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WE are very glad to receive from the Municipal Art Society of New York an official statement of the plan which has been drawn up by its committee on the proposed exhibit of a model city at the St. Louis Exposition of next year. This plan, which is founded on one prepared three years ago by Mr. William S. Crandall, as secretary of the Exhibition Committee, and submitted to the management of the Buffalo Exposition, but not carried out, from lack of funds, is far more comprehensive than the schemes published in the newspapers and magazines, including even an exhibit of the methods for securing uniformity in municipal accounts which have, of late, engaged the attention of reformers, as well as one of a model health department, introducing, for example, the sterilized-milk stations maintained by the municipality in Rochester, N. Y., and in New York City by private benevolence, by which the mortality among infants has been greatly reduced. These features, although not architectural, are quite as essential to a well-organized city as asphalt pavements or well-designed park railings; and it is very much to the credit of the Municipal Art Society and its representative that this fact should have been recognized. While the profession, naturally, interests itself more in the artistic features of a city, people generally will be more attracted by the novelties in sanitation, transportation, lighting and sewage-disposal which the Society includes in its programme, and the people who come to look at the sewage-irrigation model, or the vestibuled electric-cars, or the acetylene street-lamps, will finish their visit by an inspection of the artistic signboards and æsthetic bridges, which they would never have looked at by themselves.

IT seems to us that, with proper management, a comprehensive scheme of the sort proposed by the Municipal Art Society might be made the most valuable and conspicuous feature of the Louisiana Purchase Exposition. In Paris, in 1900, a great deal of attention was attracted by the scattered elements of what would, under this scheme, be advantageously collected and systematized. In one series of rooms at Paris, for example, was a collection of plans, models and pictures of hospitals and asylums, which offered great interest. Some of the Russian hospitals were shown by means of miniature buildings, the roof of which opened like a lid, showing the little beds, with the tiny patients, half an inch long, in the wards; many other establishments were represented by models in relief of the buildings and grounds; and, in general, great efforts were made to have the exhibits as realistic as possible. So, in the school department, rooms of the actual size were shown, the Russians, who were conspicuous in all these branches, presenting, for example, a village library complete, including all the fittings and furniture, even to the books on the shelves. In another building, at some distance, was an exhibit, with real babies, of the "couveuses d'enfants," or establishments for bringing up sickly or prematurely-born infants by keeping them in a uniform temperature, in plate-glass cases, which have been found so valuable in France; and in other portions of the Ex-

position grounds, even as far as Vincennes, were scattered extremely interesting examples of municipal utilities of various kinds. The plan of the Municipal Art Society, to show these things together, as they actually occur, would add greatly, not only to the convenience of studying them, but to the interest of each, and we earnestly hope that it may be found practicable to carry it out.

THE new methods of government in New York have begun to be applied to the theatres. Every architect knows that the building-laws concerning theatres in New York are very strict, and are, on the whole, very judiciously drawn up; but a circumstance less generally known is that, in the case of many new theatres, not the smallest pretence of obeying them has been made. According to evidence collected by the new municipal officials, a considerable proportion of the newest theatres, instead of being practically fireproof, as the law requires, are fire-traps of the most dangerous description, the safeguards demanded by the statute having been deliberately omitted, apparently with the acquiescence of the inspectors. It is gratifying to learn that a list of the deficient theatres is in course of preparation, and their proprietors will be presented with the alternative of remodelling their buildings in such a way as to bring them into conformity with the law, or having them permanently closed. Another police regulation of great importance, which absolutely prohibits the placing of seats in the aisles or passageways of any theatre, hall, church or other place of public assemblage, is also constantly violated in theatres of a certain class. Until now, the proprietors of these theatres, presumably in consequence of a private understanding with the police authorities, have escaped punishment; but warnings have now been issued that the law will be enforced, and New York theatres will have their aisles cleared of seats, or their proprietors will go to prison. It is hardly necessary to point out that, in case of fire in a theatre, obstructions in the aisles may easily cause the death of multitudes of people. All persons who go much to the theatre should bear constantly in mind the fact, proved by many examples, that the average time which elapses between the appearance of fire in the auditorium of a theatre, and the death of every person remaining in it, is less than three minutes. In other words, any person who does not get out of a theatre in less than three minutes after fire makes its appearance will never get out alive, and the obstruction of the passageways by seats simply ensures the death, in case of fire, of all the people in the front portion of the house.

A NEW inconvenience has been found to attend the construction of high buildings. In New York, last week, the inhabitants of a house on Fifth Avenue were disagreeably surprised to have a block of granite, weighing seven hundred pounds, let fall from the sixteenth story of a hotel in process of erection next door, come through the skylight over the main staircase, and continuing to descend, accompanied by a shower of broken glass, demolish two stories of the richly-carved staircase, and finally land on the hall floor, after doing damage to the extent, as the owner estimates, of ten thousand dollars, without including the annoyance to the inmates of the house, who, their staircase being destroyed, were obliged to use the fire-escape to go to and from their bedrooms. Almost on the same day six beams, which were being hoisted to the fourth story of another new building on Fifth Avenue, dropped from the chain which held them upon the roof of a picture-gallery next door, two of them breaking through the skylight, and falling to the floor. About thirty people were in the gallery at the time, but, fortunately, no one was injured.

LA CONSTRUCTION MODERNE calls attention again to the danger to which the precious collections of the Louvre are exposed through the installation in the building of the Ministry of the Colonies. It is now nearly twenty years since the French Government, by a formal decree, ordered that all the buildings of the Louvre, without exception, should be devoted to the purposes of the museum which bears the name of the palace. The ink was hardly dry on the decree when a portion of the palace was taken, "temporarily," for the accommodation of the Ministry of the Colonies. In accordance, apparently, with the "temporary" purpose of the installation, the

changes made in the building were of the flimsiest and most dangerous character. At the very outset, one hundred and sixty-five small offices, with the incidental corridors and passage-ways, were made by dividing the great rooms of the palace by partitions of spruce boards, and stretching above them ceilings of cheap thin cloth. This was a tolerably incautious proceeding on the part of people whom American architects are continually reviled for not imitating; and the subdivision has since been carried still farther, in the same style. As M. Planat says, the whole affair would burn up "in the wink of an eye," if it once took fire, and the officials of the Ministry of Colonies are so impressed with the danger to themselves and their subordinates which the construction presents that they have caused placards to be posted among the offices, giving directions where to run for safety at the first alarm; yet, in spite of the obvious and imminent risk which the installation involves to the remainder of the building, which, it must be remembered, has floors throughout of wooden beams, covered with waxed boards, and lofty mansard roofs, all framed with wood, and covered with boarding, sheet-lead and glass, and the certainty that even a small fire in the galleries would effectually ruin the priceless treasures of art which they contain, this "temporary" installation has been allowed to remain for nearly twenty years, and there is still no sign of its removal. Another circumstance which makes the invasion by official intruders of the premises declared by law to be entirely reserved for the national museum is that the offices of the Ministry of the Colonies occupy room which is urgently needed for the display of objects which belong to the museum, but cannot be shown, for lack of space in which to display them. For example, a magnificent collection of French paintings of the last century, valued at several millions, was recently bequeathed to the Louvre by M. Thomy-Thiery, of the island of Mauritius; while a fine collection of Greek and Roman antiquities, belonging to a noted amateur, M. de Clercq, has also been bequeathed either to the Louvre or the Cabinet des Médailles, preference being given to the Louvre. Neither of these rich collections can be shown, and the De Clercq collection may be lost in consequence; and the officials of the museum report also that it has been impossible to place before the public the magnificent collection of drawings by old masters which it possesses, on account of the impossibility of finding room to show them. It is hardly necessary to say that the preservation of the Louvre and its contents, and the proper display of the artistic riches which it possesses, are matters which concern the whole civilized world; and nothing, perhaps, would give pleasure and relief to so great a number of persons as the announcement that the Ministry of Colonies had departed, with all its furniture and paraphernalia, from the building which is generally recognized as the very centre of art.

PERHAPS the most important field for archaeological exploration that the world now affords is to be found in Yucatan. Although Central American antiquities do not appeal to average people, who are more interested in Romulus and Numa Pompilius, or Achilles and Priam, or Theseus and Ariadne, and the times in which these personages lived, than in the subjects of the undecipherable hieroglyphics of Copan, men of real science are inclined to believe that there was, in times more ancient, perhaps, than those of which even the Assyrian and Cretan records give us knowledge, a mysterious connection between Central America and Asia, if not, as there seems to be some reason for supposing, between Central America and Egypt. It is unlikely that any of the existing ruins in Yucatan date back to the period of such connection, but the inscriptions with which they are covered may, when they are deciphered, refer to traditions of extreme importance to the history of the human race. In this part of the world, moreover, archaeological explorers enjoy an advantage which is hardly found in any other, that the present inhabitants are, so far as is known, the direct descendants of those who occupied the country, perhaps, ten thousand years ago. While nearly every other region of archaeological interest has been conquered and occupied by a succession of different races, the Mayas have, so far as we know, never been driven from their homes by strangers, or compelled to submit to foreign innovations. They have the advantage, also, of being ignorant enough to have no literature, and hardly even a written language, and their traditions are, on that account, much more likely to have been kept pure. When the inscriptions on their ancient monuments are read, and compared with the verbal traditions collected by some one as familiar with the Mayas, and as thoroughly in their confidence, as the lamented

Cushing was with the Zúñis, it is, perhaps, not too much to expect an archaeological sensation comparable with that which followed Rawlinson's discovery of the key to the cuneiform writing.

ANOTHER dust explosion in a coal-mine in Tennessee has added twenty-two victims to the long list of those who have been sacrificed to the carelessness or ignorance of people who ought to know better in regard to the explosive character of an atmosphere charged with inflammable dust. In this particular mine it is customary to spend the earlier part of the day in drilling holes for blasting, and, toward the end of the afternoon, the miners charge the drill-holes, adjust the fuses, and make their way to the open air, leaving two men, whose duty it is to light the fuses. The mine seems to be carefully operated, for the men are required to carry safety lamps, and the two "firemen" are under orders to wait until the others are in safety before lighting the fuses. It is probable that in the present instance the firemen were in a hurry to get home, and thought, as usually happens, that there was no harm in stretching their instructions, if nobody was near to see them, for, in a few minutes after the time for the other miners to leave work, and while they were still coming out of the mine, a terrific explosion took place, tearing to pieces the building over the mouth of the mine, killing some men who stood near, and, of course, annihilating all those who were in the mine, or on their way out of it. A certain amount of "firedamp" occurs in the mine, and may have contributed to the explosion, but it seems most probable that a blast, badly tamped, or unskillfully proportioned, blew out of the drill-hole, setting fire to the explosive mixture of coal-dust and air which filled the mine. Several similar accidents have taken place in the same and neighboring mines within a few years. As our readers know, explosions of this sort often occur in saw-mills, flour-mills, cotton-mills and other places where the air is filled with fine dust, but the exact nature of the explosive action, and the conditions on which it depends, have been very little studied. In saw-mills and flour-mills it is now usual to draw off the dust by means of ventilating-fans, but anything of this sort would hardly be practicable in coal-mines, and the problem of removing the dust in such places, or of keeping it from exploding, still awaits solution.

A FEW years from now some one, we hope, will write a history of the natural-gas industries in this country. For two years or so the flow of natural gas from the wells has been diminishing, so that, instead of an almost uncontrollable pressure, often amounting to three or four hundred pounds to the square inch, the disposition of the gas to escape has become so languid that, in many cases, it must now be sucked out of the wells by air-pumps, and forced into the distribution mains, while, in others, not even this process suffices to secure a supply. The manufacturers who used the natural gas have been the worst sufferers by the failure of the supply; but the makers of plate-glass, who were able, as long as the gas lasted, to produce a beautifully clear and uniform material, have taken advantage of their experience to establish apparatus for manufacturing coal-gas, which is forced into the mains designed for natural gas, and will, undoubtedly be quite as effective in maintaining the clearness of the product, while it will have the advantage of being more uniform, and more reliable in quantity. In some of the Indiana towns in the gas-district, the owners of private houses are arranging to combine for the purpose of making artificial gas, with which to feed the furnaces and fireplaces once supplied with natural gas, and the example will, undoubtedly, be widely followed. It may be suggested that the agents of the Mond process in this country might, perhaps, do worse than establish themselves in Pittsburgh, Buffalo and Indianapolis, and arrange on a large scale for replacing the natural gas with the Mond gas, properly enriched. The main expense of the installation, that of furnishing and laying the mains and service-pipes, is already paid, and the Mond Company could probably secure the use of them on very favorable terms from the owners, who, having no longer natural gas to send through them, must either abandon them, or dig them up and sell them for old iron. In England, the Mond Company can furnish and lay its own pipes, and sell gas for about ten cents per thousand feet; so that, with the use of mains and service-pipes at a nominal expense, it should be possible to furnish the same gas here at rates very little, if at all, higher than those paid for the natural gas.

THE UNKNOWN BERNINI.

EVERY one knows that Lorenzo Bernini, at once architect and sculptor, as the favorite of Urban VIII and his successors in the papal chair, had at Rome during the seventeenth century a princely standing. Everybody knows, likewise, that Bernini, especially in his last years, became the greatest artist of his time, that the piazza of St. Peter's, his architectural *chef d'œuvre*, is one of the grandest architectural ensembles in the world, and also that his sculptural work is very ostentatious, and that which most closely rivals the sculpture of Michael Angelo; but, perhaps some of my readers will be surprised to learn that Bernini, artist in all kinds, like Orcagna and Leonardo, was an adept in caricature, a dramatic author, and himself prepared theatrical decorations, being greatly interested also in the machinery of theatres. If the fancy for Barocco art had not sprung up during these latter years in Italy, and had not the advanced spirits of the time given themselves over to the consideration of every kind of art movement, assuredly this new and curious side of Bernini's character would have remained for a long time unknown; for the favorite of Urban VIII did not arouse the interest of artists and students until our own day, and it is to a student of Bernini that we owe these new facts concerning the unknown side of the artistic life of the subject. Already, to tell the truth, Baldinucci, in a biography of Bernini which he wrote, had pointed out that the master did practise caricature; but the mere words of Baldinucci made no particular impression, and if chance had not led to the discovery of the Berninese caricatures, no one, in all probability, would have given any heed to what Baldinucci wrote. He said, apropos of Bernini, after having praised the extraordinary freshness of the drawing of the human figure in his "Hero": "The effect of this frankness has been that he labored singularly in that kind of drawing which we call caricature, where the pen-stroke which burlesques the image of another still preserves the resemblance and even the majesty, if sometimes the caricatures were those of princes, as happened frequently enough." We know from another source that a certain quantity of caricatures flowing from Bernini's pen were found in the Galleria di San Pastore, in the villa of Terra di Galliciano, inhabited by the Dominican Fathers, to whom the master had given them. It is also important to remark that these caricatures were sent to princes, in homage and as testimony to the intellectual activity of Bernini. In fact, Signor Frascchetti discovered lately a letter, dated 1652 at the Court of Este, in which there is question of two caricatures by Bernini, one representing the Cardinal Trivulzio and the other a certain Giacconazzi, a servant of Cardinal Pamphily's. In this letter, by a certain Francesco Gualengo, it is said that the latter sends to His Most Serene Highness two caricatures, in the knowledge that everything which comes from the hands of the eminent artist is accepted with pleasure by His Majesty.

The discovery of the caricatures of Bernini, some of which I here reproduce in support of this letter, has been purely accidental. Of late, they were rearranging the engravings and drawings in the Corsiniana Collection, and this led to a more attentive study of these drawings, and to the conclusion that the caricatures in question were the work of Bernini. It is perfectly true that they are not signed, but all the connoisseurs, supported by arguments whose probability I for my part admit, in face of these caricatures in the Corsiniana can think only of the name of Bernini.

Almost all of the caricatures are accompanied by inscriptions which help in the identification of the subjects.

No. 1 bears a legend, in Italian, of course: "A French Chevalier." It represents a sufficiently aristocratic type, perhaps sketched by Bernini during his sojourn in France at the time he was preparing his design for the façade of the Louvre. A very curious feature, apart from the elephantine nose, is the suppression of the eye. Perhaps, in this chevalier, the eyebrows wholly eclipsed the little eyes. No. 2, likewise, has its legend: A captain of the "Company of the Romanesques," throwers of stone (*sassaioli*) in the wars of Urban VIII. For a long time Rome was famous for its stone-fights between groups of people who inhabited different quarters of the city, and sometimes these street-fights resulted in death and great grief to

many families of the great city. Bernini, in his caricature of the Captain, has admirably expressed one of the types of the Roman populace, a type which we still meet to-day in the city streets — curious-looking creatures with long necks and very small eyes which seem to be aiming at an enemy at the very moment of attack. No. 3 is that of a Venetian advocate, a laughable type of a man, quiet, and content with the joys of life. No. 4 carries a legend, and is recognized as the caricature of Cardinal Antonio Barberini, born in 1607, an empty-headed but superb man, whose whole value consisted in his being the nephew of Urban VIII. No. 5, beside it, represents the Cardinal Chigi when he was a young man. This Chigi is Fabio Chigi who became pope in 1655, under the name of Alexander VII. The last of the series represents the head coachman of the Infatado

of Spain, a sufficiently vulgar type, with frowning eyes and neglected hair. Unquestionably, the caricature is more interesting than the original could have been. I won't waste time over the other caricatures, which anybody can see at Rome in the cabinet of engravings in the National Gallery. The sketches which I have given are more than sufficient to show the style of Bernini as a caricaturist.

Now we must recognize the architect of the Piazza of St. Peter's as a dramatic author and an inventor of theatrical decorations, according to the revelations of Signor Frascchetti. In the first place, we must know that comedies, melodramas, tragedies and other productions of the kind held, during the first half of the seventeenth century, a place of great favor in the city of the popes. Foreigners came to Rome to be present at theatrical representations which sometimes were very loose in their morality, and enthusiasm over these representations reached such a point that, in 1644, the French, as a mark of their pleasure,

erected a theatre on the Piazza Navona, and there gave shows for the people. We know that the comedies most in vogue at Rome were those which abounded in *bons mots*, which were aimed particularly at personages about the Court.

Amongst the comedies composed by Bernini, a memory of one in particular is preserved; namely, that entitled "The Inundation of the Tiber," apropos of which we read, in documents drawn from the archives of Modena, dated February 16, 1638, the following words: "The Chevalier Bernini, Monday evening, presented a marvellous comedy, and absolutely there were three scenes which struck everybody with wonder." According to the account given of this comedy, it appears that the author secured his effects by stupefying theatrical *coups* and by the vivacity of his dialogue. If we follow the documents of the times, we find that one of the spectators wrote these words:



"I have been to Bernini's comedy [it is still a question of the 'Inundation of the Tiber'] and, to tell the truth, it must be confessed that only he knows how to compose works like this, not so much for the quality of his machinery as for the manner in which the recitations are given. There was an inundation of the Tiber and a fall of

a house with three persons in it, two feigning death and one pulled out half dead, and all the three carried across the stage with a feeling for art of the highest character, and with equal naturalness; but one in particular, the wounded one, smashed almost to pieces in every part of his body (and surely this was very artfully carried out), both amused and terrified us. At the end, the scene opened and there appeared a perspective of extreme beauty at the back of the theatre. This represented a comedy and the players, and, at a considerable distance, many spectators, partly painted, and part moving to join them, some on foot and some a-horseback, some in carriages and some in litters."

In another account by a spectator we read that even Bernini played a rôle. He was arrayed in the costume of an old Florentine, and took part in two scenes, in each without attempting to make Florence appear greater than Rome, he representing the most commonplace habits of the Florentines. The writer concludes his tale by saying that "the comedy was full of pleasantries and masterly strokes, but, nevertheless, more disguised than was usual, Bernini having named nobody, but always relying on general terms which were far from giving offence."

Documents also announce the existence of another famous comedy, "The Comedy of the Two Theatres," by Bernini, played at the carnival of 1637, and, from investigation, it appears that, two years before, Bernini had a satirical comedy played, in which he presented on the stage an ox, to satirize a Borgia, whom the pope had called an "ox in armor."

Bernini, besides his "Two Theatres" and the "Inundation," also produced other comedies more or less meritorious and spectacular. We mention "The Fair" and "The Sea," in which the artist produced the illusion of sunrise, and succeeded by the use of admirable engines. We will also mention "The Palace of Atlas and Astolpus," and the "Means of paying homage to the ladies in comedy." Bernini's importance as a dramatic author consists in this, that he, as they say, was the first to introduce at the theatre the grand spectacular comedies. The imagination and the talent of the author served him admirably in these representations.

It is for this reason, perhaps, that the dramatic artist also became a painter of theatre decorations. That Bernini practised painting everybody knows, but that the master ever placed his brush at the service of the theatre is less known to my readers. At any rate, it is incontestable that Bernini, having introduced, or enlarged, the frame of comedies so as to involve stage machinery, gave himself up to the painting of the decorations, just as in Italy before him certain painters, for instance, Andrea Del Sarto, Baldassarre Peruzzi, Raphael, Tribolo and others had done the same thing from time to time. In this connection, an interesting bit of testimony of the time is one that I found in documents bearing date of 1634. We read that, "In January, 1634, there arrived at Rome a brother of the King of Poland, the Prince Alexander Charles, in whose honor Cardinal Antonio Barberino caused to be reproduced the 'History of Saint Alexis' by the ablest musicians, with marvellous decorations invented by Bernini, which were changed several times, causing to appear palaces, gardens, forests, hell, and angels who, while speaking, actually flew; and at the end there was shown a large cloud which opened and brought to view the glory of Paradise."

Bernini amused himself and amused the people by painting caricatures amidst these decorations, and on the curtain of the Roman theatre he introduced caricatures of the Marquis Biscia which caused the very select audience to be convulsed with laughter.

It is a pity that time has exercised its pitiless work upon these productions of the unknown Bernini from which I have just lifted the curtain. To tell the truth, as a painter Bernini is an artist of mediocre merit, and even less than mediocre. Facts bear proof that he did not consider himself a painter, but with his own hands destroyed several of his canvases, and the altar-piece in the Vatican Gallery of Mosaics, painted by him, one of the rarest paintings which is preserved of the master, — attributed, by the way, also to Carlo Pellegrini, — does not belie the judgment which the world has passed on Bernini as a painter. Nevertheless, theatrical decorations demanded more imagination than altar-pieces, and all these decorations, full of spectacular architecture, trees, fruits, flowers, might have attained unheard-of effects, seeing that they proceeded from an artist as marvellously endowed as Bernini in all that concerns decorative pomp and the brilliancy of moving effects. ALFREDO MELANI.

MORE VAGARIES OF UNIONISM. — A few weeks ago, some painters who were redecorating the interior of a church in an English town ceased work because women were employed to clean the droppings of paint on the pews, and the employers had to finish the job themselves. And quite recently in a seaside town there was a strike of teamsters, because their employer refused to discharge a driver who had made a journey to a neighboring town three hours quicker than they themselves had been accustomed to take. — *Exchange*.



A PLEA FOR WOMEN PRACTISING ARCHITECTURE.¹

I APPEAR before you to-night with a certain amount of diffidence, as the subject under discussion is not of my own choosing, and I fear I cannot do it justice. The title, to start with, is somewhat misleading. The dictionary says "plea" means a lame excuse or apology. Now, I do not propose to offer any lame excuses or apologies, all of which would be unnecessary under the circumstances. I shall merely bring to your notice some facts relative to woman and architecture, with most of which you are, doubtless, already familiar. Then, again, the title seems to suggest that I am conscious of a feeling against women architects, and, since I read the paper before your Association, it further implies that I believe such hostility is to be found amongst your ranks. Now, I wish it to be clearly understood that I disclaim both of these assumptions. Doubtless your committee had their thoughts directed to the choice of this subject by the knowledge of the existence of this feeling; but, personally, I have never met it. No one has ever maintained before me that a woman should not practise as an architect, and, if this view is held, I venture to think it can only be held by those outside the profession, who are consequently not acquainted with the functions, powers and responsibilities of an architect.

Since you are members of the profession, it seems superfluous to address you on the subject, as you must know better than any one what are the qualifications necessary for the exercise of the same, and therefore know better than any one that it is not a case of man or woman being best fitted to practise this art, but that it is entirely a case of personal capacity.

In a back number of the *British Architect* I came across the following remark: "Whether women, as a whole, are fitted to take up the profession of architecture we hold somewhat strong and, it may be, conservative views — views which we do not think it would serve any useful purpose to discuss." I hope very much that some one present holds similar strong and conservative views, and that he will be kind enough to express them to-night, as I may tell you the subject was selected by your committee as being a peculiarly useful and suitable one.

It would be a bold man who would assert that "women, as a whole," are fitted to take up the profession, considering so few women have turned their thoughts in this direction; but it would be a still bolder man who would assert that men, as a whole, are fitted to take up the profession, *vide* the enormities that are daily committed by men in the name of architecture. I repeat, it is not a case of men *versus* women; it is a case of individual capability and aptitude.

However, there are some people, we are given to understand, who maintain that woman, *per se*, is unsuited for practising our art. Wherein the weak point lies we shall, no doubt, discover in the course of the evening; but as far as I can judge, it lies outside the woman, and is not a defect inherent in her. I suppose the reason why woman should not practise architecture is because, except in one or two isolated cases, she has not practised it hitherto; and this is no reason at all.

The same objection is brought forward every time that women have attempted to enlarge their sphere of action, and yet yearly new proofs are given that intellectually women can, at least in many cases, hold their own with men. The results of university examinations show it; members of the medical profession testify to it; the legal profession numbers women in its ranks, both in France and in America, though up till now in England women have only been allowed to study for, but not to practise at, the Bar. "Let them study by all means," the conservatives say, "but draw the line at practice." And what is the use of instruction, I ask you, if it is to be turned to no purpose? What is study without an object? Knowledge without application? It is simply creating wants without granting the power of satisfying them. Living is not learning, but applying what one has learned.

If, then, it is granted that woman is intellectually capable of wrestling with the problems of architecture, are we to suppose that she is physically incapable of carrying on the work entailed? It were unreasonable to say her strength is not equal to the task when we see what women actually do in this country. Take chain-makers, for instance. Hundreds of women are employed in the very heavy work of chain-making, a most arduous trade, and you must remember how two or three years ago certain philanthropists were anxious that legislation should put a stop to this, as they asserted the work was too great a strain for a woman. This intervention only resulted in the Home Secretary being besieged by indignant deputations of these same women, all protesting their competence and defiantly baring their muscular arms as evidence of the strength on which they prided themselves. Then, again, our agricultural laborers are not, by a long way, all men. In harvest-time, when the work requires to be got through with all speed, women are called upon to labor side by side with their husbands and brothers; they toil from earliest dawn to latest twilight, through all the burning heat of the early autumn day, and so far from succumbing to this exposure, they weather it with the best of the men and live to seventy and eighty years of age. Now the bodily fatigue an architect must be prepared to undergo cannot be compared to the physical strain our women endure when employed as field-farers or as chain-makers.

I do not mean to make light of the arduousness of the profession. The mere study of architecture involves a great deal of physical as

¹ A paper read by Miss Ethel M. Charles, A. R. I. B. A., before the Architectural Association and printed in the *Architect*.

well as mental strain, and since practice means the continuance of study and, added to this, responsibility, the profession is certainly not one to be adopted by the physically feeble. But women are not all physically feeble any more than men are all physically strong. You have heard of architects — men — breaking down through overwork, but you would not for that reason say that all men are unfitted to practise the profession. I have never heard of a woman architect breaking down, but neither do I assert that all women are fitted to practise architecture.

Those who base their objections to women architects on the fact that they are an innovation, and therefore to be suppressed, will fling their prejudices and fears to the winds when what is now an innovation comes to be a recognized institution. Already in America one town has a lady for a consulting architect, and we are given to understand that her designs for schools, prisons and railway-stations compare favorably with other similar works in the country.

But there are some opponents who are more specific in their objections, and it is with these we must now deal. Their objections really arise from an imperfect knowledge of what an architect is. There is a general idea that architects "make plans" and climb ladders, but beyond these two accomplishments nothing certain seems to be known. The former occupation is acknowledged to be quite a legitimate one for a woman, provided she have the necessary gifts, but the latter cannot be countenanced for a moment, even though she may be sufficiently courageous to attempt it, and can be trusted not to lose her head on the scaffolding. As far as I can gather, it is not the climbing that is objected to, but the fact that she may be seen climbing a ladder. Therein lies the difficulty. No less an architect than Wren shows us a way round, if not over it. The famous Duchess of Marlborough informs us Wren "was content to be dragged up in a basket, three or four times a week, to the top of St. Paul's, and at great hazard, for £200 a year." No one could object to a woman being hoisted up in a basket any more than they could object to her making use of the more conventional elevator. Climbing a ladder is condemned as unwomanly, but so was riding a bicycle or being seen on the top of an omnibus not so very long ago, and yet all are now seemingly reconciled to these unwomanly practices. Besides, the ladder question could only be raised by persons who are in ignorance of the portion of a lifetime that an architect spends upon a ladder, and as this is so infinitesimal it is unworthy of consideration.

But besides the objector to innovation and the objector to ladder-climbing, there is the man who has dealt personally with architects as their client, and who knows very definitely what an architect is and what he expects from him. He must be a thoroughly artistic, scientific and practical man. He must be able to design at all possible speed a convenient, durable and beautiful building of any one of the three groups into which buildings may be roughly classified — Domestic, Ecclesiastical and Civil. He must have an intimate and familiar knowledge of every material and every trade employed in the realizing of the said building, in order that none but the best of its kind and the best of technical skill may be employed. He must be a master of scientific construction, in order to prevent waste of time, material and money. He must keep all accounts relating to the work, bear in mind the interests of client and contractor and manage everything without allowing any friction to come about between the parties concerned. This list is not complete; I have mentioned but a few of the functions required by an employer of his architect. For the sake of argument we will suppose that they appear to offer just so many obstacles to a woman following the profession.

I use the word "profession" because it covers more requirements than art, craft, or faculty, and though it has been weighed and found wanting, it appears to be the word in most general use when connected with the practice of architecture.

To succeed in architecture one must be, as I have said, artistic, scientific and practical in business matters; that is to say, success is largely a matter of natural gifts, education and experience. Now, who will assert that the necessary gifts are not and cannot be possessed by woman; that she does not receive the requisite general education, and that experience may not be acquired by her as well as by man?

Let us look first at the æsthetic side of the question. Architecture has been defined as good construction inspired by an artistic motive or by the instinct of the beautiful. Now this instinct of the beautiful, or, as the French put it better, "*ce sentiment du beau*," is, as a rule, more strongly developed in the woman. Nearly every woman is more or less impressionable, that is, she is an artist by temperament. Her taste will lead her instinctively and intuitively to a result which a man will reach by a series of criticisms and reasonings. He sees the truth, she feels it. The beautiful is attained by both; what matter if the paths they follow are different?

In most cases (outside the profession, be it understood) who is it who cares to be surrounded by beautiful objects and attempts as far as is possible to make the home a thing of beauty? It is certainly not the average man, who, so long as he is comfortable, cares little for the appearance of his surroundings. It follows, then, that it must be the woman who will cheerfully sacrifice even comfort to her conception of beauty, if any choice have to be made between the two.

Some people go so far as to say that a woman must necessarily know how to plan a house better than a man, because her household duties suggest to her the wants and requirements that must be met. We do not agree with this view. The best housekeeper in the world may have most definite ideas as to what she requires, but she will not produce a plan, that is, the suitable disposition of spaces, till she has

learned what rules and precepts must be obeyed in planning a house. And these rules, being all based upon common-sense and obvious reasoning, are as patent to men as they are to women.

We must not, however, lose sight of the fact that the influence of woman in domestic architecture has been felt ever since the progress of social relations made her the equal instead of the slave of man. Women's position in a country is the surest sign of the social progress in that country, and it was in the sixteenth century, when women began to be respected "as a whole," and not in individual instances, that domestic architecture regained its prominence. It was when a woman ruled this country, and by her personality influenced many, that castles, cathedrals and colleges — buildings designed by men for men — ceased to be the most important architectural objects erected. Elizabeth's reign is remarkable for the number of radical changes which took place, and in no direction was the change so marked as in architecture.

At the time when, under James's rule, the Scotch were dwelling in fortresses about as comfortable as a Norman keep, the English, under Elizabeth, were vieing with each other as to who should build the most roomy, most convenient and most beautiful houses. It is noteworthy that the great Queen spent not a penny herself in the interest of building, but she gave her noblemen much moral support, encouraging them to spend their thousands in erecting palaces worthy of receiving her as a guest. One of the most indefatigable builders of that time whose name has come down to us was a woman, Elizabeth of Hardwicke. Of the "three most elegant seats that were ever raised by one hand," so says her biographer, only Hardwicke Hall remains, and, judging from its monotonous symmetry and extravagant window-space, we have, it seems, little cause to regret old Chatsworth and Oldcotes. Besides her three country-seats, this lady left "stately almshouses for twelve poor people" in Derby, and personally superintended the construction of "a splendid mural monument" to her own memory in All Saints Church, Derby. Her biographer, alluding to her passion for building, describes her as "a woman of a masculine understanding and conduct; proud, furious, selfish and unfeeling." Apparently we are to gather that these unattractive qualities, pride, violence and egoism, go hand-in-hand with a masculine understanding. If, as Hardwicke shows, she lacked artistic feeling, she was, on the other hand, a thoroughly practical woman. Of the four husbands she outlived, three were wealthy men who were able to supply her with the means of indulging in her favorite pursuit.

In France, where women stand out more prominently than in England, and during the early Renaissance, when they were most conspicuous even as politicians, warriors and poets, we find them occupied with building at an earlier date than at home. Marie de Pierre-Vive, Dame du Perron, one of the ladies of the household of Catherine de' Medici, was officially associated with Philibert de l'Orme during the erection of the Tuileries. In 1566 her name stands among the list of "*MM. les Surintendants des Bastiments du Roy*," and it is interesting to note that where she and De l'Orme signed papers together, Dame du Perron's name comes first. Her royal mistress was another woman of "a masculine understanding," and insisted on her own plans being used for her palace. De l'Orme writes to her, "*Lequel Palays je conduis de votre Grace suivant les dispositions, mesures et commandement qu'il vous a plait m'en faire.*"

But however artistic a woman may be, her natural gifts alone will not suffice any more than will those of a man, without study and direction. Art has its restrictions and its limitations, which must be recognized and appreciated, if truth and nature are to be our guides; and architecture is particularly restricted and limited in theory and in practice. In theory it is bound by those rules of art inspired by taste based on traditions, and by those rules of science which can be demonstrated by invariable and absolute formulas. And in practice it is limited by structural conditions, which, if neglected, result in the collapse of the building; it is limited by the physical properties of material, by the climate, by the habits and necessities of the moment.

Study of æsthetic rules produces fine designs, and study of scientific laws produces fine construction. Construction demands a knowledge of the principles of mathematics, besides a knowledge of the properties of building-materials. Now, mathematics involve logic, or the science of reasoning correctly, and hitherto logic has been held to be the peculiar inheritance of man as opposed to woman. It may be freely granted that among uneducated women possibly a larger proportion are more illogical in their every-day conclusions than among an equal number of uneducated men; but it by no means follows from this that the brain of the average woman of education is less capable of mastering the science of logic than that of the average man of education. Now, we are only discussing cultivated women, and all reference to the uncultivated and illogical class is beside the question. That logic can be mastered is proved by the successful results achieved by women at the universities, where they show peculiar aptitude for the science of mathematics, the numbers who devote themselves to this study being great, out of all proportion to those who select other schools or triposes. Again, at the *Ecole des Beaux-Arts*, where the architectural course includes, besides an immense variety of other subjects, a very high standard of mathematical ability, a woman, an American, has lately had the honor of carrying off the Premier Prix over the heads of her brother-students.

But pure mathematics are of little use without familiarity with the properties of building-materials, and this familiarity, it is argued, can only be gained by a technical knowledge of the trades employed in building. In the Middle Ages the architect was only distinguished from the workman by conspicuous natural gifts and greater skill in

technique; he who was most familiar with his materials produced the finest designs. The workshop was then the training-ground for the embryo architect, and doubtless would have proved a rough school for a woman. But now, however much the fact may be deplored, most of the architect's work is produced in an office, and not in a workshop, and is due more to his intellectual activity than to his manual skill in any trade. If, then, good design depends upon the proper use of material, and this use may only be learned through handling it, how comes it that fine designs are produced by men who are in no way fitted to work with such material, and that, on the other hand, most of the builders who dispense with the services of an architect, and many of whom are skilled in one or more trades, produce crude results which, though they strive after, fail to realize, architectural effect? The answer is simple. It is largely a matter of education and preparation which enables the sharpened intelligence to grasp more readily the principles of technical skill. This general education is indispensable to architectural study, and since there is but slight difference nowadays in the course of education pursued by men and women, I cannot see that the absence of workshop training should nowadays hamper a woman more than it does a man. Do not mistake my meaning. Education cannot create the gift of design, for designers, like poets, are born, not made; but it fosters and encourages this gift and calls out the highest faculties when they do exist in the student. No amount of training will make the deaf and dumb to sing; but, for all that, training is invaluable, not to say essential, to a singer who means to do his voice justice. If I may be allowed a misquotation:—

Books, gowns, degrees will leave a fool a fool,
But designs are best when the designer's been to school.

Granted, then, that woman is fully competent as far as the æsthetic and scientific sides of the profession are concerned, there remains the economic side to be considered. This covers all the business transactions that take place between the architect, client and contractor, and involves the exercising of a large amount of tact in order to make matters run smoothly. Without tact a business man will not go far, and this indispensable quality seems universally acknowledged to be dealt out more generously to woman than to man. In France every woman is born a business-man, and her taste is never questioned, whereas in England it is the exception to find a man who combines artistic talents with business qualities.

The stumbling-block in the business relations seems to be that the architect is responsible for the quality of the work done, and so has to oversee and direct the workmen. This, for some reason, is supposed to be beyond the powers of a woman; I am told, it is objected, she cannot use the necessary amount of strong language to keep the workmen up to the mark. But surely there are other ways of enforcing your will than through the medium of unseemly language. There is not one man in twenty who has realized that gentleness may be a force. A man will boast of his want of self-control; he flatters himself that abusive language shows him to be a man of strong character, a master; he would count himself less manly were he less violent, and yet you must confess that some of the gentlest men you know happen to be those who always get their own way and compel people to carry out their wishes whether they will or no. St. Paul's Cathedral, one of the finest examples of Renaissance work we have in England, is a living example of what workmen can produce without the stimulus of abuse. When held the "ungodly custom of swearing" in such abhorrence that he posted up an order to the effect that, upon sufficient proof, the clerk-of-works should dismiss any laborer guilty of this crime, and further that "if any master working by task shall not upon admonition reform this profanation among his apprentices, servants and laborers, it shall be construed his fault, and he shall be liable to be censured by the Commissioners." Besides, swearing at one's subordinates is really not as fashionable as it used to be. In the army and the navy, where formerly the slightest order was accompanied by a volley of oaths, the change is strongly marked, and the officer who now so far forgets himself as to swear at his men lays himself open to a severe reprimand from those who are of superior rank to that which he holds.

I think I have touched upon most of the points which might be brought forward as objections to women practising architecture, and I trust we shall all be agreed that the obstacles are more imaginary than real. But there is one other point I ought to refer to before closing, and that is the "new style" some people are clamoring for. Since women began to study architecture it has been suggested that they may supply this pretended want, but as yet there has been little to warrant the conjecture that the fresh inspiration will come from that quarter. Women make intelligent interpreters and passionate disciples, but, to judge from the testimony of bygone centuries, their power stops short at creation. It may be wrong to assume that woman is totally wanting in inventiveness, and it may all be a question of upbringing and training. Hitherto men have always led the way, for the race is to the swift and the battle to the strong, and men have been the swift and the strong since women's upbringing taught them only dependence and reliance, and in no way fostered originality. But nowadays women are expected to think and act for themselves, and this self-dependence and self-reliance may prove to be the generating spark which will rouse to activity the originality and creative power which, for all we know to the contrary, may have long lain dormant within them.

But in any case this want of creative faculty would not hamper a woman architect. Architecture is a logical art, and no change has

taken place in it without a very obvious reason, and when no reason can be adduced for original and capricious designs, such productions are grotesque and not architectural. The truest architects are not distinguished for brilliancy of invention so much as for careful attention bestowed on the smallest details of their work, and women, "as a whole," possess the faculty of worrying out details so small that they often are apt to escape the attention of the more comprehensive mind of men.

If I do not stop now you may go away with the impression that I consider women more fitted to practise architecture than men, and nothing could be further from my thoughts. May I, in concluding, repeat what I said at the beginning of my paper, that it is not a question of men *versus* women, but that it is entirely a case of the capacity of the individual?

A FOUNDATION ON QUICKSAND.¹

MERIDEN lies in a valley between high hills. In the valley, which is claimed by some to be the original bed of the Connecticut River, is a soil which consists of a sandy loam, a little gravel and plenty of quicksand. Most of the buildings in this valley rest on the skin which is found at various depths below the surface, and here the Meriden Gas-light Company bought a 300' x 500' meadow-plot adjoining its works on which to erect a new holder. Careful borings were made over a section 120 feet wide by 250 feet long to determine the thickness of the gravel, if any, and its distance below the surface. To the west of this section, and 25 feet distant, runs a shallow brook, 20 to 30 feet wide—shallow except in freshet time. About seventy-five tests were taken, and the result laid out and plotted into curves, so that the most desirable place for the site might be located. The top material was a sandy loam, evidently a silt deposited from the overflow of the brook when in past years it was not so confined; the next, a good gravel, but very thin; below that, a quicksand of unknown depth. At a few points the gravel was found as near as 2 feet from the surface and 2 feet thick, while at the others it was 8.5 deep and only .4 thick, shading off to nothing. The average depth, however, taken from the boring-stations, was 5.5 feet deep and 1.2 feet thick. A boring of 50 feet taken in the centre of the site showed 42 feet of quicksand and still more below.

On such materials it was decided to construct the foundation and erect a steel tank-holder, to be 115 feet in diameter and 103 feet high, holding 700,000 feet of gas in three lifts; the weight of the holder to be 475 tons and the weight of the water to be 8,625 tons, or a total of 9,100 tons.

As the work of excavating progressed and the gravel was exposed, there was found a clearly defined depression diagonally across the pit, as if at some time the brook had flowed that way; for logs and trunks of trees were found together with a quantity of brush. Through this depression the gravel was very thin, and in three places the quicksand was entirely exposed—the first, a space 10' x 15'; the second, a space 4' x 12'; the third, a space 3' x 15'.

Hardly had the whole of the loam been removed when a rain came, followed by a heavy freshet, overflowing the meadow and deluging the pit. When the water had subsided it was pumped out in 8 hours with a 4-inch centrifugal pump and a 7½-horsepower motor, though the water was 10 feet deep in some places. The freshet convinced the Company more than ever that in erecting a holder it would be advisable to make the top of the foundation above high-water mark, which in this case would mean a fill in some spots of 12 feet, with an average of 8 feet, and the steel tank would be 2.5 feet above the level of the meadow.

At this point a difficult problem was confronted. Meriden topographically is on high hills and in a sandy valley; good gravel is a very scarce article. Four miles away, on the line of the railroad, is a large, poor gravel bank, and two miles in another direction is a small, good bank; but with all the teams that could be procured it was not possible to haul the material as fast as it was needed; and it was expensive—\$1.00 per yard delivered. It was evident that other and good material must be obtained in large quantities. On the line of the railroad three miles away is a large trap-rock quarry. Refuse in the shape of iron-stone, soft-rock and some dirt is accumulated in large quantities. It was believed this stone would mix well with the material which was on hand and could be purchased after it had been passed through the crusher to a 1½-inch size, at 60 cents per yard delivered and in quantities up to 150 yards per day. About 50 yards of gravel and 50 yards of clean, sharp sand could also be procured each day, and as much ashes from the works as there were teams to put on it.

The question of piling was considered, and by some might seem the only wise plan under the circumstances, but after consulting the leading local builder, who had worked on this quicksand for thirty years and had erected some very heavy factory-buildings on it, it was thought best to put in a combination filling of the above-named materials.

The quicksand is found hard packed and not easily dug, unless water is allowed to mix freely with it. Although the excavation was in places much below the level of the brook, little water was encountered, and quite as much came from the land as from the brook side. By keeping the bare spots well drained the men could work on the quicksand with a degree of ease without sinking in very deep; the less it was disturbed, however, the better off they were. Over

¹ From a paper by Mr. C. A. Learned, read before the New England Association of Gas Engineers.

these bare spots it was decided to lay plank close together lengthways of the holes, and upon these 8 by 10-inch timbers, 8 inches apart, crossways of the holes. The filling between the timbers was of pieces of bricks and old retorts broken up fine, that being the best material at hand just then. One of the bare spots being narrow and long, the surface was covered with large flat stones, the smaller spaces being filled in with fire-bricks and coarse ashes.

While working at this low level a pump was run night and day; also from these quicksand spots a 4-inch-tile drain was laid to a central point to facilitate drainage and keep the mass from becoming spongy while the tamping was going on and each course of filling was laid.

Until the whole surface approached a level no roller could be used, but everything put in was thoroughly rammed and sprinkled. The layers were about 3 inches thick over the whole surface. When the valleys were evened up a two-horse 4,000-lb. roller was put on, and as the thickness became greater this roller was increased in weight to 6,500 lbs., requiring four horses. When the level of filling had been raised above the natural water-level the pumping was dispensed with over night, allowing the foundation to be saturated, but it was pumped out again in the morning.

Near the centre of the foundation a loose brick well was built up, into which the water ran as the foundation was successively wetted, and from which it was pumped to the brook. There were some high knolls of gravel not over 3 feet under the surface. It was thought at first that the 5-foot concrete side-wall foundation might rest on these, but further consideration convinced the Company that this was not advisable, as part of the foundation would rest on natural gravel, while most of it would be on filled ground, so the whole level was raised 1 foot to allow of the same kind of cushion underneath the whole structure before the 5-foot circle was started.

The layers spread each day over a diameter of 125 feet were about as follows:—125 yards of quarry refuse, 40 yards of good gravel, 50 yards of works' ashes. Towards the end of the work the ashes were exhausted. Near by was a bank of 500 yards of sand, and from this was taken what was needed to make the top-dressing under the concrete, spreading on the stone, washing it in and carefully rolling. Toward the end the roller worked night and day.

Near the edge where the wall of concrete was laid, there was a space that could not be rolled, but had to be filled and tamped to a depth of 4 feet. In order to make sure that this portion was as solid as the centre, a round tapering bar 5 feet long was driven into the main foundation several times. Seventy blows on the average were required to drive it 4.5 feet, and the outside ring was tamped until it equalled the above test.

The amount of material removed approximated 2,900 yards. The work of excavating and filling ready to begin concreting took twenty-two days, and six days more were required to fill in around the great circle after the concrete wall was 4 feet high. This, however, did not delay the concreters in their work. The filling was as per the following amounts: Quarry stone or refuse, 1,780 yards; gravel, 680 yards; sand, 310 yards; ashes, 1,100 yards; total, 3,870 yards.

On this foundation was laid 630 yards of Portland-cement concrete, in the following proportions: 1 of cement, $2\frac{1}{2}$ of sand and 5 of stone. The size of stone was $1\frac{1}{4}$ inch and smaller. A great circle of concrete 4 feet wide and 1 foot thick was laid 5 feet below the finished top. On this circle was laid a ring 3 feet wide at the bottom, tapering to 2 feet 9 inches wide at the top, and 3 feet high; resting on the ring was laid, over the whole diameter of 118 feet, a layer 1 foot thick, trued to perfect level and plastered smooth. This work was accomplished in eighteen days, and in a most satisfactory manner, a local engineer taking the job at \$4.90 per cubic yard laid. As soon as the foundation was ready the iron-men were on the ground, and the holder was erected complete in a week less than the specified time of four months.

In order to prevent the action of the brook eating away the bank near the holder, a stone wall 7 feet high was built to the level of the holder foundation and 400 feet long, protecting also a new purifier building near the brook. City water was used to fill the tank, as the brook water contained acids. It took three and a half days to fill the tank, which holds a little over 2,000,000 gallons. Before the water was put in careful levels were taken on eight points of the foundations. After filling levels were again taken, and there was not the slightest settlement.

ILLUSTRATIONS

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

UNITED STATES CUSTOM-HOUSE AND POST-OFFICE, BRUNSWICK, GA. MR. JAMES KNOX TAYLOR, SUPERVISING ARCHITECT, WASHINGTON, D. C.

PLANS AND SECTION OF THE SAME.

DETAIL OF THE SAME.

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

DOORWAY: PALAZZO BRANCOLI-BUSDRAGHI, LUCCA, ITALY;—
DOORWAY: PALAZZO CITTADELLA, LUCCA, ITALY.

COMMUNICATIONS

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

DANGER FROM WOODEN STAGING IN WESTMINSTER ABBEY.

25 CATHERINE ST., NEWPORT, R. I., April 13, 1902.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—It is with the greatest distress and the gravest apprehension that I see that loads of timber and lumber are being taken to Westminster Abbey and carried into the building to construct the staging for the coronation. Should fire get into this lumber (a likely event), then Westminster Abbey, one of the most exquisite of Gothic creations, would be lost to the world.

It is easy to see how staging can be made of wrought-iron slats, pinned together through holes punched in them beforehand, with nuts and bolt-heads screwed on to the ends of the pins. Such staging can be made to conform to any arrangement for the seating desired. The floors under the seats can be of boiler-plate, noise from which can be deadened by thick carpets and layers of linoleum. The seats can be the usual cast-iron once common in our theatres, with stuffings of asbestos.

Will not some American firm offer to contract for such staging and send for plans of the arrangement of seats desired? There was a firm (I have forgotten the name) who had an office in the Charities Building on Fourth Avenue near Twenty-second Street, New York. They did work for me on the Colt Memorial Building in Hartford in 1895, and could do such work as this well.

Will not the *American Architect* give a wide publicity to this word of warning?

Respectfully yours,

EDWARD T. POTTER, Architect.

THE "EXUBERANCE" OF MESSRS. HORGAN & SLATTERY.

NEW YORK, N. Y., April 15, 1902.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—We have read with much interest and wish to thank you for your clear exposition of the facts in connection with our employment as architects for the preparation of plans and specifications for the 69th Regiment Armory Building.

We fear that, not having the facts before you, you have unwittingly done us an injustice in your remarks as to the exuberance of the design published in your last issue of the building No. 918 West End Ave., New York. We beg to state that the ornamental lamps, shields, stained-glass, etc., shown on the elevation were not designed by us, but were erected by a Brazilian who became the owner of the building nearly two years subsequent to the completion of the building by us.

We also send photograph of the building, taken when we completed same, and we think you will agree with us it is hardly exuberant in its details.

Very truly yours,

HORGAN & SLATTERY.

[THE photograph referred to shows that the exuberant ironmongery was added after the house was completed.—EDS. AMERICAN ARCHITECT.]

NOTES & CLIPPINGS

ELECTRICITY IN EGYPTIAN TEMPLES.—Electricity is to be used in lighting the ancient Egyptian temples of Luxor and Karnak.—Exchange.

SOCIETIES

THE ARCHITECTURAL LEAGUE OF AMERICA.

THE Fourth Annual Convention of the Architectural League of America will be held at Toronto, Canada, on Thursday, Friday and Saturday May 29, 30 and 31, 1902.

The Architectural Eighteen Club of Toronto, hosts for the occasion, and the various Committees are endeavoring to secure good speakers and to make the occasion profitable and entertaining.

The topics for discussion will follow in the main those of last year, special attention being given to Municipal Improvement, Architectural Education and the various departments of Architectural Club-work.

HUGH M. G. GARDEN, Secretary.

THE ROLAND PILLARS.—In many parts of Germany one finds in market-towns a rude effigy in stone called Rolandsäule, which is supposed to represent the famous Paladin of Charles the Great. There was one in Berlin which suffered ignominious treatment owing to the changes in taste and is now deeply regretted by the local antiquarians, while a number of the minor towns of Prussia find their old market-statue the most attractive thing to show visitors. Most famous of all is the Rolandsäule at Bremen. The enormous popularity of the versified tales in which Roland figured from the tenth century onward throughout the West of Europe may account for these statues; or, if they were not originally meant as monuments to Roland, may explain the attribution of them to the Paladin. In France a suggestion has been made to erect a memorial to Roland, who was an historical personage named Hrudland, Prefect of Brittany under Charles the Great. He was overwhelmed with the rearguard in 778 by the Basques while retreating from Spain. Hrudland, or Orlando, as the Italians called him, is certainly one of the most famous Frenchmen known to history, about whom a more poetic nimbus has gathered than about Charles the Great or Napoleon. So a fund has been launched in Paris which when large enough is to provide that fair city with a monument to the hero of a thousand songs, epics, plays, a Teutonic general whose character has been invested with traits borrowed from Celtic culture-heroes and ancient Romans of history and romance. The German colossal statues named for Roland in all probability were erected by citizens of certain towns to attract the ignorant, half-pagan rustics, thus affording them a substitute for their old idols, and they were placed at the town-hall or in the market so that bargains might be sealed before them. The Paris Roland will form only one of a thousand statues which attract Christian as well as pagan foreigners to the French capital.—*N. Y. Times*.

IS FORTY-FIVE THE AGE-LIMIT FOR LABOR?—Is it true that employers of labor are discharging employes who have reached the age of forty-five, whether they are capable or not? Do they decline to take on new men who have reached this age? At a meeting of the Chicago Federation of Labor, held a few weeks ago, statements were made that these were existing facts. Members present testified that they had been obliged to dye their hair when it turned gray, to cut off their beards which were becoming white, and leave their spectacles at home, in order to look younger than forty-five, or they could not get a job. The discussion was serious, and some excitement prevailed, so much so that one member sarcastically observed that employers ought to make a law providing for the shooting of all laborers who had reached the age of forty-five. No doubt there is some truth in this. Certain employers may try to get rid of old men and look for young ones, but it is impossible to change the law of nature that a man who is worth his pay, whatever that is, can get work in this country, no matter what his age. If he is twenty-five and incompetent, he cannot keep a job, nor can he at forty-five. If he is active and intelligent, he will in time get what men of the same activity and intelligence command, no matter what his age. The truth probably is that so many workmen of forty-five have lived a hard life and have lost their abilities that they are not worth the money; and employers, seeing the rule, cannot be persuaded to make exceptions. But, after all, the Labor Federation should bear in mind that any resolutions on their part that tend to prescribe whom employers shall employ are, and always will be, unsound, and can only redound to their own injury.—*Harper's Weekly*.

THE RETIRING-AGE FOR WORKMEN.—Every little while a discussion arises as to the time of life when a man ought to retire from active participation in affairs. The public is asked to consider whether there is not a certain limit of years when a man no longer ought to preach, when a rich man ought to begin to give away his money, when a farmer ought to hand over his fields and granaries to his sons and daughters, when an editor ought to stop writing anything but reminiscences which he is pretty sure nobody will read. Out in Minnesota the other day a logging-party, returning from its winter camp, was found to consist of one contractor, aged seventy-eight; another contractor, aged sixty-five; one helper, aged seventy-nine; one horse, aged twenty-three, and another horse, aged twenty-one. They built their own camp, cut their own roads, and piled upon the frozen lake 100,000 feet of pine timber. Further than these bare details the chronicle is silent, but there is enough to show that in the logging-camps of Minnesota the question of the age of retirement is still under debate, or has been indefinitely postponed.—*Exchange*.

GREEK COLUMNS.—So far from employing pedestals to columns, which some have considered as forming an essential part of an order as the entablature, the Greeks placed their columns immediately on the floor or uppermost step, the whole temple being generally raised on a low platform, to which the ascent was usually by three deep steps or *gradini*, serving as a base to the edifice; the depth of the steps was not accommodated to the human stature, but regulated so as to accord with the dimensions of the column. It is, therefore, conjectured that either a sloping platform of wood or lesser steps of the same material were employed as the real ascent to the temple. The Greeks invariably placed their columns singly, never in pairs, as has frequently been done by modern architects, and which, if not utterly indefensible, ought never to be resorted to unless required by positive necessity: for instance, where wider intercolumns than the scale of the order will properly admit are required, in which case, by affording additional support to the entablature, coupled columns not only excuse the width of the intervals, but take away the air of poverty that would result from single columns placed at the same distance from each other. Coupled columns are most of all offensive when forming a prostyle colonnade, especially if it be one with a pediment, since that disposition approximates so closely to that of the front of an ancient temple as to render any incongruity the more striking.—*The Architect*.

SEQUEL OF THE CHIGI BOTTICELLI SALE.—The suit of the Italian Government against Prince Chigi for having sold his famous Botticelli to Mrs. Gardner, of Boston, has resulted in a manner to make other owners of valuable art-works more careful. The Prince is ordered to buy the picture back or, failing that, to forfeit its value in money to the State. That the Government means to carry out the law forbidding such sales is also shown by the fine of \$28,000 imposed upon Enrico Pardo for having sold to a foreigner the Cellini bust of Altovito, formerly in the Altovito Palace in Rome.—*N. Y. Evening Post*.

CURIOUS EFFECT OF CHEMICALS ON SEA-WATER.—While M. Santos-Dumont was inflating the balloon of his No. 6 air-ship at Monaco, he was commanded by the authorities to cease immediately the process of hydrogen-making, on account of the extraordinary effect that the drainage of refuse acids and chemicals into the bay was having on the water, which had turned a brilliant orange, and which it was feared might have an injurious effect on residents near the sea-front, besides poisoning the fish. Subsequent investigations of the curious phenomenon, however, proved that the refuse sulphates running from the Dumont gas-house into the sea had, on contact with the chloride of sodium, or common salt of the ocean, precipitated enormous quantities of oxide of iron. This pure rust had dyed the waters and the shore a most brilliant orange carmine, but except for this no harm was done. Beyond acting as a tonic for the fish, the rust was absolutely innocuous, and the work of inflation was forthwith resumed.—*Scientific American*.

THE EXCAVATIONS AT CARTHAGE.—The Académie des Inscriptions et Belles-Lettres, says the Paris correspondent of *The Times*, has voted 30,000 francs to Father Delattre in order to enable him to continue his excavations on the site of Carthage.

THE USE OF MAGNETITE IN CONCRETE.—A writer in *Nature* points out the advantage that would be gained by the use of magnetic-iron ore as a material for concrete blocks. He points out that if magnetite is used instead of ordinary rock in the shape of fragments, and magnetic sand or ilmenite sand instead of common sea-sand, concrete blocks can be obtained which have all the strength of the ordinary concrete blocks, and which weigh, when immersed in water, exactly twice as much as the ordinary blocks. Such an increase in weight makes the magnetic blocks far superior as regards resistance to the waves. Work constructed with magnetic blocks will stand when other work will be destroyed.

BROCK'S "LORD LEIGHTON" CAST IN BELGIUM.—The recumbent bronze figure of the late Lord Leighton for St. Paul's Cathedral, London, modelled by the sculptor Brock, was cast in Belgium, and the marble pedestal was also fashioned in pieces on the Continent and sent across the Channel to be erected. According to the statement of a member of the Leighton Fund Committee, made to a London paper, "The work could not be done in England; that was why it has been done abroad. Mr. Brock would not intrust a work of this importance to English founders. Any one who knows anything about such things is aware that this is why such work goes to Belgium." The explanation is received with no little dismay in London. Certainly, it would not be true of the United States.—*N. Y. Times*.

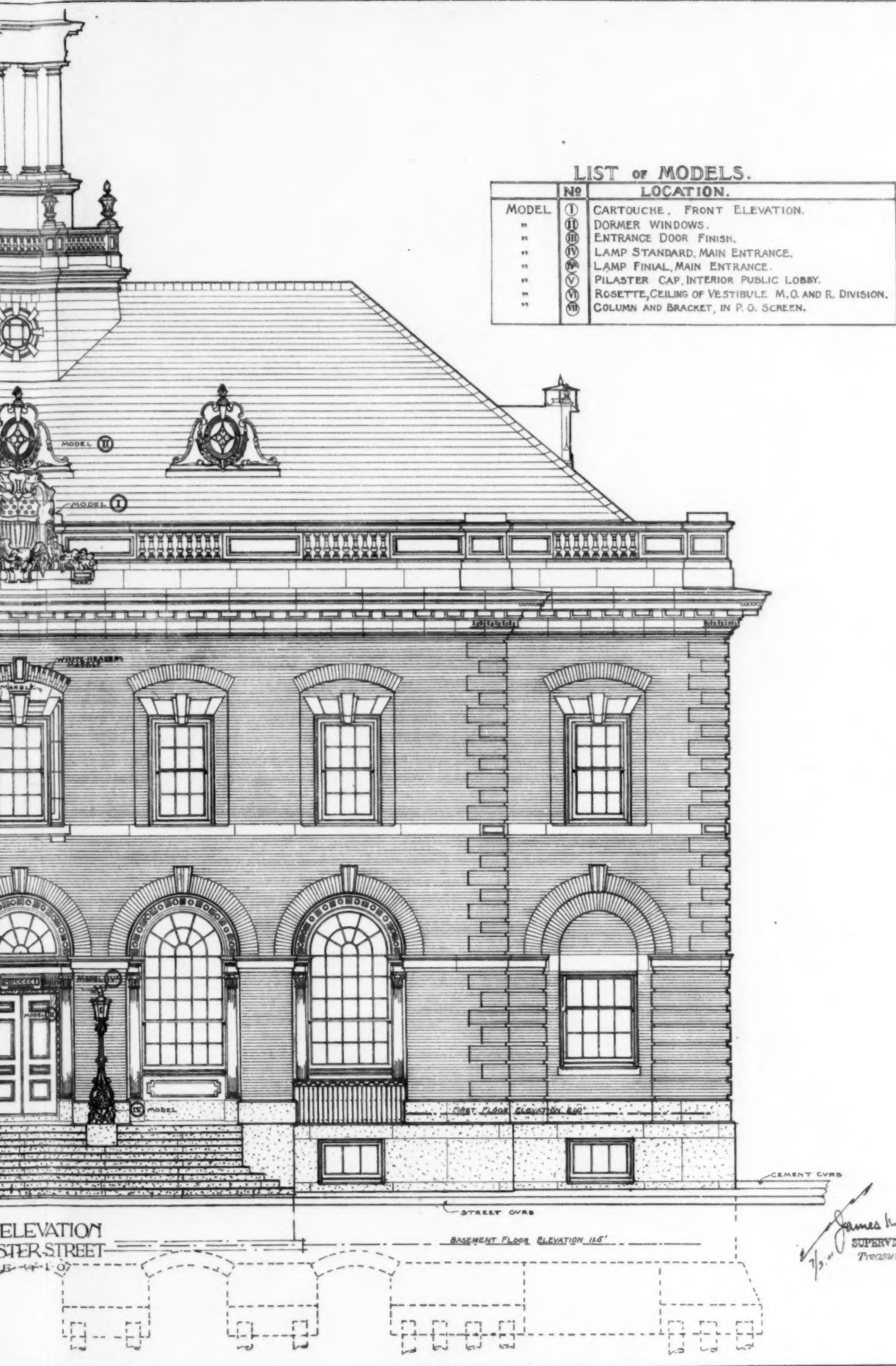
CANONS' STALLS FOR WESTMINSTER CATHEDRAL.—The luck of Cardinal Vaughan in the building of his cathedral seems to extend even to details. His fifty-four canons' stalls, which formerly stood in the Monastery Church of St. Urban, near Lucerne, will be the finest of their kind in London. The late Lord Kinnoull bought them in 1866 and bore them to Dapplin in forty trucks. One tires of toys, especially of toys of that size, and the present Lord Kinnoull, willing to clear out his stalls, fixed as their price the modest sum of £4,000. Cardinal Vaughan saw, and was delighted with what he saw, but did not think he could seat his canons so expensively. Then the usual benefactor stepped forward just in time, put down his check, and presented the carved furniture to the hesitating but not lost Cardinal.—*London Chronicle*.

THE LIGHTNING-ROD QUESTION.—The vexed lightning-rod question is now under consideration of the Special Lightning Research Committee which was organized last year by the Royal Institute of British Architects' and the Surveyors' Institution. More than 200 competent observers have been appointed in the United Kingdom, the Colonies, India, and elsewhere. The British War Office, the Home Office, the Post-office, the Trinity House Corporation, and the United States Department of Agriculture have agreed to furnish the Committee with particulars of damage resulting from lightning-stroke to buildings under their control. The heavy thunder-storms of last year afforded many opportunities of investigating and recording, upon prescribed lines, the damage caused by lightning. The net result, so far, is a series of seventy or more trustworthy records, which furnish promising material for the Committee to work upon, with the view of formulating conclusions. The Committee have arranged for getting photographs immediately after the occurrence of a disaster in cases of importance. Out of sixty cases tabulated up to the end of December, no fewer than twelve relate to buildings fitted with some form of lightning-conductor. As regards the system recommended by the Lightning-rod Conference of 1882, the facts at hand are not sufficient to determine the extent of its efficacy. The recently issued report, however, of the British Inspectors of Explosives goes to show that it has been found wanting, and that there is ample justification for the present inquiry. The head of the Committee is Mr. John Slater, the eminent architect, and among his associates are Dr. Oliver Lodge, W. P. Goulding, Major-General Festing, and other well-known scientists.—*N. Y. Evening Post*.



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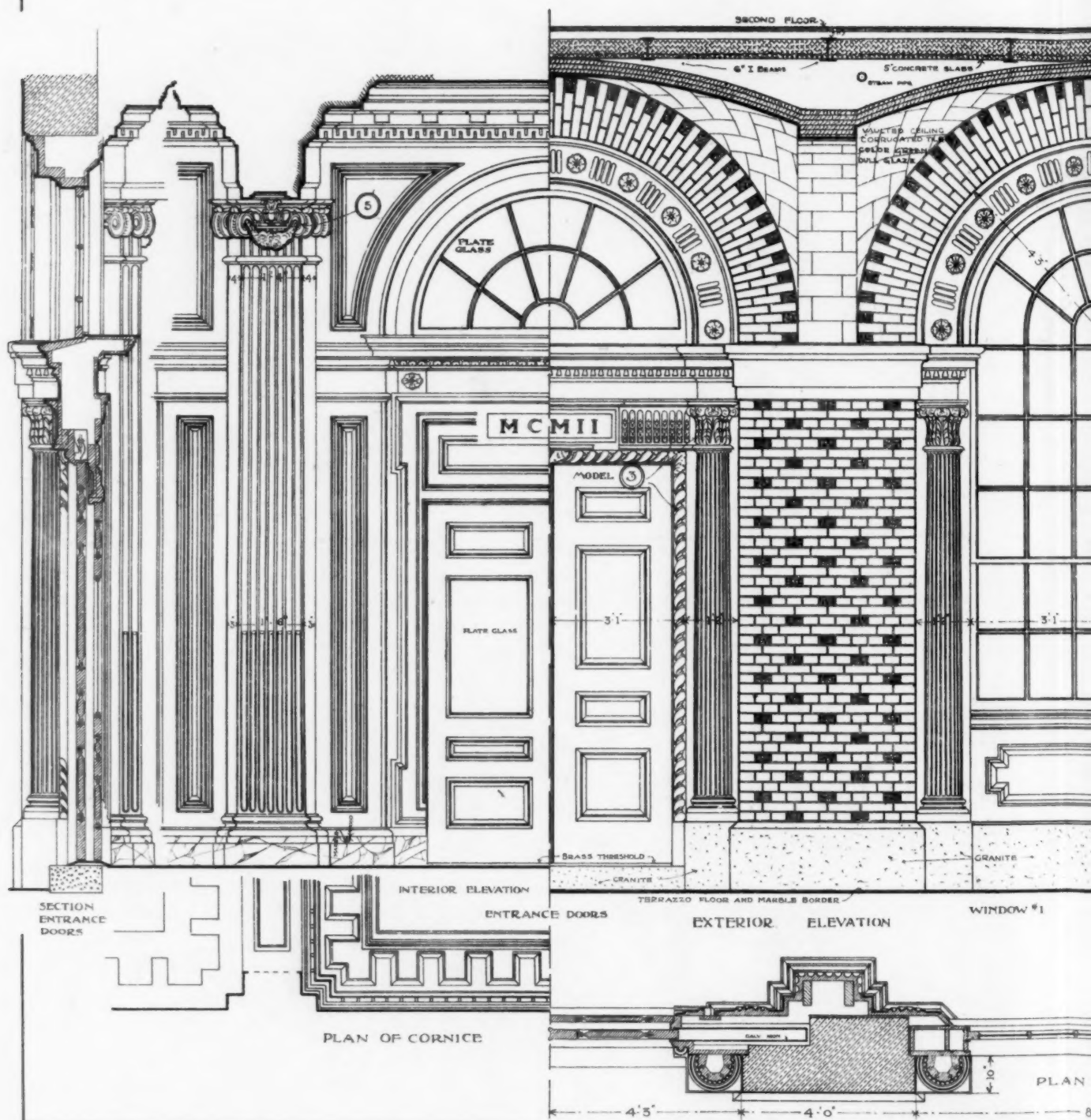
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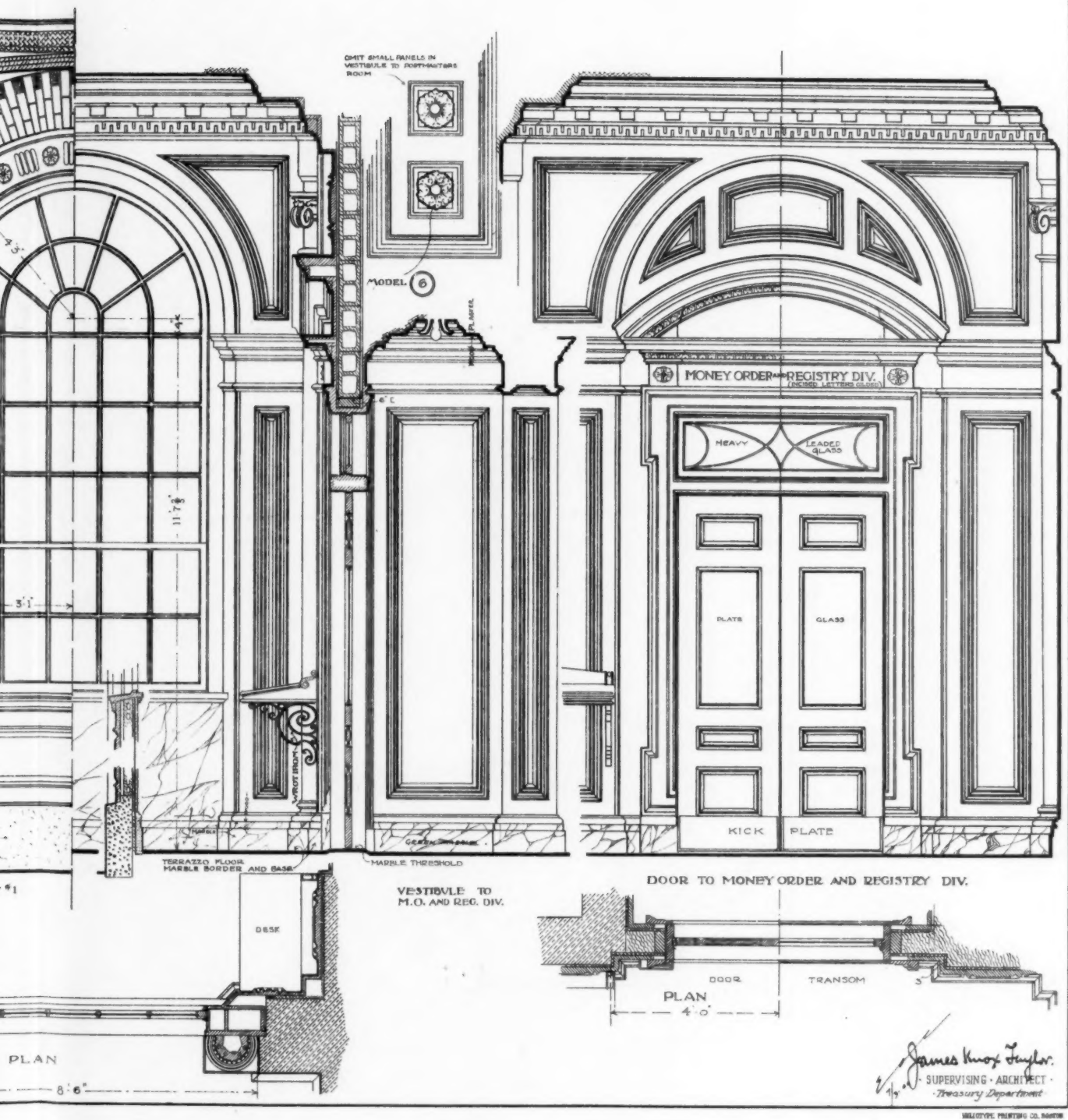
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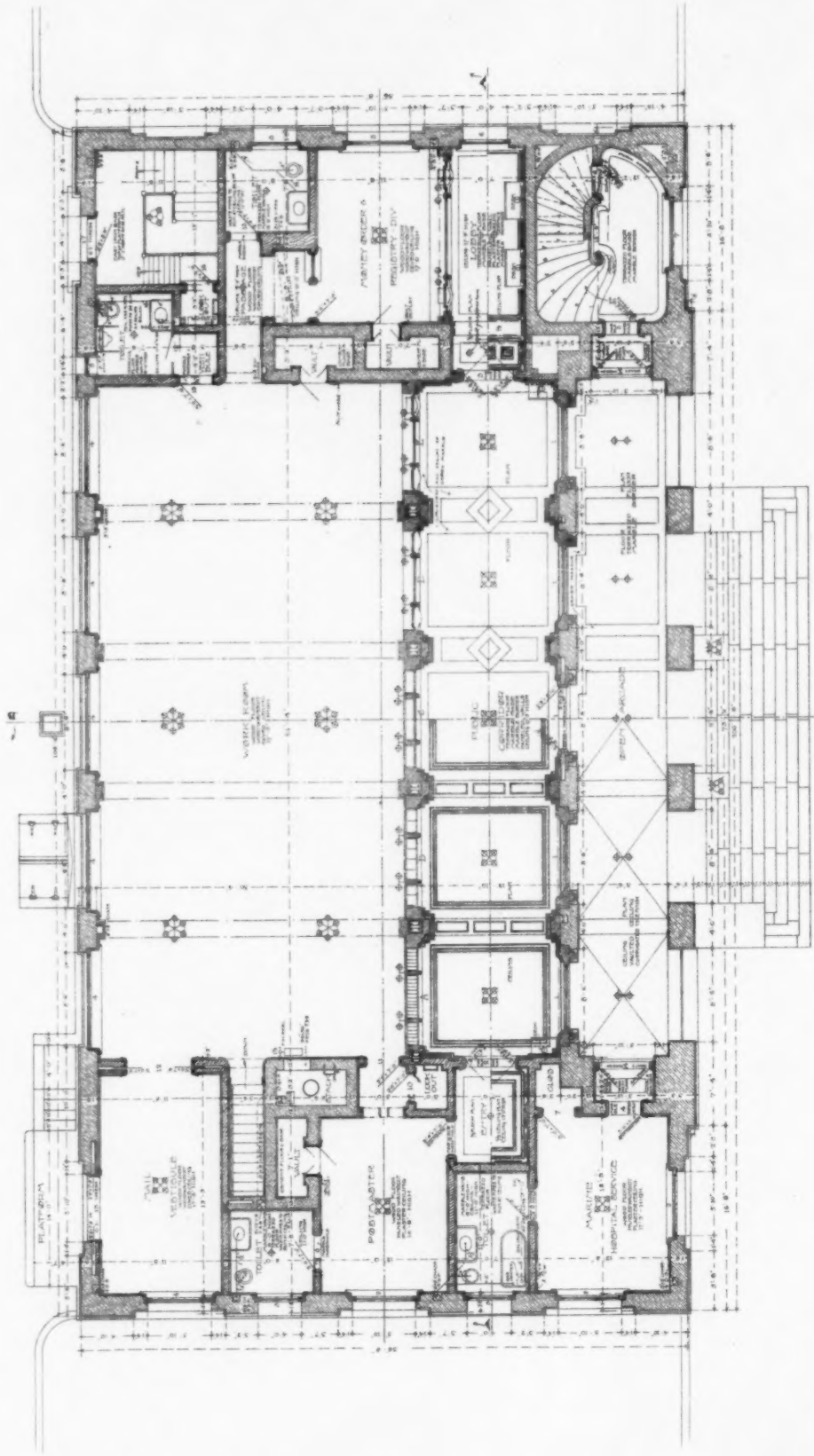
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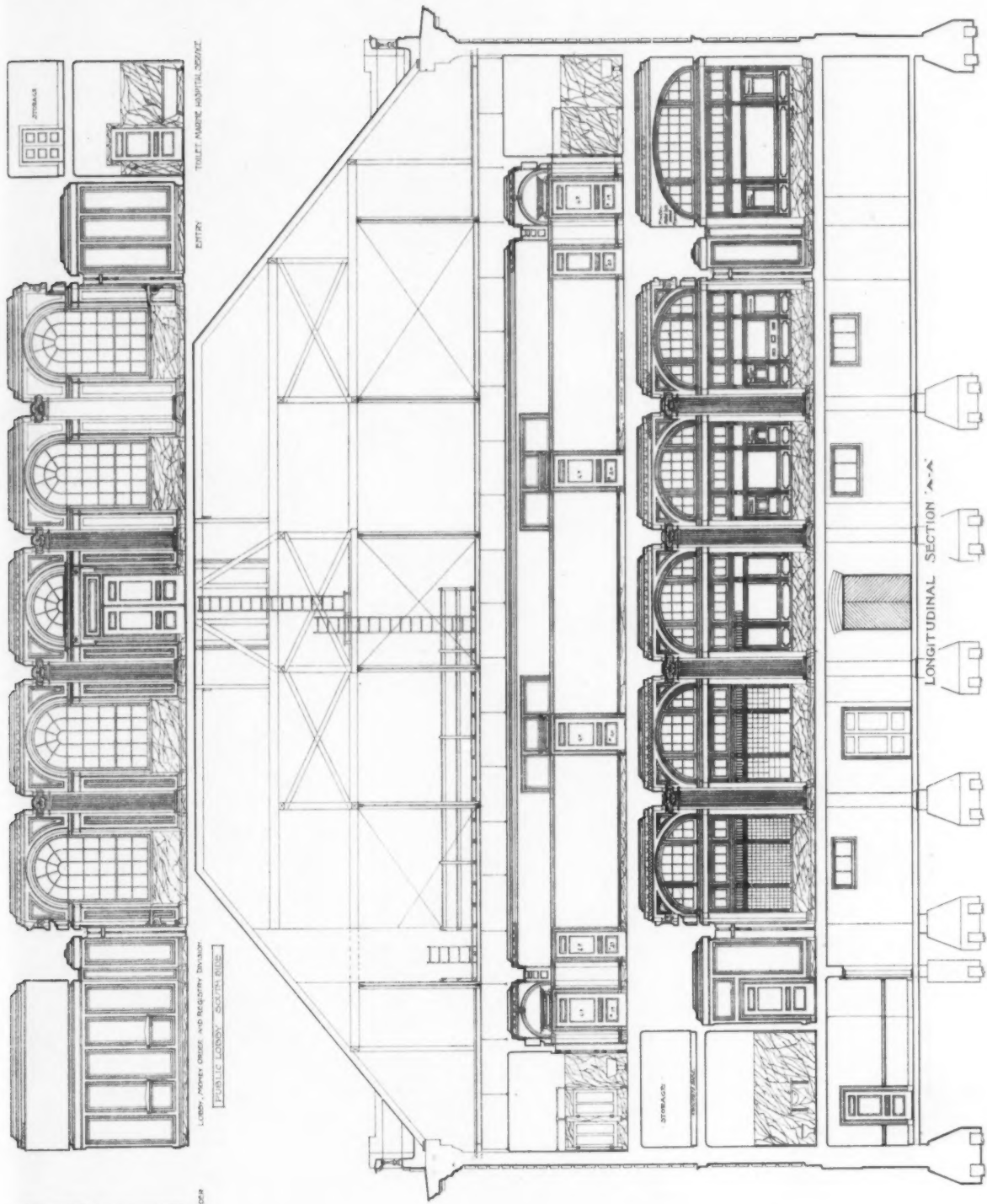


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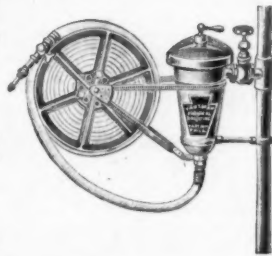
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St. Peter's P. E. Church, Philadelphia, Pa.		" 1758
Gloria Dei Church, Philadelphia, Pa.		" 1700

and others.

IMPORTANT HOUSES

Fairbanks House, Dedham, Mass.		Date 1636
Royall Mansion, Dedham, Mass.		" 1737
Philipse Manor House, Yonkers, N. Y.		" 1745
Tudor Place, Georgetown, D. C.		" 179-
Mappa House, Trenton, N. Y.		" 1809
Woodlawn, Va.		" 1799
Mount Vernon, Va.		" 1743

and others.

Incidentally there are shown special measured drawings or large views of the following features and details:

Porches and Doorways		67 Subjects
Staircases		21 "
Mantelpieces		81 "
Pulpits		6 "
Fanlights		60 "

In addition to the subjects enumerated above there is a large quantity of measured and detailed drawings of Cornices, Ironwork, Gateposts, Windows, Interior Finish, Ceiling Decoration, Capitals, etc., together with elevational and sectional views of entire buildings.

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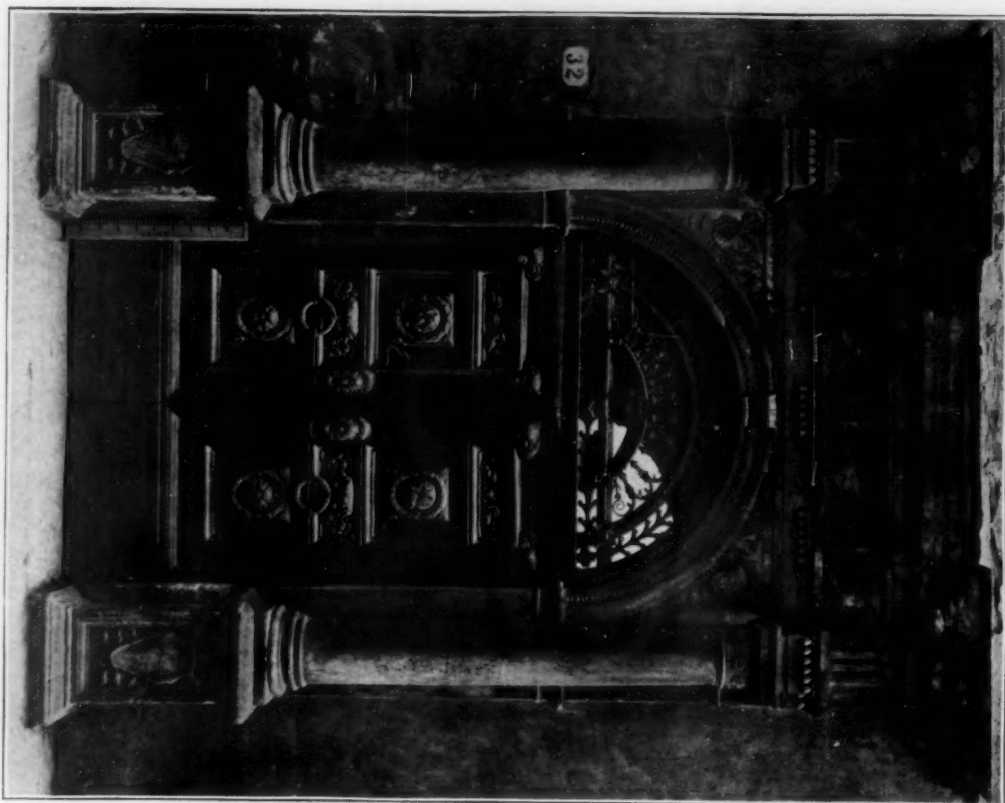
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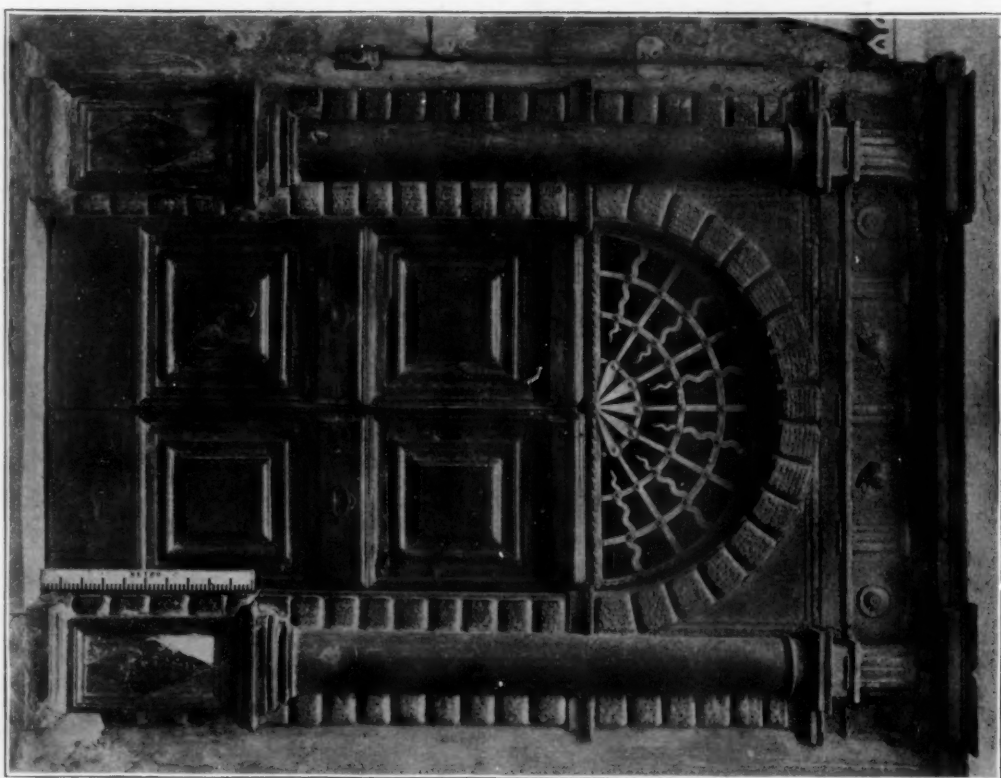
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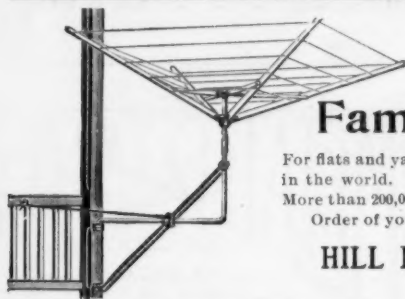
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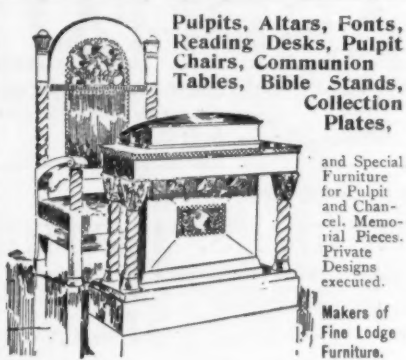


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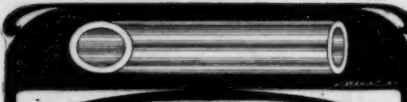
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(Advance Rumors Continued.)

years been a Director of the Taylor Opera-house, the only amusement house in this city. He thinks competition would be a good thing.

Waseca, Minn.—The corner-stone has recently been laid for the German Evangelical Church.

Washington, D. C.—The amendment authorizing the construction of a memorial bridge across the Potomac has been reported favorably. It fixes the cost at \$5,000,000 and makes a present appropriation of \$100,000.

Senator McMillan has introduced a bill authorizing the construction of a union railroad station here, to cost \$4,000,000.

Williamstown, Mass.—A new chapel, to be made one of the finest buildings of its kind in the country, is to be presented to Williams College by Mrs. F. F. Thompson as a memorial to her husband, who was a Trustee of the institution and whose gifts in money and buildings during his life-time aggregated more than \$300,000. The details of the new building are not complete.

Worcester, Mass.—Four houses are to be built on Orne St. by William Bangshan, costing from \$5,000 to \$15,000 each.

It is stated that the Swift Provision Co. are contemplating the erection of a large factory on the Norwich R. R. Plans are not drawn as yet, but the property has been secured and the company will have plans prepared, so as to commence the work this spring.

Yankton, S. D.—The Business Men's Club are reported to have accepted the proposition of Dr. Rudgers to erect a \$25,000 opera-house.

APARTMENT-HOUSES.

New York, N. Y.—Market St., Nos. 31-33, six-sty' bk. flat, 5' x 75'; \$28,000; o., Rachel Silbermunts, 44 Pike St.; a., Alfred E. Badt, 1 Union Sq. W.

CHURCHES.

New York, N. Y.—Wilkins Pl., cor. Jennings St., one-sty' & base. bk. & st. church, 46' 3" x 71' 10", slate roof; \$50,000; o., Church of the Reformation Evangelical Church, 1117 Simpson St.; a., Fred'k H. Peterson, 465 E. 164th St.

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Brooklyn, N. Y.—Sixth Ave., bet. 59th & 60th Sts., four-sty' bk. school, 157' x 166', steel & slate roof; \$125,000; o., J. B. Daily, 5th Ave. & 59th St.; a., W. J. Audsley, 11 Broadway, N. Y.

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Cornelia St., nr. Bushwick Ave., three-sty' bk. dwell., 20' x 50'; \$5,500; o., J. Weiz, 74 Cornelia St.; a., H. Vollweiler, 483 Hart St.
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New York, N. Y.—Morris Ave., nr. 196th St., 24-sty' fr. dwell., 28' x 38'; \$5,500; o., Edward Elliott, 2720 Creston Ave.; a., Chas. S. Clark, 709 Tremont Ave.

E. Fifty-sixth St., No. 125., five-sty' bk. & st. dwell., 20' x 85' 5", tin & slate roof; \$40,000; o., L. L. Benedict, 22 E. 31st St.; a., J. H. de Sibour, 1133 Broadway.

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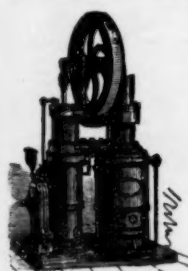
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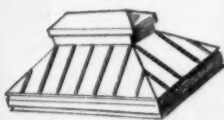


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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

built. He hopes to have everything in shape by the middle of June, so that he can open his sanitarium on Bunker Hill Day.

New York, N. Y.—The Teachers' college, a department of Columbia University, will in the future be enriched with a gift of \$250,000 for the building of a gymnasium. The giver's name has not been made public.

The Lawyers' Title Insurance Co. have lent to the Annex Realty Co. \$50,000 on the property on the north side of 19th St., near 6th Ave., on which is to be erected a brick, iron and stone mercantile building. This transaction represents an outlay of about \$500,000.

Plans have been filed at the Bureau of Buildings, Manhattan, for an extension to Grace Church parish house, in 4th Ave., in the rear of the church. The front will be of marble and five stories high. The cost is placed at \$125,000. The rector, churchwardens and vestrymen of Grace Church are the owners, and Heins & La Farge, of 7 Beekman St., are the architects.

The Home Insurance Co. will probably have a building erected for its own occupancy in the near future at 52 and 54 Cedar St. These lots are owned by the Mutual Life Insurance Co. The property will not be sold, the plan being for the Mutual Life to build an attractive structure not over four or five stories in height, which will be leased to the Home Insurance Co. for a long term. The company is at present located in the Boreel Building, which will probably be torn down within the next year to make way for a twenty-story structure.

Norton, Mass.—A two-story brick gymnasium will be erected at a cost of about \$25,000 at the Wheaton Seminary, Geo. T. Tilden, architect, 85 Devonshire St., Boston.

Philadelphia, Pa.—Permit has been granted the Thompson-Starrett Co. of New York, for the erection of the Pennsylvania office-building at the corner of 15th and Chestnut Sts., formerly occupied by the old Epiphany Church. It will be of granite, brick and terra-cotta, 17 stories in height, and will cost \$1,200,000. H. L. A. Jekel & Co., of this city, are the architects, and Horatio Adams, of Boston, is given as the owner.

Providence, R. I.—An anonymous contribution of \$5,000 toward the building fund for a new parish house has been presented to All Saints Memorial Church, on the corner of Westminster and Stewart Sts. The donor makes no restrictions on the gift, which swells the fund to about \$7,300 in cash and a site valued at \$12,000. The cost of the proposed building will be \$25,000.

The Senate committees on public buildings and grounds have reported favorably Senator Aldrich's bill for a new public building here, to cost \$1,000,000.

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Richmond, Va.—The Legislature has appropriated \$100,000 to enlarge, modernize and renovate the old capitol building. There will be no change in the general plan and architectural design.

Riverside, Cal.—It is reported that G. N. Reynolds will rebuild and remodel the Casa Palma Hotel at an estimated cost of \$50,000.

Roslindale, Mass.—An order has been introduced to the City Council providing for an appropriation for the purchase of land and the erection of a municipal building in Ward 23.

Shrewsbury, Mass.—Architects Barker & Nourse, 425 Main St., Worcester, have been selected to draw working plans for a library building to be erected here. Plans will be ready for figuring about April 25.

South Boston, Mass.—A project is afoot to build here a brick and stone stable, with accommodations for about 1,000 horses. The site of the proposed structure is near Granite and A Sts. The plan is to have the building six stories high. A half-million dollars may be invested in the enterprise.

Spokane, Wash.—The Masons will erect a \$40,000 temple. John K. Dow and L. L. Kand, architects, have prepared the plans.

Springfield, Mass.—Frank W. Dickinson has just let the contracts for a new apartment-house to be erected on Chestnut St., between Mr. Dickinson's present block on the corner of State and Chestnut Sts. and the property owned by Dr. F. B. Sweet. The block will be a x stories high, and the building will be finished in an elaborate manner both inside and out. It will cost more than \$50,000, and will contain 12 apartments. Architect, F. S. Newman.

Architects E. C. & G. C. Gardner have submitted sketches for a dormitory for the Normal School, to accommodate about 100 students, for which \$75,000 has been appropriated. A site will soon be selected by the Board of Education.

Stevens Point, Wis.—Chas. R. Aldrich, architect, Minneapolis, Minn., has plans for a school-building to be erected for the St. Joseph Academy. It will be 110' x 150', three stories and basement, of pressed brick with cut stone trimmings, with hardwood floors; cost, \$40,000.

St. Peter, Minn.—Gustavus Adolphus College is raising funds for an auditorium to cost \$30,000. It will be two-story, 80' x 100'.

Trenton, N. J.—Report states that Ferdinand Roebeling, treasurer of the John A. Roebeling Co. here, is concerned in a project to erect a large new theatre. He has an option on the old United States Hotel, on Warren St., which has a large frontage and extends back a block. It is in the heart of the business and hotel district, and has long been considered an ideal theatre site. Mr. Roebeling has for

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(Stores Continued.)

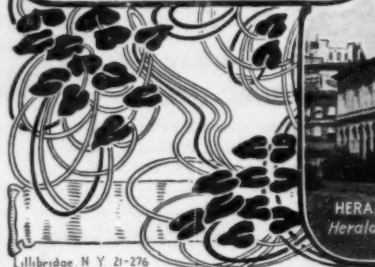
Spring St., nr. Varick St., seven-st'y bk. loft with store, 25' x 80'; \$10,000; o., G. H. Piqueron, 54 W. 129th St.; a., U. F. Rouse, 103 E. 125th St.
Riescher St., nr. Greene St., seven-st'y bk. & st. lofts & stores, 25' x 100', plastic slate roof; \$55,000; o., Geo. H. Piqueron, 1920 Park Ave.; a., Piqueron & Krause, 103 E. 125th St.
Fifth Ave., cor. 18th St., eleven-st'y bk. & st. lofts & stores, 78' 10" x 133', bk. & slag roof; \$600,000; o., Henry Coru, 142 Fifth Ave.; a., Rob't Maynicke, 725 Broadway.

TENEMENT-HOUSES.

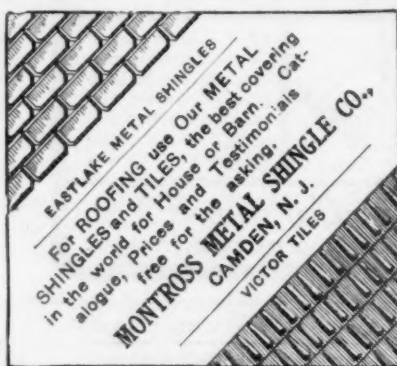
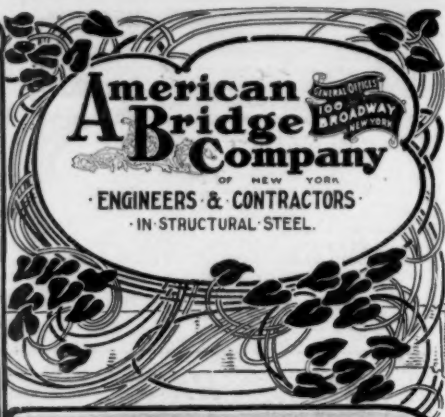
New York, N. Y.—E. Eighteenth St., Nos. 153-155, six-st'y bk. & st. tenement, 42' 4" x 79'; \$50,000; o., Isidore Mishkind, 320 Broadway; a., Sass & Smallheiser, 23 Park Row.
Stuyvesant St., Nos. 38-40, six-st'y bk. & st. tenement, 42' 2" x 50' & 57'; \$32,000; o. & b., Polstein Bros., 120 Bible House; a., G. F. Pelham, 503 Fifth Ave.
Third Ave., Nos. 385-387, six-st'y bk. & st. tenement, 49' 4" x 90', plastic slate roof; \$40,000; o., Carroll Bryce, 31 Nassau St.; a., Adolph Merzin, 33 Union Sq. W.
E. Thirtieth St., Nos. 329-331, six-st'y bk. & st. tenement, 49' x 90' 3"; \$42,000; o. & b., Polstein Bros., 120 Bible House; a., G. F. Pelham, 503 Fifth Ave.
Twenty-first St., Nos. 229-231, six-st'y bk. tenement, 46' x 85' 9"; \$40,000; o., Polstein Bros., 120 Bible House; a., G. F. Pelham.
Henry St., cor. Clinton St., five-st'y bk. & st. tenement & stores, 23' 10" x 77' 6" & 77' 7"; \$25,000; o. & b., Joseph and Isaac Polstein, 120 Bible House; a., G. F. Pelham, 503 Fifth Ave.
E. Sixth St., Nos. 742-744, six-st'y bk. tenement & stores, 44' x 84'; \$35,000; o., Louis Oshinsky, 266 E. Broadway; a., Horenburger & Straub, 122 Bowery.
Henry St., Nos. 233-235, six-st'y bk. tenement & stores, 46' x 74'; \$35,000; o., Mandel & Maran, 451 Grand St.; a., Horenburger & Straub, 122 Bowery.
Park Ave., nr. 118th St., 2 six-st'y bk. & st. tenement & stores, 50' x 76', plastic slate roof; \$90,000; o., Edw. Muller, 58 E. 98th St.; a., John Hauser, 1961 Seventh Ave.
Market St., Nos. 31-33, six-st'y bk. tenement, 50' x 75'; \$26,000; o., R. Silverman, 44 Pike St.; a., A. E. Badt, Union Sq. West.



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THEATRES AND HALLS.

New York, N. Y.—Central Park West, Sixty-second and Sixty-third Sts., five-st'y bk. theatre, 200' x 200' 10"; \$175,000; o., J. B. McElfatriek & Son, 1402 Broadway; a., J. B. McElfatriek & Son.
W. Forty-fifth St., Nos. 136-144, W. Forty-fourth St., No. 139, six-st'y & base, bk. & st. theatre & offices, 20' on 44th St. & 83' 4" on 45th St., x 100' 5", asphalt & gravel roof; \$175,000; o., George G. Heve, 2 E. 45th St.; a., J. B. McElfatriek & Son, 1402 Broadway.
Seventh Ave., cor. 126th St., three-st'y bk. & st. theatre & store, 99' 10" x 125', tile roof; \$125,000; o., Hudson Realty Co., 135 Broadway; a., Buchman & Fox, 11 E. 59th St.

WAREHOUSES.

Brooklyn, N. Y.—Delewan St., nr. Dwight St., three-st'y bk. warehouse, 78' x 100'; \$35,000; o., Chesbrough Mfg. Co., on premises; a., G. G. Brown, Avenue N, cor. E. 2d St.
Chicago, Ill.—S. Canal St., Nos. 285-289, eight-st'y warehouse, 79' x 151'; \$95,000; o., J. H. McCorkle, 267 S. Canal St.; a., Holabird & Roche, Monadnock Block; b., M. F. Powers, 17, 132 La Salle St.
South of Forty-third St., three-st'y warehouse, 115' x 146'; \$30,000; o. & b., Fairbanks Canning Co., Union Stock Yards; a., F. A. Fielder, 115 Monroe St.
Kansas City, Mo.—Seven-st'y bk. & st. warehouse, 60' x 96', gravel roof; \$75,000; o., Avery Mfg. Co.; a., Chas. Cleves, National Bank Building, Omaha, Neb.
New York, N. Y.—Fortieth St., nr. 3d Ave., six-st'y bk. stable & storage warehouse, 39' 6" x 85'; \$38,000; o., J. S. Eden, 441 Manhattan Ave.; a., R. R. Davis, 247 W. 125th St.
Broadway, cor. Great Jones St., ten-st'y & base, bk. & st. warehouse, 29' x 130'; \$250,000; o., J. W. Stevens Bldg. Co., 156 Fifth Ave.; a. & mason, J. W. Stevens, 156 Fifth Ave.
W. Nineteenth St., No. 37, seven-st'y bk. storage warehouse, 25' x 82'; \$45,000; o., O. M. Olsen, 1223 Southern Boulevard; a., C. A. French, 406 W. 42d St.
Columbus Ave. and Seventy-fourth St., six-st'y bk. storage house, 98' 2" x 109'; \$350,000; o., F. A. Clark, Cooperstown; a., G. H. Grisbel, 247 W. 125th St.
Broadway, nr. Spring St., ten-st'y & base, bk. storage house, 25' x 200'; \$180,000; o. & a., J. W. Stevens Bldg. Co., 156 Fifth Ave.
W. Thirty-sixth St., Nos. 527-531, five-st'y bk. & st. packing-house, 75' x 98', gravel roof; \$60,000; o., Chas. Rohe, 533 W. 36th St.; a., Werner & Windolph, 27 W. 33d St.

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Boston Society of Architects.

ROTC TRAVELLING-SCHOLARSHIP. Nineteenth Annual Competition.

The examination for the Rotch Travelling-Scholarship will be held at the Boston Architectural Club, 14 Somerset Street, Boston, on Monday and Tuesday, April 21st and 22d, at nine o'clock A. M.

Candidates must be under thirty years of age, must have worked during two years in the employ of an architect resident in Massachusetts, and will be required to pass preliminary examinations upon the following subjects:—

- I. Construction, Theory and Practice. (Written examination.)
- II. An Elementary Knowledge of the French Language. (Written examination.)
- III. History of Architecture. (Written examination.)
- IV. Freehand Drawing from the Cast.

Candidates who pass in these preliminary examinations will be asked to present themselves on the third Saturday following, for the competition in Design.

Candidates who have passed in the preliminary examinations since 1897 are eligible for admission to the competition in Design without re-examination.

The successful candidate in each yearly examination receives from the Trustees of the Scholarship annually, for two years, \$1,000, to be expended in foreign travel and study; provided always that the beneficiary shows such fitness and diligence as may be required of him.

The Boston Society of Architects has offered the sum of \$75 as a second prize.

Candidates are required to register their names with the Secretary of the Committee three days before the opening of the examinations.

Any further information concerning the Scholarship can be obtained upon application to

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COMPETITIONS.	PROPOSALS.	PROPOSALS.
heating apparatus. J. HENRY SHEPHERD, Pres. 1373	terial, will be received by the Board of County Supervisors until May 6, 1902. All bids must be in strict accordance with plans and specifications now on file in the office of the County Auditor, prepared by Kinney & Detweiler, architects, of Austin, Minn. Also, at the same time and place and under the same conditions throughout, proposals will be received for steam-heating the court-house and jail. By order of the Board of Supervisors. GEO. W. THOMAS, County Auditor. 1374	Post-office, Court house and Custom-house, Cleveland, Ohio, in accordance with the drawings and specification, copies of which may be had at this office or the office of the architect, Arnold W. Brunner, 33 Union Square, West New York City, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1374
STORE AND OFFICE BUILDING. [At Dawson, Minn.] The undersigned give notice that sealed proposals for the erection of a store and office building will be received at office of A. W. Ewing, secretary, Dawson, Minn., until April 29th, 1902. All bids must be in accordance with plans and specifications prepared for same by Omeyer & Thorl, arch tects, and which plans may be seen at office of A. W. Ewing, Dawson, and of said architects, St. Paul, Minn. The Riverside Improvement Co., A. W. Ewing, secretary. 1373	SCHOOL. [At Barberton, O.] Bids are wanted May 3 for erecting a school on Rose St. T. J. DAVIES, Clk. Bd. Educ. 1374	Treasury Department, Office of the Supervising Architect, Washington, D. C., April 9, 1902. Sealed proposals will be received at this office until 2 o'clock P. M. on the 26th day of May, 1902, and then opened, for the construction (except heating apparatus, electric wiring and conduits) of the U. S. Post office at Freeport, Illinois, in accordance with drawings and specification, copies of which may be had at this office or at the office of the Postmaster at Freeport, Illinois, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1374
ASYLUM. [At Burlington, Ia.] Bids are wanted April 28 for erecting a county asylum on the county farm. Separate bids will be received at the same time for heating, gas-fitting, water piping and plumbing. M. P. SHARTS, Co. Aud. 1373	Vault Doors. [At Washington, D. C.] U. S. Engineer Office, 735 N. Capital St., Washington, D. C. Sealed proposals will be received here until May 7, 1902, for vault doors for new building for Government Printing-office. Information furnished on application. JOHN STEPHEN SEWELL, Capt., Engrs. 1374	BUILDING. [At Flandreau, S. D.] Bids will be received by W. A. Jones, Comr. of Indian Affairs, Dept. of Interior, Washington, D. C., until April 30 for furnishing materials and labor necessary to construct and complete at Flandreau School, S. D., a brick workshop, a brick warehouse, a brick laundry and a water system. Address CHAS. F. PEIRCE, Supt. Indian School, Flandreau. 1373
JAIL. [At Sibley, Ia.] Sealed proposals for the erection of a jail for Osceola County, at Sibley, Ia., including all labor and ma-	Treasury Department, Office of the Supervising Architect, Washington, D. C., April 12, 1902. Sealed proposals will be received at this office until 2 o'clock P. M. on the 14th day of May, 1902, and then opened, for the excavation and foundations for the new U. S.	

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PROPOSALS.	PROPOSALS.	PROPOSALS.
BUILDING. [At League Island, Pa.] Sealed proposals will be received at the bureau of yards and docks, Navy Department, Washington, until April 26, 1902, for constructing a brick and steel building at the navy yard, League Island, Pa. Appropriation, \$57,500. Plans and specifications can be seen at the bureau or at the navy yard named. MORDECAI T. ENDICOTT, chief of bureau. 1373 BUILDING. [At Hamilton, O.] Sealed bids are wanted until May 1 for the erection of a memorial building according to plans prepared by Frederick Noonan, of Hamilton. 1373 BUILDING. [At Fort Berthold Agency, N. D.] Department of the Interior, Office of Indian Affairs, Washington, D. C. Sealed proposals addressed to the commissioner of Indian affairs, Washington, D. C., will be received at this office until April 28, 1902, for furnishing and delivering the necessary materials and labor required in the construction and completion of a water tank, engine house, etc., for the boarding school, Fort Berthold Agency, N. D., in	strict accordance with plans, specifications and instructions to bidders which may be examined at this office, the U. S. Indian warehouse, 235 Johnson St., Chicago, Ill., and at the offices of the Tribune, Bismarck, N. D., the Dispatch, St. Paul, Minn., and at Fort Berthold Agency, N. D. W. A. JONES, commissioner. 1373 SEWER. [At Adams, Minn.] Sealed proposals for the construction of sewers will be received at the office of the village recorder of Adams, Minn., until May 1st, 1902. The work to be done in accordance with the plans and specifications on file in said office, and at office of M. Tschirgi, Jr., consulting engineer, Dubuque, Ia. WM. W. DEAN, village recorder. 1373 BUILDING. [At Portsmouth, N. H.] Sealed proposals, endorsed "Proposals for Brick and Steel Building," will be received at the bureau of yards and docks, Navy Department, Washington, until May 3, 1902, for constructing a brick and steel building at the navy yard, Portsmouth, N. H. Appropriation, \$33,000. Plans and specifications can be seen at the bureau, or at the navy yard named. MORDECAI T. ENDICOTT, chief of bureau. 1374	BUILDING. [At Annapolis, Md.] Proposals will be received at the bureau of navigation, Navy Department, Washington, D. C., until May 14, 1902, for a marine engineering and naval construction building at the U. S. Naval Academy, Annapolis, Md. Blank forms of proposal and specifications will be furnished, and plans may be seen, on application at the bureau of navigation, Navy Department, Washington, D. C., at the U. S. Naval Academy, Annapolis, Md., or at the office of Ernest Flagg, architect, 35 Wall St., New York. A. S. CROWNINSHIELD, chief of bureau. 1374 PORTLAND CEMENT, ETC. [At Boston, Mass.] U. S. Engineer Office, Winthrop Building, Boston, Mass. Sealed proposals for furnishing Portland cement, sand and broken stone will be received here until April 28, 1902. Information furnished on application. HARRY TAYLOR, Capt. Engrs. 1374 SEWER SYSTEM. [At Cleveland, O.] The county engineer will receive sealed bids until April 28 for completing the general sewer system. Probable cost, \$51,000. 1373

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

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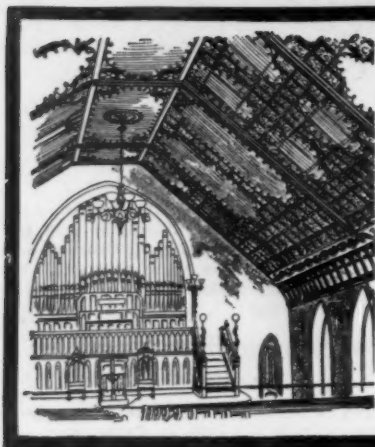
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