs or pictures of the buildings in question which he finds at the local dealers are, to avoid payment of royalty, carefully taken from points where the decorations are nearly or quite invisible, he is, in practice, obliged, however great his zeal for decorative art, to trust for his scheme to the resources more easily within his reach. Even without going so far for an illustration, we venture to say that not one Boston architect in ten has ever seen Mr. Simmons's picture in the New York Court, or any representation of it except some newspaper cut, or would be likely to venture into a New York court-room during a session, or has any idea where a photograph, or other adequate and authorized reproduction of it, can be procured, unless by writing to Mr. Simmons, whose address he does not know; yet Massachusetts counties are rich, and do not have much to spend their money on except court-houses; and if Mr. Simmons's picture were as well known to architects and judges as it deserves to be, and as it would be except for the copyright monopoly, half the costly court-houses now building in the State might be, and very probably would be, planned with a view to some such decorative feature, to the great advantage of the public, which needs to be educated by such things, and, incidentally, to the pecuniary advantage of the painters who can produce them, and who, as we are every day told, desire to be employed.

THE report of the Director of the Metropolitan Museum of Art shows the number of visitors during the past year to have been five hundred fifty-five thousand and seven hundred and sixty-nine, or nearly sixteen hundred a day. This is an increase of about ten per cent over the number of the previous year, and it is evident that the civilizing influence of the Museum must already be very great in New York. About

four thousand dollars were received for admission-fees, but these do not even pay for repairs in the building. In fact, the Director says that, as the building and the ground on which it stands both belong to the City of New York, it is reasonable to expect the city to keep both in order. Instead of this, the Trustees have, in eighteen years, expended more than ninety thousand dollars of the funds under their charge in making only such repairs as were absolutely necessary; and, believing that the money entrusted them can and should, be spent more directly for promoting the purposes for which the Museum was founded than in paying for repairs on a building which belongs to some one else, they have decided to devote no more of it to this purpose.

A MOVEMENT has been initiated in New York to combine the building-trades, the real-estate associations, the engineering organizations and the artistic societies of the city in such a way as to unite their efforts in opposing legislation at Albany which will be injurious to the beauty and prosperity of the city, and in urging measures for promoting them. Legislation in New York State often affects unfavorably the great city which is obliged to submit to it; but the interests more directly concerned are, single-handed, too insignificant, from the politician's point of view, to have much influence in resisting it; and it is thought that there is a sufficient community of feeling among the organizations represented in the new movement, in regard to matters of public health, and material and æsthetic welfare, to enable them to act together, when such matters are under consideration at Albany, and to compel attention by the importance of the constituency which, together, they will represent. The preliminary step has been taken by the formation of a general committee, of which Mr. George Keister is Chairman, and Mr. Arnold W. Brunner Secretary and Treasurer, and meetings will soon be held for further organization, and for the discussion of a plan of proceedings.

MR. CHARLES BAXTER writes to the *Record and Guide* an interesting and important letter in regard to a matter which has been too little regarded. Last year, as it seems, a bill was introduced into the New York Legislature providing that guards should be set at all windows in tenement-houses the sills of which are less than three feet from the floor. The reason for introducing this bill, which was approved by the Mayor, the Board of Health and the Building Department, is to be found in the fact that there have been, within the last twelve years, eight hundred and seventy-eight persons, mostly children, killed in the city by falling from windows, and two thousand one hundred and seventy injured; while, during the same period, only three hundred and thirty-five lives have been lost through fires. It seems that modern tenement-houses usually have their sills set from twenty-eight to thirty-six inches above the floor, and accidents by falling from their windows are almost unheard-of, the law being intended to apply particularly to old buildings, converted into tenements, which often have window-sills twelve inches above the floor. The bill was passed, but when it appeared in printed form, according to Mr. Baxter, one of those metamorphoses to which New York legislation seems peculiarly subject had taken place in it. As introduced, the bill read that the provisions of the law should apply to "all buildings now constructed and hereafter to be constructed or converted into tenements," but in the printed form the words "now constructed" had been left out, so that the owners of the old rookeries where nearly all the accidents take place, and for the compulsory protection of which the law was specially intended, are exempt from its operation. It appears, however, that the builders of new tenement-houses object to spending a few cents for an iron bar in their front windows; and, as Mr. Baxter says, an attempt is to be made this year to have the law, such as it is, repealed altogether; and he appeals to public opinion to insist that, instead of being repealed, it should be reenacted in accordance with the original draft.

THE Pittsburgh Chapter of the American Institute of Architects will hold its first annual exhibition of architectural drawings in the Carnegie Art Gallery, from May 2d to 31st, inclusive. Mural decorations, sculpture, and etchings and engravings will also be admitted to the exhibition. The jury of selection consists of Messrs. Robert S. Peabody, of

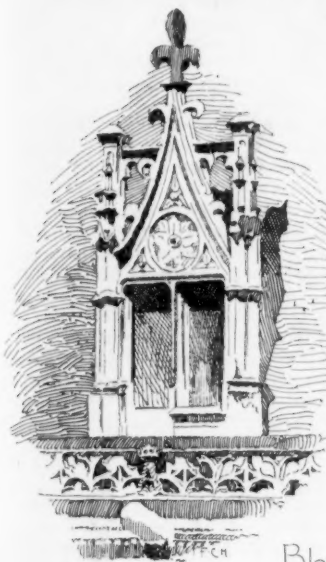
Boston, John Galen Howard, of New York, and Walter Cope, of Philadelphia. Drawings from Pittsburgh, Philadelphia, New York, Boston, Cleveland and Chicago will be collected and returned free of charge, if proper notice is given. Entry blanks, which may be obtained from Mr. J. C. Baker, Managing Secretary of the Pittsburgh Chapter, A. I. A., 341 Sixth Avenue, Pittsburgh, Pa., must be filled-out and returned before March 26th, and drawings must be ready for collection by March 31st; but drawings now shown at the League Exhibition in New York may be sent, by suitable notice, directly to Pittsburgh.

THE *Builder*, speaking of the competition of designs for the buildings of the University of California, gives a summary of different buildings to be planned, and says, what is undoubtedly true, that to devise any sort of reasonable plan for them all would occupy the ablest and most experienced architect many months, and that those who are best qualified to make such plans are just those who will understand most easily the hopelessness of doing the work within the time allowed, and will, in consequence, leave the competition to men who, knowing little of the difficulties to be considered, treat the problem "with gayety of heart," as the French say, trusting, if luck should favor them, to get through their task somehow. It was Jerrold who remarked that "easy writing is devilish hard reading," and facile planning is apt to imply anything but prosperous execution; so, as the *Builder* presumes that the trustees of the Hearst fund desire to obtain plans from architects of experience, it suggests that it would be very desirable to extend the time for the competition several months, at least, and says that, at this stage of the affair, there could be no difficulty about doing so. Probably every architect in this country, of any experience in such work, has made the same reflection as the editor of the *Builder*, and, much as the profession deprecates changes in the published terms of a competition, there is no doubt that the shortness of the time allowed will throw the affair, in this country, almost wholly into the hands of draughtsmen, and young architects not yet in practice.

MR. JOHN A. DOONER has been appointed Superintendent of Buildings for the Boroughs of Manhattan and Bronx. Mr. Dooner has had a varied experience, having spent several years, after his early training in New York, in South and Central America, where he built a hospital and more than three hundred houses for the Panama Canal Company, and afterwards a palace in Guayaquil for the President of the Republic of Ecuador. Returning to the United States later, he engaged again in business in New York, and has for some years been well known as a builder and contractor.

THE inhabitants of the Borough of Bronx are not unanimous in regard to the acceptance of the Heine monument. A hearing was held a few days ago by the Board of Public Improvements of the Borough, at which a petition, with several thousand signatures, was presented, in the name of certain German societies, asking for the acceptance of the monument, and asserting that its rejection by the City of Düsseldorf, Heine's birthplace, for which it had originally been made, was due simply to a desire to flatter the Emperor's known antipathy to the Hebrew race; and that the German citizens of New York had tried to make amends for what they considered the disgraceful action of the Düsseldorf authorities, by buying the monument for New York. On the other hand, the rector of a Catholic parish opposed acceptance, on the rather illogical ground that he could not see why the Borough of Bronx should be asked to accept a work which had been rejected everywhere else, an argument which would have doomed to oblivion a large portion of the greatest works of art and literature ever produced; and another clergyman said that it was such things as the Heine monument which brought about the downfall of Rome, and thought, apparently, that the poor Lorelei might be similarly instrumental in bringing about the downfall of the Borough of Bronx. Fortunately, the connection between the downfall of Rome and its monuments has not yet been satisfactorily established, and the quiet people of the annexed district need not for the present fear that the reception of the wanderer will be followed by gladiatorial games in Claremont Park, or by the installation of a West Chester County Nero in the Mott Haven town-hall.

THE RELIGIOUS ART OF MILLAIS.



Bloy

piece of painting pure and simple, Rubens's "Descent from the Cross"? Imagine it transferred from its present position in the Cathedral of Antwerp, where it seems to secularize, as it were, the altar over which it is hung, and think of it as an altarpiece in some little wayside chapel among the Bavarian Highlands; imagine yourself alighting from your *vettura*, and entering that place of rest to pour forth a thanksgiving for your safe journey through storm and tempest. What would be your sentiments, your feelings, on finding yourself face-to-face with Rubens's sumptuous work? Surely not religious emotion or devotional ecstasy—rather a mental burst of applause at the grandeur of the art. Such would certainly be the feeling of all persons who are stirred by art as art; whereas the miserably drawn and wretchedly executed pictures of the local peasant artists, who have followed the traditions of the early Italian and Flemish painters, would probably soothe you and guide you to earnest prayer and adoration. It is more than doubtful whether any one of culture has ever been led to worship his Creator through the inspiration of such pictures as those by Rubens or Velasquez or Rembrandt or Tintoretto—but what consummate art it is!

On the other hand, who has not felt the influence of that exquisite prayerful faith which inspired Fra Angelico? We are told that he painted on his knees; and surely that is the attitude which we feel inclined to assume when we gaze upon the ideal beauty of his angels in that loveliest of religious pictures the "Last Judgment." It is all purely imaginative, no doubt: we shall find our last home totally different from that green landscape, and the angels as unlike those glorified human beings with wings and flowing draperies, carrying wreaths of roses, as we shall be unlike the Elect whom the gracefully conduct to the peacefulness of Paradise; but what can the practical intelligence or the poetic fancy of the modern mind substitute in its place? Can we, with all our advanced knowledge, give a more lovely picture of heavenly bliss, of calm and peaceful content, of pure, unselfish adoration? Can the modern painter produce anything more devotional than the works of Lippi, of Fra Bartolommeo, of Memling, and a host of others? We trow not; and so it behooves us to treat religious art from a totally different and modern point-of-view; otherwise we produce mere senseless imitations, shorn of the spirit which inspired the art of our forerunners (*vide* the namby-pamby work of the modern German schools), or else we throw all our devotion into the purely technical part of our work.

What, it may be asked, is the main object of a religious picture, more especially when it is intended as church decoration? Surely to inspire religious emotion; to be, like the right kind of music, an aid to devotion. We do not want to admire the coloring, to study the modelling, to criticise the drawing of an altarpiece. It should be calming to the mind, soothing to the spirit; the means of raising the soul to the contemplation of God, not an object of worship in itself, nor a disturbing element to the mind, like some of the church music of the day.

But how is art thus to affect the modern man?—not necessarily the devotional man (that may be done by other methods) but the ordinary, commonplace, matter-of-fact people, who are hurried in this world, who have no time for religious exercises at home or abroad, who plod on at their daily work, and do it well or ill according to their love of labor or of ease. If art be the handmaid of religion, surely it ought to possess, above all things, the power of implanting religious, as distinct from merely moral, qualities in the soul of the average individual. Art is not religion, as some enthusiasts maintain, it is simply, at its best, an aid to religion. So is the love of Nature, which people confuse with the love of God; for

worshipping the Creator in his work is not worship, but admiration. And, in the same way, art is frequently the object of admiration, rather than the humble agent for leading souls to the worship of the Almighty.

That the early Flemish and Florentine painters worked in this spirit, there can be no doubt. It can be verified by the emotions it causes to the storm-tossed men and women of our own times; and equally true is it that the pictures of the Italian Renaissance no more touched the hearts of the sixteenth century multitudes than it does those of the nineteenth, for the lives of both painters and patrons prove the contrary.

What are the first thoughts which occur to us when we gaze upon those marvellous mangers of Paolo Veronese, where the Blessed Virgin sits enthroned in the atrium of a Roman temple, surrounded by magnificently attired Venetian nobles? Are our religious feelings at all stirred by the "Last Judgment" of Michael Angelo? Can we say with truth, if we divest our minds of conventionality and tradition, that even Raphael's Madonnas inspire us with much besides admiration for the great master's peculiar sentiment? It is heresy to give expression to the thought, but are not the exquisite far-seeing eyes of his Child-Christos to be seen in the faces of many of our own little ones? and does the "Madonna della Sedia," in spite of all that has been written about it, really convey more to our minds than the most perfect personification in art of maternal love and devotion? It seems as if the religious sentiment declined as the art advanced.

But a modern development has grown up amongst us, and probably Millais was one of its earliest disciples, paving the way for the present-day school of Lhermitte, Dagnan-Bouveret, Puvis de Chavannes, Lerolle, Hitchcock and Béraud. W. Holman Hunt's art belongs to a different category, and Flandrin came upon the scene somewhat earlier; but, although he infused true spirituality into his work, he kept upon the lines of the old masters.

In 1850, when Millais startled the world with his "Carpenter's Shop," no one had conceived the possibility of treating such a subject in such a manner. The old masters had sometimes touched upon religious incidents and Bible stories from the historical point-of-view, and a few French and German painters have followed in their wake; but even these were more devotional than historical, and a realistic treatment was quite ignored. Such work as that of Delaroche and Scheffer, of Overbeck and Cornelius, was a mere repetition of the style of Guido and the Carracci—less muscular perhaps, but equally sentimental and spiritless. Prudhon was a giant who tried to tilt against the namby-pamby, but conventionality still held him in bonds. Had it occurred to him to treat a "Descent from the Cross" as an event taking place on Montmartre, with surroundings of a Parisian priest and workingmen in blouses, as M. Béraud has done, he would not have dared. And yet, which is the greater incongruity, this realistic interpretation by the modern Frenchman, which certainly must appeal to the heart, or the "Marriage in Cana," by Veronese, where Our Blessed Lord is seated in the banquet-hall of some magnificent Italian palace surrounded by all the notabilities of the day clad in the richest velvet and bejewelled costumes of sixteenth-century Venice? Just imagine this picture as decoration for a church!—and it is only one of a multitude of a similar character. Could anything pictorial be less conducive to prayer or devotion? On the other hand, the tearful faces of the working-people in M. Béraud's "Crucifixion," the tender care displayed by the nineteenth-century Joseph of Arimathea, the sorrow and remorse depicted on the countenance of the modern Magdalen, unite and make the picture a suitable one for the embellishment of any church. The mere modernity of the treatment would appeal to the hearts of the hardworking French poor. But the world is not yet sufficiently freed from conventions to admit such pictures into its cathedrals. It discourses upon the "usual" style of the authors, but it does not taboo the work of all the old masters who contributed profane—and very profane—decorations to the palaces of the nobles. If all pictures are to be turned out of the churches because the artists produced Bacchanalian scenes elsewhere, there will be a considerable sweeping of noble work into the museums—a result which might be profitable to all parties concerned. Sir John Millais seems to have been possessed of this modern spirit very early in life, but, unfortunately, success in portraiture and other more paying subjects diverted him from the path of religious art. Possibly the storm with which the "Carpenter's Shop" was received was not encouraging to the young painter; but that he had a desire to treat this branch of art cannot be doubted, for the title of his very last picture, "The Forerunner," was but a cloak for its real name—"St. John the Baptist"; and all his life through, from time to time, he felt the fascination for religious subjects. Is not "St. Stephen" pathetic in its simplicity? "He fell asleep"—that is all. There is no piling on the agony of the stoning, no exhibition of brute force, no melo-dramatic horrors to make the spectator shudder; only a suggestion of the perfect peace which is the inheritance of the Saints—"He fell asleep."

How grand, too, is the conception of "Victory, O Lord"—that incident in the life of Moses, when, tired and weary, his arms were upheld by Aaron and Hur, in order that victory should not be denied by the Israelites when fighting with Amalek. Surely this grand picture equals in every way the great works of Titian or Michael Angelo.

Then there is the series illustrating the Parables—the modern housewife with the chamber candlestick, holding her broom and

searching for the lost piece of money. The "Enemy sowing Tares," the "Pearl of Great Price," "Jephthah," "Esther," and an early sketch for a "Prodigal Son." These subjects all tend to prove that Millais might have been the leader of a great nineteenth-century Renaissance of religious art, had he, and the public, so willed. The "Carpenter's Shop" led the way; and, looked upon with modern eyes, what is there in it which should have caused such an outburst of abuse as was heaped upon it in 1850? From childhood we have read "Is not this the Son of the Carpenter?" and have understood the question to relate to a simple fact. Why then should it be profane to illustrate the fact? In a picture by M. La Touche, exhibited some years ago at the *Salon*, we have the same realism. There is the carpenter; there is his bench, with the tools on the wall; and the ground is also strewn with shavings. Well we remember the fun which was poked at the shavings in Millais's picture. Why? Where is the profanity of treating this subject realistically? In a carpenter's shop, what could be more appropriate? Wherefore should profane folks scoff, or pious folks hold up their hands aghast? That Millais was wanting in the poetic spirit is possible; but his originality and his imaginative powers made up for the want, and herein lay the success of his early pictures—the clever "Lorenzo and Isabella," the exquisitely beautiful "Huguenot," the quaint "Sir Isumbras," and the intensely reverent "Carpenter's Shop." All these subjects were composed in a peculiarly original manner, a manner not the least "understood of the people," when the pictures were first exhibited; but times have changed, and the revolution begun by our great master has been successfully carried on by our friends across the Channel and our cousins on the other side of the Ocean.

S. BEALE.

FIREPROOF CONSTRUCTION OF DOMESTIC BUILDINGS.¹

UNDER the London Building Act concrete is sometimes filled-in between the top and bottom flanges and metallic lathing fixed thereto and under the bottom flange; but it is seldom practical to employ concrete in this way more than 3 inches thick; it is difficult to apply in a soft state, and is, moreover, a moderately good conductor of heat, and, more important than all, the bottom flange of the beam is either insufficiently protected or not protected at all. On the other hand, plastering-mortar possesses little more than one-third the conductivity of brick or tile, and, if applied so as to leave a hollow space behind, $1\frac{1}{2}$ inches in thickness of plaster is more effective than $2\frac{1}{2}$ inches of concrete. I am told that asbestos-plaster has much less conductivity than common plaster. Captain Shaw, a former chief of the Metropolitan Fire Brigade, wrote, some years since, in reply to an inquiry on this point: "Very little plaster will suffice to prevent ironwork from melting, softening, or cracking, if only it remains on, but this is the difficulty. Some key is absolutely necessary, and hoop-iron or wire-netting would probably be found the cheapest and best; with a really trustworthy key, about half an inch of plaster would insure safety." When Captain Shaw wrote this, metallic lathing had not come into use. To ascertain for myself the capability of common plastering to resist fire, I built a small brick inclosure 7 feet square and 6 feet high, upon the top of which I laid steel joists and attached thereto a suspended ceiling on expanded-metal lathing. When the plaster was thoroughly dry I made a larger fire under than would be likely to occur in an ordinary room, and after two hours of fierce combustion and repeated quenching the upper side of the ceiling with buckets of water, the plastering remained sound, although pieces of wood an inch thick thrown on the top of the ceiling were ablaze in a few seconds from the heat conveyed through the plaster. I am bound to say the result was quite a surprise to me. The steel joists, although unprotected, were not injured to an extent that would cause them to buckle or expand to any degree, and nearly one hour after the fire was lighted were but moderately hot. A further protection may be practised by plastering the flanges and exposed portions of the beam with asbestos-plaster, which adheres better to unpainted metal than to painted. I am unable to speak from experience as to the merits of asbestos; but if the reports concerning it are true, it has some marvellous properties in connection with fireproofing, as regards its resistance both to fire and water. Protected in this form, beams would withstand greater heat than if incased with concrete or terra-cotta or fire-clay tiles, say, 2 inches thick, as the outer plaster incasement is everywhere disconnected from the beam itself, and forms a valuable and almost invulnerable first line of defence. Doubt has been expressed whether the heated air between the plastering and the beam would not expand and burst the incasement. This can be avoided by fixing an air-brick or tube in the walls upon which the beams rest: anyway, it should not be a difficult point to deal with. Joists in almost every system have their webs incased by the floor materials; the top flanges are much less liable to become overheated than any other portions, but the bottom flanges require greater protection than any other part, as they are at all times subject to a severe tensile strain, and in case of fire the heat is directed full against them. No floor is absolutely safe unless the bottom flanges are efficiently safeguarded. Sir Nathaniel Barnaby, in making experiments in connection with iron ships, found that iron and steel beams gained in strength up to between 490° and 550° Fahr.; beyond this

their strength rapidly diminished. The moral to be derived is that if the steel beams and joists used in fireproof floors can be so far protected that they do not attain much over 500° of heat, they take no harm either from loss of strength, from heat, or expansion. Where beams have to be employed, it is only reasonable they should be no longer than is absolutely necessary—i. e., they should be disconnected at every bearing where possible. Divided opinions prevail as to whether concrete is reliable as a fire-resisting material or the reverse; this depends mainly upon the materials of which the concrete is made. Thames ballast is one of the worst, and being used at one time for fireproof floors in London, many failures took place, and firemen were cautioned not to enter burning buildings which possessed fireproof floors. The most reliable fire-resisting materials are crushed bricks, coke-breeze, clinker from furnaces, slag from iron-ore, pumice and similar substances which have passed through fire. Mr. Webster's experiments proved that slag made the strongest concrete, broken firebrick came next, and then pumice, while coke-breeze was the weakest; but after being heated to a red heat, and quenched with water, the order of things was reversed, for it was found that slag had lost two-thirds of its strength, broken firebrick nearly as much, pumice about the same, but coke-breeze less than one-half, and that the latter was then stronger than the other three materials. Neat cement was only about one-fifth its original strength after being heated and quenched; but it was clear that when diffused among other materials to form concrete, its strength, from some cause or other, was not diminished in the same ratio. But good concrete increases its strength with age, and assuming that a concrete floor will sustain the specified load required at a month, it should carry double that at a year, and from this we gather that if a concrete floor made of coke-breeze is exposed to a fire, and becomes nearly red hot—say $1,000^{\circ}$ Fahr.—it ought to be still capable when cold of supporting its original specified load, subject to not being weakened from other causes; and here another contingency arises: expansion from heat and subsequent contraction. This appears to be a substantial objection to the use of floors formed of a single slab without joists, or of large self-supporting areas of concrete for floors, whether flat or arched. So far as regards strength, first-class concrete requires no steel beams or joists whatever for floors up to 15 feet between supports, nor any iron imbedded therein, (I have, many years since, executed 12-foot spans of a uniform thickness of $4\frac{1}{2}$ inches only); but the effect of a fire would be to cause them to expand, and, as they cooled, to contract, and probably, through being tied into the walls and unable to adjust themselves to circumstances, break up into fragments. Concrete paths in public streets expand and contract with ordinary variation of temperature, and, to avoid irregular cracks, are executed, as we know, in sections of about 9 feet square. But as the temperature in a house-fire scarcely exceeds, we are told, $1,000^{\circ}$, there should be no difficulty in so protecting the beams, the joists, and the concrete that neither should, in an ordinary house, be exposed to a temperature of more than 500° one hour or longer after a fire has got well alight. Cement-concrete has some peculiar properties; for instance, it is not considered by any means an elastic material, but I have seen a slab 10 feet in length and $4\frac{1}{2}$ inches in thickness deflect over an inch in the centre under a heavy load, and resume its original shape within a quarter of an inch, after having been weighted for several days. So that any perceptible movement or deflection of a concrete floor in walking over or jumping upon does not necessarily imply danger. This is, however, not a pleasant sensation when the floor is known to be of concrete, and to avoid this a flat floor has to be thicker than is absolutely necessary for strength. A segmental arch-shaped floor has an advantage in this respect, for, no matter how light it may be, it is practically rigid. A flat slab floor without joists has another disadvantage, viz., the effect of ordinary changes of temperature, as before described. The difference of temperature in the rooms of a dwelling is never very great, but, combined with the tensile strain on the lower half of the floor, it is sufficient to cause slight cracks in the concrete on the under side, as the result of a change from heat to cold, and, although I have never known an accident result therefrom, cracks are naturally looked upon, and with good cause, as elements of danger. These cracks may not develop for a year or more after the floor has been completed, and if covered on the top with a wood casing, and the under side is plastered, they may never be visible. Then another objection to slab floors is that the lower half, or half below the neutral axis, is undergoing a tensile strain, a strain which concrete is least liable to resist, and these combined disadvantages go to prove that although flat floors of concrete without any joists are economical in cost and space, they are not adapted for rooms of domestic buildings. They may do very well for corridors, passages, lavatories and the like, always remembering that concrete conveys sound more readily than any other building-material; as an instance, conversation carried on in an ordinary tone in a room divided from another by a 6-inch concrete partition, plastered on both sides, can be heard in the adjoining room; this I state from experience. Another type of floor is the same as the one just described, but has steel or iron rods, wire-netting, expanded-metal, or any other form of steel or iron imbedded in the concrete below the neutral axis, for the purpose of counteracting the tensile strain. Floors of this character have been advocated for years, more especially those of Hyatt, Branmon, Monier, Edwards, the Expanded Metal Company, and several others. The main point is to prevent shearing of the imbedded material, and this is usually obtained by

¹ Portions of a paper read at the Society of Arts on Wednesday evening, January 26, 1898, by Thomas Potter, of Alresford, Hants.

securing the ends of the metal ties in the concrete. The strength of concrete floors is largely increased in this way; but the general disadvantages of the slab floor just described are still the same, and if large areas of concrete have to be divided into smaller by means of steel joists, I fail to see much advantage in the use of imbedded metal. The so-called solid concrete floor is more largely used than any other, principally because it costs less, can be executed by the builder, and came into use at a time previous to the general introduction of better systems. Joists are usually fixed 2 feet to 6 feet apart according to circumstances, and the concrete kept an inch below the bottom flange, with the object of protecting the beam from fire, and a plaster ceiling is formed on the concrete. The objections to this form of floor, from my point-of-view, are (1) that the one-half portion of concrete below the neutral axis is of little use so far as regards strength; (2) it conveys sound very distinctly; (3) the concrete having to be of a thickness equal to the depth of joist, plus the inch below, is very heavy; (4) the cost is thereby enhanced; (5) in case of fire, the under portion may become very hot before the heat reaches the upper portion owing to the thickness it has to permeate, so expansion in some places and none in others creates rupture of the particles, and, cohesion being weakened, masses may fall away; or if expansion occurs from heat, rupture of the concrete will take place at its weakest point, and that is where it incases the bottom flanges of the joists, which is only 1 inch in thickness; should this happen, and the fire is extensive, the fate of the floor is settled, although in an ordinary way it should scarcely be sufficient for this; (6) plastering on concrete surfaces of this character to form ceilings has scarcely any key, the concrete surface being simply jagged or indented with a pointed tool, and in case of fire the plastering will possibly soon fall away — indeed, it often occurs without a fire.

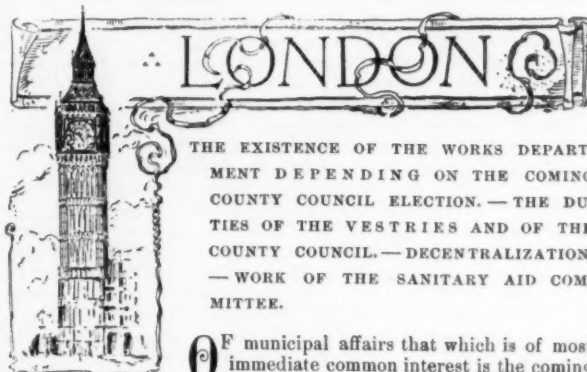
The weight of a concrete floor of this kind, as shown, 9 inches in thickness, is about 40 pounds to 50 pounds per superficial foot, without the joists, while the greatest live load necessary to be provided for floors of domestic buildings is said to be only between 20 pounds and 30 pounds at most. A modification of this floor so as to reduce the weight of concrete was adopted some years ago, but can scarcely be called a fireproof floor; a better title would be an improved wood floor. These are a description of floors usually performed by any kind of laborers. My experience is that workmen who have acquired an intimate knowledge of concrete floors, and take an interest in their work, perform it in a superior way, produce better work, and are more reliable. Concrete floors which have collapsed have been done by men of no experience. There is an impression that concrete floors of an arch-form exercise considerable thrust, and must necessarily be held together by tie-rods and bolts, but, except in large spans, this is not so. Indeed, arch-shaped concrete assumes more the character of a cantilever than an arch. But level ceilings are necessary for rooms of dwelling-houses. This can be obtained by forming them of metallic lathing suspended to the joists, while the vacant space that intervenes creates a barrier to the transmission of sound. Fawcett's floor and Homan's floors are too well known to require any description. There are types of the lintel form of construction, with a portion going under to protect the bottom flanges. Concrete is filled-in up to the level of top of joists, and the under sides of the lintels are plastered in the usual way. There are numerous floors of the lintel type — Willis and Astley's, Pickering's, Fergusson's and others. I offer no opinion as to the relative merits of any patent floors in use.

Were I to do so impartially, I could only say that probably they will all safely support any reasonable load; that their cost is very much the same; that each may possibly possess some advantage, more or less, over others; but until a series of tests have been made as to fire-resisting and other desirable properties of some of the best types of floors by independent authority under similar conditions, and upon areas of suitable dimensions, no comparative results are possible. The patentee of every floor can bring ample evidence, without a doubt, to prove that his system is far better than any other, and also that the severe trial it has withstood against fire in a small test-place 7 feet or 8 feet square, arranged for the purpose, has beaten all previous records; all the same, it is quite a different thing from a fire in an apartment 18 feet or 20 feet each way, and not specially constructed to be tested.

My views as to fireproof floors for domestic buildings are: (1) Steel beams should be avoided as far as possible; up to 24-foot spans, or between bearings, they can be dispensed with altogether, and joists of moderate size substituted at but little increase of cost. (2) Where, however, steel beams are necessary, the greatest care should be given to protect them from fire. (3) Steel joists to divide floors, whether flat or arched, should not be more than 6 feet apart, and should also be well protected, more especially the bottom flanges, which, as a rule, are less cared for than other portions; the top flanges are not so important. (4) A better quality of concrete, and less of it than is usual, should be employed to lessen the enormous weight thrown upon walls and foundations. (5) The plastered ceilings should, if possible, be of a character that will not fall or come away as the immediate result of a fire beneath. The properties aimed at in fire-resisting floors of domestic buildings should be as follows: (1) Resistance to fire, (2) non-conductivity of sound, (3) lightness compatible with safety, (4) economy of space, and (5) economy of cost. I have endeavored to carry out these principles in a floor shown; but, although highly successful on a small scale, like every one else's patents, I am, unfortunately, unable to say what

the result would be in a genuine big fire. The bottom flanges are incased with burnt-clay shields, an air-space intervening, and a metallic lath suspended ceiling is fixed to the shields by iron hangers and lathing bars; permanent iron centres are used for forming the floor, and the bottom flanges of joists have a double air-space protection. The best covering for a concrete floor is wood in narrow widths, nailed direct on the concrete itself. Obviously, the floor must be first made quite straight, and the materials of a consistency that will enable nails driven therein to hold as well as if driven into wood. It has been said that the wood will rot; but I have done floors in this way for sixteen years and found no decay yet, and, for some reasons, they are preferable to wood-block floors and cost less. Dovetailed strips of wood imbedded in concrete for nailing boards thereto I found acquire dry-rot and decay more or less in from three to four years.

Wood laid on concrete direct will not burn except through the strongest provocation; it will smoulder and become charred. Small wood joists laid on the concrete and floor-boards fixed thereto in the usual way will burn rapidly. It is worthy of being more generally known that cement used for making concrete parts with as much water as is unnecessary for hydration, and clear water can always be seen dripping from concrete newly laid on temporary centring or wood platform formed to uphold it. This is often supposed to be a case of too much water having been used in mixing; but it is not so, unless it is colored with cement, in which case it is evidence of the latter having been carried through the concrete owing to the use of an excess of water, and the floor is obviously weakened therefrom. As a matter of fact, concrete for any purpose is assumed to be such a commonplace thing that it is difficult to evoke any interest in connection therewith, so far as building matters are concerned.



THE EXISTENCE OF THE WORKS DEPARTMENT DEPENDING ON THE COMING COUNTY COUNCIL ELECTION. — THE DUTIES OF THE VESTRIES AND OF THE COUNTY COUNCIL. — DECENTRALIZATION. — WORK OF THE SANITARY AND COMMITTEE.

OF municipal affairs that which is of most immediate common interest is the coming County Council election. This triennial event will recur this March and all parties interested are already hard at work throughout the electorate. Of the two chief parties into which the Council divides itself the Progressives in the elections of both 1889 and 1892 were able to obtain a good working majority. In the 1895 election, however, the Moderate party was more successful, and, though unable to secure a majority, captured 67 of the 118 seats, leaving the Progressives in power, with 70 seats and the small majority of 3. The chairman, it should be mentioned, does not vote in a division. Under these circumstances, there is reason for either party to feel considerable confidence of success in the coming election and a keen contest is expected. The elections of the School Board, which also are held triennially, and occur some four months before those of the County Council, are generally taken to furnish some indication of the line of action which the municipality is likely to follow in the case of the Council elections, for, although the electorates are not quite identical, the same general division into parties, Progressive and Moderate, prevails. The most noteworthy feature of the School Board elections held in November last was the sweeping successes obtained by the Progressive party. The question on which the election hung was that referring to denominational religious instruction. This is a matter over which in former elections long and bitter hostility has been displayed on all sides and to which, at the Board meetings, much of the public time has been fruitlessly sacrificed. The attitude of the Progressive party was one favoring the maintenance of the *status quo*, with resolve that reopening of the question should by no means be tolerated. Some part of the Moderate party was in accord with this arrangement, but the hesitation implied in this partition diminished the chances of success of the Moderates as a party. Electors have by experience realized that the rates on account of education must for the present follow an ascending scale, be the party in power what it may. And the determination consequent upon this appears to have been that efficiency with economy was the most attractive policy to support. The daily papers, and especially the popular *Daily Mail*, endeavored to keep this essential question in its simplicity before the electorate, and by the publication of black-lists showing the views and intentions of candidates upon the religious question did more to influence the result of the contest than is perhaps generally recognized. This same attitude the Press has apparently determined to adopt in the matter of the County Council elections. The demand for economical efficiency will form a basis, and a brief but categorical statement at the mouth of the several candidates will be taken as indicative of

intention upon two or three more or less burning questions of the day. Foremost among these, it may safely be stated, will be found the questions of the Fire Brigade and the Works Departments.

The former question has sprung suddenly and accidentally into being as a direct result of the disastrous fire which occurred in the City in November last. It is concerned mainly with the matter of appliances, doubt being entertained by many as to whether those at present in the hands of the Brigade are either sufficiently numerous or entirely adapted in pattern and efficiency to the fulfilment of what is required of them. Promise therefore of increased attention to Fire Brigade matters will certainly form a popular plank. The case as regards the Works Department is somewhat different. The question is one not so much of reform as of extinction; and here the Progressives and Moderates will certainly be very definitely divided in policy. I have in these columns described, as occasion demanded, the main reasons why the Works Department has fallen into disrepute; and it will be remembered that, as a result of the inquiry instituted into the recent falsification of accounts, a falsification adopted with inconceivable foolishness in the hope of presenting an attractive balance-sheet, it was decided by both sides of the Council to take no further steps in the matter until the views of the municipality had been ascertained in election. There is no doubt that the extraordinary proceedings adopted by the managers of the Works Department leading up to this inquiry gave great advantage to that party which has ever followed a policy of criticism against the Department, both in principle and in practice. But the sensation aroused by the disclosures have been to some degree blunted by time, and this the more because the closest inquiry was unable to show or to suggest that any officer or other person concerned had misrepresented facts or manipulated accounts for personal advantage. The critical position of the Works Department is no matter of question, as was shown last summer in the Council proceedings. The finding of the Committee of Inquiry, formed of nine members, five Progressives and four Moderates, was presented in two parts. The view of the Progressive majority was that a Works Department, some definite organization for the direct execution of public works by the Council under its own officers, was desirable and beneficial; attached were several suggestions of reform in management and control. The report of the Moderate minority, however, recommended that the Works Department as at present organized should be placed under the engineer, and that no architectural works should be taken in hand by the Department. This was suggested apparently by the fact that the principal trespasses upon estimates have taken place in connection with architectural works, while the engineering works have been accomplished without excess upon estimates. When the report of the majority was laid before the Council for adoption, a sweeping amendment was proposed that the Works Department be abolished and the whole of the buildings, plant, and stock sold. The result of the voting was exactly equal, and it is owing to the refusal of the chairman to give a casting vote that the whole question stands over until after the elections. The voting was as distinctly partisan as had been the division in the Committee of Inquiry, and it is thus evident that the reform or abolition of the Works Department hangs entirely upon the success of parties in the coming election.

Important as a potential influence in this connection was the utterance by Lord Salisbury at the Albert Hall in November last, especially the parts dealing with municipal government. "London," said the Prime Minister, in effect, "is too great a city for adequate control by central government. Her Majesty's Government conceives that a mistake was made in including the metropolis in the Local Government Act of 1889, as the effect has been to create not a local government of local representatives for local affairs, but a small parliament of organized politicians." This, he said, was detrimental to progress and a hindrance to proper administration. The Government therefore proposed to raise the position of the Vestries into something more dignified and useful and reduce the functions of the County Council to one of mild supervision. The Vestries of London, it may be observed, are thirty in number, and at present are responsible for the maintenance and control of streets and sewers, and the sanitary condition of buildings; they deal with nuisances, light the streets, maintain public-baths, wash-houses and libraries, and have in charge the parochial cemeteries. The County Council has to deal with the main drainage and disposal of 60,000,000 tons of sewage annually, fire brigade, bridges and ferries, inspection of slaughter-houses, dairies and common lodging-houses, testing of gas and gas-meters, weights and measures, control of the sale of oils and explosives, regulation of theatres and music-halls, and maintenance of 3,700 acres of parks and pleasure-grounds. The County Council also executes improvements, as street-widening, reconstruction of insanitary areas, and formation of embankments and new roads. The cost of these stood on April 1st last for projects then in hand at nearly £600,000, while other works to the value of a further million and a quarter are at present being undertaken. The Council moreover provides and controls lunatic asylums for 13,500 patients, with an annual expenditure of £400,000, furnishes technical instruction at a cost of some £150,000 per annum, executes the Building Act under the District Surveyors, has an annual turnover of about two million pounds, a debt of £22,000,000 and a rate of 1s 2½d in the pound. This is the skeleton of the work of the County Council, and some suggestions of the vastness of its work may perhaps be obtainable from the rough figures I have quoted.

Lord Salisbury did not of course go into detail, or indicate which of the functions at present exercised by the London County Council might with advantage be transferred to the Vestries; but a cursory glance at the list of the cares of the Council will at once suggest that the greater number are such as can be administered with economy only by a central authority. Where responsibility should happen to overlap, the apportionment of liability between the Vestries concerned would become a most complex matter, while no Vestry would conceivably find itself in a position to undertake improvements on the scale that the Council adopts. The London County Council can without difficulty raise its loans on interest as low as 2½ per cent.

It is now generally recognized that Lord Salisbury was improperly "primed" for his speech, or, at any rate, that there was considerable misunderstanding of facts. But whether this were so or not, the speech caused a remarkable sensation in London at the time, and it soon became evident that neither the Progressive, Moderate, nor any other London political party would support the Government in its policy. Decentralization is certainly a marked tendency of modern times, and in London this is as noticeable as elsewhere: with the suburbs spring up their local libraries, baths and other establishments demanded by the needs of the locality; theatres, too, once the monopoly of the Strand, are now to be found everywhere in the suburbs, whichever way we may turn. But this decentralization is, of course, the dictate of convenience, and in governments, perhaps, the same general principle will hold good. Decentralization is possible and even essential when interests are better served so, and where the lines of definition are indisputable. In London, however, the latter condition is far from being the case, and there appears small reason for anticipating the former.

The Right Hon. C. T. Ritchie, the father of County Councils, has since made considerable modification of his leader's words, and the probability now is that Her Majesty's Government will introduce anything but that which the Prime Minister seemed to foreshadow. Instead of detracting power from the London County Council, it will probably be found that power is to be bestowed, and this in the direction of increased supervision over the Vestries, who, in their turn, will probably be endowed with more dignity and, possibly, altered somewhat in constitution. Had this speech occurred towards the eve of the elections the Progressive cause would undoubtedly have profited by the scare to the extent of almost ensuring a great victory at the polls. Time, however, has allowed all parties to repudiate sympathy with any radical changes in the system of government. To sum up the probabilities of the election of this month, the Progressive party may be expected to win with a small working majority. In this case the Works Department with its 2,000 employés, and the workshops and other buildings, on which was spent only recently some £30,000, will be retained, and the Progressives will be able, with free hands, to proceed with their active and advanced policy.

Something might be written of the Socialistic aspect of the work of the Progressives. Not the least interesting point of the elections lies in the fact that it will serve to show London's tendency towards Socialistic thought. But Socialism is matter perhaps scarcely more than on the border-line of our province.

In a broad view of the government of London, there is reason to think that the most evident faults will be found in those details administered by the Vestries, and, as these are purely local matters, it is well that they should remain in the Vestries' hands. Any additional supervisory powers, however, vested in the County Council with the view of keeping the Vestries to their work would be desirable. The branches in which the Vestries chiefly fail are the cleansing of the streets and the treatment of nuisances and insanitary buildings. Of these the first is, perhaps, the smaller of the evils; the nuisance of dirty streets is one immediately apparent, appealing to all. Insanitation in buildings may, however, lie hid, to attract public notice only in the vague and detached form of a high district death-rate. This possibility was recognized as long as fourteen years ago, when a Sanitary Aid Committee of the Mansion House Council of the Dwellings of the Poor was formed to deal with precisely this abuse. Since that date the movement has spread consistently, and fifteen local committees now carry out a voluntary work of supervision and inquiry, strengthening the hands of the Vestries, and, if need be, by impeachment to the proper authorities bringing negligent and recalcitrant Vestries up to a proper standard of administration. Over 50,000 cases of insanitation have been handled by the Committee since its inception, and the work remains in many large districts almost as great as ever. The number of sanitary inspectors acting officially for the Vestries has been greatly increased through the efforts and representation of the Committees, and, by the distribution of leaflets and in other ways, the Sanitary Aid Committees have endeavored to awaken a sense of self-respect and a regard for decency and order in the people themselves, with particular reference to whatever in a house is conducive to health and the reverse. The work of these Committees has indeed been so successful that allied branches are being formed in the provinces, and requests for information of procedure have been received from all parts of the world. The energetic action of the Committee has had its effect on the London death-rates. Sir John Hutton, speaking the other night at the meeting of the Sanitary Inspectors' Association, showed that the death-rate in 1660 was 80 per thousand. To-day it is 17.0, and, notwithstanding the lowness of this figure, there are yet clearly defined districts in the metropolis where the rate still stands at 30 and above. Gradually these blots will be

removed, when, with an improved water-supply, London, it is declared by competent statisticians, will rank as one of the healthiest dwelling-places in the world, either of town or country.

(To be continued.)



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, 6 Beacon Street, Boston, January 6, 1898; no quorum present, and adjourned to meet in New York.

The adjourned meeting was held at the office of the President, 33 East 17th 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 Secretary read the following 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,¹ 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 the first day of December, 1897: Mr. Oliver C. Smith, of Austin, Ill., and Mr. F. A. Coburn, of Cleveland, O.

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 re-instated 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 U. 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 Gen. 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 of 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 ideals therein suggested could be put in practice.

¹ Two Fellows have in consequence been expelled.

Many of the Chapters of the Institute have replied to the appeal to endorse 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.

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 custom-house at Norfolk, Va., 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, N. J., in which Mr. Alfred Stone, William Aiken and the Supervising Architect are the experts, and plans for which will be due on the first of March.

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

Mr. Carrère 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.

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."

Adjourned.

ALFRED STONE, Secretary.

SOCIETY OF BEAUX-ARTS ARCHITECTS.

THE regular February meeting of the Society was held at the Café Flouret, 18th Street and Fifth Avenue, on Monday, the 21st. About thirty-five were present, including guests. After the dinner a short business meeting was held, which was principally devoted to routine work. Messrs. Thomas Hastings and Edward P. Casey were re-elected respectively delegate and alternate to the Fine-Arts Federation. The following new members of the Society were elected: Messrs. H. Hornbostel, Theo W. Pietsch, and Hugh Tallant. Mr. Franz C. Thomas was elected as an Associate Member. The Committee on Exhibition reported on the work of preparation already accomplished and announced that the exhibition would be held in the fall.

EDGAR A. JOSSELYN, Secretary.

THE ART CONTENTS OF CHANTILLY.—The Institute of France has taken formal possession of the estate of Chantilly, which the late Duke of Aumale gave to it in trust for the Republic of France. Inventories have been taken showing that its contents include 557 pictures, 282 miniatures, 50 statues, 2,600 drawings, 3,000 engravings, 3,685 medals, 1,453 manuscripts, 375 volumes printed on vellum, 2,400 other books, and artistic furniture, jewelry, arms and china.—N. Y. Tribune.

ILLUSTRATIONS

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

CORRECTION.

WE must accept the responsibility for the error made in our last issue in attributing to Messrs. Howard & Cauldwell the alteration of Mr. Watson's house at Rochester, which was actually carried out by Messrs. Du Fais & Canfield. If our readers and the librarians of public libraries will kindly make the correction in the title of the illustration exhibiting the house in question they will prevent future error.

THE TRANGOTT-SCHMIDT BUILDING, DETROIT, MICH. MESSRS. DONALDSON & MEIER, ARCHITECTS, DETROIT, MICH.

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

COMPETITIVE DESIGN FOR THE UNITED STATES COURT-HOUSE, NORFOLK, VA. MESSRS. CARPENTER & PEEBLES, ARCHITECTS, NORFOLK, VA.

This competition, in which Messrs. Wyatt & Nölting, of Baltimore, were successful, was the first competition held under the provisions of the Tarsney Act.

COMPETITIVE DESIGN FOR THE UNITED STATES COURT-HOUSE, NORFOLK, VA. MESSRS. NOLAND & BASKERVILL, ARCHITECTS, RICHMOND, VA.

ST. JOSEPH'S ROMAN CATHOLIC CHURCH, CORPUS CHRISTI, TEX. MESSRS. ARMSTRONG & PASCO, ARCHITECTS, DALLAS, TEX.

Y. W. C. A. BUILDING, ROCHESTER, N. Y. MR. GEORGE T. OTIS, ARCHITECT, ROCHESTER, N. Y.

[The following named illustrations may be found by reference to our advertising pages.]

THE PALAZZO VECCHIO, FROM THE PITTI PALACE, FLORENCE, ITALY.

NEW PREMISES, EXCHANGE ST., MANCHESTER, ENG. MR. CHARLES HEATHCOTE, ARCHITECT.

This plate is copied from the *Builder*.

[Additional Illustrations in the International Edition.]

HOUSE IN THE RUE DES VERGEAUX, AMIENS, FRANCE.

AMONGST the great illustrated works on architecture which the photograph and the half-tone illustration are so rapidly depriving of much of their original value and interest, none is more noteworthy than the admirable volumes which record in very artistic lithographic illustrations the architectural observations made by Baron I. J. S. Taylor in the old provinces of France. As these volumes, because of their size and great cost, are rarely to be found outside of the great libraries, our readers may welcome a small selection from them.

COURT-YARD OF THE OLD BAILLAGE, AMIENS, FRANCE.

CHURCH OF ST. MICHAEL, XVI-CENTURY, DIJON, FRANCE.

HOUSE ON THE RUE VANNERIE, DIJON, FRANCE.

THE WELL OF MOSES, DIJON, FRANCE.

This well-preserved relic of the old Carthusian monastery dates 1396-99.

HOUSE AT ABBEVILLE, FRANCE.

COURT-YARD OF A XVI-CENTURY HOUSE, CHATILLON, FRANCE.

This and the foregoing illustrations are copied from Baron Taylor's "*Voyages pittoresques et romantiques dans l'ancienne France*."

NORTH AISLE OF NAVE, GLOUCESTER CATHEDRAL, ENGLAND.

CALCOTT COURT, BRONDESBUURY, ENG. MESSRS. PALGRAVE & CO., ARCHITECTS.

COMMUNICATIONS

[The editors cannot pay attention to demands of correspondents who forget to give their names and addresses as guaranty of good faith; nor do they hold themselves responsible for opinions expressed by their correspondents.]

INFORMATION WANTED.

ST. JOSEPH, MO., February 26, 1898.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—I would like to find out where to address the makers or manufacturers of the material which I think is composed of wood-pulp mixed with a kind of cement and used as floor in place of wooden flooring. The stuff is shipped in sacks so you can utilize it anywhere.

I have never seen it, but I have an inquiry from German correspondents saying that they saw the advertisement in some paper but lost it, and they would like to use it. An early reply would greatly oblige,
Yours respectfully, PHILO GERMANICUS.

NOTES & CLIPPINGS

QUICKSAND.—Very little is known by the general public about quicksand, and that little is usually obtained from novels. Such information is usually wrong, being composed of a pinch of truth and a handful of fiction. The sensational novel goes even so far as to give to quicksand some attributes that belong only to living creatures. No ordinary observer could distinguish quicksand from any other, if it were dried; and if he wished to restore its fatal property artificially, he would, in all probability, fail. Suppose he fills a bucket with it in the dry state, and soaks it with water; it does not in consequence become mobile. If he drains the water off from the bottom, the sand will be found wedged firmly in place, and if the water be measured it will be found to equal 30 per cent of the bulk of the sand, or about 20 per cent of its weight. From this we may infer that a cubic foot of dry sand weighs nearly 94 pounds. This, for sand, is a very light weight, for there are other qualities of sand which weigh as much as 171 pounds. Quicksand, when examined under the microscope, will be seen to have rounded corners like river sand, as distinguished from angular or "sharp" sand, which will pack more solidly than the other. It is quicksand that is used in the hour-glass and in the smaller egg-boiler, partly because of its fineness and partly because it does not obscure the inner surface of the glass by scratching. The lightness of quicksand is the quality which will lead us most surely to the cause of its reputation, and to illustrate this the bucketful of sand must be loaded with water from below, and made to overflow very slowly. The upward current will be found to loosen the sand and to raise the surface very slightly, separating and lubricating the particles so that they are easily displaced. The bucket now contains quicksand, and this sand, from the support it receives from the water, has its weight or supporting power reduced. In the dry state it weighed nearly 94 pounds, but if weighed in the water it is reduced to 32 1-2 pounds, and its mobility prevents any animal from walking on it. The mixture of sand and water weighs quite 112 pounds per cubic foot, or nearly twice the weight of water and bulk for bulk nearly twice the weight of a man, but it is too thick to swim in, and the person engulfed would soon be too exhausted to escape. He would probably die of suffocation if not drowned by an advancing tide, for quicksands are found mostly within the influence of tides. He would not be swallowed by the quicksand, because it is so much heavier than his body. Quicksands require in all cases an upward current which is not quick enough to form what is called a spring or fountain. It may be formed in two ways: In tidal rivers and on the shores of tidal seas the rising tide may saturate a porous stratum of ground below high-water mark, and when the tide falls a return-current is established through the same porous (sandy) ground with a sufficient velocity to loosen the sand as above described. This sand, as soon as the rising tide reverses the current, ceases to be "quick." The other case is that when a slow current of fresh water finds an exit through a surface of sand above or below water. This is a permanent quicksand. Any sand and almost any material might have the quality of quicksand imparted to it by means of a suitable current. Coal is separated from shale in an upward current of water, so regulated that the coal is made to float while the shale falls to the bottom, and heavy iron tools have been carried to the surface by the sudden discharge of artesian wells. Quicksands that are encountered during the sinking of wells and foundations are all due to the influx of water when the work gets below "spring level," or the level of water in the ground. The sand, being deprived of the support of the excavated part, is pushed from behind by the water-current flowing in from all sides.—*Invention*.

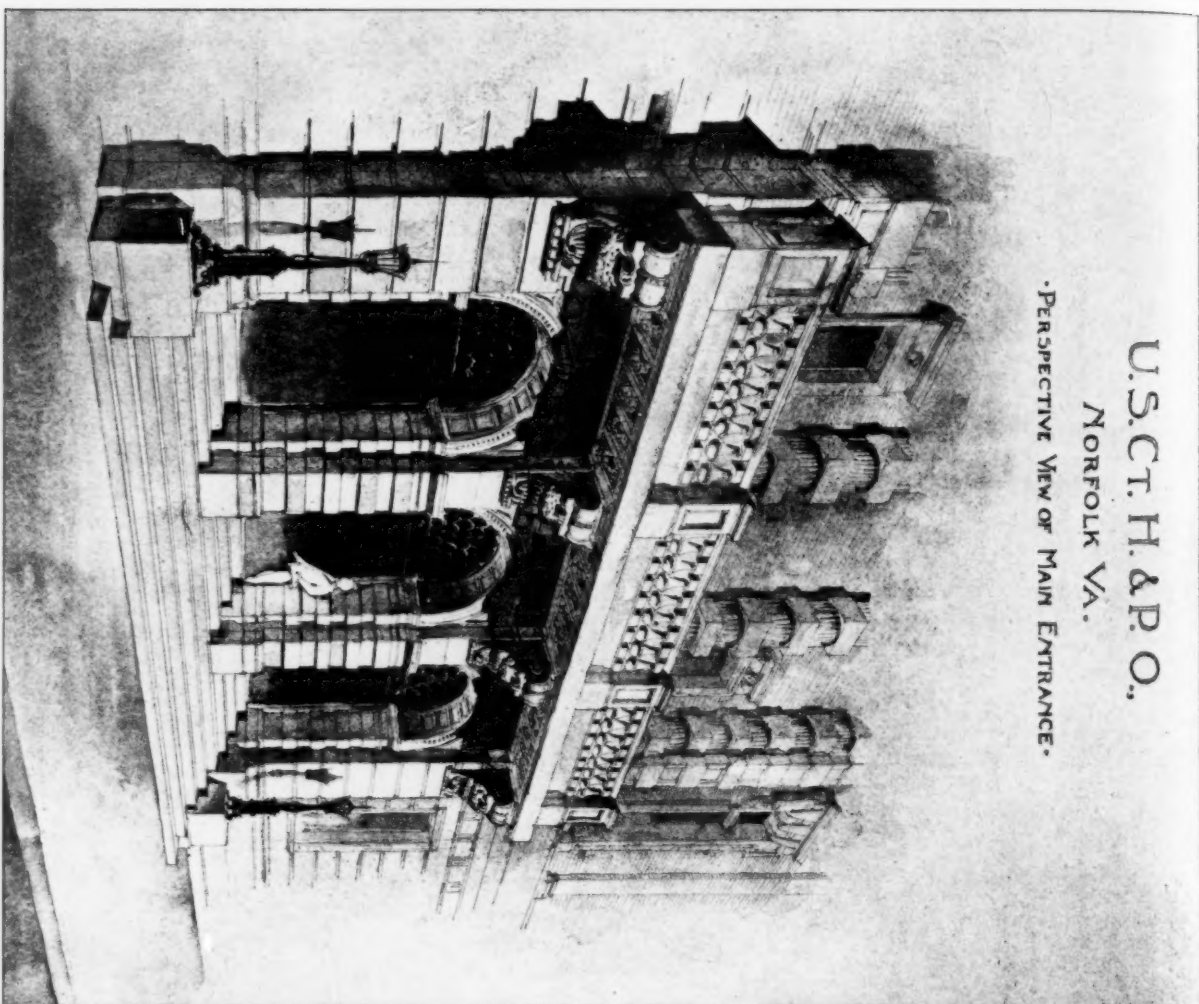
MODERN SANITATION AND YELLOW FEVER.—In writing from New Orleans a correspondent of the *New York Evening Post* says: "There were many strange things about the spread of the epidemic. One, that it is hard to make people believe, is that on streets where there are open canals and reeking gutters it rarely ever appeared; while in the best-drained and most carefully cleaned parts of the city the yellow flag was no uncommon sight. More than this, there are streets through which large drainage-canals run, which have recently been covered over. Yellow fever had never been known to appear on these streets while the open canal existed. Last fall many houses along them were quarantined."

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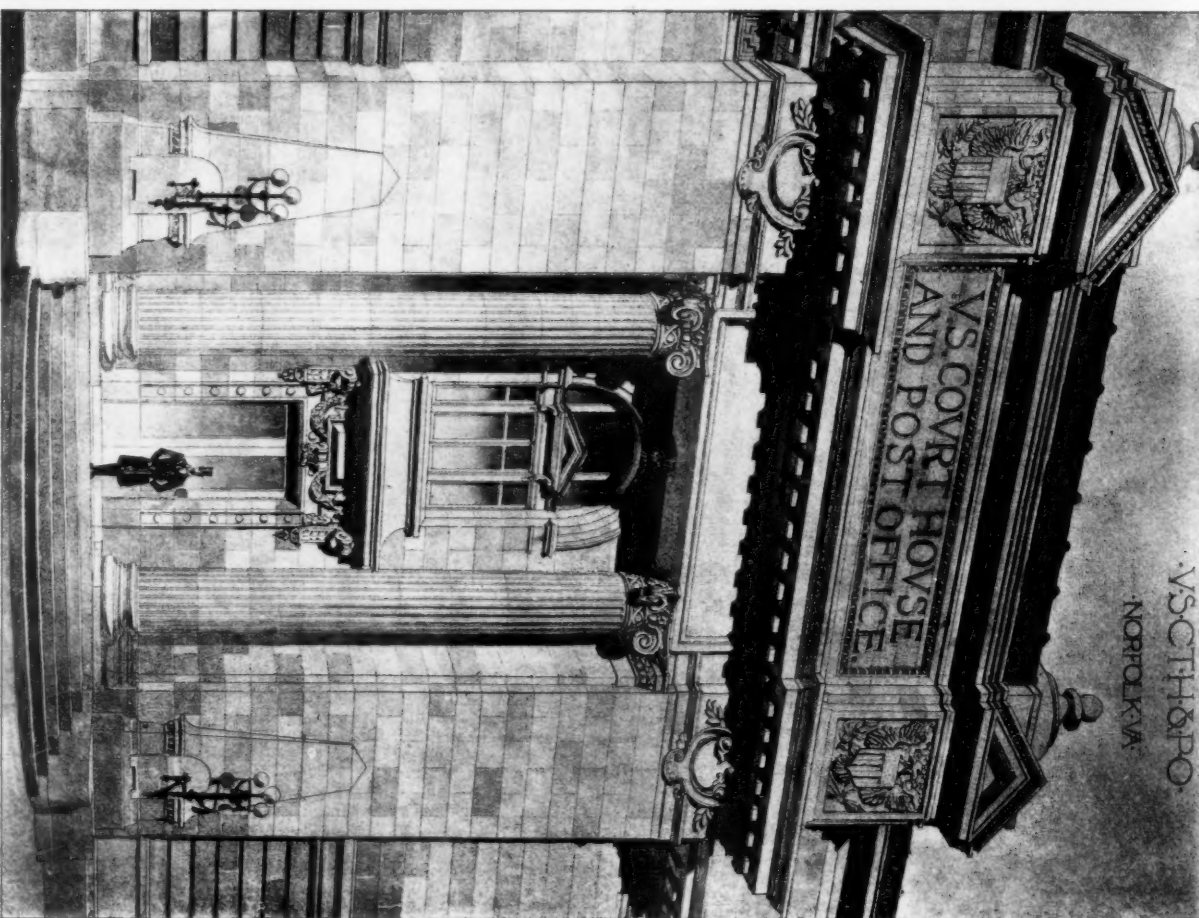
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PERSPECTIVE VIEW OF MAIN ENTRANCE.

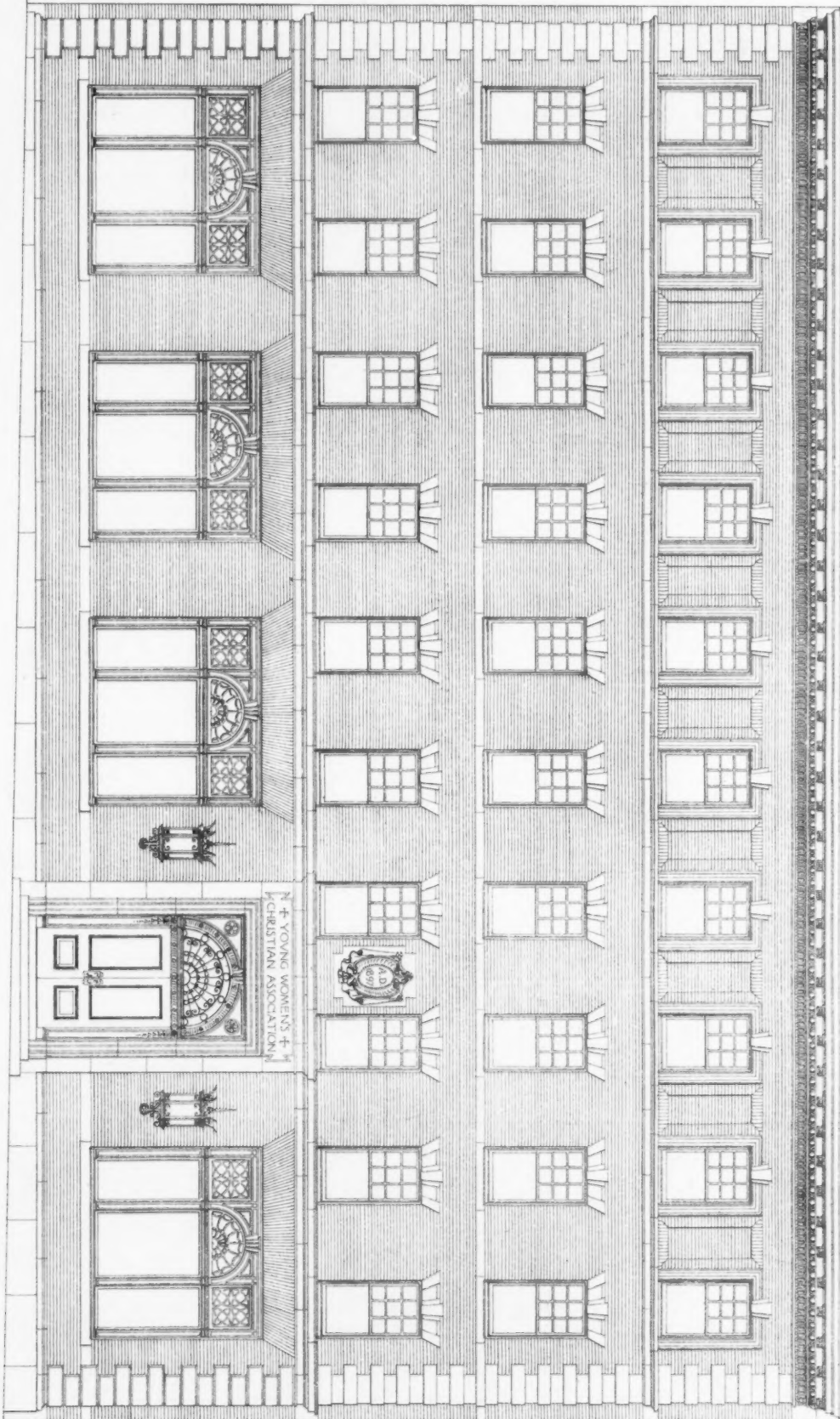


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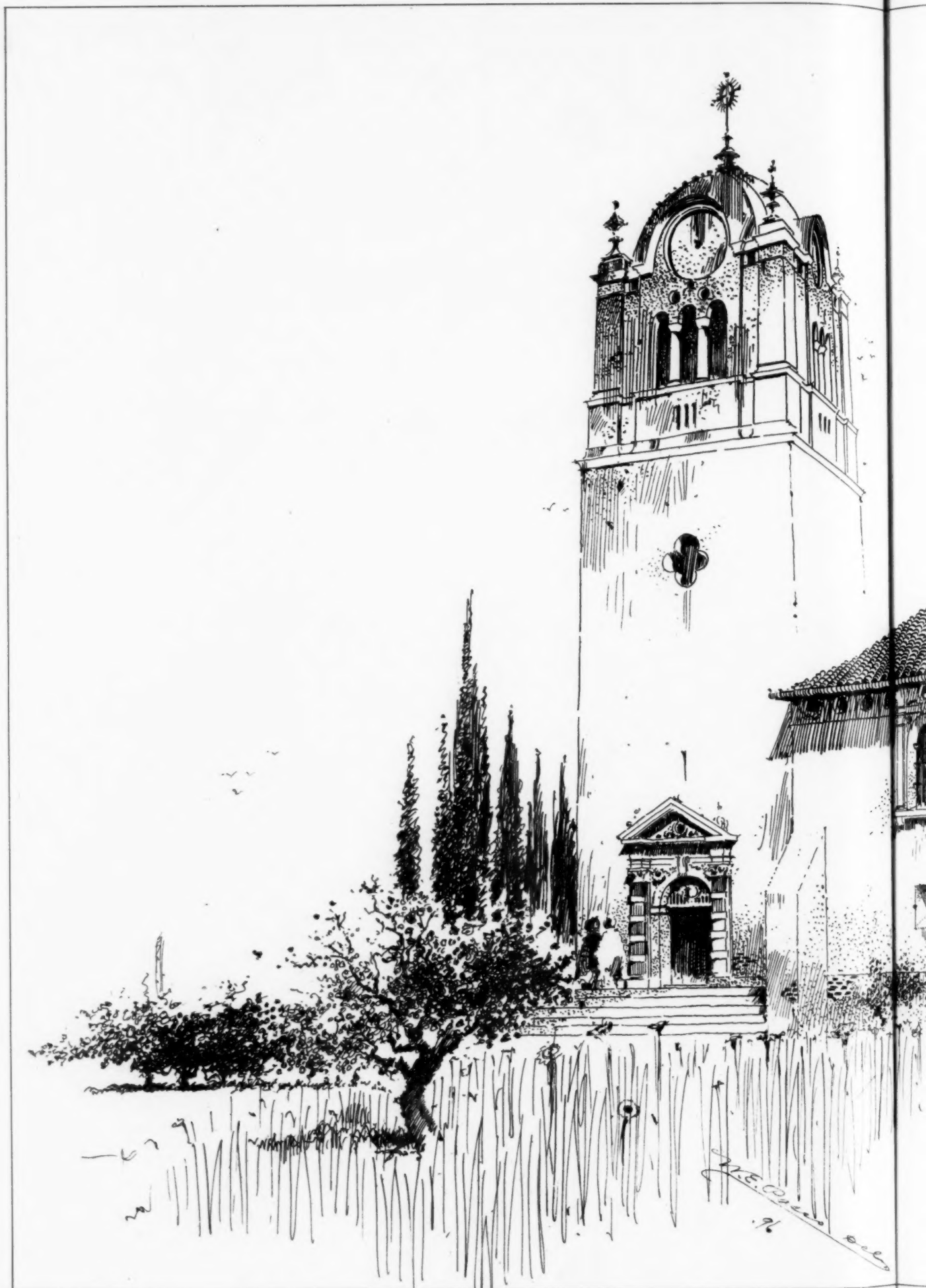
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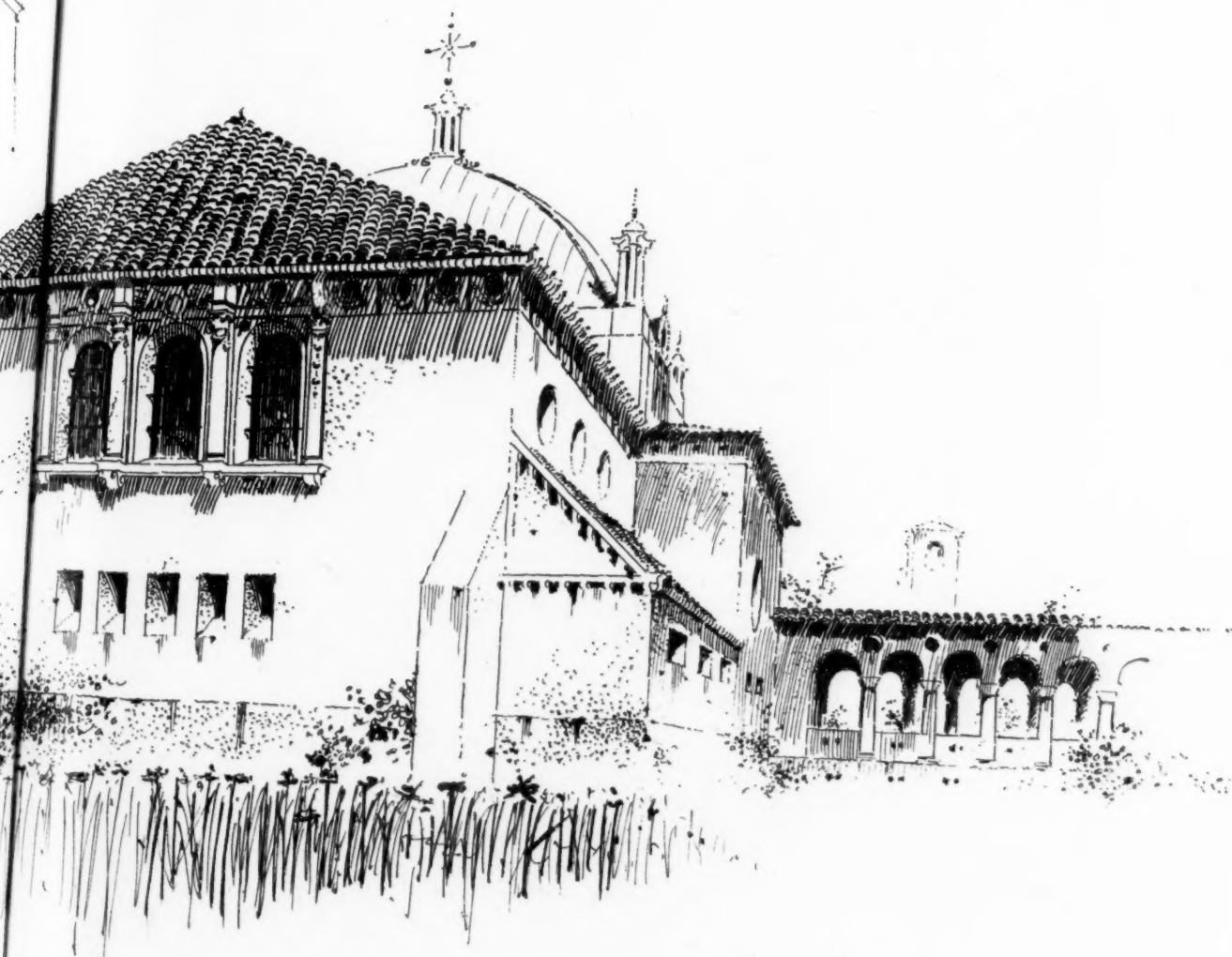
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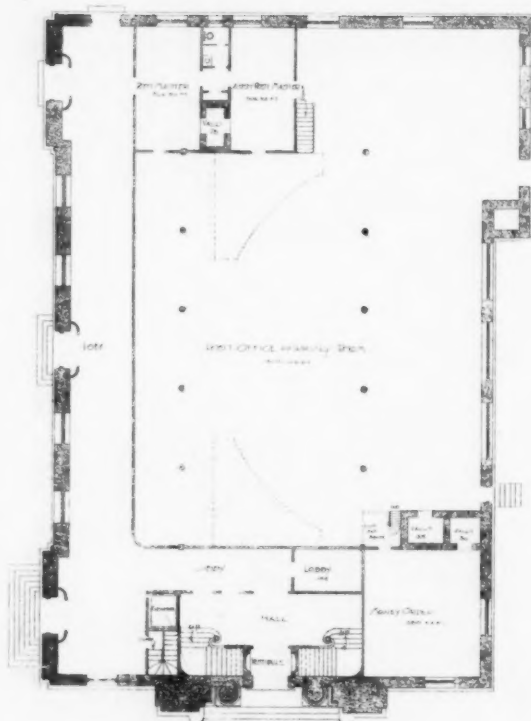
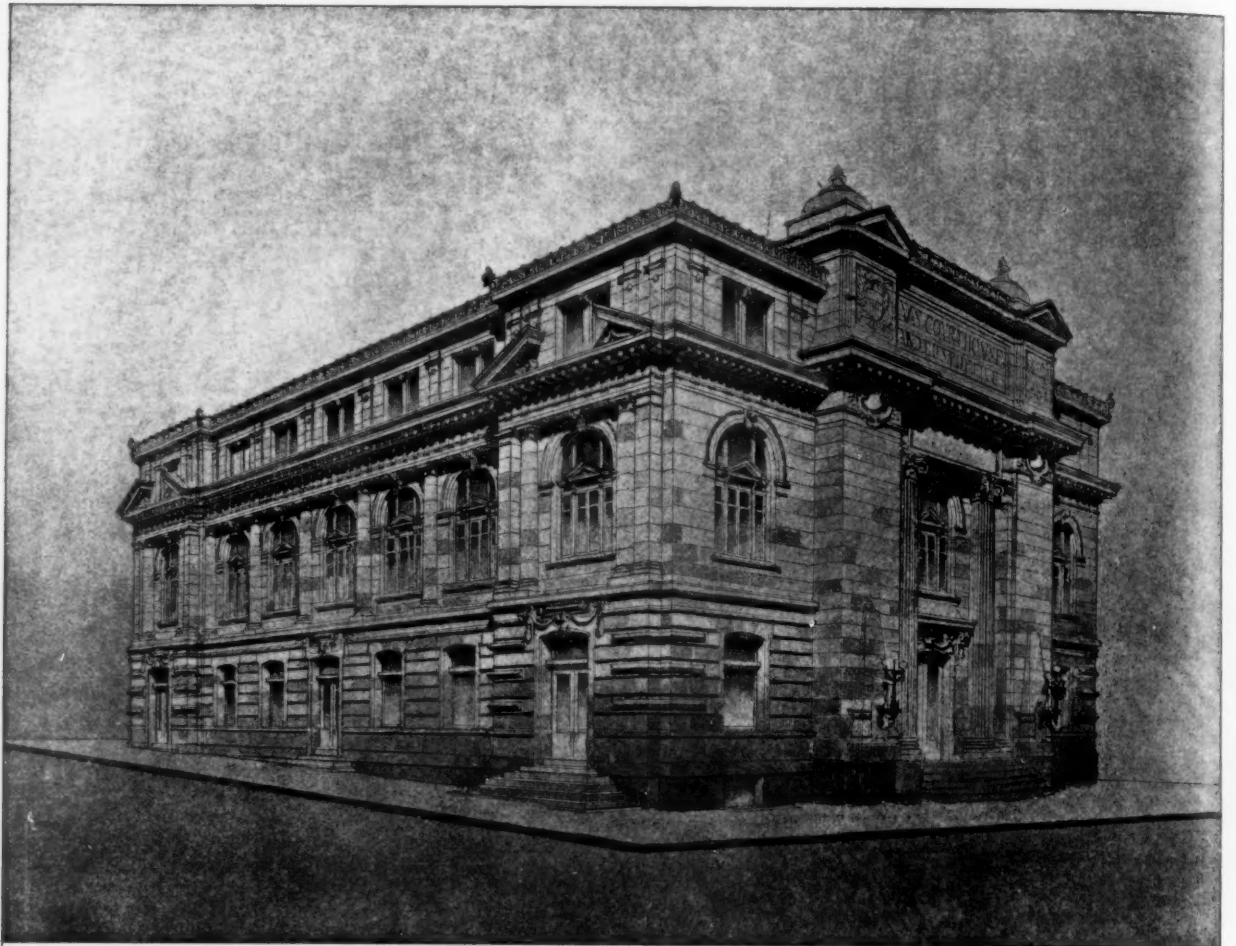
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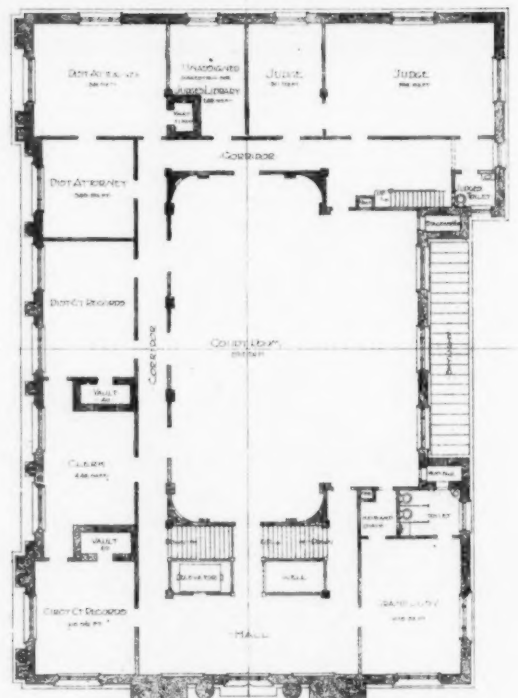


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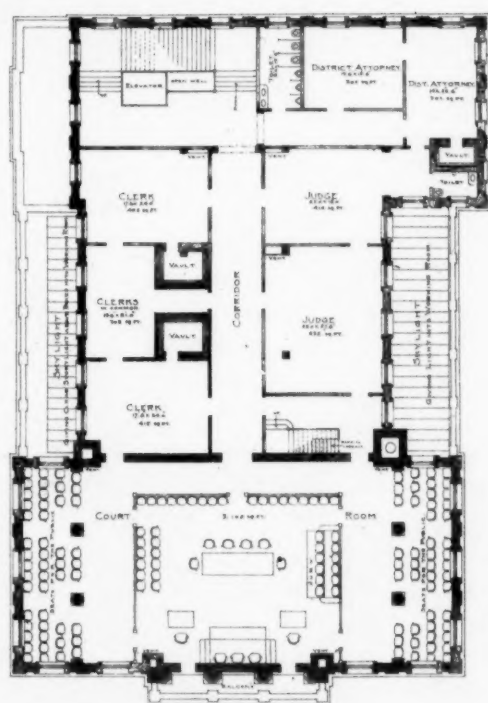
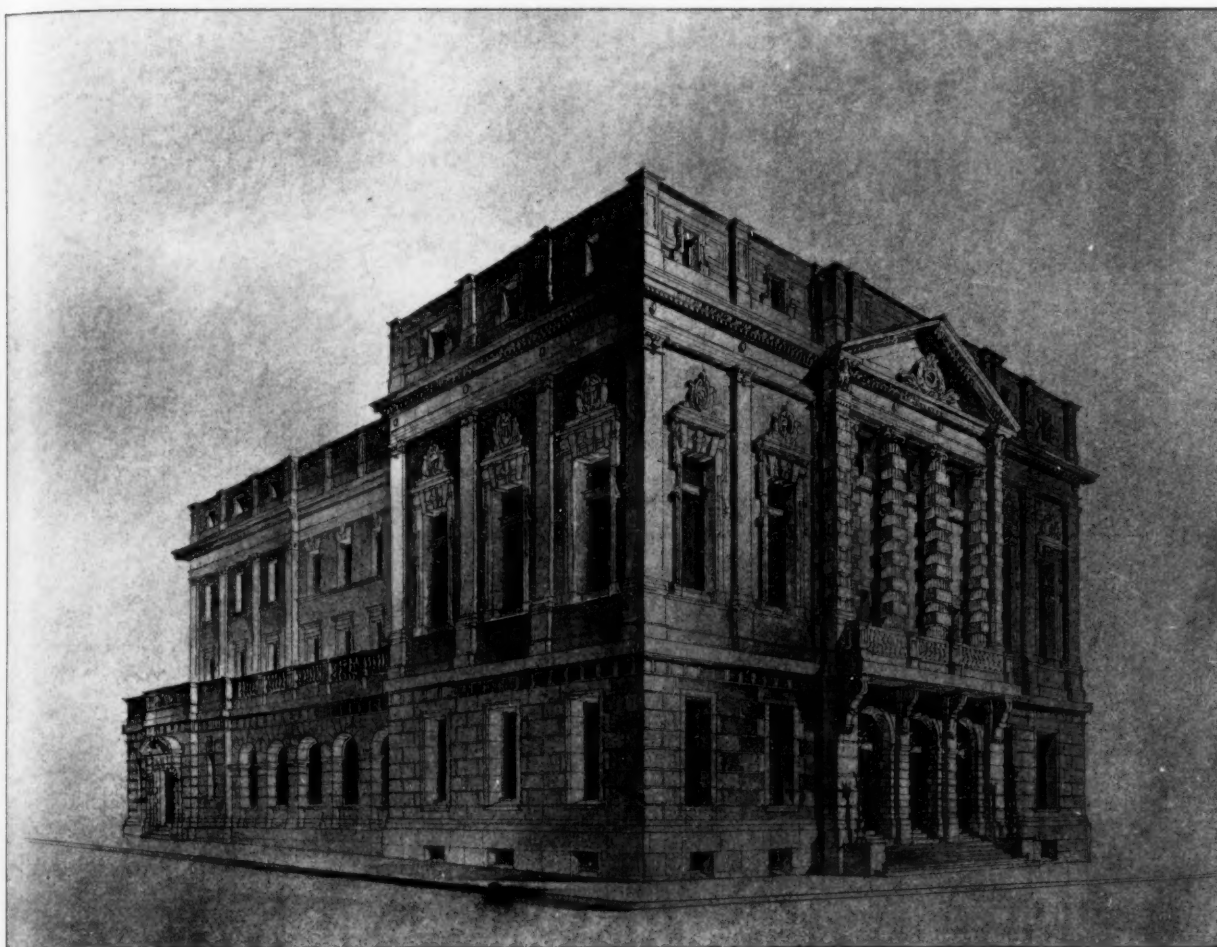


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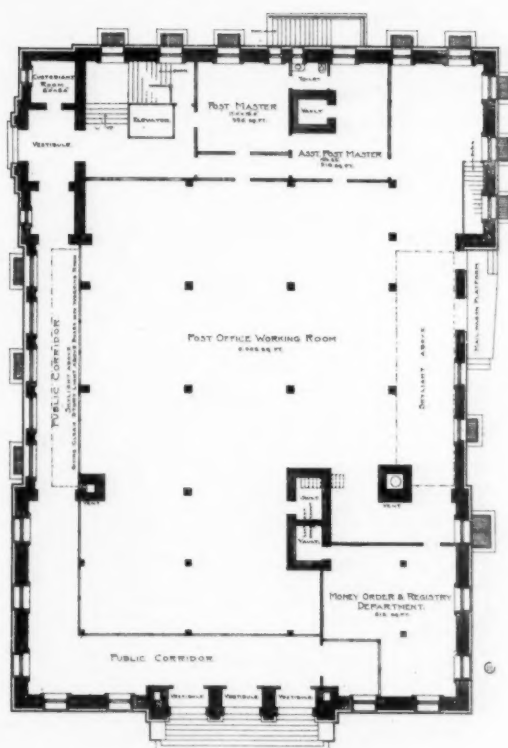
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