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## SUMMARY:—

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| The League Exhibition for 1893.—Change of Date of the Exhibition.—The Medal Competition.—An International Competition in Hungary.—An Attempted Fraud upon the Authorities of the Louvre.—Discovery of the Deception.—Another Collection of Casts for the Chicago Exposition.—The Painted Busts of El Khargeh.—The Transmission of Tuberculosis by the Bites of Insects.—Narrow Escape of Joan of Arc's Chapel at Vaucouleurs. | 65 |
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| Entrance to the High School Building, Cambridge, Mass.—House at Chicago, Ill.—Music-room in the Same.—Ball-room and Theatre in the Same.—Hall in the Same.—Theatre in House of Francis Wilson, Esq., New Rochelle, N. Y.—House at Overbrook, Pa.—Stores on Columbus Avenue, Boston, Mass.                                                                                                                                                                                              |    |
| Additional: Interior of New Church, Miles Platting, Manchester, Eng.—New Law Courts, Madras, India.—Villa at Boisredon (Yonne), France.—The Virgin adored by Two Saints, in the Royal Museum, Berlin, Germany.—Carnegie Free Library, Ayr, Scotland.—Schloss Theatre, Totis, Austria.—Details of Wood Architecture at Brunswick, Germany.—New Roman Catholic Church of the Holy Rood, Watford, Eng.—Verwood Vicarage, Dorsetshire, Eng.—The Virgin and Child.—Hôtel de Ville, Cologne. | 74 |
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THE League Exhibition promises this year to be of unusual interest and merit, and, as it is to be held for the first time in the new building of the American Fine Arts Society, it will undoubtedly attract a very large number of visitors. From the first, the League Exhibitions have formed the principal architectural event of the year, so far as the public is concerned; and, to one who has watched them from the beginning, there is something surprising, as well as most gratifying, in the growth of the interest taken in them by the public. Six or eight years ago, although the exhibitions were in many respects as good as they are at present, they attracted hardly any one outside of the profession. To the veteran architect, there was a great deal of pleasure in visiting them, not only to see what progress had been made in the art within the twelvemonth, but, in the careworn professional men, who might be seen here and there, studying the drawings, to recognize friends and acquaintances; but, beyond these professional visitors, with, in the evenings, a few draughtsmen, looking overworked, but enthusiastic, and accompanied, in most cases, by sympathizing girls, there was almost nothing in the way of a public to be seen in the rooms. Now things are very different. What might almost be called a crowd of smiling and well-dressed people, much more fashionable than professional in appearance, fills the rooms; and, although the criticisms that one overhears are, perhaps, not quite so intelligent as they used to be, it cannot be said that the interest and enthusiasm of the spectators has diminished. There is only one inference to be drawn from this; and that is, that architecture is rapidly becoming in this country a great and popular art. Undoubtedly, the able management of the League Exhibitions has done much to make them attractive, and the League itself must have due credit for the important part it has played in educating and interesting the public; but this does not alter the fact that the New York public has proved, of late years, very responsive to the efforts made in this direction, and that, unless matters have changed very much on the other side of the water within a few years, the New York League Exhibition now has more visitors than all the annual architectural exhibitions in Europe combined. We will not stop to enlarge upon the significance of this; all our readers know what we think about the future greatness of American art in general, and American architecture in particular; so that we need only call attention to the circumstance as a confirmation of our views.

THIS year, the Exhibition comes later than usual. Instead of beginning in Christmas week, and ending soon after New Year, the opening day is January 2, and it remains open until the evening of January 24. As formerly, completed work, such as carving in stone and wood, wrought-iron work, mosaic, furniture and so on, will be shown in connection with the architectural designs proper. The time for receiving exhibits is to be from Monday, December 19, to Wednesday, December 21, although separate shipments may be made, if desired, from outside of New York. The League will collect and return all works in New York City, Philadelphia and Boston, free of charge to the exhibitor, on condition that a proper notice is sent to the Secretary of the League before December 15. Drawings must be framed, or mounted on stretchers, and provided with a label, giving the title of the work, the name and address of the author, and the name of the draughtsman; and no work will be received that has been previously exhibited in New York. Collections of works for the Exhibition will be made in New York on Monday, Tuesday and Wednesday, December 19, 20 and 21, by Messrs. W. S. Budworth & Son, No. 1 West Fourteenth Street; in Boston, on Friday and Saturday, December 16 and 17, by Messrs. Williams & Everett, 190 Boylston Street; and in Philadelphia, on Friday and Saturday, December 16 and 17, by Messrs. J. F. McClees & Co., 1417 Chestnut Street. All further information desired, and blank forms for entries, may be obtained from Mr. Edward T. Hapgood, Secretary of the New York Architectural League, No. 215 West Fifty-seventh Street, New York.

AS usual, the Exhibition will be accompanied by a competition for draughtsmen, the prizes in which will be the gold and silver medals of the League. The subject this year is to be a Fountain in Commemoration of the Discovery of America. The fountain is supposed to be erected against the west wall of the old New York Reservoir, facing Bryant Park. The wall against which the fountain is to be placed is of gray granite, about five hundred feet long, and forty feet high, with a batter of about one foot in ten. It has at present an Egyptian cornice, which may be removed from the portion above the fountain, if desirable. Any resident of the United States, under the age of twenty-five, may compete. Drawings must be delivered, under cipher, at the rooms of the League, No. 215 West Fifty-seventh Street, on or before Saturday, December 24, 1892; and a sealed envelope, bearing the corresponding cipher or motto, and containing the name, address, and time and place of birth of the author, must be sent by mail to the Committee on Competitions and Awards, at the same place, at the same time. Drawings are to be delivered and returned at the expense of the competitor, and must be sent flat, but stretchers or frames are not required. The detailed programme may be obtained from the Secretary of the League, No. 215 West Fifty-seventh Street.

AN international competition is announced for a monument to the memory of the great Hungarian statesman, Count Andrassy, which is to be erected in the city of Budapest. Three prizes will be awarded, the first of six thousand francs, the second of four thousand, and the third of three thousand. The competition will remain open until October 1, 1893. The monument must comprise an equestrian statue of Count Andrassy. Plans, and model, in plaster, are required, and must be delivered, before the expiration of the period fixed, to the President of the Executive Committee, II Foutcza No. 1, II<sup>e</sup> étage, Budapest, Hungary.

THE authorities of the Museum of the Louvre, according to the French papers, came very near being cheated by an impudent forgery the other day. A beautiful bronze statuette was offered them, apparently of Venetian workmanship, of the end of the fifteenth century, representing a man, naked, except for a flowing wig. Figures of this sort were common at that period, and the authorities of the museum, considering the one offered them unusually fine in some respects, agreed to buy it, at a price of forty thousand francs. The statuette was put on exhibition, and it was not long before a letter appeared in the newspapers, declaring it to be a modern forgery. Meanwhile, however, the directors of the

museum had, on more critical examination, come to the same conclusion. Although the figure, as a whole, was different from any other known, the head, and upper part of the body, were found to resemble closely one preserved in the Correr Museum, in Venice, and there were certain defects of proportion between the bust and the rest of the body which indicated that the head and shoulders of the Correr figure had been copied, or moulded, and adroitly joined to a body and limbs moulded from the sculpture on some Venetian tomb. The details of the execution confirmed this opinion. The casting was very poor, the finishing showed that it had been done with modern tools, and the whole was covered with a patina, which proved to have the peculiar slaty color of the modern counterfeit oxide, although it was nearly concealed by a coarse black varnish, intended to represent the accumulated dirt of four centuries.

THE money for completing the purchase of the statuette has not yet been paid over from the Treasury to the authorities of the Louvre, and will not be; so that the ingenious counterfeiter will have to go without his forty thousand francs. It is probable that he will be allowed to take his statuette away, but any attempt on his part to enforce the contract of sale, will, of course, be followed by his arrest and punishment for the attempted deception. As it happens, the directors of the Louvre had been, about the same time, solicited to purchase another bronze, which, they were assured, had not been offered to any one else. The discovery of the fraud which had been perpetrated in connection with the Venetian statuette led them to look somewhat closely into the history of the other bronze, and they ascertained that it had been offered several times to various amateurs in London and Paris, who had refused it, and there was reason to believe that a campaign against the authorities of the Louvre had been for a considerable time in preparation. It may be a comfort to persons who possess antiquities, in regard to the genuineness of which they sometimes experience misgivings, to know that the most skillful experts in the world are sometimes deceived, and that many museums, perhaps all the great ones, contain forgeries, bought for genuine specimens. Even the Sistine Madonna at Dresden, probably the greatest picture in the world, has been strongly suspected of being a copy, and not the original, and the chances for deception in objects of mere archaeological value are much greater than in pictures.

ANOTHER collection of great interest to architects, which will be shown at Chicago, is one of casts from some of the objects in the Trocadéro Museum, which, as every one knows, is filled with specimens of French architecture of all periods, both in the original and in casts. Among the rest, the north portal of the great Romanesque cathedral of Bordeaux is to be reproduced, besides the "jubé," or organ loft, of the Cathedral of Digne, and many other beautiful objects. According to *La Construction Moderne*, the casts are to be shipped to Chicago this month, so that the architects of that city will have an opportunity to study them at their leisure. Before the exhibition closes, it is to be hoped, and, indeed, we suppose it is intended, that arrangements may be made for retaining the casts in this country. Very little is known here of French Gothic, still less of French Romanesque, and of French Transition and early Renaissance next to nothing; so that the casts will be of great use in architectural education.

LA CONSTRUCTION MODERNE gives a little additional information in regard to the busts of painted plaster, recently discovered in a tomb in the oasis of El Khargeh, in Upper Egypt, and sent to the Louvre. El Khargeh was probably, at the time the busts were made, inhabited by a population of mixed race, the majority of the citizens being apparently, at least by training and tradition, Greeks, the descendants of the people who followed Alexander through the Nile valley. In the three hundred years which intervened between Alexander and Augustus, the Greek settlers had adopted the Egyptian customs, and, to a certain extent, the Egyptian religious views, and embalmed their dead, placing them in mummy-cases, as the Egyptians had disposed of theirs for three thousand years previously. During the Roman period, however, to which the painted busts belong, some innovations had been introduced in the old ceremonial, which are curiously

characteristic of the acute and enterprising, but not very spiritually-minded, Greek. The old mummy-cases were generally portraits, the figure, bearing the form and features of the deceased, being shown as calmly reposing, awaiting the termination of the five-thousand-year probation allotted to the souls of men. Repose was not much to the Greek taste, and, in the course of centuries, the Grecian colonists, in adopting the Egyptian eschatology, modified its expression in their mummy-cases by representing the figure as starting into life, and half-risen from its couch. As time went on, the intelligence and foresight of the race suggested ways of economizing in the manufacture of these costly envelopes of mortality, and, at the time to which the Louvre busts belong, the mummy-cases were made in quantities, richly ornamented, but without a head, or any other distinguishing individual characteristic. By means of this improvement, the friends of a deceased person could select "from stock" a mummy-case of whatever style suited their purse, and have it individualized later, by adding the head; and, for this purpose, portrait heads in plaster were made and colored to order, which would fit the ready-made part of the mummy-case, thus saving a considerable expense. The Louvre heads, it appears, are objects of this sort; and, while they hardly represent a very elevated form of art, they give a curious illustration of the skill of what may be called the manufacturing undertakers of the period.

M. MARCEL DALY, in *La Semaine des Constructeurs*, makes the surprising assertion that tubercular consumption may be transmitted from one subject to another by means of the bites of insects. He quotes from a certain Dr. Dewèvre, who describes a case where two children died of consumption, one after the other. At the time of the death of the first, the other was perfectly healthy. After the first death, the room which the patient had occupied was thoroughly disinfected, as were also the sheets, blankets and mattresses of the bed, but not the bed itself. The younger child was then allowed to occupy the room, and soon afterwards showed symptoms of tuberculosis, which increased until their progress was terminated by his death. Dr. Dewèvre, who attended the younger child, observed that it was badly bitten by bugs, and learned that for five years the room had been infested with them. Suspecting that they might possibly have been the means of conveying the contagion, Dr. Dewèvre captured some of the insects, and used them to inoculate guinea-pigs, which became tuberculous soon after the inoculation. Although this experiment stands, so far, alone, and its results can hardly be considered more than indications, they are nevertheless important. It has long been believed that the worst forms of malarial fever are communicated by mosquitoes, which infuse into the circulation bacterial poison brought from the swamps in which the mosquitoes breed, and it does not seem at all impossible that the ferment of tuberculosis may be transmitted in the same way. M. Marcel Daly thinks that the moral to be drawn from this reflection is that clean houses are safer to live in than dirty and infested ones, and he says, what is undoubtedly true, that if there were a general public demand for houses in which vermin could not, and would not live, architects would have no difficulty in supplying them.

WHERE are some people in France, as well as here who have not much sentiment to waste on historical monuments, and who need, occasionally, to be forcibly reminded that other people care for things which do not interest them. Two or three weeks ago, word was sent to the Minister of Public Instruction, in Paris, that the Bishop of Verdun had laid out a new church on the site of the chapel belonging to the castle of Vaucouleurs, where Joan of Arc, during her visits to the castle, to entreat from Robert de Baudricourt, the governor, an escort and introduction to the Dauphin, was accustomed to pray, and commune with her guardian saints. M. Simeon Luce, whose name deserves to be remembered for his energy in the good cause, assumed the burden of representing the community in its opposition to the Bishop's scheme, and, just as the workmen were actually engaged in tearing down the little old chapel, to make room for the Bishop's basilica, a decision was given in his favor, and an order sent by telegraph to the Mayor of Vaucouleurs, directing him to have the work of demolition suspended, as the chapel had been taken under the protection of the State, as a "monument historique."

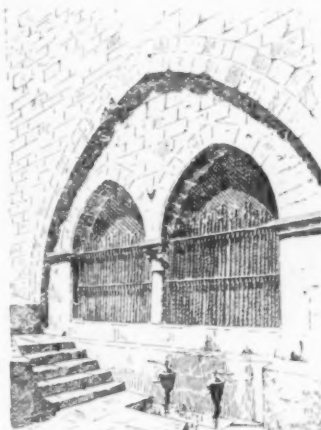
FOUNTAINS.<sup>1</sup>—I.

Fig. 1. Fountain at Lectoure (Gers, France).

THE word fountain is almost a synonym of spring; it is applicable to any water issuing from the ground. By extension, it was used first to designate the natural or artificial basin surrounding the spring, and then later was made to apply to the ensemble of architectural or sculptural ornaments employed to decorate it.

There is a wonderful variety of dispositions and arrangements exhibited in fountains. Among them may be noted: grotto fountains, reached by descending steps; those figuring as a buffet or porch, built against a wall or across a corner; pyramids (that is, composed of basins placed one above another); those in recesses, niches, demi-lunes, spouting or rustic springs, with satyrs, statuary, etc. All these call for no further description. It should be added that, when a fountain assumes grand proportions or a monumental character, it is usually termed a *château d'eau*. Such, for example, is the fountain of Trevi at Rome.

It is very difficult to find a satisfactory basis for the classification of the different kinds of fountains. Quatremère de Quincy attempts to rank them as architectural, sculptural or mixed; that is, participating of both arts at once. This seems to us a worthless division, for we know of no example in which architecture does not play a part; we should, therefore, have to set them all down as mixed.

A fountain may serve two ends: first, it may furnish a comfortable water-supply for households in such quarters of a town

In fact, as it takes a hare to make a civet, so, to construct an ornamental fountain, it requires water, an abundance of water, spouting, rebounding, springing into the air, and falling back in sheets. If a decorative fountain should be made a supply

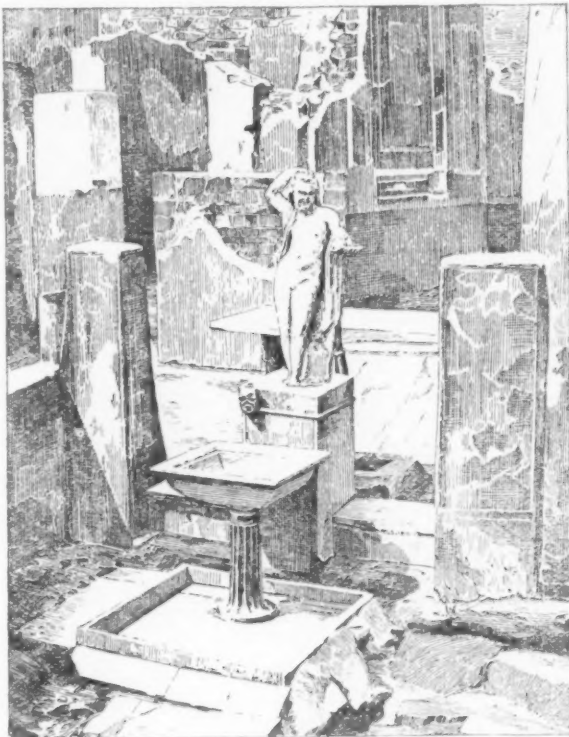


Fig. 3. Fountain at Pompeii.

fountain at the same time, the drops of water blown about by the slightest breeze and carried to a distance would surely besprinkle the housekeepers who came to draw water there. For this reason, pretty water effects are seldom sought in supply fountains, and the water is usually allowed to flow out in a slender stream that can be caught easily in a pail or jug, or hydria, to use the term employed by the over-refined, who decline to call a bucket a bucket when speaking of antique things. Instead of falling into a basin, the stream sometimes flows into a stone trough, in which the water vessel can be immersed to fill it.

When art is applied purely to the decoration of fountains of the "useful" sort, it takes a form which seems to us to admit much more readily of criticism and analysis. On the other



Fig. 2. The Acqua Paola, at Rome.

as have no domiciliary distribution under pressure; secondly, it may contribute to the adornment of cities, courts or gardens. Sometimes both objects are attained at once, but this is rare.

<sup>1</sup> From the French of Léon Benouville, in Planat's *Encyclopédie de l'Architecture et de la Construction*.

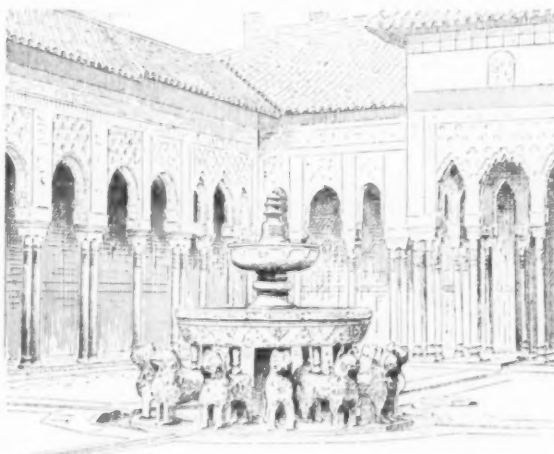


Fig. 5. Fountain of Lions, Court of the Lions in the Alhambra, Granada.

hand, criticism becomes impossible in the presence of one of those decorative effects whose only purpose is to be decorative; it is beautiful or ugly; it is a success or a failure, that is all.

In Greece, fountains were probably merely reservoirs, out

of which the water flowed through a sufficient number of orifices. We can imagine that these reservoirs admitted of every possible variety of embellishment. As is often the case in mountainous countries, the water may have filled a secondary basin also, which served as a laundry; and, again, this ensemble of reservoir, well and laundry may have constituted an important structure, roofed in or surrounded by porticos. Certain of the Etruscan vases point to this conclusion. The fountain of Lectoure, reproduced in Figure 1, is designed in accordance with this primitive plan, although it belongs to the thirteenth century.

When, under Paul V, Giovanni Fontana, brother of Domenico, repaired the old aqueduct of Trajan and connected various other springs with it, he erected at the terminus, at the culminating point of Rome, the Acqua Paola (Fig. 2), which forms an overflow for the distribution supply. The effect produced by the enormous masses of water discharged here is imposing, notwithstanding the unfortunate proportions of the monument, which is justly criticised for the exaggerated dimensions of the attic borne on very slender columns. The fountain of Trevi marks, like the preceding, the outlet of an aqueduct, the Acqua Vergine. We speak of these fountains here because they are derived in principle from the Greek fountain, and because the same idea is discernible in their construction as in that of the small fountain at Lectoure referred to above.

The Romans seem to have been the first to inaugurate a system of water distribution, properly so-called. It is a well-known fact that, in spite of the ruined condition of certain of the old aqueducts and the complete abandonment of some of the conduits, Rome still has an enormous water-supply, reaching 1,500 litres a day per capita. This is all brought by such of the ancient aqueducts as have not been allowed to fall into decay. If Pliny's testimony can be relied upon, old Rome possessed more than one hundred spouting fountains, and nearly four hundred with basins and drinking-troughs.

It was impossible that the Romans should fail to take advantage of the waters, which they knew so well how to capture and conduct, for ornamental purposes; that they heightened the effect produced by the use of sculptures is shown by the familiar figure of the child with the goose, but we have no precise information as to the workings of their public fountains. On the other hand, the excavations of Pompeii have furnished accurate data respecting the construction of private fountains. We give (Fig. 3) a fountain from the atrium of the so-called House with the Large Balcony. The water must have flowed from the shell in the

child's hand into the basin, and thence into the impluvium; a stream doubtless emerged from the lion's head on the pediment at the child's right, from which vases could be filled. We cite, likewise, another Pompeiian example from the so-called House of the Great Fountain; it is a niche fountain: the water issued from a mask and fell into a basin. The interior of the niche is enriched with mosaics.

With the above-mentioned group let us connect certain others closely related to them in the purpose which they serve, namely, fountains intended to cool an inner court, as for instance, the pretty one in the court of the Palazzo Vecchio at Florence (Fig. 4), designed by Vasari, with a bronze statue by Verocchio. The fountain of the Lions in the Alhambra was destined to the same end; it is, as it were, an atrium fountain on a vaster scale (Fig. 5).

It is perhaps mixing sacred and profane things, but we should like to remark here that the object of the lavabos in the cloisters was to impart coolness to them while at the same time ministering to the demands of cleanliness; however, as these were often stationed beneath special little structures, as at Thoronet (Var.) and at Fontenay, they may be differentiated from atrium fountains.

Supply fountains designed to furnish water to the inhabitants of a city, or of a dwelling, always comprise a spout from

which the stream issues and a receptacle where the water collects and in which a bucket can be plunged to be filled. Very primitive fountains made up of three juxtaposed troughs are often encountered in mountainous regions; the first receives the water in all its purity, the overflow from this falls into a second which serves for a watering-place, and the waste from the latter supplies a laundry. Figure 6 gives a section of one of these crude arrangements. Each trough is provided with means for emptying it; the one designed for drinking-water

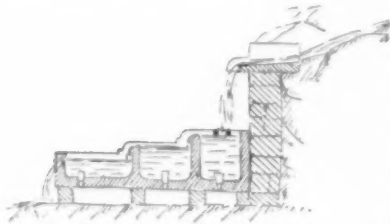


Fig. 6. Fountain, Watering-place and Laundry Combined.

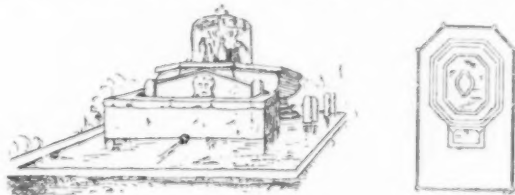


Fig. 7. Fountain at Civita Castellana.

has two iron bars in it, beneath the spout, on which the jug or pitcher can be set to fill.

Figure 7 is a facsimile of a sketch made at Civita Castellana, by Percier.

(To be continued.)

**LIGHTING THE LIBERTY STATUE.**—The face of the gigantic Statue of Liberty in New York Harbor is thought not to be sufficiently distinct at night, and a proposal is made to put an arc lamp with a reflector to throw the light on the features of the statue. Two 100-candle power incandescent lamps are also to be placed on each of the 25 rays of the coronet. — *Inventions.*

SOME SOUTHERN CAPITOLS.<sup>1</sup>—IV.

SOUTH CAROLINA.



The State-House, Columbia, S. C.

THE edifice in the City of Columbia, in which the State of South Carolina transacts its official business, is somewhat unique among Southern Capitols, in that it is neither altogether an ante-bellum structure made to do service until an advance in popular taste demanded a better, nor does it wholly represent a post-bellum renaissance. Yet it is partly both of these. The building was, in fact, begun in 1849 upon a design fully abreast of the best architectural taste of that period in this country, and the work recently done upon its interior is in accordance with modern architectural ideas though carefully avoiding all incongruity with the original design. Thus the State House of South Carolina reflects the three great periods of the history of the State during the past half-century: the prosperous period before the war; the terrible war-period and the decade succeeding the war which Southerners generally hold to have been worse than the war itself in its consequences; and the post-bellum recuperation which has just now reached its zenith.

When the building was designed by the architect John R. Niernsée, it was estimated that it could be erected at a cost of from \$1,500,000 to \$2,000,000. Ten years of energetic labor and the expenditure of \$1,100,000 brought it nearly to completion. Then the clouds of war gathered with such rapidity that a suspension of work was necessitated.

Early in 1865, Gen. Sherman and his army arrived before Columbia on his famous "March to the Sea." The city was formally surrendered to the Federal troops on February 17, and promptly burned to the ground. The substantial granite walls (from six to seven feet thick) of the nearly completed State-house failed to succumb and remained over-looking the blackened ruins of the once fair city of Columbia after the departure of the Federal troops. But building materials, valued at \$120,000, were found stored in sheds on the grounds and these the soldiers proceeded to destroy. They consisted principally of marble columns, sculptured capitals, marble pavements, staircases etc., and included a colossal group of statuary designed and executed by Henry Kirk Brown, for the pediment. The only salvage secured out of these finished materials was a quantity of Tennessee marble, badly defaced and no longer fit for the purposes for which it was first intended, but subsequently used at the suggestions of economy for the interior ornamentation of the State Library.

The building was left in such a condition that it could be occupied and used for State purposes, and it was thus used for twenty-one years. It witnessed some exciting scenes during the period of State reconstruction.

In 1886 it was estimated that \$800,000 would complete the building according to the original plan, and it was decided to provide the necessary amount by a system of yearly appropriations. Mr. Niernsée was consequently directed to proceed with the work. He died soon afterwards and was succeeded by his son, who has carried on the work thus far at an expenditure of less than half the estimated sum.

The building occupies a dominant site in the city. The grounds include two entire blocks, approached by broad avenues, and affording ample opportunities for landscape gardening which have been duly embraced. The severity of the two stories and high basement of the main building is relieved by an ample Greek portico, reached by a broad flight of steps in two terraces; and by a graceful tower surmounted by a lantern and short spire. Corinthian columns are used in the portico and tower.

At the demands of economy the Italian and Tennessee marbles intended to be used for ornamentation throughout the interior were replaced by less expensive materials, but such as were more in accordance with modern taste and were calculated to produce better effects. For example, the room devoted to the State Library upon which considerable architectural taste has been expended with

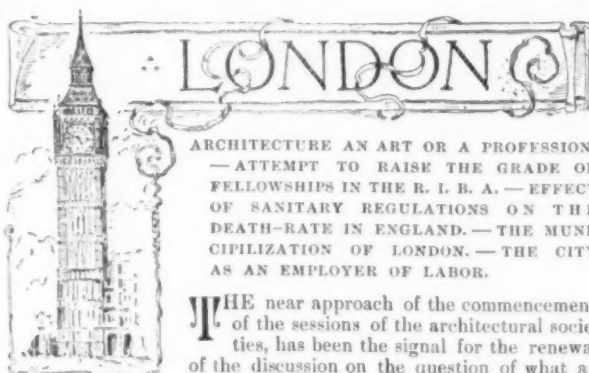
admirable results, is floored with "Creole" and "Kennesaw" (dark and light) Georgia marbles laid alternately in diagonal lines. The woodwork is of dark San Domingo mahogany relieved by the lighter colored mahogany of Mexico. The balconies or galleries and spiral staircases are of wrought-iron in mediæval German design, relieved by ornaments in oxidized-silver. The panelled ceiling is of iron decorated with colors.

The House of Representatives and Senate Chamber; the various lobbies and committee-rooms; the Supreme Court-room and the several offices are similarly treated and with like results.

Probably of the greatest architectural interest are the ten groined vaults in the main corridor of the building connecting the House of Representatives with the Senate Chamber. The execution of vaults of this character suggests a difficulty to be met with in the South, and also the way in which they have been overcome in one instance at least. Mr. Niernsée was unable to find, within the State, masons skilled in this class of construction. He very wisely determined that the work should be done by resident workmen, and to carry out this determination he selected the requisite number of workmen from the best masons to be found in the State and proceeded to instruct them in the work required of them. As the result of this improvised "trade school," these groined vaults have been very successfully constructed.

The most modern ideas regarding sanitation, ventilation and lighting have been adopted, and altogether the State of South Carolina not only has a State building of which to be proud but one sufficient to meet all her requirements for many years to come.

ARTHUR HOWARD NOLL.



ARCHITECTURE AN ART OR A PROFESSION.  
—ATTEMPT TO RAISE THE GRADE OF  
FELLOWSHIPS IN THE R. I. B. A.—EFFECT  
OF SANITARY REGULATIONS ON THE  
DEATH-RATE IN ENGLAND.—THE MUNI-  
CIPALIZATION OF LONDON.—THE CITY  
AS AN EMPLOYER OF LABOR.

THE near approach of the commencement of the sessions of the architectural societies, has been the signal for the renewal of the discussion on the question of what an architect's work really is. It is a little difficult to explain very clearly the precise nature of this singular dispute, which causes such keen discussion here and which has practically divided the profession into two camps. The division may, I think, be ascribed to a reaction against the practice which has undoubtedly been followed to a considerable extent of regarding architecture as a pure business to be followed simply for the idea of gaining a livelihood. There are many practitioners in England of this type. They are men more of a commercial than an artistic temperament. Their work is of a diverse character. They make plans of party-walls, and are almost as familiar with the complicated questions of ancient lights as solicitors themselves. They attend courts and arbitrations and give evidence. They have no insurmountable objection to make valuations. They lay out building estates and when buildings come into their hands to design, they do not pretend to lay claim to any surpassing artistic power in their method of treatment. If it answers its purpose, and is a success commercially, they are satisfied; they are men who rarely have time to draw themselves with their own hands, and occasionally seek the temporary assistance of a junior colleague to assist them in "putting together the front elevation." On these lines they find architecture a fairly remunerative profession and are content to go along in their own way, feeling that their practice is administered in a very business-like way, and at the end of the year their fees and retainers amount to a respectable total. While this sort of thing has been going on for years, there has been steadily growing up a new school of architects of quite a different type. These men have been nicknamed "art architects," not altogether as a term of praise, by their commercially-minded brethren. They start with the doctrine that they are artists, and design and mould a building much in the same way as a modeller his clay. With them art is everything. Unless a man can with his own head design, and with his own hands draw his design, and unless the result of both operations is in their opinion artistic, they go so far as to deny him the title of architect altogether. They will have nothing to do with valuations, ancient lights, party-walls and a host of similar remunerative semi-legal questions which their commercially-minded colleagues indulge in. They are matters for surveyors, and take up their time unnecessarily, they are too occupied in considering the details of their design to go into such matters, and if artists and the educated public admire their work, that is all they want. Many of these men are in a sufficiently independent position to enable them to follow this policy without detriment to themselves, but some are self-sacrificing enough to prefer to remain comparatively poor, than to undertake work that

<sup>1</sup> Continued from No. 839, page 60.

they, rightly or wrongly, consider calculated to stifle artistic feeling and derogatory to the art which they practice.

This is a short attempt at an explanation of the struggle which goes under the name of "an art or a profession," and I hope will enable you to estimate pretty fairly the intensity of feeling with which the two sides are animated. So long as the Memorialists (as the "art architects" are known, from a memorial they addressed to the Institute) were content to occupy their own position and go their own way, the other party satisfied themselves by rather laughing at them, but otherwise leaving them alone. Latterly, however, these men have taken a more aggressive course. You will remember the divisions they caused in the Architectural Association by their refusal to take part in its work, except on certain terms, and also, probably, the course they adopted in the Institute, of black-balling those candidates for the Fellowship whose buildings did not reach that standard of artistic merit they felt to be necessary, and their power and influence seems to be generally extending. The younger men, as a rule, take their side, and they must, I think, be now reckoned with as a distinct party who, if not in a position to dictate terms, must be considered in any important movement that is contemplated. The immediate question is the Institute Fellowship. The continued black-balling led to a counter-move, substituting show of hands for ballot-voting, subject to a general appeal by voting-papers, and as this was felt to make the entrance to the Fellowship too easy even by the moderate men, having regard to the non-necessity of candidates for Fellowship to pass examination, the whole question of qualification for Fellowship was referred to the Council of the Institute for consideration. Thus the qualifications which govern entrance to the highest grade of membership of our recognized professional body, are at the present time an open question and naturally have become a very fruitful subject of dispute. The examination party wish to restrict the recruiting of Fellows to the ranks of the Associates, while some even go so far as to talk of setting up a further examination for Fellowship. The "Memorialists," on the contrary, do not place such value upon examinations and they are asking that the Fellowship of the Institute should be made an honor akin to the Associateship of the Royal Academy, and that candidates should in all cases have to submit drawings and photographs of their executed designs and then after these have been seen by all, submit themselves to the ordeal of election by the members of the society. There is an animated correspondence now proceeding in the columns of the *Builder* and there will probably be a good deal said on the question during the next month or so.

A most interesting comparison of the sanitary state of the England of to-day and the England of two centuries ago was made by Sir Charles Cameron, the President of the Sanitary Congress, which has just completed its deliberations at Portsmouth. After recording step by step the various sanitary enactments which have been passed by Parliament during the past fifty years, the President went on to analyze the growth of the sanitary movement, showing the remarkable effects that have been produced by the increased sanitary vigor of recent times. Up to 1700, the President seemed to imply scientific sanitation was unknown. From 1700 to 1780 the death-rate in London was so high that population stagnated. In the former year the inhabitants numbered 665,200 and in the latter year 653,900. During this period the deaths were in the ratio of about 1 per 30 persons living. This, reduced to a convenient basis for comparison amounts to a death-rate of 33.3 per 1,000 persons living, a rate of mortality which would go far nowadays to ensure any particular area being condemned as insanitary, and needing the application of the Housing of the Working Classes Act. By 1801 the population had crept up to 777,000, and the death-rate had fallen to 28.3 per 1,000. He described this great improvement more to a growth of popular knowledge upon matters concerning the health of the people rather than to sanitary legislation, and pointed out that when those entrusted with the conduct of public affairs became aware how much the health of the people was affected by bad water, by foul emanations from cesspools, and by a too great density of population, they began to secure supplies of pure water, to construct proper house-drains and street and house-sewers, to remove filth systematically from houses, and to widen streets. Thus the promulgation of the natural laws of health preceded the enactment of laws by the State, and until about forty years ago common-sense was the only motive-power which impelled sanitary reforms in London and elsewhere. That this was a potent force was shown by the quotations from Rickman's Report to Parliament on the census of 1811, in which were given the following estimates of the death-rate in England.

|               |                                  |
|---------------|----------------------------------|
| In 1780 — 25  | deaths per 1,000 persons living. |
| " 1790 — 22.2 | " " " " "                        |
| " 1800 — 21.3 | " " " " "                        |
| " 1810 — 20.0 | " " " " "                        |

If these estimates could be taken as reliable, Sir Charles felt that the great improvement in public health took place in the latter part of the eighteenth and in the earlier part of the nineteenth centuries, and during the subsequent fifty years no further appreciable advance was made, indeed Dr. Newsholme has given the death-rate for 1838-1854 as 23.28 for males and 21.65 for females, showing an increase on Rickman's figures. This increase is certainly unexpected and is probably to be accounted for by a certain amount of inaccuracy in

the earlier records. Even, however, allowing for a certain amount of defective registration, the period between 1810 and 1860 does seem to have been one of comparative stagnation. Various reasons have been ascribed for this interruption in the results to be looked for during a period of constantly increasing vigilance, but Sir Charles was probably not far from the truth when he ascribed the apparent stagnation to the tendency during the earlier half of the present century on the part of the populace to gather together in large centres of population. It is obvious that the dweller in a large city is more liable to the attacks of disease and physically not so well able to withstand them as his fellow-dweller in the country, living in pure air and strengthened by continual exercise, and this continued accretion of large masses of men in a limited area, cannot fail to exercise a maleficent influence over individual sanitary effort. Sir Charles indeed reflected with satisfaction upon the fact, that, although the towns of England were increasing in population at the rate of from 200,000 to 300,000 annually, the death-rate of the whole country had not sensibly increased. In 1872 one of the first determined efforts in the direction of collective and compulsory sanitation culminated with the enactment of the Public Health Act of that date, which was amended and improved in 1875, and the subsequent improvements in the public health may reasonably be attributed to the operation of this act. In this connection the following statistics are interesting.

DEATH-RATE PER 1,000.

| Period. | Males. | Females. | Total. |
|---------|--------|----------|--------|
| 1841-70 | 23.3   | 21.5     | 22.4   |
| 1871-75 | 23.3   | 20.7     | 22.0   |
| 1876-80 | 22.1   | 19.5     | 20.8   |
| 1881-85 | 20.5   | 18.3     | 19.4   |
| 1886-90 | 20.0   | 17.8     | 18.9   |
| 1891    | 21.5   | 19.0     | 20.2   |

Thus, with the exception of last year, which was distinctly an unhealthy year, a uniform diminution in the national death-rate can be traced for the past fifty years and this is the more remarkable when the statistics given by Sir Charles as to the large proportion of the persons who dwell in towns is taken into consideration. In 1892, 18,931,070 persons lived in towns and 10,472,276 in the country, making a total of 29,403,346.

The statistics with regard to London afford great scope for encouragement. During the ten years ended in 1850 the mean annual death rate in the metropolis was 24.8; in 1851-60 it was 23.4 and in 1861-70 it was 24.1. During these thirty years there was no marked improvement in the sanitary state of London; now comes the period of sanitary activity. In the decade of 1871-80 the death-rate fell to 22.5, in the subsequent ten years it further declined to 20.5 or 4.3 below the rate for 1841-50. A striking illustration of this was made when it was stated that if the death-rate in greater London had been as high during the years 1881-90 as in the period 1841-50 nearly 50,000 more deaths would have taken place. It should be noted that while the death-rate of London has been declining, the population of the great city has been increasing and concentrating. In 1841 the density of its population was moderate, i. e., 25 persons per acre, but in 1891 there were 56.5 persons per acre. The Congress was very well attended and much interest was taken in the proceedings by the general public, which is a very gratifying incident. Various questions of sanitary law and its administration were fully described at the several sectional meetings, and the Congress was generally considered to have been a great success.

The municipalization of London is proceeding apace. On October 5, the London County Council decided to add over nineteen miles of tramways to the property of the citizens of London. The proposal was opposed at first upon the ground that the arbitrator had not given his award in the case now before him, and consequently the Council were taking a leap in the dark, and secondly, when purchase appeared inevitable, the moderates desired to insert a clause that the Council, if they purchased the lines, would not seek to work them. Both amendments were, however, defeated and the Council decided to purchase these tramways by a majority of 68. In the course of the discussion, John Burns expressed his desire to establish a universal penny fare throughout London after the municipality had purchased all the trams. The next step is perhaps even a more important one, as it involves a departure in policy not yet attempted by anybody controlling works of great magnitude. It has been found for some time that the tenders received for public works have considerably exceeded the estimates submitted by the Council's officers. In a recent case of the construction of a new sewer the tenders were as much as 60 per cent above the engineer's estimate, and the Council thereupon decided to dispense with the contractor altogether and do its work itself, employing its own men and buying its own materials. A similar proposal is now being made in connection with the construction of a large block of dwellings for the working classes at Blackwall, and if this policy is proceeded with, the Council will shortly be in the position of large employers of labor and subject to all the difficulties to which large capitalists are liable at the present time. It is a dangerous ground and opens up a vista of difficult possible complications. At the same time I should be sorry to say that the experiment is not worth the trial. Sir Thomas Farrar, in an

able memorandum to the Council, however, warns it against a growing tendency to underpay brain labor and overpay muscle labor. Sir Thomas's words convey the more weight when we recollect that he is a progressive of the progressives and has at all times taken an active interest in the proposed acquisition of the gas and water supplies by the municipality. The immediate cause of the memorandum was this. In October, 1890, the Council began to reform its attitude towards labor by reducing overtime and Sunday work and adopting a minimum wage of 6*d.* an hour; so adding to the bill for the parks some £5,000 or £6,000. This addition is not of alarming extent in itself, but when it is considered that the total pay of the Parks staff only amounts to £30,000, it will be seen to be about 15 per cent, relatively a serious addition. If this percentage is to be added to the cost of the labor in all the Council's undertakings, and the increased pay cannot well be confined to an individual branch, it is obvious that the benefits we are told we are to receive from the acquisition of the water and gas and other undertakings will after all be diverted into the pockets of a single class, besides creating dissatisfaction between private employers and employed, and possibly a general increase in the rates of labor. The whole question is one of serious difficulty, but will no doubt receive the most careful consideration at the hands of the Council.

The panic among depositors of building societies will certainly tend to cause a general stagnation of the building trade. It is the expressed object of these societies to lend money extensively upon mortgage on small houses and consequently they are not able to meet a sudden call. Fortunately the bulk of the pressure fell on the Birkbeck Building Society, an institution of sound financial position which was able to withstand it, so the panic has to a certain extent subsided, and it is possible it may pass away.

#### RESTORATIONS IN VENICE.



Front of New Museum, Douai, France.

FROM time to time the restorations going on (or neglected) at Venice, have called out from various foreign sources remonstrances sometimes just and needed, and at times exaggerated, and requiring a defence or explanation. But the critics, unaware of the antagonisms developed among those responsible for the care and restoration of the monuments and the internal difficulties which the restorers have had to contend with beyond the technical ones, have never done entire justice to them. There have always been two schools of restorers in Venice—one for preservation and the other for renovation—and the rancor of their antagonism has been carried to a point only short of physical collision. The renovators, whose ideal of restoration was the removal of all marks of time, had always with them, as in every Italian city, the municipal authorities, and, since the organization of the Provincial Council for the Preservation of Ancient Monuments, have formed the majority of that body. The arbiter of all disputes is the Ministry of Public Instruction, which presides over the interests of archaeology and art, as well as literature. In the beginning, the renovators had it all their own way, at Florence as well as at Venice, and the great outbreak of indignation in England about fifteen years ago had a large basis of justification, and did an immense deal of good, but would have done more had the denunciations taken account of the fight that some of the Italians were making against the crudities then perpetrated.

The restoration of the Fondaco dei Turchi, the noblest of all the early palaces of Venice, had been effected by the municipality through its architect, Berchet, and resulted in simple reconstruction, with the difference between the original and the restored buildings that all the splendid columns of the original, brought from the East and (after the manner of the Venice of that time) simply introduced in their original condition and patina, and the bits of early sculpture worked in as decoration, either borrowed from the earlier buildings or made *ad hoc*, were entirely recut, and the former reduced to the uniform standard and symmetry of modern design and construction,—the latter so as to remove every trace of the original art. This made the Fondaco no longer an ancient building, but a modern and grossly inaccurate copy of the old, with not a single element of antiquity remaining; but it was to the intense satisfaction of the municipality, which conferred a pension on the architect in token of its content. To all people of taste, the palace is utterly ruined. The Church of St. Mark had its own architect, who had been in charge during the greater part of the Austrian dominion, Cav. Meduna, a man who died past ninety years of age, and was succeeded by his younger brother. Both had been trained under

the Austrian authority, which, whatever it may have deserved of detestation politically, showed a reverence and tenderness for the antiquities of Venice that its Italian local authorities have never had. They carried out the restorations on the church, if not with the feeling for the picturesque which the English critics demanded, at least with the respect for everything old that the stability of the building permitted, and the north façade remains an evidence of Austrian good taste. The younger Meduna retained his position after Venice became Italian, and at the time of the English protests I was in Venice, and wrote in his defence in the main, drawing on myself a great deal of English indignation. I am free, therefore, to say that the architectural authority now responsible for the condition of the church has much less than the Meduna's reverence for it, and his new restorations of the pavement, painfully in discord with the original work, and his introduction of the electric-light for the illumination of the interior (!), show what we must expect from his superintendence of the church in the future.

Fortunately, at the same time that the great controversy broke out, the restorations of the Duomo at Florence were going on, on the system of Berchet, by washing the marble incrustation of the church with acids to remove the patina, and then recutting the sculptured surfaces. This was the municipal idea, at Florence as at Venice; but there the English outcry was in time to attract the attention of the Ministry of Public Instruction, which immediately ordered the suspension of the renovation, and the whole subject came up for examination, with the result that all similar attempts throughout the kingdom were forbidden. In Venice, however, the war of the sects went on, and the apple of discord was the Ducal Palace. The direction here belonged entirely to the Ministry, and there was no chance for the municipality to renovate after the manner of the Fondaco; but there was a strong competition between the two schools for the execution of the work. Happily, the plans of the chief of the school of preservation, the architect Forcellini, involved an expense so slight in comparison with that of the rival project of substantial reconstruction that it was awarded the preference, for the external indications of decay were so marked that it seemed to superficial observers that the building must come down. The practical execution of the plans of Forcellini were placed in the hands of a capomaestro of the Ministry of Public Works, a worthy descendant of the builders of Orvieto, Siena, Pisa, etc. (for the profession of architect, as distinguished from the builder, did not then exist, and Nicolo Pisano, Arnolfo and their colleagues were simply the head foremen of the masons and builders). Forcellini died some years ago without seeing the realization of his plans, and the control of the works devolved on the capomaestro, Vendrasco, who had to meet a redoubled energy of attack from the united forces of the Chapter of St. Mark's, the Provincial Council and the body of architects, who reclaimed for an architect the control of the work. The Provincial Council is clerical, as is naturally the Chapter and its architect, and the advent of the ministry of Rudini, strongly clerical, or of the old Right, strengthened the hands of the clerical element in the Council. Berchet, the renovator of the Fondaco dei Turchi, was made President of it, his acceptance being conditional on the dismissal of Vendrasco, which, after a protracted contest between the opposing influences, was finally decided upon.

Nothing can give a better idea of the character of certain tendencies of official Italy than the career of this Provincial Council. Its existence, like that of all its kind, is due to the passion for official position, for the efficiency and competence of its members have generally nothing to do with their appointment, which becomes a question of partisan or personal influence. The fitness of its constituents for their position may be judged from the selection of the restorer of the Fondaco for its President. The manner in which it performs its duty of supervision of the preservation of monuments may be inferred from the following facts lately observed, and which have been in my knowledge for several years. Peremptory orders have issued from the Ministry for the removing of all combustible matter, and everything foreign to the building itself, from the Ducal Palace, but the Institute of Venice still occupies, with its mass of books, documents and papers of all kinds, the principal rooms along the Piazzetta side; and, while the Council replies to all remonstrances that it cannot find a fitting place for the library, it has let as a café the Zecca, which was, in every sense of the term, admirably adapted for the purpose, but, as such, offered no speculation. *En passant*, I may add that it was due to the persistent denunciation of English and American residents that the families living in the palace, and the carpenter's shop in one of its principal rooms, were removed. The rooms underneath the galleries, containing the great collection of Venetian art at the Accademia, are occupied as a winter school of design, with heating arrangement of a primitive kind, for the comfort of the models and pupils, with lights, etc., as requisite. They are, besides, stored with pictures for which no place on the walls can be made, canvases not worth hanging, etc.; and a chance spark or a defective flue may destroy the entire collection in an hour. The great Titian in S. Salvatore, with its proud inscription, "Titianus fecit," is spattered all over its lower part with the wax of the altar candles; the superb Bellini at Murano was, when I saw it, as it has been for years, exposed to the full blaze of the sun at certain hours of the day, and two of the finest Tintorets still in the churches I found in the same state. The finest Lorenzo Lotto in Venice, and perhaps the best there is, is in a dark chapel in S. Bartolomeo, where it cannot be seen under any circumstances, and

where the only compensation for its neglected state is that the cleaners who have ruined some of the best pictures in the Accademia cannot get at it. The roof of S. Pietro di Castello, the original cathedral church of Venice, is a complete wreck, and does not keep out the weather. The late ministry issued an order of the most imperative character, that no pictures in the churches were to be kept under curtains in order that the custodians might make the exhibition of them a pretext for asking fees, and that no custodian should be allowed to accept fees; but the Council has taken no step to secure obedience to the order in a single case.

The letting of the Zecca for a café is a most luminous illustration of the efficiency of the Council. Three arches of the façade which were built up by the Republic under circumstances of historical interest, and have remained closed ever since, were an obstacle to its utilization as café, and the reopening of them was opposed by all the lovers of old Venice as an offence against history, apart from the degradation of the building for the proposed use. The fight was hot over it, the municipal authorities regarding the rent to be received as the principal consideration, while Vendrasco, our capomaestro, took part in the discussion, and published a pamphlet opposing the decision of the Council which approved the letting. This settled the question of his dismissal from the works on the palace, which, though demanded by the Council, and, therefore, taken into favorable consideration by the ministry, had never been carried into effect, on account of the numerous remonstrances the measure had called out. The insubordination shown by the employé of the Government in publicly protesting against the decision of the superior authority provoked the order for his dismissal, and he was formally dismissed; but the immediate pressure from influential quarters on the new ministry, with the influence of the new Prefect, Basile, an intelligent lover of old Venice — perhaps, also, a review of all the facts by the new minister, Martini — reversed the decision, and the old man was reinstated in his former position.

Italians are very sensitive to foreign criticisms of their way of treating their artistic treasures, and at times very voluble in their abuse of a critic who ventures to say that they do not appreciate them; but the conduct of the Provincial Council for the Venetian provinces, the most important in Italy, is an undeniable proof of the insufficiency of the machinery of the Government and the utter incompetence of the local authorities to protect them. We have the Fondaco dei Turchi utterly ruined, the Zecca let as a café, the finest collection of Venetian art in the world in danger of conflagration, to say nothing of the destruction by restoration, and by only less destructive neglect, of some of the finest pictures in Venice. All over the kingdom we have ancient churches, most important in the history of art, allowed to be transformed by the Church authorities into the most vulgar modern structures: the Duomo of Florence about to be reduced to the state of a building of the nineteenth century — an end only stopped by a timely article in the *Cornhill Magazine* (which called out the most intense indignation of the Florentines), as the worst of the intended desecrations in Venice were prevented by the outcry of the English correspondents, when they had not called out an alarm from any Italian authority. We have an awakening of the royal authorities, due mainly to the foreign protests, and yet the Italian journals will go on abusing the foreigner for his impertinent meddling with Italian archaeological questions.

The late Minister of Public Instruction, Professor Villari, had the highest interest in these questions, and did his best to promote the artistic interests of the country; but his efforts were continually thwarted by the indifference of the public and the Legislature, and the conflict of authorities, local and central, which made an entanglement of red tape such as no one not an experienced bureaucrat and politician, neither of which he was, could struggle against. Italians may like it or not, they may prevent remedies being taken, but they cannot prevent the art-loving traveller from criticising ever so savagely their neglect of works which belong to the history of the world's art as well as to Italy. And I will do the Italian ministry the justice to say that I have never known a case of its attention being called in the most private manner, even, to an injury being done to any monument without the notice receiving instant attention. Nothing could be more liberal and cordial than was the action of Professor Villari in all cases where the interests of art were concerned; but he was not long enough in office to learn to see through all the intrigues which involved even the peaceful department of Public Instruction. I hope it will be found that his successor will have no less liberality in his views. — *W. J. S., in New York Evening Post.*

#### THE HERO OF GAS.



unveiling within the Wallace monument at Stirling, of a bust of William Murdoch, the inventor of gas lighting, is an event of more than national interest, though to Scotsmen, of course, it affords special gratification. In the Wallace monument there have been set up memorials of Scotland's great men, and no one will dispute the claim that Murdoch has to be so regarded. Yet, strange to say, there never was a man, who accomplished so much, so little known to his own countrymen. There are perhaps few people in Scotland who are familiar with the story of Murdoch's services to mankind. Work like his does not appeal to the popular sentiment. It is not made the burden of songs, and is not calculated to inspire

perfidious enthusiasm; but, though it cannot be measured by these romantic standards, it must nevertheless claim for this Ayrshire engineer the honor of being enrolled amongst the heroes and the great men of Scotland. One of the benefactors of mankind, the world, his fellow-countrymen included, forgets how much it owes to the inventive genius of Murdoch. It is not easy, however, to realize the change that was produced with the inauguration of gas-light. The lighting of the streets is now so well done that people can walk abroad by night with as much confidence as by day; but before the introduction of gas, honest men were afraid to trust themselves out of doors in the large towns after dark. Four centuries ago the citizens of London, with a view of making the streets safe, were enjoined to "hang a lantern, lighted with a fresh and whole candle, nightly outside their houses," and so sensible were the people of the necessity for more light that men bequeathed money to be applied for all time coming to the illumination of some thoroughfare named in their wills. But, notwithstanding public regulations and private gifts, the prowling thief and the lurking assassin had command of the streets after nightfall, and in Queen Anne's time a tax for lighting was imposed, and oil lamps superseded the miserable rush candles. This was a vast improvement, and for his safety the pedestrian was warned not to venture into dark by-roads, but to:

"Keep the public streets, where oily rays,  
Shot from the crystal lamp, o'erspread the ways."

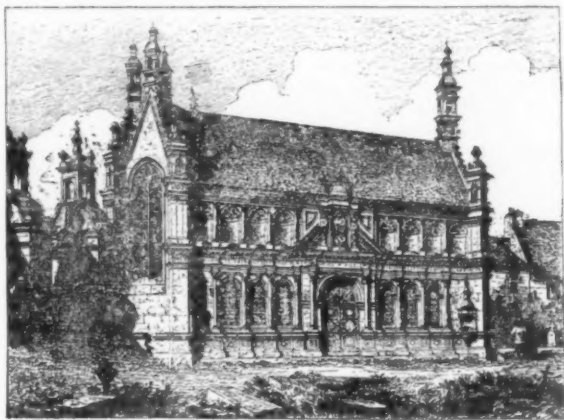
Still feeble oil lamps and decrepit watchmen offered after all a very poor protection, for the "oily rays" shed such ineffectual light as do little more than make the darkness visible. So it was in Edinburgh, at all events. "I smell you in the dark," growls Johnson to Boswell as they are passing along the High Street one night. Street robberies were the ordinary events of the night. "Security was the exception to the course of atrocity, for which the government applied no remedy but to hang. The streets were filled with tumultuous vagabonds, and the drowsy guardians of the night suffered every abomination to go on in lawless vigor, happy if their sleep were undisturbed by the midnight row of the drunken rake."

Such was the state of matters in the large towns when Murdoch was devising a method of applying coal gas to a practical purpose. Long before his time an illuminating gas had been made, but it is to Murdoch that the credit of treating the discovery not as an idle amusement, but as a thing that could be put to a great use, belongs. It was at Redruth, in Cornwall, that he made his first experiments. Afterwards going to the machine-making establishment of Messrs. Watt & Boulton, at Birmingham, he there continued his experiments, and in the general illumination of 1802, in celebration of the Peace of Amiens "he wrapped the whole front of the works in a flaming flood of gas, dazzling and delighting the population of Birmingham, and publishing the new light to the world." Its success was so decided that the proprietors had their entire manufactory lighted with gas, and several other firms in various parts of the country followed their example. Glasgow was one of the places where the new light was most favorably received — though as yet only by private persons. It made its way steadily in spite of the most ridiculous objections. Oracular heads were shaken at the gas. As well think of lighting a town with "clipped moonshine" as their contemptuous conclusion. Then it was asserted that the pipes conveying gas would be hot and apt to produce conflagration, and they would touch them cautiously with their hands. But it was not until a German named Winsor applied to Parliament for a bill to bring gas-light into use in London that the force of the opposition to the new illuminant fully manifested itself. It is said that the pamphlets on the subject which Winsor sent out were characterized by extravagance, quackery and fanaticism, but, even making a considerable allowance for that, the criticisms to which his schemes were subjected will make the present day reader smile. Sir Walter Scott wrote from London that there was a madman proposing to light London with — what do you think? — why, with smoke. Murdoch petitioned against Winsor's bill, and was examined before the Parliamentary Committee. "Do you mean to tell us," asked one member, "that it will be possible to have a light without a wick?" "Yes; I do, indeed," answered Murdoch. "Ah, my friend," said the legislator, "you are trying to prove too much." Even Sir Humphry Davy ridiculed the idea of lighting towns with gas, and asked one of the promoters of the company if it were intended to take the dome of St. Paul's for a gasometer.

The most vivid description which we have of the difficulties which the legislature presented to the introduction of gas lighting is that given by Harriet Martineau. "The Original Gas Company," she proceeds, "whose example was to be followed, not only by all England, but the whole civilized world, were first derided and then treated in Parliament as rapacious monopolists intent upon the ruin of established industry. The adventurers in gas-light did more for the prevention of crime than the government had done since the days of Alfred. We turn to the Parliamentary debates and we see how they were encouraged in 1816 — nine years after it had been found that the invention was of unappreciable public benefit. 'The Company,' said the Earl of Lauderdale, 'aimed at a monopoly which would ultimately prove injurious to the public, and ruin that most important branch of trade — our whale fisheries.' Alderman Atkins 'contended that the measure was calculated to ruin that hardy race of men, the persons employed in the Southern and Greenland whale

fisheries, in each of which a million of money and above a hundred ships were engaged. If the bill were to pass, it would throw out of employ 10,000 seamen, and above 10,000 rope-makers, sail-makers, mast-makers, etc., connected with that trade." — *Dundee (Scot.) News.*

#### SANITATION AT MANCHESTER.



Ossuary at St. Thegonnec, Brittany.

**M**ANCHESTER is a city of sanitary experiments. Unfortunately, experiments are not always successful, and when one has proved disappointing, it needs a succession of others to put matters right. Five-and-twenty years ago the "Lancashire midden" was practically universal in the town, and houses rented at 50*l.* and upwards were often without more modern conveniences. As for the smaller houses, they were built in long rows, each with its tiny yard and its privy at the back. A narrow passage separated the back premises of one street from those in the next street, and into the gully formed by the two blocks of buildings there rose the emanations from the seething mass of household refuse and excreta that lay accumulating for weeks and weeks before it was considered necessary to remove it. All the back windows of the houses, mostly bedrooms, of course, overlooked the two rows of middens, and, when opened to ventilate the rooms, took in a very liberal share of their exhalations. It was no wonder that Manchester ranked low in the scale of health, when half of its sleepers drew their "fresh air" from an alley filled with putrefying refuse.

The first step towards a better state of affairs was made when the authorities insisted on the middens being roofed in, and being furnished with a flue reaching above the eaves of the houses. Although this was far from being an ideal sanitary condition, it was a distinct improvement, for in certain states of the weather the gases were rapidly dissipated in the atmosphere. But on dull, muggy days the flue did not draw, and the vapors welled up through chimneys and crannies, filling the yards and the intervening passage, where the boys played marbles and the girls discussed the fashions in doll's attire.

Sometime about 1876-78 came the next change. The pail system was introduced into Manchester, with the promise that it would completely cure every sanitary ill. It was made obligatory on all property owners to construct closets to a standard pattern. They were usually against the boundary wall of the yard, and a trap-door was constructed through which the pail could be removed without the pail-carriers entering the premises. The sinder-sifter was arranged to deliver the flue ashes into the pail, and their virtue as deodorants was extolled in terms that would scarcely have applied truthfully to permanganate of potash. It seemed an excess of caution to promise that the pails should be closed and removed in covered vans, after all that had been said as to the innocuousness of their contents, due to the presence of dry ashes. A long time was occupied in the alterations of the middens, but they were finished eventually, and Manchester entered on the third stage of its sanitary history. But long before this the inhabitants found out that the pail system comprised abominations more trying to bear, if less deadly, than the midden system. In so far as the quantity of refuse in the back-yards of the houses was enormously reduced, and that it was removed before its decomposition had advanced very far, there was a distinct gain. The wholesale contamination of the air of houses was ended, and it was possible to sleep in a fairly pure atmosphere, especially when householders exercised reasonable care in the treatment of their domestic refuse, and complained if its removal was not effected weekly. But the transport of the pails introduced a new terror into town life. Instead of being the inodorous vessels they had been represented, they stank most abominably, making their presence felt for a long distance. Their collection was not made during the hours of night and early morning, but proceeded all day. We have seen collecting vans enter St. Ann's-square, on a summer's morning, at the hour of the ladies' promenade, and in a few moments the place became a solitude. Every one had fled into the neighboring streets, leaving all the delights of the shop windows for the leisurely inspection of the pail-

carriers. Bad as was the passage of the vans to the general inhabitants, it was ten times worse for those living in the streets leading to Holt Town, where there were situated the works in which the refuse was converted into manure. Here a continual traffic was maintained, coming and going, and in the early morning one might meet a string of half-a-dozen vans setting out for different districts. For those who went to work before breakfast such an experience was specially painful: the mechanic pulled with redoubled vigor at his pipe, and the mill-girl covered her mouth and nose with her shawl until the foul procession was passed.

After many years of patient endurance the Manchester people have decided that the pail system is unbearable, and they are now going to introduce the water-closet system at a cost, it is said, of half a million sterling. But this is a matter that will take time — several years — and there are other difficulties to be faced in the meanwhile. The troubles of the old method are not ended when the pail is emptied in the depot. In spite of all we hear about the folly and wickedness of discharging sewage into the sea, no one seems very anxious to obtain excreta, even when they can be delivered unmixed with the enormous quantity of water which forms the bulk of ordinary sewage. In 1886 Manchester obtained a large piece of land at Carrington Moss for the disposal of its night soil, and has conveyed there many thousands of tons. But that outlet is now becoming insufficient, for two reasons. First, its capacity for receiving manure grows less as it is reclaimed, and brought into a high state of cultivation; and, second, the amount of refuse has suddenly increased by the inclusion in Manchester of the outlying townships of Gorton, Openshaw, and Newton Heath. For some reason it is felt to be inexpedient to oblige property owners in those districts to build water-closets at once, and hence the pail system must be maintained there for several years to come.

Accession of new territory put the Health Committee into a predicament. Carrington Moss took 67,000 tons last year, and was already over-burdened, therefore, a new outlet was wanted. Most people who have travelled between Manchester and Liverpool would have imagined that there was ample land on the route awaiting a higher cultivation, but it is stated authoritatively that there is none suitable to be had at a reasonable price. In the neighborhood of the Ship Canal 400*l.* an acre is asked, clearly showing that certain people expect to do well out of the canal, even if the shareholders do not. The Manchester Council assert that they have made exhaustive inquiries, and that it is impossible to obtain land in their own neighborhood. They, therefore, went further afield, and found what they wanted in the Rampton Manor estate, situated near the Trent, by Retford and Gainsborough. Preliminaries having been arranged, they applied to the Local Government Board for power to borrow 60,000*l.* to carry out the scheme, and the matter has been made the subject of an official inquiry during the last and present weeks. On the part of Manchester it was put forward that there was the most urgent necessity to get rid of 20,000 tons of manure annually, consisting of one half faecal matter, one-fourth ashes, and one-fourth street sweepings and stable manure. This was to be sent from Ardwick Station three nights a week in open 8-ton trucks. The distance was seventy miles; the area of the estate was 1,800 acres, of which 1,000 were under the plough, and 700 acres in meadow. It was proposed to put 20 tons per acre per annum on the ploughed land. One part of the estate was known as "Hungry Hill," and on inquiry it was found that this place was hungering by reason of the want of what Manchester was now proposing to supply. During eight months of the year the manure would be supplied direct to the land, and during the remaining four months it would be stacked. The cost of the estate was 33*l.* an acre, or 60,000*l.* in all. The cost of carriage would be, including truck hire, 3*s.* a ton, or 21*l.* 19*s.* an acre per annum. The tenants now in possession would not be disturbed, but the use of the manure would be obligatory on them. There were only about 350 inhabitants in the village of Rampton.

The case for the opposition was heard last Friday at Rampton, and last Wednesday at Retford. It was led by the County Council of Nottingham, who naturally objected to Manchester filth being deposited in their county. They were, however, badly provided with witnesses, and the only two important facts deposed to were that the land was subject to occasional floodings — about every ten years — and the inhabitants drew their water from shallow wells that might be contaminated. Some farmers testified that the land would take the manure for two or three years, but they believed it would then become "sick," and would not take so much. Mr. Dunston, lecturer on agricultural chemistry, appointed by the Nottingham County Council, said that the land was in the main a strong red clay, three feet six inches and four feet deep. He thought it would rapidly become manure logged. The Corporation of Sheffield appeared, to see that no nuisance was caused by the transit of the material over the Sheffield Railway, and the Corporation of Retford manifested a similar anxiety.

The Retford inquiry extended over Wednesday and Thursday, and the account of the last of the proceedings had not reached us at the time of going to press. Dr. Voelcker was called to testify that the land would take 20,000 tons of manure annually without any difficulty. For the Corporation of Sheffield Dr. Littlejohn demanded that there should be no shunting or stoppage of trucks in the town. Mr. W. Spencer, medical officer of health for Retford, stated that the River Trent would be contaminated, but admitted in cross-examination that sewage from Retford got into it through the Idle. Mr.

Macdonald, surveyor to the Local Board of Gainsborough, deposed that the outfall from Rampton was two miles distant from the intake of the water-supply, which although not now in use might be reverted to at any time. The Gainsborough sewers discharged below the intake, but the tide backed up the water.

It is impossible not to sympathise with the inhabitants around Rampton Manor in their objections to this scheme. Either it is a very serious matter to have 20,000 tons of concentrated manure dumped into their midst every year, or it is not. If it is, they are perfectly in the right in protesting against it, especially under the particular circumstances of the case. There are conditions under which it becomes the citizen's duty to bear a certain amount of inconvenience, and even of risk, for the general good of the community. The advantages of civilization — that is the benefits we receive from living in communities instead of being dispersed in a wilderness like savages — have to be paid for. But the profits and disabilities of any particular system ought, as far as possible, to fall on the same community. In this case the inhabitants of Manchester gain the advantage of living in a city full of opportunities for business and pleasure, and propose to send their refuse, which is admittedly a very noxious article, not only to a distance, but into another county, and among a people who have only the remotest interest in Lancashire and its industries. Until the railway pierced the "backbone of England," there was scarcely any traffic across the hills, and a man who migrated from one side to the other was regarded by the common people as a species of foreigner, although he might not have moved more than a dozen miles. Even now, when travelling is generally so easy, there are only three points between Skipton and Ambergate, a distance of about 70 miles as the crow flies, at which the hills are now pierced, and in each case with a long tunnel. Nature has divided Lincolnshire from Lancashire in a most emphatic manner, and it is only by the expenditure of immense sums of money, and by great engineering skill, that it has been rendered possible to transport material from the one to the other, except in half-ton loads dragged with difficulty over steep roads and bleak hills.

The people of Manchester, however, declare that this 15,000 tons of ordure, feebly diluted by 5,000 tons of ashes, will not prove a nuisance. If that be so, there can be no reason for carrying it 70 miles to get rid of it. According to their showing a piece of land of 1,100 acres, that is, a mile broad and less than two miles long, will receive it annually, and show no sign except in increased fertility. Surely an area like this can be found in their own extensive country. It need not be all in one piece, and if their neighbors are too keen to let it go at 33l. an acre, they must pay a longer price. All Lancashire as far north as Fleetwood, excepting the Liverpool district, looks to Manchester as its commercial capital, and is bound to it by many ties. It is not too much to expect that it should show its sympathy by sharing some of the difficulties of its representative town. If Manchester refuse is innoxious in Lincolnshire it will not smell in Lancashire, and if, on the contrary, it is a vile nuisance at home it is unreasonable to impose it on a foreign community. The plea that Rampton is only a small place recalls the excuse of the girl who extenuated her frailty on the ground that her baby was "such a little one." In such cases the principle of the offence is more important than the magnitude of its results. If this scheme is carried out it will introduce a new practice into municipal affairs, and one that is in opposition to modern and enlightened legislation. Formerly towns cast their sewage into the nearest stream, feeling that they were entitled to avail themselves of all the advantages of their topographical position. If the dwellers nearer the outlet of the river were inconvenienced, it was the unfortunate result of their being situated on the lower reaches. It was something they were expected to regard as the order of Providence, like the fogs and the floods to which their position subjected them. But, now, the Pollution of Rivers Act has altered all that. Municipalities may no longer poison water-courses, simply because they flow through their districts for a mile or two. They have to erect precipitation works and carry them on at great annual cost, not for their own benefit, but for that of other people. The privileges of their positions are taken from them to a great extent, and they have to deal with their filth in their own areas. But if they may not use a river to carry their refuse into another district, there to undergo decomposition, why should they be allowed to employ a railway for the purpose? No single person in Manchester can believe that the contents of the pails can ever be carried, or stored, without the accompaniment of stench. If, instead of the present scheme, Sheffield were proposing to carry 20,000 tons of excreta through the very heart of Manchester every year, and to deposit it on the bank of the Ship Canal, what an outcry there would be. Bi-metalism and Bombay cotton mills would cease to fill the local papers, and for a moment Cottonopolis would recall the days when it stood foremost in the country in the arts of agitation. But the principle is the same, in spite of Rampton being "such a little one," and of the Trent carrying barges in place of ocean steamers. — *Engineering.*

THE MONSTER TELESCOPE, which will be one of the wonders of the French Exhibition of 1900, has been recently lectured upon at M. Deloncle's residence. Curious details were given touching the proportions of the projected telescope, which, it is stated, will cost £100,000. It is to be as high as the Vendôme Column, and will enable the spectator to detect on the surface of the moon any spot of the size of one of the towers of Notre Dame. — *Invention.*



#### THE CINCINNATI CHAPTER OF THE A. I. A.

At a meeting of the Cincinnati Chapter of the American Institute of Architects held at the Gibson House, October 6, 1892, it was resolved that:

In the death of Mr. Edwin Anderson the Cincinnati Chapter has lost one of its oldest and most valued members, that we sincerely regret his sudden death, that we shall ever retain a pleasant recollection of his genial ways and always cherish his memory.

Mr. Anderson was faithful and conscientious in the discharge of his duties and always the friend of the young and struggling candidate for fame in the profession.

WM. MARTIN AIKEN, } Committee.  
CHAS. CRAPSEY, }

#### ROBERT CLARK TESTIMONIAL COMPETITION. — REPORT OF COMMITTEE.

John E. Youngburg, Esq., Secretary Chicago Architectural Sketch-Club:—

Dear Sir, — Your committee on the Clark Medal begs leave to report as follows:

It has received drawings from thirteen competitors. The award of prizes is as follows:

First Prize. — Gold Medal, A. Sandblom, Chicago, Ill.

Second Prize. — Silver Medal, Walter E. Pinkham, San Francisco, Cal.

Third Prize. — Bronze Medal, John Zeffel, Cincinnati, O.

Honorable Mention. — Bronze Medal, Henry H. Braun, New York City, N. Y.

C. A. S. C. Complimentary. — Bronze, John Richmond, St. Joseph, Mo. Very truly yours,

DANKMAR ADLER, } Committee.  
N. CLIFFORD RICKER, }  
HENRY IVES COBB, }  
LORADO TAFT, }  
S. A. TREAT, }



[Contributors are requested to send with their drawings full and adequate descriptions of the buildings, including a statement of cost.]

ENTRANCE TO THE HIGH SCHOOL BUILDING, CAMBRIDGE, MASS.  
MESSRS. CHAMBERLIN & AUSTIN, ARCHITECTS, BOSTON, MASS.

[Hello-chrome, issued with the International and Imperial Editions only.]

HOUSE OF HARLOW N. HIGINBOTHAM, ESQ., CHICAGO, ILL. F. M. WHITEHOUSE, ARCHITECT, CHICAGO, ILL.

MUSIC-ROOM IN THE SAME.

BALL-ROOM AND THEATRE IN THE SAME.

HALL IN THE SAME.

THEATRE IN HOUSE OF FRANCIS WILSON, ESQ., NEW ROCHELLE, N. Y. G. KRAMER THOMPSON, ARCHITECT, NEW YORK, N. Y.

We shall shortly publish further illustrations of this house.

HOUSE FOR MRS. SAUNDERS, OVERBROOK, PA. MR. GEORGE T. PEARSON, ARCHITECT, PHILADELPHIA, PA.

STORES ON COLUMBUS AVENUE, BOSTON, MASS. MR. JOHN A. FOX, ARCHITECT, BOSTON, MASS.

#### [Additional Illustrations in the International Edition.]

INTERIOR OF NEW CHURCH, MILES PLATTING, MANCHESTER, ENG. MR. LEONARD STOKES, ARCHITECT, LONDON, ENG.

This church, which the Norbertine Canons are about to build in the poor and populous district of Manchester known as Miles Platting, is designed to accommodate about 1,200 worshippers, and is so planned that the greater number of these can see the high altar. The work has not yet been begun on account of lack of funds, but it is proposed to build the church almost entirely of the local bricks, stone, however, being used for the nave piers, arches, vaulting ribs, etc. As the church is to be especially dedicated to the Blessed Sacrament, any richness in the design has been massed round the high altar, the nave depending upon its size and simple dignity for effect. The drawing we reproduce was exhibited this year at the Royal Academy, and is from the hand of the architect. The illustration is copied from the *Builder*.

## NEW LAW COURTS, MADRAS, INDIA.

OUR illustration shows the New Law Courts, Madras, as seen from the northeast angle. Our picture is too small to show the whole extent of this large building, but it will give our readers a very good idea of its style and architecture. The front and a portion of the side only are shown in the view. It will be observed that the front is a good deal broken, projected and recessed, and the architectural forms used in the projections are different to those in the recesses. The projections form the courts and are faced with large arches which extend from floor to ceiling, letting in a flood of light and air into the whole of the courts. They are borrowed from the designs of the Pathan buildings of the fifteenth century, where they were used in domed mosques and were intended to throw light into the highest recesses of the domes, and show their beautiful ornaments, as well as to light the other parts of the main hall of the mosques. The adaptation of the same idea was first introduced by Mr. Chisholm into Madras in the designs of the Revenue Board and Post-office buildings, where, as in the Law Courts, they give grace and grandeur to the design, as well as allow of thorough and complete ventilation. The recesses consist of a series of small colonnades and arches of stone, or dressed with stone, running up in three stories, each story differing from the one below it. The effect is remarkably fine, and in marked contrast with the large arches in the projections. The sides of the projection are flanked with towers, which add greatly to their grandeur and make the contrast between the projections and recesses still more marked and pleasing. The small portion of the side view shown in the picture adds another variety to the architecture. Here the colonnades and arches run through only two stories in front, the third story being thrown slightly back, the roof from front to back going up in a series of broken steps. The effect of this, though not so grand as the large arches extending up to the full height of the building, is very pretty, the broken roofs showing very pleasing roof architecture. There is a chasteness and subdued beauty about this portion of the design, which forces one to linger longer about it than in the purely grander sections. And thus, if one went right round this immense pile, which our illustration cannot show, there is marked change and variety, interest, grandeur or beauty, in every different part, all differing, yet all pleasing—a sort of unity in variety, where nothing palls and all makes up one unanimous whole.

The ground plan was made by Mr. Brasington, and he has shown great art in this, in the way he has broken and projected and recessed all the faces, making many three-sided exterior open courtyards, so necessary in a large Indian building, where the outer air should be in near contact with every room, and yet these same projections and recesses add considerably to the architectural effect. The designs for the superstructure were Mr. Irwin's. Mr. Brasington made elevations, but as he carefully avoided giving sections, and sections show the construction, and the construction is the real design, his picture elevations were discarded and fresh ones made on Mr. Brasington's ground plan; so that the credit of most of the architectural superstructure belongs to Mr. Irwin. The change of architects was a good thing for the building, as it thus benefited by the ripe knowledge of two good men.

If the exterior architecture is fine, the interior is even still more pleasing, and has been a surprise to those most capable of judging and giving an opinion on it. A large building like this becomes historical, and ought to record the true state of industrial art in India when it was brought into existence. With this object in view, as well as to do the best for the interior of the building, nearly all the industrial arts, refined and improved, have found a place in it, to stand as an undying record of the capabilities of this generation. There are some wonders of the deep wood-carving of the south, so different to the shallow surface cutting of the north. The plasterer of Madras has eclipsed the sculptor of the north, in the wonderful effects he has produced with his trowel, making his dead plaster look like living stone. As the photography of the modern day has outdone the painter, in many departments, and yet helps the artist by its perspective and shadows, so is the Indian plasterer to the sculptor. The plasterers of Madras, unlike those of Europe, do not use moulds for the work, but do everything with the hand, a sort of free hand with the trowel, instead of the pencil, which makes their work less stiff, and more graceful and natural. In the New Law Courts large surfaces of the plaster are worked into a variety of geometric and floral designs and sometimes in different colors.

The colored cathedral glass, introduced by Mr. Chisholm into this country, had a free hand in this work. Not only the old men taught by him were employed, but a number of others, principally boys, were instructed on the work, and have produced a wealth of colored glass, such as cannot be seen in any other building in India, and in very few out of it. The cheapness of Indian art labor allowed of this indulgence in art luxury.

All the courts have extensive paintings in frescos and oils on the walls and ceilings, some patterns being light and chaste, and others dark and bold. The same wealth of design characterizes the paintings and frescos as was shown in the plastering and glass-work.

Mr. Irwin introduced the more artistic forms of hand-hammered ironwork, and the Madras blacksmiths soon caught at it. Three large gangs of blacksmiths were started in sheds on the work, and have produced some marvels in this description of art industry. All the entrance gates are of hand-hammered iron, and a large screen

measuring 10½ x 17 feet has been worked in the most intricate of patterns. This hand-hammered iron, filed and polished, cost about six annas a pound, whereas in a European country it would have cost about six annas an ounce.

About three or four hundred carpenters have been employed for some months on the new furniture for the courts, in sheds on the work, and are producing quite an original cast of furniture. Together with the usual deep carvings are blended inlaid woods of different colors, principally dark rosewood, and ivory-like white cedar and satin-wood. This, together with the original designs, will give the Madras carpenter and the Madras public a new start in cabinet work. In this department of work the only regret is that more time was not available for the proper seasoning of the timber used.

The New Law Courts mark an era of great technical advancement in South India. We have no time to enter into a discussion of means and causes. While educationists were talking largely about the advantages of technical education, and the best methods of imparting it, and quarrelling amongst themselves, the engineers have gone quietly and succeeded in teaching it in a manner which cannot be mistaken. If our educationists can be less verbose, and more practical, the country at large will derive more profit.

We think that too much honor cannot be shown to Mr. Irwin and Mr. Stephens, whose services Mr. Irwin has handsomely acknowledged, for the manner in which these large buildings have been completed. They have not only built but instructed labor, and laid the foundations for new industries and new departures in old ones, and all this, most wonderful to relate, without exceeding their estimates.

The large tower is shown unfinished in our plan, because the lamps which are to finish it have not yet been received from England.

This plate is copied from *Indian Engineering*.

VILLA AT BOISREDON, (YONNE) FRANCE. M. PAUL SEDILLE, ARCHITECT, PARIS, FRANCE.

The plate is copied from *La Semaine des Constructeurs*.

THE VIRGIN ADORED BY TWO SAINTS. BY COSIMO TURA, IN THE ROYAL MUSEUM, BERLIN, GERMANY.

This illustration is copied from *L'Art*.

CARNEGIE FREE LIBRARY, AYR, SCOTLAND. MESSRS. CAMPBELL, DOUGLAS AND MORRISON, ARCHITECTS, GLASGOW, SCOTLAND.

THIS building is now approaching completion, and from its prominent situation, looking down Cathcart Street and along the new bridge, does not fail to arrest attention. On the principal floor, which is six feet above the street level, are placed the lending library, general reading-room and committee-room, etc. The upper floor is occupied by the reference library, ladies' reading-room, and the museum, or picture gallery. In the lending library there will be accommodation for 25,000 volumes, and in the reference library 5,000 volumes. The basement floor is three feet below the street level, and is occupied by the heating chamber, book stores, workshop, lavatory, etc. The librarian's house is in the north wing, on two floors, between the street level and the floor of the museum. With the exception of the reading-room, the floors are all of fireproof construction. The mason-work is built of red stone from the Ballochmyle quarries. Internally, various descriptions of tiles are used on the floors and walls. In the museum and picture gallery the principal part of the walls available for pictures is being constructed with curved surfaces, similar to what has been found so admirable in the new picture galleries, Dundee. The estimated cost amounted to £7,600, and as far as is apparent, the building will be completed within the sum. The memorial stone was laid by Mrs. Carnegie.

This plate is copied from *Building News*.

SCHLOSS THEATRE, TOTIS, AUSTRIA. HERREN FELLNER & HELMER, ARCHITECTS, VIENNA, AUSTRIA.

This plate is copied from *Architektonische Rundschau*.

DETAILS OF WOOD ARCHITECTURE AT BRUNSWICK, GERMANY.

This plate is copied from *Zeitschrift für Bauwesen*.

NEW ROMAN CATHOLIC CHURCH OF THE HOLY ROOD, WATFORD, ENGLAND. MR. J. F. BENTLEY, ARCHITECT.

VERWOOD VICARAGE, DORSETSHIRE, ENGLAND. MESSRS. ADYE & ADYE, ARCHITECTS.

THE foundation-stone of this vicarage was laid in 1890 by the late Archdeacon of Dorset for the present incumbent, the Rev. Claud Brown, M. A., and is, with a stable attached, just reaching completion, at a cost of about 7,000l. The walls are built hollow and faced with red brick, with Westwood stone dressings. The roofs are covered with dun-colored tiles.

THE VIRGIN AND CHILD.

THE church of St. Michael's, Derby, was one of the six churches in that town recorded in the Domesday survey. The first mention of a vicar, William de Wilne, occurs in 1170. A fifteenth-century building, in a ruinous condition, existed in 1856. On August 16 in that year, during the celebration of Holy Communion, the east gable

fell in, the officiating priest narrowly escaping by jumping the altars. The church had to be entirely rebuilt. It was reopened April 16, 1857. Mr. H. Y. Stephens was the architect. It is a stone church, consisting of nave, aisles, chancel, with priests' vestry on the north side and organ-chamber on the south. The squat tower stands at the west end of the south aisle. The only entrance is through the tower. The nave consists of four bays. Between the third and fourth, at the west end on either side, is a blank space of wall about four feet wide. On these spaces it is intended to place mural paintings representing the Nativity and Atonement. The Virgin and Child, as shown in the present number, has been placed on the north side. It was painted by Mr. Aveling Green in spirit fresco on linoleum, rolled down with a resinous substance onto thick sheet-zinc, nailed to the wall with a slight oak moulding round. This plan has many advantages. The zinc behind the painting effectually secures it against damp. The linoleum forms a good surface for the spirit process, and the work can be executed in the studio. It can, if desired, be let into the wall flush with the surface of the plaster. In neither case does the eye detect the difference of surface. The thickness of the linoleum is so slight it is not seen, and the work has all the appearance of having been painted on the original surface of the wall.

HÔTEL DE VILLE, COLOGNE.



[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.]

#### UNAUTHORIZED DUPLICATION OF AN ARCHITECT'S DESIGN.

PROVIDENCE, R. I., October 14, 1892.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—I should like to ask your opinion in regard to the rights of an architect in the following case:

An architect is employed by a real estate company to furnish plans and supervise construction of a cottage house, with the understanding, that is, he had written a letter to the real estate company in reply to an inquiry, that his "terms for plans, specifications and supervision would be five per cent on cost of building, but if two or more buildings were built from same plans and at same time, his price would be five per cent for one and two and one-half for each of the others." After contract for building was let, the treasurer of the real estate company (with whom all previous business had been conducted), ordered another set of blue prints, saying that he wanted them in the office to show to prospective purchasers, and he permitted, without consent or knowledge of the architect, a man whom he hoped would be a purchaser of house and lot, to take the set of plans home with him to show to his wife. This man copied or caused them to be copied without the knowledge or consent of the architect, and built a house for himself on a lot purchased of the real estate company, and let the contract to the same contractor who was employed by the real estate company, and as the architect got out his detail drawings the contractor used them for both houses.

Query: Can the architect recover anything for the using of his set of plans? If so, can he sue the man who surreptitiously copied his plans and specifications? Can he sue the real estate company who negligently allowed them to go out of his possession to the benefit of the man copying them, and to the injury of the architect; if so, in what form of action? And can the contractor be sued for using, without authority, the detail drawings (furnished him for one house), for building another?

Can you refer to any decisions in point?

Yours truly, L. P. L.

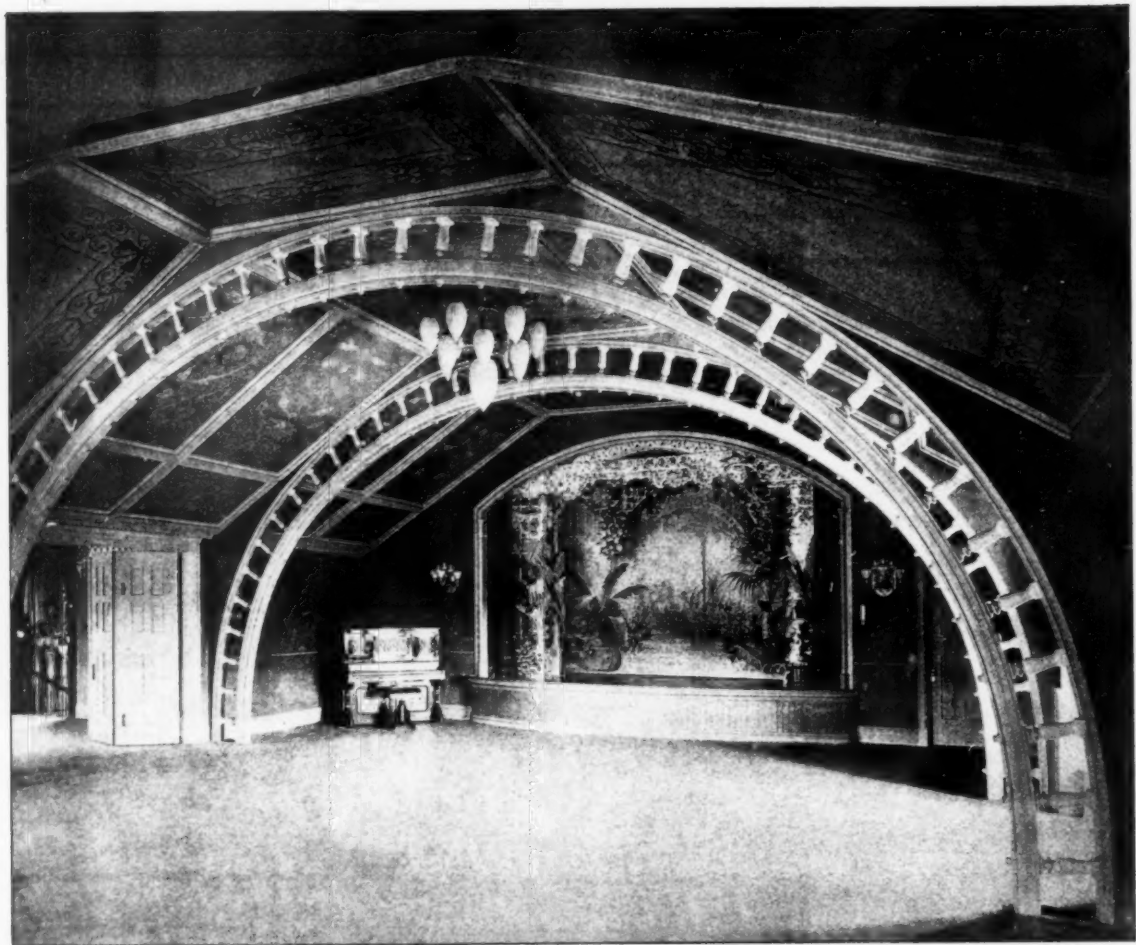
[If L. P. L. wrote the real estate company, as he says he did, in reply to their inquiry, saying that his terms "if two or more buildings were built from same plans and at same time" would be "five per cent and two and one-half per cent for each of the others," and the company accepted the terms, which they seem to have done, tacitly at least, by employing him without further discussion, it seems to us that an implied contract was established between him and the company that, if more than one house was built from the plans which he furnished, he should be paid for the additional houses according to the terms which he had proposed and the company had accepted. Under this contract, the company had certainly no right to have a second house built from any design without paying the architect, nor could they give any one else a right which they did not possess themselves; and, as it seems to us, they were responsible to the architect if his property, that is, his design, was stolen, either with or without their consent, while in their possession. On this view, the action would be against the company, under the contract, for compensation as agreed for the use which they made, or allowed, intentionally or negligently, to be made of the design. Whether anything could be recovered by the architect from the individual who copied the plans, or from the contractor who made unauthorized use of the details, it is impossible to say, as there are, so far as we know, absolutely no decisions in this country bearing on the question of the property of an architect in his designs; but a suit brought against either of them by the architect would open up such an interminable series of questions hitherto almost untouched in our courts, such as the ownership of the drawings, and, consequently, the relative rights of the various parties to demand

damages for misuse or misappropriation of them, the value of an architect's ideas in general, and the extent of damage inflicted upon him by stealing them, that it would be folly for a single architect to attempt to carry such a controversy to a conclusion against a rich opponent. At the same time, we think that it would be well worth while for the profession as a whole, to have all these questions thoroughly argued, and decided by the highest courts, in such a way as to fix the law on the subject definitely; and we hope yet to see a standing committee appointed by the American Institute of Architects, to consider cases of the kind, and an appropriation made for paying the expenses of carrying to an authoritative conclusion controversies involving, as this does, some of the most important professional rights. — EDS. AMERICAN ARCHITECT.]

## TRADE SURVEYS

It is learned from engineering circles that there is an unusual amount of engineering work in contemplation for the coming year. The enterprises in hand may require two years for their completion, and involve simply a very general expansion of facilities for transportation and traffic. Included in the new enterprises are ship lines, transportation lines, boat lines between coast cities, some river lines, a good deal of canal construction, to say nothing of a vast amount of bridge work, elevated railroad work, track laying and the better equipment of shops under control of railroads for repairing purposes. It is, in short, the purpose of the managers of quite a number of large railway systems to round out and complete certain schemes or projects they have had in mind for some years. These enterprises involve the purchase of a great deal of iron and steel, lumber, machinery, equipments and supplies of various kinds. One of the principal items will be structural material for elevated-railroad work. Included in the contemplated work are a good many elevators and wharves. It is probable, according to the statements of some of the engineers, that a good deal of work will be undertaken early next year. One cause for the delay has been the nervousness among railway managers over unsettled conditions, unsettled freight-rates, and lack of confidence in their ability to control their respective properties to the best interests of stockholders. The dread of railway wars has always been present among the minds of wise managers as well as rash ones. Conditions have very generally improved during the past year, and managers are now getting down to a common-sense basis, and are studying up plans and methods for the improvement of their respective properties. Another subject worth more than passing notice is the probability of a great increase in the building of manufacturing establishments during the coming year. Information on this point is not authentic; it consists of rumors, possibilities, schemes, etc., but the safest thing to be said is, just now, that manufacturers are beginning to feel that the time is near when a considerable enlargement of capacity can be safely made. An exception is in the iron trade. The producing-capacity for raw material is as large as it is safe to have it for the present, but, in the working-up of iron and steel into finished products, machinery, etc., the capacity of shops to fill orders is not in excess of the country's needs. In other lines, however, there are prospects for enlargement. A few industries may be mentioned. Boat, ship and car building, general machinery manufacturing, especially of those kinds used in connection with electricity, wood-working machinery, including saw-mills, and a vast variety of miscellaneous machinery for general industrial purposes. The best authorities in the machinery-making line have recently expressed the opinion that a very heavy demand will present itself within the next twelve months. Late reports from 129 railroads show the increase in gross earnings in August over August last year to be 5.80 per cent; increase in net earnings, 2.36 per cent; for eight months, increase in gross earnings, 6.39 per cent; increase in net earnings, 3.12 per cent. Reports from bank officials show a strong demand for loans from interior points. Bankers say that if they care to enter upon a policy of indiscriminate lending to small borrowers on land security, that they could very greatly increase their business. Requirements from these causes are likely to steadily increase, they say, and they think that, sooner or later, some steps will have to be taken to meet them. Confidence prevails in commercial and industrial circles. The month of October has been a very satisfactory one indeed, considering the political agitations. The strongest point in the market is that consumptive requirements are growing, and that production is kept rather below than above the safe limit. Prices are not weakening; in fact, there is but little room for shading. Quotations are not being advanced, and there is but little probability of a marking-up of values during the rest of the year. Merchants are doing their best to check the long-credit system, and are meeting with success. Competition is in a healthier condition than it has been for years. Reports as to house-building are rather meagre, but, so far as they have been made, show that this year has been a phenomenal one. A great deal of new work is even now being projected, not only in the larger cities, but in the smaller towns. Building has not been overdone. Raw material is low and abundant. The healthy condition of the industries is shown in the multiplication of foundries and small machine-shops, in the springing up of a multitude of small manufacturing establishments by former mechanics, foremen and superintendents with small capital. This seems to be a year for the small men or those of limited or no capital. There has been a great expansion of small industries, a result due to the healthy trade conditions generally prevailing. The winter will probably be one of unusual activity, as before intimated. The Presidential election has had less effect upon trade than any preceding one. The stock of goods in hands is less per capita than ever before known. Some men indulge in the prediction that an extraordinary rush of orders for all kinds of merchandise will manifest itself soon after the Presidential election. While not going to this length, it is safe to say that an expansion of business is probable, because of the conservative methods of doing business that have prevailed during the past year. There is but little idle labor in the country. Strikes have almost ceased. Agitations have been discontinued. There are but few mutterings among the labor leaders and organizations. No general strike is at present contemplated next year. The rank and file of labor organizations are more averse to agitations now than they have been for many years. Membership has not fallen off, but a cooler spirit seems to exist, and it is not probable that any radical change or policy would be welcomed by those who have most at stake. The first of January will probably see the Connellsville coke region in full blast, and this year's figures will show an increase in production over last year of two million tons. New coke fields are being opened up, and a tract of land estimated to contain two hundred million tons of bituminous coal is about to be opened near the summit of the Allegheny Mountains, where it is crossed by the Pennsylvania Railroad.





BALL-ROOM AND THEATRE IN HOUSE OF HARLOW N. HIGINBOTHAM:



HELIOTYPE FROM PHOTO BY BOSTON

THEATRE IN HOUSE OF FRANCIS WILSON, NEW ROCHELLE, N.Y. G. KRAMER THOMPSON ARCH'T.

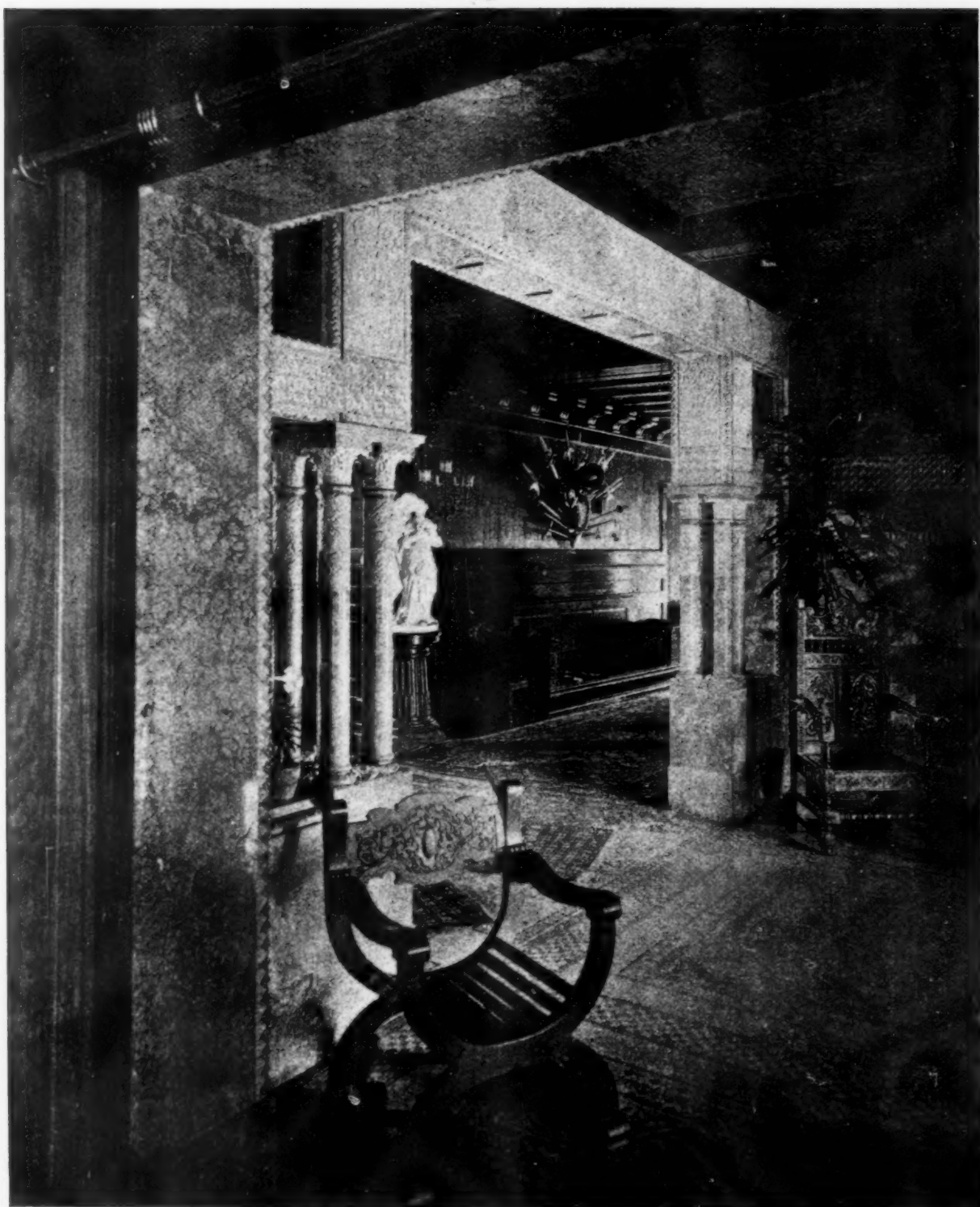


3 STORES ON COLUMBUS AVE. BOSTON.

JOHN A. FOX, ARCHT.

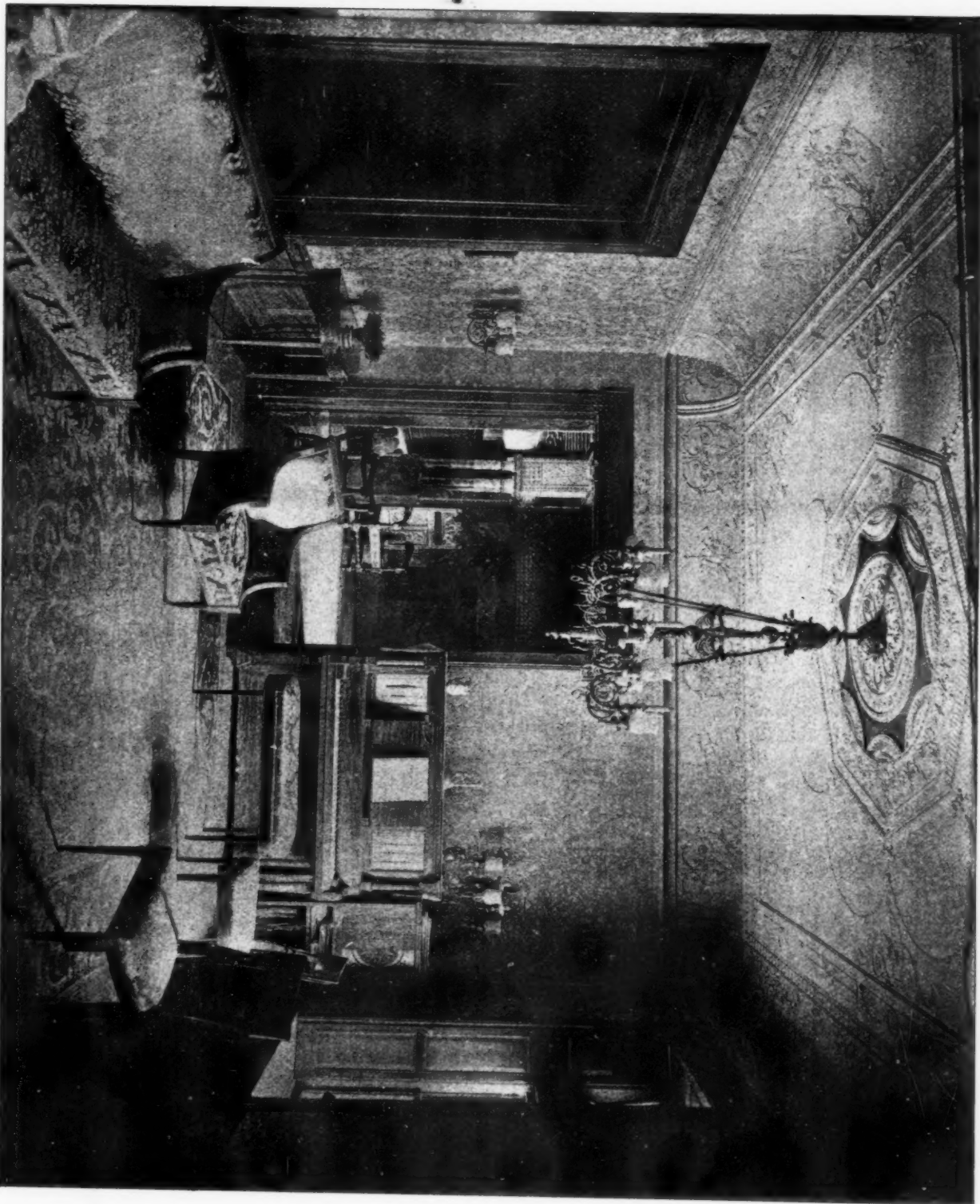






HELIOTYPE PRINTING CO. BOSTON

• HALL • IN • HOUSE • OF • HARLOW • N • HIGINBOTHAM :



MUSIC ROOM IN HOUSE OF HARLOW N. HIGGINBOTHAM.

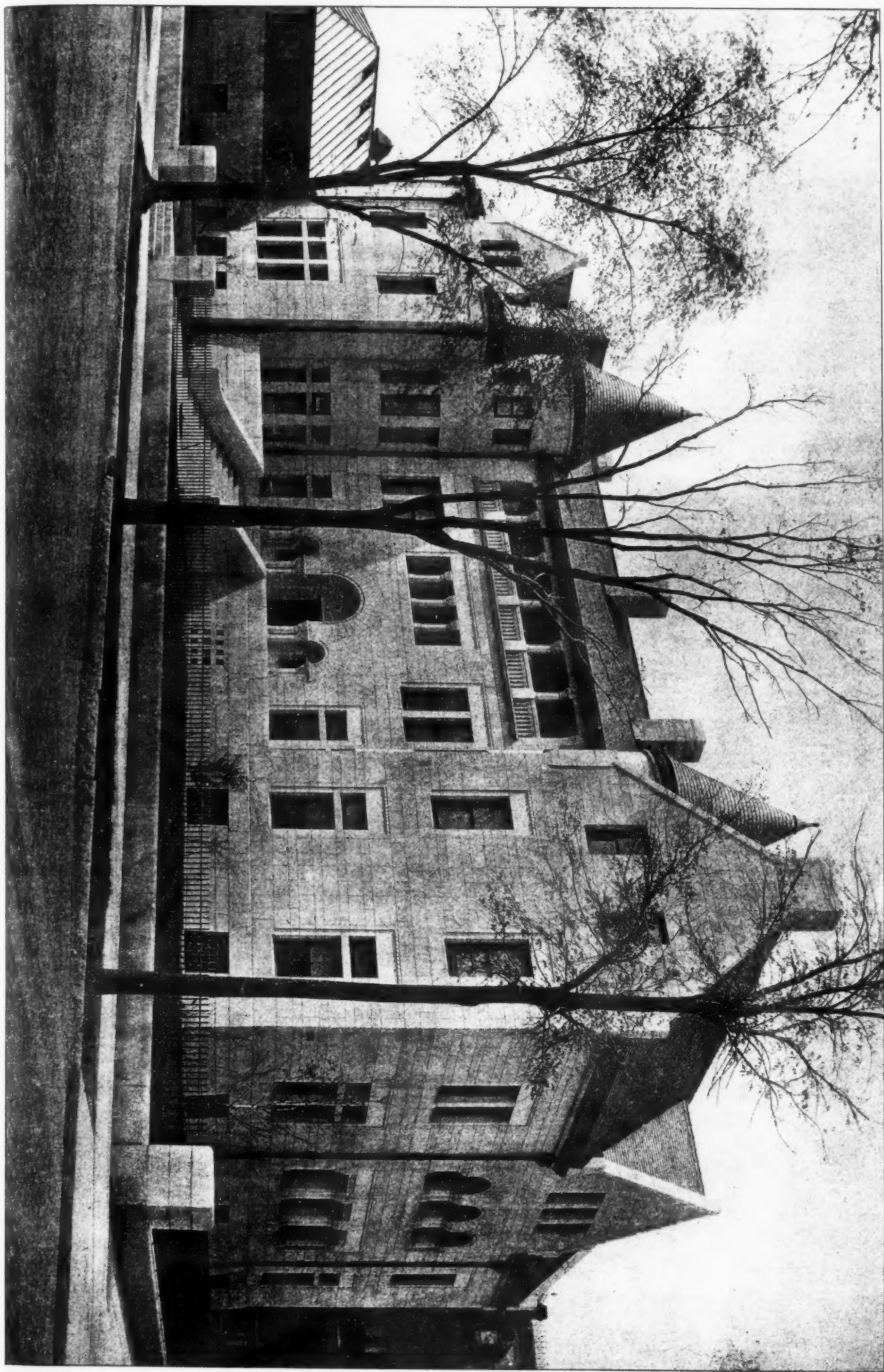


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INTERIOR VIEW OF HOUSE