

THE AMERICAN ARCHITECT AND BUILDING NEWS.

VOL. LXVII.

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No. 1257.

Entered at the Post-Office at Boston as second-class matter.

JANUARY 27, 1900.



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THE death of John Ruskin will affect many people, who disagreed with most of what he said, with a sense of personal loss. Harsh and unjust as was often his criticism of other people, and demoralizing as was his fashion of speaking of them, there was in him at times a passionate elevation of spirit, an intensity of love of moral and physical beauty, and a hatred of meanness and dirt, which appealed to the inmost heart of his readers. For this he has been beloved, in spite of his innumerable follies and inconsistencies, by millions of readers, and millions more, we may hope, will find in his works encouragement for their purest aspirations. We need hardly repeat what every one knows, that John Ruskin was the son of a prosperous London wine-merchant. About his mother little seems to be known, but his father, as he tells us himself, was a man of intelligence and taste, for whom he always retained a great affection and respect. The younger Ruskin was educated at Christ Church College, Oxford, and after his graduation devoted himself to the study of art. It is often said, particularly by the class of artists who, as we are informed, used to drink, in their café in Rome, to the confusion of "il Giuda Rooschino," that he never got beyond the amateur, that is, the rudimentary stage in the practice of art; but this is far from being the case. Although he devoted himself mainly to water-color, which was then at the height of its popularity in England, he was a master of this medium, and one of his drawings, "The Fall of Schaffhausen," belonging to Professor Norton, which has occasionally been exhibited, surpasses, as we recollect it, in fire and inspiration, anything in water-colors that we know. It is, however, hard for a painter to express himself in this intractable medium, and it was in his beautiful drawing that Mr. Ruskin was most successful as an artist. It was, moreover, easier for him to convey his thoughts by words than by form or color, and what might have been a great artist of the Florentine type became a great writer on natural and moral beauty, his disquisitions on these subjects being at first strung, so to speak, on a thread of artistic comment. The result was, not unnaturally, to convey to the minds of his readers a confusion between heavenly aspiration and French pointed arches, and between the Venetian Renaissance and corrupt luxury, which, in his own thoughts, was probably derived more from accidental coincidence than from reasoned conviction, but which had some singular results. For a time those people in England who aimed at a reputation for aspiring to the true and the beautiful betook themselves to French Gothic, Pre-Raphaelitism, Turnerism and other eccentricities, and Mr. Ruskin is

said himself to have said later that he felt as Frankenstein might have felt when the monster that he had called up confronted him. Disappointed in the visible effect of his influence on art, he turned his attention to political economy, in which, as an intelligent University man, he would naturally take an interest. At this time writers on political economy were numerous, and Mr. Ruskin found no difficulty in holding some of them up to ridicule, while his own theories, though little less illogical and ridiculous in many cases, gained much credit, particularly among the poorer and less critical classes, through their evident care for the individual man, as distinguished from the atom in a struggling and selfish mass, which the economists of that day delighted to expatiate upon. To a man of Ruskin's sincerity the idea of publishing a theory without acting upon it was intolerable, and he divested himself of nearly all his property to found what he called St. George's Guild, under the auspices of which should be taught and practised the things which he considered of importance. This institution still flourishes, although in a modest way, as the Ruskin foundation is, practically, its only support, and very pretty stories are told of the good conduct of its members, several of whom now live in this country. After completing this important work, Mr. Ruskin, whose health, never good, had suffered from various circumstances, retired to a cottage in the country, where most of the remainder of his life was passed.

NO one was ever more conscientiously sincere about himself than Mr. Ruskin, and it is due, not only to himself but to others, to observe that his divorce from his wife, who afterwards married Millais, the artist, although it undoubtedly saddened his subsequent life, and perhaps brought about the occasional attacks of mental derangement from which he suffered in his latter years, was without fault on either side. In fact, as English law could find no legal ground for a separation asked for by the noblest self-renunciation on one side and hardly less noble frankness and confidence on the other, a special Act of Parliament was passed to annul the marriage and set the parties to it free. It is a curious and significant commentary on Mr. Ruskin's writings that, while such conduct in a public man, or, indeed, in any other person of prominence, would have excited amazement, it seemed, as did his subsequent endowment of St. George's Guild, only what was to be expected from him, as if he alone out of all the people who preached great thoughts was believed to be sincere enough to put them into practice.

THE Fine-Arts Union of Washington asks all artistic associations to join with it in protesting against having any alterations or additions to the Executive Mansion of the United States, supposing that any such are necessary, devised or executed without the examination and advice of an expert commission of architects, landscape architects and sculptors of national reputation; and in recommending that the commission proposed should be appointed by the President of the American Institute of Architects, the President of the National Sculpture Society, and the President of the National Academy of Design. It is known that an attempt is to be made, under very powerful patronage, to have an amateur scheme for the enlargement of the building adopted by Congress at the present session; and no time should be lost by artistic associations in endorsing the protest of the Washington Fine-Arts Union, and in requesting Congress to legalize such a commission as is proposed. Blank forms, ready for signature by the president and secretary of societies of the kind, can be obtained from Mr. T. F. Laist, Secretary of the Fine-Arts Union, the Octagon, Washington, D. C.

ACCORDING to the newspapers, there has been a sort of tacit competition in the matter of the public buildings in Cleveland and Indianapolis between the Supervising Architect's office and the profession at large. While the Cleveland building is to be designed by outside architects, in competition, the drawings for the Indianapolis building, which is of nearly equal importance, have been made in the Supervising Architect's office, and are said, as we can readily believe, to be extremely creditable. Senator Fairbanks, of Indiana, however, at the request of some of his constituents, has made representations to the Treasury Department, saying that the people of

his State would prefer to take advantage of the law authorizing competitions in such cases; and the plans prepared by the Supervising Architect will probably be abandoned.

WITHOUT any reflection on the Supervising Architect, or his conduct of his office, it seems to us that this incident shows the necessity for something more definite than the Tarsney Act, by which the designing of public buildings is now regulated. This measure, in deference to a public sentiment which had not made itself very clear to the minds of politicians, permitted the Secretary of the Treasury to obtain designs for public buildings from architects outside the Treasury Department, in competition, but did not render this obligatory; so that, if he found that the public preferred official architecture, or that the employment of outside architects involved any unforeseen difficulties, he could follow the dictates of his own judgment. Meanwhile, as the Supervising Architect might, in consequence of this discretion, be called upon at any time to furnish designs for important buildings, it was necessary to retain in his office a considerable number of highly skilled men, ready to undertake at a moment's notice the work of the most accomplished outside architects. It was very possibly with the object of keeping these men employed on work worthy of their powers that the important Indianapolis building was taken out of the competitive list, and a large sum of money, undoubtedly, expended on making the drawings for it. If, then, as seems to be the case, the people of Indiana prefer to have an unofficial design for their building, the money spent on the official plans has been thrown away; and more public money is likely to be thrown away in the same manner until some definite policy is adopted in such matters. It seems now tolerably plain that the people of the United States, as a rule, like the system of employing outside architects to design, in competition, the Government buildings. The competitions interest a large number of persons, and there is a general feeling that in this way the cities in which such buildings are erected are more sure of securing something in which they will take pride, and which will serve to educate the community in artistic matters; while, as has been often shown, the cost of having public buildings designed in this way is less, rather than greater, than that of having them designed by officials. There is now no reason, therefore, why the system, instead of remaining tentative and permissive, should not be permanently established, enabling the Supervising Architect to save a large expense in making, or holding himself ready to make, the costly drawings which would, under a fixed system, all be made in the offices of private architects, and attracting, more than can be the case under the present vacillating and uncertain system, the best class of architects, who will rarely take part in ventures in the decision or conduct of which any room is left for chance or whim.

A COMPETITION case has just been decided in Pennsylvania, which, as architects will observe, seems to be rather ungrateful territory for incautious members of the profession. The County of Luzerne invited competitive designs for a court-house, promising that the authors of the five plans next in merit to the one accepted should be paid three hundred dollars each. The design of Mr. Osterling, of Pittsburgh, was placed first, but, as it appears, is not yet carried out, and so the building has not been accepted by the County, and he has not been paid, nor has anything been paid to the authors of the five plans next in merit, although the award has been duly made. Mr. Kipp, who was placed among the five, concluded to sue for his money, which had been refused him by the County Controller, who claimed that Osterling had not been paid; that his building had not been accepted, and that nothing was due to the five others. The Court, however, thought differently, and ordered the money to be paid to Kipp. It is fair to say that the County Commissioners seem to have acted honorably in the matter, and granted an order for payment of the five awards, but the Controller refused to cash it, alleging, as an excuse, an interpretation of his own of the contract which had been entered into.

A REVISION of the laws regulating the height of buildings in the city of Paris has been under consideration for several years and certain changes seem likely to be made. The present rules restrict to twenty metres the vertical height

of walls bordering on a street of twenty metres or more in width, but permit a roof to be added, the profile of which shall be inscribed in an arc of a circle having its centre at the level of the top of the vertical wall, and a radius not greater than eight-and-one-half metres, the arc to be tangent to the vertical face of the front wall. The proposed modification, which has been adopted by the Commission of the Municipal Council, restricts the height of the vertical wall within the same limit, but permits the profile of the roof to be inscribed in an arc of ten-metres radius instead of eight and one-half. This gives as the maximum height of buildings for private purposes in Paris about ninety-eight feet from the sidewalk to the highest point of the roof, instead of the ninety-one feet allowed by the present law. In the case of public buildings, as with us, the law seems not to be applied, and the city of Paris is said to be now erecting a building which is to be fourteen stories high above ground, as a storehouse for records.

THE Pan-American Exposition, to be held at Buffalo from May to November, 1901, invites applications for space. The buildings are so far advanced that the reception of exhibits will begin November 1, next, unless some postponement, of which exhibitors will be advised, should be found necessary. A charge is to be made for space for individual exhibits, and charge will also be made for power and for light, and for the cost of wiring for electric-lights. The Governments of the United States and the State of New York have made large contributions to the exhibition, and it will doubtless be of much interest. The department devoted to what the Director-General is pleased to call the "New Possessions" of the United States will probably be viewed with mixed feelings by visitors. That it may be made, as we are told, "intensely interesting" is unquestionable. A model, for example, of the old man in a Philippine village who was shot dead by an American sentry while carrying a child, mangled by an American shell, to a place of safety, would be as interesting an object as is likely to be found in the whole Exposition. Whether the interest will be accompanied with satisfaction is another matter. Although the Exposition is intended "fittingly to illustrate the marvellous development of the Western Hemisphere during the Nineteenth Century," and "the Government of the United States has indicated to the Governments of the Nations and Colonies of the New World its desire and hope that they participate in this Exposition," there is no very definite indication in the circulars as yet sent out, to show how many of these Nations and Colonies have accepted the invitation. Perhaps the "intensely interesting" character of the exhibit from the New Possessions of the United States makes them a little nervous; but, even without that, the fact that South America is far more closely connected, commercially and socially, with Europe than with the United States is likely to reduce the importance of its representation. Intending exhibitors may obtain blank applications for space, and all necessary information, by addressing the "Director-General, Pan-American Exposition, Buffalo, N. Y."

THE United States Geological Survey shows in its annual report that the supply of natural gas, which for many years has furnished a cheap and excellent fuel in many portions of Pennsylvania and Ohio, is rapidly diminishing. In nearly every gas-well district the pressure has fallen off, and in Pennsylvania, which has longest been supplied with natural gas, the annual value of the output now is less than one-third what it was in 1888. In this region, also, it is said that furnaces which were constructed to use natural gas for fuel are being remodelled to burn coal, and the blessing to which its industries have owed so much will soon be a thing of the past.

THE Massachusetts Charitable Mechanic Association has long had in mind the establishment of a trade school, after the model of those which have done so much for workingmen in New York, and, a practicable scheme having been prepared, such a school is to be opened this year, probably in October, in suitable rooms in the Association's building on Huntington Avenue. For the first year, three classes will be maintained, limited, probably, to twenty students in each. Undoubtedly, further details will be made public as the arrangements are completed.

THE SO-CALLED BATHS OF TITUS.

INNOVATION and change in matters of archaeology take place rapidly nowadays, and in a journal of this sort it is necessary to take account of them. At present it is the turn of the Baths of Titus, which are really the Baths of Trajan. This is not precisely a novelty of to-day, hardly of yesterday, and it is one of those questions which are interesting only to those who are particularly concerned with Roman archaeology.

The ensemble of the so-called Baths of Titus occupy a vast surface almost accurately bounded by the present streets Labicana, della Polveriera, S. Pietro in Vincoli and delle Sette Sale. Over all of this surface, here and there, rise ruins of halls, exedras, corridors; and amongst these ruins the most remarkable are those of the hemicycle in which the French government, in 1809-14, placed a powder-mill which gave its name to the aforementioned street. I will not speak of the considerable ruins near the Sette Sale, or of the crypt under the Church of S. Martino, for, in fact, under the name of the Baths of Titus there is understood in general the accessible side which almost corresponded with the middle of the southern side of the whole building. This, nevertheless, still more than the Baths built above it, forms a portion of the earlier "*domus aurea*" of Nero; and on these baths exist ancient inscriptions, and a citation in the "*Liber Pontificalis*" (Vita Simm.) says that the majestic building was erected quite near the Church of S. Martino ai Monti. Near this church, in fact, was discovered, in the sixteenth century, a vase, a reminder of the ornamental work executed in the Baths at the expense of Julius Felix Campaniano, prefect of the city.

It is useless to recall to you that the arrangement of these baths has a great analogy with that of the Baths of Caracalla; and that the baths of which I am writing were particularly famous because of the numerous and precious statues which were found there, as well as because of the splendid painted decorations which in Italy became the fashion during the Renaissance. I speak of the "*grottesche*."

The suggestion that possibly these ruins were not the Baths of Titus, but in reality those of Trajan, dates back some little time, but to-day, thanks to the studies of M. Lanciani, this doubt has been removed by the examination of a drawing of Palladio's and in consequence of excavations which have been undertaken between the Flavian Amphitheatre and the Esquiline. So that now we are able absolutely to assert that the ruins hitherto called the Baths of Titus are, in reality, the Baths of Trajan, which in the regional catalogues and inscriptions are named separately. The real Baths of Titus used to rise almost at the west side of the Baths of Trajan, which, according to the testimony of Suetonius, were built by that emperor immediately after the dedication of the neighboring amphitheatre. The remains of the Baths of Titus were discovered in 1895, during the excavations just mentioned, at a point north of the amphitheatre and the Rue Labicana, on the left side. So the true Baths of Titus rose on the summit of the Oppian by the side of the Rue Labicana, which was on a level with the amphitheatre, and access was had to it by means of a monumental staircase, at the foot of which was built a portico which formed the beginning of the Baths. This is the same portico some remains of which are still visible in the shape of a series of brick piers, decorated with half-columns and connected by ruined arches. The portico and the monumental staircase were in fair condition in the time of Palladio, who, hence, was enabled to make an illustration of them in his work on the baths of the Romans. The baths were connected with the private palace of Titus, in which, according to Pliny, was preserved the group of the Laocöon, which was discovered in 1506, "*in domo Titi*" as Pliny says. This affirmation might seem in contradiction with the theory which seeks to restore to Trajan that which belongs to him, and which from time immemorial has been attributed to Titus; but the contradiction is only apparent, for, according to the investigation of this question, the discovery of the group, which, according to the testimony of Pliny, was found "*in domo Titi*," only signified that Trajan made use of the palace of Titus for the construction of his baths. And here it is just as well to recall a few dates. Titus reigned from the year 79 of the Christian era until the year 81; and Trajan, successor of Nerva, reigned from the year 98 down to the elevation to the imperial throne of Adrian, in 117. In short, the Baths of Titus and those of Trajan were both built upon the same ground, and rose above the ruins of the "*domus aurea*" of Nero, which, as has been a hundred times repeated, according to the original scheme of Nero, was to have had as great an extent as from the north slope of the Palatine across the Velia and the low valley between the Palatine and the Caelian as far as the Oppian: whence the palace itself was called "*Transitoria*." But this was destroyed by the terrible conflagration of the year 65; and the emperor built a second one, less expensive, but of astounding richness.

Nevertheless, even the Baths of Trajan did not lack that air of sumptuousness which was proper to Roman architecture. On the contrary, among the monuments of Rome there did not exist many which could compare with these baths, and, since I have occasion to draw the attention of the reader to a monument of which the influence upon the decorative art of Italy at the time of the Renaissance has been profound, I beg the reader to glance with me at the decoration of these Baths, formerly ascribed to Titus but now to Trajan. It is precisely through these Baths that the artistic knowledge of the entire world has been enriched by a word which generally is not translated but everywhere still preserves its Italian

aspect. I mean the word "*grottesche*." Just what these "*grottesche*" are there is no living man can describe: motives of painted ornamentation, drawn or sculptured, reproducing bizarre subjects or forming arabesques in interlacings in which appear extravagant figures and fantastic animals. But that which, perhaps, is less known is the origin of the Italian word in that which concerns its connection with the artistic subjects which come under the name of "*grottesche*." This word has its etymology in "*grotte*" or "*grotta*," that is to say, places dug out, caves, or caverns, and to explain the real meaning we must go back, not to the time of Titus or Trajan, but only to the time of the Renaissance in the sixteenth century. At this time the Baths of Trajan were accessible, and Raphael, with his pupils, just then on the point of decorating the celebrated loggia of the Vatican, went there to study these decorations, painted in the fantastic taste which smacks much of that Hellenistic art improperly called Pompeian. It is Vasari, the Plutarch of Italian artists, who tells us of these repeated visits to the Baths, which, because of their antiquity, had become subterranean structures like caves, or caverns, or, finally, *grotte*. Hence the name "*grottesche*" is given to the decorations which clothe the walls and the vaults of the so-called Baths of Titus, called also "*Raphaelesque decoration*," which has the same meaning. The story also goes that Raphael and his pupils, in order that no one might know of their plagiarism, caused these particular portions of the ruins to be filled up—a tale which is wholly unlikely, both because of its contrast with the known archaeological spirit of Raphael and because history does not confirm it. As a matter of fact, the records exist that these ruins were accessible up to the beginning of the eighteenth century, and it was only at this time that they were made inaccessible because of having become the resort of brigands, who in them found a fairly secure retreat. History recounts that in 1776 Ludovic Mirri uncovered them and explored a portion of them; but it was only in 1813, during the French domination, that they were uncovered to almost the extent which they are at present. The writers on the Cinquecento, on the other hand, assert that the decorations of the so-called Baths of Titus excited the curiosity of everybody in Rome, and this, too, shows the unlikelihood of the story that the ruins were filled up in the time of Raphael.

We will not linger over these particulars where the truth resembles the light of fable which children find glimmering across their fancies. Let us rather stop a moment and consider the character and importance of these decorations, which are often cited but are very little known in reality.

The decorations of the so-called Baths of Titus have the same characteristics as the paintings at Pompeii, and belong to that simple style which, when I was once writing to you on the matter of ecclesiastical decoration, I indicated under the denomination of "*first period of the second style*:"¹ ediculæ on slender columns, little images, genii, little trophies, little figure-paintings. On certain walls these ediculæ are repeated to excess and the uniformity and symmetry of the resulting effect have a very monotonous character. As a rule, there is an absence of candelabra (it is necessary to keep in mind the Pompeian paintings) and no excess of ornamental details except on certain vaults that are greatly overloaded; not that they are bizarre although they are monotonous. For example, one vault very richly decorated on its different faces bears certain figures half clothed with robes which conceal even the heads. These figures are repeated, equal in action, in the movement of the draperies, and in every way. The remarkable peculiarity is that these friezes, which are very varied, are developed with great mobility about scenes and paintings which look like copies of bas-reliefs.

A description of these paintings, which are executed in fresco, like almost all Hellenistic paintings, would carry me very far. I can only tell you there is here a veritable mine of ornamental motives and one which has been very slightly explored in comparison with its total richness. Students and decorators are drawn to the study of Pompeian paintings, or to those discoveries in the Garden of the Villa Farnesina (now in the new Museo delle Terme, at Rome), and only in rare cases pay any attention to these decorations to which I now draw attention. The explanation of this preference, and of this forgetfulness, rests in great part on the fact that no one has as yet had the inclination to make known the decorative beauties of these so-called Baths of Titus. Many people know the existence of these decorations, but the greater part do not take the trouble to really make their acquaintance. And yet, there is one fairly rich publication, of the last century, to be sure, a fact which is not an endorsement of its stylistic fidelity. This publication, "*La Terme di Tito e loro interne pitture*," dates from 1776, and was made by Ludovic Mirri, whom I mentioned a moment ago, with drawings by François Smugliewicz, a Polish painter, and engraved by Marc Carloni in an atlas containing several plates showing both the ensemble and details, with text by the Abbé Carletti. In fact, this text has been published apart from the plates under the title "*Le antiche camere delle Terme di Tito*," that is, the Ancient Chambers of the Baths of Titus. I do not know the fate of this publication, which, while being without color, yet had a truly royal air. Certainly to-day it is altogether forgotten, and I am pleased to remind people of its existence in this review, feeling sure of rendering a service to architects and decorators. Above all, I desire to call attention to the beauty of the vaults, and this makes the value of the

¹ American Architect, February 8, 1896.

work I mention all the more considerable, for to-day wall-paintings are less sought after than those suitable for vaults.

The halls of the so-called Baths of Titus most highly decorated open on the portico which I mentioned, and then there is the cryptoporticus, on the middle of which is legible the following inscription in Latin: "*Duodecim et Jovem optimum maximum habeat iratos quisquis hic minxerit aut cacarit*," and the triclinium.

I do not wish to take leave of my readers without furnishing the literary means of informing themselves in every way possible on the subject of this article and the novelties which I have referred to. Beside the ancient writers Pausanias (X. 12. 4) Cass. Dio. (LXIX. 4. C. I. L. VI, 1670, 8677, 8678, 9797), the reader can turn to the following modern works: Becker, "*Handbuch der römischen Alterthümer*," Leipzig, 1843 (1.688); "*Beschreibung der Stadt Rom*," von E. Platner, C. Bunsen, E. Gerhard, etc., Stuttgart, 1830-42 (III. 2. 221); Canina, "*Indicazione topografica di Roma antica*," Rome, 1850 (IV. tav. 202-204); Jordan, "*Topographie der Stadt Rom im Alterthum*," 1871-85 (II. 524); and especially Lanciani, "*Forma urbis Romæ*, Mediolani, 1893-96 (tav. 23. 29); also Gilbert, "*Geschichte und Topographie der Stadt Rom im Alterthum*," Leipzig, 1883-90 (III. 297); the superb publication of the Deutsches archäologisches Institut, "*Mittheilungen, Rom*," 1892 (tav. 302), and the "*Monumenti antichi pubblicati per cura della R. Accademia dei Lincei*," Milan 1890-96 (484).

ALFREDO MELANI.

GAS FOR LIGHT, HEAT AND POWER-TRANSMISSION.

THE importance of coal-gas as a factor in the production of light, heat and power is on the increase. During some years gas was regarded simply as an agent for illumination, and the price of artificial-gas in the United States still confines it largely to lighting purposes. The abundant and cheap supply of natural-gas as fuel for domestic and manufacturing purposes in some of the States has been a great object-lesson, and the reduced prices now charged in many large cities for artificial-gas is developing its wide use in cooking, and to a less extent in heating. The almost instant production of a high degree of heat at the gas flame, its ease of regulation and ready extinction are main causes of its popularity. An additional point in favor of gas for cooking is its small expense in operations that require heat at a particular point during short periods at a time.

The last decade has witnessed great improvements in the gas-engine, which now bids fair to become of the highest importance as a prime mover. As the gas-engine draws its supply directly from a service-pipe, or small reservoir, the first-cost of a plant for a given power is less than that of an equivalent boiler and steam-engine, with the necessary accessories, and smaller floor-space is required. Another condition in favor of the gas-engine is the fact that, in small plants, a highly-skilled and licensed engineer is not necessary. On fairly-constant loads of nearly its full capacity, the gas-engine, in moderate sizes, consumes about twenty cubic feet of gas, of good quality, per horse-power-hour, at a cost of two cents, with gas at one dollar per thousand cubic feet. From five to ten pounds of coal per horse-power-hour are commonly consumed with small steam-engines and boilers, making the full expense from one and one-fourth to two and one-half cents per hour, with coal at five dollars per ton. When the extra labor necessary for the care of a steam-boiler is considered, the gas-engine is apt to be at an advantage, unless the exhaust-steam is wanted for heating purposes.

The ease and cheapness with which gas is distributed through city pipes, and the higher efficiency of the gas-engine over that of the combined steam-engine and boiler, have led to the proposal that gas distribution be used to replace that by electric systems to a large extent. This power-distribution by gas would apply to electric light, power and traction service, and include gas-engines and electric generators of moderate capacity at frequent intervals over the service-area.

Another subject of much importance that is now receiving attention is the long-distance transmission of gas from coal-mines to centres of population, and along the line of railroads to supply motive-power for trains. These last propositions again include electric-generating stations at suitable intervals, driven through gas-engines by the long-distance supply.

A glance at the methods of production and the qualities of gas will do much to indicate its fitness for these several purposes. Coal-gas is commonly made by the application of great heat to bituminous coal in retorts or closed chambers. Under this process one ton of coal yields about 10,000 cubic feet of coal-gas, 1,500 pounds of coke, 120 pounds of tar, and 140 pounds of ammonia liquor. The cost of gas-production is, of course, a variable quantity, depending on the transportation-charges for coal, and other factors; but there is little doubt that near the coal-mines the coke and other materials incident to gas-production have enough value to cover the entire expense of the process and pay a fair profit besides. Under these last conditions, therefore, the value of gas can only be placed at a very low figure. The greatest objection to gas for illuminating purposes rests on its vitiation of the air by the products of combustion, a fault from which the incandescent electric-lamp is entirely free. The gas-flame also suffers in comparison with the incandescent-lamp in the matter of heat given off per unit of light, and in its quality. It is interesting to note in this connection that 20 cubic feet of gas will de-

velop one horse-power-hour when used in a gas-engine. The gas-engine driving a dynamo will supply about twelve sixteen-candle-power incandescent-lamps per horse-power-hour, while 20 cubic feet of gas consumed at the burners give only four or five sixteen-candle-power jets during one hour. In this last fact rests a large measure of justification for the growing extent to which electricity is displacing gas in illumination.

Coal-gas liberates about 700 heat-units per cubic foot when burned, so that the total heat furnished by the gas made from one ton of coal is about $700 \times 10,000 = 7,000,000$ units. A good gas-coal when totally burned yields about 14,000 heat-units per pound, or $14,000 \times 2,000 = 28,000,000$ units to the ton, so that about one-fourth of the heating-power of coal is imparted to its gas. The cubic feet of coal-gas equivalent in heating-effect to one pound of coal is represented by $14,000 \div 700 = 20$ feet. At five dollars per ton, one pound of coal costs .25 of a cent, and the price of coal-gas can only be $.25 \div 20 = .0125$ cent per cubic foot, or 12.5 cents per thousand cubic feet, if it is to be equally cheap with coal for fuel.

While it is no doubt impossible under present conditions to distribute coal-gas at any such figure as that just named, so low a price is not necessary to its extensive use for fuel purposes. In various English cities, including London, coal-gas is sold at from fifty to sixty cents per thousand feet, and is used to a large extent as fuel for cooking and mechanical operations. Charges as low as one dollar per thousand feet for coal-gas in some American cities have also done much to extend its use as fuel. The advantages of gas over coal in the ability to start, regulate, and stop a fire at will warrant the substitution of gas in many cases, even at the prices named.

Certain varieties of gas derived from coal, as water-gas and producer-gas, have heating values only one-third to one-half as great as the regular coal-gas, and any extended plans for heat from gas should therefore be based on a knowledge of the particular gas to be used. While one ton of coal yields 10,000 cubic feet of gas, which in the gas-engine is competent to supply $10,000 \div 20 = 500$ horse-power-hours, the same amount of coal consumed with the ordinary steam-engine and boiler, in moderate sizes, will hardly develop more than $2000 \div 5 = 400$ horse-power-hours. This difference in power-production is to be especially noted, because the coke, tar and ammonia yielded in the process of gas-making are about equal in value to the coal used, while in the generation of steam-power the coal is entirely consumed. The great importance of power transmission and distribution and the easy transfer of gas through pipes give especial interest to the economical performance of gas-engines.

The electrical distribution of energy for light and motive-power purposes is a highly important interest in most large towns and cities. Starting some years ago with a small steam-generating station for each moderate area of service, systems of electrical distribution are coming to include, in each, one large steam-plant that develops all of the electric energy for a wide area, and a number of sub-stations suitably located over it. Current sent out by the main generating-station at high electric pressure is received at the sub-stations and converted to a low pressure for consumers' use. The first-cost of the main station and of the electric-conductors running to the sub-stations is very large, and the combined losses of generation, transmission and conversion considerable. Another factor that counts against the combined steam-and-electric system is the fact that the engine can at best deliver only about fifteen per cent. of the heat energy from coal as mechanical motion. A large gas-plant connected by pipes with sub-stations containing gas-engines and electric-generators would supply sufficient gas to operate a given electric load with but little greater consumption of coal than would be necessary for a steam-plant, and have a remainder of coke, tar and ammonia nearly equal in value to the coal used. It is thus a serious question whether a gas-plant will not replace the great steam-driven station in electric systems.

The transmission of power from coal-fields to great cities has long offered an inviting opportunity to electric systems, but the expense of the necessary conductors and the losses incident to transmission and conversion have thus far proved prohibitive over distances of one hundred miles or more for the average case. The inability to make very long transmissions with economy is one of the main factors that prevent the substitution of electric-motors for steam-locomotives in regular railroad work. The transfer of gas through pipes offers an economical solution of both the last-named problems, as the supply of natural-gas over very long distances to cities has demonstrated that the power required to overcome the friction between gas and its pipes, when suitably designed, is but slight.

These few glances at the expanding field of gas utilization indicate that the electric arts, instead of displacing it, will find in gas the foundation of their greatest applications and triumphs.

ALTON D. ADAMS.

A SANMICHELE PALACE.—The ex-Empress Frederick of Germany has just purchased a fine villa on the Lake of Garda. The house is delightfully situated on Cape San Vigilio, and belonged to the family of Brenznoni. It is in the purest Renaissance style, by the famous Verona architect Michele Sanmichele, and was built in the first half of the sixteenth century. The terrace of the villa reaches far into the lake, and from it is obtained one of the most lovely views in Southern Europe.—N. Y. Evening Post.

GAS CONFLAGRATIONS.

IN the New York *Evening Post* there was published last week the following communication which should have the widest publicity, for, as the editor says, "coming from an authority, this note of alarm should attract widespread attention from citizens and public officials."

"Sir: The letters in recent issues of the *Evening Post* considering the leakage of gas in distribution as a public danger and a public nuisance show that attention is at last attracted to this great and increasing evil. The facts have been so skilfully concealed that even those whose business it is to investigate happenings of public interest have failed to note the evidences of the magnitude of this evil, and of the extent to which it menaces life and property.

"For example, the burning of the Windsor Hotel, with its appalling loss of life and its many distressing incidents, was a wasted lesson. That this was a typical gas-fire, due primarily to the leakage of gas from street-mains into the cellar and basement, and immediately to the accidental firing of this accumulation of gas in partitions and under flues, was known to every gas-man in New York, and to a great many people not connected with the business; but in all the newspaper discussion of that event I do not remember to have seen the real explanation of the phenomena of the conflagration hinted at.

"There was a great deal of talk about flimsy and combustible construction and the lack of fireproof-materials in the building practices of twenty or more years ago. Those who knew the building well—and I knew it from cellar to roof—recognized the fact that, while in no sense fireproof, nor even of slow-burning construction, there was nothing in the building itself or its furnishings to carry flame from story to story and from street to street, as it would follow a powder-train. The building was saturated with gas.

"We find like phenomena in the case of the fire which destroyed the dwelling and thirteen members of the family of Mr. Wallace C. Andrews. In this instance an especially well-built house of the first class was swept by fire from basement to attic, with such suddenness that Mr. Andrews was caught on the stairs and shrivelled to a cinder while trying to descend from the second floor to the parlor. Only gas could explain such a casualty.

"Among perhaps a hundred examples of gas-fires which have occurred in this city within a year and a half, the cause was evident enough, but no one looked for it, and those in a position to sound the danger-signal failed to do so. Even in so unmistakable an instance as the destruction of the Frischen house last September, the fact was noted with no recognition of its significance. In this case a paper-hanger was preparing for a day's work in the basement of the Frischen house, and struck a match to light his pipe. Instantly the house was wrecked, and the dwellings on either side badly damaged. The paper-hanger was killed. Before night the gas company occupying that street had a temporary main in place, and its officials, when questioned, admitted that they 'had long been uneasy' concerning the old main. A suspicion of structural weakness in one truss of the elevated railroad, or one case of bubonic plague in New York, would fill the newspapers for a week, and create something like a panic; but the enormously greater and ever-present danger to life and property attending the leakage of gas from broken and defective mains and service connections furnishes only occasional paragraphs.

"Even the National Board of Underwriters, whose members have paid millions of dollars in losses for gas-fires, have become aware of this hazard only lately. Their circular of December 28 was a startling document, but it contained an amusing oversight. The committee, in discussing the special fire-risk due to gas-leakage under asphalt and other impervious pavements, forgot that in winter all pavements are impervious, and that a few inches of frost penetration as effectually prevents the transmission and escape of gas as a poultice of asphalt or a surface of stone.

"The individual citizen should understand that there are risks incident to gas-fires which the underwriters cannot assume—the casualties which usually attend them. I can say from personal knowledge that there are miles of dwellings in the residence streets and avenues of New York which are distinctly unsafe for occupation for this reason. As a rule, gas which has filtered through the ground has very little odor, often none at all. Uncarburized water-gas is odorless; carburized water-gas in passing through the earth leaves behind most of its added illuminants, which impart its characteristic smell. What passes is a compound of hydrogen and carbonic oxide, highly inflammable.

"The effect of gas-main leakage on the public health has never been investigated. Probably it is much more serious than has yet been realized, and it would seem to come under the purview of the Health Department as a matter in the highest degree 'dangerous to life and detrimental to health.' From this point-of-view, it is a very much more serious public nuisance than many of those which interest the Board of Health a great deal more.

"What the leakage of the mains of our city gas-companies is seems to be a matter of conjecture. No doubt it is more in New York than in London. In London it averages over half a million cubic feet a mile of main per annum—which is low as compared with Glasgow, where it reaches the surprising figure of 1,642,000 cubic feet. Philadelphia has had a leakage of 871,000 cubic feet in

one year. It is safe to say that the gas-main leakage in New York materially exceeds half a million cubic feet a mile per annum, and no doubt the committee of the City Club was within the truth in saying: 'In parts of this city the loss is probably in excess of a million cubic feet per mile per annum.'

E. N. T.

NEW YORK, January 13, 1900.

PERSIAN TILES.



HE student of the arts, industries and handicrafts of Persia receives but little assistance from the writers of either ancient or modern times. Poets, historians, philosophers, romancists of classic fame never condescend to analyze or interpret for posterity the avocations or the labors of the people among whom they lived. They were, nevertheless, the slaves of the situation, and had to mould their style and subjects so as to procure the favor and patronage of kings. To magnify events and intensify their meaning and effect in all the vivid hues of oriental coloring, was the aim and business of the historian. His work has one recommendation: it is drawn to a scale. Everything is colossal, and to those not acquainted with his methods he appears to be impartial. Success or disaster, victory or defeat, prosperity or calamity, feasting or mourning, all receive the same treatment. Nothing could be small, nothing insignificant. His imagination, not his judgment, secured the favor and earned the reward. It is not, therefore, surprising to find him silent on the minor, yet practical, realities of the national life.

To trace the course of any industry in Persia which has survived the ravages of time is an interesting study. The industrial activity, though unnoticed by the records, is very closely interwoven with the texture of the national life, and in its pictorial aspects reflects its peculiar and dominating characteristics. It will, moreover, be found that where the skill of the artist has been united to the handicraft of the artisan, the product has taken firm hold and has remained, under various forms and degrees of excellence, through every national, dynastic and religious change. This proposition receives its most practical illustration and proof in the industry associated with the manufacture of porcelain, glazed and encaustic tiles. Their invention lies far back in the twilight of history. They have been excavated in their almost original lustre from the buried cities and entombed palaces of Babylonia, Persia and Media, and are now the treasures of the museums of the West.

Tiles, in their pictorial aspect, have had considerable variety of form and representation. In one instance a tile contains a complete picture, while in another it may form a small section of a large composition. In the early stages of the art the surface of the tiles appears to have been generally smooth and flat, while in later developments raised or embossed figures have entered largely into the design, especially for mural and frieze ornamentation. The aesthetic idea was generally modified to represent the character, the predilections, and the policy of the reigning monarch of the period. Warriors in complete armor, hunting, feasting, and religious devotions diversified the illustrative scenes. The artistic perceptions, though not always correct, have been generally free from the blemishes and luxurious depravity which have defaced other domains of art.

In the superiority of materials, in the delicacy of design, in the beauty of coloring and perfection of finish, nothing has, perhaps, equalled the work of the thirteenth, fourteenth and fifteenth centuries of the Christian era. The tiles produced during this period were generally devoted to the decoration of mosques, holy places, shrines and tombs of saints of the Mohammedan faith.

The centre is composed of flowers or geometrical figures, and the border consists of written passages from the Koran. A golden tint pervades the whole surface, sometimes united with a shade of blue, giving to the design a peculiar softness and charm. The materials and the method of producing this characteristic are now unknown, and hitherto no attempt to reproduce it has been successful, either in Persia or Europe. One tile manufacturer in Teheran, after experimenting for many years, seems to be on the path of success.

How this beautiful art was lost to the world is a question often asked, but without eliciting any satisfactory answer. It is, however, generally known that certain departments of art workmanship were in former times confined to small communities, and not infrequently to the members and branches of one family, who looked upon themselves as close guilds and the possessors of special secrets, rights and privileges. This gave them profitable advantages, but it exposed their craft to absolute extinction. It is therefore not unreasonable to conclude that either by famine, pestilence, the sword or exile the art and the artist perished forever. Twenty years ago examples of this work could be bought for a trifling sum, but at the present time the finer specimens command ridiculously high prices.

It should be noted that vessels of household use, especially vases, ewers, basins and dishes, were made of the same materials, with the same glow and tint of coloring, but, being more delicate in texture and more fragile in form, very few examples remain.

At the present time two classes of tiles are made, the plain and the pictorial,—the former in a variety of shades for flooring, and the latter chiefly for mural decorations. As a general rule, tiled floors consist of alternate white and colored rows, though some are

laid in composite designs. The masonry of the gates of Teheran, the domes of mosques and shrines, and some public buildings are overlaid with variegated tiles in arabesque or mosaic designs. The effect is graceful, though decidedly oriental. The thickness of the tile varies from two-thirds of an inch to three inches. Those used on the outside of buildings are the thickest.

The material used in the composition of the groundwork consists of nine-tenths of pulverized quartz to one-tenth of strongly-adhesive clay, and the glazing is compounded of flint and potash. All the minerals used in the manufacture of tiles and porcelain for groundwork, glazing and coloring are found in the country.

With our preconceived notions of complicated manufacturing processes, it is difficult to imagine that the most beautiful carpets in the world are the product of the gypsy's tent; or that the glowing surface of the ornamental tile can have received its shape, color and hardening in a mud hut, with no more machinery than a pestle and mortar and an ordinary knife. In such surroundings, organized-labor troubles have not much scope for operation.

No sanitary laws exist for the regulation of workshops, or even a general inspection of the conditions of living and habitation. In this respect every man is a law to himself.

No insurance society has so far been organized in Persia, either for life or property, though some English companies insure goods in transit in the interior, and a Dutch agency is trying to introduce the system of life insurance.

The social conditions and religious prejudices and restrictions prohibit to a very large extent the employment of female labor in factories or workshops. Carpet-weaving seems to be the only industry in which their services are utilized.

The Persian Government gives no encouragement and lends no aid to native industries beyond being a purchaser of the goods produced. A little help in reviving old arts and supporting modern ones would benefit a large section of the population and give an impetus to the exercise of artistic and mechanical skill.

The tile will continue to be used as a covering and ornament for the domes, cupolas and minarets, both inside and outside of mosques and other sacred buildings, but for houses and public buildings it seems to be gradually falling out of the taste and fashion of the times and giving way to simpler and cheaper materials. For durability it is superior to anything now in use, but the cement by which it is attached to the masonry lacks the proper adhesive qualities, and it often separates and falls away.

The tile business of Persia is very humble and simple. The most extensive is carried on, from pulverizing the quartz to putting the finished article on the market, by the proprietor, his son, and four helpers. Under such industrial conditions not much room is left for the contractor and sub-contractor, and yet I believe such divisions are not unusual.

It is difficult to give an estimate of the prices of tiles, for the variety of shape, ornament and size seem to almost equal the number of tiles produced, and each has a different price. But as a formula to include all, it may be stated that floors, dados, borders, window-seats, etc., can be fitted up from \$3 to \$15 per square yard.

Hitherto the foreign demand for this product has been comparatively small. Orders have been executed for London and Paris. The heavy cost of transport is the chief hindrance to the export trade. So long as the camel, the mule and the ass are the only freight vehicles, Persian industries will labor under great disadvantages. The rates for carriage are for tiles the same as for every species of merchandise, viz.: from eight to twelve cents a ton per mile, which means from Teheran to Bushire, exclusive of customs and commission, \$80.

The free and untrammelled adoption by Persia of improved methods of transport and communication, and the development of the resources of the country, are being greatly impeded by monopolies, concessions and conventions, which, instead of infusing new life into native industries and utilizing natural products so as to give increased employment to the population, either cause industries to lapse into a state of decrepitude or inanity, or are used as instruments to foster the processes of decay.

When Persia can shake herself free from these shackles of foreign drags and interference, and give freedom, instruction and help to native enterprises, then and not till then may she hope to take her place as one of the producing nations of the world.

The principal ornamental-tile makers of Teheran may be addressed as follows:

Ustad Ali Mohammad, Hassanabad.

Seyd Habib, Kāshi-paz, Khiaban-i-Ala-ed-Dowlah.

Mosaic work, as understood among us, does not exist in Persia.

JOHN TYLER, U. S. Vice-Consul-General.

TEHERAN, May 8, 1899.

PRINCIPAL MIHRAB OF THE JAMI MASJID, FATEHPUR SIKRI.



THE Jami Masjid at Fatehpur Sikri is the largest and one of the finest buildings in the city. Exclusive of the bastions upon the angles, the building measures 542 feet from east to west to the outside of the *liwān* or sanctuary, or 515 feet 3 inches to the outside of the west main wall and 438 feet from north to south. The general plan chosen by Muhammadans for their mosques has been adhered to.

In the middle is a large open court, measuring 359 feet 10 inches by 438 feet 9 inches, surrounded on the north, south and east sides by spacious cloisters, 39 feet in depth, and on the west by the *liwān* itself, 288 feet 2 inches in length by 65 feet deep. It was erected in A. D. 1571.

On the north, south, and east sides of the quadrangle are large gates. That on the south, the Buland Darwaza, is the largest. It was erected towards the close of Akbar's reign to commemorate his victory over the Dakhan, and in all likelihood replaced another gate designed more in accordance with those on the east and north sides of the courtyard. The Buland Darwaza is the highest and grandest gateway in India, and ranks among the biggest in the world. It stands on rising ground, and this adds considerably to its majesty. In height it is some 134 feet, measured from the pavement in front of the entrance, or, if to the bottom of the steps approaching it, 176 feet. In width the gate is 130 feet across the front. It is built in the form of a semi-octagonal bay. In the centre is an embowed porch or portico, in which are three portals leading to the masjid quadrangle. The centre one is larger than the others, and forms the principal entrance. The others are smaller, and lead into rooms built in the sides of the portico. The smaller entrances are oblong in shape, and are enclosed by architraves in stone and marble. The head of the door is closed by two stone brackets, 2 feet 1 inch high, 2 feet 7 inches in length.

On the under side, the brackets are cut into three tiers or steps, and beneath the lower and upper tiers diminutive carved brackets are introduced, while, under the middle, there is a circular pendant, enriched with leafage, beading, etc., with a square cap. The front face of the bracket is divided into six panels. Those nearest the architrave are filled-in with carved-leaf ornamentation in relief, while the others are occupied with crosses of leaves contained within foliated figures raised from the flat surface of the panel.

The lintels over the doors are supported by the brackets and are divided into nine small panels filled with leaf-carving. These are the only doorway-brackets in Fatehpur Sikri treated in this manner, the front surface generally being quite plain, as in Jodh Bai's palace, or ornamented with a mass of carving, as seen in Bir Bai's house.

We have taken our illustration from the Technical Art Series, to which also we are indebted for our descriptive letter-press.

The plate is an elevation of the principal *mihrāb*. The principal *mihrāb*, as the illustration shows, is surrounded by a broad rectangular architrave starting from a flat geometrically-carved base, painted a deep blue, and sculptured with verses from the Qurān, in raised Arabic characters overlaid in gold. Beneath the transverse head of the architrave is a four-centred and stilted arch delicately carved on the face with a rich undulating scroll in relief, between two narrow hexagonal-shaped mouldings, ornamented with the chevron, springing from balusters resting upon the impost, which are painted with floral-scrolls in white, red, and blue upon a chocolate ground. Around the soffit of the arch is a delicately-carved cusping, springing from pretty brackets just above the impost.

The space beneath the arch and the spandrels above are embellished with rich floral designs in color. In the centre of the spandrels are carved-leaf bosses overlaid with gilt. Beneath the big arch is a pentagonal-shaped aperture half domed over on the top, and recessed 4 feet 3 inches from the outer surface of the wall. Across the upper portion of the aperture is an archway supported on brackets standing on semi-octagonal shafts upon the jambs of the openings. The front of the arch is enriched with scroll-carving, and the spandrels with bold leaf-carved paterae surrounded by a field of raised quatrefoils overlaid with gold on a dark-blue ground. Confining the sides of the spandrels is a rectangular border carved with a raised chain-pattern and flowers. Enclosing the whole is a geometrically-carved architrave in red sandstone, inlaid with white-and-black marble. — *Indian Engineering.*

BOOKS AND PAPERS

WE have only one fault to find with Mr. Maginnis's charming little book¹; it is too small. In the first place, the knowledge and earnestness that he puts into his teaching of a very difficult art deserve more space than he gives them; and, in the second place, architectural draughtsmen, whose perspective sketches must usually be on a large scale, would be glad of some examples of work on something the same scale. However, what we have is so good that it is hardly reasonable to ask for more, and, perhaps, in a second edition, intended particularly for architects, we may have more ample pages, with, possibly, the substitution of work strictly concerned with architecture or landscape, for which there is plenty of available material, for the Gibson heads and the poster cuts, which, while they have interest for illustrators, are less useful to the draughtsman in an office than other examples that might be given.

Mr. Maginnis begins with some practical directions to the draughtsman in regard to the ink and pens to be used, and the method of stretching paper, and these are followed later by suggestions in regard to composition and values, and technical effects of rendering,

¹ "Pen Drawing," an illustrated treatise. By Charles D. Maginnis. Boston: Bates & Guild Co. \$1.50.

which are admirable in every way, and are not less valuable on account of the emphasis with which he insists upon the necessity for sketching from nature, as the basis of an effective individual style. His points are illustrated by reproductions of pen drawings, very carefully selected, by Lalanne, Pennell, Gibson, Railton, Vierge, Rico and others. Perhaps Norman Shaw, Samuel Prout and Ernest George might have been added to the list with advantage, and some valuable suggestions might certainly have been obtained from Turner and Albert Dürer, but students will be able to extend their knowledge almost indefinitely in such directions as they choose. It is interesting to notice that the painters such as Raffaelli, Rico and Lalanne show in their drawings, as a rule, the best understanding of composition, concentration of interest, and effects of light and shade; while those who are etchers also, like Lalanne, are conspicuous in what Mr. Maginnis calls "economy of means." A Whistler etching would have given an example of this, even more forcible than the Lalanne drawing which is reproduced, but the Lalanne sketch has the advantage of showing a building which is rendered with a delicacy and architectural feeling unknown in Whistler's works.

It would, however, be an endless task to suggest all the additional illustrations with which the book might have been enriched, and to try to do so would be ungrateful to the author, who, feeling himself obliged to keep his book small and inexpensive, made from the available material a selection which deserves nothing but praise.



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

SKETCHES FOR A HOUSE AT MANCHESTER, MASS. MR. C. H. BLACKALL, ARCHITECT, BOSTON, MASS.

HOUSE OF L. D. DREWRY, ESQ., CINCINNATI, O. MESSRS. ELZNER & ANDERSON, ARCHITECTS, CINCINNATI, O.

INTERIORS IN THE SAME HOUSE.

TOMB OF BENEDETTO SUPERANZIO, IN THE CHURCH OF STA. MARIA SOPRA MINERVA, ROME, ITALY.

This and the following illustration are copied from Giacomo Fontana's "Raccolta delle migliori Chiese di Roma e Suburbane."

TOMB OF BISHOP BOCCACCIO, IN STA. MARIA DELLE PACE, ROME, ITALY.

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

PRINCIPAL MIHRAB [THE NICHE MARKING THE DIRECTION OF MECCA] OF THE JAMI MASJID, FATEHPUR SIKRI, INDIA.

For description, see article elsewhere in this issue, which, with this plate, is copied from *Indian Engineering*.

[Additional illustrations in the International Edition.]

WEST FRONT OF THE FREE MUSEUM OF SCIENCE AND ART, UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA, PA. MESSRS. COPE & STEWARDSON, WILSON EYRE, JR., AND FRANK MILES DAY & BROTHER, ASSOCIATED ARCHITECTS, PHILADELPHIA, PA.

[Gelatine Print.]

COURTYARD OF THE SAME.

[Gelatine Print.]

MAIN ENTRANCE OF THE SAME.

[Gelatine Print.]

ENTRANCE TO THE PALACE OF JUSTICE, MUNICH, BAVARIA. HERR FRIEDRICH THIERSCH, ARCHITECT.

[Gelatine Print.]

HOTEL DE L'EUROPE, LEICESTER SQUARE, LONDON, ENG. MR. WALTER EMDEN, ARCHITECT.

DESIGN FOR CARTWRIGHT MEMORIAL HALL, BRADFORD, ENG. MESSRS. H. & E. MARTEN, ARCHITECTS.

NOTES AND CLIPPINGS

DRIFTWOOD ON THE ALASKA COAST.—One of the greatest curiosities noted by travellers in Alaska is the wonderful haven of driftwood on the coast between Yakutat and Kyak Islands, some twelve hundred or fifteen hundred miles northwest from Seattle. The constant deposit of logs and driftwood in this particular spot, which has been going on for hundreds, perhaps thousands, of years, is due to the phenomena of the tides, the Pacific Gulf Stream, the mysterious ocean-currents and peculiar formation of the shore-lines at that point. Logs and timbers are readily identified there as having come from Japan, China, India, and other parts of Asia, as well as from California, Washington, and other parts of the American continent. There are fine logs of the camphor-tree, the mahogany, the redwood, and the pine in this driftage. Some of those from the State of Washington bear the names of the men who felled the trees and of the saw-mills for which they were destined but never reached. Logs 8 feet in diameter are in this novel woodyard, and some entire trees 150 feet long are there, uplifted by the roots, cast into the sea by some terrible tempest, and sent floating around the world. Often persons on the beach descried big trees floating shoreward, with fantastic roots above the waves. One beach after another has been formed by the floating timbers, and a little distance back from the shore the deposits are so old that the wood in some places is petrified, while a little deeper in the earth it has turned into coal. The newer logs are without bark and as hard as stone, due, it is thought, to their long immersion in salt-water. They have all taken on a whitish appearance. In places the timbers are piled 20 feet high; at other points they rise to a height of only 4 or 5 feet. Under this wonderful beach are found large quantities of dark, ruby sand, rich in fine particles of gold, for the separation of which no successful process has yet been discovered.—*Chicago Times-Herald*.

EXAMINATION FOR ARCHITECTS.—The recent decision of the American Institute of Architects to enlarge its membership only through the examination of applicants makes of interest the following statement concerning the last R. I. B. A. examinations: Intermediate examinations of candidates for registration as student R. I. B. A. were, it was reported, held simultaneously in London, Birmingham, Bristol, Manchester and York on the 7th, 8th and 9th of November, 1899. In all 65 candidates were examined, with the following results:—

	Examined.	Passed.	Relegated.
London.....	40	22	18
Birmingham.....	5	4	1
Bristol.....	3	0	3
Manchester.....	10	5	5
York.....	7	4	3
	65	35	30

Preliminary examinations, qualifying for registration as Probationer R. I. B. A., were held simultaneously in London, Birmingham, Bristol, Cardiff, Dublin, Manchester and York, on the 7th and 8th of November, 1899. Of the 154 candidates admitted, claims for exemption from sitting were allowed to the number of 34. The remaining 120 were examined, with the following results:—

	Examined.	Passed.	Relegated.
London.....	70	33	37
Birmingham.....	7	4	3
Bristol.....	7	4	3
Cardiff.....	7	3	4
Dublin.....	2	1	1
Manchester.....	14	8	6
York.....	13	10	3
	120	63	57

The successful candidates, together with those exempted, make a total of 97 newly-registered probationers.—*The Architect and Contract Reporter*.

A PILE-DRIVING TEST.—At a test made at New Quay, Royal Victoria Dock, London, early in last year, it was found that as the work went east the strata became softer, piles going 2 inches to four 8-foot blows of an 18-cwt monkey at 36 feet and 38 feet in the ground, against 5.5 inches and 1 inch per four blows farther west. Wishing to determine accurately the safe load and the greatest resistance, as formulas on pile-driving vary considerably, the engineer decided to make a test. One of the worst piles, a pile going 2½ inches to four 8-foot blows, when driving was stopped, was accordingly loaded with steel joists 14' x 6', 56.8 pounds to the foot. The pile was 37 feet long, pitch pine, 12½' x 11½', 36.8 cubic feet, there being 36.1 feet below the cut-off mark. The sectional area was 143.75 square inches, and the weight of monkey 18 cwt. A few pieces of timber were placed under the ends of the joists to support them during the process of loading, but these pieces were never allowed to become tight, the whole load being supported at the centre by the pile under test. A small indicator was arranged just above the level of the ground to record the deflection:—

At 10 tons.	No deflection.	Remained thus 24 hours.
" 20 "	1-16 inch.	" " 48 "
" 30 "	1-16 "	" " 0 "
" 37.5 "	3-16 "	" " 7 days.
" 56.9 "	1-4 "	" " 4 weeks.

At the end of this time there was no further deflection. On the load being removed the pile rose $\frac{3}{16}$ inch, showing that a great deal of the deflection was due to the fibres of the timber being put in compression.—*Engineering*.

FREEZING A FLOODED MINE.—The Belle Isle Salt Company, operating at Belle Isle, in Iberia parish, La., and owned almost entirely by New York capitalists, has decided to make a desperate effort to recover \$400,000 expended on machinery and sinking shafts in the salt-mine, all of which is apparently lost by striking a spring which has flooded the mine to the mouth. The stockholders have raised \$32,000, which will be expended in freezing the water in the mine into a mass of ice, which will then be excavated. "This, it is expected, will permit of the closing and damming of the spring which has flooded the mine, before it can do any additional injury. The sinking of the shaft disclosed a deposit of fine rock-salt, which is very valuable, if flooding can be prevented."—*Tire and Water.*

A PERMANENT PONTOON-BRIDGE.—Owing to the frequent settlement of the land in the salt-districts it has always been found a difficult matter to maintain in proper order bridges and other similar structures. To meet this difficulty the engineer of the Weaver Navigation, in constructing two swing-bridges over the river at Northwich, has so designed these that instead of resting on the land the weight of the bridges is carried on steel pontoons floating in the water, and the bridges are therefore independent of any settlement of the land so far as their foundations are concerned, and they are so built as to be easily adjusted to any settlement of the ground at the two ends. These bridges are also opened and closed by electric power, being the first to be so operated in this country. The two bridges have cost £25,000.—*Nature.*

AN INGENIOUS CANADIAN BRIDGE.—A unique feat of engineering is described by an exchange as having been accomplished in the bridging of a narrow strait connecting Canso Harbor and Chedabucto Bay, in Nova Scotia. The place is known as the "Tittle," and the difficult problem presented was the construction of a bridge that would not obstruct navigation nor require the expense of erecting a drawbridge and employing the services of a tender. The manner of getting around the difficulty is thus described: The bridge is built upon stone-ballasted piers and in the middle of the central span a clear-cut of about eighteen inches in width crosses the whole superstructure. The boats that use the "Tittle" are fishing-smacks, with pole-masts and without shrouds or other side-rigging. Consequently they have only to be steered so as to bring their masts in line with the opening in the bridge, when they readily are poled and pushed through. The spreaders at the opening prevent the flapping sails catching and tearing. Traffic is much greater by water than by land. When the infrequent vehicle wishes to pass, a hinged board across the width of the bridge is raised up and covers the small chasm. As soon as the wagon has gone over this the driver is expected to throw back the hinged board.—*Railway Age.*

MANSIONS OF GENOA.—In the Via Balbi, the Strada Nuova, the streets of palaces, some half-dozen of those vast mansions on either side are quite enough to form a street; and as you pause at door after door of the six, you look in upon a splendid vista of arches and columns, perhaps enclosing a green nest of orange trees, or widening into a magnificent court, from the ample marble sides of which rise the staircases which lead to the house. Then, though they are alike, there is a variety in each: one springs upwards on graceful marble columns to a domed roof, and beyond throws only some three or four broad low steps between you and the orange-garden, against the fresh green of which the pillars shine. Another reveals to you its miniature quadrangle, cloistered round at the top of a short but princely staircase, down which on either side a pair of gigantic lions have been rushing, when some sudden spell arrested their course and fixed them there. Next door the prospect widens, and one court draws itself out within another, with perhaps a gallery and grand balustrade behind, from which the inmates, cool in the shadow of their own lofty roof, could hear their fountain trickle as it played. Whosoever would see the fountain, if it chanced to be a work of note, or would examine the frescos if there happen to be any about hiding among the columns, or would simply look at a kind of architecture so liberal and princely, may enter as he will; and if there is a collection of pictures above, which is exceedingly probable, is free to penetrate into the salons without either fee to pay or warrant of respectability to offer. These open courts and columns are a somewhat handsomer way of withdrawing oneself from the street than by building a dead brick-wall between the thoroughfare and one's gentility; and it is these princely entrances which gain for Genoa her distinction of "La superba." The buildings themselves are no doubt grand and imposing, but in this is the characteristic and remarkable feature.—*The Architect.*

THE PROJECTED NEW FRONT FOR MILAN CATHEDRAL.—The Cathedral of Milan has one façade, dating from the sixteenth and seventeenth centuries, which has been declared by some to be out of accord with the rest of the building, and, therefore, offending. A worthy citizen of Milan who held this opinion died in 1884 and bequeathed about four hundred thousand lire towards the building of a new façade, but he attached the proviso that the work should be commenced within twenty years of his death. A competition was held, in which architects from all parts took part, but it proved unsatisfactory and, as the result of a second competition, the designs of a young Italian architect named G. Brentano were accepted in 1888. It appears that an attempt was made to begin the work at once, but the architect died suddenly, and this upset matters to such an extent that nothing has been done since, and as there only remain a few years of the stipulated limit of twenty, the cathedral authorities are beginning to feel anxious about their restoration, especially as it has been found that the legacy will not nearly cover the expenditure entailed. The artists of Milan, supported by many of the newspapers, are all against having the old façade touched, which, out of keeping or not, is a fine piece of work. This view of the case has no more zealous supporter than the eminent architect Signor G. Beltrami. He says: "This great monument, which oc-

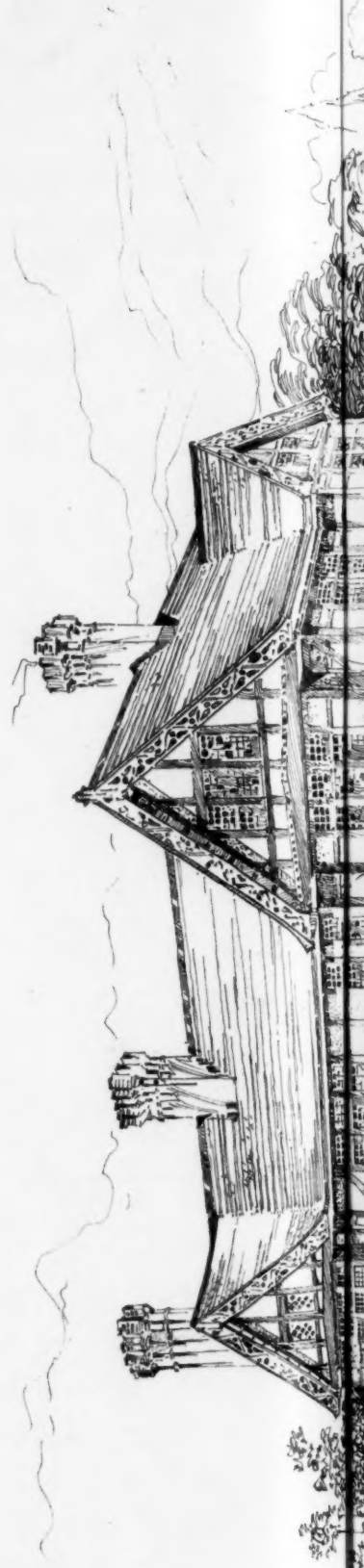
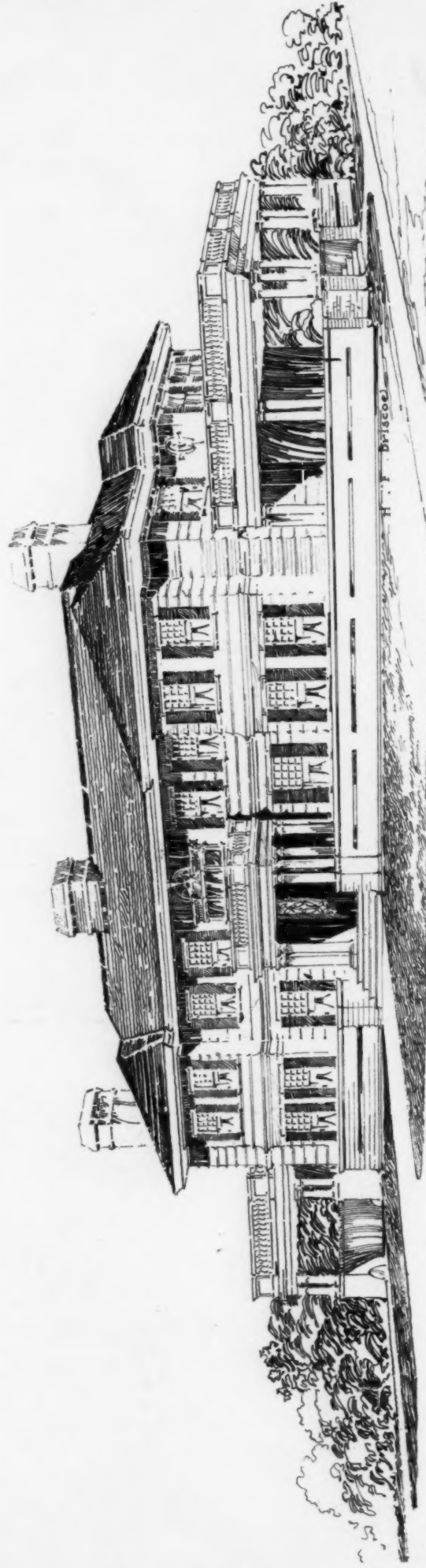
cupied many centuries in building, bears the stamp of various ages, shows traces of all the generations which in succession bestowed their labor on it. Each epoch has contributed its share, for good or ill, until our Duomo has become, so to speak, the visible record of the arts throughout the centuries. Unpardonable, therefore, would it be to lay a desecrating hand upon it, or to attempt to modify it with the object of arriving at that unity of style which it cannot possibly possess. Moreover, as the façade now exists, so we have always seen it, so we have learned to love it, with all its beauties, all its faults. Time has laid a coloring hand upon its stones, and clothed them with that mysterious harmony which no human skill can replace or imitate, should this contemplated crime ever be committed." Presuming this to be a fair view of the case, we certainly agree that the substitution of a new façade would be a gross act of vandalism, and in this age of "restorations" the cry of "hands off" the old buildings needs to be taken to heart by all concerned, for too often the hand that touches mars and withdraws forever the charm and beauty which Time alone can give.—*The Builders' Journal.*

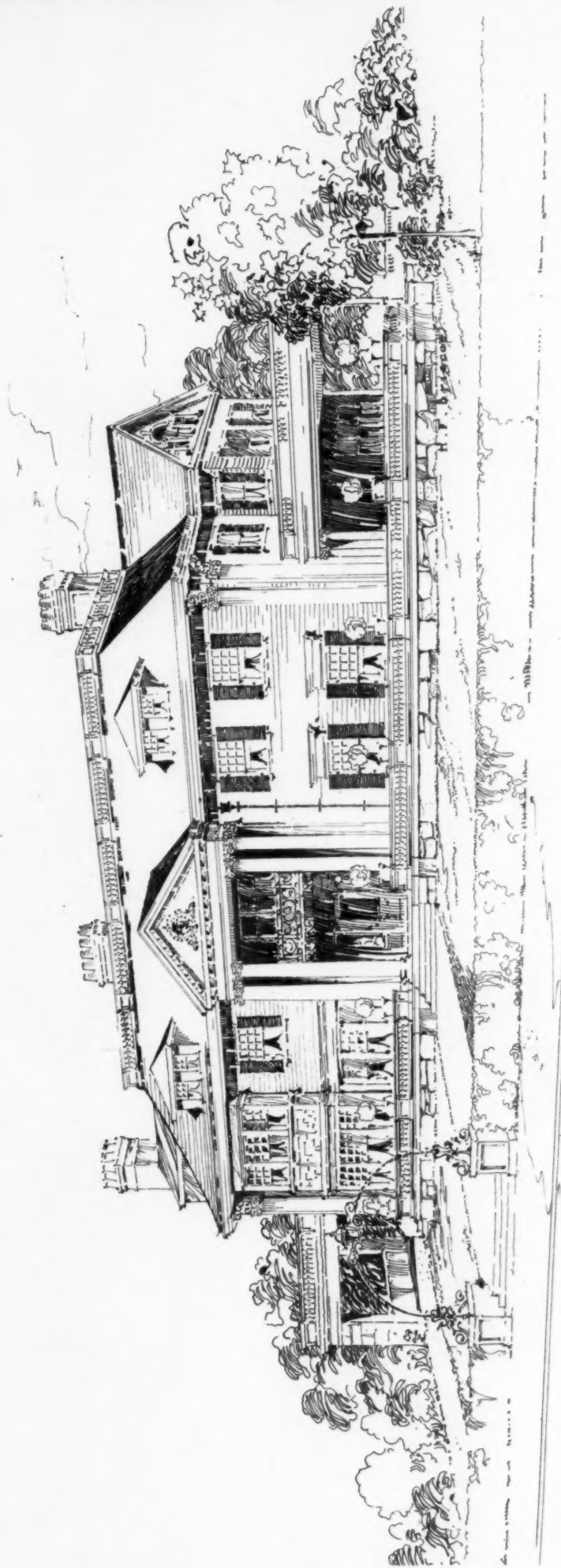
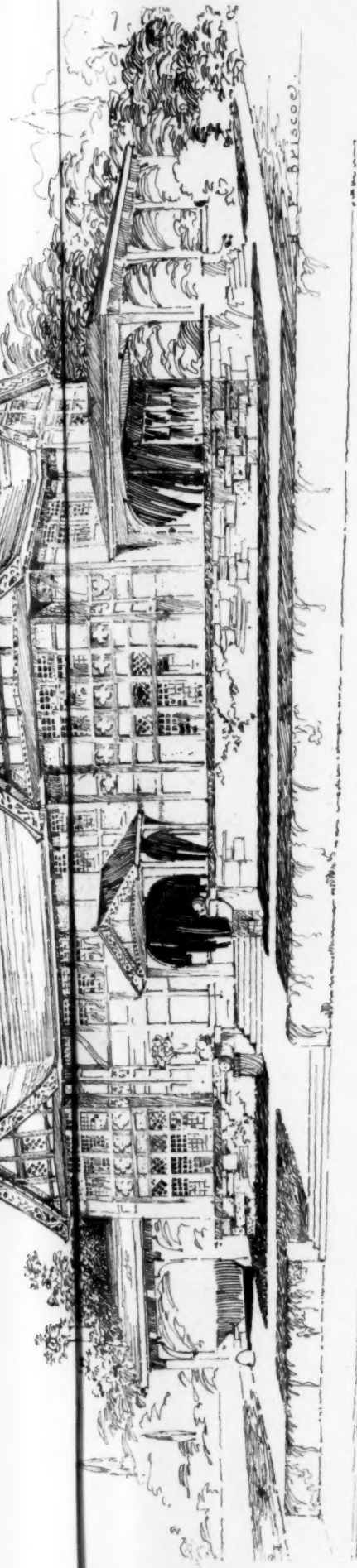
DEATH OF M. PAUL SEDILLE, ARCHITECT.—Among the French architects of our time there was not one who was more kindly disposed towards English work than Paul Sedille. It is, therefore, with much regret we announce that he has passed from life at his house in the Boulevard Malesherbes in his sixty-third year. It was impossible to be in M. Sedille's company for a short time without feeling exhilaration from his joyous spirits. About his ability all were agreed, and clients were glad to make use of his services. He appeared to be recognized as the successor of Charles Garnier. Although not so much of the "gamin de Paris" as his friend, he was a companion whose society all artists could enjoy, and he was eager to employ as many arts as possible in his buildings. He was an enthusiast for color, and the *Printemps* suggests his skill in that respect, as well as his courage in not concealing his employment of metallic construction. In the Exhibition of 1889 he was entrusted with designing the building for the liberal arts. Among his numerous works is the church at Domrémy, which is a memorial of Joan of Arc. Some years ago he wrote interesting essays on English architecture in the *Gazette des Beaux-Arts*, and in reply to some criticism of those shortcomings which were inevitable in the work of a stranger, he sent us a good-humored remonstrance on our severity. He held a prominent place among French architects, and was always ready to defend the interests of his profession. From a man with so much vitality much remarkable work was to be anticipated, but death has put an end to his own and his friends' hopes.—*The Architect.*

THE WASTEFUL "CHRISTMAS-TREE."—There are divergent views on the alleged injury done by the cutting of young firs to serve as Christmas-trees or for other decorative purposes. J. Sterling Morton, ex-Secretary of Agriculture, started the discussion years ago, and at each recurring Christmas has voiced his plea for the evergreens. One argument made by the *St. Joseph News* is that in the land where the fir-trees grow, they shoot up so thickly that when a large part of them are cut down those remaining are vastly improved. "Nature," this editor says, "is so bountiful in this provision that a hundred times the number of trees cut for the children could be spared without endangering the future forests in such localities." To this Mr. Morton replies in his Nebraska paper, the *Conservative*, that Nature can attend to the business of thinning out the pine and fir forests better than man can. As the trees grow and shut out the light from the lower limbs, the latter drop off, and thus the process continues until in the survival of the fittest the lumberman finds the trees from which he can saw the knotless boards. The facts fortify Mr. Morton's position. Forests which have not experienced man's "thinning out" for Christmas decoration produce unequalled specimens of the long and straight conifers.—*N. Y. Evening Post.*

AN ELECTRIC SMOKE-ALARM.—A patent has been issued to Mr. Henry C. Baer, of New York, describing an invention having for its object the giving of an audible alarm through the agency of smoke or non-flame-supporting gases such as are ordinarily generated by fire. The device is based upon the principle that a flame of gas or other combustible material is only supported when supplied with a definite amount of oxygen. This principle is utilized by causing the flame to act upon a thermostatic bar included in the electrical circuit with an electric alarm of any well-known form, the circuit being normally open so long as the flame continues, and the arrangement being such that when the flame is extinguished, the circuit will be closed, thereby causing an alarm to be sounded at any desired point. The apparatus consists of a perforated casing containing a gas-flame, supplying heat to a thermostatic bar. Should an abnormal condition take place in the surrounding atmosphere such as is attributable to the presence of smoke, the smoke will be drawn into the casing, the flame will be extinguished from lack of oxygen to support combustion, and the thermostatic bar becoming cooled will close the circuit and sound an alarm.—*Exchange.*

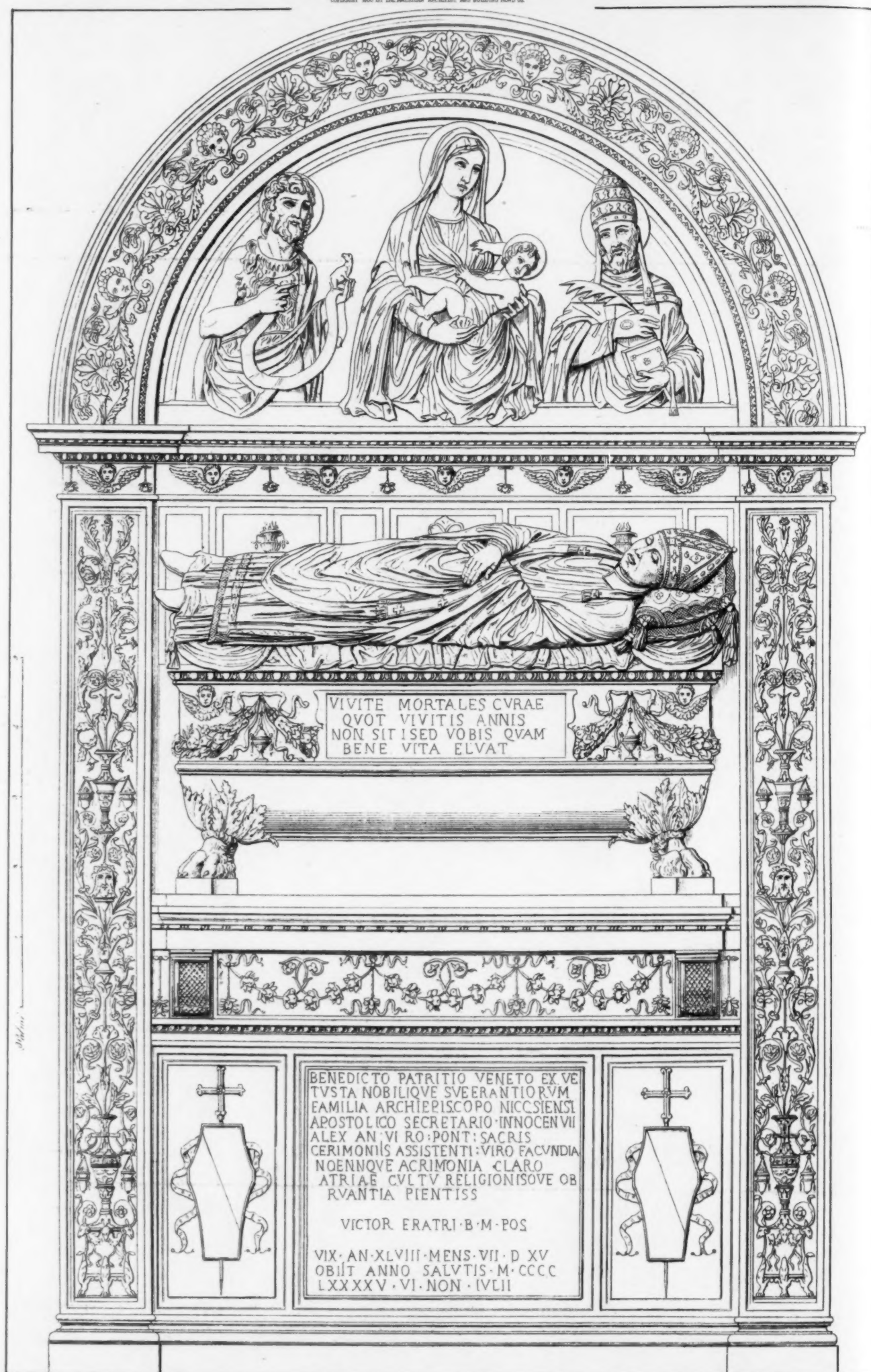
THE MONUMENTS OF BERLIN.—According to the *Berlin Börsen-Courier*, the capital of Germany is the most "monumental" city in the world, boasting of no fewer than sixty-three such memorials. As soon as the "Siegesallee" is completed and other monuments now projected are a reality, the "Athens of the Spree" will be able to boast of at least one hundred. The *Rundschau* adds that this is a little too much of a good thing, as the why and wherefore of not a few of these monuments is not exactly apparent. It is noticeable that, in this centre of the greatest military state of the age, the number of civilians who have thus been honored exceeds the number of military men, there being only twenty-nine of the latter represented, as against thirty-four of the former.



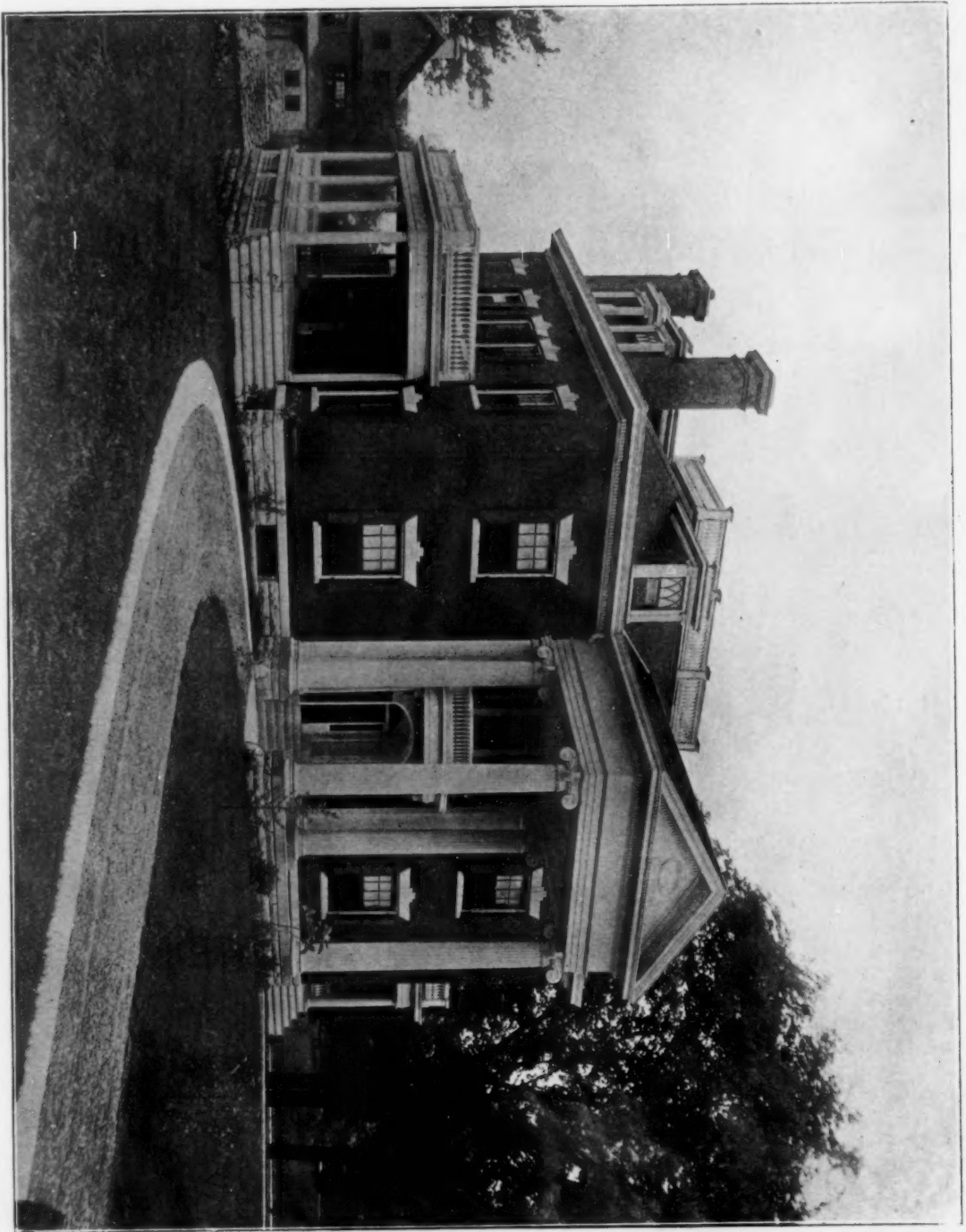


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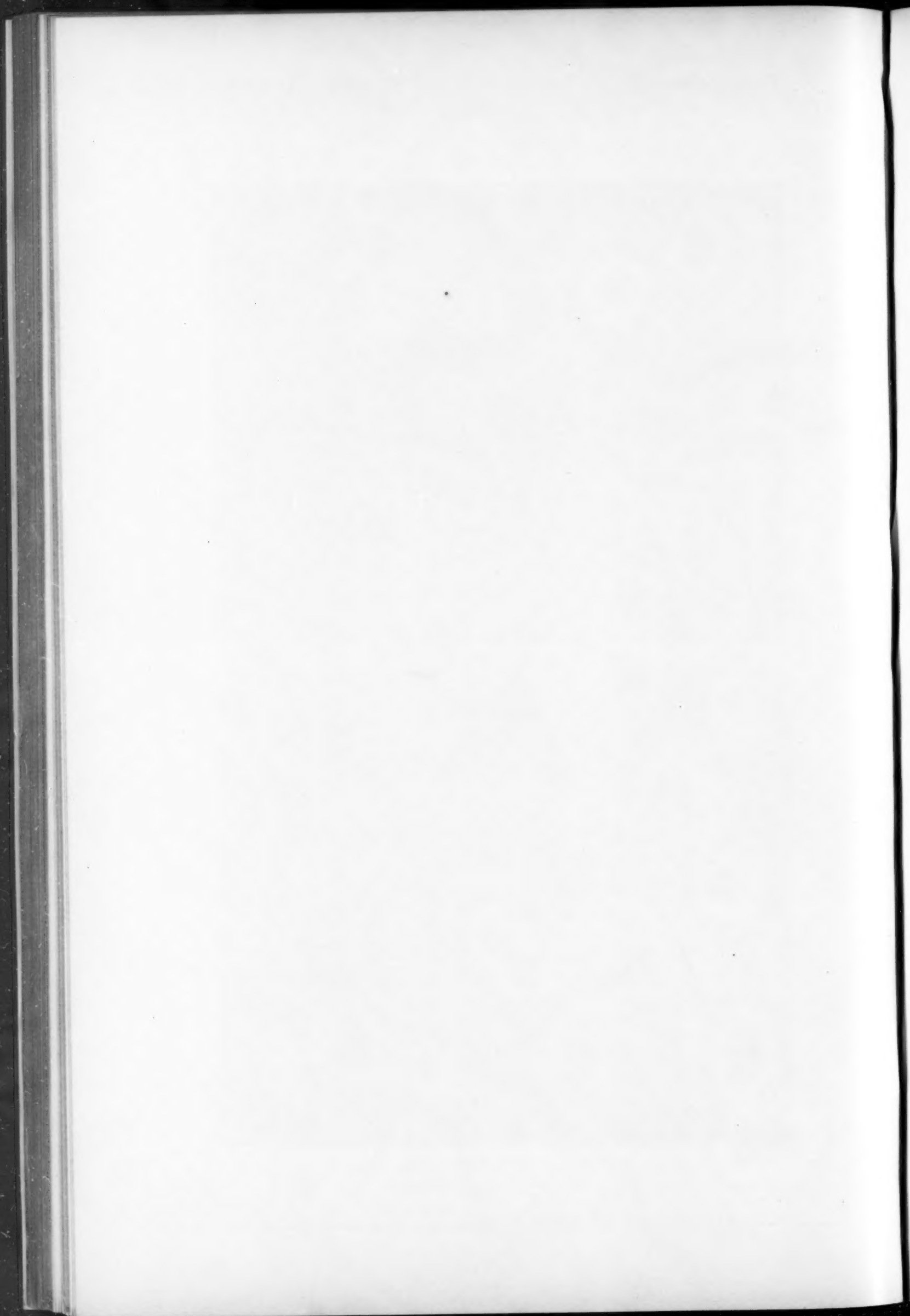
TOMB OF BENEDETTO SUPERANZIO. BISHOP OF NICOSIA, IN THE CHURCH OF STA. MARIA SOPRA MINERVA, ROME.

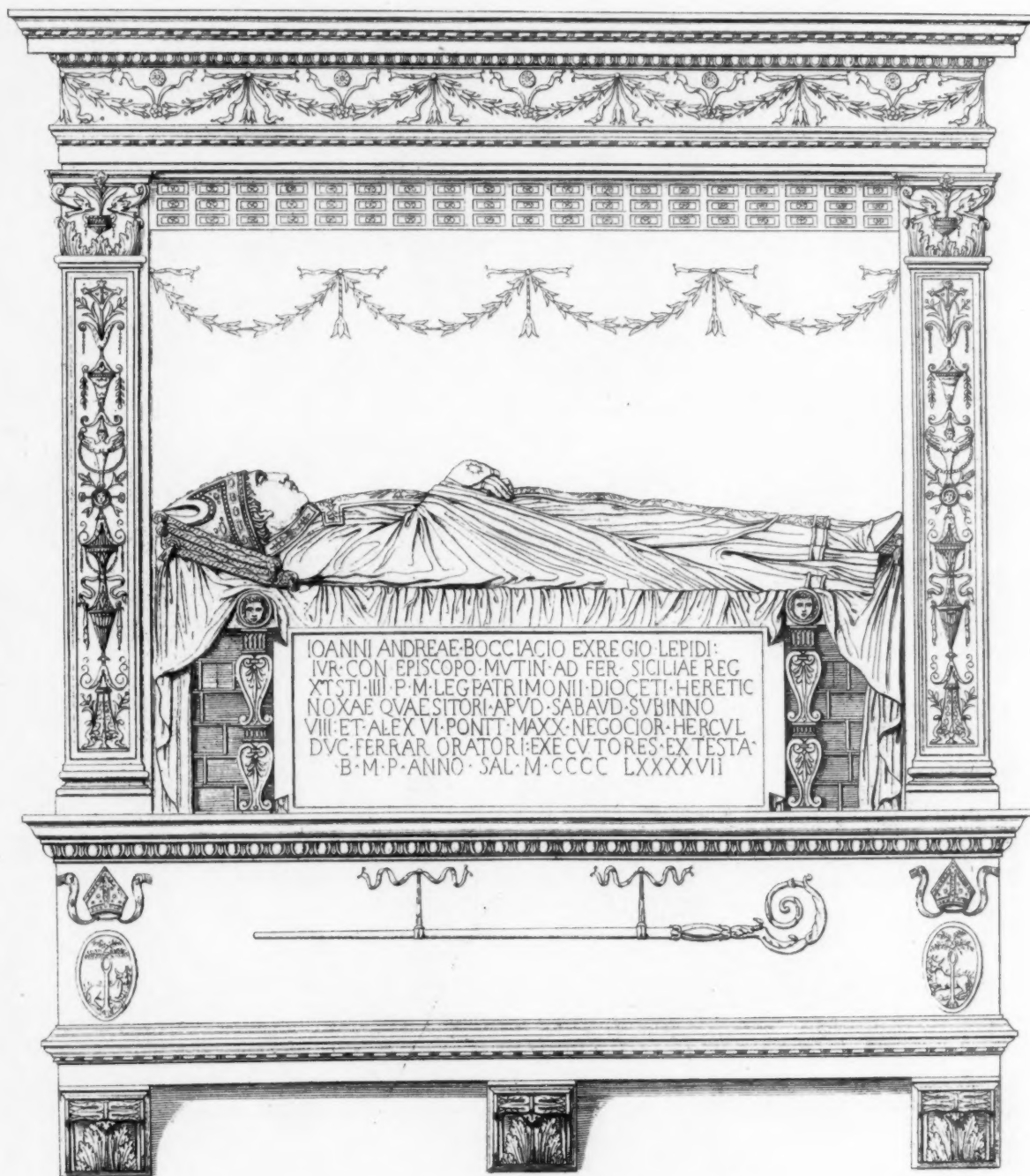


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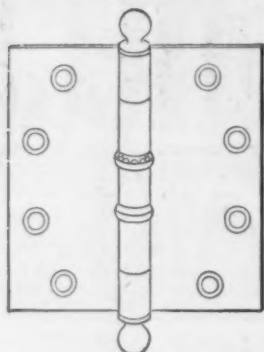
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" ".....	5 50	8 00	6 50
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Pine.....	14 00	16 00	25 00
Spruce.....	12 00	16 00	15 00
Hemlock.....	18 00	21 00	14 00
Yellow pine.....			22 50
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Pine..... Round Wood		2 25	2 50
Spruce..... Slab.....	3 50	3 75	3 25
Shingles:			
Pine, shaved..... P M.....	5 00	6 00	
Pine, sawed..... ".....	4 00	5 00	
Spruce, sawed..... ".....	1 50	2 00	
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Cedar sawed..... ".....			
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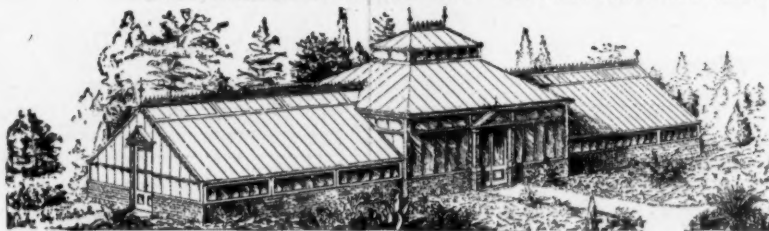
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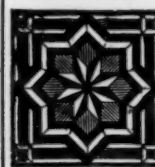
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Regular Edition, \$6.00 per year; six months, \$3.50
International Edition, per year in advance, 16.00
" " quarterly " 18.00

[Foreign Postage, \$2.00 Extra.]

Payment should be made to American Architect and Building News Co. direct, either by draft or post-office order.

Address all business correspondence to the publishers direct.

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New Advertisements.

FRANK A. SEIFERT (St. Louis, Mo.), Plastic Relief Ornaments. Page ix.
JOHN MAXWELL & CO. (Philadelphia, Pa.), Gypsum Water Paint. Page xi.
THE ELECTRIC STORAGE BATTERY CO. (Philadelphia, Pa.), Chloride Accumulator. Page iii.
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641,357. FOLDING-HATCH ATTACHMENT.—Edwin E. Augell, Somerville, Mass.

BUILDING INTELLIGENCE.

(Reported for The American Architect and Building News.)

[Although a large portion of the building intelligence is provided by their regular correspondents, the editors greatly desire to receive voluntary information, especially from the smaller and outlying towns.]

ADVANCE RUMORS.

Allegheny, Pa.—It is stated that the Standard Ice Co. are having plans prepared for a large cold-storage plant, to cost about \$350,000.
Belmont, Mass.—L. C. Coss, of Cohasset, will build an \$18,000 residence after plans prepared by E. R. B. Chapman, Boston.
Braintree, Mass.—An appropriation of \$25,000 has been made to remodel the municipal electric-light plant.
Brazil, Ind.—The directors of the M. E. Church, it is said, will erect a new edifice to cost about \$30,000.
Brookline, Mass.—E. M. Wakefield, Boston, has prepared plans for a two-and-one-half story house to be built on Clark Road for Horace W. Fuller; cost, \$10,000.
Buffalo, N. Y.—The Lehigh Valley Railroad will build a one-story frame freight-house, 53' x 520', on Diggins St.; cost, about \$17,000.
It is stated that John J. Albright has offered to build in Delaware Park a marble building for the Buffalo Fine Arts Academy, to cost about \$300,000.
Canton, O.—Geo. F. Hammond, of Cleveland, has prepared plans for a \$15,000 steel and brick building to be erected by Louis Moushey on N. Market St.
Chicago, Ill.—F. J. McDonald, 6038 Wallace St., has drawn plans for a \$30,000 four-story stone front apartment building to be erected on Dearborn St., near 63d St., for J. E. Bennett, 98 Board of Trade Building.
S. M. Seator is drawing plans for a three-story apartment-house to be erected at 6917 Madison Ave., for S. R. Frazer; cost, about \$50,000.
Thomas McGinnis has leased the ground at 9-11 Plymouth Pl. and will erect a \$20,000 two-story building to be used as a café.
Louis H. Sullivan, 1600 Auditorium Tower, has completed plans for the Greek Church to be erected at N. Leavitt and Haddon Sts.; cost, about \$20,000.
Chillicothe, Mo.—Andrew Carnegie has offered to give \$25,000 for a public library building if the

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

city will provide the site and \$3,000 annually for running expenses.

Cleveland, O.—The Little Consolidated Street Railway Co. will expend about \$30,000 on the erection of an immense car-house on Woodland Hills, near the end of the Kinsman Street line.

Reports state that the Trustees of the Cleveland Museum of Art are considering the question of erecting a building to cost about \$1,000,000.

Western Reserve University has raised \$60,000 for a chapel for its college for women. The building will be begun at once.

Connellsville, Pa.—It is stated that a \$12,000 school will be erected in the spring.

Covington, Ky.—Andrew Carnegie will give the city \$40,000 for a public library, providing it will agree to furnish a site and \$5,000 annually for its support.

Davenport, Ia.—The Edwards Congregational society are having plans drawn for an enlargement and remodeling of its building, to cost between \$10,000 and \$12,000. S. F. Smith, chairman building committee.

Denver, Col.—Varian & Sterner are drawing plans for a \$75,000 hotel to be built by the Boulder Hotel Co.

Des Moines, Ia.—The Iowa State Bottlers' Association contemplates establishing a factory for the production of soda gas; cost, \$50,000. Fred Harbach, sec.

Hallett & Rawson, architects, have prepared plans for a four-story suburban hotel to be erected by M. Skorer at 6th Ave. and State St. It will be 60' x 90', of local brick, with Bedford trimmings, and cost about \$50,000.

Dubuque, Ia.—It is stated that the Chicago, Milwaukee & St. Paul R. R. Co. will build new shops here, at a cost of \$100,000. J. W. Stapleton, Div. Supt.

East Orange, N. J.—Andrew Carnegie's gift of \$50,000 for a public library on condition that the city appropriates \$5,000 a year for its maintenance, has been formally accepted by the city.

Easton, Pa.—C. P. Bolton & Co. are drawing plans for a new building to be erected at Lafayette College.

Flemington, N. J.—F. S. Allen, Joliet, Ill., will prepare plans for a new school-building to be erected here at a cost of \$35,000.

Fredericksburg, Va.—Architect M. J. Dimmock has completed plans for a four-story brick and granite bank and office building to be erected on the corner of Princess Anne and Commerce Sts.; cost, \$8,000.

Galena, Kan.—Architect A. C. Michaelis has prepared plans for a five-story fireproof office-building for C. C. Moore and others; cost, \$75,000.

Garden City, L. I., N. Y.—McKim, Mead & White, New York City, are drawing plans for a four-story hotel to be built of red brick with white marble trimmings. The cost of the building will be about \$300,000.

Gastonia, N. C.—Preparations are being made for the erection of a cotton mill to cost \$1,000,000. Work will begin in the spring.

Glenside Highlands, Pa.—W. T. B. Roberts is interested in a project to build a suburban summer and winter hotel here in the spring. The structure

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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

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high, with a frontage of 210 feet, and a porch ex-
tending along the entire front. Mr. Roberts has
in view the making of one of the finest hotels
about Philadelphia.

Grand Rapids, Mich.—Architects W. G. & F. S.
Robinson are drawing plans for a new factory for
the Grand Rapids Paper Box Co.

Architect W. G. Robinson has prepared plans for
remodelling Voight, Herpolsheimer & Co.'s build-
ing on Monroe St.; cost, about \$15,000.

The Gunn Furniture Co. will rebuild their dry
kilo and storage rooms recently destroyed by fire
at a loss of \$50,000.

Haverford, Pa.—Plans have been prepared for a
gymnasium building for Haverford College; cost,
about \$40,000.

Holyoke, Mass.—The city will erect a school-
house to cost \$75,000, after plans by W. B. Reid.

Hornellsville, N. Y.—The question of erecting a
city-hall and court-house, to cost about \$40,000 is
under consideration.

Hudson, N. Y.—Plans are being prepared by Henry
S. Moul for rebuilding the Columbia County court-
house at a cost of \$30,000.

Jackson, Miss.—A syndicate has been formed for
the construction of a \$50,000 hotel. S. S. Carter,
president, First National Bank, is interested in the
enterprise.

La Crosse, Wis.—Langdon & Boyd will erect a
modern packing house to cost about \$50,000.

Lancaster, Pa.—C. E. Urban is drawing plans for
a new Y. M. C. A. building to cost about \$40,000.

Louisville, Ky.—It is stated that plans have been
prepared for a \$17,000 convent for the Ursuline
Sisters, to be erected at Shelby and Chestnut Sts.

Milwaukee, Wis.—The Home for the Friendless
is considering the erection of a new building on
Van Buren St., to cost \$10,000.

Grace Lutheran Society is taking bids for the
erection of a church from plans by H. C. Koeh &
Co., architects. It will be 63' x 89', of brick and
stone, and will be located at Broadway and Juneau
Ave.; cost, \$50,000.

Minneapolis, L. I., N. Y.—It is stated that Wm. E.
Tubby, of Glen Cove, will prepare plans for a \$100,-
000 court-house for Nassau County.

Moline, Ill.—The Public Library Board is said to
be preparing to erect a library, to cost about \$60,-
000.

Newark, N. J.—The congregation Anshe Russia,
K. U. V., will erect a synagogue to cost about \$30,-
000, on W. Kinney St.

Newberry, Mich.—Charlton, Gilbert & Demar,
architects, of Milwaukee, Wis., have prepared plans
for two buildings to be erected at the Upper Pen-
insula Insane Institution. They will be two-story,
40' x 50' & 40' x 80', of brick; cost, \$15,000 and \$25,-
000.

New Ulm, Minn.—The Board of Education has
decided to build a high school, at a cost of \$15,000
to \$20,000.

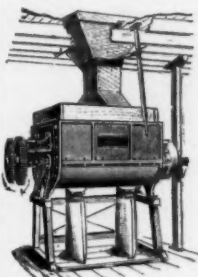
New York, N. Y.—Architect Henry I. Cobb has
started plans for a mammoth hotel on the site now
occupied by the old Hotel Brunswick. The structure
will occupy all the ground from 26th to 27th
Sts., on 5th Ave., and will extend to Madison Ave.
It will be twenty stories high, and will be the
handsomest hotel in the world. The entire amount
of capital involved will be about \$10,000,000. Leon
O. Bailey, of Indianapolis, is the prime mover of
this project, and Philadelphia, Boston, Chicago,
and local capitalists are interested.

The Evangelical Zion Church will build a one-
story brick church, 37' 6" x 100', on 140th St., near
7th Ave., after plans by L. B. Morrison; cost,
\$8,000.

A. B. Jennings, 41 Wall St., has drawn plans for
a new church for the Hanson Pl. Baptist Church.
It will be an imposing granite structure, the top
story of which will be an open air roof garden, so
designed as to be sheltered on all sides; estimated
cost, \$125,000 to \$150,000.

Norfolk, Va.—J. E. Peebles, Columbia Building,
and J. E. R. Carpenter, Citizens' Bank Building, are

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walls) a complete construction in any
number of stories of stacks which may
be required. For COURT HOUSE build-
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library construction is having recog-
nition. The equipment of our factory is
especially designed for work of this kind.
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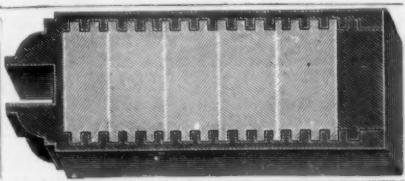
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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

preparing plans for a jail, police station and police
court building, to cost about \$200,000.

J. K. Peebles has prepared plans for a \$40,000
brick synagogue.

North Judson, Ind.—The New England Beet
Sugar Co., of Boston, Mass., will erect a beet-sugar
plant, to cost \$500,000.

Oneida, N. Y.—The New York Central and Hudson
River R. R. will erect a passenger station here at
the head of Broad St., to cost \$25,000.

Orange, N. J.—Mr. and Mrs. Joseph W. Stiekler
have given \$50,000 to found a free library here as a
memorial to their son, the late Dr. Joseph W.
Stiekler, Jr., who died recently in New York.

Ottumwa, Ia.—Reports state that Andrew Carnegie
has offered this city \$50,000 for a public library.

Pawtucket, R. I.—N. M. Isham and E. J. Anthony
have completed plans for a church building for St.
Paul's Church, to be erected at Park Pl. and Church
St.; cost, about \$45,000.

Philadelphia, Pa.—It is said that a syndicate of
New York and local capitalists are planning to
secure property bounded by Market St., West and
South Penn Sq. and 15th St., and on this site it
proposes to erect the largest and highest office-
building in this city.

Dr. George Woodward, of Wissahickon Heights,
will have a gate lodge built in front of his residence
on Willow Grove Ave., to cost about \$6,000.

Pipestone, Minn.—Plans are being perfected at
Washington for erecting a new building at the
Indian School, to cost \$25,000.

Pittsburgh, Pa.—The Opalite Tile Co. have pur-
chased a site on the Pittsburgh & Lake Erie Rail-
road, on which they will erect a factory, to cost
\$20,000.

Reed B. Coyle & Co. are having plans prepared
for 6 three-story pressed-brick residences on Bryson
St.; cost, \$48,000.

Port Washington, Wis.—Fred Graf, architect,
Milwaukee, has plans for a court-house to be erected
here. It will be two-story, 72' x 94', of brick and
stone; cost, \$35,000.

Reading, Pa.—Smith Bros. have prepared plans
for a \$15,000 school to be erected at 5th and Hering
Sts.

Red Wing, Minn.—The Becher Lumber Co. will
rebuild the saw-mill which was burned last Decem-
ber; cost, about \$35,000.

Richmond, Va.—Architect M. J. Dimmock has
prepared plans for a two-story dwelling to be
erected on the corner of Franklin and Shafer Sts.,
for John Skelton Williams, president of the Sea-
board Air Line; cost, \$50,000.

Rochester, N. Y.—The congregation of the First
M. E. Church, it is stated, will erect a new edifice,
to cost about \$50,000. Rev. C. E. Hamilton, pastor.

Rome, Ga.—The Southern Railway will build a
large freight depot corner 2d Ave. and East St.
The structure will cover an entire square and cost
\$100,000.

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Spokane, Wash.—Malmgren & Preusse, architects,
have plans for a lodge hall to be erected by the
Elks at Post St. and Front Ave., at a cost of \$45,-
000. It will be three-story, 50' x 142'. The exterior
will be of red pressed brick with sandstone trim-
mings.

The Spokane Amateur Athletic Club will erect a
modern club-house; cost, about \$40,000.

Stevens Point, Wis.—The Stevens Point Textile
Starch Co. has been incorporated with \$30,000
capital stock. Buildings will be erected soon.

St. Joseph, Mo.—R. G. & H. W. Conser will erect
a three-story pressed-brick laundry and storeroom
on the corner of 8th and Francis Sts., to cost \$12,-
000.

St. Paul, Minn.—Wm. Kingsley, architect, 613
Germania Life Building, is preparing plans for a
store and flat building for Geo. W. Beal, to be
erected on 3d St. and Smith Ave. It will be 39' x
70', three stories, pressed brick, brownstone and
terra-cotta trimmings; cost, \$18,000.

Webster City, Ia.—Local capitalists have com-
pleted arrangements for the erection of a modern
opera-house soon; cost, \$20,000.

Winchester, Va.—Plans have been prepared by
Mr. Frank H. Jackson, of Washington, D. C., for a
new city-hall, to cost about \$50,000. It will be
located on Fairfax Sq. in the centre of the city
and will be three stories in height, with a frontage
of 110 feet and a depth of 71 feet.

Winona, Minn.—The lumber and grain men of
this city are to form a corporation for the purpose
of erecting an office-building to be called the Grain
and Lumber Exchange. The structure will be of
brick, three stories high, and cost about \$50,000.

York, Pa.—Andrew Carnegie has offered the city
\$50,000 for a public library on condition that the
city provide a site and appropriate by ordinance
\$5,000 a year for maintenance of the library.

APARTMENT-HOUSES.

Birmingham, Ala.—Twenty-first St., 2½-story bk.
aparts., 60' x 81', tile & gravel roof, steam; \$10,000;
o., Frank P. O'Brien; a., Wheelock & Son.

Brookline, Mass.—Commonwealth Ave., 2 three-story
bk. aparts., 29' 9" x 63' & 30' x 60'; \$24,000; o., A.
L. Jewell; b., J. H. Davidson.

Buffalo, N. Y.—Prospect Ave., three-story bk. apart-
ments, 61' x 100'; \$35,000; o., Thomas Tindle; a.,
Metzger & Greenfield.

Chicago, Ill.—North Ave. and Humboldt St., four-
story bk. & st. apartment, 47' x 50', comp. roof, steam;
\$14,000; o., Henry Baragwanath; a., E. E.
La Belle.

Milwaukee Ave., No. 2250, three-story bk. & st.
store & flats, 25' x 125'; \$12,500; o., August Allen;
a., Henry Worthman.

Fifty-fourth and Halsted Sts., four-story bk. &
store & apartments, 50' x 88', comp. roof, steam;
\$25,000; o., K. Mueller; a., Robert S. Smith.

Wentworth Ave., nr. Sixty-ninth St., three-story
st. & bk. stores & flats, 50' x 90'; \$35,000; o., J. K.
Almquist; a., A. G. Lund.

Iron-Work.

We have in Stock at East Berlin, Conn.,
about 10,000 tons of Beams, Channels,
Angles, Plates, etc., as follows:

CHANNELS.			I BEAMS.		
100 bars	3 inch	4 pounds per ft.	110 bars	3 inch	5 1/2 pounds per ft.
250 "	4 "	5 1/4 "	375 "	4 "	7 1/2 "
130 "	5 "	6 1/2 "	330 "	5 "	9 3/4 "
250 "	6 "	8 "	155 "	6 "	12 1/4 "
330 "	7 "	9 3/4 "	200 "	7 "	15 "
430 "	8 "	11 1/4 "	50 "	7 "	12 1/4 "
80 "	9 "	13 "	250 "	8 "	17 1/2 "
100 "	10 "	15 "	95 "	9 "	21 "
50 "	10 "	16 "	155 "	10 "	25 "
225 "	12 "	20 1/2 "	200 "	12 "	31 1/2 "
			200 "	12 "	40 "
			265 "	15 "	42 "
			150 "	15 "	50 "
			180 "	15 "	60 "
			25 "	20 "	65 "

In addition we also have all sizes on Angles both with even and uneven legs, from 1 x 1 x 1/2 in. to 6 x 6 x 3/4 in., and Plates from 6 in to 60 in in width. We also have a fair stock of Zee Bars, Tee Iron and special shapes.

All of this material in lengths from 40 ft. to 50 ft.

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Sidewalk Lights. Artistic work in Wrought and Cast Iron, Brass and Bronze.
Designs and Estimates of Cost Furnished for Work in any Department.

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BUILDING INTELLIGENCE.

(Apartment-Houses Continued.)

Jackson Boulevard, two-st'y bk. & st. aparts., 22' 6" x 76', comp. roof, steam; \$8,500; o., George W. Dunne; a., H. J. Mullen.
Indiana Ave., bet. 34th & 35th Sts., four-st'y bk. & st. apart., 50' x 90', steam; \$30,000; o., James O. Vaughney; a., Henry L. Ottenheimer.
Washington Boulevard, three-st'y Bedford st. apart., 26' x 61', comp. roof, steam; \$8,000; o., J. W. Strookbein; a., J. E. Youngberg.
Westworth Ave., nr. 69th St., three-st'y bk. & st. store & flat, 50' x 90', gravel roof, steam; \$35,000; o., John K. Alquist; a., A. G. Lund.
Sawyer Ave., No. 447, two-st'y st. & bk. flat, 23' x 60', furnace; \$5,400; o., John Doyle; a., H. J. McMullen.

Columbus, O.—Three-st'y bk. apartments, 100' x 140', slate & comp. roof, steam; \$60,000; o., R. Z. Dawson.

Jersey City, N. J.—Peterson St., and Pierce Ave., three-st'y fr. store & flat, 20' x 55'; \$5,000; o., F. Gertzi; a., Emil Guhl.

Joplin, Mo.—Fourth and Pearl Sts., three-st'y bk. flats, 56' x 116' 6", comp. roof, steam; \$25,000; o., Nichols & Crane; a., H. L. Spradling.

Newark, N. J.—Eleventh and Orange Sts., three-st'y bk. & terra-cotta store & flat, 25' x 54'; \$7,500; a., J. J. C'Neill, East Orange.

New York, N. Y.—St. Nicholas Ave., n w cor. 151st St., seven-st'y bk. flat, 65' 9" x 90' 7", 92' 7"; \$100,000; o., A. Goosch; a., Frank Wennemer.

Third Ave., No. 2031, six-st'y bk. flat & stores, 25' 2" x 86' 8"; \$25,000; o., Lowenfeld & Prager, 115 Broadway; a., G. F. Pelham, 503 Fifth Ave.

W. Central Park, nr. 100th St., 2 seven-st'y bk. flats, 49' 6" x 99'; \$160,000; o., Alois Gutwillig, 47 Cedar St.; a., Neville & Bagge, 217 W. 125th St.

E. Thirty-first St., Nos. 223-225, six-st'y bk. flat, 33' x 87' 9"; \$32,500; o., Bernhard Paneth, 35 Nassau St.

One Hundredth St., nr. 3d Ave., 2 six-st'y & base. bk. flats & stores, 25' x 89' 7"; \$70,000; o., Hyne Construction Co., 803 Boulevard.

Seventy-fourth St., nr. Avenue B, six-st'y & base. bk. flat, 25' x 88' 8"; \$22,000; o., A. A. Schorsch, 240 E. 79th St.; a., G. F. Pelham, 503 Fifth Ave.

CHURCHES.

Beaver Dam, Wis.—Two-st'y bk. & st. church building, 24' x 50' x 160', furnace; \$22,000; o., St. Peter's Parish; a., A. Dohmer, Milwaukee.

Brooklyn, N. Y.—Evergreen Ave., n w cor. Woodbine St., bk. church, 61' 8" x 100' 11", slate roof, hot air; \$15,000; o., Second German Baptist Church, 30 McKibben St.; a., Higgs & Garigan, 1123 Broadway, New York.

BUILDING INTELLIGENCE.

(Churches Continued.)

Galesburg, Ill.—One-st'y st. church building, 40' x 130', slate or tile roof, steam; \$20,000; o., Episcopalian Parish; a., C. E. Hair.

New York, N. Y.—One Hundred and Fortieth St., nr. 7th Ave., one-st'y st. church, 37' 6" x 100'; \$8,000; Evangelical Zion Church, 116 W. 125th St.; a., R. B. Morrison, 41 Wall St.

EDUCATIONAL.

Boston, Mass.—Adams and Chestnut Sts., fr. school building, 30' x 80', pitch roof, furnace; \$6,000; o., City of Boston.

Brooklyn, N. Y.—Blake Ave., s s, extends from Thatford to Rockaway Ave., three-st'y bk. public school, 172' x 60' 6", gravel roof, steam & hot air; \$120,000; o., City of New York; a., C. B. Snyder, 59th St. & Park Ave., New York.

Duluth, Minn.—Three-st'y bk. & st., 80' x 150', tile roof, steam; \$75,000; o., State of Minn.; a., Palmer, Hale & Hunt.

New York, N. Y.—Sixty-sixth St., n s, 100' w W. Central Park, two & five-st'y bk. riding academy, 200' x 200' & 95' 11"; \$200,000; o., Durland Riding Academy Co.; a., Henry F. Kilburn, 156 Fifth Ave.

Sand Beach, Mich.—Two-st'y bk. & st. public school, 72' x 88', shingle roof, hot blast heat; \$17,000; a., Public School Board; a., I. Erb, Port Huron, Mich.

Sheldon, Ill.—Two-st'y bk. & st. school, 84' x 90', slate roof, steam; \$16,000; o., City of Sheldon; a., Paul O. Moratz, Bloomington.

HOSPITALS.

Boston, Mass.—Jerome St., nr. Cushing Ave., bk. asylum, 50' x 100', flat roof, steam; \$50,000; o., St. Mary's Infant Asylum; a., W. H. McGinty.

King Park, L. I., N. Y.—Bk. building for employes; \$60,000; o., Long Island State Hospital, Clinton & Montague Sts., Brooklyn; a., G. L. Helms, Albany.

HOTELS.

Boise, Idaho.—Tenth and Main Sts., five-st'y bk. & terra-cotta hotel, 56' x 122', gravel roof, hot water; \$65,000; o., Indiana Hotel Co.; a., W. S. Campbell.

Tottenville, S. I., N. Y.—Three-st'y fr. hotel, 50' x 80'; \$15,000; o., J. L. Garcia; a., Horace H. Esselstyn, 220 Broadway.

HOUSES.

Ashland, Ky.—Two-st'y bk. & st. dwell., 53' x 69', natural gas & furnace; \$6,000; o., J. W. M. Stewart; a., J. B. Stewart, Huntington, W. Va.

Bloomfield, N. J.—Woodland Park, 21-st'y fr. dwell.; \$5,000; o., Mrs. Anna B. Pond, Plainfield

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4 inches
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Light Iron Work of every description.

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BUILDING INTELLIGENCE.

(Houses Continued.)

a., A. L. C. Marsh, 97 Nassau St., New York, N. Y.
Boston, Mass.—Bay State Road, nr. Sherburn St., 3 three-st'y bk. dwells., 13' x 18' x 70', flat roofs, hot water; \$40,000; o., Ada L. Vinal; b., A. Bellamy; a., A. H. Vinal.

Hamilton St., No. 164, 2 1/2-st'y fr. dwell., 26' x 41', pitch roof, furnace; \$5,000; o., James O. Jordan; a. & b., F. J. Rockwell.

Brookline, Mass.—Beacon St., 2 1/2-st'y fr. dwell., 40' x 64', pitch roof; \$10,000; o., E. C. Lowe; b., L. B. Jordan.

Brooklyn, N. Y.—E. Twenty-second St., nr. Avenue F, 2 two-st'y & attic fr. dwells., 26' x 43' 4", hot air; \$11,000; o. & b., Daniel Lauer, 1626 New York Ave.; a., B. Driesler.

Linden Boulevard, nr. Nostrand Ave., two-st'y & attic fr. dwell., 38' x 39', shingle roof; \$5,000; o., Mrs. Alice Frazer, 122 Lenox Road.

Hancock St., nr. Throop Ave., 8 three-st'y & base. bk. dwells., 16' 5" x 48', hot air; \$44,000; o., Wilfred Burr, 555 Jefferson Ave.; a., A. S. Hedman, 375 Fulton St.

Broadway, nr. Moffatt St., three-st'y bk. stores & dwells., 20' x 60', asbestos roof; \$8,000; o., Henry Claus & Wm. Rohde, 76 Suydam St.; a., Th. Engelhardt 905 Broadway.

Camden, N. J.—Clifton Ave., No. 301, nr. 3d Ave., 2 1/2-st'y fr. dwell., 21' x 56'; \$4,600; o., Edw. H. Jones; a., W. D. Jones.

Mt. Prospect Ave., No. 137, two-st'y bk. dwell., 25' x 34'; \$4,500; o., Nelson M. Baldwin; a., Paul G. Botticher.

Mairn Pl., nr. Clifton Ave., 2 1/2-st'y fr. dwell.; \$40,000; o., Louis S. Heyden; a., Alex. Murray, East Orange.

Columbus, O.—Broad St. and Ohio Ave., three-st'y bk. & st. dwell., 38' x 46', pitch roof, hot water; \$18,000; o., Edward Merkle; a., Yost & Packard.

2 1/2-st'y bk. dwell., 38' x 38', slate roof, furnace; \$10,000; o., Trustees State University; a., H. C. Lord.

Concord, N. C.—2 1/2-st'y fr. dwell., 45' x 60', slate roof, hot air; \$10,000; o., J. W. Cannon; a., Hayden, Wheeler & Schwend.

Deal, N. J.—Hathaway Ave., 2 1/2-st'y fr. dwell.; \$6,000; o., Miss Delia Kearney; a., David W. King, 203 Broadway.

Detroit, Mich.—Lafayette Ave., two-st'y bk. & fr. dwell., 26' x 45', slate roof, furnace; \$5,500; a., Geo. W. Meyers.

Philadelphia Ave., two-st'y bk. & fr. dwell., 34' x 44', pitch roof, furnace; \$5,000; a., Kastler & Hunter.

Elkhart, Ind.—Two-st'y & base. fr. dwell., 40' x 89', pitch roof, hot water; \$5,000; o., W. W. Sprague; a., A. H. Ellwood.

Evanston, Ill.—Hinman Ave., No. 1112, two-st'y fr. dwell., 26' x 44', pitch roof, hot air; \$5,000; o., H. A. Rowland; a., Chas. R. Ayars.

Hinman Ave., No. 1824, three-st'y fr. dwell., 60' x 60', pitch roof, steam; \$8,000; o., S. K. Rogers; a., Chas. R. Ayars.

Far Rockaway, L. I., N. Y.—Three st'y bk. & st. dwell., 40' x 100'; \$30,000; o., John P. Carroll; a., Horgan & Slattery, 1 Madison Ave., New York, N. Y.

Fox Lake, Wis.—Two-st'y fr. summer residence, 30' x 52', pitch roof; \$7,000; o., William Mariner; a., Elmer Grey, 419 Broadway, Milwaukee, Wis.

Green Bay, Wis.—Two-st'y fr. dwell., 42' x 62', pitch roof, hot water; \$9,000; o., D. W. Britton; a., F. A. Foeller.

Grosse Pointe, Mich.—Two-st'y bk. & st. dwell., 30' x 45', slate roof, hot water; \$16,000; o., H. Scherer, 280 Jefferson Ave., Detroit; a., Louis Kemper, 10 Miners' Building.

Yonkers, N. Y.—2 1/2-st'y fr. dwell., 19' x 54'; \$5,500; o., New York Mutual Building Co.; a., A. J. Van Suetendael.

St. Andrews Pl., 2 1/2-st'y fr. dwell., 41' x 42'; \$5,500; o., R. F. Shaen; a., F. S. Cook.

OFFICE-BUILDINGS.

Boston, Mass.—Utica St., cor. Harvard St., six-st'y bk. office-building, 73' x 83' x 103', flat roof, steam; \$50,000; b., C. A. Dodge & Co., 166 Devonshire St.; a., Walter Atherton.

Columbus, O.—Long St. and Lynn Alley, six-st'y bk. business block, 85' x 130', comp. roof; \$65,000; o., William Monypeny Estate; a., Edgar B. Fox.

Altoona, Pa.—Four-st'y bk. bank & office building, 50' x 50', slag roof, steam; o., Keystone State Savings & Loan Association; a., C. M. Robison.

Madison, Wis.—Two-st'y bk. & st. telephone building, 50' x 88', steam; \$10,000; o., Wisconsin Telephone Co.; a., H. J. Esser, 77 Camp Building, Milwaukee, Wis.

Lansing, Mich.—Michigan Ave., No. 412, 414, three-st'y st. & bk. business building 44' x 100', comp. roof, steam; \$6,000; o., Turner Estate; a., A. E. Bowd.

THE KENNEY FLUSHOMETER



An ingenious device for flushing water-closets. Takes the place of noisy and dirty overhead flush-tanks. It has passed the experimental period; can be adapted to conform to almost every conceivable requirement, and the only system that will operate successfully at all times one or any number of closets under the varying conditions of water pressure. No Cup Leathers or Springs.

SIMPLE, SURE AND SANITARY

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Application of Flushometer.

Patented.

The Monarch Water Heater

FURNISHES HOT WATER INSTANTLY,
AT ANY MOMENT, DAY OR NIGHT....

Open a Hot Water faucet anywhere in the house, and this act instantly turns on the gas at the heater. As there is no storage, the water is heated as it passes through the coil, furnishing a constant stream of hot water in any quantity desired. The instant the water is turned off, the gas is shut off likewise. The hot water is always fresh, and can be used for cooking or any purpose. Write the

MONARCH WATER HEATER CO.,

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are guaranteed to prevent Stoppage of Waste Pipes by removing all grease from the water. Used in hundreds of private and public buildings.

Manufactured by
SPROUL & MCGURRIN
Grand Rapids, Mich.

BUILDING INTELLIGENCE.

PUBLIC BUILDINGS.

New York, N. Y.—Prospect Ave., n w cor. 152d St., two-sty bk. & st. engine-house, 25' x 95'; \$20,000; o., City of New York; a., Horgan & Slattery.
W. Thirty-third St., Nos. 113-115, three-sty bk. hook-and-ladder house, 49' 10" x 98' 9"; \$60,000; o., City of New York; a., Horgan & Slattery.
W. Seventy-seventh St., Nos. 217-219, 2 three-sty bk. engine & hook-and-ladder houses, 25' x 102'; \$120,000; o., City of New York; a., Horgan & Slattery, 1 Madison Ave.

TENEMENT-HOUSES.

Brooklyn, N. Y.—Ralph Ave., nr. St. Mark's Ave., 6 three-sty bk. tenements, 30' x 63'; \$48,000; o., a. & b., Frederick Buchar, 1344 St. Marks Ave.
Ralph Ave., s e cor. St. Marks Ave., 2 three-sty bk. stores & tenements, 23' 6" x 83'; \$20,000; o., a. & b., Frederick Buchar, 1344 St. Marks Ave.
Java St., nr. Franklin St., four-sty bk. tenement, 25' x 65', gravel roof; \$7,500; o., Philip Bierchenok, 175 Green St.; a., P. Tillion, 121 Meserole Ave.
Java St., nr. Franklin St., four-sty bk. tenement; \$7,500; o., Henry G. Dorr, Norman Ave. & N. Henry St.
Meeker Ave., s e cor. Kingsland Ave., three-sty bk. store & tenement, 25' x 65', steam; \$15,000; a., H. Schoeffler, 91 Monitor St.
Monitor St., nr. Nassau Ave., four-sty bk. flat, 30' x 56', tin & gravel roof; \$7,000; o. & b., P. Metternan, 213 N. Henry St.
Washington Ave., n w cor. Degraw St., four-sty bk. flat, 22' 6" x 63'; \$20,000; o., W. G. Grover, Hollis, L. I.; a., B. Driesler, 1432 Flatbush Ave.
S. First St., nr. Rodney St., 4 three-sty bk. flats, 25' x 65'; \$21,500; o., A. Buermann, 507 Grand St., New York.

New York, N. Y.—W. Twenty-sixth St., No. 229, six-sty & base. bk. flat & store, 24' 10" x 85' 1"; \$28,500; o., B. A. Klein, 35 Nassau St.
Rutgers Pl., No. 11, six-sty bk. flat, 26' x 95' 3"; \$20,000; a., Horenburger & Straub, 122 Bowery.
Eldridge St., No. 176, six-sty & base. bk. flat & store, 23' x 76' 10", 15' 10"; \$20,000; a., M. Bernstein, 245 Broadway.
E. Eighth St., Nos. 385-389, 2 six-sty & base. bk. flats & stores, 30' x 79' 6"; \$28,000 each; o., Lowenfeld & Prager, 115 Broadway; a., Geo. F. Pelham, 503 Fifth Ave.
Cannon St., Nos. 83-85, six-sty bk. flat & store, 40' x 70' 2"; \$35,000; o., Balloisen & Wexler, 152 Boorum St., Brooklyn.
Cannon St., No. 89, five-sty & base. bk. tenement & store, 25' 3" x 69' 10"; \$22,000; o., Lowenfeld & Prager, 115 Broadway; a., G. F. Pelham, 503 Fifth Ave.

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WAREHOUSES.

Brooklyn, N. Y.—Van Dyke St., nr. Richard St., two-sty bk. warehouse, 40' x 55'; \$5,000; o., O. L. Peterson; a., Axel Hedman, Arbuttle Building.

Indianapolis, Ind.—Four-sty bk. warehouse, 100' x 100', gravel roof; \$10,000; o., Home Stove Co.; a., Adolph Scherrer.

Newark, N. J.—Ogden St., No. 414, four-sty bk. storage building, 52' x 60'; \$10,000; o., J. C. Smith & Wallace; a., H. Edward Reeves.

New York, N. Y.—One Hundred and Seventeenth St., n s, 275' e 8th Ave., seven-sty bk. warehouse, 50' x 96'; \$38,000; o. John J. Timmins, 265 W. 117th St.; a., Henri Fouchaux, Broadway & 162d St.

Philadelphia, Pa.—Sixth St. and Glenwood Ave., one-sty bk. & iron ice storage-house, 35' x 100' 5"; \$5,000; o., Franklinville Ice Co.; b., J. M. McCloskey.

Morris St., corrugated-iron fr. shed, 62' 5" x 75'; \$12,000; o., American Product Co.; b., Keen & Frazier; a., Charles Edgerton.

MISCELLANEOUS.

Brooklyn, N. Y.—Sheridan's Walk, w s, at Atlantic Ocean Beach, one & two-sty fr. bathing pavilion, 50' x 193', gravel & shingle roof; \$5,500; a., H. D. Whipple, Surf Ave. & W. 8th St.

COMPETITIONS.

LIBRARY.

[At Duluth, Minn.] Plans will be received by the Building and Grounds Committee of Duluth Public Library until February 5th, for a library building, to cost \$50,000. W. M. HUBBARD, Chmn. 1258

SCHOOL.

[At Rutherford, N. J.] Plans are invited until February 10th, for a new school-building, to cost \$42,750. BOARD OF EDUCATION. 1258

PROPOSALS.

Treasury Department, Office Supervising Architect, Washington, D. C., January 18, 1900. Sealed proposals will be received at this office until 2 o'clock P. M. on the 1st day of March, 1900, and then opened, for the construction (except heating apparatus) of the extension of the U. S. Post-office Building at Columbus, Ga., in accordance with the drawings and specification, copies of which may be had at this office or at the office of the Custodian at Columbus, Ga., at

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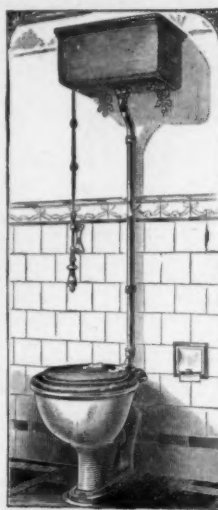
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Treasury Department, Office Supervising Architect, Washington, D. C., January 18, 1900. Sealed proposals will be received at this office until 2 o'clock P. M. on the 28th day of February, 1900, and then opened, for the erection and completion of a toilet outhouse for the U. S. Post-office, Custom-house, etc., at Jacksonville, Florida, in accordance with drawings and specification, copies of which may be had at the discretion of the Supervising Architect, by applying to this office, or to the Custodian of the building. JAMES KNOX TAYLOR, Supervising Architect. 1258

CHURCH.

[At Beaver Dam, Wis.] Bids are wanted until February 15, for a church for St. Peter's Catholic Society; cost, about \$22,000. REV. N. M. ZIMMER, pastor. 1259

COLLEGE BUILDING.

[At Madison, Wis.] Sealed proposals are wanted until January 31, by the Board of Regents of the University of Wisconsin, for a building for a College of Engineering. E. F. RILEY, secretary. 1257

PAROCHIAL RESIDENCE.

[At Clara City, Minn.] Sealed bids will be received until January 31 for the erection of a parochial residence for the Catholic parish. JAMES KEELEY. 1257

DESKS, ETC.

[At Havana, Cuba.] The Military Governor of Cuba invites bids until February 15th, for supplying one or more lots of school-desks, book-cases or closets, chairs, teachers' desks, clocks, etc., for the public schools of the Island. ADNA K. CHAFFEE, Chief of Staff. 1258

OFFICERS' QUARTERS.

[At West Point, N. Y.] West Point, N. Y., January 13, 1900. Sealed proposals, in triplicate, will be received here until February 13, 1900, for construction of officers' quarters, as per plans. Address Q. M., U. S. M. A. 1258

HIGH SCHOOL.

[At Fremont, Neb.] Sealed bids will be received by the Board of Education of the Independent School District of Fremont, Nebraska, until February 6, 1900, for the erection of a high school building. M. E. REYNOLDS, Sec. of Board. 1258

ASYLUM.

[At Pueblo, Col.] Sealed bids will be received until February 1st, for the erection of a home for feeble minded. DR. H. WORK. 1257

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ADOPTED BY THE SOCIETY, FEBRUARY 1, . . . 1895. . .

SECTION 1. No Member should enter into partnership, in any form or degree, with any builder, contractor, or manufacturer.

SECTION 2. A Member having any ownership in any building material, device or invention, proposed to be used on work for which he is architect, should inform his employer of the fact of such ownership.

SECTION 3. No Member should be a party to a building contract except as "owner."

SECTION 4. No Member should guarantee an estimate or contract by personal bond.

SECTION 5. It is unprofessional to offer drawings or other services "on approval" and without adequate pecuniary compensation.

SECTION 6. It is unprofessional to advertise in any other way than by a notice giving name, address, profession, and office hours, and special branch (if such) of practice.

SECTION 7. It is unprofessional to make alterations of a building designed by another architect, within ten years of its completion, without ascertaining that the owner refuses to employ the original designer, or, in event of the property having changed hands, without due notice to the said designer.

SECTION 8. It is unprofessional to attempt to supplant an architect after definite steps have been taken toward his employment.

SECTION 9. It is unprofessional for a Member to criticize in the public prints the professional conduct or work of another architect except over his own name or under the authority of a professional journal.

SECTION 10. It is unprofessional to furnish designs in competition for private work or for public work, unless for proper compensation, and unless a competent professional adviser is employed to draw up the "conditions" and assist in the award.

SECTION 11. No Member should submit drawings except as an original contributor in any duly instituted competition, or attempt to secure any work for which such a competition remains undecided.

SECTION 12. The American Institute of Architects' "schedule of charges" represents minimum rates for full, faithful and competent service. It is the duty of every architect to charge higher rates whenever the demand for his services will justify the increase, rather than to accept work to which he cannot give proper personal attention.

SECTION 13. No Member shall compete in amount of commission, or offer to work for less than another, in order to secure the work.

SECTION 14. It is unprofessional to enter into competition with or to consult with an architect who has been dishonorably expelled from the "Institute" or "Society."

SECTION 15. The assumption of the title of "Architect" should be held to mean that the bearer has the professional knowledge and natural ability needed for the proper invention, illustration and supervision of all building operations which he may undertake.

SECTION 16. A Member should so conduct his practice as to forward the cause of professional education and render all possible help to juniors, draughtsmen and students.

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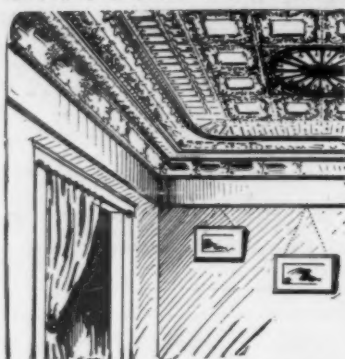
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