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THE Annual Report of the Supervising Architect of the Treasury Department speaks of the results of the new system of procuring designs for public buildings through competition among architects as being extremely satisfactory, both artistically and practically; but he does not find, according to newspaper reports, that the direction and supervision of the actual work of construction go on so well under private architects as on the old system. He therefore thinks that, while the present method of obtaining designs in competition should be continued, it might be well to limit the work of the successful competitor to the furnishing of drawings and specifications, leaving the actual execution to be carried out by the Department.

AN opinion of this kind from so competent a person as Mr. Taylor will undoubtedly receive, both from the profession and the Government, the serious consideration that it deserves. That private architects are likely to find themselves unpleasantly hampered by the formalities and restrictions necessarily connected with Government work is probably true; and it is also likely to be true that the Government officials, accustomed to have the exercise of their discretion strictly limited by law, find an unwarrantable license in the habits of unofficial architects; but it should not be forgotten that an important consideration in the change by which private architects were admitted to employment on public work was the fact that public buildings, under the old system, have cost, as a rule, at least twice as much as they would have cost if built by private architects for private parties. Mr. Taylor does not say, and, probably, could not tell with certainty, whether an important economy has yet been realized in this way; but, reasoning from known facts, it is fair to assume that, with all their imperfections in matters of propriety and routine, private architects will be able to do as well for the public as they are constantly doing for private owners. Meanwhile, it should be remembered that the prompt decision, and disregard of etiquette and precedent, which, perhaps, alarm the official mind in the case of private architects, are essential to the successful and economical prosecution of their duties. The old story of the Detroit Commandant who could not call the town fire-engines when his barracks took fire, because the law obliged him to advertise for bids for every form of service, extinguishing fires included, illustrates a system which is totally opposed to economy and efficiency in building operations, however useful it may be in other matters. Any delay in giving a necessary order, or in enforcing obedience to it, means, in building operations, greatly increased expense; and if the habits of private

practice and the formalities of the public service do not go well together, it may be advisable to see whether the latter may not need modification instead of the former.

THE excellent scheme for the construction of pipe galleries in connection with the New York Rapid-Transit tunnel has been abandoned, in consequence of an unfortunate complication. It would seem that the Rapid-Transit Commission, although it understood the advantages of the pipe subway, was not authorized by its constitution to construct such a subway, and only hoped to be able to secure it for the citizens indirectly, by making it a part of the underground railway scheme. Its plans were made accordingly, but the contractor for the work, whose contract was, necessarily, only for the construction that the Commission was authorized to carry out, found it impracticable to include the pipe subway in the tunnel work without a large extra expense, which the Commission was not authorized to incur, and which he was not himself under any obligation to bear. Considering the immense value to the city of such a subway, it is most unfortunate that the opportunity for constructing it cheaply should be lost. The Comptroller, who ought to be a good judge, estimates that the future value of the pipe gallery, in view of the saving of cost to gas, steam, electrical and other companies, and to the city itself, of tearing up and replacing pavements, would be greater than the value of the Rapid-Transit tunnel itself. If this is true, as is altogether probable, it can hardly be long before some way will be found of building them, either with public or private money. If the necessary concession could be obtained on reasonable terms, and without the preliminary expenditure of vast sums in bribery, the construction of pipe galleries in large cities would offer a very attractive investment to capital. The cost of building them could be ascertained with great precision, and, as, after their construction, all telegraph, telephone, electric-light, pneumatic-clock, burglar and fire alarm, steam and power companies would be compelled to use them, by an ordinance prohibiting interference with the pavement of streets containing them, it would be easy to fix beforehand a fair and permanent rental for its use by pipes and wires, and in this way to make sure of the present income to be derived from it. If this were made reasonably satisfactory, the assurance of its steady increase and the certainty that, apart from legislative interference, no business could be safer than that of maintaining and extending such a plant, would, as we believe, draw into the investment an almost unlimited amount of money. The main preliminary question is really that of a cheap and efficient system of construction for such a conduit. Naturally, where rapid transit tunnels are to be built, a pipe subway is easily connected with them; but this is an exceptional case, and it is the pipe conduit pure and simple, high enough for repairers to pass easily, wide enough to contain all the pipes and wires that will ever use it, inexpensive in construction, strong and durable, which is now imperatively needed in all large American cities; and the person who devises such a structure will hardly have to wait long for his reward.

THE course of the iron-market has been a little puzzling for a week or two. Since the election, many plans for construction, the consideration of which had been temporarily postponed, have been taken up again, and the demand for iron in this country is likely to be good for some time to come. So far, prices of structural iron have not materially advanced, the mills appearing to have taken the sensible resolution to sell their product at such rates as their customers can pay, rather than to have it left on their hands in consequence of an unreasonable advance. Abroad, prices have remained substantially unchanged. Although pig-iron and coal have rather advanced, structural metal is little in demand. In Germany, the entire product of the blast-furnaces is engaged until the beginning of 1902, yet the manufacturers of wrought-iron and steel find difficulty in disposing of their goods. In Belgium, a similar condition of affairs prevails, and the Belgian mills are trying to find customers in France, by offering structural metal, delivered in Paris, with freight and duties paid, at seven-eighths of the price of French iron. If Germany should imitate the example of Belgium, which is not unlikely, prices may fall still further, in France as well as in England, where

German, Belgian and American iron are already sold in great quantities. Coal, in England, has fallen very much in price, fortunately for the poor people there. On the Continent there has been no change. Complaint is made that there is very little building work offering on the Continent, particularly in France, where the Exposition, as usually happens in such cases, seems to have exhausted for the present the inclination of people to enter into new construction. The second line of the Metropolitan Railway, work on which will begin in January, will consume a large amount of material, but nothing else of importance seems to be projected.

THE Boston Museum of Fine-Arts has long shown a case of so-called Tanagra figurines, most of which were given to the Museum by the late Thomas G. Appleton, in 1879. Having been purchased by a wealthy and intelligent amateur from a dealer of high reputation, these figurines had always been accepted as genuine, particularly as they showed the characteristic style of the little terra-cottas now so well known in museums all over the world. Very recently, an English expert called the attention of the Curator, Mr. Robinson, to some suspicious marks, and the little statuettes were thoroughly examined, with the result that, on washing off the paint with which they, like other terra-cottas of the kind, are covered, cracks filled with modern glue were found, and nearly all the figures proved to be made up of fragments, glued together, with additions in plaster-of-Paris to make up deficient parts. In some cases, the deficiency included the entire body, which was composed of modern plaster, with a few almost shapeless fragments of terra-cotta attached to it. Only three out of the twenty-three Appleton figurines were found free from fraudulent patching of this sort. On reporting the circumstances to the Committee in charge of the Museum, Mr. Robinson was directed to withdraw at once the fictitious figurines. Meanwhile the Museum authorities console themselves with the ingenious idea that later, when they have the necessary space at their command, they will exhibit a collection of artistic figurines, properly marked, for the instruction of unsophisticated amateurs.

THE Metropolitan Museum of Art makes a timely appeal for the modification of the Federal war-tax law, by which a heavy tax is placed on inheritances and bequests. A large part of the Museum collections has been received in the shape of bequests of pictures. The beautiful Wolfe Collection was acquired in this way, as a whole; and single works, or small collections, of great value are often thus received. Under the war-tax law, before a legacy of a picture, or a collection of pictures or other works, can be received, it is necessary for the Museum authorities to get together in cash from five to ten per cent of the value of the objects bequeathed, as officially appraised, and pay it to the Federal collector. As most American Museums of Fine-Art are dependent for their income, apart from the insignificant sum received from admissions, on the charity of a small circle of individual citizens, who already give all that they can afford for the purpose, the raising, at short notice, of sums of five, ten, fifteen or twenty thousand dollars, in order to secure a bequest which might be of immense value to the public, is an impossibility, and many such bequests must be declined, simply because the Museum, living from hand to mouth, as it must, and depending upon the contributions of its friends to pay its necessary expenses, can neither raise additional money to pay the tax, nor sell any part of the bequest for that purpose.

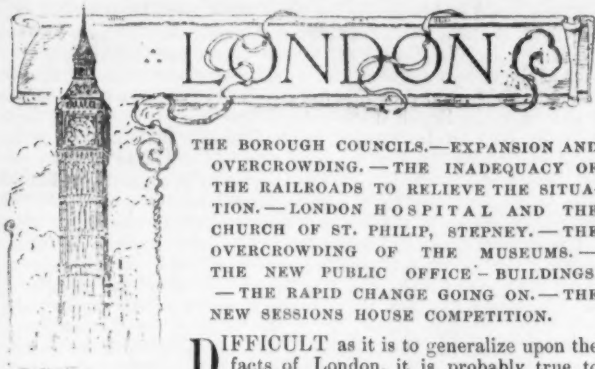
THE New York *Evening Post* calls the attention of those interested in apartment-houses to the advantages of the so-called "duplex system," by which each apartment extends through two stories, the reception-rooms being on one floor, and the bedrooms above. This arrangement is not so unusual as the *Evening Post* seems to suppose, but it has never been very popular, owing, probably, to the necessity for giving a certain elasticity to apartment-house plans, which is not so easily secured under the duplex arrangement. In itself, a plan which gives each family a little two-story house to itself, with its own staircase, is attractive, but it is common for owners of apartment-houses to find themselves, in course of time, obliged to turn them into transient hotels; or subdivide the flats, or shift one or two rooms from one apartment to another, and the duplex system, which groups the rooms of each apartment around its own staircase, makes this difficult. The *Evening*

Post says, with truth, that the duplex plan obviates the necessity for long corridors; but long corridors are a thing of the past in apartment-house planning, and a skilful architect can get just as pleasing interior effects in an apartment all on one floor as in one divided between two floors.

A NEW way of making an honest penny out of the whims of unpractical lovers of antiquity is suggested by a recent experience of the Manor Hall Association, of Yonkers, N. Y. The city of Yonkers owes a good deal of its attraction for strangers to the fact that it contains an ancient mansion, known as Manor Hall, which was built in the year 1684, by Lord Frederick Philipse, and still stands, surrounded by its old-fashioned garden. Apart from its antiquity, the house possesses historical interest, from the fact that General Washington once slept there, on his way to White Plains. For some time, the property has been held in trust for the public benefit by the Manor Hall Association, which has kept the house in repair, and has done its best to preserve the estate. Recently, the Common Council of Yonkers, having occasion to build a fire-station, coolly seized a part of the Manor grounds, and made a contract for the erection of the building. The Manor Hall Association, from the first, entreated the Council not to encroach upon the Manor, but in vain. Even after the contract was signed, hoping that the encroachment might still be averted, the members of the Association raised twenty-five hundred dollars, which they offered the contractor if he would cancel the contract. He accepted the offer, but the Common Council was obdurate, and voted to demand twenty-one hundred dollars more from the unfortunate Association, as its price for letting the matter drop. How the affair will end, no one can say, but the citizens of Yonkers very generally side with the Association; and, if humble petitions do not move the hearts of the Council, it is probable that an appeal will be made to the Courts.

THE British explorations in Crete have brought to light some curious suggestions, rather than definite discoveries.

Much of the work unearthed is of the character known as Mycenaean, common to objects found not only at Mycenae, but at Argos, Tiryns, Orchomenos and other places in European Greece, and in Troas and other parts of Asia Minor. So far, although sacred caves, and even temples, appear to have been discovered, nothing like a god in human form is found or indicated in any of them; but, on the contrary, the divinity inhabiting them seems to dwell in a sort of pillar, or stone set vertically, like many ancient, and traditionally sacred, monuments in Greece, Asia Minor and India, including the "pillar" set up by Jacob at Bethel, and, perhaps, the "dolmens," or vertical stones, found throughout Western Europe, from Great Britain to the Straits of Gibraltar. A pillar of this sort, standing in the cave in the island of Crete, which is reputed to have been the birthplace of Jupiter, is still locally held to have been the material form of the ruler of the gods, and, singularly enough, is to this day known as Baetylos, a corruption, as is supposed, of the Hebrew word Bethel, "the house of God." This curious survival of a trace of the superstitions of prehistoric antiquity is, however, surpassed in interest by a ceremony still practised in a certain Mahometan village in Macedonia, where a stone pillar of the same sort is to this day regularly worshipped as sacred. It seems that the sacredness of these stones did not consist, as might be imagined, in their distant resemblance to the human form, but in the belief that the divinity to which they were sacred utilized them as a sort of dwelling-place, or, perhaps, as a means of communication between the natural and supernatural worlds. A fresco discovered in the ruins of the palace of Minos, at Cnossus, shows such a pillar, with the divinity to whom it was sacred standing, armed, in front of it, as if he had been called to visible form by means of it, just as the witch of Endor, by her incantations, called up Samuel before Saul. In this fresco, the background shows a sacred grove, such as the Bible frequently mentions, surrounded by a wall, and it is surmised that the sacred pillars may have been a more durable substitute for the sacred tree in which a still more ancient superstition believed the divinity to reside. The talking oak of Dodona is, perhaps, the most famous example of these material instruments of communication with the gods; but there is hardly a country where some remnant does not exist of a belief in trees or groves haunted by supernatural beings, who could be induced to converse with mortals by means of a suitable ritual, performed by the initiated at the proper place.



THE BOROUGH COUNCILS.—EXPANSION AND OVERCROWDING.—THE INADEQUACY OF THE RAILROADS TO RELIEVE THE SITUATION.—LONDON HOSPITAL AND THE CHURCH OF ST. PHILIP, STEPNEY.—THE OVERCROWDING OF THE MUSEUMS.—THE NEW PUBLIC OFFICE-BUILDINGS.—THE RAPID CHANGE GOING ON.—THE NEW SESSIONS HOUSE COMPETITION.

DIFFICULT as it is to generalize upon the facts of London, it is probably true to say that at no previous time in history has there been such a remarkable appreciation of progress as at present obtains. True progress in a city, I take it, is dictated for the most part by the foresight and magnanimity, the wealth and will, of its inhabitants, and though doubtless in the early part of this century wealth and energy were unspared, yet from to-day, almost, dates the large hope that works will be guided as much by future interests as by present needs. Were such a spirit in fact to be the governing principle of the future a stage indeed would be reached; but, without forcing the point, it insists itself with greater strength as time enlarges London and London problems, that, could bygone generations have correctly estimated the exacting nature of present-day requirements, for thousands could have been done what now requires millions; at a small cost could have been secured what is now relegated to the impossible. To insist upon this were to indulge in somewhat fatuous platitudes on the development of states and societies; but it can nowise be doubted that largely in depreciation of the parochial spirit, the small local and nearsighted policy, has been framed the Act which gives London a new government, the Borough Councils. The functions of these bodies will not largely differ from those exercised by their predecessors, the Vestries and District Boards. But the concentration of many small bodies into a lesser number of larger bodies is calculated, with the enhanced dignity and interest that a district mayor and aldermen may give, to rouse some unity and patriotism. This, hitherto, has been woefully absent from London life.

The pressing question of the day, possibly the most important, is that of overcrowding. I have had occasion to speak frequently in these columns of some of the most obvious of the causes which have produced overcrowding as well as of the remedies which the County Council and one or two of the Vestries have adopted to attempt to check the evil. It is not now necessary to say more than that the present degree of the evil is to a great extent directly attributable to the neglect of the Vestries to execute the law, unless one may add that the great expense which is entailed by the County Council and others in purchasing and rebuilding slum property has made the fact manifest that a single and final remedy has not as yet been reached. The Borough Councils, some think, should not be expected to undertake, as the Act permits, the rebuilding of slum areas—if they attempt it on any large scale failure seems inevitable, for how could a small local body carry out with success the work which the County Council, powerful out of all proportion even to the massed Borough Councils and vastly more powerful than any single Council, has not been able to carry out with such financial success as to dull the point of criticism? The Borough Councils will rather take advantage of the period in municipal control to commence afresh the administration of the law; if this is done with determination and spirit, the overcrowding question will assume an interesting and probably extremely acute aspect; indeed it is likely that as time goes on the opinion that the problem has by its magnitude become an Imperial affair, to be dealt with by legislation in the Imperial Parliament, will receive more and more subscription.

The kernel of the matter is here—that London has to make up the accumulated leeway of twenty years' neglect in house-building; and if building is the first term of reformation, cheap and rapid transit is of almost equal importance. And in this, principally, the difficulties become appalling. Take the case of the Southeastern and Chatham Railways, which serve the whole of Kent and a large portion of South London. Byword for unpunctuality and discomfort as these amalgamated companies are in the mouths of all whose ill-fortune it is to be compelled to use their lines, it is only fair recognition to note that the companies made out for themselves something of a case the other day when waited upon by a very influential deputation to complain of the condition of things. The permanent way is utterly incapable of serving the districts it professes to connect, the rolling-stock is as inadequate to the requirements as are the existing sidings incapable of holding another truck. The capital expenditure, therefore, of this railway company alone to bring matters into line even with present-day requirements will have to be counted by millions of pounds. But this is to imply the passage of years, for in the present condition of overcrowding all house demolition (and any real extension on these lines would dislodge hundreds of people) would have to be preceded by the building of accommodation for those to be displaced. This is the position with regard to

one only of the many companies which serve London; the difficulties of nearly all the others vary only in degree. Electric traction in tube railways is being developed and extended, it is true, but this is a mere palliative as yet, too local to affect the overcrowding problem. Meantime the County Council continues to fight the evil, most notably at the present moment by the scheme of cottages which are being built at Tooting, on the southwest outskirts of London. The site contains about 40 acres and upon it are to be built some 1,100 houses of the two-story-cottage type, in four classes: the building work is not expected to be finally completed for four or five years, although the scheme is definitely set on foot and work has begun. The number of persons housed will be over 8,000, and a feature of the undertaking is that the property will be absolutely self-supporting and will discharge its own building-debt in the course of years without laying the rates under contribution at any time.

But it is not alone in house-room and traffic-space that London feels the pinch of concentration. In all departments there is one desire—space, but to limitations must bow hospitals, schools, theatres, markets, libraries, museums, public offices. The London Hospital in a century has sprung from nothing to an enormous establishment which covers acres of ground, and still upon the well-packed site is found room to build—now an outpatients' ward, now nurses' homes, now operating-theatres and research laboratories. And the group of buildings overflows and crosses the street to where stands the noble church of St. Philip, Stepney, which the brilliant, ill-fated Arthur Cawston reared, a heritage too little known but that will endure, the cathedral of the East End. The hospital buildings have come now to crowd around the east end of the church; an isolation-ward closes in upon the apse, almost touching it. Out of the East End and at another time the thing would be the signal for angry protest, but in the struggle for room the sacrifice is made and none forbids.

The problem of the museums is not very different. Where shall be displayed to the best educational advantage the immense collections of things curious and beautiful that have been brought from world-wide sources to the British Museum, to its daughter the Natural History Museum, the South Kensington Museum, the Imperial Institute, the Bethnal Green Museum, the Wallace Collection, the Picture Galleries? and what will be the position of these National storehouses half a century hence if to-day they are already crowded towards the extinction of usefulness? The Museum stretches its arms towards the dim past as eagerly as it embraces the present. An acquisition that is not introduced for its comparative value in a class, an original acquisition, that is, at once begets a generic group, and the ever-widening circle of material in the eye of the careless loses form and becomes incident without design. But whether the outcome of the congestion will be a general adoption of the principle which has founded the Natural History Museum with such eminent success at South Kensington, a system of decentralization of the mass and concentration of the detail, or whether, the student and specialist being sacrificed to the generalist, a series of minor and emulative establishments will eventually be formed throughout London, the question is one that will certainly force itself into notice before many years. In many respects the latter principle would appear to have merits, if the mission of the Museum in London is to be really instructional, and not, as now, a centre for the votary, the leisured student and the bookworm.

The great works which the Government have undertaken recently in Westminster to provide, new public offices, is but a further evidence of the expansive spirit that has so markedly come into being in the last few years; Rolls Office, Police Headquarters, Admiralty Offices, War Office, Local Government Board Offices, all are new buildings not long completed or still in hand. And now after vast extensions in the General Post and Telegraph buildings, the "old G. P. O.," in St. Martins-le-Grand, is itself to be cleared away and rebuilt.

It is a most regrettable probability that this particular item of reconstruction will be designed by the Office of Works, and that, in consequence, the present gloomy pile will be replaced by a block similar in character to the more recent Post-office work on the opposite side of the road. H. M. Government has, it is true, shown in recent years a changed and plausible spirit of appreciation for architectural considerations in designs, as witness the new Scotland Yard, South Kensington Museum, and the new War Office and Local Government Board Offices. It will hardly be probable, however, that more sympathetic treatment will be secured for the Post-office than was bestowed, as recently as 1895, on the abominations I have referred to across the way.

It is not easy to convey any distinct idea of the amount of building work at present in hand in London or immediately to be undertaken. To touch thus lightly upon the merely official side of the question is to take notice of half a dozen really extensive schemes, and if one should go farther and speak of great areas that are being rebuilt in shops and flats, in hotels and offices, and of the innumerable semi-official and private buildings that are everywhere being raised—it would but tend to suggest what is perhaps three parts true—that the reproach levelled at London twenty years ago as a city of mean and dowdy streets has been turned to negation, and that the fervor and advancement of the national mother city is truly, if slowly, appearing in the buildings that compose her. To stand at the south end of Waterloo Bridge and with the eye contain the view that the bending northern Thames bank affords—whether it be when the morning sun silhouettes the light-floating dome of St. Paul's and

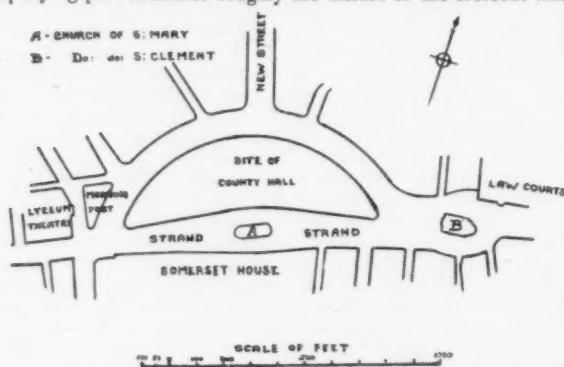
strikes full on the towers of St. Stephen's, or when in the ruddy smoke-bank he sinks behind the group of Westminster and lights up the bleached white stone of Somerset House and all the eastward spires—is to recognize once and for all that London has wonderful and peerless aspects.

The magnitude of the building-schemes which are in hand in various parts of London and the rapidity with which apparently great changes are carried into effect, whether by street-widening or new building-operations, renders the passage of the streets of London exceedingly interesting to him whose habitude it is to constantly move about; to the less active observer the changes become almost bewildering, while the rare visitor will with wisdom hesitate at all times to assert that he "knows London." There are the great mushroom residential districts on the outskirts of London, where streets are being formed and blocks of small houses hurried into existence at an extraordinary speed, equal in some districts to an increase in the population of 20 per cent per annum; but apart from these wide districts, which as a whole are remote alike from common knowledge and common interest and arouse in the visitor but a vague passing notice, as the arriving or departing train steams through so many miles of suburbs—apart from all this there is a vast and ordered change taking place in the heart of London, the area which was London of a million inhabitants at the beginning of the century, the twenty square miles grouped about the City.

Confining ourselves to this small area, whether we turn to Westminster, Mayfair or Marylebone, Bloomsbury, Clerkenwell, Aldgate or Southwark, we find a constant upheaval and rearrangement in progress: at one time it is a street-widening that suddenly opens up a new vista, and brings into view a building of merits hitherto unsuspected; or the clearance of a large site imparting a sense of roominess and air where no room was, a sense, alas! that all too soon is negated by the brisk rise of the builders' towering gantry, token of the cumulative and more ponderous pile that, with more dignity and precision, will in the course of days envelope it: or round a sudden corner we meet a débütante, the veil of scaffolding only now almost away, somewhat abashed and appealing for reserved judgment, or brazen, trusting to conceal rather than mean material of costume under a specious show or an assured manner.

If a local letter is to convey more than a casual and detached impression of parts of a city as opposed to a general idea of the development of its architecture, some systematic scheme of review is essential; and in the bewildering acreage of London there appears to be no more logical method of doing this than a consideration district by district of the most notable structures and groupings from time to time produced. This general analysis of localities I shall hope to be privileged to offer from time to time in these columns, without neglect of such current questions of common architectural interest as present themselves.

The present season has been signalized by the holding of two very important competitions for London public buildings. The first was that of the New Sessions House on the site of the Newgate Prison. Illustrations of the design with which Mr. E. W. Mountford successfully competed and descriptions have already appeared in these pages. The other was a limited competition in which the County Council invited eight among the most prominent of London architects to submit a block plan and designs in elevation for the façades of the base of the new street from Holborn to the Strand. The accompanying plan indicates roughly the nature of the crescent which

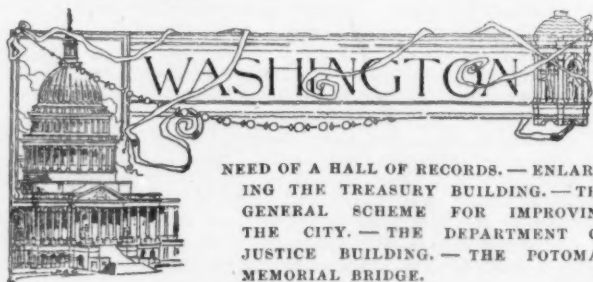


it is proposed shall form the embouchure of the new street into the Strand, and shows the "island" which is destined to contain among other buildings the County Hall, or central offices of the London County Council. The competitors were provided with a block plan and block elevations which they were required to elaborate and clothe with features and detail. The portions for treatment were the concave and convex façades of the crescent, the Strand elevation and the small isolated building at the extreme left of the plan—the *Morning Post* offices. The new street and the approaches to it, as well as the portion of the Strand included in the scheme, will have a width of 100 feet and the new buildings would vary from 70 to 80 feet in height to the parapet. The Building Act permits a maximum of 80 feet, and though this is by some felt to be excessive if the new street is to impart a sense of breadth, yet the County Council will scarcely be able, except so far as their own buildings are concerned, to limit the existing abilities allowed by law.

The selected architects for the competition were Messrs. Reginald Blomfield, William Flockhart, Ernest George, H. T. Hare, Mervyn Macartney, E. W. Mountford, Ernest Runtz and Leonard Stokes. Each of the chosen architects submitted a set of drawings and the collection was placed on view for a few days and attracted a large number of visitors at the Royal Water-color Society's Gallery in Pall Mall. Probably such an instructive and interesting exhibition of design and draughtsmanship has not been seen in London in recent years, and though the work is tentative and merely suggestive, there is much in the drawings that if it will not influence current architecture will find a permanent place in reproduction in the student's portfolio.

The general conditions asked for a "Palladian" character in the designs; the strong personality however of each of the designers stands out clear of style, and it is interesting as well as pleasant to note how slight has been the controlling effect of the suggestion of style. Mr. Norman Shaw, R. A., is advising the Council in the award of places in the competition, and his report will be awaited with a good deal of interest. Generally speaking, criticism of the designs selects No. 26, believed to be by Mr. H. T. Hare, as the widest and most notable; the County Hall is made the key-note and leading feature of the entire conception, and a guiding principle has been the consideration of the relation of Somerset House and the Church of St. Mary-le-Strand to the new buildings. It is impossible to say that any one of the designs submitted will in whole or part be carried out; the County Council has, it is true, the greater part of the land in its own hands and can sell or lease conditionally on the adoption of this scheme so far as it applies; a large portion, however, of the concave curve remains the absolute property of the Duke of Bedford; doubtless there will be no difficulty in securing harmony in material and design even if the Council's design be not strictly adhered to. For the street itself, with its three-fourths of a mile of frontage, no general plan has been prepared, and this would be left to individual lessees. Before the Council can carry out on large lines the demolition of the house-property on the line of route, a work which will dishouse nearly 4,000 people, accommodation for this number is to be provided in buildings in various parts of London, notably at Millbank, Westminster, on a noble site in Clerkenwell recently purchased from Reid's Brewery Company, and on sites adjoining the new street. There must thus elapse some considerable time before a fair start is made on the work itself.

The assessor, Mr. Norman Shaw, and the Council's superintending architect have now presented a joint report particularly commending three of the designs. The names of the authors are not published nor is any announcement made at present as to the position the Council intends to adopt in making use of the designs. There is much hesitation in accepting the suggestion that the Council will itself build and so extend the municipal property, or on the other hand take so novel and arbitrary a step as to define what shall or shall not be the nature of the design of this or that building. Some representatives of current opinion are already possessed of the idea that the £2,000 expended on the competition has been practically thrown away. It is in no case useful to go to this length at the present juncture; that such evidence of good intent should be made manifest in the Council is worthy of a sacrifice, and if some good comprehensive scheme is, by firmness or diplomacy, secured, the price will be small indeed. A note of complaint may not infrequently be caught in the daily papers, and especially in conservative organs, that the County Council does not exercise the veto to prohibit this building or that monument or those electric standards from being erected—on score of base design and breach of harmony in the surroundings. Of course the London County Council possesses no veto and can no more control the architectural treatment of a structure than dictate the vagaries of fashion itself.



THERE are many indications that the present session of Congress, though a short one, will see something done with the question of providing new buildings for the Government, and with the general treatment of national buildings and grounds. The need is pressing. The departments are intolerably crowded. The files are crowding out the clerks, making the buildings unsanitary, and threatening losses by fire which would be practically irremediable.

Secretary Long urges an appropriation for a Hall of Public Records. His recommendation is on the broad lines of an absolutely fireproof building, so designed and placed as to admit of future enlargement.

A slight fire among the records in the Treasury Department Building a few days since called general attention to this matter, and it is said that the President will include in his message to Congress a

strong recommendation for a Hall of Records, and that the several heads of departments will urge the measure warmly.

The need for more space has become so pressing in the Treasury Department Building that it has brought about a proposition to add a story to the height of the building. This, I understand, emanates from Supervising Architect Taylor, who proposes to carry it out in a manner least likely to mar the Classic integrity of the building. His idea is to put on an attic, rising back of the line of the outer walls, beginning, in fact, only at the ridge of the roof, in order to be as little in evidence as it is possible to keep it. The building being an oblong about 450 feet long by 250 feet wide enclosing two interior courts, this will give an H in plan, the attic, for obvious reasons, being not intended to carry across the north and south ends. The scheme would provide considerable additional floor-space, enough to provide for all future needs of the Supervising Architect's office, and to presently release for other use sixteen good rooms in the basement of the building, besides the large draughting-room, a recent temporary structure in one of the courts, and some storage room. The story is to be kept low and is expected to show very little on the east, merely appearing as an additional cornice above the roof. This scarcely promises an altogether academic effect, and on the north, south and west, where the building is seen across wide streets and parks, it will be difficult to keep the proposed superstructure from being very much in evidence.

Beyond the probable elimination, by absorption, of formless chimney-stacks, electric-wire scaffolds, elevator-houses, and the like, which now give a rather too-picturesque sky-line, the scheme offers little, aesthetically, to reconcile one to the risk of disfiguring a good building. The Treasury Building is of granite, with four stories, a long colonnade and pavilions on the east, and fine porticos on the other three sides, in the Ionic style. It is one of the four great public buildings of architectural merit, in the columnar, or post-and-lintel, manner which Washington has to show. The Capitol may be called a Roman building, and its noble impressiveness would be hard to exceed. The Treasury and Patent Office are Grecian, the latter in severe Doric. The Post-office is a white marble building in the modern Italian style. This last and the Treasury Building were designed by Robert Mills.

It is to be hoped that Congress will be disposed to provide for expansion in the departments of government in consonance with the general scheme of permanent public improvement which has been put forward and which evidently meets with general approval.

Buildings set in broad and artistically treated grounds, grouped generally along the line of Washington's great thoroughfare, Pennsylvania Avenue, between the Capitol and the President's House, for convenience and enhancement of the general effect, and with fine bodies of park and landscape artistry lying to the south of them away to the river — this is about the gist of the scheme.

There is another, which proposes to drive a boulevard 200 feet wide straight through from the Capitol to the Washington Monument, to set up public buildings in rows along its bleak stretch, and to leave the surviving torn and riven fragments of park to take care of themselves in the sequel. The vulgar ugliness, the weary monotony of the probable result have been the theme of recent editorial comment in this journal.

The time is come to settle these questions. The matter is one which not only interests residents of this city, but concerns the Government economically and the whole people, as determining the upbuilding and beautification of their capital. And whatever may be decided, the plan should be one, which takes nothing from, but rather adds to and makes perfect, our parks and grounds. These we should defend to the utmost.

This is the key-note of the very comprehensive and beautiful plans which have been elaborated by Mr. Parsons, and which will accompany the report to Congress on this matter by General Wilson, Chief of Engineers. The results of Mr. Parsons's study have been set forth in some large and highly finished drawings in color, to which he adds a relief model in papier mâché, which will be very convincing. He accompanies these with detailed recommendations and estimates.

It is to be hoped that all this matter may have reached a stage to permit its being given to the public in time to be discussed with other projects at that session of the American Institute of Architects set apart for the subject of "Grouping of Government Buildings, Landscape and Statuary in Washington." The Institute holds its Thirty-fourth Annual Convention here next week, and the session referred to is that of the evening of December 13, in the Lecture Hall of Columbian University.

Congress will probably provide in a general way for the effect of last year's rise in the price of building-material on the construction of public buildings. This will affect the new building for the Department of Justice, which from various causes has not as yet passed beyond the preparatory stage. There is some rumor of a new site for this building, near the Capitol, and a consequent remaking of the plans, *de novo*. But in the event of the immediate adoption of a general scheme of improvement, a site midway between the President's House and the Houses of Congress would be found convenient and fitting. The idea is to provide for the Supreme Court in the same building. It is expected also that Congress will provide for a municipal building for the District of Columbia at this session.

Colonel Bingham will have conveyed to the White House on the morning of December 12 a model of that building's proposed enlargement from plans evolved by Mr. Owen under his direction.

Later in the session, if not before the holidays, the Memorial Bridge matter will be revived. General Wilson will recommend that the accepted plan shall be carried out. There are some questions bearing upon this matter of the bridge which have not yet been studied and digested, so far as one knows, and should be before an appropriation is made. For instance, the relation of the bridge to the important question of channel-building and correction of river; its relation to the effect of the Potomac as a sheet of water in the middle distance and to the hills of Arlington as a background; these and some other points one would like to be informed about, as they seem important both from the point-of-view of hygiene and of aesthetics, and, doubtless, all such considerations will have been amply treated in Mr. Parsons's project, will be handled as well in the Institute's discussion, and we shall be enlightened. They have been suggested to the writer of this letter, from time to time, by a friend whose work lies somewhat in those lines, who has studied these matters for years on the spot, and who has thought out a treatment for the bridge which would surely interest the public could his modesty be induced to let him bring it forward.



DETROIT ARCHITECTURAL CLUB.

ON the eve of November 10, at the Hotel Ste. Claire, a farewell reception and banquet was tendered Mr. Alex. Blumberg, the Treasurer of the Club for the past two years, who left to accept a position in the Supervising Architect's Office at Washington, D. C.

On November 5, the Club held an election of Officers and one Director for the ensuing year. The election resulted as follows: *President*, Francis S. Swales; *Vice-President*, C. F. J. Barnes; *Treasurer*, J. J. Frauenfelder; *Director*, Geo. H. Ropes; and to fill the unexpired term of Mr. F. S. Swales as *Director*, Mr. Cheri Mandelbaum.

President Swales has appointed the following committees: —

Educational: J. Watrous Case, *Chairman*, Wm. Reed Hill and Geo. H. Ropes; *House*: J. J. Frauenfelder, *Chairman*, Frank C. Baldwin and H. A. O'Dell; *Entertainment*: S. B. Rosengarten, *Chairman*, W. S. Painter and W. S. Chaffee; *Publicity*: Dalton R. Wells, *Chairman*, J. A. Gillard and A. Eisen; *Librarian*: Chas. R. Greene. Mr. Geo. H. Ropes has been appointed to succeed Mr. F. S. Swales as *Chairman of the Exhibition Committee* with J. W. Case and W. R. Hill.

The Club has outgrown its quarters at 10 West Columbia Street and is now located in a very handsome suite at Nos. 1109 and 1110 Union Trust Building. The formal opening of the rooms was held on Thursday evening, November 22, with an affair of a Bohemian character.

DALTON R. WELLS, *Secretary*.



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

A DESIGN FOR A MEMORIAL BRIDGE ACROSS THE POTOMAC RIVER, AT WASHINGTON, D. C. MR. GEORGE KELLER, ARCHITECT, HARTFORD, CONN.

BEFORE describing the design prepared by me it may be well to give a brief account of the steps already taken to secure a Memorial Bridge at Washington, which has been the subject of discussion for the past twelve or fifteen years.

Major Hains (now Colonel), Corps of Engineers, in 1886 reported in favor of a main bridge structure 1,200 feet long, the Washington approach to be by a wide roadway on an *embankment*, the Anacostan Island and bed of Little River to be crossed partly by *embankment* and partly by open trestle supporting the roadway. At the same time Captain (now Major) Symonds, Corps of Engineers, submitted a plan for a bridge, the approaches and a portion of the bridge across the lowlands to be an *embankment*.

On February 20, 1890, the Senate adopted a resolution directing the Secretary of War to report to the Senate the most suitable kind of bridge with approaches, from a point at or near New York Avenue, across the Potomac River, to a point on the United States National Cemetery grounds at Arlington, so as to connect in the best manner the public grounds on both sides of the Potomac River, with estimates of the kind of bridge deemed most expedient, and least likely to interfere with the navigation of the river. This was referred to Colonel Hains for report, who recommended a suspension-bridge, the river-span to be 1,100 feet and two shore-spans 652 feet each, the approaches at each end to be on masonry, arched viaducts and earth *embankments*.

In 1892 the matter again came up and was referred to Maj. C. E. L. B. Davis, who reported June 1, recommending a bridge similar to the one proposed by Colonel Hains in 1886, which contemplated

approaches of embankments of earth. In 1895 (January 29) a bill was introduced appropriating \$100,000, or so much thereof as was necessary, for the purpose of securing designs and of commencing the construction of said bridge. This bill was referred to Major Davis, Corps of Engineers, who reported that the limit of cost, \$600,000, was not sufficient to build a suitable Memorial Bridge, such as was evidently intended from the wording of the bill. A similar bill came up in the Senate soon after, with the exception that the limit of cost was stricken out. None of these bills became laws. Finally, March 3, 1899, an act passed Congress appropriating \$5,000 to procure designs for a Memorial Bridge across the Potomac, from the most convenient point of the Naval Observatory grounds, or adjacent thereto, across the Potomac, to the most convenient point of the Arlington estate property, without limiting the cost of the bridge. It was under this act that the competition for a design was held, which resulted in the adoption of Mr. Burr's design, the other competitors being Messrs. Buck, Hutton and Morison, all eminent bridge-engineers. The instructions to the competitors directed that the initial point of the approach on the Washington side should begin at the intersection of 23d Street and New York Avenue, and terminate at the Georgetown and Alexandria Highway on the Virginia side of the Potomac, a total distance of about 5,550 feet, or a little over a mile.

It will be noticed that previous to this competition all the designs recommended by the officers of the Corps of Engineers, to whom the bills had been referred, recommended that the bridge proper should be from 1,100 to 1,200 feet long, and that the approaches should be mainly constructed of roadways built on embankments of earth.

In the instructions to the competing engineers this method of constructing the approaches of earth embankments was practically prohibited, as the specifications required an openwork structure over Potomac Park, so as not to interfere with the Park, and an openwork structure over the flats, so as not to interfere with the water discharged over these flats. Mr. Morison, although complying with the instructions in submitting his design, felt constrained to point out the objections to such a construction. He says: "It seems right to add that the arrangement of the approaches in the plans submitted, though required by the specifications, does not seem to the designer the solution of the problem. . . . So far as keeping the park open is concerned, it is impossible to maintain a park under a bridge with a solid floor such as is required for street-travel. The shadow caused by this floor destroys the grass below it and prevents the growth of vegetation. A neat appearance can only be obtained by constructing a gravel way the entire width of the structure, and this is not consistent with park ideas. So far as the Arlington approach is concerned, it seems desirable to exclude the flow of water from the flats, confining the entire flood discharge of the river to the bridge proper. This would maintain a deep channel through the bridge, and the waterway would still be equal to that of the Aqueduct Bridge above. It would allow the flats on the south side of the Potomac to be filled and converted into solid dry ground, a very important sanitary consideration. The designer believes that the proper form of approach is a solid earth embankment, with slopes flat enough to be maintained as grassy lawns, decorated with such flowers and shrubs as a landscape architect might recommend." The necessity of observing this stipulation in the specification added greatly to the expense and destroyed much of the simplicity of the designs submitted, without any adequate advantage. It obliged the engineers to string out their bridges for a distance of nearly a mile, whereas, had the earth embankment been wisely adhered to, the bridge could have been contracted to a little over 1,400 feet, giving an opportunity to concentrate the architectural features, instead of weakening their proper effect by scattering them along an interminable line. Mr. Morison, in the description of his design, says that "the one material suitable for a monumental work is masonry; it is the only form of construction made of really durable material. The ordinary elements of the atmosphere do not act destructively on the better classes of stone, brick and mortar. In metal structures constant care and protection are required to prevent oxidation, and oxidation means rapid destruction." The Board of Engineers and Architects evidently held the same opinion as to the material suitable, for the report distinctly says that "the Board does not favor the use of concealed iron or steel work that requires painting or similar application for its preservation."

Strange to say, in the face of their better judgment, the design adopted might fairly be described as a cagework of steel concealed by a mask or veneer of stonework. When the design adopted by the Board was illustrated in the *Washington Star*, that paper published a letter from me criticising the design, the substance of which I will here repeat, as it briefly states the objections to the adopted design, and will serve to show what I have aimed to accomplish in the design prepared by me, and what I have sought to avoid. "The result of the competition from an artistic standpoint is not a success, for it is a grave mistake in the design to place the most important and purely monumental feature of the composition where it cannot be fairly studied. The view as shown in the perspective of the Memorial Arches spanning the roadway can only be had from a boat on the river or from a flying-machine, but never by one approaching it from either end of the bridge. The Memorial Arches can only be seen from directly in front as you approach the bridge, after having walked nearly a third of a mile in order to get a good view. If you stop in front of the arches in order to get a good view of the Me-

morial, it is at the risk of being jostled by the passing crowd on the narrow sidewalk, or, if you venture to step on to the roadway, to be run over by vehicles, trolley-cars, automobiles, etc., so that you are not in just the frame of mind to appreciate the beauties of architecture while looking out for your own safety.

"Then, it is unfortunate to combine so utilitarian a device as a bascule draw-span with what should only embody a purely monumental idea. If the top of the Great Pyramid or the capstone of the Washington Monument could be contrived by some clever bascule or other engineering device so as to open and shut occasionally, like the lid of an inkstand, the monumental character would be destroyed; for the impression of stability, which is the first requisite of a monument, would be entirely lost. . . . As to the design of the bridge itself, it lacks simplicity, the arches are from all spans from 60 feet to 192 feet, and all shapes; semi-circular, segmental, and steel imitation segmental arch for the bascule."

Why the Board preferred the memorial arches shown on the alternate plan to those shown on the adopted design of the bridge is difficult to understand, for the discarded arches are far more monumental than the ones substituted. They have neither breadth nor depth sufficient to be in proportion to the great width of the arch opening or the excessive height of the structures, 260 feet, above the level of the river. They look in the distance more like enormous derricks or dredging-machines than monumental arches, and their position in the middle of the stream tends to strengthen that impression. It is absurd to say that they are necessary in order to withstand the thrust of the adjoining 192-foot arches. Any engineer will tell you that a little calculation would disprove that statement, if it were not already refuted in the design of Mr. Morison, where abutment piers for 184-foot adjoining arches are shown without any such superimposed weight to reinforce the piers.

Another reason given for placing the memorial arches in this anomalous position, in the middle of the river instead of on *terra firma*, is that it would be "a violation both of the structural elements of the composition and those which relate exclusively to æsthetic motives to ignore such a feature of the work" as the bascule or movable part of the bridge. You cannot ignore the bascule; it will assert itself no matter how you may attempt to disguise it by enclosing it between two memorial arches. It is contemplated to expend about a million of dollars on statuary and carving on the entire structure, of the design adopted by the Board, the most of which is to be concentrated on these memorial towers, eight colossal groups, — bas-reliefs, statues of "Victory," etc., where they cannot be fairly studied and where they will be defiled by the flying clouds of dust every time the bascule is raised and the wind blowing. It is a greater violation of æsthetic motives to display statuary where the spectator is disturbed by the passing crowds and at times affrighted by seeing the whole surface of the bridge between the memorial arches gradually rising to a vertical position. The bascule need not be ignored nor disguised, for it is susceptible of artistic treatment and can be much more simply and effectively marked than by hiding it behind huge towers, each of which is in bulk twice that of the Arc de l'Etoile in Paris, the largest monumental arch in the world of either ancient or modern times. The cost of the Paris arch was over \$2,500,000, yet we are told that the proposed bridge with its approaches of stone masonry, almost three-fourths of a mile long, and including two enormous arches containing together more than four times the bulk of the Arc de l'Etoile, will cost less than \$5,000,000.

The propriety of placing the towers in the middle of the stream is not demonstrated because three out of the four competitors placed it there in their designs. In a similar project on a much smaller scale, over forty designs were submitted in competition by architects from both this country and Europe, nearly every one of which had a monumental arch in the middle of the bridge spanning the roadway. This position was suggested by the committee, but when the designs were received it became apparent that it would be a grave error to place it there, so the idea was abandoned, and the memorial arch was placed where it belongs — at the entrance to the bridge, on *terra firma*. Of the four engineers who submitted designs, Mr. Morison was the only one who had the courage of his convictions, and refused to use iron or steel in the construction of the Memorial Bridge, for the reasons already given. He is perfectly familiar with the topography of the proposed site of the bridge and the difficulties of the problem involved, and he does not hesitate to advise the building of the approaches on earth embankments, and, incidentally, the filling-in and reclaiming the flats on the south side of the Potomac River, which is to be commended from practical, as well as sanitary, grounds. In his investigation of the requirements of the case, he has found that if an average depth of 26.7 feet below water is assumed, which is about 8 feet above the average depth of bed-rock, a width of 900 feet would give a cross-section of 36,000 square feet, which is a little more than that of the Aqueduct Bridge above, and more than sufficient to take care of the highest floods.

This width he adopted in his design, which made a bridge, including the piers and abutments, a little over 1,200 feet long, and I have taken a modification of this and incorporated it in my design, with Mr. Morison's permission.

The suggestions of Colonel Hains, Major Symonds and Major Davis, of the Corps of Engineers, endorsed by Mr. Morison, that the approaches both on the Washington side and the south side of the Potomac River should be formed of earth embankments, so commends itself to one's judgment that I have adopted it in my design.

These embankments could be planted with trees forming a beautiful shaded approach to the bridge on either side, similar to the Champs Elysées in Paris, affording a most grateful relief in summer, instead of facing through the burning sun a stretch over a mile long.

On the Washington side the avenue of trees is interrupted by a handsome stone bridge spanning Water Street underneath, and then the promenade opens into a fine circular plaza, or esplanade, with gently sloping banks and radiating walks leading to the lower grounds of Potomac Park, so that this plaza forms a feature of the Park and really becomes a part of it, while it serves its principal purpose as a noble entrance to the bridge. In the centre of the plaza is placed a Memorial Arch, entirely free, as is the Arc de l'Etoile in Paris, and, like it, set in the centre of a great circle 500 feet diameter, so that it can be fairly studied from all points-of-view.

The arch in this position does not encumber the entrance to the bridge, yet is an integral part of the design and is the most important architectural feature of the Washington side of the river. It offers ample opportunity for the display of sculpture illustrating the War for the Union, and is conspicuous at a great distance from the streets and roadways radiating from it.

Two monumental pillars, crowned with groups of sculpture, mark the entrance to the bridge, as in the Friederich's Bridge, Berlin, or the more recent Alexander III Bridge in Paris.

The adopted design contemplates a structure having thirty-four arches, six of which belong to the bridge proper and are 192-foot span, three arches on each side of a 226-foot bascule draw-span; the remaining twenty-eight arches are 60-foot span and carry the approaches on either side of the river to the main bridge. By the adoption of earth embankments in the design now being described, twenty-eight masonry arches with their piers and abutments are eliminated, and the construction is simplified to six noble arches spanning the river, three on each side of a central draw-span of 145 feet.

The Alexander III Bridge is 132 feet wide. It would be too costly to build a bridge approaching this in width, if it were nearly a mile long, such as the one adopted by the Board contemplates; but it is quite feasible when the structure is but 1,400 feet long instead of 3,615 feet. I have accordingly shown the bridge 100 feet wide, 60 feet of which is occupied as roadway with trolley-cars in the centre, and 20 feet on each side for colonnaded promenades overlooking the river affording shade and protection to the pedestrian, and giving a monumental character to the structure. These promenades are slightly raised above the level of the roadway, and are approached from the plaza by wide arches piercing the pedestals of the monumental pillars. The starlings, or projections, of the piers beyond the face of the bridge are carried up level with the colonnaded promenades, and there are formed into balconies where one can step out and linger on the bridge overlooking the river.

The central opening of the bridge is occupied by a Scherzer rolling-lift draw-span, flanked by semicircular continuations of the colonnades, treated so as to suggest the martello towers of Italy and Spain anciently defending the seacoast.

This is the point "seized upon" in the adopted plan, to use the language of the designer, "as the most suitable for expressing the memorial character of the structure"; but in the design now being described, while not ignoring the bascule or attempting to conceal its object, it is given no such undue importance. It is distinctly emphasized and given a character of its own in keeping with its mechanical purpose, but there is no attempt to link a movable bascule with a pair of monumental arches—a most incongruous combination. The lighter treatment of the ironwork of the draw in contrast with the bold martello towers gives a picturesque effect to this feature, which is further increased by the Venetian masts that rise above, flying the national colors. These towers also serve the purpose of providing at the level of the roadway, shelter for the keepers in charge of the working machinery of the bascule.

The pillars at the entrance, and these towers at the draw-span, frame the lighter treatment of the colonnades contained between them, and aid the monumental character of the design, the towers at the same time serving to screen the mechanical portion of the draw-span.

The western half of the bridge is similar to the eastern side, excepting that the circular plaza at the western entrance has a monumental column rising from its centre, balancing the memorial arch at the Washington approach to the bridge. As this esplanade is on the soil of Virginia it would be fitting to devote it to the commemoration of the "Return of Peace" to the country and the "cementing" of the Union. A statue of "Concordia" would surmount the column and at its base be grouped figures representing the North, South, East and West, suggesting also, by a processional frieze, the final restoration of Unity, Equality, Fraternity and Liberty.

This plaza, in like manner to the one at the Washington approach to the bridge, would slope gently on all sides to the reclaimed land surrounding it, and the highway, lined with shade-trees on either side, would continue in a straight line to the Georgetown and Alexandria Road.

From this description it will be seen that the design beginning at the initial point at the intersection of 23d Street and New York Avenue provides a shaded promenade all the way to the Georgetown and Alexandria highway, pleasantly diversified as one passes along the road. The first portion is through an avenue of trees until you reach the open esplanade opposite the entrance to the bridge, where

a fine sight of the whole composition breaks on the view, easily taken in at a glance, not vanishing into hazy distance as would a string of arches three-fourths of a mile long. From the centre of this plaza rises the imposing memorial arch, enriched with beautiful sculpture. Crossing the plaza the eye is attracted by the monumental pillars marking the entrance to the bridge, and the colonnaded promenades are entered, giving a fine view of the river on either side. Resting-places are provided at intervals opening from the colonnades, at the projecting balconies built over the piers.

The centre of the bridge is marked by four Venetian masts bearing the national flag, and seats are provided in the exedras formed by the continuation of the colonnades, affording a fine view up and down the river. At the western end of the bridge the monumental column, rising from the centre of the plaza corresponding with the one at the Washington end of the bridge, commands the attention, after which one passes under the grateful shade of the avenue of trees lining the road to Arlington, the whole forming a happy combination of nature and art.

UNITED STATES CUSTOM-HOUSE, BALTIMORE, MD. MESSRS. HORN-BLOWER & MARSHALL, ARCHITECTS, WASHINGTON, D. C.

A COMPETITIVE DESIGN FOR THE UNITED STATES CUSTOM-HOUSE, BALTIMORE, MD. MESSRS. WYATT & NÖLTING, ARCHITECTS, BALTIMORE, MD.

PLANS AND SECTION OF SAME.

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

AN ENTRANCE-DOOR: GRAND PALAIS DES CHAMPS-ÉLYSÉES, PARIS. M. DEGLANE, ARCHITECT.

This plate is copied from *l'Architecture*.

[Additional Illustrations in the International Edition.]

APPELLATE COURT-HOUSE, NEW YORK, N. Y. MR. JAMES BROWN LORD, ARCHITECT, NEW YORK, N. Y.

HOUSE OF WILL H. LOW, ESQ., LAWRENCE PARK, BRONXVILLE, N. Y. MR. W. A. BATES, ARCHITECT, NEW YORK, N. Y.

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HOUSE AT MANCHESTER BEACH, MASS. MR. T. C. LINK, ARCHITECT, ST. LOUIS, MO.



[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.]

REAL ESTATE IMPROVEMENTS AND RECALCITRANT OWNERS.

BOSTON, MASS., December 3, 1900.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—For a second time within a few years is the present generation to witness the artistic development of the small tract of land between Washington Street, Adams Square, Devonshire Street and State Street delayed, if not blocked completely, by the avariciousness or obstinacy of the owners of small but prominent parcels of the property, who refuse to surrender their holdings and join in with the neighboring owners in the development of the property according to modern demands. Again shall we have the distressing sight of an insignificant building on one of the most prominent sites in the city engulfed, squeezed-in, and many times overtopped by its new neighbor.

Though averse to the injudicious curtailing by the Legislature of the property rights of owners in Boston, yet it does seem as though a "Board of Arbitration" should be inaugurated by State or City to step in in just such a case as this, and somehow bring the obstinate few to the way of thinking of the yearning many.

Very truly yours, W. P. RICHARDS.

NOTES AND CLIPPINGS

CARLOADS OF MOLTEN-IRON.—The construction of a new bridge across the Monongahela, to be opened for service within the next few days, directs attention afresh to a striking feature of modern metallurgy. The usual way to make steel is to melt up cold pig-iron, to which other materials are added, and then purify the mixture by burning out certain undesirable elements. Pig-iron, however, is itself the product of a previous heating-process, in which the ore is melted up with carbonate-of-lime to remove the oxygen. It occurred to some ingenious Yankee a few years ago that if the product of the blast-furnace could be converted into steel before it had cooled sensibly a great economy in fuel would be secured. The new bridge just mentioned has been built for the Carnegie Company, and will be used to convey molten-iron from the Carrie furnaces to the Homestead Steel-works, nearly a mile off. At the present time Homestead obtains molten metal from Duquesne, about four and a half miles away. The new route has been laid out so as to save time and distance, and, possibly, caloric, too. There has been for some time one "hot metal" bridge across the Monongahela, controlled by the Carnegie Company, and besides the new one about to be opened a third is in process of erection for the Jones & McLaughlin inter-st. It will thus be perceived that the practice has proved so successful that it is being rapidly extended. One gets a vivid idea of this remarkable procedure when he reads about the precautions taken in the construction of the new bridge to prevent harm in case any of the melted metal leaks or slops over while in transit from the iron furnace to the steel-works. The spaces between the ties are to be filled with sand, so that no iron may fall to the decks of passing steamers. The ties will be of wood, but are to be protected by a covering of sand. On either side of the track there will be raised a screen of heavy metal plates, faced with fire-brick and reaching to a height of 4 feet. An extension of thinner plates will bring the screen up 6 feet farther. The cars are ladle shaped, and the molten metal runs directly into them when the furnaces are tapped. A locomotive then draws the train to the steel-works at a moderate pace. The glowing freight is still in a fluid condition when it reaches the mixers there. If it were not the cars would be ruined. — *N. Y. Tribune.*

THE MARBLE ARCH, CUMBERLAND GATE.—It is rumored that the Marble Arch is to be pulled down and rebuilt elsewhere. The Arch, adapted by Nash from those of Septimius Severus and of Constantine at Rome, and constructed of Carrara marble at a cost of, reputedly, £80,000, was originally designed to carry Chantrey's equestrian statue of "George IV" (now in Trafalgar Square), and was first erected in the Mall, opposite Buckingham Palace, 1825-7. The sculptured work is by Flaxman, Westmacott, and Rossi. The beautiful gates, designed and cast in a copper alloy by Samuel Parker, cost 3,000 guineas; they were unfortunately damaged as they left the foundry, and were shorn of their upper frieze and semi-circle. In 1745 a mean brick arch was built at the northeast corner of Hyde Park. Decimus Burton made designs for gateways for the new iron gates presented by H. P. Hope in 1822, and for a lodge, to replace the lodge and gateways built there by Soane in 1794. In 1851 the iron gates were divided and placed at the sides of the Marble Arch upon its removal to Cumberland, formerly known as Tyburn, Gate. There is no doubt that the Marble Arch is absurdly placed at present, where it has no meaning and fronts nothing, and we should be very glad to see it reërected in some position where it could suitably add to the architectural dignity of a site, and form a State entrance of some kind; but considering what was the fate of the Burlington House Colonnade, we think the authorities ought to make it clear, before removing the arch, what they mean to do with it, and that it is really to be preserved and reërected, and not allowed to "go to spoil." — *The Builder.*

THE OCHRE INDUSTRY.—An industry in which France has maintained a supremacy for nearly two centuries is the production of ochre, as the French material is peculiarly rich in the oxides-of-iron, and considerable care is exercised in its preparation. Vauluse is the centre of this industry, and in the neighborhood of Apt the country contains a number of hills of alluvial clay, which are more or less rich in the ore. Sometimes it is excavated direct, and often shafts are sunk and the material, when brought to the surface, is transported to the valley below on carts, and there washed. The mining is done in the winter season only, as the watercourses are dry in summer, and by means of successive settling-basins various degrees of fineness are secured in washing the ore. At the end of the winter these basins are filled with ochre in the form of mud, which dries hard with the hot weather, and is then cut into blocks of regular size and dried in the sun. It is then either cut into bricks or crushed into powder for shipment, and is sorted for color. The yellow shades command the highest price, and the dark red the least. The total production of these mines last year was about 18,000 tons, of which amount 3,000 tons were shipped to the United States. The mines, though they have been worked for many years, are by no means exhausted, and even though the industry is at present carried on with primitive methods, it is of considerable importance. — *N. Y. Evening Post.*

THE WISCONSIN HISTORICAL SOCIETY.—The State Historical Society of Wisconsin, which first opened its Library Building on October 19, has had a unique career. Starting during the first session of the Legislature in 1849, its local habitation was till 1856 a corner in the old Capitol. Needing elbow-room, it then removed with 1,050 books to the basement of a church, and remained there till 1867, when it brought its books, already over 20,000, into three halls prepared for it in the new

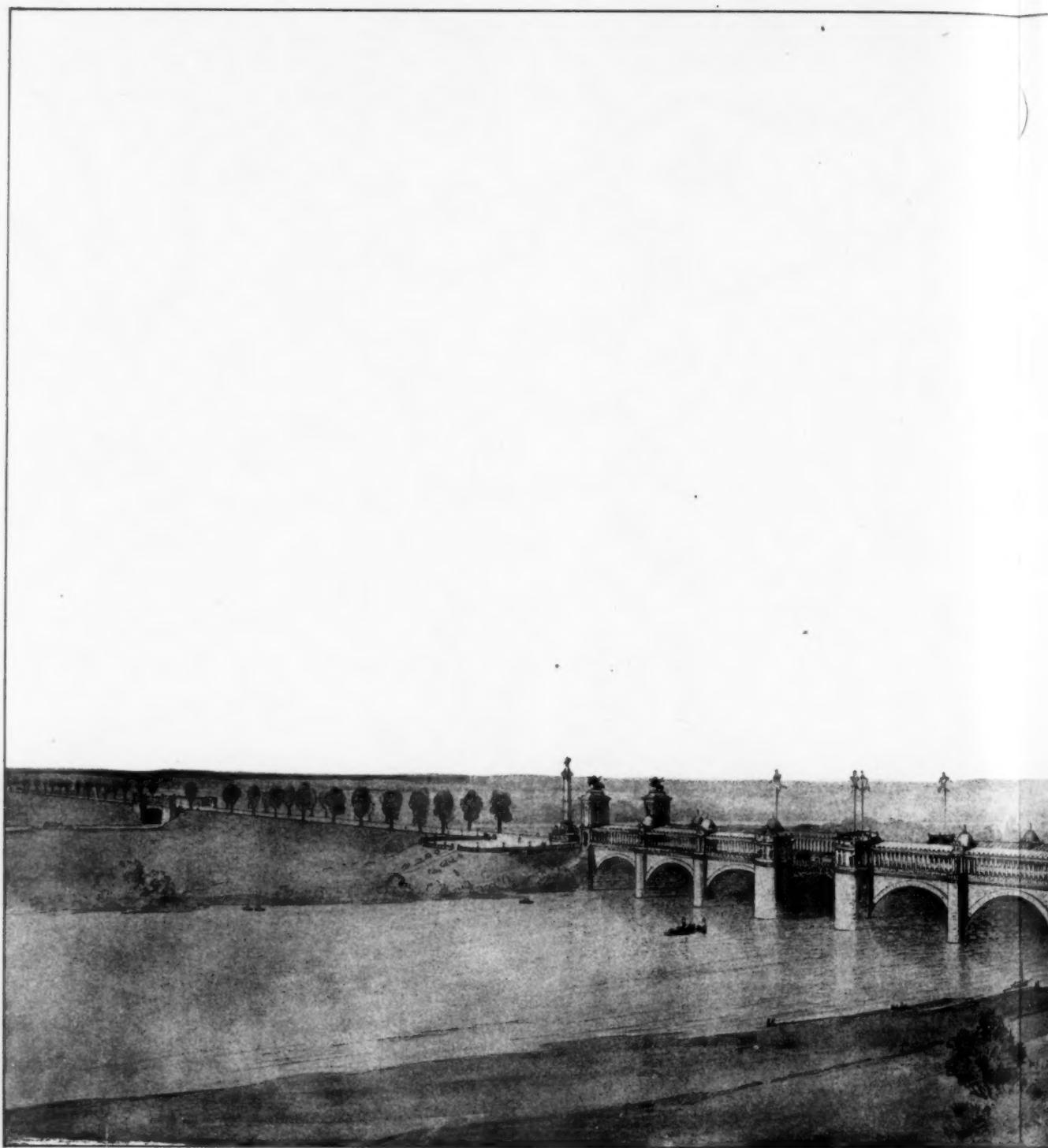
Capitol. A dozen years afterward, its jewels having outgrown their casket, Capitol extension was largely brought about in order to enshrine them in befitting settings. Within two decades its collections had become so ponderous that they threatened ruin to walls and floors; as well as too precious to be imperilled in a capitol which was far from fireproof. Accordingly, soon after the burning of Pennsylvania rarities at Harrisburg, the State of Wisconsin set about rearing the structure just now completed. The new quarters, which have cost the State \$575,000, the Society enters with more than 100,000 bound volumes, and about as many pamphlets, often more rare and of some historic value, with card-catalogues of everything, even to the tiniest primer, and such shelf arrangement that no particle can be hard to locate. The catalogue of its 10,000 newspaper files is of more than interstate reputation, having been found of national usefulness. The books are mainly stored in a wing (45' x 63'), reverted at right angles from the chief edifice. In all the six stories the stacks and shelves are iron. The façade of 200 feet has a central dodecastyle porch upward from the second story. Back of the porch is the reading room (120' x 48'), with skylights and ceiling electric-lights, and around the walls 180 shelves of reference books. Tables and chairs suffice for 240 readers, that is, two-thirds as many as the British Museum accommodates. Separated from the reading-room only by pillars are card catalogues and delivery-counters. We lack the space for details concerning other features of a building which is, perhaps, the most costly that has ever been built under the name of an historical society. The name "historical," however, though legal and legislative, is partly a misnomer. In truth, the Library is not a complete building, still lacking a second wing to hold the books of the University, which now, numbering 50,000, find a temporary lodgment in the wing of the Historical Society. This Library Hall marks a new educational departure. It has been erected on ground furnished by the University. The accumulations of that institution and those of the Society clasp hands together under one roof. Thanks to this felicity of position, whatever the people, out of the abundance of their hearts, have bestowed on the Society as trustees is spread as daily food before their sons and daughters, who here chiefly congregate for the bettering of their minds. — *N. Y. Evening Post.*

ARE FURNACES FIXTURES?—The question as to when furnaces and ranges are fixtures was involved in a suit brought by the Union Stove Works to foreclose a mechanic's lien, filed against a number of flats owned by Frederic Klingman. The plaintiff, during the construction of the flats for the purpose of sale, furnished to the owner furnaces set in the cellars, from which pipes ran to the chimneys and through the partitions to registers on different floors. There were also ranges having the usual attachments and connected with the water-pipes. A judgment rendered at Special Term in favor of the plaintiff, which was affirmed by the Appellate Division, has now been upheld by the Court of Appeals on the opinion below by Justice Parker, now Chief Judge of the Court of Appeals. Justice Parker held that the circumstances indicated that the furnaces and ranges were intended to be annexed to the realty and to pass as fixtures, and the contractor was entitled under the statute to file a lien against the property, not only for their value, but also for the labor of setting them and for the necessary pipes and appliances furnished therewith, although a portion of the material, notably the ranges, might be removed from the buildings without difficulty. — *N. Y. Times.*

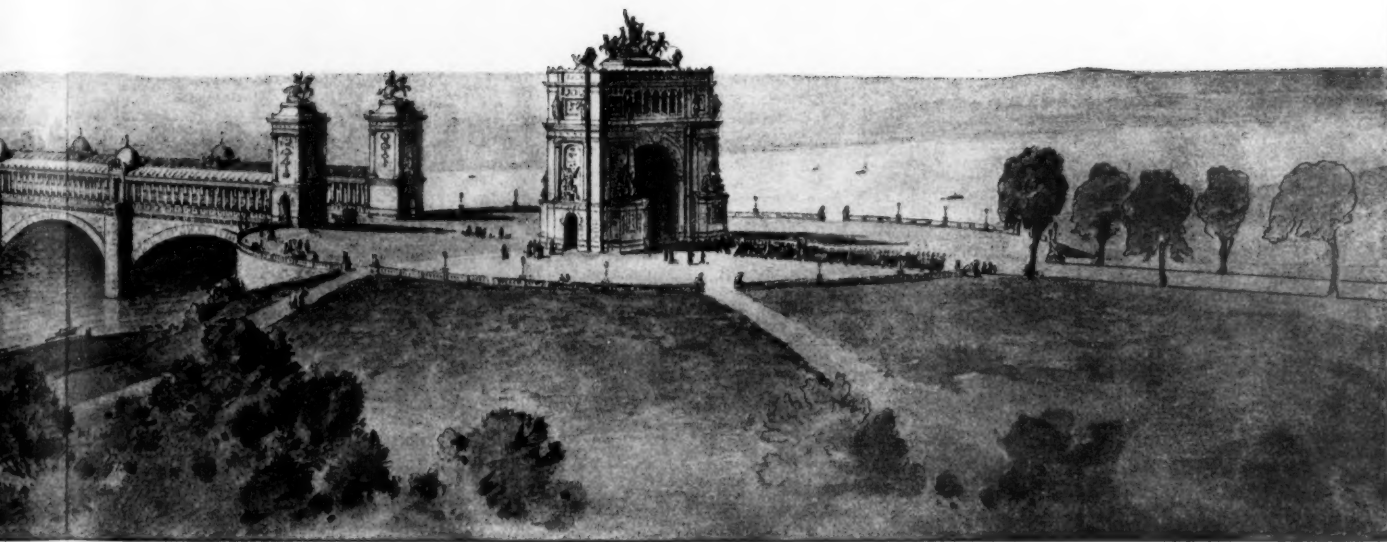
THEATRE FRANCAIS RECONSTRUCTION.—Although the plans of the old playhouse built by the architect Louis in 1782 have been religiously followed down to the merest detail in the renovated theatre, the very few alterations made include one which involves historic interests. The opportunity of the rebuilding of the house has been taken advantage of to enlarge the former Royal, now the Presidential, box, which was originally of small dimensions. A good-sized sitting-room has also been added behind. To find the requisite space one of the actors' dressing-rooms contiguous to the box has been turned into a *salon*. It is to these quarters that an historic interest attaches, as they were used throughout his long career at the Français by the great Talma. The dressing-room, however, had not been preserved as it stood when the famous tragedian of the Napoleonic era occupied it, having long since been irreverently used for the storage of all sorts of waste property and lumber. Converted into a *salon* for the President of the Republic, Talma's dressing-room will now be handsomely fitted and furnished with woodwork and panellings, and with stone and marble sculptures taken from some of the fine rooms of the Palais Royal, which date back to the days of the Regent. — *Paris Correspondence, London Telegraph.*

ETRUSCAN ANTIQUITIES AT PERUGIA.—The discovery in 1886 of the tomb of an Etruscan priestess at Todi has been equalled by a similar "find" close to the Villa Spera in Dio, near the gate of Sant' Angelo, at Perugia. Old tradition and the local archaeologists say that the neighboring hill, which is near the city wall, extending from the gate of Bulagalo up to the Torre del Monte, was aforesaid a sacred rock, and it is likely that other tombs of high-priests and soothsayers (*aruspici*) may exist there under the soil of the forest sacred to the cult of the various divinities worshipped by the Græco-Etruscan peoples. It seems that an immense sarcophagus has been found by Signor Salusti during the excavations in the locality, near the spot where twenty years ago were dug up the rarest bronzes and golden ornaments. — *Western Daily Press.*

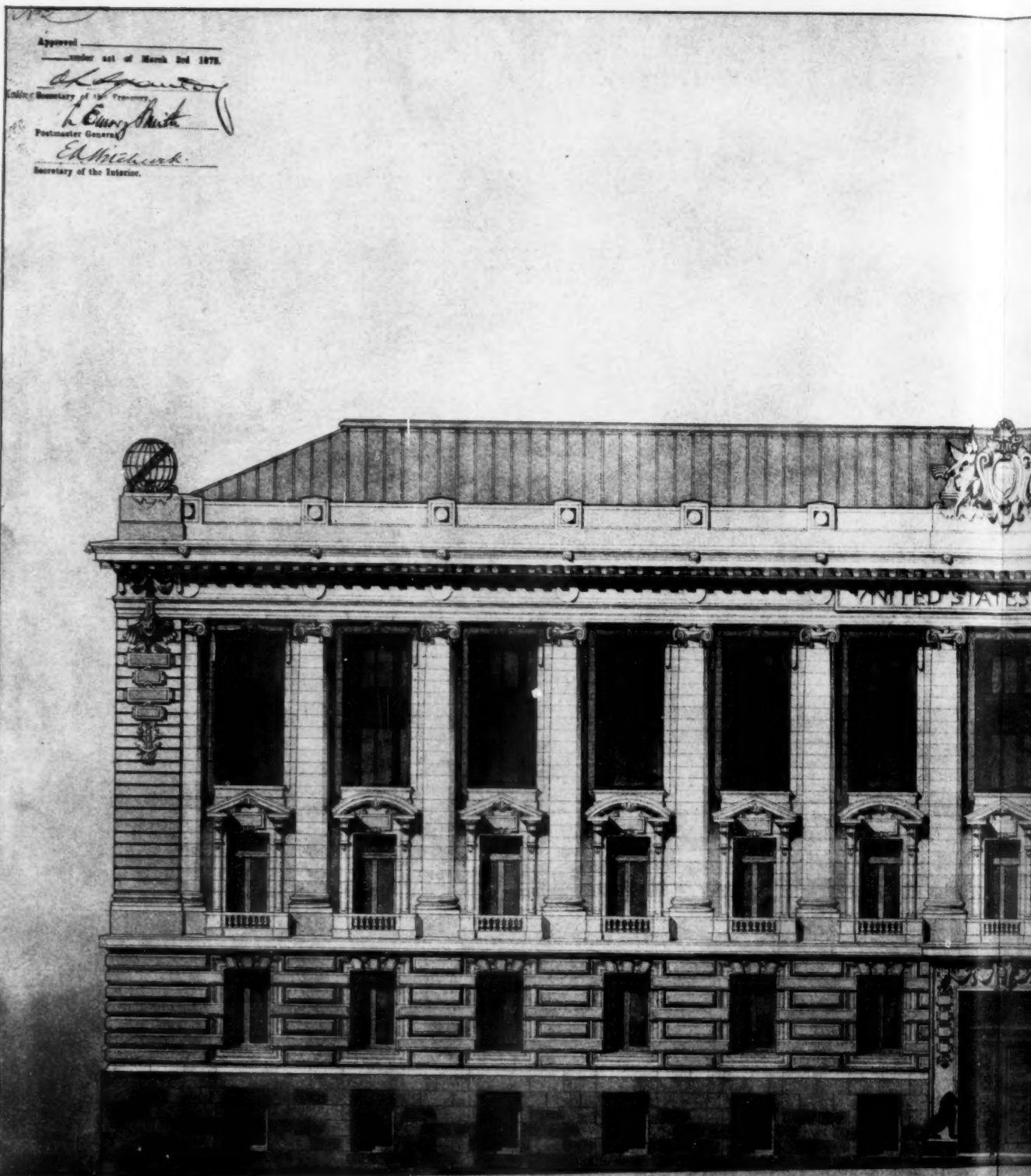
SUGGESTED AMERICAN HOSPITAL IN PARIS.—Agents of Mrs. Leland Stanford are said to be negotiating to secure certain Exposition buildings at Paris, which could be taken apart and erected upon ground already purchased in a pleasant suburb of Paris, to serve as an American hospital. — *Exchange.*



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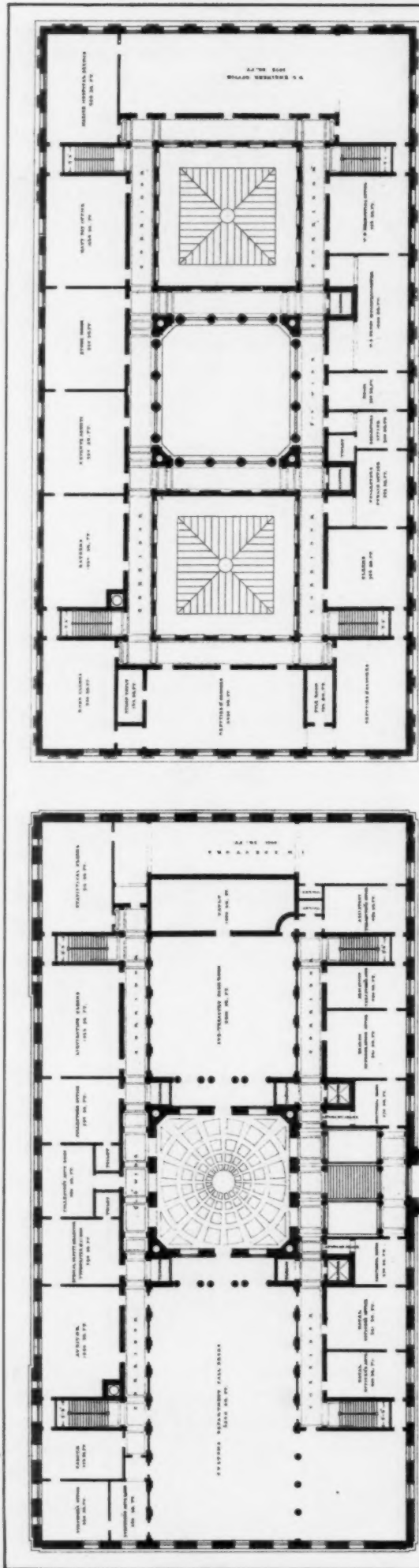
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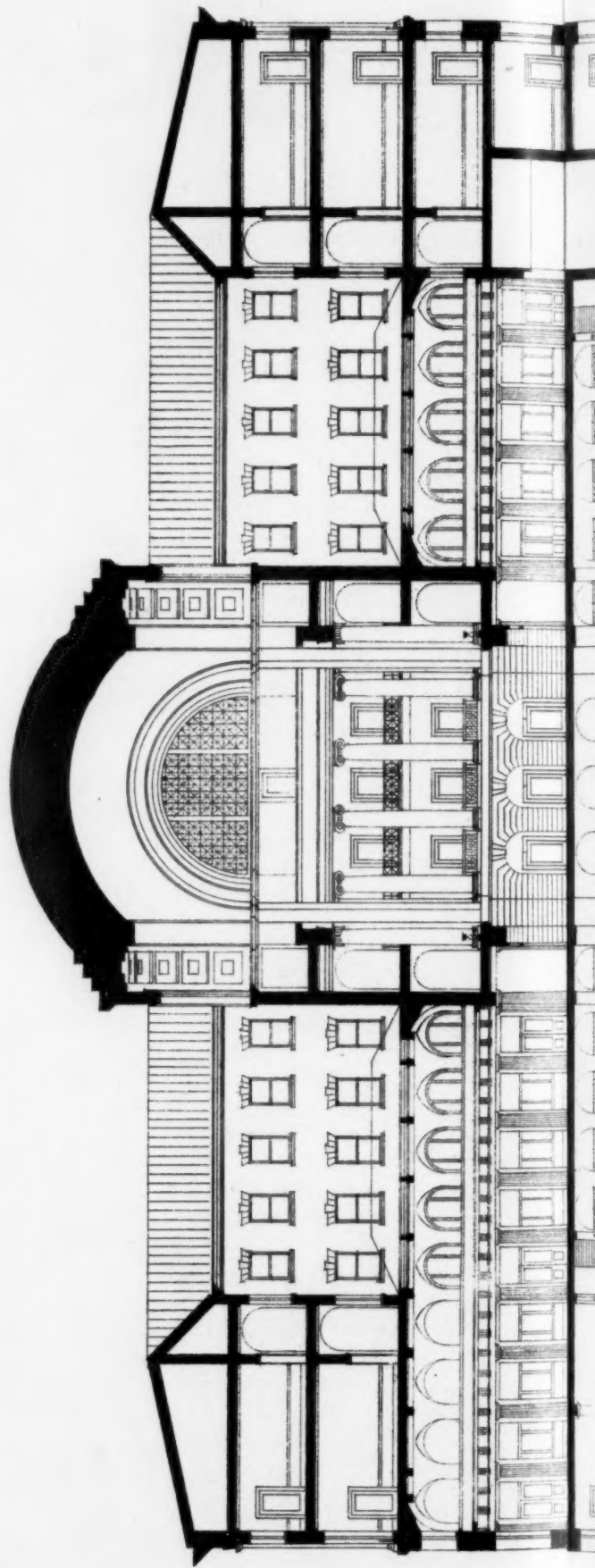
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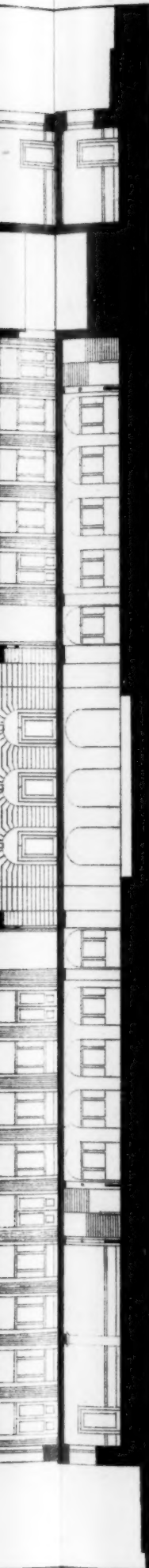
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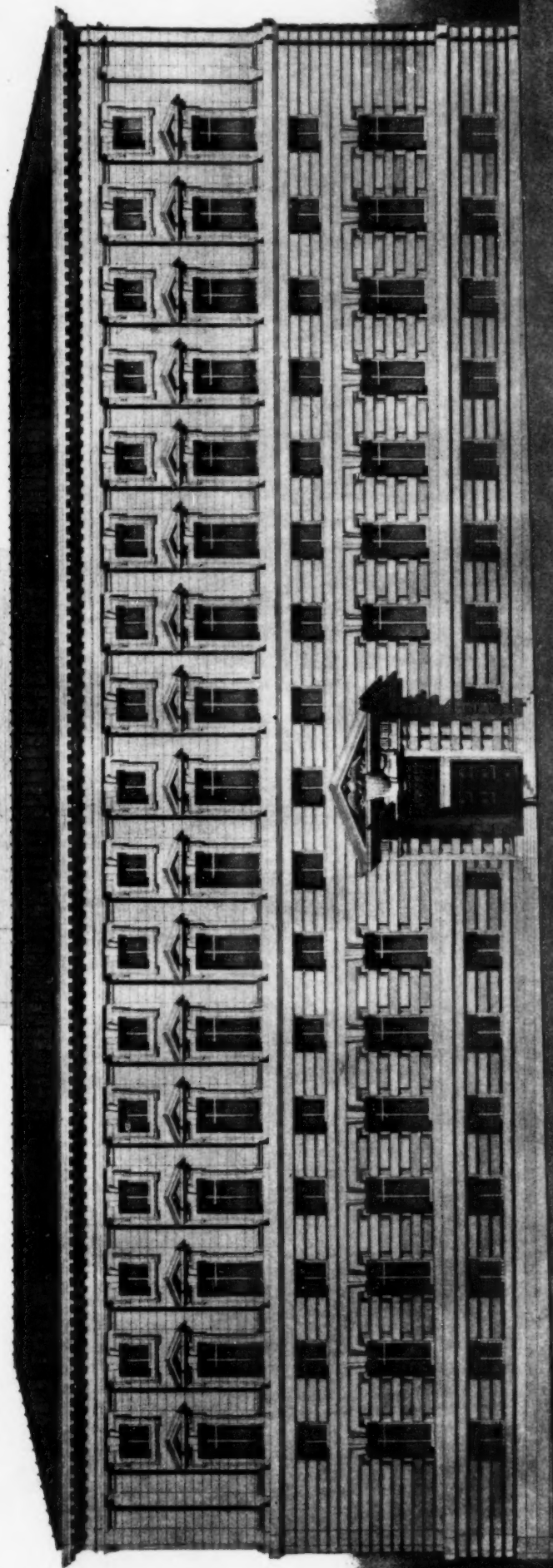
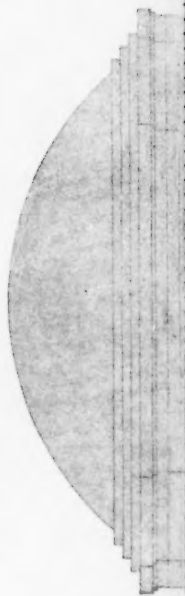
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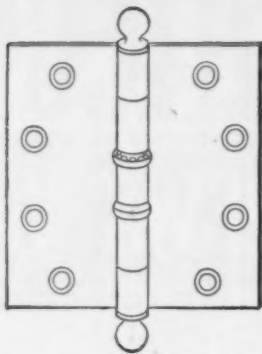
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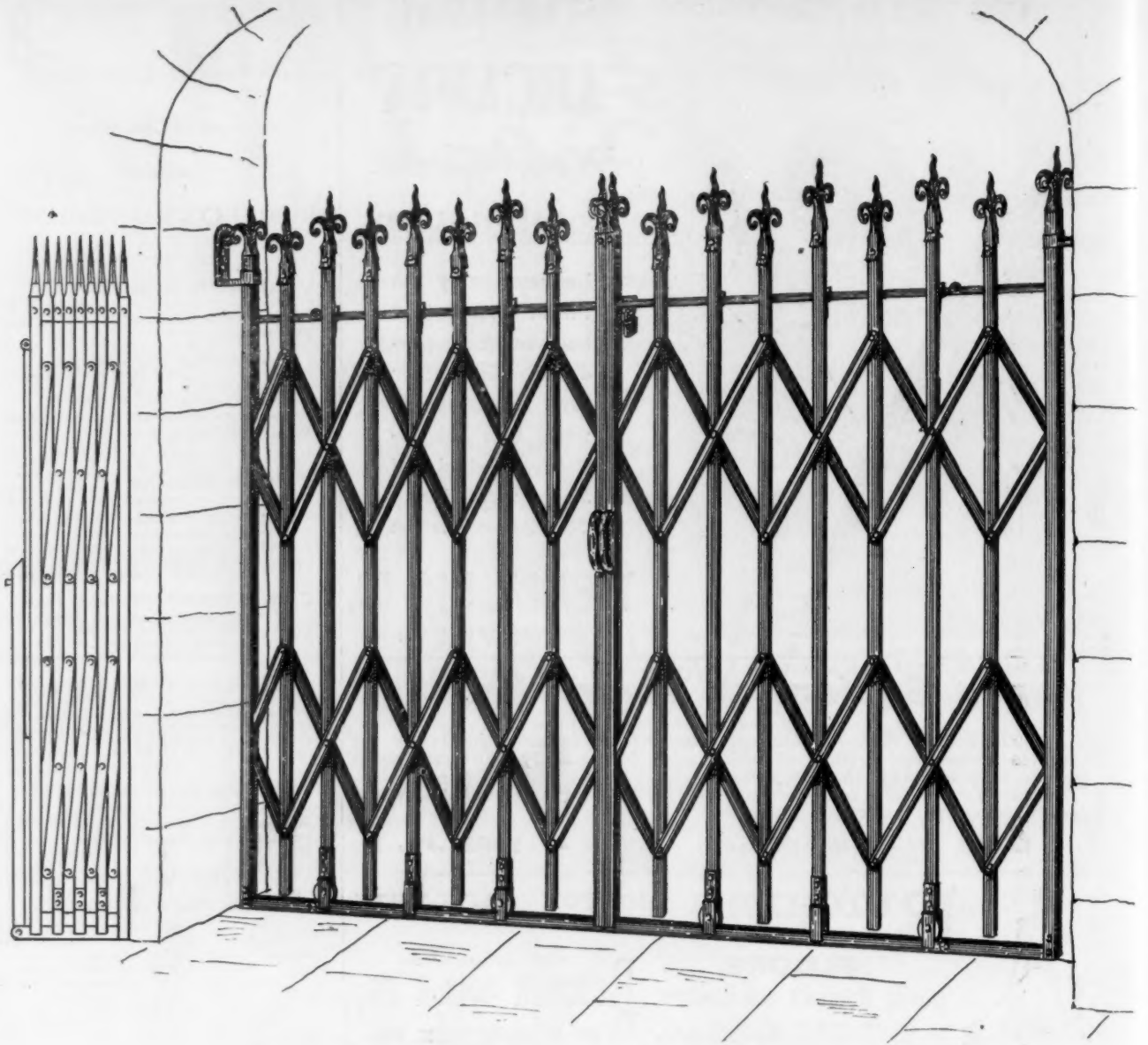
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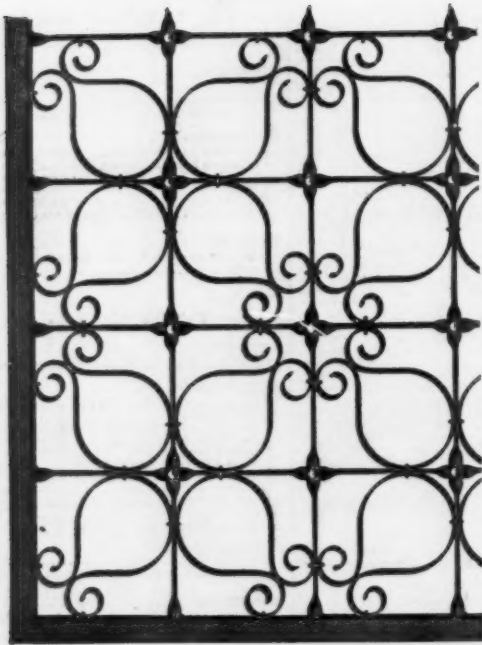
Pittsburgh.
Monarch Water Heater Co. [Heaters].
Sciffe, Wm. B. & Sons. [Meters].

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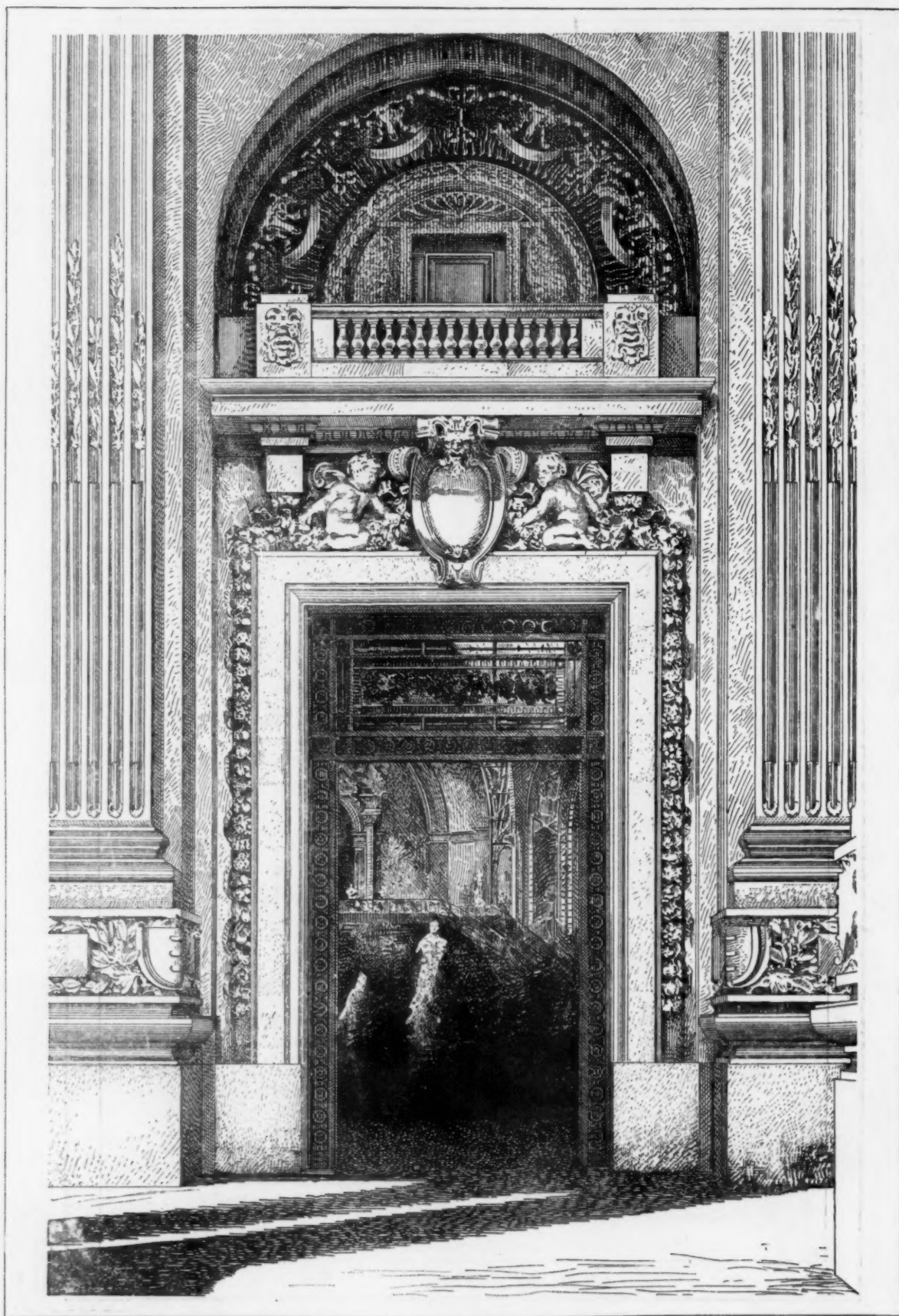
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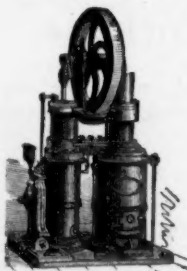
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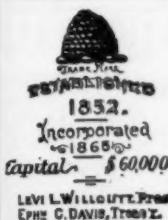
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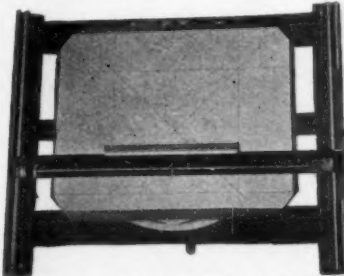
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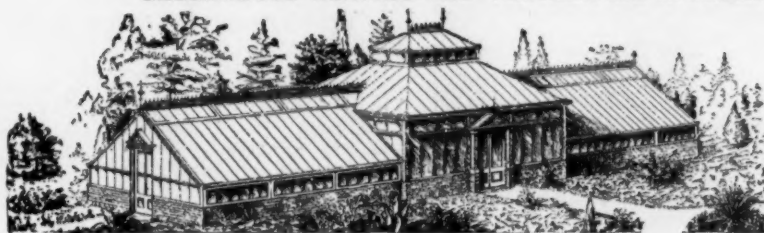
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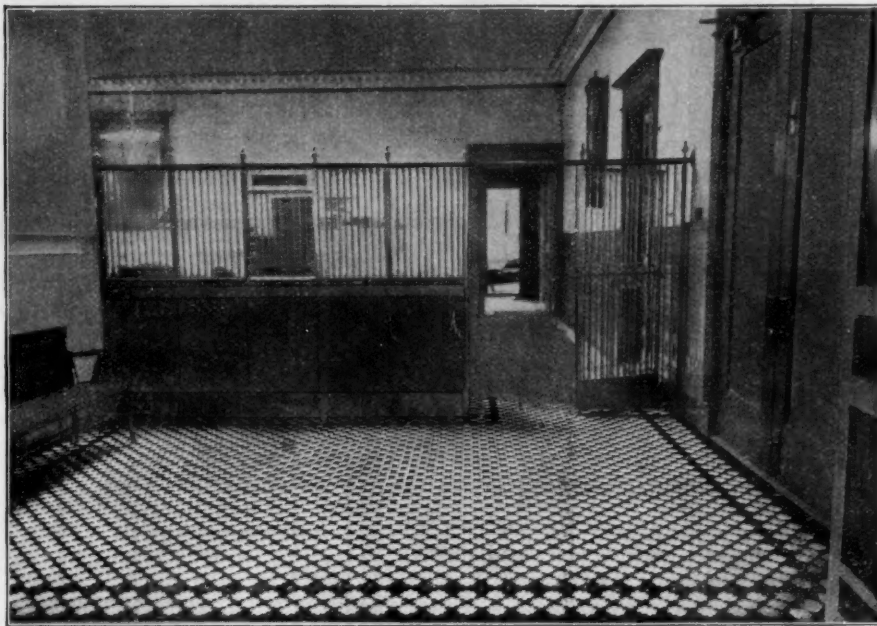
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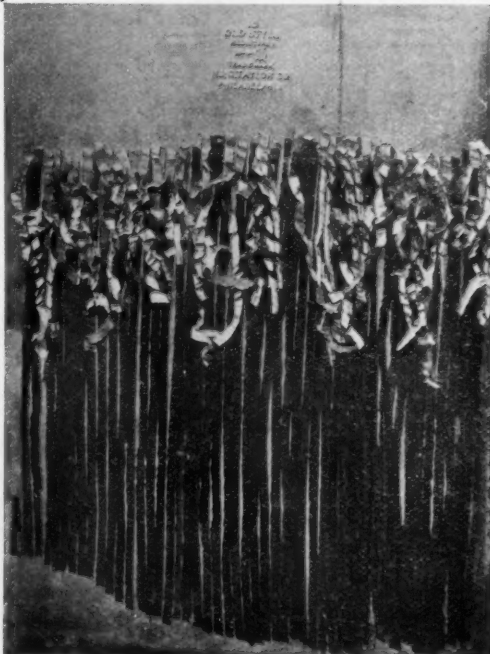
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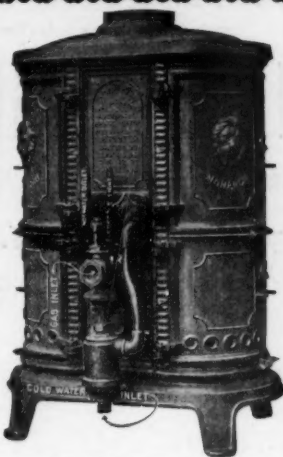
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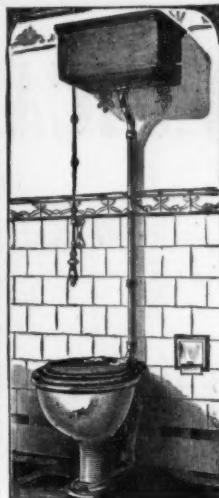
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2 o'clock P. M. on the 5th day of January, 1901, and then opened, for the construction (except heating apparatus, electric conduits and wiring) of the U. S. Court-house and Post-office at Altoona, Pa., in accordance with drawings and specifications, copies of which may be had at the discretion of the Supervising Architect by applying to this office or to the Postmaster at Altoona, Pa. **JAMES KNOX TAYLOR**, Supervising Architect. 1303

JAIL.

[At St. Paul, Minn.]
Sealed proposals will be received until December 10 for all the labor and materials required for the erection of a jail and sheriff's residence. **W. R. JOHNSON**, county clerk. 1302

STOREHOUSE.

[At Governor's Island, N. Y.]
Sealed proposals will be received December 28, 1900, for constructing storehouse, Governor's Island. **S. R. JONES**, Q. M. 1304

PROPOSALS.

SCHOOL-HOUSE.

[At Bayonne, N. J.]
Sealed proposals will be received by the Board of Education December 18 for labor and materials necessary for the construction of public school building at Railroad Ave., between E. 29th and E. 30th Sts. **R. T. HEWITT**, secretary. 1303

SCHOOL-HOUSE.

[At Washington, D. C.]
Sealed proposals will be received until December 15 for constructing a school-building on northwest corner of 12th and D Sts., northeast. **HENRY B. F. MACFARLAND et al.**, commissioners, D. C. 1302

INDUSTRIAL HALL.

[At Lakeland, Ky.]
Bids will be received until December 17 for an industrial hall at the Central Hospital for Insane. **H. F. McDONALD**, archt., Bullitt and Main Sts., Louisville. 1303

PROPOSALS.

LIBRARY.

[At Cheyenne, Wyo.]
Sealed proposals will be received until December 27th for the erection of a public library building. **ROBERT C. MORRIS**, sec. 1304

COURT-HOUSE.

[At Emporia, Kan.]
Sealed bids for erecting a court-house will be received until December 18th by the Commissioners of Lyon County. 1302

COURT-HOUSE.

[At Danielsville, Ga.]
Sealed proposals will be received by the ordinary of Madison County until January 15 for the erection and completion of a county court-house for Madison County. **J. N. BOGGS**, ordinary. 1303

Treasury Department, Office Supervising Architect, Washington, D. C., November 21st, 1900. Sealed proposals will be received at this office until 2 o'clock P. M., on the 27th day of December, 1900, and then opened, for the construction (except heating apparatus and electric wiring) of the U. S. Post-office at Blair, Nebraska, in accordance with drawings and specification, copies of which may be had at the discretion of the Supervising Architect, by applying to this office or to the Postmaster at Blair, Nebraska. **JAMES KNOX TAYLOR**, Supervising Architect. 1302

Treasury Department, Office of the Supervising Architect, Washington, D. C., November 24th, 1900. Sealed proposals will be received at this office until 2 o'clock P. M. on the 17th day of December, 1900, and then opened, for the extension of vault (issue division) Office of the Comptroller of Currency, Treasury Department Building, Washington, D. C., in accordance with drawing and specifications, copies of which may be had at this office at the discretion of the Supervising Architect. **JAMES KNOX TAYLOR**, Supervising Architect. 1302

Treasury Department, Office Supervising Architect, Washington, D. C., November 24, 1900. Sealed proposals will be received at this office until 2 o'clock P. M. on the 3d day of January, 1901, and then opened, for the construction (except heating apparatus, electric wiring and conduits) of the U. S. Post-office at St. Cloud, Minn., in accordance with drawings and specification, copies of which may be had at the discretion of the Supervising Architect, by applying to this office or the office of the Postmaster at St. Cloud, Minnesota. **JAMES KNOX TAYLOR**, Supervising Architect. 1302

VII

PUBLISHED NOV. 24

VII

PART SEVEN

"The...Georgian Period"

WHILE this Part was passing through the press, the acquisition of unexpected material induced us to increase materially the number of plates and the illustrations in the text-matter; consequently, it contains more matter than is usually included in an odd-numbered Part.

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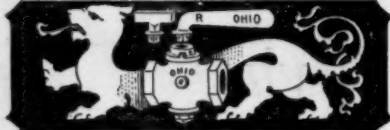
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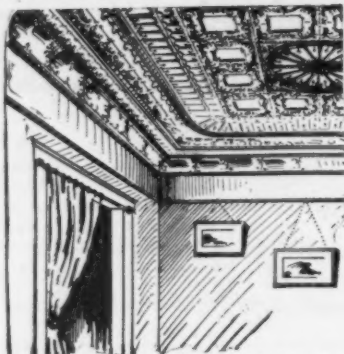
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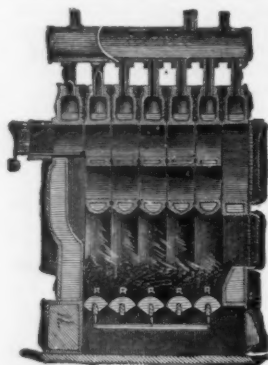
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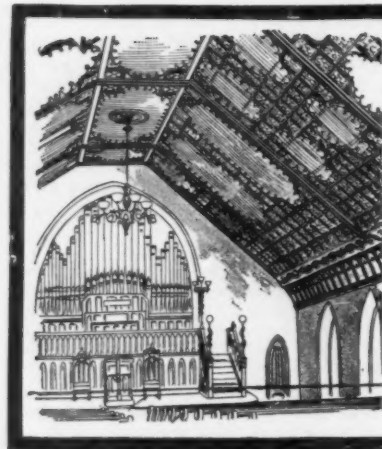
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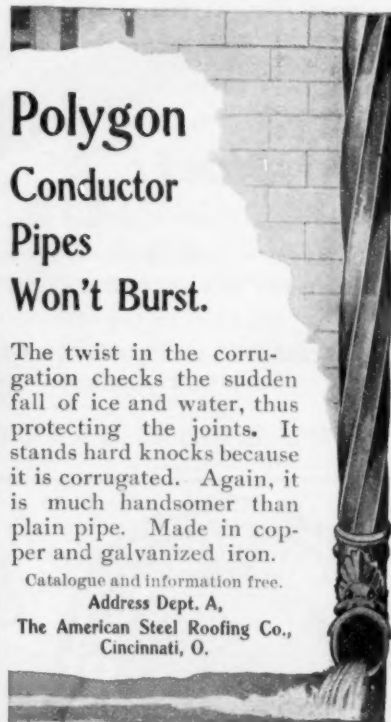
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