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A VERY important petition has been filed in the Superior Court of Illinois, by the firm of Winslow Brothers, of Chicago. This firm has a contract for supplying ornamental ironwork in the new Lakeside Building. A general strike of all the building-trades has been ordered on this structure, and the petition prays for injunctions against Mr. Leiter, the owner of the property, to restrain him from cancelling his contract with the petitioners in consequence of the delay caused by the strike; and against the Building Trades' Council, and the Architectural Iron-Workers Union, to restrain them from issuing orders preventing the union men from working, and from interfering with non-union workmen, by force, threats or otherwise. Of course, so important a petition as this is not likely to be finally decided upon in the Superior Court, and it may be long before an authoritative ruling is given, but the proceedings will be watched with much interest.

SO far as Mr. Leiter is concerned, it is safe to predict that the petition will be dismissed. If a man agrees, for proper consideration, to do anything for another man, nothing but superior force can excuse him for failing to do it, and it is not likely that any court will consider a strike to be such "act of God" as would relieve any person of his obligations. It would, in fact, be a misfortune to the community to have such a view prevail, for it would shift upon innocent owners, without notice, the loss and burden of building-disputes, and would render it easy for contractors, either with or without collusion with their men, to perpetrate enormous frauds upon their employers. Whether the Building Trades' Council can be restrained from ordering "sympathetic strikes," and therefore injuring persons entirely innocent of any connection with the quarrel which the Council has taken up, is a different matter. The courts are, in this country, very unwilling to interfere with any man's right to join whatever associations he pleases, and submit himself to any regulations that he may approve; but where the regulations of an association provide for combined action which must necessarily be injurious to innocent persons, it becomes a question how far the liberties of two parties must be restrained, to prevent them from encroaching upon one another. The courts of this country have generally held that every man is entitled to say for whom he will work, and, in the absence of a definite contract, to leave his employment at any time, whether he thereby causes inconvenience to his employer or not, and the distinction between the application of this rule and the formation of conspiracies against certain employers is not easily traced; but the right of every man to work for whom he wishes carries with it the duty of allowing every other man to do the same; and there are signs that, as this principle gains acceptance, the interference of unions with non-union men will be more and more sternly repressed, by statutes as well as by court decisions.

IN England, where trades-union tyranny has run riot for so many years, the reaction against it seems to be even more decided than it is here, and employers have, of late, received from the courts a consideration which they would hardly get in this country. A manufacturer recently had trouble with the union to which his men belonged, and a strike was ordered. He sent to a distance for new men, but they were met at the railway-station by committees of the union, and persuaded to go back again, or their fare was paid to other places; and those who resisted these persuasions were labored with in their new position, and some of them induced to give up their employment. The manufacturer applied to the courts for an injunction to restrain the strikers from meeting his new men at the station, or arguing with them subsequently, and was partially successful. It was not alleged that violence or threats of violence were employed, and the strikers claimed that all they did was to describe to the newcomers the condition of affairs. The judge said that if they had done no more than this they would have been acting within their right, but he thought that the evidence showed that they used undue persuasion to induce the new men to break their contracts with their employer, and he ordered an injunction to issue on this complaint. In regard to the proceedings of the strikers after the new men had begun work, however, he did not think that improper conduct had been shown, and refused the other injunction desired. The distinction is not very clear, and both parties seem to have been dissatisfied with the decision, so that the case is likely to be carried to a higher court, where, we hope, the judicial view of the matter will be expounded at length.

THE New York Architectural League has made the suggestion that the old building of the Academy of Design, which is to be torn down this summer, should be presented to the city, and rebuilt in the Central Park, as a pleasure-house for the public. We do not favor the erection of any more buildings in the Central Park, which has far too many of them already, but it certainly seems a pity that the Academy should not be preserved. The newspapers speak of it as having been "modelled after the Doge's Palace, in Venice," but the fact is that it was not modelled after anything, and in this consists its principal merit. While its bands and voussoirs of black-and-white marble, and its angle-columns, give it something of a Venetian flavor, there is no building in this country more directly designed from the plan, or planned with a more straightforward attention to the requirements of the case, and in this lies its principal attraction. Another of its great merits is in the variety and interest of its sculptured decoration. It used to be said in New York, we do not know with how much truth, that the capitals and string-courses were designed by the individual stone-carvers, the architect bringing them natural leaves and flowers, and instructing them in the principles of conventionalization; and, although coarsely and rudely executed, in comparison with the splendid stone-carving now to be seen in New York, they still bear the impress of the interest and affection with which they were done. In fact, the whole building is a piece of architectural poetry, such as is hardly to be found anywhere else in this country. The older men in the profession will remember that the designing of the Academy building was done in the time of the prosperity of the Truth in Art Society, of which its architect was an earnest member. The society has long disappeared, and people laugh and shrug their shoulders over it and its principles; but the building still stands in which one man who believed in those principles put his whole heart, and neither principles nor heart are so conspicuous in American architecture that we can afford to throw away the most noted example of them that we possess.

THE Fellowship of the Pennsylvania Academy of the Fine-Arts has issued a circular, in which it announces that a committee has been appointed, to form, so far as the courtesy of private owners may make it possible, an index to

what it calls the art-resources of Philadelphia, including both public and private collections, so that students may know where to find all, or nearly all, the works of art which are numerous in Philadelphia, although scattered among many owners. The committee proposes to include paintings, in oil and water-color, pastels, etchings, prints and lithographs; sculpture, including casts, bronzes, medals, coins and engraved gems; Oriental objects having an artistic character; illuminated manuscripts, books and other objects of the sort. An excellent committee has been appointed, consisting of Miss Emily Sartain, and Messrs. Henry J. Thouron, Charles H. Stephens, William H. Miller and Charles Augustus Davis. There can be no doubt of the value of such an index as is proposed, not only to students, whose opportunities for observation and improvement will be greatly increased, but to the history of art, and the example of Philadelphia might well be imitated elsewhere; but some curious questions will come up for study in the course of the committee's labors. While street pedlars in Philadelphia do not offer for sale what they claim to be original paintings by Raphael and Titian, as they are said to do in San Francisco, great numbers of fictitious Corots and Michels, and Daubignys and Rousseaus are sold in the Eastern States through the auction-rooms, and even experienced collectors are often imposed upon in Europe, so that the committee must occasionally be brought face-to-face with the alternative of giving mortal offence to a man who has paid a high price for a spurious work, or admitting to its index a picture which has no right to a place there. In the end, the effect of applying this sort of criticism to private collections will unquestionably be beneficial, but the process will be unpleasant.

AN appropriation of twenty-five thousand dollars of public money has been made for the erection of a monument on Dorchester Heights, in South Boston, to commemorate the evacuation of Boston by the British in 1775, a movement, the motive for which was due in great part to the fact that the Continental rebels had established a battery in this commanding position. The site of the battery has been kept open ever since, and furnishes an excellent position for a monument devoted to Revolutionary history, particularly as it is visible for many miles around. A committee has been appointed to carry out the scheme, and it is probable that designs will be called for in competition. Twenty-five thousand dollars will not pay for a very imposing or elaborate affair, but the merit of the artist who can produce a good effect with that sum will be so much the greater.

THE newspapers say that a scheme is on foot for erecting a great monument to President Lincoln, either in the cemetery at Springfield, Illinois, where he is buried, or in the middle of the town, where he lived most of his life; or, possibly, in Chicago. The Illinois Legislature is said to contemplate the appropriation of half a million dollars for the purpose, and contributions would undoubtedly be received from other sources. Lincoln was born in 1809, and it is proposed to take time enough to study the designs thoroughly, and to have the monument unveiled on the one hundredth anniversary of the birth of the great President.

MR. CAULDWELL, the Director of the Fine-Arts section of the United States Commission to the Paris Exposition of next year, has made known informally the plan of the Commission in regard to the exhibit of American pictures. Fortunately for the credit of American art, the space available is limited, and not more than two hundred and fifty pictures can be shown; but Mr. Cauldwell apparently believes that, while the great majority of American pictures are bad, some of them are surpassingly good, and by picking out the best, and putting them together, he thinks he can surprise the artistic world, and we believe that every one who has followed the development of American painting will agree with him. The Commission proposes to appoint two juries—one for the East, and the other for the West—and to have a careful selection made next winter from the material offered, which may include any work executed by Americans in America within the last ten years.

WHAT is called "wireless telegraphy," although wires are just as necessary for it as for any other kind, has been brought into general notice of late, by the successful use of the system in making communication across the English Channel, as well as in signalling to ships at sea; and it is interesting to learn that an expert like Prof. Silvanus P. Thompson, as reported in the *British Architect*, considers it entirely practicable to send messages across the Atlantic without wires. He says that the accidental grounding of a wire from an electric-light dynamo in London has been perceived in telegraph instruments in Paris; and he himself once undertook to establish communication between England and South Africa by means of suitable circuits in each country, if fifty thousand dollars should be appropriated for wires and instruments, but the proposition was rejected as "too visionary." Considering the extreme sensitiveness of the telephone to electrical movements, it is singular that this should not have been, as yet, utilized for the wireless telegraphy. Telegraph signals are said to have been read over a telephone, the wire from which was four miles, at the nearest point, from the telegraph wire; and, while no method of selecting signals, by differences of wave-length, seems as yet to be applicable to the telephone, there is no reason why a suitable one should not be invented.

THE new Act of the Legislature of Minnesota, establishing forest reserves, from which so much is to be hoped, contains some curious provisions. By the Act, a State Forestry Board is established, of admirable composition, which is given very extensive powers over all public forest lands, but with a very meagre allowance of money for carrying out its plans. This defect in the plan is, however, likely to be corrected as time shows the value of the work that the Board has in charge, and, meanwhile, a novel device is employed for increasing the public forest territory. In Minnesota, even more than elsewhere in this country, vast tracts of land, which have been stripped of their trees, or exhausted by injudicious cultivation, are lying waste, the owners not even paying the taxes on them. In many cases, the town or county is the virtual owner, through sales, for non-payment of taxes, of such tracts, but, to secure the good-will of the original owner, it is provided that any person may convey to the Forestry Board, by quit-claim deed, any land on which there are no incumbrances except tax-liens, as well as land entirely unincumbered, and that such land, if accepted, shall be added forever to the forest reserve of the State, but that the income from it, after it becomes productive, shall be divided into three parts, one of which shall be retained by the Forestry Board, while the remaining two-thirds shall be paid to such educational institution of the State as the grantor shall designate, either in his original deed, or in a subsequent recorded instrument. As the members of the Forestry Board are nearly all representatives of the State colleges or learned societies, this provision has a threefold effect. Not only does it tempt the owner of land now worthless to immortalize himself without expense as a benefactor of learning, at the same time that he relieves himself of a heavy burden of taxes, but it provides what, with reasonably good management, is sure, in the future, to form a solid and ample endowment for the schools and colleges of the State, and, perhaps not least, it offers a motive to the financial committees of the latter to keep an eye on their representatives in the Board, to see that the property in which they have so large an interest is managed economically and wisely.

ANOTHER little tempest has broken out among the German artists over the decoration of the new Parliament House in Berlin. A great deal of money has been appropriated for this work, about two hundred and fifty thousand dollars having already been spent on painting, while the ceiling alone of the assembly-room is to cost one hundred and fifty thousand. It seems that the Parliament has appointed a Building Committee, retaining Professor Wallot, the architect of the building, to supervise the work of decoration, at a salary of twenty-five hundred dollars a year. Herr Wallot, who now lives in Dresden, but makes regular visits to Berlin, ordered a picture for the building from a distinguished artist in Munich. When the picture arrived, the Building Committee rejected it, calling it a daub. Professor Wallot tried in vain to point out that a decorative painting, intended to be looked at from a long distance, could not be judged by a near view, except by experts; but the Building Committee insisted, and the architect finally consented to ask the painter to make some alterations. Meanwhile, the German artists, who do not like being called hard names in public places, have made vigorous protests against the way in which some of them have been treated, and Professor Wallot is said to have resigned all connection with the building.

THE CATHEDRAL OF MORELIA, MEXICO.

THE magnitude of the improvements completed in the artistic Cathedral of Morelia is such that it is believed to be opportune, in view of the termination of the work, to inform the public as to their extent, what they have cost, and as to the sumptuous inauguration that has lately taken place. The City of Guallangarco, afterwards Valladolid, and to-day Morelia, was founded by order of the viceroy Don Antonio de Mendoza, in the year 1540. The Emperor Charles V granted to it a coat-of-arms, in which was represented three portraits — that of the grantor, that of Maximilian, and that of Don Philip II.

The Cathedral of Michoacan was founded in Zintzuzan, capital of the ancient Tarascans Empire, in the year 1539; and the following year Sr. Don Vasco de Quiroga removed it to Patzcuaro, and later, on the 9th of November, 1579, Fray Juan de Medina de Rincon fixed the episcopal see in Valladolid, selecting for the service of the cathedral the church known to-day by the name of La Cruz, until the cathedral as it now stands should be erected.

The construction of the new cathedral was begun during the year 1640, by means of the supplies furnished by the "factories fund," the donations of the citizens, and with some aid from the kings. This work was finished in the year 1744.

The church is situated in the midst of the *plazuela* of the martyrs, with its principal façade toward the north. The façade is not designed in conformity with any of the recognized orders. In the lower story are to be found three portals of antique style. All this façade of the cathedral is adorned with rich carvings in high-relief and of mixed styles. In the upper part of the façade, corresponding to the central portal, is a magnificent window containing the portrait of His Holiness Leo XIII. The portico, which is very spacious, is enclosed by artistic and elegant screens of wrought-iron, valued at more than 40,000 *pesos*.

At the corners of the façade are two beautiful towers that extend majestically to a height of sixty-two metres above the level of the site. These towers contain eight small bells and seven of lesser size, all of fine tone and great sonorousness. All these bells were cast at the end of the last century.

The choir is in the centre of the main nave, a location that seems to us in very bad taste, as it thus deprives a great number of the worshippers of the contemplation, in their details, of the majesty and beauty of the great religious ceremonies.

Archbishop Arciga, upon his return from Europe, conceived the restoration of the cathedral, and after some mishaps and difficulties succeeded in putting his design into effect. The intelligent artist, Sr. Don Claudio Molina, was commissioned with the work. He began his labors by replacing the ancient floor with an elegant and artistic pavement of Venetian mosaic-work with a Grecian-fret border, the whole producing a charming and harmonious effect. This tiling was the work of Italian artists.

The interior decorations are of great artistic magnificence, and to describe them, though somewhat meagerly, we will mention the special features of the interior of the "temple" in which the hand of the artist has shown its inspiration and good taste.

The interior of the temple is divided into three grand naves, that in the centre being seven metres higher than the laterals. These naves are vaulted in the Tuscan style. The ribs of the vaulting are decorated with "dulled" burnished gold, somewhat subdued in tone. The ornamentation of the vault of the central nave is cream-colored; that of the laterals is marine-blue with filigree ornamentation, showing great delicacy and inspiration. The naves are separated by well-proportioned piers, decorated with different *motifs* imitating candelabra in low relief, and in subdued colors; in the capital of each pier is a grotesque which sustains an elegant bronze candelabrum, entirely new, with thirty-six and forty-eight lights alternately.

The Cathedral, Morelia, Mexico.

The spherical cupola, in the Tuscan style, rises beautifully and majestically in the centre. Its covering is composed of greater and lesser vaults, and it is lighted by four stained-glass windows imported from Bavaria and containing historical figures, viz, "The Transfiguration of Jesus," "The Annunciation," and the apostles Peter and Paul. These windows are most richly and perfectly executed, and cost $6,000 in gold.

On the pendentives of the cupola are painted the four evangelists, Matthew, Mark, Luke and John, in medallions in low-relief and imitating porcelain.

The high-altar forms a *ciprés* sustained by eight columns of scagliola imitating marble, decorated and gilded in soft tones of coloring, and the table is of Carrara marble. The gilding of the cupola of the *ciprés* is in imitation of engravings, showing on the front the escutcheon of the archdiocese sustained by two genii, the whole being in the style of the Renaissance. The presbytery is surrounded by a series of columns with square bases and spiral ornamentation, all of Carrara marble. This work was done by Mexican and Italian artisans.

At the sides of the *ciprés* in the superior portion there are twenty-four seats of the finest wood, which are intended for the use of the chapter, and eight in the lower part for the chaplains. The carving of these seats represents historical figures in low-relief in the style of

the sixteenth century. Behind the *ciprés* is a groundwork of cherry-colored silk with gold decorations.

The carving of the organ-cases is in representation of historical figures. It is of true artistic merit and in the style of the seventeenth century. The strength and quality of tone of these organs, which cost some $100,000, is truly magnificent; they were transferred to the sides of the *ciprés* from their former location.

The pulpit with its stairway is located on the fourth pier of the central nave. Its decorations are in imitation of cast gold. The location of the pulpit is suited to the laws of acoustics.

The throne of the altar is of massive silver with touches of gild-

ing. The ornamentation is in high-relief and in the style of the fifteenth and seventeenth centuries. Its weight is 690 kilogrammes. It was the gift of the bishop, Don Juan de Ootegay Montañey. The entire work is in the most excellent taste and the value is estimated by competent jewellers at $50,000.

The sanctuary of the high-altar is of silver and gold and in harmony with the style of the throne. Its value is more than $30,000.

At the beginning of the west lateral nave there are two chapels; the first gilded in Byzantine style, and the second in Neo-Grec. In the extreme upper portion of the same nave there is another chapel, decorated and gilded in divers styles; and the last chapel, located in the eastern nave, is decorated and gilded in the Byzantine style. All these chapels have new screens and gates of wrought-iron.

All the lateral altars have been newly made and their decorations and paintings are in various styles, the Byzantine and Greek being most pronounced.

The dressing-rooms, sacristy and chapter-house are decorated in Classic style with the exception of the chapter-house, which is in the

style of Louis XIV. The sacristy is hung with rich tapestry of damascene silk.

The cathedral has many reliquaries, but the most notable is one of 18-carat gold, the standard of which is an angel supporting the reliquary. The body of the sacred vessel is surrounded by a wreath studded with brilliants, emeralds and rubies of the purest water. The workmanship is very artistic and the value as estimated by jewellers is $50,000. There is likewise a service of wine-chalices and incense-vessels, etc., all of 18-carat gold and designed in excellent taste.

The metropolitan church possesses the richest of vestments, copes, deacons' robes, chasubles, albs, amices and surplices, all ornamented in the most artistic manner with costly Brussels lace.

J. W. Perkins.

EXHIBITION OF THE CHICAGO ARCHITECTURAL CLUB. — THE HEARST ART COMMISSION BILL. — ATTENDANCE AT THE LARGER ART-SCHOOLS. — THE OUTLOOK FOR THE SEASON.

THE Chicago Architectural Club is at the date of writing of this letter holding its twelfth annual exhibition at the Art Institute. The rooms as far as visitors are concerned present a most striking contrast to those which held the Tissot collection, or even the works of the Chicago or Western Society of artists. A few rather bored-looking people walk through the rooms and a still smaller number make the rounds with any apparent interest. The exhibition fills three or four large galleries and takes up some space in one of the corridors, and, apart from its size, has somewhat impressive characteristics. There is the usual work from the schools, of the least possible interest to the ordinary visitor, but full of worth and benefit for the student. Columbia's showing is not as strong as in some previous years, while Illinois comes out better than heretofore. The work from this latter university is so well mounted that it looks at its very best on the walls, though in itself having often less merit than that from some of the other schools.

One very attrative exhibit is the small fountain — not the design but the actual thing itself — destined for the court-house at South Bend, Indiana, by Shepley, Rutan & Coolidge. It is of bright bronze, of broad, spreading shape — a central column of beautifully designed acanthus leaves rising from the main basin surmounted by a smaller basin ornamented with the heads of dolphins. Not only is the design good, but the execution is excellent, sharp and clear. Tritons blowing their conch horns and an occasional shell introduced into the refined and unobtrusive design carry out and suggest the object of the composition.

Among perspectives and elevations much that is very good is shown.

Wilson Eyre takes up some space with his extraordinary productions. One is tempted to ask "For what does Mr. Eyre make his perspectives?" Certainly not to let his clients know how their finished work will look. He has, among other things, a formal garden with some barn or building at the rear, and nothing could be farther from nature than this, both in drawing and in coloring. Such a view as the drawing would indicate could be obtained only if the client could take up a position in some conveniently anchored balloon or on some neighboring gable; and as for such dark and gloomy coloring as the gentleman uses, it could only be seen in the midst of some severe electrical storm, when one is not supposed generally to be enjoying the quiet beauty of a garden, or perhaps in the midst of some little disturbance such as was so disastrous to Pompeii some eighteen hundred years ago. Birch Burdette Long, with a different kind of coloring but with a similar laudable desire apparently to hide the true and actual effect of what he is trying to paint, gives us a good example of what he can do, in the perspective numbered 312, entitled "Saint Fagan's Castle."

Diametrically opposed to this kind of work is that numbered 164 in the catalogue, the University Hospital at Lake Forest, from the office of Frost & Granger. Similar in character is 161 and 161A, the Protestant Episcopal Cathedral, D. C., from the office of Ernest Flagg, 264 from the Philadelphia firm, Kennedy, Hays & Kelsey, 367 a design for the Spencer Memorial Library at Geneva, Ohio, by R. C. Spencer, Jr., and a charming group from the firm of Wilson & Marshall. Mr. Buck has excellent perspectives for various firms, and, as usual, his rendering is not only artistic but legitimate. A well-designed Gothic church from the office of W. A. Otis is most pleasingly put upon paper.

Aside from the matter of rendering, but as a question of design, if one wants a good rousing monstrosity, one need not hunt far or long for it when one is in the room with the elevation for the Montgomery Ward Building. The structure is ostensibly a ten or eleven storied one, coming in nicely within the limit of the ordinance for high buildings, but in the centre of the façade rises a tower about forty feet square, with six or seven stories more above the cornice. These seven stories have their height almost doubled by the addition of an extinguisher-shaped composition surmounted with an apparently Classic arch or kiosk, bearing aloft a draped female figure, sacred perhaps to the millinery interests.

It is encouraging to one's belief in the growing appreciation of things architectural to see the display of post-offices from the office of the Supervising Architect of the Treasury Department at Washington. Such work as Mr. Taylor shows here it would have been impossible to have found as coming from a government office in this country fifteen years ago, and the fact that naval architecture makes a small exhibit points to another pertinent fact. Akin to the work of the Supervising Architect is that of our local school-architect, Mr. Mundie, who took the place of Mr. Patton, retired. Mr. Mundie shows his design for the North Division High School, a pleasing brick structure with high Colonial entrance or portico.

A very attractive group of little perspectives is the houses of the artist-colony at Oregon, Illinois, by Pond & Pond.

Two curious compositions are the two and one thousand dollar prize design for the Luxfer Prism competition, for a windowless structure in which to use this peculiar product. One design, the first-prize one, is of a large arcade lined with shops. The floor of the arcade is of paving-stones of Luxfer prisms, and underneath this light and cosy market is a subway for vehicles, of course lighted throug the paving-stones and roof above.

The second prize is not nearly of so utilitarian a nature, being a fantastic glass tower, in the drawing not without a certain dignity of proportion.

There is in the exhibition a good deal of decorative design, some of the most charming being Mrs. Dwight H. Perkins's panels, illustrating nursery-tales and meant for the decoration of a child's room.

Pennel's delightful pen-and-inks are here to charm us, as well as some other delightful architectural drawings exhibited by the Century Company.

It would seem highly probable that comparatively few people, right in the very heart of Chicago, are aware of a bill, which has reached its third reading in the House of Representatives, which is to provide an Art Commission for Illinois cities. This bill, which is known as the Hearst Bill, is similar, it is said, to those already in operation in New York and Massachusetts, and which, though it might be productive of good, makes one shudder at its possibilities of evil. Its object is to place the artistic adornment of cities in the hands of those presumably competent to judge of such things. But certainly here a mighty "if" steps in, the *if* they are competent. Think of the works of art that might be elected by some bodies politic, and the glorious possibilities of such selections! No city shall be forced to have such a commission, but, should it elect to do so, the commission will consist of the mayor, the president or chief officer of the principal art-institute, or similar organization, if any, the presidents of park boards, if any, and three other members, whom the mayor shall appoint, one to be a painter, one a sculptor and one an architect. The bill further provides that —

"Hereafter no work of art shall become the property of such city, by purchase, gift or otherwise, unless such work of art, or a design of the same, together with a statement of the proposed location of such work of art, shall first have been submitted to and approved by the commission; nor shall such work of art, until so approved, be erected or placed in or upon, or allowed to extend over or upon, any street, avenue, public ground," etc.

"The term 'work of art' as used in this connection shall apply to and include paintings, mural decoration, stained-glass, bas-reliefs or other sculptures, ornaments, fountains, images or other structures of a permanent character intended for ornament or commemoration."

A saving clause in the bill seems to be that the commission shall serve without compensation. There certainly will not be a general rush by the greedy boodler for any such position. Such a commission, of course, might do much towards a higher standard of art. Certainly, directed by the spirit which pervades our Art Institute, it could not help being a power working for good in the community. People are beginning to feel that anything that has its foundation or source in our Art Institute must have in it a strong element of education in the right way. The growth of the institution to the place which it occupies in the heart of the people, as well as the place which it covers on the Lake Front, is really quite remarkable. It is only when comparing it with similar institutions of the country that one realizes how phenomenal has been the growth. In all its various deparments the museum of the Institute stands only second to the Metropolitan Museum. This, alone, in so young an institution, is surprising; but it is really in its Art School that the Chicago Art Institute is so surprising. Equipped with a fine corps of teachers, it is a strong influence in art education for this part of the country, and its large number of scholars testifies to the appreciation of this influence. Compared with some of the other well-known art-schools, its size will doubtless be a surprise. The number of students last year were, at Cooper Institute, 250; Academy of Design (New York), 250; New York Art School (W. M. Chase), 285; Art Student's League (New York), 988; Cincinnati Museum Fine Arts, 475; Corcoran Art School, 250; Pennsylvania Academy Fine Arts, 375; Boston Museum Fine Arts, 275; St. Louis Museum Fine Arts, 300; Art Institute (Chicago), 1,803.

With the opening of spring matters in architects' offices are assuming a much more cheerful aspect than they have for several years past. Extra T-squares are being taken down and dusted and, uninfluenced by our present unpleasantness, the demand for Manila paper is greater than it has been for some time past. Chicago has not reached any speculative stage in building operations yet. Stocks and bonds are good enough for most people to invest their money in at present, but the good-time epoch seems to have reached the point where, if a family needs a new house, it gets it; citizens feel they can vote for new school-houses, and religious organizations feel warranted in erecting new churches. So, though the offices are not actually crowded with work, there is a healthy activity, and buildings are being put up for which there is need and demand.

THE PLANNING OF CONCERT-ROOMS.[1]

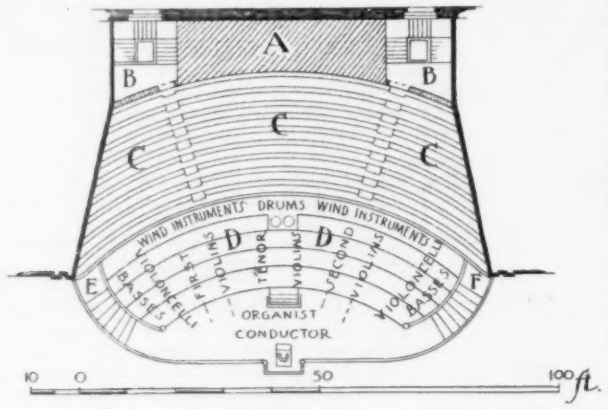
IN connection with the subject of the Soane Medallion, I propose to offer a few practical suggestions in regard to the planning of concert-rooms, more especially in respect to the organ and orchestra. But in the first place I would call attention to two points in regard to the general construction of concert-rooms: Where it is intended that such a room should be also available for balls or receptions, a flat floor is, of course, a necessity; but, for a room which is to be used as a concert-room only, the main floor should always be formed with a gradual slope upwards from front to back. A perfectly flat floor is always a bad position for hearing the performers who are on a raised platform. There has been no concert-room in London so good for hearing band and choral music on a large scale as the old Exeter Hall, where the line of seating was carried upwards in one unbroken slope to the back of the hall. Wagner adopted the same method in his Bayreuth theatre, which, though not a beautiful building architecturally, is a very practical one. Secondly, it should be borne in mind that all expanses of smooth, unbroken wall-surface, whether at the sides or end of the room, whether straight or curved on plan, are undesirable, as tending to produce a disturbing echo. The object in a concert-room is that the sound as first produced should reach the ears of the hearers with as little impediment as possible, but that, once heard, it should not be reflected back to them again. Wall spaces behind or at the side of the audience, therefore, should be architecturally treated so as to be broken up into facets, and thus to break up and distribute the echo in different directions, instead of permitting it to concentrate. This is especially the case in regard to the end-wall of the room, which if left flat will send back a very decided echo; while if built on a general curved plan it will be likely to focus an echo at the point which forms the centre of the curve.

To come now to the question of the orchestra and the organ. I observe that in the plan to which the medal has been awarded the seats for the chorus are shown arranged in straight lines at right angles to the axis of the house. That is a mistake. The usual arrangement of the seats in a segment of a circle is done for practical reasons. In the first place, it is desirable that the chorus-singers should stand so as all to look towards the conductor, so that they can see the movement of his baton by merely raising their eyes from the music, without turning the head. Secondly, it is desirable that the one side of the chorus should be able to hear the other side, which is impossible if they are all placed in a straight line — those at one side will then only hear themselves and their near neighbors.

[1] Read by H. Heathcote Statham [*F.*], and published in the *Journal of the Royal Institute of British Architects*.

If the two sides face partially towards each other they will hear each other, and that is an assistance in keeping time together. It is not necessary or desirable that the curve should be developed, as it occasionally has been, to a semicircle — in that case, part of the singers will not be singing sufficiently towards the audience: a segment of a circle meets all requirements best.

In more than one of the plans submitted the band is provided for on a level space at the foot of the chorus-seats. That would never do: the players at the back would not properly see the conductor, nor would he have sufficient control over them, nor would the instruments placed at the back be sufficiently heard by the audience. The band require to be raised on successive steps, like the chorus, but not of quite the same section. The chorus require two feet-six-inches width for each rank, from back to front, and a rise of about one foot three inches in each step, so that each rank may sing over the heads of those in front of them. The band steps should be considerably wider — say three feet two inches — and do not require so high a rise; we may say eight-inches rise for the lowest step, and two inches added to the rise for each successive step. The greater width is necessary because the bulk of the band are string-players, who require space to move their arms and their bows.



I have given here an imaginary plan of an orchestra for a concert-room of large size, arranged for a band of about one hundred (the numbers of the band vary a little, as extra instruments are sometimes required which are not ordinarily wanted), and for a chorus of four hundred. The side-walls are shown expanding from back to front, which should always be done in one way or another. They may be on a concave plan or a convex plan, or (as here) in straight lines, but they should always expand towards the auditorium. The space for the band might have been provided with one step less, and making it the same width as the chorus-stage; but it is better not to expand the band too much laterally, as the basses in a large band are nearly always divided, and placed at opposite sides, and as they have, nevertheless, to play together, they must not be separated by too great a distance. It would, perhaps, be better in this plan if another step had been added, and the width of the whole further reduced.

The approximate positions of the instruments are indicated on the plan. The basses, or *contrabassi*, and the violoncellos, are usually divided, as indicated, at each side of the orchestra; some conductors prefer to group the violoncellos more in the centre, but the arrangement here indicated is the more usual. The first violins, of which in a band of this size there would be fifteen or sixteen, are grouped to the left of the conductor, the second violins (of equal number) in a corresponding position on his right, and the tenor violins, or *violas*, in the centre. It will thus be seen that the principal portion of the orchestra is occupied by the stringed instruments. The wind instruments, which do not require the same degree of action in playing, take up much less room, and are all ranged on the top tier behind the strings; their average number may be taken as about seventeen, but allowance must be made for three or four more, as occasionally required.[1] The central portion of the top tier should be projected out, as shown, to make standing-room for the kettle-drums, two large copper bowls about two feet six inches, and two feet diameter. Another form of drum (the "bass-drum") may be wanted, but not always, and a temporary stand will do for that; but the kettle-drums are indispensable, and are always put in the same position, viz, in the centre of the top tier, directly facing the conductor — also for a practical reason, for the sound of the drum is so dominating that if the drummer is the least out of time he sets every one else wrong; therefore he is put where he has the most intimate relation with the conductor. And as this requirement is invariable, it is best to provide for it specially.

I have shown a dividing rail or fence between band and chorus. This is very seldom provided, but it is much better to have such a distinct line of demarcation. It is not well to have a couple of brass instruments, for instance, pushed up into one of the ranks of the chorus and putting the singers out by playing close to their ears; it is better to confine the band to its own quarters, allowing space enough (as is done here) for a little elasticity in numbers. The entrances for the solo performers and the band are shown at E and F respectively. On the plan adopted here it was necessary to have steps down, to get headway under the front of the chorus-stage, where the entry is situated. But it may be observed that it is much better, when circumstances admit of it, to have the access from the green-room to the platform entirely level — no steps anywhere; and especially no single step in an unexpected position, a stumble on which might spoil a player's nerve just as he was going before the audience.

Now we come to the important question of the organ. In the first place, none of the Soane competitors except one ("Olive Green") appear to have any notion of the space and height required for a modern concert-organ. An organ of the size which is required for the performance of modern music must occupy a space of some three hundred square feet, and weighs some twenty tons or upwards (without counting the bellows). It will thus be recognized that the idea that you can hang such an instrument on a wall wherever it is most out of the way is hardly a practical one. Moreover, it must have height enough to allow for a thirty-two-foot pipe above the level of the sound-board on which the pipes stand. It is only the pedal-pipes which run to this height, and where an organ is built from the floor, the pedal sound-board may be placed at a lower level than the others; but where the organ is built out as a projection carried on girders, the thirty-two-feet height is a necessity, allowing also three or four feet more for the "action" and the foot or "boot" of the pipe.

The scheme of carrying the organ out overhead has become fashionable lately, but it is anything but good for the effect of the instrument. The Queen's Hall organ, which is essentially a fine one, is ruined in its effect by that position, which in that case may be said to have been only a kind of makeshift to get space out of a totally inadequate orchestra plan. A large organ has far more effect when placed in a low situation and assisted by the resonance of the floor. If, however, the organ is built as a kind of promontory projecting into the chorus-seats there is the disadvantage that the compactness of the chorus is broken into, and the singers on each side of the organ are in a kind of nook by themselves, and not in a position to keep their place properly in the general effect. I consider, therefore, that the best solution of the problem is that which I have shown in this plan — to place the organ as the backing of the whole orchestra, utilizing the space at each side of it for the chorus staircases. These staircases would be covered in immediately above the doorway; the partitions might be architecturally connected with the organ-case design by a cornice run right across, and above that level the sides of the organ would stand free. The bellows, for an organ of this size, should be provided for in a lower story.

One word about the position of the organist. As long as organs could only be played by long wooden slips ("trackers") connecting the key with the wind-valve it was important to get the player near the organ, to reduce the length of the trackers and their tendency to lengthen and shorten with the changes of temperature. But now that pneumatic or electric action can be used there is no excuse for putting the player where he cannot hear the effect of the instrument, and (more especially) where he cannot hear its effect as combining with the band and chorus, when the organ is used to accompany them. In the present day the organ-player ought never to be put at this disadvantage both to himself and others; and I have shown the organ key-board where from henceforth it ought to be — placed in front of the band and facing the conductor's desk, so that the player can hear what he is doing, and can also see the conductor without the aid of a reflector; with the modern resources of mechanism there is no occasion for the player to face the instrument and turn his back on conductor and audience; he can sit facing the hall just as well as the other way, and it is, therefore, absurd to keep up, from mere habit, a disadvantage of position which is no longer necessary.

[1] The average complement of wind instruments to provide for is as follows: two flutes, two oboes, two clarionets, two bassoons, four horns, two trumpets, and three trombones. Occasionally there may be in addition a piccolo flute, a contrabassoon, a tuba, and four trumpets instead of two. The players of all these require no more than ordinary seat-room side by side, only not so close as to elbow each other; they cannot, for instance, be packed as closely as the chorus-singers. — H. H. S.

BOOKS AND PAPERS.

IT is with something of a shock that, on opening the latest important work[1] on Sanitary Engineering that has come under our notice, we find a long account of the Liernur system of sewage-removal, with details of the working, and the cost per head per annum — just as if this filthy and inadequate system, although, it is true, still in use, had not been discredited among sanitarians for twenty years; while, turning, for the latest information, to the chapter on apparatus, we are treated to descriptions of the pan-closet, with D-trap, the Jennings valve-closet, and other appliances which, in this country at least, have only an archæological interest; while only one syphon-closet is mentioned, and that only as a matter of hearsay; not one of the closets shown has a local vent, and nothing is said about the use of vitreous ware for closet-bowls — the greatest improvement that

[1] "*Sanitary Engineering*": A Practical Treatise on the Collection, Removal and Final Disposal of Sewage. By Col. E. C. S. Moore, R. E. With 524 illustrations and 70 plates. New York: Longmans, Green & Co. London: B. T. Batsford. 1898. Price $10.

has been made in this sort of apparatus for many years. Instead of these things, we find descriptions of the antiquated Underhay valve-closet, which "has been much used during the last five years," various "washout" closets, which "are in great demand," and other objects, which can still be studied, it is true, in Continental hotels, but have long gone out of favor with sanitary engineers and the enlightened public. It is, however, only fair to say that this conservatism in the description of available apparatus is not accompanied with any misapprehension as to their qualities on the part of the author, who comments very judiciously on the different patterns; and we may probably lay it to the natural slowness of the English to abandon old ideas, joined, perhaps, to the belief of the author that his book should treat of everything old and new that his readers would be likely to meet with.

In other respects the book has been kept well up to modern practice. Something might have been borrowed from American practice to amplify the article on "Sewage Disposal by Bacterification," but the theory is well stated, and some interesting facts given from English experience; and it is well enough to remember that the science of sewage purification by bacterial action is of very recent growth, and that its development is almost from month to month, so that a book can hardly be expected to give the very latest information in regard to it.

In one respect, however, American sanitarians will find much to interest them in the work. Although the American method of utilizing garbage by extraction with naphtha is totally ignored, not a word being said about it; an excellent account is given of the attempts at using house-refuse as a fuel, which have attracted most attention from English engineers, and a good deal from those of our own country. As is well known, the English practice is to throw garbage and cinders together into the "dust-bin," and it is the mixed refuse that the English engineers always have to deal with. Strange stories are told in this country of their success in lighting cities with electricity produced by the burning of the town garbage, but the simple truth, as told by Colonel Moore, is that, while the garbage and cinders will burn, the cost of burning them, together with that of removing the rubbish after burning, is much greater than the profit; and, although in one place the garbage is used for producing steam, by which air-pumps are driven for lifting the town sewage to an elevated outfall, and in another it is made to operate dynamos, from which electric current is obtained in sufficient quantity for lighting the works and two or three public buildings in the neighborhood, there seems to be no city where the destruction of garbage is effected at a profit, although everything possible is done in the way of picking out the rags and bottles, and selling them, making the ashes and hard clinkers into paving-slabs, utilizing the waste heat for making steam, etc.; yet the total result of the operations shows always a loss; and some experiments, made by manufacturers of waste-consuming grates, which showed that the combustion of a pound of average house-refuse would evaporate, under the most favorable circumstances, less than two pounds of water, show that little is to be expected from this mode of treatment.

ILLUSTRATIONS

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

MASSACHUSETTS STATE-HOUSE EXTENSION, BOSTON, MASS. MR. CHARLES BRIGHAM, ARCHITECT, BOSTON, MASS.

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

A COMPETITIVE DESIGN FOR THE "SHATTUCK PRIZE" FOR ARTISANS' HOMES [LIMITED COMPETITION]. SUBMITTED BY MESSRS. J. R. COOLIDGE, JR. & VERNON A. WRIGHT, ARCHITECTS, 89 STATE STREET, BOSTON, MASS.

THE buildings are first-class buildings, as required by law. Concrete stairs. Exterior of hard-burned brick, with entrances trimmed with Indiana limestone, and sills of the same material. Cornices, terra-cotta; rusticatations, of gray brick, flush with wall-surfaces.

Special Features. — Through ventilation of suites. Elimination of courts, public halls and corridors. Arrangement of living-rooms (each with water-closet), and of bedrooms so as to give apartments of one, two, three or four rooms on each floor. Plumbing strictly in line: one tank to each house. Parapet-wall to screen roofs and clothes-yards from external and central streets, continued, however, at the back of each block by a high, open fence. Roof-gardens.

ESTIMATES OF COST AND OF REVENUE.

The buildings cover 90,676.5 sq. ft. and measure, from cellar-floor to attic-ceiling, 42 feet 4 inches.

Their cubic contents, for the purpose of these estimates, are 3,838,638.5 cubic ft.

Estimated cost at 15 cents per cubic ft.	$575,795.77
" " " $6.35 per sq. ft.	
Cost of land, 160,000 sq. ft. at $1.50	240,000.00
Total investment	$815,795.77
768 living-rooms at $1.00 per week	$768.00
1,312 bedrooms at 50 cents per week	656.00
Weekly income	$1 424 00
Annual income at 52 weeks per annum	$74,048.00
Gross return	9.052 per cent.

RENTABLE AND NON-RENTABLE AREAS.

(As itemized on the second-floor plan, *q. v.*)

1.	Area of all living-rooms and bedrooms (one typical floor)	62,580	square feet.
2.	" " " vestibules and entries (no public hallways)	3 574 2-9	" "
3.	" " " water-closets	3 420	" "
4.	" " " closets	2 217 7-9	" "
	Total rentable area (per typical floor)	71,792	" "
5.	Area of all stairways	4,832 square feet.	
6.	" " " light-shafts	180 " "	
7.	" " " partitions	3,725 7-9 " "	
8.	" " " walls	10,146 2-3 " "	
	Total non-rentable area (per typical floor)	18,884 4-9	square feet.
	" area built over	90,676 4-9	" "
9.	Area of all setbacks, alleys and streets	69,323 5-9	" "
	Area of the building site, 200′ x 800′	160,000	" "

PLANS OF THE SAME.

UNION STATION, OMAHA, NEB. MESSRS. FROST & GRANGER, ARCHITECTS, CHICAGO, ILL.

HOUSE OF W. D. KELLY, ESQ., GERMANTOWN, PA. MR. CHARLES L. HILLMAN, ARCHITECT, PHILADELPHIA, PA.

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

HOUSE OF MRS. U. N. HOPKINS, PASADENA, CAL. MESSRS. BLICK & MOORE, ARCHITECTS, LOS ANGELES, CAL.

HOUSE OF MRS. MARSHALL, PASADENA, CAL. MR. HERBERT SMITH, ARCHITECT.

GOTHIC WALL-TREATMENT OF THE WARDROBES IN THE SACRISTY OF THE CATHEDRAL, VOLTERRA, ITALY.

THIS plate is copied from *Zeitschrift für Bauwesen.*

[Additional Illustrations in the International Edition.]

THE PALAZZO MARINO, MILAN, ITALY. GALEAZZO ALESSI, ARCHITECT.

[Gelatine Print.]

THIS imposing palace was erected for Andrea Marino, a Genoese merchant, who, being originally penniless, by well-directed mercantile enterprise amassed great wealth, was created Marquis of Casalmaggiore and Duke of Terranov, and finally became a Senator of the city of Milan. He invited Galeazzo Alessi, an architect of considerable fame, of Genoa, to build for him a palace. Just when the construction was begun cannot definitely be stated, but we know that in 1558 it was well under way. With Andrea's death, which occurred in 1571, his great fortune rapidly disappeared, and his family, from its proud position held previously, sank into obscurity. The palace for a long while remained unfinished, and finally, in 1577, passed into the ownership of the State.

In the exterior, the strong individuality of Alessi manifests itself in forceful combinations of peculiar forms, which are of a certain severity of expression. The Tuscan order of the ground story reminds one strongly of the Arco del Porto, at Genoa. Cleverly studied is the contrast in the characteristic window-openings of the two lower stories. Whether Alessi is responsible for the top story, with its uninteresting windows and the excessively tall, drawn-out hermæ which are made to form part of the cornice-brackets, it is impossible to state.

Of greater interest and importance than the exterior of the edifice is the grand and beautiful interior court, one of the most luxurious examples of decorative Barocco. Admitting that in our plate the lower arcade appears somewhat too light for the heavy load superimposed, yet in reality this impression is quickly forgotten in view of the charm of this magnificent composition. The arcaded galleries of the upper story originally ran all around the court, the windows

shown in our plate being later additions, as are also the small statues in the niches of the pillars. Aside from these ill-chosen additions, which somewhat mar the effect, the composition, in its strong verticalism, must be pronounced a masterpiece of the first rank, for the happy harmony of its proportions, the marked individualism of the motifs, the combination of virile strength, lavishness, and finest detailing of the ornamental features: in short it is a composition expressive to the last degree of a loud, splendor-loving parvenu.

A CORNER OF THE COURT-YARD OF THE PALAZZO MARINO, MILAN, ITALY. GALEAZZO ALESSI, ARCHITECT.

[Gelatine Print.]

THE QUEEN OF HOLLAND'S WORK-ROOM, AMSTERDAM, HOLLAND.

THE SMALL BALL-ROOM: THE HAGUE, HOLLAND.

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.*]

HIGH BUILDINGS.

Boston, Mass., April 25, 1899.

To the Editors of the American Architect: —

Dear Sirs, — In a Boston *Herald* interview, and subsequent editorial comment on the same in *Architecture and Building*, I am credited with a note of alarm as to structural perils of *Boston* skyscrapers. This note was uttered against New York structures, and the *Herald* interviewer, in his zeal to point a moral for Boston, substituted "Boston" for "New York" in quoting from a published article of mine which I had handed to him.

Warnings which may be aptly uttered against New York's monstrosities are hyperbole when applied to Boston buildings. Even our Ames Building is a comparatively rational structure by contrast with New York's "St. Paul," "Mill Syndicate" and others.

Here in Boston we have but one building exhibiting dangerous elements in its proportions, and that is the building upon which our Mayor has conferred the distinction of a "recommend" for retroactive legislation. This recommendation was most timely and in accord with the best principles of modern political economy as well as art. *Delenda est Carthago:* it is safe to assert that there will be no truce until the unsightly menace on Boston's finest park avenue shall be humbled.

Everywhere the righteous attempts to rectify abnormal conditions and structures, moral and physical, are met by the same old plea of "no retroactive legislation: no disturbance of the established order." But our people of the United States have done too much of this rectifying on a prodigious scale to be hindered now in their various local measures of this character. The primal, basic constitution of our nation was ordained "to promote the general welfare," not to foster the individual whim. An excellent principle to follow in development of our great municipalities.

Albert Winslow Cobb.

NOTES AND CLIPPINGS

Piers and Shafts. — The various styles that immediately succeed the Classical are distinguished from each other principally by the different manner of using shafts, which in some styles are mere accessories, in others real supporters of weight. Thus in the interiors of the Christian Roman and Pisan churches the walls entirely rest on bearing-shafts, and there are no compound piers. In the Romanesque of Lombardy and of the Rhine compound piers are universal, and often alternate with bearing-shafts; and in the South of France the compound piers are used alone, and the bearing-shafts employed are confined to the apsis. In the Byzantine, the principal feature of which is the mode of roofing by domes and wagon-vaults, we find huge piers with their faces decorated with tiers of arches, but the shafts are confined to the support of decorative arcades, and hold no essential place in the mechanical structure, except in some smaller specimens, as at St. Fosca, Torcello, where they are placed under the arches that support the dome. There are no genuine compound piers, and the introduction of this essential feature of the Gothic appears due, therefore, to one of the Romanesque styles. In the Early Norman there is a much greater massiveness and rudeness than in any other; their builders are fond of employing bearing-shafts of two or three diameters in height, and their piers when compound are more complex than those of their contemporaries. Considered in the order of art, the Pisan style holds undoubtedly the first rank, from the Classical beauty and elegance of their sculptured ornaments and mouldings. Of all the Romanesque styles, that of the South of France appears to possess the most simplicity and plainess of decoration, and yet the greatest complication of plan. Here, too, pilasters are used in the interior, of so Classical an appearance that if these were not pretty universal one should be tempted to believe them subsequent interpolations. They are fluted, sometimes with zigzag flutes, or else decorated with arabesques or sculptured mouldings; examples of them occur in the triforium and apsidal aisle of La Charité sur Loire, in the triforium of the choir at Lyons, and at Autun and Clugny. In the dispositions of the smaller shafts the angle-shafts afford a ready characteristic; these are susceptible of two modes of application, as edge-shafts and nook-shafts. The first kind is used in the Byzantine, South of France and Norman styles, the second in the Lombard, while in the Romanesque of Germany both kinds appear. The edge-shafts are introduced with much the greatest profusion in the Norman style, and to this belongs the introduction of them on the edges of the compound piers, where they are never placed in any other style. Hence arose a greater richness and multiplying of parts in the piers, which led the way to the elaborate compositions of the Early period. — *The Architect.*

The new Architect to the London County Council. — We are pleased to find in the *Building News* the following particulars as to the architectural career of the Admiralty surveyor who has been made architect to the London County Council: — "Mr. William Edward Riley, A.R.I.B.A., M.Inst.C.E., the newly-elected administrator of the London Building Act and architectural advisor to the London County Council, is 46 years of age, and was born at Ossett in the West Riding in 1852. Mr. Riley was articled in 1868, and having served four years in a provincial town with an architect and engineer, obtained an appointment as architect's assistant in the office of Messrs. Beck & Lee, of Finsbury-circus, E.C., with whom he remained two and a half years, and at that period personally designed some important blocks of workmen's dwellings for the Improved Industrial Dwellings Company. Another like period of two and a half years was devoted to general practice. In April, 1877, Mr. Riley was the only successful competitor in an open examination for the appointment of architectural draughtsman in the department in which he has during the subsequent twenty-two years risen, through every executive grade, to the highest possible position, that of senior permanent civil officer, a position attained some three and a half years ago. The syllabus for the competitive examination includes the history and styles of architecture; drawings, designs, and details of architectural works and ornaments; strength and use of constructional materials; specifications, measurement of quantities, and estimates of cost of building-works. He also passed in 1882 the voluntary examination of the Royal Institute of British Architects, and was elected an Associate, his sponsor being Mr. Blashill. Mr. Riley has had exceptional and varied experience in building-operations at home and abroad, having had independent charge of the whole of the Admiralty works at Bermuda, Chatham, Portsmouth, Devonport, and Malta collectively for nine years, and during the last three years he has had the personal charge of the whole of the Coastguard buildings, designs and contracts, in Great Britain. Among the recent designs made either personally by Mr. Riley or under his direct control are those for several important buildings in Malta requiring sympathetic treatment to avoid violating the historical surroundings, the extension of the Naval Engineering College at Keyham, and the new Observatory buildings at Greenwich. At 21 Northumberland Avenue Mr. Riley has gained the character of an exceptionally hard worker, and one, therefore, able to obtain from his staff willing and efficient services, combined with efficient control and economical administration of the department."

Claude Perrault. — Louis XIV sent for Bernini to design the additions and alterations contemplated at the Louvre, and it was a happy thing for France that this high and haughty architect was disgusted with the workmen of Paris, and returned to Italy without executing his designs, for, grand as they were in respect of dimensions, they were exceedingly corrupt in composition. But there is a still weightier reason why France had cause to rejoice in their rejection, which is, that it gave Perrault an opportunity of ornamenting the capital with one of the most splendid monuments of art that Europe can boast; one which changed the heavy style then in vogue, and gave the French artists that impulse whose power is still in action upon them. The beauties of the façade of the Louvre so completely overpower its defects that one overlooks its coupled columns and the arch of the central door rising into the story of the colonnade. It seems to be the fate of architects to fall under the lash of poets. Ben Jonson lampooned Inigo Jones in his "*Bartholomew Fair,*" under the title of Lantern Leatherhead. Pope and Vanbrugh did not very well agree. So Perrault, whose first profession was that of medicine, which, however, he only practised for his friends and the poor, having spoken ill of one of Boileau's satires, was told by the poet that "*De méchant médecin devient bon architecte.*" Perrault competed in this work with Le Vau, the king's principal architect, against whom and others he was successful; he was, however, assisted in the execution, as it is said, by that artist, though, from Perrault's intimate acquaintance with the several branches of science, one can scarcely believe the assistance was necessary. Contemporary with Perrault was Le Mercier, the architect of the church of St. Roch, in the Rue St. Honoré, at Paris, who followed, but with much originality, the precepts and principles of the Venetian school, and died in 1660, twenty-eight years before the decease of Perrault. — *The Architect.*

Proposed Statue of Marshal de Rochambeau. — A movement has been started in Philadelphia for the raising of a subscription of $1,000 towards the erection at Vendôme, in Touraine, France, of a statue of Marshal de Rochambeau, who commanded the French forces serving in the American war of independence. It is proposed that Philadelphia, Boston, and New York each subscribe $1,000, and that a like sum of $3,000 be raised in France. — *N. Y. Evening Post.*

S. J. Parkhill & Co., Printers, Boston, U. S. A.

UNION - STATION
OMAHA - NEBRASKA
FROST & GRANGER - ARCHITECTS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K
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D
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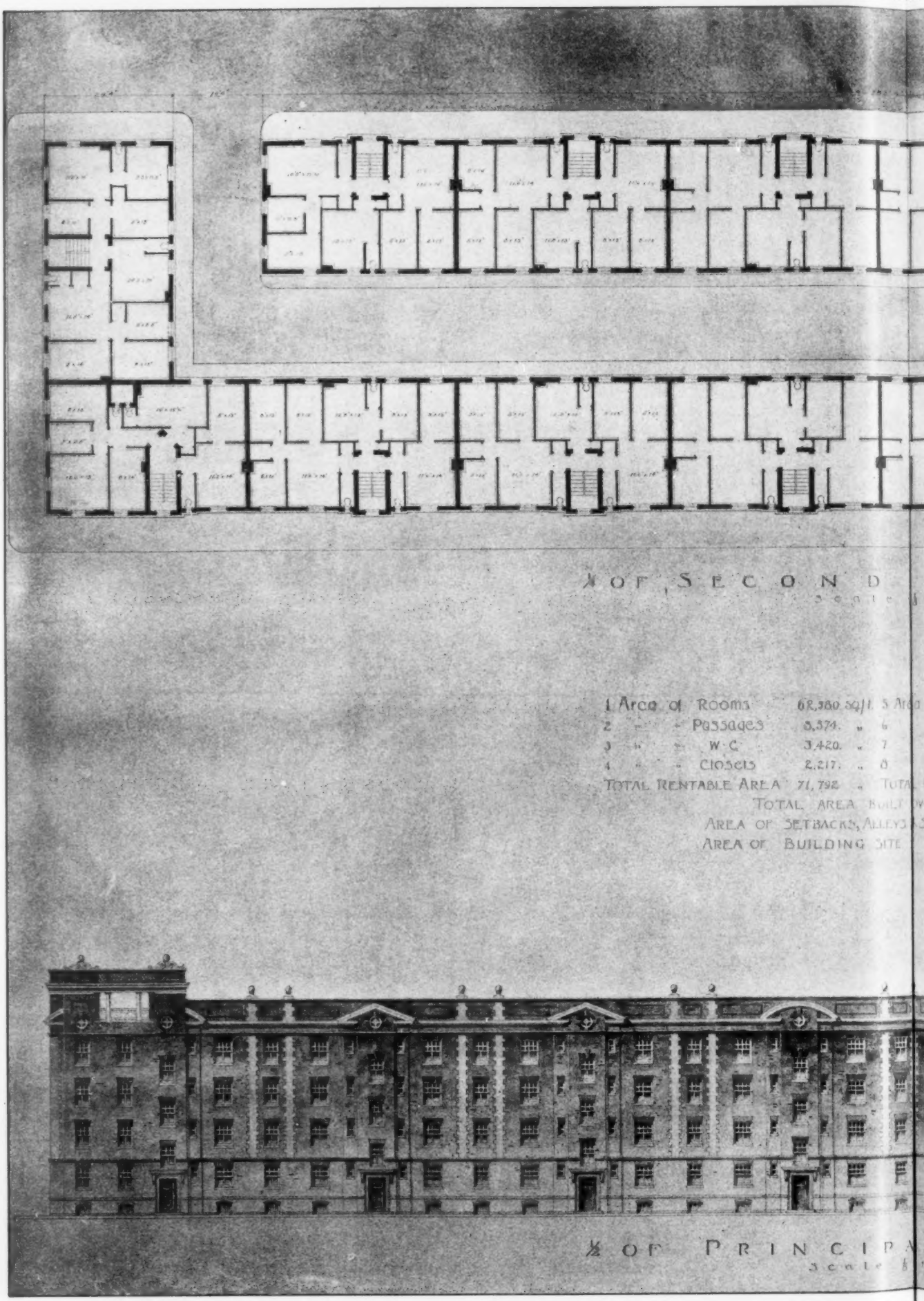
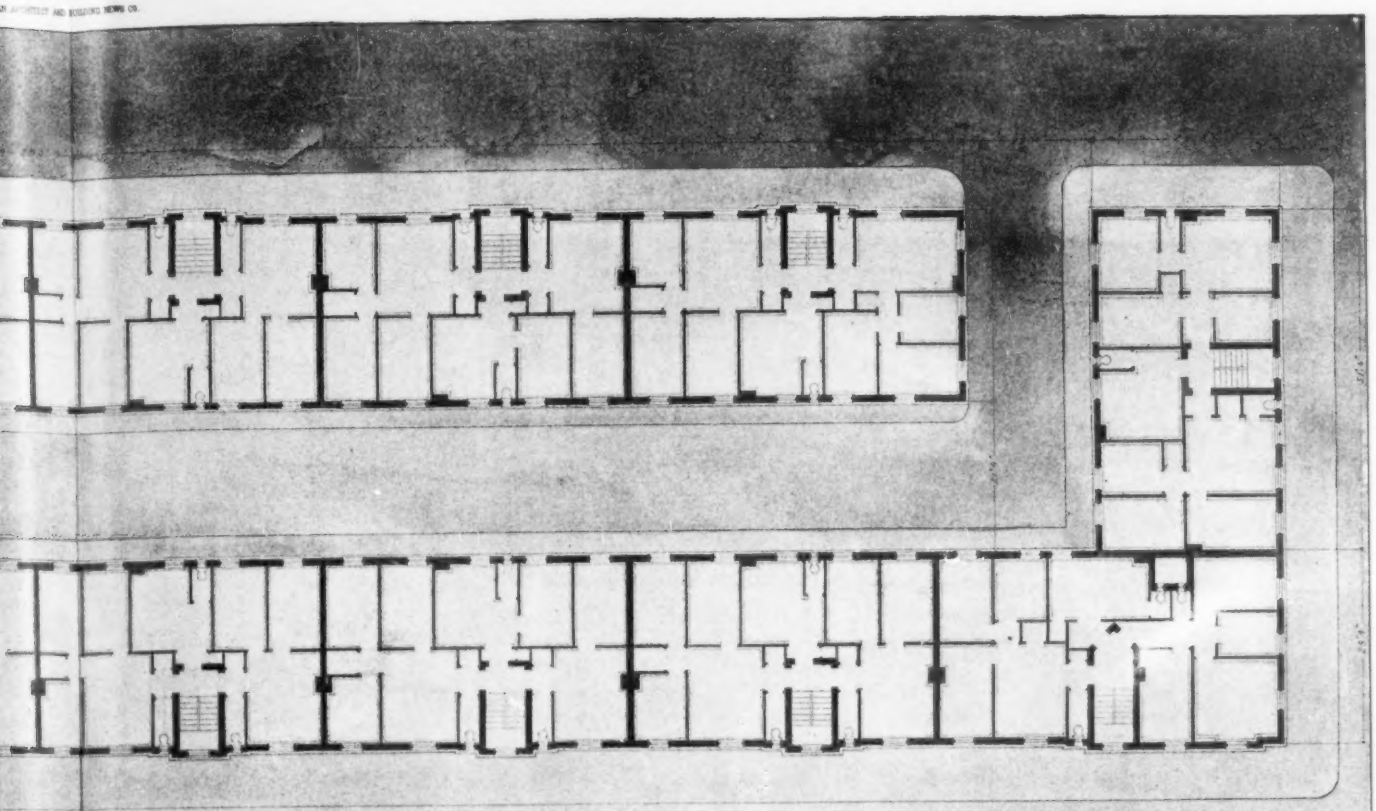
P
S
P.- PARLOR.
S.- LIBRARY.
D.- DINING ROOM.
T.- TOILET.
K.- KITCHEN.
L.- LAUNDRY.
M.- PANTRY.
HOUSE FOR
W. D. KELLY ESQ.
GERMANTOWN PA.
CHAS. L. HILLMAN
Architect.



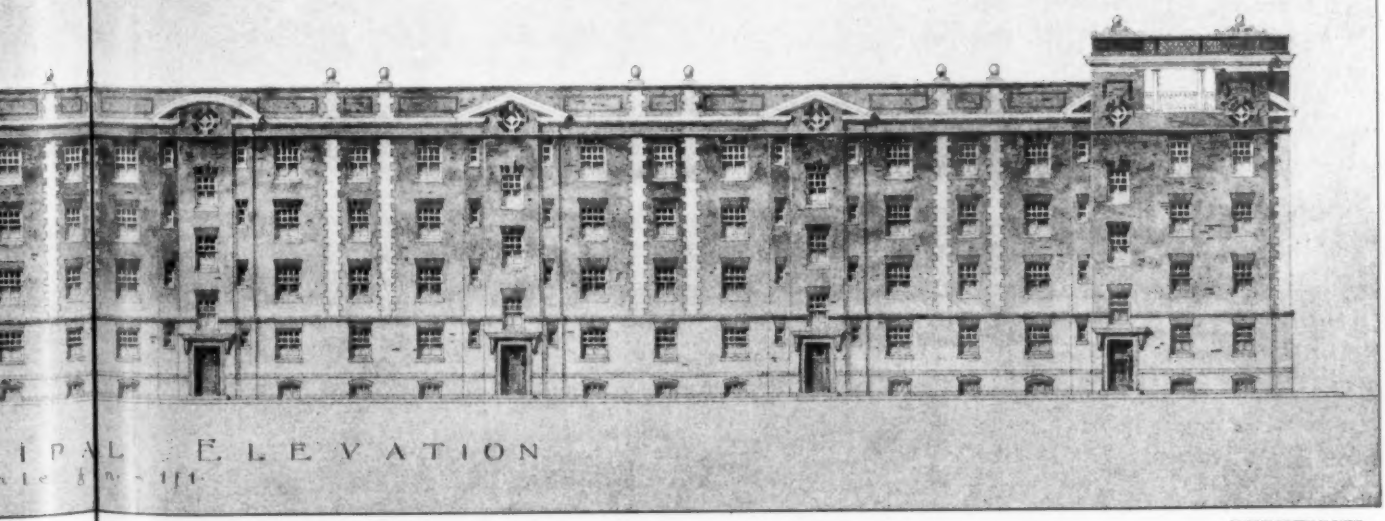
SHATTUCK PRIZE FOR COMPETITIVE DESIGNS FO

J. R. COOLIDGE AND VERNO



D FLOOR PLAN

q ft.	5	Area of Stairways	4,832. Sq. ft.
"	6	Light-Shafts	180. "
"	7	Partitions	5,723 "
"	8	Walls	10,146. "
"		TOTAL NON-RENTABLE AREA	18,884.
		BUILT OVER	90,676 Sq. ft.
		ALLEYS & STREETS	69,325. "
		SITE	160,000. "



IPAL ELEVATION

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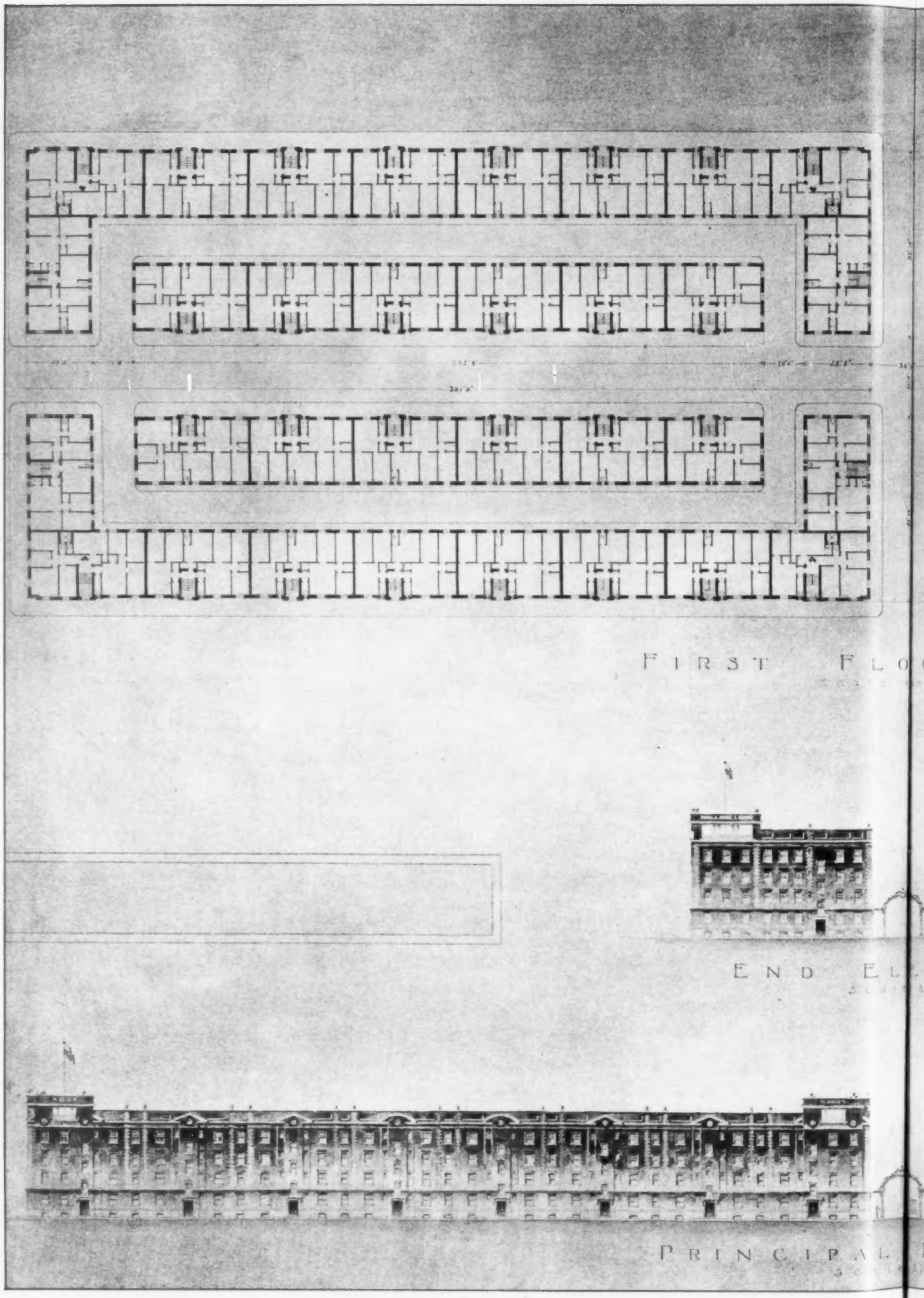
DESIGNS FOR ARTISANS' HOMES (LIMITED COMPETITION).

E AND VERNON WRIGHT, ARCHITECTS.



SHATTUCK PRIZE FOR COMPETITIVE DESIGNS FO AR

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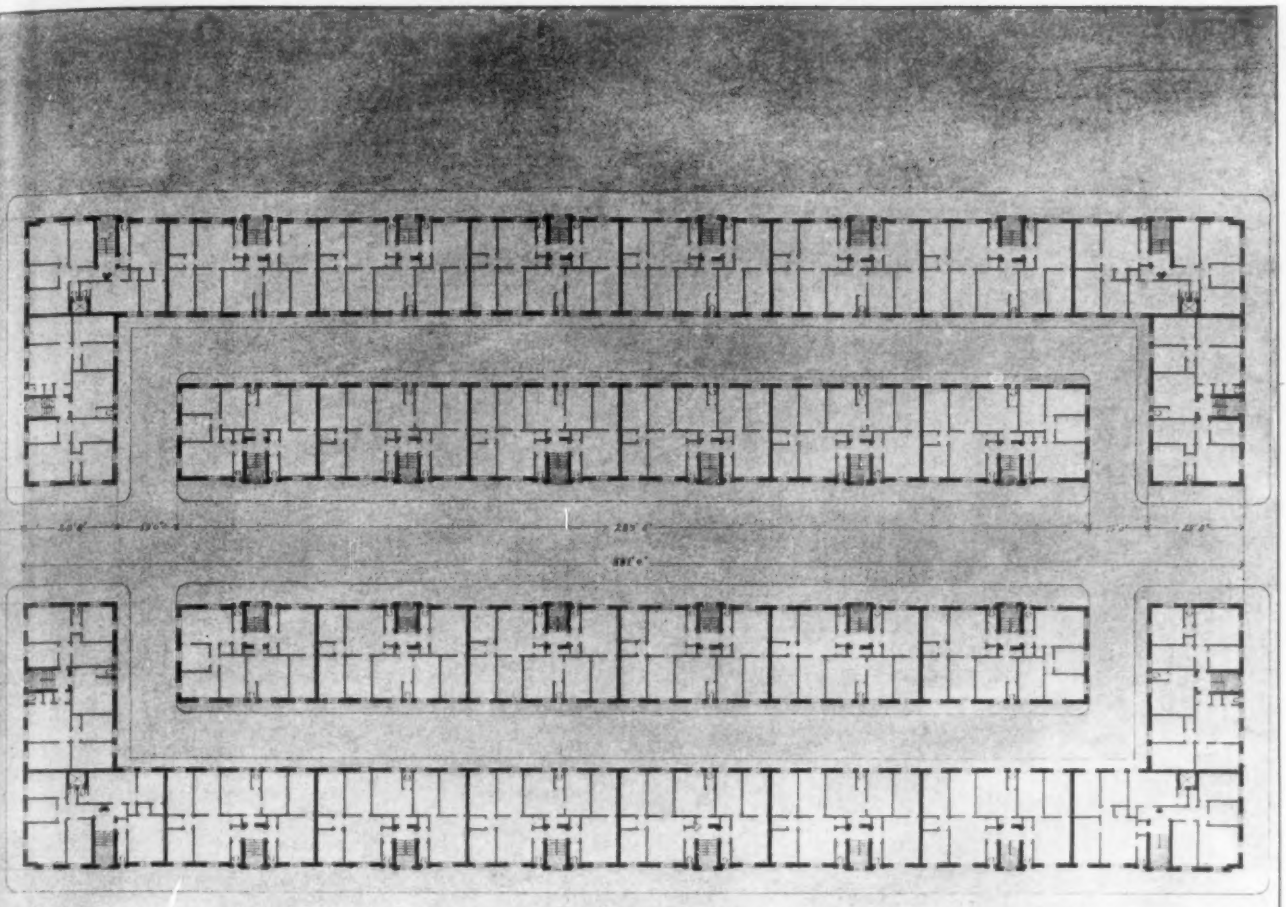

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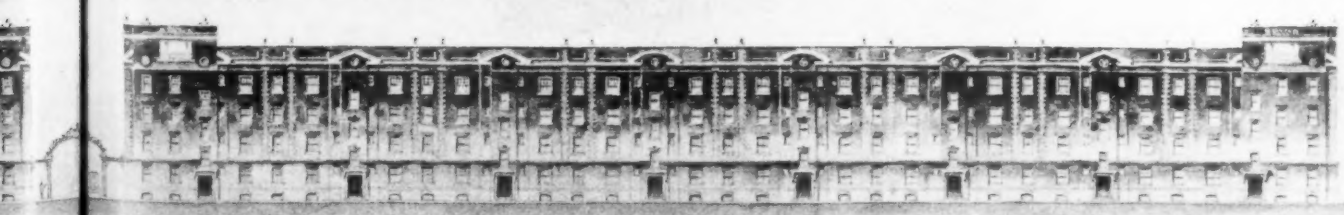

A L E L E V A T I O N

SIGNS FO ARTISANS' HOMES (LIMITED COMPETITION).

ND VERNO WRIGHT, ARCHITECTS.

HELIOTYPE PRINTING CO., BOSTON

THE AMERICAN ARCHITECT AND BUILDING NEWS.

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MAY 6, 1899.

CONTENTS

THE proposed legislation, to limit the height of all buildings within one thousand feet of the Boston State-house to the level of the main cornice of that venerated structure, is likely to fail, the Committee on Cities having reported the petition for such legislation unfavorably; but a substitute bill has been reported, limiting the height of all buildings within the State of Massachusetts to one hundred feet. Whether exception will be made in favor of church towers and grain elevators remains to be seen. The failure of the scheme for prohibiting high buildings around the State-house is undoubtedly due to the reluctance of the Legistature to face the heavy damages that would be demanded. Fortunately, the theory of Mayor Quincy, that "the people" have a "vested interest" in other people's real-estate, and can make them do with it what they choose, without paying any damages, is not yet accepted in Massachusetts, and is not likely to be, so that the prospect before the Committee was that the State would have to make up by a special law, at least the actual losses caused which would be considerable. The general restriction which has been substituted will be approved by almost everybody, — certainly by the architects, who have been foremost in their warnings against the inconveniences and dangers incident to lining streets with buildings much higher than the width of the street. [As we go to press we learn that the House has rejected this law.]

IN the discussions which have taken place in the newspapers, and before legislative committees, on the high-building question, it has been frequently asserted that the Paris police regulations limit the height of buildings to the width of the street on which they front, or less, and that to this fact is due the cheerful and regular appearance of the Parisian streets. Really, however, the regulations in Paris only indirectly limit the actual height of buildings, the rules applying primarily to the fronts, the allowable height of which is clearly and definitely specified. If the vertical walls of the front are kept within these limits, a considerable latitude is allowed in the height to which the roof, which, it need hardly be said, is usually of the double slope or "Mansard" pattern, can be carried above them, and a house on a deep lot may have a roof so lofty as to make the total height of the building much greater than the width of the street. Of course, the retreating planes of the roof do not cut off the sun as a vertical wall would, so that ample light and air may in this way be secured for a street, without unduly restricting the capacity of the houses fronting on it; but the regulations which answer well for Paris would be very unsuitable for our Northern cities, where snow and ice must be dealt with for six months of the year. A Paris street, transported, with the buildings lining it, to Boston or New York or Chicago, would be impassable to pedestrians nearly all winter, from the avalanches of snow, the dripping of water from gutters blocked with slush and overflowing, or the showers of heavy icicles, which would make travelling on the sidewalks dangerous; yet, if snow and ice are to be kept from falling upon the public, by sloping the roof back from the street line, as is required by law in New York, where the front wall of the building is directly on the street, sun and air must be kept out also. The high gables on the street, with which our Dutch and German ancestors met the difficulty, cannot be used with ordinary roofing, and a promising field is open to the young architect who will try to invent a method of combining the advantages of the New York and the Parisian systems.

THE *Iron Age* notes a fact which is of much significance. Every architect and builder knows that, during the past winter, plans have been made for a great number of new buildings, and that the increase of demand, and the prospect of a still greater increase to follow, have had the effect of advancing prices of many sorts of materials, particularly of iron manufactures. It happened, at the beginning of the year, that an unusual number of orders came into the market for plates and angles, and other materials for bridge and engineering work, and the mills, partly to make a profit while they could, and partly to avoid being overwhelmed by the flood of orders, advanced prices materially. The wire and beam mills, although they were in better condition to fill the demands on them, followed suit, the wire and nail manufacturers having advanced prices, it is said, to nearly double those of last year. At the same time, prices of copper, lead, zinc, brass and other metals were put up, and, following their example, large advances were demanded in nearly all other building-materials. So far as these are concerned, the movement seems to have been too rapid, and to have checked itself. It is reckoned, probably with approximate correctness, that the cost of building this season is, in general, about fifteen per cent higher than it was last year. While an advance of five per cent would probably not have interfered with carrying out most of the schemes which had been formed for building, a fifteen-per-cent rise seemed to many people unwarranted by the conditions. No such advance in rents could be maintained, and, as people do not build houses and stores for amusement, but for the purpose of getting an income on their investment, a great number of building-operations have been abandoned, or postponed until either rents rise, or the cost of building-operations falls. In addition to this, the great expansion of investments has absorbed so many hundreds of millions of dollars of loanable funds, that the capital still available is held at higher rates than those prevailing last year, and, as little flurries occur in the money-market, the disposition of financiers to lend funds for long terms, to be used in building-operations, diminishes. The effect of all these conditions is now beginning to be felt in the material-market. The demand for iron, as the *Iron Age* says, is much less active than it has been, and it seems likely to continue quiet for some time to come. The more sensible manufacturers, who know from experience how much better it is to be able to sell all their goods at reasonable prices than to be overwhelmed with orders for a time, and then to let their mills stand idle during months or years of reaction, are rather pleased at the new turn of affairs, and express the opinion that prices are now at the highest point, and will probably fall moderately hereafter. Whether the same can be said of the market for brass goods, earthenware, glass and so on remains to be seen; but glass is said to have already taken a downward turn, and there are indications that the manufacturers of plumbers' earthenware are finding that high prices encourage an uncomfortable competition. Fortunately, the workmen in the building-trades have, as a rule, been sensible enough to avoid trying to upset their own business this spring, and the prospect seems to be that there will be a moderate amount of building-work, for people who must have new houses, or new stores, but that the great speculative operations will mostly be postponed to another season.

THE question of what constitute fixtures in a house received consideration the other day in the Supreme Court in Washington, and a rather novel doctrine was evolved. A man mortgaged his house and land to the Philadelphia Mortgage and Trust Company. Several years after the mortgage was made, he put into the house a boiler, and a bath-tub, and the mantels were put in after the house was plastered and kalsomined. The mortgage was foreclosed, and the mortgagee claimed the mantels, the tub and the boiler as fixtures, and therefore a part of the realty, while the owner claimed that they were merely furniture, and not covered by the mortgage. The Court took the latter view, and gave an architectural explanation. "Anciently," said the judge, according to the *Evening Post's* report, "mantels were uniformly built as a "part of the house, and therefore became a fixture to the realty ". . . and could not have been removed without materially "affecting, not only the appearance, but the real usefulness, "of the house. But advancing mechanical science and taste "have evolved an altogether differently constructed mantel . . . "sold separately, and made adaptive to any kind of house. "They are, in fact, as much a separate article of merchandise "as a bedstead or a table." The Court applied the same principle to the bath-tub and boiler. Each of these was "in "no way attached to the building," the judge said, "except by "its plumbing connections. It could be detached without in "any way injuring the realty; and we see no reason why it "should be considered a fixture, any more than the ordinary "stove, which is connected by pipes to the boiler and to the "plumbing system generally." The evidence showed that the mantels were not secured to the walls until three years after the house was finished, screws being then put in to keep them from falling away; and the Court thought that this was an additional reason for considering them furniture.

WE do not question the doctrine of the Court, but it may be remarked that it might be extended in a way which would seriously affect mortgage security. For instance, the doors in a house are much less firmly attached to it than the bath-tub, and might be simply lifted off their hinges and carried away, reducing the value of the house in which they were hung very materially; yet it could not be said that the change would "injure the realty," any more than the removal of a bath-tub and boiler. So with many other details. We have known, in a house very elaborately finished, the dressings of the doors hung to the walls, so as to avoid nailing through their face. Such dressings can be lifted off and carried away as easily as a picture is removed, yet their disappearance would certainly diminish the value of the house to which they belonged, without involving any damage to its structure, which the Court seems to consider the important point. In fact, it would be easy for an ingenious builder to make half his wood-finish portable, so that he could transfer it, with the plumbing and heating-apparatus, and the mantels, from one mortgaged house to another, as long as he found any one to lend him money. How far the Courts would assist him in this process remains to be seen, but it is certain that in this, as in other cases of dishonesty, innocent parties would ultimately suffer the penalty, by finding lenders unwilling to trust them with money on mortgage to a greater amount than a certain percentage on the value of the portion of their houses which could not be removed without affecting the structure, and this is, in most houses, a comparatively small part of the whole.

NEW YORK is to suffer a severe loss, in the retirement of Mr. Bonner from the post which he has so long held as Chief Engineer of the City Fire Department. In this position, Chief Bonner has been one of the most useful men in the United States, and his interest in his profession, his courage in meeting danger, and his intelligence in drawing conclusions from his experience, have not only been worth millions of dollars to New York, but, through the readiness with which he shared his knowledge with others, have greatly assisted in the general adoption of measures by which unnumbered lives, and vast sums of money, have been saved throughout the country. It is understood that Mr. Bonner will, immediately on relinquishing his post in the Fire Department, devote himself to perfecting the plans, which have long been formed, for the establishment of a School of Fire-Engineering, of which he is to be the head, and we trust that, as the most conspicuous representative of the science which he has practised so long, he may for many years continue to lead his fellow-citizens, with more effective results than ever, in their struggles with the enemy which costs them every year, in life and money, as much as a destructive war.

THE National Board of Fire Underwriters has an Electrical Bureau devoted to gathering information in regard to the fire-risks attendant upon the use of electrical appliances, and it has made some curious observations. The dangers of the accidental crossing of arc-light wires with telephone, or telegraph or incandescent-light wires are well known, but the general burying of arc-light wires in cities has almost stopped accidents due to this cause. There are, however, occasional fires due to the introduction of high-potential currents into houses over wires not made for them. Not long ago the primary and secondary wires of an alternating-current system of incandescent lighting, supplying some thirty houses, became crossed, and the high-potential primary current was thrown into the house-circuits. Naturally enough, this powerful current burst the lamps, and set fire to the insulation on the wires. The burning insulating material set fire to the wooden partitions through which the wires passed, and all the houses were more or less damaged, four being totally destroyed. Another, comparatively new, source of danger is to be found in the appliances for electrical heating which are becoming common. An electric flat-iron was left to itself, with the current turned on, and soon became so hot as to set fire to the woodwork near it. There was an automatic fire-alarm in the building, and help was promptly summoned, but damage to the amount of twelve thousand dollars was done before the fire could be extinguished.

MANY fires are caused by incandescent lamps, through the mistaken idea that the bulbs do not get hot enough to set fire to anything. So long as the air circulates freely about them they remain comparatively cool, just as the open-work handle of the kitchen poker remains cool while the other end is red hot; but if the air is prevented from circulating about them they soon become hot. We heard once of a lady who hung a towel over an incandescent-light fixture, apparently with the idea of softening the light. Very soon the towel began to smoke, and was taken off with a hole burned through it. In a similar way, as the insurance inspectors tell us, where a thirty-two-candle incandescent lamp was allowed to touch a freshly-finished sheathing, the latter was found, a few hours after the current had been turned on, burned through, and if there had been a draught of air to fan the fire a great deal of damage might have been done. In another case, an illuminated sign was made by putting forty-nine sixteen-candle incandescent lamps in a frame, with wooden partitions between them. The space between the lamps and the partitions was well packed with asbestos, but the whole affair became so hot as to set fire to the partitions, and through them to other work, and considerable damage was done.

THE annual competition for the Rotch scholarship is now going on in Boston. The preliminary examination, held last month, resulted in eliminating all the candidates but three, Messrs. Pulsifer, Welton and Mowell, and these are now engaged in their work on the problem in design, the subject of which is a building for horticultural exhibitions.

THE Chicago Architectural Club, with the support of the Philadelphia T-Square Club, the St. Louis Architectural Club, and similar organizations in Boston and Cleveland, has called a convention of delegates from all architectural clubs in the United States, to meet at Cleveland, Ohio, on Friday and Saturday, June 2 and 3, next, at the rooms of the Cleveland Architectural Club. Each club is entitled to one voting delegate, but any other club members will be welcomed to the convention. The deliberations will be devoted to studying the best methods for acquiring and holding the interest of club members, and the management of exhibitions, and, if possible, an exhibition schedule and circuit is to be prepared for next year. Competitions, and other subjects of professional interest, are also to be discussed. Each club is requested to contribute ten dollars towards the expenses of the convention, and to take action as soon as possible in regard to the appointment of delegates, and the suggestion of matters to be laid before the convention.

PAINT-FACTS AND PAINTING-SPECIFICATIONS.—I.

Dwelling-house, Rue Jeanne d'Arc, Lille, France. M. Bondin, Architect. From *L'Architecture et la Construction dans le Nord.*

WITHIN the past few years the subject of architects' specifications for painting-work has been discussed at many of the meetings of the different associations of master-painters and decorators, local, State and National, and the statement has repeatedly been made that the average painting-specification is either very indefinite in its terms, or else, having been based largely upon data furnished to the architect by representatives of manufacturers of materials used in painting, or by some one painter, to the exclusion of his competitors, necessarily is biased and very frequently does not call for the best or most economical method of producing the desired result. Very often the same materials would be used, by the painter who does the work, in a very different manner, if he were permitted to exercise his own judgment, for in every job there are certain local conditions which must be taken into account if the best results are to be obtained. The nature of the wood, the condition of its surface, the state of the atmosphere will all be considered by the experienced painter, who will vary his materials accordingly, if he is permitted to do so; but if he is compelled to follow a hard-and-fast formula in the application of his paint or varnish, it will only be at those times when all conditions are favorable that a satisfactory result can be secured. How to write a specification that will so bind a painter that a thoroughly good job can be demanded, and yet at the same time permit him to exercise his own judgment, is a difficult problem. Unfortunately, too, there is no business on the face of the earth that offers so many temptations to the dishonest man as the painting business. It is impossible for the architect to tell whether the painter carries out his specifications with exactness or not. It is even impossible for the master-painter to be sure that his journeymen do not add thinners surreptitiously to the paint to make it work easier and save themselves labor in spreading it. The writer knows of an instance where, lacking turpentine or other legitimate thinners, the journeymen at work on a ceiling added water to the paint, the disastrous effects of which were not discovered till months afterwards, when they were made known by the paint cracking and peeling in such a manner that the employer was compelled to do the entire job over again, at a very considerable cost.

At the Convention of the National Association of Master House Painters and Decorators, held at Cincinnati in February, 1899, it was suggested by Mr. Alexander G. White, an English painter who was present, that it might be possible to make the specifications for painting work more definite and binding by establishing certain standards and requiring that painters bid with the understanding that their work would be required to conform with the special standard mentioned in the specification, no matter how the painter obtained the result. This suggestion is an excellent one for interior work, and it might be well for every architect to have a standard set of samples of wood finished in various ways, both painted and with natural finish, to certain of which he should require his bidders to conform in submitting their estimates, the finished work to be judged by comparison with these samples; or the painters who bid upon the work might be required to submit panels finished in accordance with their understanding of the specifications, these sample panels as well as the price to be taken into account in awarding the contract. But while such a system might answer very well for interior work, not exposed to the weather, on outside work the architect should have a very decided voice in the choice of the materials to be used, since they play an important part in the durability of the paint.

To write a painting-specification that shall neither be indefinite nor absurd the architect should possess some knowledge of the different substances which enter into the composition of paint, and should understand why certain materials are best suited for some conditions and why others are required under different conditions. He should know too that there are natural processes and chemical disintegrations which cause paint to perish, and their action at times is so obscure that even the most experienced painter may be puzzled to explain why a certain job has not withstood the action of the elements. Under such circumstances, the uninformed property-owner is apt to blame the painter or the material which he used, though neither may have been at fault, the poor result having been due to weather conditions, over which the painter had no possible control.

Much depends on the painter. Given a good mechanic, he will obtain a fairly good result, even though the material may not be the best; but the inexperienced or careless workman will make a poor job, no matter how excellent the materials may be. The best result can be obtained only by a good mechanic and the best materials, hence the desirability of confining the estimates for painting-work to those painters who are known to be honest themselves and to employ only competent journeymen.

One of the most essential things in painting is that ample time should be allowed for each coat to thoroughly dry and harden before applying the subsequent coats. Especially is this necessary on the priming coat. Ninety out of every hundred failures in painting not directly due to poor materials or the use of the wrong materials may be attributed to the work being unduly hurried or to the paint being applied over a wet or damp surface. Paint does not dry by evaporation but by the oxidation of the oil to form a leather-like compound called "linoxyn." To hasten this oxidation the painter is compelled to add oxidizing agents known to the trade as "driers," and while these hasten the drying of the paint, they also hasten its ultimate decay. It is not to be understood from this, however, that no drier should be used. A very small proportion is almost always needed, depending upon the condition of the atmosphere and upon whether the wood is thoroughly seasoned or not. In general, it is safe to say that driers should be used only to the smallest possible extent, though this is a matter which cannot be determined in the specification, but must be left entirely to the judgment of the experienced painter. Only the best quality of liquid driers should be employed for outside painting.

Paint as the term is understood by the trade is a mixture of a solid pigment, ground to an impalpable fineness, with a vehicle or liquid, in which it is held in suspension, so proportioned that it shall be in condition for spreading upon the surface to which it is to be applied, whether that mixing be done at the work by the painter or whether it be done at a factory by machinery and sent to the work ready mixed. When a pigment is ground to the consistency of a stiff paste, so that it may be more conveniently broken up and incorporated with the oil or other vehicle than it could be when perfectly dry, it is not yet paint but merely pigment ground in oil, be it white-lead, zinc-white, ochre or what not.

It is one essential of a pigment that it shall be in a very finely divided state, but all materials capable of this fine state of division are not pigments. As self-interest has prompted many unscrupulous manufacturers — and writers who have been in their pay — to attempt to befog the whole question by raising doubts as to what constitutes a pigment, it is well to define the meaning of the term at the start, and to do this we quote from the encyclopædia, with some condensation: —

"Pigments are colored powders which, when mixed with oil, water or other fluids, form paints. All substances, colored or neutral, capable of being presented in the form of an impalpable powder, which at the same time are insoluble and unalterable under ordinary atmospheric influences, may be regarded as possible pigments.

"But there are many qualities, practically essential in a pigment, which limit the range of available substances. A consideration of the first importance is the 'body' or covering power of a pigment — that is, the property of fully covering and concealing with an opaque coating the surface over which it is spread. It should work well and be unaffected in appearance and constitution by the medium with which it is made into a paint, and it should spread in an even, uniform coat, which should dry well and quickly and adhere firmly to the surface to which it is applied. When dry it should resist change under the action of the weather and other influences to which paint is exposed. These are the principal qualities requisite in paints in their important functions as preservative coatings for the surfaces to which they are applied."

Certain unscrupulous manufacturers have not hesitated to introduce into their paints substances which will not stand the test of the foregoing definition, and which have no real pigment value, but

whose sole purpose is that of an extender or adulterant, whereby valuable pigments are replaced by worthless makeweights or substitutes. Until a few years ago the presence of these extenders was not even suspected by the purchasers of the paints, but an extensive campaign by the master-painters' associations against these fraudulent practices brought to light the fact that a large proportion of the paint-materials then on the market and sold for perfectly pure goods were adulterated from ten to ninety per cent with substances whose presence was in no wise indicated by the labels on the packages. Certain well-known manufacturers, however, proved an honorable exception to the almost universal rule. Since that time the general standard of excellence has materially improved, and now very few manufacturers of colors, and no corroders of white-lead brand as "strictly pure" any goods which bear their own name. In the case of mixed paints, their being no standard of purity, since each brand is made by the special private formula of the manufacturer, the use of materials which will not stand the encyclopædia's definition of a pigment still continues, and is defended by those paint-grinders who employ these extenders on the ground that they are inert pigments, but they have no real value, and their presence in a paint can only be regarded as a fraud.

Frauds of this kind are more easily guarded against by the architect who desires to obtain the best results for his client than those frauds which are perpetrated by the painter. It is no uncommon trick of the dishonest painter to "dope" or dilute his paint with soft-soap, lime-water or other cheap and useless materials to increase its spreading capacity, and thus make a small quantity of honest pigment cover a large surface. This, of course, results in rapid deterioration of the painted surface in the course of a few months, but the paint will retain its gloss until after the painter has received his pay; and many painters of this class never hope to secure a second job from the same owner, so they do not care for the permanence of their work. The architect's experience with the average house ceases with the occupancy of the owner, and he has no opportunity to study the wearing of the paint. But whether the owner complains to the architect or not, he nevertheless blames him for the poor workmanship of the painter, and seldom fails to speak of it to his friends. If architects would make it a point to follow up their work, and to watch the condition of the paint for a year or two, they would soon learn which painters were deserving of confidence, by the average excellence of their work, and would make it impossible for these dishonest tradesmen to bid in their offices. As we have already seen, such a course is more necessary in the painting-trade than in any other, because of the opportunities which it offers for fraudulent practices without the chance of immediate detection.

There is no general consensus of opinion as to what constitutes the best paint for ordinary purposes. During the past few months this question has been discussed at considerable length in the columns of the paint-trade press, and many interesting and valuable facts have been gathered from master-painters who have tested different materials or mixtures, by the editors of these publications, who have sent out series of questions to painters in all parts of the country. One very important thing to bear in mind in considering the economy of any paint is that not only must durability be taken into account but also the condition of the surface of the paint when repainting becomes necessary. This is a large factor in the cost of house-painting during a long series of years. It is poor economy to employ a paint lasting seven years before it needs renewal, if at the expiration of that time the surface must needs be burned off, requiring a large expenditure of labor before a reasonably good job can be done, where, on the other hand, a paint that will last but five years without requiring renewal, at the end of that time is in such condition that a mere dusting off puts it in shape to receive a new coat of paint at once. The ultimate economy is very greatly in favor of the shorter-lived paint.

If the average painter, who has been brought up in the old-fashioned way, and whose only desire is to do honest work, — and there are many painters of that class, — were asked what he believed to be the best paint, he would almost unhesitatingly reply: "Pure white-lead and linseed-oil." In doing so he would follow a strictly conservative course and would undoubtedly feel that he was making a safe general reply; yet probably the same painter, if left to his own judgment, would, under some conditions, employ different materials. Indeed, there are conditions under which such a paint would by no means be even a reasonably good one. Again, it must be remembered that painters are perhaps the most conservative and prejudiced class of mechanics in the building-trades, and few of them are willing to grant the possibility that any new material intended as a substitute for those they have been taught to regard as orthodox may have any merit whatever. The fact that it requires the experience of years to determine the actual value of a paint-material naturally tends to make them conservative and hesitating about trying new things, since they know that a failure will reflect upon themselves. For this reason the architect who calls for other than orthodox paint-materials in his specifications is apt to meet with opposition from the painters, who, perhaps, will substitute, without his knowledge, the time-tried goods for that which he has specified.

It is so nearly axiomatic that it has passed into a proverb among painters, that "the life of the paint is the oil"; but although this is true, it is not wholly so, except in the case of those earth and iron pigments which are absolutely inert in their action. Many of the pigments most commonly employed, among them being both white-lead and zinc-white, combine more or less with the oil to form what is chemically termed a soap, and it is the durability of this compound of oil and pigment that determines the life of the paint. In general it may be asserted that those paints which have the greatest affinity for oil or are the most oil-absorbent are the most durable. Without any question, the most durable of all pigments is lamp-black, which absorbs the greatest quantity of oil, in proportion to its weight, of any pigment known. But it must also be remembered that lamp-black, being nearly pure carbon, is of itself practically indestructible by any agency except extreme heat. Well-known instances are on record of sign-boards where the letters have been originally painted with lamp-black on a white ground. The letters have stood for years almost as perfect as the day they were painted, while not only has the white paint disappeared but the surrounding woodwork has been eaten away by the weather. Unfortunately the color of lamp-black prevents its use for house painting to any considerable extent, and for this reason its valuable property of oil-absorption cannot be fully utilized. But a certain proportion of lamp-black added to white-lead to produce a lead color makes it extremely valuable as a priming coat, since it will contain more oil than pure white-lead, and will consequently be more durable; and, again, the lead color will cover imperfections in the wood better than a pure white priming coat, and make it possible for the painter to bring up his subsequent coats better. The architect who specifies that his outside woodwork shall be primed with pure white-lead and pure raw linseed-oil tinted to a lead color with pure lamp-black will follow a safe and conservative course. Whether turpentine and driers shall be used should be left entirely to the judgment of the painter, as this is a matter that depends upon the location of the house and atmospheric conditions at the time of painting.

It may be asked why raw linseed-oil should be employed in the priming coat instead of boiled. If genuine boiled oil is to be had, the character of the oil has been changed by the boiling and it has become a sort of varnish that dries with a gloss. Now the most essential thing about the priming coat is that it shall dry flat, since otherwise the subsequent coats will blister or wrinkle. Again, boiled oil has a tendency to dry from the top, so that the surface of the paint will be dry while it will be soft underneath and will expand and contract with the varying temperature of the air. This will cause the paint to assume a wrinkled appearance. Another important thing to be considered is that there is very little boiled linseed-oil on the market, most of that sold for boiled oil being "bung-hole boiled," or simply raw oil loaded with powerful driers to make it dry rapidly. These are very destructive of the life of the paint.

Having now considered briefly some of the most important general characteristics of paint we will next take up the most important pigments or groups of pigments, beginning with white-lead, the oldest and best-known of all paint-materials.

[To be continued.]

PARIS

THE NEW OPÉRA-COMIQUE.

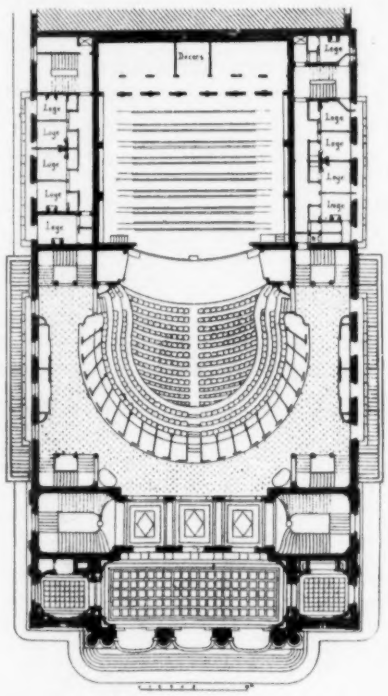
WHAT has come to pass in connection with the new Opéra-Comique justifies the theory which I have always maintained: that it is imprudent to speak of architectural works before they are completed, or to formulate criticisms before being sure that they are deserved. In fact, one runs the risk of being unjust in praise as well as in blame, and it is better worth while to wait than to be accused of exaggerated severity or excessive indulgence. What was not said against the Opéra-Comique before its completion and opening! A violent press campaign was waged against the architect, M. Bernier, and before the public had a chance to cross the threshold the journalists had informed everybody that the new theatre was a failure — ugly and unusable. Everything was too small, both auditorium and stage. Nothing was seriously studied, the *couloirs* were narrow, the means of intercommunication too restricted, decorations (which nobody knew anything about as yet) were in bad taste, and so on, and so on. Finally, the building would never be ready and the work was not making any progress. This is the sort of stuff which one could read in the daily papers for over a year. But for four months the Opéra-Comique has been open to the public and people are beginning to understand the truth about these unjust and ill-natured criticisms. It is not my purpose here confessedly to enter on a defence of a fellow-architect, but, playing the part of a mere echo of general public opinion, I cannot but give testimony to one thing, and that is that the new Opéra-Comique is found to be charming from the point-of-view of interior decoration and general effect. Does this mean that M. Bernier has known how to give his work a real note of personal art, as Garnier did in the case of the Opéra? No, assuredly not; and if no one could repeat Garnier's Opéra, surely many architects could make an Opéra-Comique of as much worth as this of M. Bernier's; but, if the latter

has not invented a style, he has at least known how to impress upon his work a feeling of elegance which is very artistic and really fine.

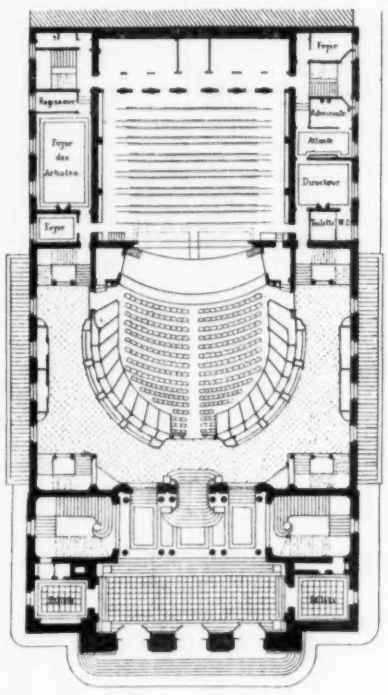
Before entering on any detailed description of the new building I must recall in a few lines the events which preceded its construction and which I mentioned as long ago as April, 1893. After the terrible conflagration of May 25, 1887, which completely destroyed the old Opéra-Comique and caused the death of more than 200 victims, the Government's first idea was to rebuild the theatre on the site of the Eden Theatre, near the Grand Opéra, or on the site of the old Salle Ventadour. But this notion was quickly abandoned, and they returned to the Place Boïeldieu to the site of the old theatre.

Two solutions were studied: the first was to preserve the old lines and rebuild the theatre with its façade on the Place Boïeldieu; this was the more restricted scheme. The second foresaw the purchase of buildings fronting on the boulevard and utilizing the site as a triangle, so as to bring the principal façade onto the boulevard. On February 4, 1888, a design in conformity with the more restricted programme was presented to the Chamber by M. Crépinet, the architect of the old Opéra-Comique; the cost of the proposed structure was 3,480,000 francs. A change in the ministry brought about the shelving of the first scheme; the second was studied by M. Dutert, with its façade on the boulevard, and foreseeing a cost of 6,500,000 francs. The Chamber of Deputies approved this scheme, but the Senate disliked it and returned to that of M. Crépinet in June, 1889. The commission in charge of the budget rejected this scheme and invited the Chamber to seek a less burdensome means of rebuilding the Opéra-Comique. Then it was that a public contractor, M. Guillotin, took upon himself the responsibility of carrying out the scheme of MM. Duvert and Charpentier, at a cost of 3,500,000 francs, reimbursable by a financial arrangement in the form of a first payment of 1,074,110 francs, followed by seventy-five annual payments. This arrangement was favorably received by the Chamber, but a campaign was opened in favor of a public competition, so as to preserve the artistic interests which, as was pretended, were sacrificed under the proposed arrangement. The Senate rejected the Guillotin scheme and a public competition was opened to all French architects in July, 1893. About that time I told in detail the romantic *odyssée* of the rebuilding of the Opéra-Comique, and for several months this was the talk of the day.

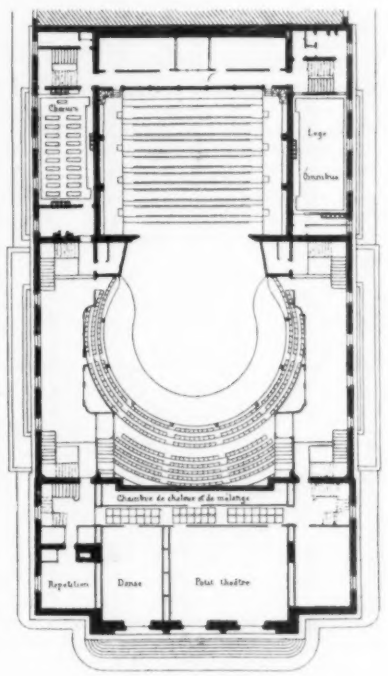
Eighty-four competitors took part in the competition of 1893, and M. Bernier was the winner, obtaining the prize of 10,000 francs and the execution of his scheme. This entailed much work and brought upon him many criticisms and attacks of all kinds, but it also won him the rosette of an officer of the Legion of Honor, and this is something which is held to amply repay an artist for all pain and injustice that he undergoes. Unjust people surely have been toward M. Bernier, and the injustice was of such an exaggerated kind that a reaction in his favor, equally exaggerated, is to day easily recognizable and people are beginning to acknowledge that the defects of the Opéra-Comique are not all chargeable upon its architect. The gravest cause of complaint lies in the fact that the auditorium and the stage are so narrow. Now, the auditorium is as large as that in the old building, and figures prove it. The old hall measured 17.5 metres between the first boxes and the curtain, and 16.40 between the first boxes; the new hall measures 17.5 x 16.5 metres, the proscenium-arch is 10 metres wide, the height of the hall is 17 metres. It is not, then, as narrow as people would have us believe, and the Théâtre Francais measures 2 metres less in width between the boxes. This, then, disposes of one undeserved reproach. Now let us consider the depth of the stage: it measures exactly 17.5 metres in width by 17.95 metres in depth. Now these are the very dimensions of the old stage, but, nevertheless, composers, artists and machinists complain of its incommodiousness. How can it be explained that a stage formerly large enough has become too small? The explanation is very simple, but the architect does not count in it. The lack of space is felt now because they want to represent nowadays lyric dramas, while formerly they only played comic operas. Hence there is a necessity for grand decorations, and important settings require greater spaces. But if this programme was foreseen it was evidently necessary that the old site should have been enlarged or a new site procured. M. Bernier, restricted to the former site, has built a hall and stage as large as the old Opéra-Comique — and nobody could demand more of him. Within the same space, moreover, he has known how to arrange accommodations much more important and so arranged as to provide every security for the public. The plans themselves will show, better than the most minute description, that the staircases placed at the four angles of the passageway of the hall conduct the audience to two large vestibules on the ground-floor opening upon side-streets and absolutely independent one of the other, although connected by a grand gallery under the hall. Independently of these four staircases, the orchestra-chairs and the *baignoires* are served by steps opening into the centre of the vestibule of the main entrance from the Place Boïeldieu, a vestibule to the right and left of which are found the staircases of honor, leading to the level of the foyers. The question of actual usage by the audience is carefully studied; something, however, might be desired in the stage portion of the building, in spite of the thick walls which on each side isolate the stage from the dressing-rooms and foyers of the artists. Clearly, those who do not chance to be on the stage at the time of the breaking-out of a fire would have a very good chance of escape, but those who might be surprised between the two isolating walls would run the risk of being crushed in their endeavor to pass through the outlets at the rear.



Orchestra and *Baignoires*.



Foyer level.



Second Gallery.

The lighting of the new building is furnished by 2,845 electric incandescent lamps, of which 1,035 are used for the general purposes of the building and 1,810 for the stage and hall.

One of the peculiarities of the new hall is the arrangement of the musicians' orchestra, placed below the spectators on the ground-floor, who thus no longer see between themselves and the stage, going and coming, the fiddlesticks of the violins and cellos. The effect from the ground-floor is agreeable, but, seen from above, the hole where the musicians sit is rather disagreeable.

Much half-hearted praise has been given to the decoration of the hall, and M. Bernier has been accused of employing an exaggerated sobriety. This is a matter of taste. Many criticisms also have been aimed at the harlequin mantle, treated with sculptured draperies supported on either side by two winged figures, by M. Marqueste, as being a little too important. But the conception of treating supple stuffs in solid material, although illogical in principle, has been studied with much ability and very gracefully carried into execution. The same principle has been adopted for the drop-curtain, where heavy red draperies are replaced by tapestry in staff lightly tinted,

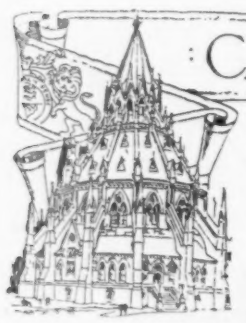
well connected with the lines of the architecture. This is new, and it is decorative. The ceiling of the dome has been treated by Benjamin Constant in cameo on a blue background with figures bathed in orange-colored and vaporous effects: the general impression created is admirable. The decorative painting is, moreover, one of the elements of the success of the new theatre, and M. Bernier has known enough to support his work with that of eminent artists. His theatre is a real museum of painting and sculpture. The staircase of honor on the left of the vestibule has been decorated by Luc-Oliver Merson, whose panel — "Music" — is composed and executed with an admirable regard for decorative feeling; facing it, the second panel symbolizes "Greek Poetry," the ceiling representing "Song," "Elegy" and "Hymn" — the offspring of "Music and Poetry." The right staircase was entrusted to M. François Flameng, who has in a rather unexpected manner made "Antique Tragedy" an associate with the "Modern Dance," while on the ceiling "Comedy" chases away the "Vices" with lashings of her whip, and "Truth" issues from her well.

The *avant foyer* contains decorative figures, on classic lines, of more commonplace character, signed by M. Joseph Blanc. The grand foyer itself is entirely decorated with paintings which surround the magnificent marble door and window frames emphasized with gilded bronze. M. Gervex has been entrusted with the two ends. At one end he shows us the "Ballet de la Reine," a Henri III scene; at the other, the "Foire St. Laurent." The ceiling is the work of M. Maignan, and represents the "La Ronde des Notes de Musique." The notes are represented by figures more or less draped, winding in and out in disorder, as in the serpentine dances of our days of carnival. Save for slight criticism on this point, the painting is fine and solidly done. At each end of the foyer opens a little oval *salon*. That at the left has been decorated by M. Raphael Collin with bewitching paintings: the "Inspiration," exhibited with success at the last *Salon*, and "Truth Inspiring Fiction," "Ode" and "Song." The *salon* on the right was entrusted to M. Gustave Toudouze, whose paintings represent "The Dance," "Music," "The Glorification of Music" and a thirteenth-century pastoral.

Sculpture is worthily represented by MM. G. Michel, Allar and Peynot, who have executed the caryatides which sustain the corners of the central motive of the façade, and by MM. Puech and Guilbert in the figures in the two niches situated on the right and left of the façade.

In the central vestibule we find "Lyric Drama," by M. Falguière, and "Comic Opera," by M. Mercié, also a monument to Bizet, by Falguière; in the central gallery, a very beautiful "Pensée," by M. Michel; and finally, in the hall itself, the flying figures of M. Marqueste, which support the figured draperies of Harlequin's mantle, and we can also note the caryatides by M. Coutan, which support the second balcony.

In short, the Opéra-Comique by M. Bernier, although the construction has been carried on somewhat slowly, is a graceful and elegant theatre, satisfactorily answering to the exigences of its repertoire. It can become too small only in case they undertake to bring out a modern lyric drama, and then in truth the composers cannot but regret the having to choose between a theatre which is altogether too large — the Opéra — or a theatre which is altogether too small — the Opéra-Comique. But, I repeat, it would be unjust to hold the architect responsible for this, since he had at his disposal only a very restricted site, and he succeeded in securing greater space for circulation without contracting the dimensions of the old stage and auditorium. It is only necessary to add that the acoustic qualities are found to be admirable.



THE PUBLIC AND BUILDING-LAWS. — THE ARCHITECT OF THE TORONTO COURT-HOUSE "SIGNS" HIS BUILDING. — COMPETITION FOR A MARKET-HOUSE AT TORONTO.

IT is strange, but very true, that it is a difficult matter to get the public to take any interest in some matters that vitally concern its welfare. Anything that is of a technical nature it either will not trouble to understand or else it concludes that such matters should be left for its representatives in Municipal Councils to attend to and it goes its way, satisfied to leave such matters alone. As members of Municipal Councils are but items of the general public, they are not much better than their constituents, the only point of difference, apparently, being, that, once they have breathed the air of the Council chamber, they become so puffed up with pride that, in imagination, they are endued with knowledge on all technical subjects to a degree that may well make experts hide their heads for shame. The public is a very-much-indulged body, the amount of time and energy that has been expended in its free education is astonishing, and yet the public, like a treacherous dog, only snaps at the hand that caresses it.

One of the subjects so important to its welfare is "Building By-laws." Every city or town that has any respect for itself has its building by-law. It matters very little what that by-law is, whether its enactments are wise or practical, if it has its by-law it is all right. Any professional man who dares to point out an improvement, or any body of, say, architects, which suggests a new one and takes the trouble to draft one up, either is practically told it had better go to school again.

What does the public care if fire-traps are erected in the centre of a city or if inadequate means of escape are provided in large stores, theatres or churches? Simply nothing. They will crowd these buildings just the same, and "run chances," and when a fearful accident occurs they will kick for nine days and then all goes on as before.

If a city has a set of respectable by-laws that it has borrowed from some other place, their effect is entirely nullified by the ignorance or wilful blindness of the "inspector"; but that does not affect the public a bit. Architects have to submit their drawings to some jack-in-office who knows so little that he does not see when plans contravene the by-laws, and then, having passed them, he dare not point out that certain things when carried out are not "according to Hoyle"; so everywhere we see the by-laws violated and nothing done to prevent it. In large cities, perhaps, where the architects have been felt to be worthy of notice by the esteemed aldermanic body some attention is paid to them, but the reception that has been accorded to the "suggested by-laws" drawn up by the Ontario Association of Architects, not only in Toronto but throughout the Province, only bears out my statement that the aldermen think they know better than the architects. I doubt if a single town has adopted these carefully prepared by-laws, whereas the majority of towns have not paid the slightest attention to them. The architects have certainly done their duty, and the results, being pigeon-holed, are a reproach to the want of intelligence of the municipal crews. The fire-departments are well equipped — in fact, most places in Canada seem to take an unusual interest in appliances for fighting fires; but the great expense incurred and the sacrifice of life among the firemen have no effect upon the public; fire-traps are permitted, and it really seems seldom that a building, once ignited, has any chance of being saved. If anything, fires seem to be fiercer than they used to be; despite the training of the brigades, the excellence of the equipment and the courage of the men, "total wreck in an hour" is the general result. It is a serious matter. Architects and insurance-companies should work together to bring about a change. The insurance-companies have the power to enforce their suggestions, which architects have not, and they would certainly derive assistance in technicalities by associating with the architects. Fireproof construction, slow-burning theories, these things are in their infancy, while the dangers, through heating-apparatus, electric appliances, and so on, are multiplying fast. There is no time to lose and architects would certainly be benefited by the results.

The design of the corbel-table of the chief cornice of the new City-hall and Court-house in Toronto, which has been finished over a year, I believe, has suddenly given rise to some excitement among the citizens. It has been discovered that the architect has "dared" to have his name placed there. In letters 3′ x 2′, at intervals all round the building, it is possible to spell out his name, profession and the date. Some are for having him cut out the letters, others suggest that he should pay a rental for the "sign." Sir Christopher Wren's famous *si monumentum* is outdone; the "cheek" of the architect is only equalled by the height of the just completed tower. And yet it took a year to discover the fact. But wise indeed is our brother architect; well indeed he knew that the Council would never allow him the customary inscription to which he certainly is entitled for his creation. The worthy public has no appreciation of genius or talent and can see no way of dealing with it except as a marketable commodity, therefore in an unobtrusive manner the architect, having taken French leave, provided his inscription to suit himself. He should have all other arcitects at his back if he has to defend his action.

It is many years since there was a competition for designs for a public building in Toronto, but there is one on just now, the designs being sent in early last month. The old City-hall site is to be combined with the present market-hall and is to form a magnificent market-building, in point of area, if not of design. There is nothing very specially worthy of notice about it, except that a somewhat unusual scheme has been adopted in giving instructions to would-be competitors. To gain information regarding markets a commission was appointed and made a tour of many of the United States cities. One of the commissioners was an architect as well as an alderman, and with his report he prepared and submitted a scheme for the new market which should include and exhibit all "the latest" in market-accommodation. The plan and perspective view of this scheme are incorporated in the instructions, and architects, in competing, are told that they "must follow the general scheme laid down," and "conform thereto as regards accommodation, etc.," at the same time they are "expected to present . . . original ideas as to the treatment of the subject."

The Longevity of Cedar-wood. — Some Egyptian boats made of cedar, probably in use 4,500 years ago, have been found buried near the banks of the Nile, and furnish an interesting proof of the power of that wood to withstand the ravages of time. — *N. Y. Evening Post.*

SIR W. RICHMOND AND ST. PAUL'S CATHEDRAL, LONDON.

LONDON, ENG.

A FEW weeks ago you pointed out some blemishes in the system upon which St. Paul's is being decorated. You, and, if I remember rightly, the *Builder* of this city objected to the work being done piecemeal, and you suggested that paint should be used first, in order to try the effect before putting the designs into mosaic. This seems so sensible an idea that one wonders any one should be found to object. In Paris statues and groups are nearly always put up in plaster (at great expense, too), that the effect may be seen before money is spent upon bronze, and for obvious reasons. For many years we gazed upon the chariot and horses designed by M. Falguière for the Arc de Triomphe; it was criticised and judged, found wanting, and consigned to limbo.

Now, however, the art public of London declines to accept these principles at St. Paul's. In the choir there has been no tentative painting; the mosaic was put up at once, and when uncovered the designs were found by most of us so minute, so full of detail, that all general effect of grandeur was lost. Also, the idea of decorating an Italian building with Byzantine designs seems like putting the cart before the horse. How could the Byzantine artists have decorated a seventeenth-century church? That is, to many, captious criticism. We have at Venice a Byzantine church full of seventeenth and eighteenth century designs: why should not Byzantine designs decorate a seventeenth-century church? Well, why not? Surely the answer is obvious, that a church must be built before it be decorated; and the only way for St. Paul's to be decorated in the Byzantine style is to follow the traditions of the Greek church, and to put the work into the hands of Greek architects and mural painters and mosaicists.

But, apart from this, the whole scheme wants more breadth; and had the designs been painted first, as you suggested, we should not have had such confused decorations as the creation of birds, fish, etc., in the saucer domes. But surely the gilding of capitals, the veneering of dirty stone pilasters with marble, and the rough surface of the mosaic cannot be a mistake; and yet people are now talking of Wren's "grand stonework," although a few years ago we were told that Wren had intended coloring the whole building! Why not? The old architects used color everywhere; and as to the "sham" of marble veneers, do people imagine that San Marco is built of solid marble? and do they think that other Italian churches of the Renaissance are one solid mass of marble from top to bottom — capitals, arches, pilasters, and what not?

A few years ago we were all exercised at the dirty, dingy effect of St. Paul's; designs by Sir Frederick Leighton, Sir E. Poynter and others were put up in the dome and all were found wanting in the "grand style." No one seems to be able to realize the distance of the dome from the gazer's eyes, nor the fog and smoke which are always up above our heads. Who has ever seen Thornhill's designs from below? Why, then, should not the dome be simply a mass of gold mosaic with a few Orcagna-like angels flitting about? What would be more suitable than these beings of six wings, as we see them in the Campo Santo, flying about over our heads?

And below: why not have a frieze of angels as Blake designed them, hand-in-hand, and clothed in feathery garments — or, rather, the bodies formed of feathers, which become wings and fins — if a fish-like appendage may be applied to the angelic host? In the chapel of St. Peter the Martyr, in St. Eustorgio, Milan, there is a dome, and round the lower part is a frieze of angels in relief. The work is attributed to Michelozzo Michelozzi; and possibly W. Blake's "Sons of God Shouting for Joy" were suggested to the painter by those older sculptures in Michelozzi's chapel. The conception of these feather-clothed beings is beautiful and all visitors to St. Peter Martyr's chapel must recall to mind the appropriateness of the design to the base of a dome.

The *Times* sums up the discussion thus: "It is, as we have said, the question whether the old St. Paul's of Wren is to remain, or whether the whole of it is to be overlaid with a new and foreign surface. The new surface has already crept down to the arches of the dome; it stops at present, this surface of dotted patches of stencilling and gilding, just above the beautiful Corinthian capitals of the columns. It will not permanently stop there. Something must be in preparation for the columns themselves, as well as for the transepts, nave and aisles. The least that this long suffering English public can ask, this public which has no Minister of Fine-Arts, and whose cathedrals are in the hands of irresponsible deans and chapters, is that it should know the worst — or the best — that is in store. Then will be the moment to insist, with a force which even Dean Gregory cannot withstand, that St. Paul's shall not be sacrificed until a competent tribunal has declared that Sir William Richmond is a greater man than Sir Christopher Wren."

Now surely such criticism as this is irrelevant. Sir W. Richmond would be the first to say that Wren is the "greater man"; but that is no reason why the lesser man should not decorate the great architect's work. Formerly the architect and the painter worked together. There is scarcely a building of Greek, Roman, or Mediæval architects that was not painted — absolutely painted with common paint; and were it not for the climate, there is no reason why St. Paul's should not be covered with arabesques, as is St. Peter's at Rome. But here, in this smoke-choked city, paint would peal off, therefore mosaic seems the best medium for decoration. Would the *Times* and its followers have mosaic domes and spandrels riding above and upon dirty stone columns and pilasters? Of course, every one would prefer a Minister of Fine-Arts, if he were the right man, to settle these questions; but the fact remains that for years every one grumbled at "Wren's masterpiece" being gloomy, dismal, dirty and *incomplete;* every one echoed that Wren intended to color every inch of it, and yet, when the Dean and Chapter undertake to do it, every one grumbles at the methods and persons employed. Competitions, even carried out by great artists, failed — *vide* the ungainly attitudes of the Prophets and Evangelists in the spandrels of the dome — and, now that the work has been confided to one man, every one grumbles again! Surely this is unfair; for, if we survey the very greatest work of art, do we not find parts thereof quite inferior to others? Where is perfection? Is it at St. Mark's, or St. Peter's, or even at Chartres, or at Westminster? Cannot we pick holes in the work of every architect, sculptor, or painter, however great he may have been?

Meanwhile Sir W. Richmond is probably the most effectually abused artist of the day; but when jealousies have toned down and the decorations are completed he may live to find his work appreciated as a fit complement to Wren's lordly architecture. Let us all bear in mind our errors as regards Pre-Raphaelitism, impressionism and all other artistic isms, and their authors. Only the very few saw beyond their own noses when Millais's "Vale of Rest" was exhibited; and how many persons dreamt of the success of Manet and Le Page and Millet? Therefore critics, professional and amateur, should be humble — and cautious.

S. BEALE.

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.]

CLUB-HOUSE OF THE NEW YORK ATHLETIC CLUB, NEW YORK, N. Y. MR. W. A. CABLE, ARCHITECT, NEW YORK, N. Y.

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

BUILDING OF THE *St. Louis Republic*, ST. LOUIS, MO. MR. ISAAC S. TAYLOR, ARCHITECT, ST. LOUIS, MO.

MAIN DOORWAY: CHURCH OF ST. MARY THE VIRGIN, NEW YORK, N. Y. MESSRS. N. LE BRUN & SONS, ARCHITECTS, NEW YORK, N. Y.

THIS drawing exhibits in its final and intended form the doorway which was shown in a gelatine plate in our issue for March 25, last.

ENGLISH CHURCH, RAGATZ, SWITZERLAND. MESSRS. D'OENCH & SIMON, ARCHITECTS, NEW YORK, N. Y.

CHURCH OF S. PUDENZIANA, ROME, ITALY.

ALTHOUGH this is called the oldest church in Rome the façade here shown has been "restored" and altered at sundry dates, the porch and door — shown at larger scale in our issue for December 11, 1897 — being the oldest and least changed features of the façade. We note with regret that both in the title of the earlier plate as in that of the one printed to-day the last syllable of the saint's name has been omitted. The error reveals one of those cases of carelessness which every reader, we hope now and then, discovers in himself; thus, though we have read Scott assiduously for more than forty years, it was only this winter that we noticed that the word was "assoilzie," and not "assoilize," as we had read it a thousand times before.

CHURCH OF S. ANDREA, PISTOJA, ITALY.

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

HOUSE OF W. C. STUART, ESQ., PASADENA, CAL. MR. F. L. ROEHRIG, ARCHITECT, PASADENA, CAL.

HOUSE OF J. H. ADAMS, ESQ., PASADENA, CAL. MESSRS. ADAMS, PHILLIPS & CO., ARCHITECTS, PASADENA, CAL.

THIS house is said to have cost about $9,000.

[Additional Illustrations in the International Edition.]

REAR DOOR OF THE CHURCH OF ST. MARY THE VIRGIN, NEW YORK, N. Y. MESSRS. N. LE BRUN & SONS, ARCHITECTS, NEW YORK, N. Y.

[Gelatine Print.]

INTERIOR OF THE SAME CHURCH.

[Gelatine Print.]

DIE STADTWAAGE, BREMEN, GER.

[Gelatine Print.]

AMONG the works of Lüder von Bentheim that have come down to us, this building, next to the justly famous Bremen Town hall, of which we have some plates in preparation for a future issue, is the most important. It was erected in 1587. As in many other commercial cities of that period, the Public Scales established and administered by the municipality served to weigh the imported merchandise for the purpose of levying customs-duties. Furthermore, these scales formed an important source of revenue for the public exchequer, through fees being collected from the merchants for employing the scales for their private use. To house such an object of public usefulness in a building of monumental character and appearance was an idea quite in keeping with the intense civic pride of the burghers of the old Hanseatic town, provided that a certain degree of simplicity was observed in its erection.

The interior of the Stadtwaage Building contains nothing that is especially noteworthy in an architectural sense. The hall of the ground-floor, spanned by a massive wooden ceiling, formerly contained the scales, of which there were several in use. The story above formerly contained offices and assembly-rooms. Now it serves for the storage of merchandise, as do the three upper floors built into the spacious roof.

The architecture of the main façade clearly expresses the inner arrangement by distinct horizontal division of the whole. Its principal attractiveness consists in the well-balanced proportion of the several stories to one another and of the dominating gable to the whole. This stepped gable is remarkable for the repetition of the same decorative feature, viz, coupled Ionic pilasters over corbels, with adjacent volutes and pointed obelisks, topping-off the various steps, a repetition giving this façade a monumental repose such as we encounter in few other gables of this or later periods. The only variety introduced by the architect is to be found in the bands, or friezes, which are decorated with daintily sculptured angels' heads and kindred devices. The framework of the plain window-openings is of sandstone, the lintels being surmounted by arches and sculptured shell-ornament. Narrow bands of sandstone enliven the spaces of brick wall, while the corners of the building are accentuated by embossed blocks with peculiar rustic carving, which are also employed to decorate the two round-arched main entrance-doorways, whose keystones bear the coat-of-arms of the Bishopric of Bremen, with the historical key as its principal feature.

Soon after the completion of the building the foundations were discovered to be insufficient, bad cracks having formed in the structure, and it was found necessary to re-enforce the right-hand corner by the construction of an unsightly buttress which to some degree mars the fine effect of the façade. The appearance of the latter was formerly enhanced by the coloring and gilding of certain ornamental portions. Recently a similar polychrome treatment of the friezes has been undertaken, whether with the same happy effect as the original scheme it would be difficult to decide.

"FERNLEIGH," NOTTINGHAM, ENG. MR. ARTHUR MARSHALL, ARCHITECT.

INTERIOR OF WEIGH HOUSE CHAPEL, DUKE ST., GROSVENOR SQUARE, LONDON, ENG. MR. ALFRED WATERHOUSE, ARCHITECT.

THE exterior view of this building may be found in our issue for April 15, last.

CORRECTION: — Speaking of mistakes, we must ask our subscribers to correct one which we made in our issue for March 11, 1899, which was brought about by a mistake in marking the negatives of two buildings not personally known to us. Immediately on the publication of the two interior views under the title "Genesee Valley Club-house" Mr. Du Fais at once wrote to disclaim their authorship; but to publish a disclaimer without making the proper correction seemed undesirable, and because of delays on the part of those we wrote to for the facts, it has taken an unusual length of time to verify our suspicion that the mistitled views actually show interiors in the Eureka Club-house, also at Rochester, the work of Messrs. Nolan, Nolan & Stern. We ask our subscribers, and particularly all librarians, to make the needed correction on the prints in question.

NOTES AND CLIPPINGS

THE ELEPHANT OF CATANIA. — The diligence of Professor Holm has brought to light one or two scraps both of Byzantine and of Saracenic work lurking in the streets and lanes of Catania. But no Byzantine or Saracenic building remains. There is however one work of art which, if we can believe the local legend, belongs to the days of Byzantine rule, but which by no means comes within the standard of Byzantine orthodoxy. The elephant wrought in lava, with tusks of white marble, which in later times has been set to carry an Egyptian obelisk in the place before the cathedral, is held in local belief to be the work of a certain Diotro, Diodoros, Liodorus, or Heliodoros, who in the eighth century turned Jew, practised magic and became a manufacturer of idols. The Jews of Catania were a numerous and a proselytizing body in the days of Gregory the Great; but, whatever may have been their misdeeds, it is hard to charge either them or the Saracens with being makers or worshippers of idols. But this Sicilian forerunner of Lord George Gordon was a mighty necromancer indeed. He turned men into beasts, and, when he was carried to Constantinople to die for his crimes, he escaped the vigilance of the Imperial police by flying through the air back to his own city. But there he met with his match in the Bishop Leo of Ravenna, who, as himself a worker of wonders through holier influences, bore the surname of Thaumatourgos. Heliodoros, once, it is said, a candidate for the bishopric, was burned, not indeed in Ætna, but in some lowlier furnace of fire. The modern historian of the Sicilian Mussulmans sees in this tale a legendary account of the last destruction of heathen monuments by Christian hands. But the elephant, whatever may be his date, is there to speak for himself, not only in his own person but in the place which he bears in the arms of the city. The obelisk which he has borne for the last 150 years has no natural connection with its bearer, nor is it obvious why an Egyptian work should find itself among the ornaments of the Sicilian city. An explanation has been found in the fact that Agathokles had an Egyptian wife, Theoxena, who, it has been guessed, was the stepdaughter of the first Ptolemy. Agathokles may have received an obelisk as part of her dowry, and he may have set it up at Catania. At any rate, the work of the Egyptian is there, mounted on what passes for the work of the convert to the creed of the Hebrew. — *The Architect.*

WHAT TRADE-UNIONS HAVE DONE FOR ENGLAND. — The diversion of engineering business, such as the building of locomotives and steel bridges, from Great Britain to the United States is provoking an animated discussion in the English press. One of the most significant letters published comes from Mr. Thomas H. Robinson, editor of *Fair-play*, who declares that the loss of trade is due chiefly to the logical effect of trade-unionism. He says: "When our leading engineering firms are full of work for the next two years, as is the case with most of them, they cannot be accused of want of enterprise, for they have already undertaken more than they can do. When the men can earn in four days as much as will keep them for a week I do not see why they should be blamed for not doing more; they are not philanthropists, and it is only in poetry that manual labor is a joy; while as to commercial travellers, what is the use of their hunting up orders which they know cannot be executed? The real cause of the trouble lies in another direction, namely, in the restriction of apprentices imposed by the trade-unions. Some ten years ago a prominent shipbuilder and engineer on the Clyde told me that in consequence of these restrictions we were approaching the time when there would not be a sufficient number of skilled hands to meet the requirements of trade. That time has come. If our engineers were to double their works to-morrow, they could not find suitable men to fill them, because such men do not exist, and under trade-union rules can never be brought into existence. The object of trade-unions is not to increase trade, but to limit the number of men employed in any particular industry, and this object they have attained with the result we see."

THE EMPRESS ELIZABETH'S GARDEN AT LAINZ. — When the late Empress Elizabeth was staying at Nauheim the Empress Frederick, on a visit to her, gave her a vivid description of her garden at Friedrichshof, near Cronberg, which had been laid out according to her own ideas. It is longer than it is broad, and is enclosed by a high wall, in which there is a sculptured niche and fountain, like these we see in the Old World gardens of Central Italy. On either side of the garden an immense pergola runs from the house to the wall, lofty and light, and overgrown entirely with roses — Malmaison, Marshal Niel, Noisette and others. The garden is laid out in terraces, and, with the exception of a broad middle avenue and a lawn before the house, is planted with rose-trees of all kinds and all colors. The Empress Frederick gave the Empress photographs of this garden, which she sent to the Emperor, asking him whether he did not think the idea charming, and whether he had any objection to her having a similar garden laid out at Lainz. She never had a definite answer to that letter, and now the Emperor has given orders that the garden at Lainz is to be laid out exactly like that of Friedrichshof without delay, as the realization of perhaps the last wish the Empress ever expressed. By next spring the gardens of Lainz will be as the Empress would have wished to see them. — *London News.*

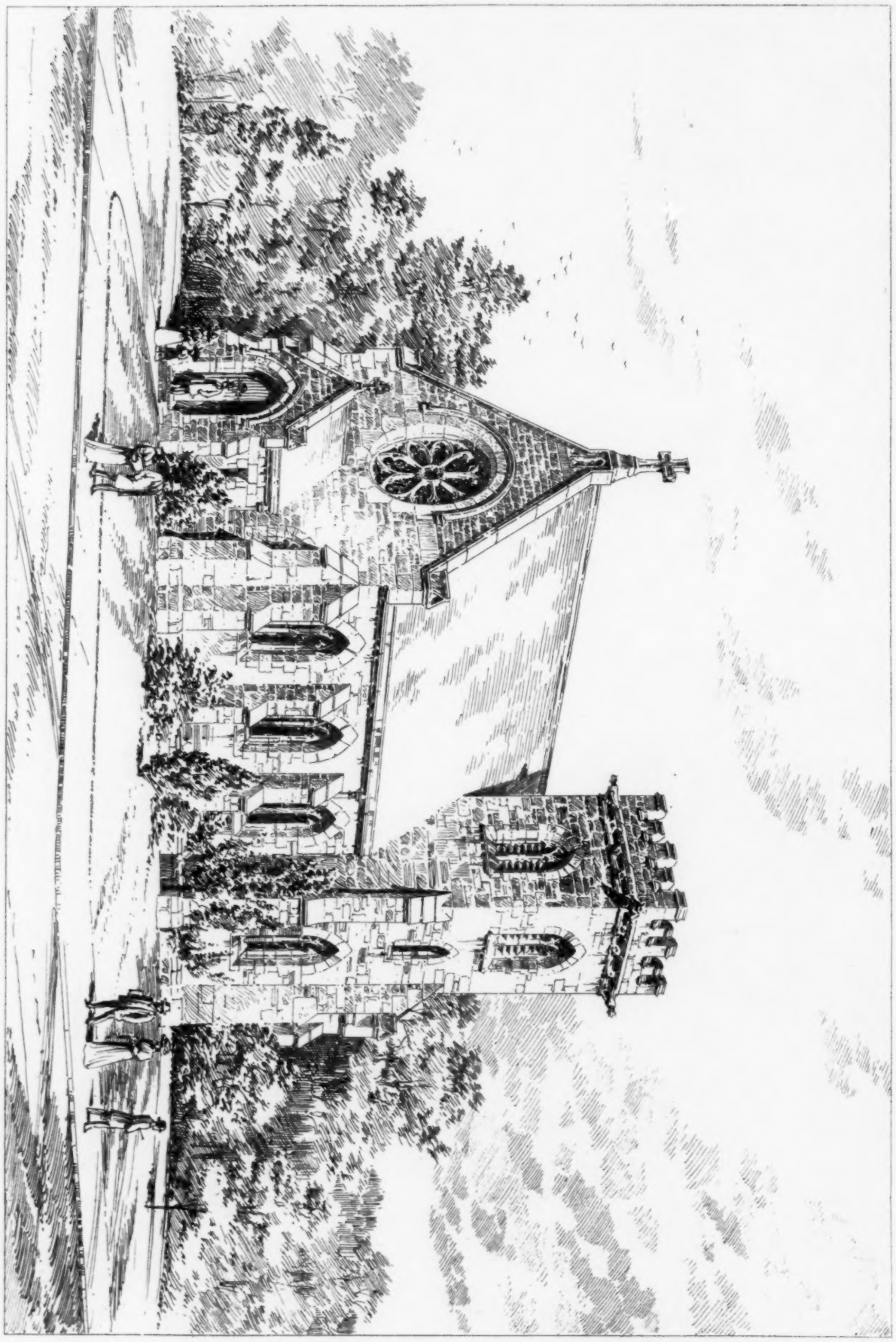
TO SAVE THE PLAINS OF ABRAHAM. — The Plains of Abraham, the scene of the epoch-making victory of Wolfe over Montcalm, are to be subdivided into building-lots and converted into a suburb of the city unless the authorities intervene and pay a large price for the property. It transpires that the Government has held it from year to year under a lease made with a religious corporation, a nunnery, a nominal rental of $100 a year being exacted. The last lease, made in 1802 for a period of ninety-nine years, expires within the next two years, and as the land has now become valuable the owners propose to resume possession. Strenuous efforts will be made to preserve from desecration a spot the most historic in Canada. The various literary and historical societies throughout Canada and many commercial bodies have petitioned the Government to buy the land and convert it into a national park, but as yet there is nothing to show that these petitions will be listened to. It would take a large sum of money to secure the land, as it is admirably suited for suburban residential purposes. — *Boston Transcript.*

FIND OF MARBLE IN SOUTH AFRICA. — Valuable marble, said to be equal to Carrara marble, has been found in German Southwest Africa. It is asserted that the beds are most valuable, owing to their size and thickness. The Government has sent a committee of experts to report on the find, believing that the discovery will enhance the commercial value of the colony tenfold. — *N. Y. Tribune.*

S. J. PARKHILL & Co., Printers, Boston, U. S. A.

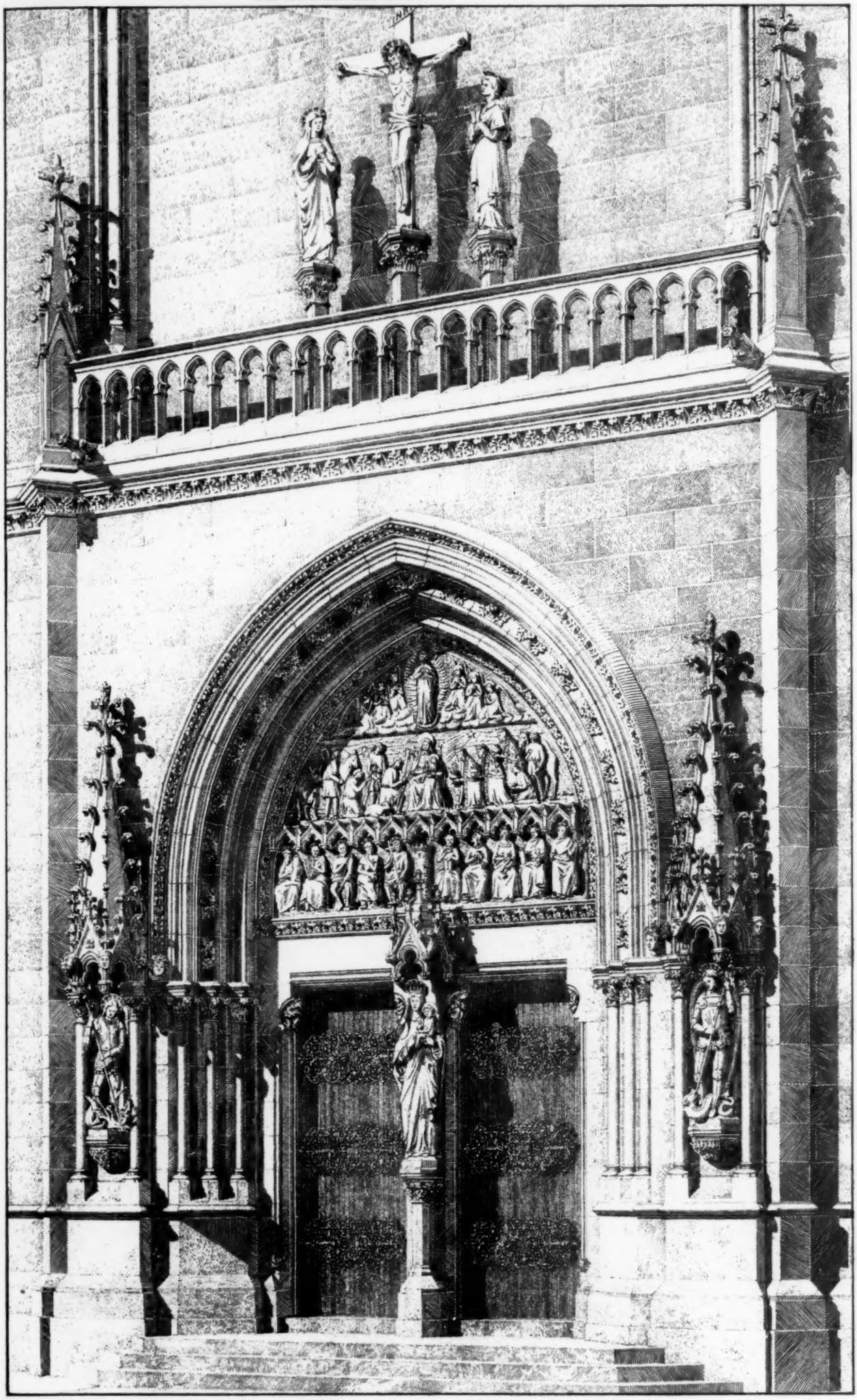
CHURCH OF S. PUDENZIA, ROME, ITALY.

CHURCH OF S. ANDREA, PISTOJA, ITALY.



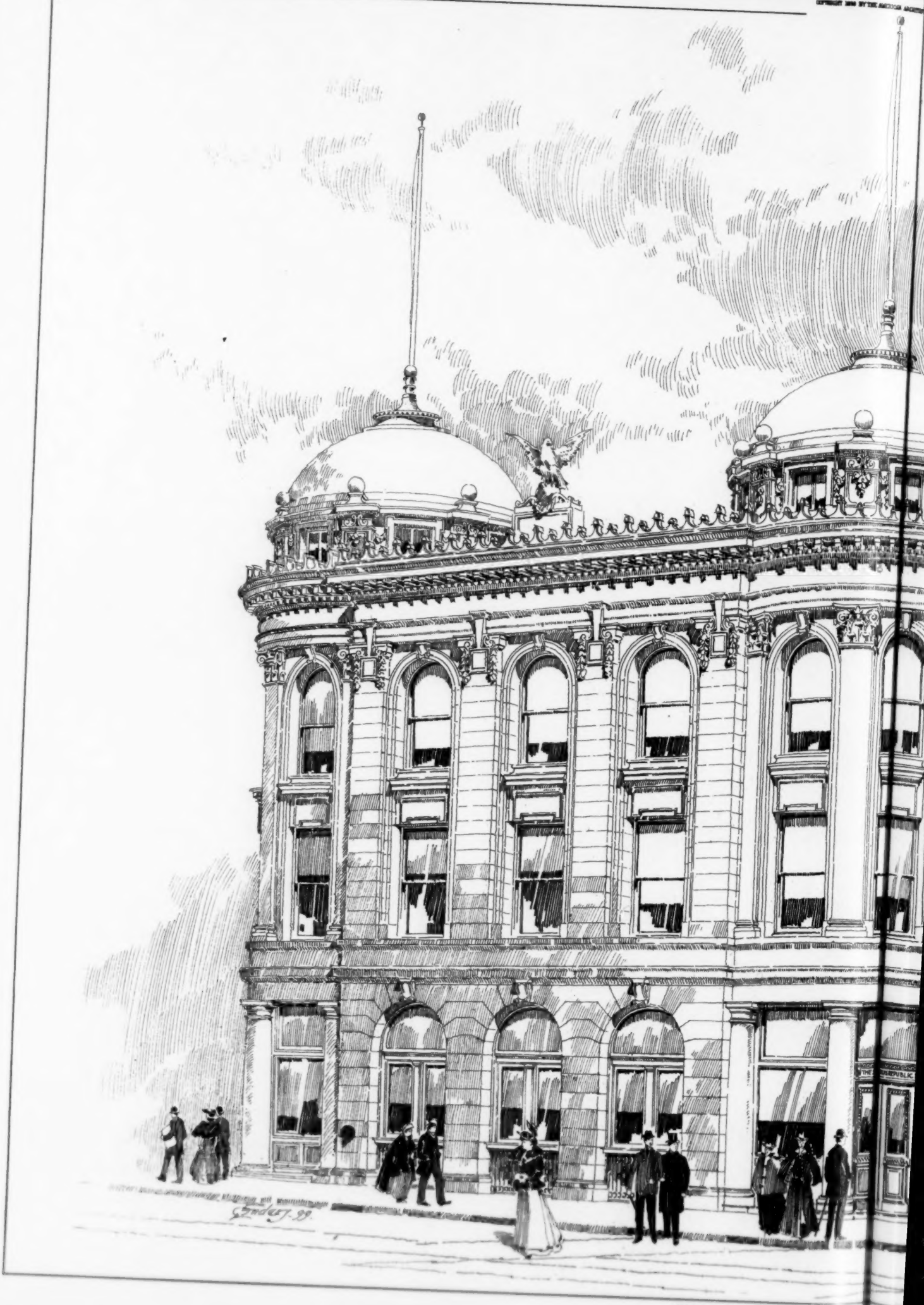
ENGLISH CHURCH, RAGATZ, SWITZERLAND.

D'Oench and Simon, Architects.



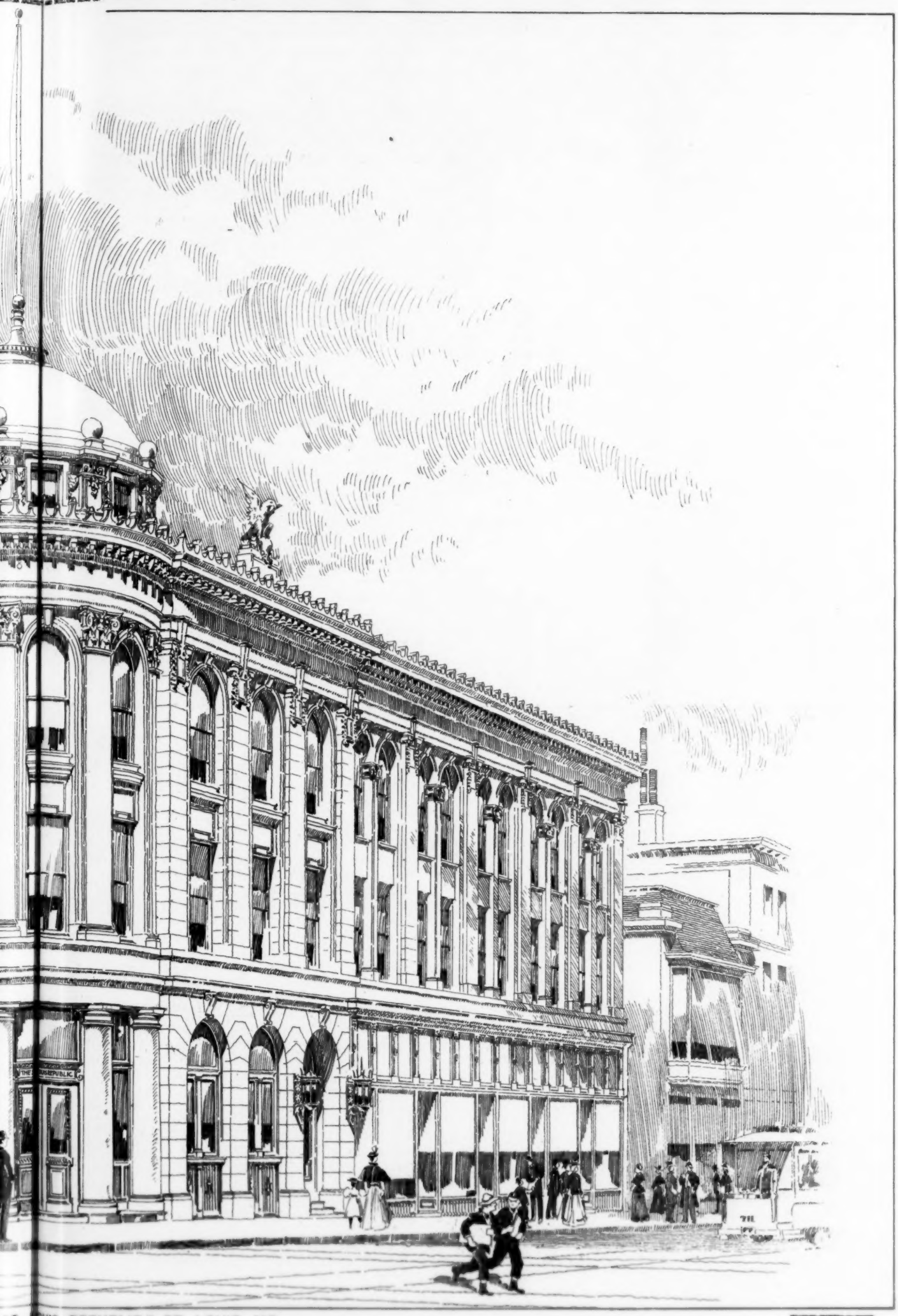
MAIN ENTRANCE: CHURCH OF ST. MARY THE VIRGIN, NEW YORK, N. Y.

N. LeBrun & Sons, Architects.



BUILDING OF THE "ST. LOUIS

ISAAC S. TAYLOR,



ST. LOUIS REPUBLIC," ST. LOUIS, MO.

AC S. TAYLOR, ARCHITECT