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SUMMARY:—

The National Association of Builders on the Matter of Payment for Estimates.—Objections to this Course.—Award of Contract for a Boston City Bath-house.—The Appointment of an Architect for the New York Hall of Records.—The Brazer Building, Boston.—Formation of an Arts and Crafts Society in Boston.—Mr. Goodyear's Investigation of Perspective Illusions in Mediaeval Buildings.—An Opening for American Pig-iron in France. 57

PUEBLO ARCHITECTURE.—II. 59

LETTER FROM PARIS. 61

THE BRUSSELS INTERNATIONAL EXHIBITION. 62

SOCIETIES. 63

ILLUSTRATIONS:—

West Front of the Library of Congress, Washington, D. C.—The Brazer Building, Boston, Mass.—Details of the Same: Two Plates.

A Group of Legislative Buildings.—A Group of Old Colonial Buildings.

Additional: Business Premises, Newport, Monmouthshire, Eng.—New Synagogue, Cardiff, Wales.—Grain Silo, Greenwich, Eng.—Northern Pavilion of the Monument to William I, Berlin, Prussia.—Chapel, Streatham Cemetery, Eng.—Additions to "Stadacona," Stamford Hill, Eng.—The Weidemann Memorial, Brompton Cemetery, London, Eng. 64

NOTES AND CLIPPINGS. 64

THE *Bulletin* of the National Association of Builders does us some injustice in speaking of our comments on the measure proposed by the Association, by which contractors were to claim compensation for making estimates. It thinks that our editorial was "sneering," which it was certainly not intended to be, and says that we expressed in it our "entire satisfaction with the conditions prevailing in the building business at the present time," a sentiment which we are very far from feeling. The *Bulletin*, however, changes the ground of the discussion a little by explaining that what the National Association of Builders want is not to have compensation paid to every contractor who makes an estimate, although it maintains that every such contractor renders a "valuable service," but that the lowest bidder should be paid for estimating, in case the contract is not awarded to him. The evident objection to this is that the irresponsible bidders who find means for forcing pretended estimates on owners would need only to put in some preposterous bid to secure a handsome reward for their alleged services. The *Bulletin* will probably say that none but honorable contractors ought to be invited to estimate, and, if architects had their own way, no others would be allowed to do so; but every architect knows that, in practice, a great many estimates that he never asked for are submitted by men who have either solicited the privilege of estimating from the owner, or who, learning that a job was being figured in the office by certain invited contractors, have had the effrontery to force themselves in, trusting that the busy architect and his assistants would not notice them in the crowd. Under present conditions, the bids submitted by these intruders into his office can be simply thrown into the wastebasket by the architect, while the propositions brought by the owner, from men who have been to him and "guaranteed" to do the work for "fifty dollars less than any one else's bid," or for "five dollars per square foot, including everything," generally, after a little explanation from the architect, find their way to the same place; but a rule, or custom, that the "lowest responsible bidder" should be paid for estimating unless he received the contract, would open an interminable series of disputes as to whose bid was really the lowest, what constituted a "responsible" bidder, and so on.

FOR these reasons, architects, like all other people who feel any responsibility for the conduct of building-matters, dislike to tie themselves down, or to be tied down by any one else, to the unconditional acceptance of the lowest bid. Where

all the bidders are known to him to be honest and responsible, and no error seems to have been made by any of them, any architect will advise the acceptance of the lowest bid. The National Association complains, no doubt with reason, that owners often use the lowest bid for the purpose of beating down the price demanded by another contractor, to whom they prefer to give the work; but they receive little or no assistance from architects in doing so. On the contrary, we believe it to be the universal custom of architects in this country to regard written bids as final, and to refuse to take part in any negotiations for varying them, leaving the owner and contractor to do such "dickering" as seems to them good, by themselves. No doubt, in "dickering" of this sort the contractor often gets the worst of the bargain; but, as we said in what the *Bulletin* calls our "screed," the contractors are under no obligation to yield to the owner's representations, and it is worse than foolish to blame the architects, who are the principal defenders of their rights, for the mishaps which they suffer in playing a game which buyer and seller have played since the beginning of the world, and which the contractors themselves, unless they are much belied, play quite skilfully with dealers in materials and other persons.

AS an illustration of what it considers the rights of the lowest bidder, the *Bulletin* cites the case of a contract for a bath-house for the City of Boston, which was awarded to a contractor whose bid was considerably above the lowest, by order of the Mayor, who had made the award, as he explained afterwards, in consideration of a private promise from the contractor to employ only union men on the work. We need hardly say that no architect was concerned in the Mayor's action, and the whole profession will support the claim of the Boston Master Builders' Association, as set forth in the *Bulletin*, that if a promise to employ none but union men was to be an element in the award, the lowest bidder should have been allowed to make the same promise, if he wished. It is obvious that a case in which known skill, distinguished honesty, or even personal friendship are allowed to count in determining the award of a private contract is a very different thing from one in which the award of public work is made in accordance with a concealed bargain, to which only one of the bidders is admitted. In the former case, the reputation of the different bidders, and, usually, the friendship of the owner for any of them, is known to all the bidders; and every one who estimates does so with an understanding of the possible odds against him; but in the latter case the bidders who estimate in competition with the favored contractor have been deceived, inasmuch as the legal reservation of the right to "reject any or all bids," which is manifestly intended to protect the city against irresponsible or vicious contractors, and the application of which, in selecting a contractor, can be reckoned on with reasonable certainty by the bidders, has been used to justify the award of the contract in accordance with considerations which the bidders were not informed of, and could not have inferred from any circumstances known to them.

THE architects of New York, to say nothing of other people, are not very well pleased at the way in which a plan is to be obtained for the new Hall of Records to be erected in that city. It had been known for some time that the building would be authorized, and the architects, naturally enough, supposed that competitive plans would be called for; but nothing was done until a few days ago, when the Board of Estimate and Apportionment unexpectedly commissioned Mr. John R. Thomas to prepare plans for the building. It is understood that Mayor Strong proposed his employment, but the Board unanimously approved it. Apparently, the fact that Mr. Thomas received the first award for his design for the abortive City Hall, and, instead of the execution of the work, which was promised, accepted a money prize, weighed most with the Board in his selection, and this would be a reasonable ground for the choice; but there is a strong feeling in New York that all future public buildings should be of the highest architectural excellence, and, to secure this excellence, long study of the problem of designing them, by many different minds, has generally been found the best course. What the

result of the agitation will be, no one can say, but if the Board should persist in its decision, there will be at least a certain gain to the profession in the precedent thus set for regarding a person who has been obliged to relinquish the promised reward which he had fairly won in an artistic contest as entitled to preference in subsequent employment.

FEW buildings have ever been erected in Boston that have attracted more attention than the Brazer Building, illustrated this week. Architects have watched the building from the start with interest, not only because its author, Mr. Gilbert, was a Minnesota architect, but because his engineer, Mr. L. E. Ritter, had developed a very interesting treatment of the steel-frame problem, because the methods employed by the general contractors, Messrs. Fuller & Co., of Chicago, were somewhat novel in Boston, and because of the great excellence and marvellous accuracy of the terra-cotta work furnished by the Northwestern Terra-Cotta Company of Chicago. All this interest, however, is as nothing when compared with that excited by the discovery that the cornice of this instructive and excellent building had become entangled with some drapery curtains ten stories below it! It speaks well for professional courtesy, as it is understood and practised in Boston, that the architects of that city have taken voluntary action in aid of their Western *confrère*, and hope to find that the curtains will prove to be of more yielding stuff than the cornice. The matter is a very curious one, since arrayed on the side of the cornice are the law, the rulings of the Inspector of Buildings—who declares that Mr. Gilbert is within his rights—and the disinterested architects of the city.

BOSTON people interested in applied art have taken the first steps toward the formation of a society, the name of which is as yet undetermined, to promote the education of artisans, and develop industrial art in Boston. Professor Charles Eliot Norton is to be the first President of the new society, and the membership will include many architects and artists, as well as workmen and apprentices. It is proposed to establish one or more schools of applied design, to maintain lectureships, and to provide a library, as well as workrooms and tools, by the aid of which members can carry out their ideas in a way which would otherwise be impracticable; and later, it is intended to collect a museum of works of applied art.

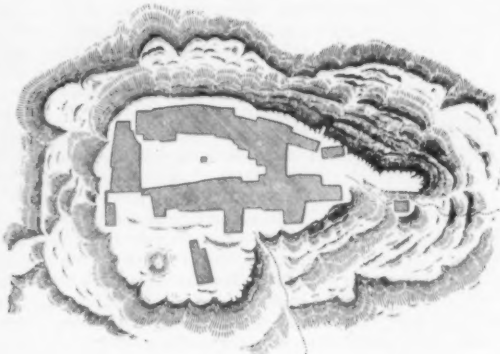
THE *Architectural Record* continues the papers by Mr. Goodyear on his remarkable discoveries in relation to the curves of plan and profile in mediæval Italian buildings, his last contribution describing certain horizontal curves. Meanwhile, Prof. Charles Eliot Norton, of Cambridge, himself one of the earliest and keenest observers of the intentional irregularities of the Italian Romanesque, to which Mr. Ruskin first called attention, has written to Mr. Goodyear, observing that there seems to be no literary record of the principles by which the mediæval architects were guided in designing these irregularities, and suggesting the importance of ascertaining whether they were planned in conformity with a recognized and intelligent system, handed down by tradition, or whether their authors simply followed empirical rules still current in the guilds, and probably inherited from the Romanesque period. How this question is to be answered no one can say, for literature seems to be silent on the subject; but not only as a part of the history of art, but as a matter of everyday practice, the reply will be of great interest. We know, from the best of evidence, that derived from actual measurements, that all the important buildings of antiquity, all those of the Romanesque period in Italy and France, and, possibly, in Germany, and many, if not all, the best of the great mediæval buildings in Italy, France and England, were designed with intentional departures from the symmetry, rectangularity and straightness which are now so universally accepted as necessary to architectural design that we are only just beginning to find out that architects could ever have failed to observe them. As it costs a great deal more to build stonework on a designed curve than to set the blocks with a straight-edge and a string, our predecessors must have felt very strongly the æsthetic necessity for such departures from geometrical precision; but we cannot even guess at the period when a tradition so ancient, or an æsthetic feeling so important, fell into neglect.

SO far as the feeling is concerned, we are not sure that it has yet disappeared from the building world. Professor Ware writes somewhere about an observant old plasterer of his acquaintance, who said to him one day that a long moulded cornice, if made perfectly horizontal, always had a heavy look, as if it hung down in the middle, and that a better effect was produced by a slight lifting in the middle, only perceptible as correcting the optical effect of heaviness. This is exactly the effect, and exactly the correction, which was familiar to the Greek architects of the time of the Persian Wars, and, as Mr. Goodyear has shown us, the mediæval architects used the same remedy for the same æsthetic fault. The Romanesque and mediæval architects, however, went much farther than the ancients in their dislike of geometrical precision. We know a modern architect, and a very distinguished one, too, who, in his early days, found the straight, parallel lines of the shingles on the roofs of his houses intolerable, as compared with the beautiful, wavy play of the shingle lines on an old roof. Not being able to put an old roof on his new house, and being determined to get rid of the straight shingle-lines, he adopted the rather hazardous expedient of making his rafters so slender that, after a few heavy snows, they began to bend, less to the satisfaction of the owner than of the designer, who saw with artistic delight the raw, ruled lines of the roof give place to soft curves. It is hardly necessary to say that better means were subsequently found for securing a similar result, but to this day the same architect strives by various means to break up his straight roof-lines, very much as George Edmund Street and Norman Shaw, less conscientiously, always showed by wavy lines in their drawings the roof tiles and ridges which, in execution, were of an uncompromising straightness. The feeling which leads our more sensitive architects to dislike straight roof-lines is, unquestionably, the same as that which induced the architect of the Cathedral of Pisa to build the piers carrying the great arches under the dome with an outward inclination; the designer of the Baptistery to vary the height of the arches in his arcades, and the architect of Salisbury to throw the lower windows in the transepts out of line from those above them; but, while our architects can indulge their fancy in such matters only to a very limited extent, their predecessors were not only allowed, but were probably encouraged to do so by artisans' traditions which have now vanished. Nevertheless, in architecture, just as in other arts, a hair's-breadth is often the only separation between prose and poetry, and if our architects wish to be true artists, and to accomplish an artist's work in the world, they should study just these subtle distinctions between the commonplace and the beautiful, and try to educate the rest of the world to appreciate them also.

THE owners of our great iron furnaces, where pig-iron is produced more cheaply than anywhere else in the world, should note what the last market report in *Le Génie Civil* has to say about iron in France. It says "There is complaint in France of a scarcity of pig-iron, and yet the production has never been so great. In Meurthe-et-Moselle, fifty-three furnaces produce every twenty-four hours fifteen hundred and fifty tons of refining-iron, twelve hundred and fifty tons of casting-iron, and nineteen hundred tons of iron for steel-making; in all, forty-seven hundred tons. Supposing that nothing comes to check this activity, the production for the current year will amount to one million and six hundred thousand tons, or three hundred and fifty thousand tons more than last year. As the whole of this, substantially, is absorbed in France, and yet there is scarcity, one may imagine the press of work in our rolling-mills, steel-works and foundries. We may add that English pig-iron is being introduced everywhere among us, and has penetrated even into the Eastern districts." At a time when structural steel is weak in price in this country, at little more than a cent a pound, and the mills are preparing themselves for a drop to less than a cent, the iron-masters of Alabama and Tennessee might do worse than try to supply the demand of these busy French manufacturers, who are, as a rule, favorably disposed to things American, and who would not be likely to find fault with the quality of our iron. Moreover, Atlantic freights are generally taken at low rates, so low, in fact, that iron has been sent from Manchester to London by the way of New York, the cost of the two Atlantic passages, including transportation from Manchester to Liverpool, shipping, transfer in New York, and landing in London, being less than the railway charges for some two hundred and fifty miles transportation overland.

PUEBLO ARCHITECTURE.¹—II.

GROUND-PLANS.

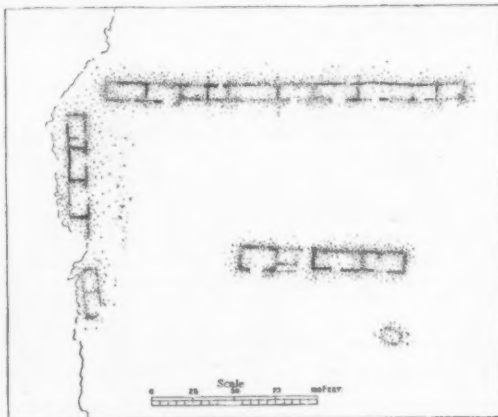


Topography of the Site of Shupaulovi.

THE most important element of a pueblo structure is the ground-plan, for, owing to the peculiarities of the system and of the conditions under which it developed, the ground-plans of villages were modified by and reflected closely the changing conditions; while the unit of the system, the single cell or room, remained practically unaltered. In much the larger part of the ruins nothing now remains but the plan on the ground, and in all of the inhabited villages the area of ground covered varies from year to year. From a study of these changes in the modern structures we can infer something of the circumstances under which the ancient ruins were once occupied, although now nothing remains of them but a few heaps of stone here and there.

The typical or ideal plan of a village, consisting of rows of houses arranged regularly about an enclosed court, in which, or on the border of which, the *kivas* or sacred chambers were placed, was seldom attained, for it was always more or less modified by local conditions. The ancient examples adhere to it more closely than the modern, and in some of the Chaco ruins, in New Mexico, we find the nearest approach to it in the whole pueblo country. The peculiar social conditions under whose influence the plans of villages expand and contract, have already been mentioned. In that stage of pueblo growth, when the houses were located on the summits of rocky mesas on almost inaccessible sites, the restricted area available for buildings exercised an important influence on the general result. Normal growth and contraction took place, but the direction of the growth was modified. For example, the village of Walpi, one of the Moki towns in Arizona, is located on a long narrow mesa, and as the building surface is much restricted, the plan follows closely the mesa edge. Similarly, the village of Shupaulovi is located on the summit of a butte standing above the mesa, and occupies nearly all the available surface. In this case the effect of a restricted site has been to force the houses into a compact group or cluster. Where extensive modifications of plan have been brought about in this way, the effect is usually that shown in the last example.

Many of the ground-plans of ruins and villages were but slightly, if at all, modified by the topographic character of the sites occupied. The simplest plans are always those of summer settlements, whose place in the system was indicated in the first paper of this series. These were sometimes single houses or rooms, but generally a number of rooms were clustered together, and we can see in them, in their incipient stages, the causes which eventually produce the complex plans of great valley pueblos. A ruin of a summer settlement



Ruin near Moen-kopi.

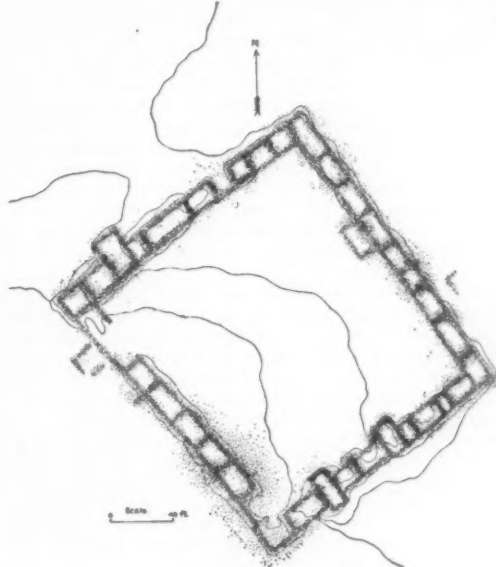
of a simple plan occurs on the flat summit of a mesa near the village of Moen-kopi, in Arizona. Twenty or twenty-one rooms, all of one story in height, were arranged in three rows near the edge of a mesa

¹ Continued from No. 1112, page 21.

overlooking an extensive area of good land in a little valley below. Had occupation of this site continued much longer, the rows of houses would gradually have grown together, enclosing a central court of fair dimensions.

The Pueblo Indians, like all the other tribes, are divided into great artificial families, or clans, claiming common descent from some mythical ancestor. A number of such clans or families occupy together a village site, but each one lives in its own quarter or part of the village. When a man marries, he goes to the home of his wife and is adopted into her clan, in former times not being allowed under any circumstances to marry within his own; thus there is a constant ebb and flow of population within each village. As descent is in the female line and the children belong to the mother, the prosperity of a given clan grows or wanes according to the number of girls in it; and the area or number of houses occupied by it correspondingly increases or diminishes.

The clan system, which prevails among all savage people, is not a hard and fast system. New clans are born, old ones become extinct; in time the relations of the various families become very complex. To obviate the difficulties growing out of this, related clans are aggregated into larger units, which have been called "phratries." In the olden days a man could not marry within his phratry, but now the system is somewhat broken down and men sometimes marry even within the clan. At the time when the system was closely adhered to, each phratry occupied its own house-cluster in the village, and each clan its own part of that cluster. Hence, the division of the villages into specified quarters. Often it happened when a site was occupied for a long time that the clusters grew together, but the division line, indistinguishable to a stranger, was none the less real and apparent to those who knew where it fell. As a rule, the phratral division into clusters can be seen in the ruins; and through the



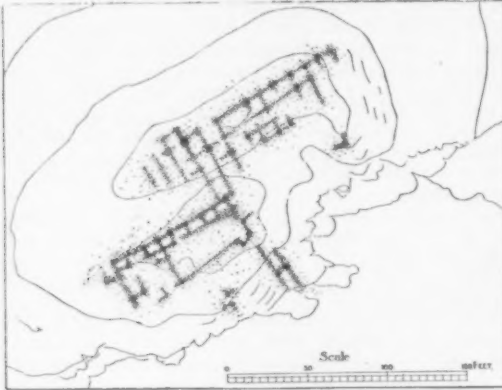
Ground Plan of Ruin on Clear Creek, Arizona.

arrangement of the clusters much can be inferred as to the conditions under which the place was occupied.

The manner of growth of villages has already been sketched. When a small band established a summer settlement such as that shown in the ruin near Moen-kopi, they built different house-clusters if they belonged to different and unrelated families. The people who occupied that site were of at least three different families or clans. But from the ground-plans we can also obtain some idea of the length of time during which the place was inhabited. Long continuous wall-lines, such as those shown in the plan, and regularity in the arrangement of cells, indicate that the rooms were put up at one time, that is, within a year or two of each other, and that the place was occupied but a short time. For, through the operation of the law or custom of female descent, whereby the man went to the home of his wife, long-continued occupation of one site produced irregularities in the plan which can be easily recognized. As more space was required, rooms were added as near as possible to those already built, and changes in plan resulted, which, to borrow a term from geologists, may be called "unconformities." As an estimate, it may be stated that the ruin under discussion was occupied less than ten years.

The plan of the inhabited village of Moen-kopi, which is a summer establishment attached to Oraibi, Arizona, but forty-five miles distant from it, shows a somewhat more lengthy occupation. Here we have two clusters and two detached houses, indicating four families. At one end of the principal cluster there is a group of rooms separate from, but still attached to, the others, and arranged at right angles to them. This is what has been called an unconformity in the plan. The detached houses form an interesting feature which will be alluded to later.

On the summit of a mesa, near Camp Verde, in Arizona, there is a ruin which commands an extensive area of cultivable land on a terrace of Clear Creek. The plan is remarkably regular in character, but still presents a number of irregularities. The interior court has been entirely enclosed by single rows of buildings, but at several places rooms have been placed across the rows and at right



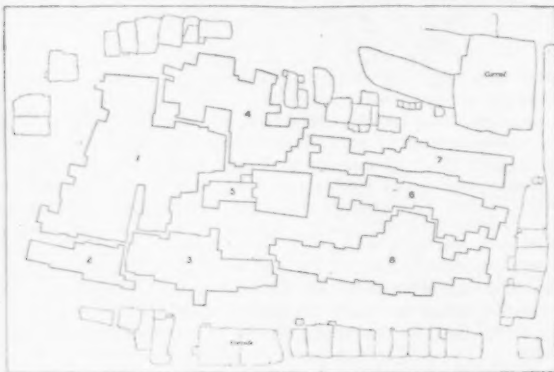
Ruin near the Moki Villages.

angles to them, that is, to the principal axis; in one place a room has been added on the interior or court front. This site was occupied but a short time, but the beginning of the process is apparent which would, had occupancy continued, have resulted in an elaborate and complex ground-plan.

Plans of such regularity as this are comparatively rare; probably for the reason that few of the villages were built under entirely normal conditions. A more common form is that shown in the illustration of a ruin near the Moki villages. Here there are two principal clusters joined together, the whole of very irregular outline. This site is one of those occupied by some clans of the Moki, prior to settling in their present location. It is on the edge of a large mesa, overlooking an extensive valley, in the immediate neighborhood of other similar ruins, and is referred to in the native traditions as having been occupied for some time, possibly one generation. The character of the plan bears out this statement, for it is apparent that the place was inhabited during at least several decades, if not a century.

The plans of ruins shown, except possibly the last, represent houses of one story high. In the first occupation of a site such rooms only are built. But the processes which produce irregularities and growth in the ground-plans operate similarly on the profiles. There comes a time, and that very soon in the history of a village, when it is more convenient to add an additional story over part of the structure than to extend the area of ground covered. Extended occupancy, therefore, affects the elevation of a cluster almost as much as its ground-plan. But as there was seldom any thought or provision made for additional stories at the time when the first walls were built, disastrous consequences sometimes followed when many stories were added. Only a few years ago a considerable section of a house in Zuñi fell from this cause—the overloading of walls not originally designed to carry the weight put upon them.

The little village of Shupaulovi, one of the Moki towns, which was probably founded not more than two centuries ago, illustrates the irregular way in which additional stories are added. Almost every house is two stories high in some part of it, and in this case the separate floors can be easily distinguished. It often happens, however, that owing to irregularities in the site the second story on one



Outline Plan of Zuñi, New Mexico.

side is the first on another. Thus in Zuñi it is possible to count seven stories in the highest cluster by going upward from terrace to terrace, while the same building exhibits but four stories, counting down directly through the rooms.

It is singular that notwithstanding the elaborate buildings put up by the Pueblo Indians, often with very complex ground-plans, no

attempt was ever made to prepare the site, by levelling or otherwise. The great clusters attained their dimensions by actual growth, slow but persistent, and the fact that they did attain their size is proof positive that the conditions were favorable to them: just as in the case of a tree, which from a precarious start in some sheltered place slowly grows and acquires such size and strength that it is able to battle with unfavorable conditions and overcome them.



Plan of an Oval Ruin.

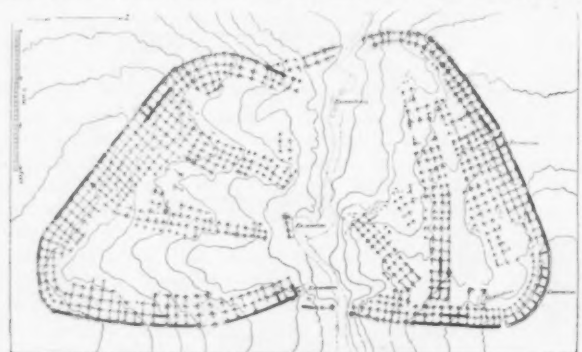
As before stated, many of the pueblo villages were located on foothill sites at the time of the Spanish Conquest in 1540. The village of Mashongnavi, now on the mesa summit, was moved to that place after the insurrection of 1680. Prior to that time it occupied a site immediately under the rim of the mesa, on the highest slopes of the foothills. The plan of the old village can still be made out, notwithstanding that much of the stone was used in the construction of the newer buildings on the summit. It shows an extended occupation by ten or a dozen clans. Such a plan indicates that the village was inhabited at least one century, probably longer.

When Coronado and his army arrived at the famous "seven cities of Cibola," for whose conquest his expedition had been organized, he found only some pueblo villages. It is now definitely determined that the Cibola of the sixteenth century is the Zuñi country of today, and the first village or "city" stormed and taken has been identified as a ruin known as Hawikuh, pertaining to the Zuñis and about fifteen miles southwest from the present pueblo. At that time the Zuñis lived in seven villages, separated some miles from one another; the aggregation of these villages into one huge pueblo took place in the early years of the eighteenth century.

The ground-plan of Hawikuh, although the place was abandoned more than two centuries ago, can still be made out. There were six or seven clusters of buildings on the point of a long promontory or hill jutting out from a great mesa. Except for the courts, which are a necessary feature in a village of this size and character, practically the whole summit of the hill was built over; while the dense clustering in parts show that the place was inhabited a long time. As an estimate, it may be said that occupancy continued not less than two centuries. The amount of debris upon the ground shows that many of the houses were more than one story high.

The localization of the clans within the village is well shown in this plan, as is also the requirement that strangers or outsiders should build away from the village proper, in separate houses or clusters. All the remains at the foot of the hill and on the flat beyond were structures erected by or for the Spanish monks, who established a mission here. Some standing walls are the remains of an adobe church, one of the first, if not the first, to be erected in that part of the country. Little of it now remains, as the place, according to the native legends, was abandoned on account of the assaults of wild tribes, possibly the Comanches, prior to the insurrection of 1680. After that great uprising the Zuñis abandoned all their villages and retreated to the summit of an almost inaccessible mesa in the vicinity, where they remained for twenty or twenty-five years. About 1705 they came down into the valley again and established the present pueblo on the site of one of the older villages.

The present pueblo of Zuñi affords a good illustration of the dense clustering to which allusion has been made. Complex as it is, it is the result only of accretion or aggregation. In the very centre of the village is an adobe church, abandoned many years ago. But from our knowledge of pueblo rules and methods we can state positively that at the time the church was built, early in the eighteenth century, it must have been on the outskirts and not in the settlement



Plan of Kin-tiel Ruin, New Mexico.

proper. In other words, the village, or part of it, has grown around the church in less than two centuries. This might well be, for the place now contains a population of over fifteen hundred souls, and new rooms and houses are being built constantly.

The development of ground-plans is clearly exhibited in the ruins,

which show a series from the simplest to the most complex examples, and it has been shown that the former might in time grow into the latter. The system is rectangular and all the plans shown are of that character, as are more than nine-tenths of the ruins and all the inhabited villages. But under certain conditions, not yet well understood, resort was had by the ancient builders to a form circular in outline, but still essentially rectangular in principle.

About thirty miles east of the Moki villages there is a little ruin which is referred to in their legends as the home of one of their clans. It is placed on the brink of a mesa, on one side of a narrow cañon, and is so small as to seem almost a play-house. It might have been inhabited by twenty or twenty-five persons. It is peculiar in that the exterior wall was continuous, and was apparently laid out before the rooms in the interior. This could only happen when a body of people moved *en masse* from some other location, with apparently no wish or intention to allow other bands to join them. Such conditions are anomalous, as are also the ground-plans produced by them. There is no doubt that the builders planned a circular structure, and the result is as near to that form as the pueblo architect ever attained. Even the small circular *kivas* or sacred chambers, found in many of the ruins, and of from ten to fifteen feet diameter, often present as much irregularity as this village plan.

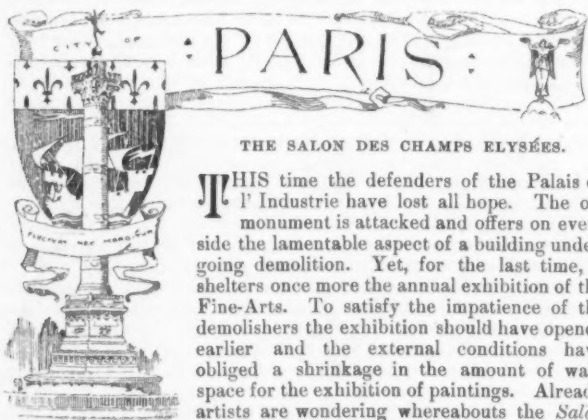
One of the most pretentious plans ever laid out by pueblo builders can be seen in a ruin on the route between Zuñi and Moki. The designer apparently had in mind two circles joined together, but the result more nearly resembles a butterfly with outstretched wings than anything else. In this case also the exterior wall line was determined first and apparently completed in the beginning, for the wall-surface is continuous; but the area covered was so large that there was ample room in the interior for natural growth and expansion, and also for such increase of population as might come from outside.

The structure or cluster was nearly six hundred feet in its greatest diameter and might easily have accommodated over a thousand persons, for nearly six hundred rooms can still be made out on the ground. In most of its length the external periphery was but two or three rooms deep, but in places there are six rooms or more, one behind another. Doubtless, the structure was in places several stories high, for the exterior wall now shows parts of two stories.

This plan is more regular than others of like character, but there are decided unconformities; and it is curious to find, in a structure designed to be circular, the same arrangement or grouping of houses into long rows which characterizes all pueblo villages. The groups in the interior are exactly similar to hundreds of others found standing alone. This ruin is one of the most extensive in the country and there is no doubt that it was founded by a large band who came together from some other place, and that it was occupied several centuries.

COSMOS MINDELEFF.

[To be continued.]



THE SALON DES CHAMPS ELYSÉES.

THIS time the defenders of the Palais de l'Industrie have lost all hope. The old monument is attacked and offers on every side the lamentable aspect of a building undergoing demolition. Yet, for the last time, it shelters once more the annual exhibition of the Fine-Arts. To satisfy the impatience of the demolishers the exhibition should have opened earlier and the external conditions have obliged a shrinkage in the amount of wall-space for the exhibition of paintings. Already artists are wondering whereabouts the Salon will be held in 1900. Several schemes are

now being discussed, amongst others the establishment of temporary buildings in the Place du Carrousel, or the utilization of the Palais Royal, which to-day is nearly deserted. Nothing, however, is yet decided. The best course, perhaps, would be not to hold any Salon at all. This would give us a bit of a rest from this overwhelming saturation of paint and would allow the true artists to recruit their forces, to the benefit of the great international affair.

But how can one cause this revolutionary idea to be accepted by this multitude armed with furious brushes with which they relentlessly attack the innocent canvas! Hold no Salons for two years! What a calamity! So let us drop this unrealizable dream and consider this year's pictures.

In spite of the restricted space, the artists have succeeded in hanging 1776 paintings, only 317 less than last year, and yet they protest that this shrinkage is too great. This opinion we do not share, but find that there are still too many. Not that this exhibition is particularly bad, but we would have preferred to find a better one, a kind of apotheosis for the old building that has sheltered so many predecessors. But there is nothing of this kind about it: no really remarkable work signalizes the date of the Salon of 1897, which can win only its customary *succès d'estime*. What it absolutely fails to

stimulate is emotion — emotion which makes one halt before a work that is truly sincere and inartificial — emotion which, after having caused the artist's own heart to vibrate, can be detected in his very work and diffused into the observer by the mysterious current of the genius of art. At the Salon of the Champs Elysées we experience none of these violent sensations. We can admit the existence of great and real talent here, we can praise the conscientiousness of our painters in maintaining worthily the fame of our School of French Art, but we regret not to have found a single name which can be said to personify our artistic glory in this year of grace.

It is in astonishment that we halt before the huge canvas of M. Jean-Paul Laurens, the dimensions of which have no other excuse than the decorative aim of the work. But is this end and aim attained? The canvas is intended for the Capitol at Toulouse and appears to characterize the fertile region of Languedoc known as "Le Lauraguais." It pictures a succession of immense fields retreating up the rounding hillsides and forming a valley in the background. These fields, wholly bare and barren, are sprinkled here and there with groups of laborers and ox-drawn ploughs. As you see, it is a subject for an easel-painting rather than for grand decorative work. Treated in colossal proportions, everything is disconcerted and loses scale. The result is harsh, dry and uninteresting. We cannot guess what effect the painting will have in place: here it has simply the air of a painting hugely overgrown.

M. Henri Martin, always much discussed, exhibits "Vers l'Abime," a symbolic composition which, unfortunately, too closely resembles the subject he exhibited in 1891, "à Chacun sa Chimère." A crowd of human beings is shown rushing in pursuit of an illusion of some kind. It is a subject that each year tempts a certain number of artists, one that last year M. Rochegrosse attempted to modernize. The symbolic figure that M. Martin uses is a strange one: a nude figure, clad in a robe of the thinnest and most transparent of black gauze, with puffed sleeves, girdled with a wreath of poppies, and shod with black shoes, flies in mockery before the pursuing throng of naked men, both old and young, who in desperation stretch out to her their ill-drawn arms. Here lies the chief defect. M. Martin's figures are drawn in most slovenly fashion and modelled with nonchalant insufficiency. Moreover, the subject, warmed over once more for this year's feast, has become rather hackneyed and could only acquire interest by a fresh originality of interpretation which M. Martin's work wholly lacks.

A scene from "Midsummer Night's Dream" has inspired M. Gervais to send in a large canvas. As usual, it is Titania fondling the donkey-headed Bottom, while rather uninterested young women look on at the supposedly amusing scene. Apparently these secondary figures have no other purpose than to exhibit the splendors of their nude bodies illumined by the rosy glow of the setting sun: their poses are graceful, their bodies well drawn, but the composition is rather affected, and one cannot tell why each head is crowned with elaborately dressed hair in entire disaccord with the extreme simplicity of their toilette.

As usual, there are too many merely big pictures. I do not speak of simple anecdotes treated at life-size, but why should M. Bérourd feel obliged to show at such an exaggerated scale the visit of the Czar Nicholas to Napoleon's tomb? The grandeur of the episode itself did not equal that of the painting, and if admiration is to be measured by stature of the personages, M. Felix Faure, of whom M. Bérourd has made a giant, leaves very little of it for the Czar who stands near him. The painting attracts attention because of the subject, but it lacks justice of proportion. Another souvenir of the Russian visit is presented by M. Brouillet, this time it is "The Reception of the Czar by the Académie Française." The Emperor and Empress are seated before a table, around which are grouped the Academicians listening to the address of their dean, M. Legouvé. This kind of picture is always interesting, since it is documentary. Independently of this, we grant that the portraits of the Academicians are exact — several being striking likenesses — and all of solid and luminous workmanship. These Russian fêtes inspired other artists, and amongst them M. Vauthier has recorded in most happy vein the laying of the corner-stone of the Pont Alexandre III. Without making a large picture he has succeeded in preserving the luminous image of that fairy fête, with the crowded river-banks and the Seine covered with gay boatloads. The picture is full of sunlight and gaiety.

Turning again to decorative work, we remark the painting by M. Sinibaldi, part of a decoration for the Ministère du Commerce. It depicts "French Commerce" receiving from the hands of "Peace" and "Plenty" samples of the first fruits. On a quay below, microscopic personages are discharging merchandise. The pose of the symbolic figures which, with the exception of that of "Commerce," hover in the air, is troubling, because of the human characterization the artist has imbued them with. They have the air of being real women, and one asks why they are not resting upon the ground like the other people and like "Commerce" herself. The background is of good decorative effect, with its perspective of sail-boats emerging from a warm mist. Another good decorative painting can be pointed out in M. Marioton's ceiling, "Art evoking Beauty." The subject is not very clearly indicated, but the general effect is luminous and brilliant: without great seeking after originality and though the graceful figures draped in the clouds of the background are sufficiently banal, the effect is pretty and, for want of better, one can well be content with it.

In very truth, the more one looks about, the harder it is to find noteworthy works. Almost everything is fairly good, a large number are very good, but from such a quantity how is it possible to make selection? We must, however, speak of M. Detaille, who also exhibits a documentary painting, "The Funeral of Pasteur," in which we find all the good qualities of the master and which is the best proof that a small painting can produce a big impression. It is obviously difficult to escape from the official side of such a subject; but the artist has known how, through the ingenious grouping of his figures and his knowledge of composition, to recall the grandeur of this ceremonial. He has chosen the moment when the funeral-car was passing before the President of the Republic, having at his side the Grand Duke Constantin and around him the whole official and scientific world.

M. Henner sends two portraits, or rather two heads, one a blond young woman's, the other a brunette's, both rendered in that peculiar manner that is so successful in the hands of the master, so insupportable in the hands of those who try to imitate him. In his portrait of the Academician Joseph Bertrand, M. Bonnat becomes decidedly hard, even brutal; it is a living likeness, all the same, and a very able performance. As much cannot be said of an eagle holding a hare, by the same artist, for the eagle seems to be badly stuffed.

It is impossible to mention all the good portraits, they are too numerous. The reproach that can be brought against most of them is that they are too artificial and lack naturalness, as, for example, the portrait of the Duc d'Aumale, by M. Benjamin-Constant. It is equally hard to speak of all the good landscapes. Here, once more, we will remark that good landscapes with good figures are becoming rare; animals and humanity are alike generally lacking and, because of this lack, pictures are sometimes less gay but often have an effect of calm grandeur, which is not without charm.

Genre or subject painting is represented this year by a certain number of interesting pictures. Military subjects are less numerous than usual perhaps, but those by M. Boutigny and M. Delahaye must be mentioned. The former shows us the mortally wounded General Marceau confided by his own officers to the loyal humanity of the hostile commander. There is much noble sentiment about this picture and it is very well painted. The latter artist shows a war episode of great dramatic simplicity: three German officers, two still at the breakfast-table, the other seated at the piano, have been surprised by a volley of musketry which kills the man at the piano and wounds one of the others. It is a simple composition, but it tells a moving tale.

As to those artists who stick to easel-pictures, finished and detailed to the last degree after the manner of Meissonier, we must mention M. Detti, the painter of cardinals and the nobles of the last century, M. Pujol, who handles the same class of subjects with success, M. Outin, whose little scenes always have a meaning, and M. Ernst, whose Oriental subjects are remarkably well studied.

Before leaving the pictures let us turn to two artists who have recently died, although their exhibits are here: M. Henri Pille, who died at the age of fifty-three, was a draughtsman of much imaginative force and great originality, who made for himself in the illustrated journals a specialty in the line of mediæval scenes. His knights and noble dames had always a distinguished and distinguishable air. He made many illustrations, but he was also a regular exhibitor at the *Salon* and, faithful to his retrospective habit, his last painting represents the disembarkation of the so-called "beggars" of William of Orange. M. de Penne, on the other hand, made a specialty of hunting-scenes. He was born in 1831, and was a pupil of Cogniet and Charles Jacque. At all the *Salons*, and in every exhibition, he showed dogs chasing stags, or hunting-scenes with red-coated, horn-blowing horsemen. This year he shows "Les chiens allant à l'attaque" and "Bat l'eau."

Another name to remember is that of M. Struys, a Belgian, who shows one of the best pictures. Wholly inartificial, it very simply and by the mere attitude of its figures excites those emotions to which I referred above: a black clothed woman, her face buried in her hands, is being comforted by a priest. A portion only of his face can be seen, and yet one divines it in its entirety, with its compassionating eyes. The whole being of this consoler of the afflicted exhales pity. Why? No one can say; but this priest is no mere model posing to an artist, it is a very man moved by the grief he seeks to assuage. Aside from sentiment this canvas exhibits great science on the part of the artist; the sombre tones harmonize admirably without being monotonous.

Turning now to the sculpture, we find less to embarrass us. There is no need to examine the innumerable busts of more or less known personages, nor yet those grotesque statues half hidden behind the shrubs, but we easily could select some really excellent works from all this plaster and marble. Amongst these would not be Falguière's Poet on a winged horse. It is an unfortunate inspiration, and the horse leaves much to be desired, although the expression and attitude of the poet are more successful. It is good academic work, but lacks feeling. Quite otherwise is the work of M. Puech, who shows the monument which is to honor the poet Lecomte de Lisle in the Luxembourg garden. A winged figure (Glory, probably), nude to the girdle, stands embracing the poet's bust on the high pedestal beside her. The draperies of her lower body supported by the graceful movement of the arms envelope the pedestal. In one hand she holds a gilded branch of laurel. It is difficult to convey any idea of the beauty of this figure, its suppleness, its grace, its youthfulness. The

general composition makes it worthy of the poet, and this monument will be one of the fine things in the Luxembourg garden, which is likely to become, if this sort of thing continue, a very museum of celebrated men, for here are already monuments to Eugène Delacroix, Théodore de Banville, Murger and Watteau.

The Parc Monceau for its share, will have the monument to Guy de Maupassant, which M. Verlet exhibits in incomplete form—a young woman, a modern, leaning on her elbow, sits at the foot of the pedestal which bears the author's bust, and is day-dreaming over the romance she still holds in her hand. Her legs are outstretched in natural and familiar fashion, but this pose brings the feet into the fore plane and gives them undue importance. In spite of this, the work is one of the very good ones shown. It is full of feeling and, from the point of view of execution, a superb piece of stone-cutting.

Another monument in the same class likewise awakens emotion. It is the tomb of the celebrated cantatrice Mme. Carvalho, created by M. Mercié, Member of the Institute, and is both beautiful and grandly simple; it is merely the bas-relief of a smiling, standing figure, with straight-hanging draperies; at her feet is a lyre hung with flower garlands, upon which perches a bird in full sing—and that is all. But it is admirable.

When the "Shooting-star" which M. Charpentier shows us in the guise of a superb but graceful nude female, the monument to the memory of Joigneaux by M. Mathurin, and the high-relief group by M. Frémiet for the new museum, called the "Age of Stone," have been named, the list of the principal works of sculpture is exhausted. Yet there should not be overlooked the monument which is to be erected in Madagascar in memory of the French soldiers who perished in the expedition of 1895. It is full of patriotic sentiment and is due to the chisel of M. Barrias, Member of the Institute. It shows a soldier seated at the foot of a pedestal, upon which stands the figure of "France," who at the same time holds over the soldier's head a laurel crown, while she shelters in the folds of the tricolor, the figure of a female Malagassi. It is rather academic in treatment, but its touch of solemnity is not out of place.

Objets d'art now hold an important place in these exhibitions, and amongst these we find work by M. Gérôme, whose painting only deserved silence, but who recovers his reputation in the field of sculpture. He exhibits a bust of Bonaparte and, better still, an equestrian statue of the same personage, which is a very marvel of precise workmanship.

We are always embarrassed when it comes to our own particular department, the section of architecture, which as usual contains far too many competition drawings and *School projets*. Whenever an executed work deserves mention, it seems better to make a special study of it later, as in the case of Prince Roland Bonaparte's house.

In this way we may, later, describe the curious Japanese pavilion arranged in a private house by M. Marcel, and which contains a splendid *salle des fêtes*: all the materials were brought from the far East, and the architect has most happily carried out his inspiration. The Hôtel de Ville at Ivry, near Paris, by M. Adrien Chancel, also deserves a special study. To these two names should be added those of MM. Eustache and Pontremoli, who deserve praise for their excellent *envois de Rome*.

THE BRUSSELS INTERNATIONAL EXHIBITION.

BUT few people, even in Belgium, realize the importance and magnitude of the Brussels Exhibition, of which the Parc du Cinquantaire and its contents form but the smaller part. The remainder, seven miles from the city, is of greater extent and beauty, and will possess more powerful popular attractions when it is ready to receive the public. The park of Tervuren is about 500 acres in area, and its natural beauties have been increased by the expenditure of large sums during the past year. Tervuren, which lies on the outskirts of the Forest of Soignes, was at one time the residence of the unfortunate Empress Charlotte, until the château she occupied was burned.

There can be no two opinions as to the advantage Tervuren possesses as an exhibition site, and it seems a pity that the complete scheme was not laid out within its limits; however, as this was impossible, for various reasons which we need not discuss, and as the creation of the famous avenue depended on the adoption of the dual site, the wisdom of the plan is beyond dispute. The chief, and, indeed, the only architectural feature at Tervuren is the Congo Palace, a spacious building with a granite façade, standing on a high plateau, and facing the end of the avenue. The building consists of a large central hall (mainly occupied by a restaurant), and two spacious wings. One of them is devoted to objects illustrating the habits and customs of the Congolese—their religions, amusements, dress, weapons, pursuits and domestic life. Many groups of colored life-sized figures lend animation to the hall, which also contains screens covered by photographs and maps. At the end of this wing a spiral inclined plane takes the visitor down a shaft skilfully arranged as a corner of a tropical forest, in which are concentrated specimens of the Congolese fauna. At the end of the shaft is the entrance to an aquarium, which will be furnished with varieties of Congolese fish. Two points about this aquarium are worthy of notice: its roof and the contents (not yet in place) of its tanks. The roof is a semicircular structure built of hexagonal glass cells set in cement, but without any framing. This very ingenious and simple

form of construction is admirably adapted for its purpose, the illumination of the low-level aquarium being perfect; the system appears capable of being adapted to a large variety of purposes. As it was impossible to bring the fish alive from so great a distance, or at all events to keep them alive under such changed conditions of climate and surroundings, they were placed in a preserving solution, and will be exhibited in the tanks filled with a similar solution. In order to give the effect of animation to the specimens, they will be suspended by fine wires in the solution.

At the other end of the aquarium are stairs leading to the opposite wing of the building. This wing is divided into three halls; in the first of these are shown the exports from the Congo; in the second the importations to the Congo from Belgium; and the third is a *salle de dégustation*, in which are shown exhibits of Congolese coffee, chocolate and tobacco, facilities for consuming these products being provided to prove their excellence. Native woods, bamboos and other materials are employed for the internal decoration of the buildings, and too much praise cannot be accorded to Lieutenant Masui, who has charge of the installation, for the artistic skill he has shown. Naturally, the Congo Palace will remain as a permanent monument of the interesting Belgian Colony. Associated with the building are several native villages picturesquely located on or near the brink of one of the lakes that add a special charm to Tervuren, and here will be exhibited, as soon as the summer is well established, a colony of 250 Congolese. There is quite a chain of lakes formed in the park, which will all be utilized for some special purpose, for gondolas and electric launches, and for a special exhibit of the miniature naval war game, that appeared first at our own Naval Exhibition some years since, and on a far more elaborate scale last year at Berlin. A huge building in a deplorable condition of incompleteness dominates the long series of terraces that descend to the middle lake; it would seem impossible that this can ever be anything but a blot on an otherwise perfect piece of landscape-gardening. It will contain a fine power installation for supplying current to the Behr mono-rail carriage. No less than 1,250 electrical horse-power will be generated for this purpose, and the cost of the installation has been defrayed by the Belgian Government. The rest of the shed will be occupied by other engines and generators, and by a fine collection of locomotives and rolling-stock from the Northern Railway of France. Adjoining the power-station is the entrance to the mono-rail domain, the approach being by a bridge crossing a public road, and a well-planted avenue interrupted by exhibits of the original system as shown at Westminster some years since; a model of the Listowel Railway; of a line working in France; of the present installation; and of various devices connected with the system. At the end of the avenue is the one station on the line, and from this point there is visible the ellipse, with its three-mile perimeter, on which the passenger-car is to make its rapid circular tours.

Beyond the entrance to the Behr Railway spacious grounds are laid out for various sports, including a racing path, and a cinder path for cycles. It should also be mentioned that a special road has been laid down, 1½ miles in length, for motor-car races and trials. The success of the Brussels Exhibition as an international undertaking is due to the Avenue of Tervuren; but probably the avenue would not have been constructed but for the Exhibition.

The King of the Belgians has taken a keen interest in the enterprise, because the dual scheme involved the construction of the Avenue, and without Tervuren the Exhibition would have been poor and incomplete. The project of the Avenue de Tervuren is no new thing; on the contrary, it has been a royal plan for many years, long before the King was called to control the fortunes of his busy and prosperous people. But circumstances had never been favorable to the realization of the plan till now, and the King was not slow to take advantage of so good an opportunity as that offered by the somewhat pressing needs of the Exhibition Company. At the cost of many millions of francs, contributed partly by the State and partly by the Province, the great road has been brought so near completion that it can be opened for traffic in a few weeks.

The natural conditions were very favorable as regards gradients, while picturesque and even beautiful scenery exists from one end to the other. The uniform width will be 300 feet, divided into ample space for many tracks of electric tramway, the rails of which are laid, and the poles, brackets and conductors installed; abundant width for carriages, for special cycle tracks, for foot-passengers and for rows of trees. As we have already said, when completed, this avenue will be without its rival in the world. The building land on each side will no doubt be rapidly occupied for residences of the best class, as far as the Forest of Soignes, through which the Avenue runs, intersecting in many places its long and beautiful alleys. At one place the railway from Brussels to Tervuren crosses the new road, but the levels have been raised, and a lofty viaduct thrown over it. Close to this viaduct is the central power-station, from which the different lines of tramway will be operated.

In inspecting this great work it becomes evident that the Brussels Exhibition is but an incident in its completion, a pretext for calling it into existence, and thereby still further beautifying Brussels, and connecting it with a new park more attractive than the Bois du Cambre. And though the Exhibition itself will undoubtedly be successful and popular, as well as—we venture to predict—highly satisfactory to exhibitors, it will be speedily forgotten that to it Brussels is indebted for its greatest and newest improvement.

It may seem somewhat extravagant to compare the Brussels Ex-

hibition of 1897 with the World's Fair of 1893, and yet—the beauty of the transient buildings apart—the advantage in such a comparison would rest almost wholly with the former. The World's Fair has left no monument behind it, and not many pleasant memories; its promoters achieved their purpose of beating the record as regards size, and the exhibition well-nigh broke down under its vast bulk. If the true objects of an Exhibition be instruction, business and pleasure, the present undertaking will achieve its purpose far more closely than did the World's Fair. — *Engineering*.



SOCIETY OF BEAUX-ARTS ARCHITECTS. — RECOMMENDATIONS IN REGARD TO COMPETITIONS.

THE Society of Beaux-Arts Architects, having the interest of the community at heart, as well as the advancement of the architectural profession, lays before its members the following recommendations as to their individual conduct in their relations to competitions, believing such recommendations to embody the best and most advanced ideas on the subject held by the profession, not only in this country but also abroad:—

1. Members of this Society should do all in their power to discourage competition for all but public or semi-public buildings as defined below.

2. It is the sense of the Society that all public buildings should be the subject of competition.

3. Competition for public buildings or for semi-public buildings erected by private means for the use and benefit of the public, such as important churches, hospitals, libraries or colleges, etc., can only be entered with the approval of this Society, if safeguarded by conditions which the Society deems essential to their fairness and success and to the self-respect of the participants.

4. The following are the conditions deemed essential to the fair and orderly conduct of a competition:

(a) That a professional adviser should be appointed by the party instituting the competition, whose duty it shall be to assist in the preparation of the programme, to assume all and direct relations with intending competitors, receiving and answering all communications, and giving all information in writing to all intending competitors alike; to examine all drawings or other matter called for by the programme, and place out of competition, and return any that do not conform to the terms of the programme; to make a selection of one design as the best and to submit his selection, together with his reason therefor, to the parties instituting the competition.

(b) That if the proposed work be of sufficient magnitude a Jury of Award of at least three shall be put in charge, to include the professional adviser of the party instituting the competition and one or more architects named by a vote of the competitors. This jury to have the same duties and powers as above given to the expert adviser.

(c) That the author of the design selected by the expert adviser or jury shall be appointed the architect of the work.

(d) That the architect of the building shall receive at least the rates of compensation established by the Schedule of the American Institute of Architects.

(e) That the programme shall be full and explicit on all the above points and, besides, shall fix a definite time and place for the receipt of drawings, give all useful or necessary information as to lot and surroundings, and as to requirements for occupancy, fix the number, scale and character of drawings, give essential details as to construction and materials, and prescribe definite limits regarding descriptions, etc., which shall accompany the drawings.

Adopted by the Society May 17, 1897.

EDGAR A. JOSSELYN, Secretary.

THE NATIONAL SOCIETY OF MURAL PAINTERS.

At the annual meeting of the National Society of Mural Painters held on the 5th inst., the following officers were elected for the coming year:

John La Farge, *Honorary President*; Frederic Crowninshield, *First Vice-President*; Geo. W. Maynard, *Second Vice-President*; D. Maitland Armstrong, *Treasurer*; Herman Schladermundt, *Corresponding Secretary*; J. William Fosdick, *Recording Secretary*.

J. WILLIAM FOSDICK, Recording Secretary.

BALTIMORE'S CENSUS OF BUILDINGS. — Baltimore has a novel census of buildings conducted biennially by the police. The statistics deal with the occupied and vacant buildings, the water-supply, etc. By the census just completed the city is shown to have 104,000 buildings, 85,936 of which are dwellings, 9,316 business houses, 400 churches, and 303 schools. The proportion of unoccupied dwellings is larger than it was two years ago, and the same is true as to stores and factories. In the two years there were additions of 1,737 dwellings, 49 educational buildings, 1,337 business buildings, 2 churches, 245 stables, and 9 manufacturing buildings. The percentage of buildings unoccupied with water dropped from 8 in 1895 to about 6 1-2 in 1897, but nearly 7,000 buildings are yet lacking this sanitary improvement — *N. Y. Evening Post*.



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

WEST FRONT OF THE LIBRARY OF CONGRESS, WASHINGTON, D. C. ARCHITECTS, MESSRS. SMITHMEYER & PELZ; P. J. PELZ; EDWARD P. CASEY.

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

THE BRAZER BUILDING, BOSTON, MASS. MR. CASS GILBERT, ARCHITECT, ST. PAUL, MINN.

THIS building, being erected on the corner of State and Devonshire Streets, Boston, on the site of the former building of the same name and where was built the first church in Boston, covers an area of about 2,600 square feet, and is to be a modern fireproof office-building of eleven stories, of the best class in all respects. The steel frame has been designed with the view of securing the strongest structure of its type in the country. The first three stories, above a granite base, are of a light-gray limestone. Above this, the entire building to the top of the cornice is of a light ornamental terra-cotta, broken by bands of carving and cheneaux of gilded bronze. Special attention has been given to heating, ventilation and high-speed elevators, to run day, evening and Sundays. The basement is divided into three large and well-lighted offices. On the ground floor there are three offices, one suitable for banking purposes. On the first floor the entire area is one large room containing about 2,000 square feet, with large vault, and specially adapted for a banking-room. The second floor and those above will be divided into offices varying in size according to the desires of tenants. These offices are finished in quartered oak, with wardrobe and bowl if desired. Toilet-rooms finished entirely in marble are placed on each floor, and fitted with modern and approved plumbing, with special ventilating system. There are marble floors in all the corridors, the walls being wainscoted with Pavonazza marble. The ceiling of the main entrance is in color mosaic. There will be entrances to the building from Devonshire and State Streets, and from Congress Square, with independent entrances directly from the street to the first-story offices. The building is entirely surrounded by streets, thus giving ample and outside light to every room. The elevator system is placed central in the building on the Congress Square side, so that every office is an outside office, and so that the entrance to every office is immediately adjacent to the elevators, and long halls are avoided.

DETAILS OF THE SAME: TWO PLATES.

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

A GROUP OF LEGISLATIVE BUILDINGS.

A GROUP OF OLD COLONIAL BUILDINGS.

[Additional Illustrations in the International Edition.]

BUSINESS PREMISES, NEWPORT, MONMOUTHSHIRE, ENG. MR. W. L. GRIFFITHS, ARCHITECT.

This plate is copied from *Building News*.

NEW SYNAGOGUE, CARDIFF, WALES. MR. DELISSA JOSEPH, ARCHITECT.

This plate is copied from the *Builder*.

GRAIN SILO, GREENWICH, ENG. MR. ASTON WEBB, ARCHITECT.

This plate also is copied from the *Builder*.

NORTHERN PAVILION OF THE MONUMENT TO WILLIAM I, BERLIN, PRUSSIA. HERR REINHOLD BEGAS, SCULPTOR.

This plate, which is copied from the *Deutsche Bauzeitung*, shows the quadriga modelled by the sculptor Herr Johannes Götz.

CHAPEL, STREATHAM CEMETERY, ENG. MR. W. NEWTON DUNN, ARCHITECT.

ADDITIONS TO "STADACONA," STAMFORD HILL, ENG. MR. LOUIS AMBLER, ARCHITECT.

THE WEIDEMANN MEMORIAL, BROMPTON CEMETERY, LONDON, ENG. MR. LOUIS AMBLER, ARCHITECT.



THE NEW MUSEUM FOR EGYPT. — The foundation-stone of the new museum, destined to contain the national collection of Egyptian antiquities now at Gizeh, was laid on the 1st inst. by the Khedive, the ceremony being attended by the ministers, high officials, diplomatic corps, and a few invited European residents. An Egyptian monolith coffer of the twelfth dynasty, about 2500 B. C., was used to hold a box containing the following objects: The *procès-verbal* of the ceremony in French and Arabic; an account of the finding of the coffer; a bronze medallion portrait of the Khedive bearing on the reverse the names Abbas Hilmi II., Khedive; Mustapha Fehmy Pasha, Prime Minister; Hussein Fakhry Pasha, Minister of Public Works and Instruction; J. de Morgan, Director-General of Antiquities; Marcel Dourgnon, architect; specimens of current coins, photographs on parchment of the plans and façade of the building, an ivory metre measure, a copy of the building specifications, and copies of native and European journals published in Cairo. The ornamental design of the *procès-verbal* represented two pylons, on which, after the names of Champollion and Mariette, inscribed as the chiefs among Egyptologists, were those of Rosellini, Nestor l'Hôte, Lepsius, de Rouge, Brugsch, Frisse d'Avennes, Chabas, Lieblein, Maspero, Dumichem, Lepage, Renouf, Grébau, Lanzzone, Naville, Schiaparelli, Erman de Morgan, Lenormand, Pleite. The only English names inscribed on the document were those of Birch and Goodwin. The coffer, after being lowered into an underground cavity of masonry, was finally covered with a large cubical block of stone. Comment has been excited at the exclusion of such eminent names as those of Belzoni, Young, Wilkinson, Petrie, Spiegelberg, Sayce, from the roll of Egyptologists deposited under the foundation-stone of the new museum. — *Cairo Correspondence London Times*, April 5.

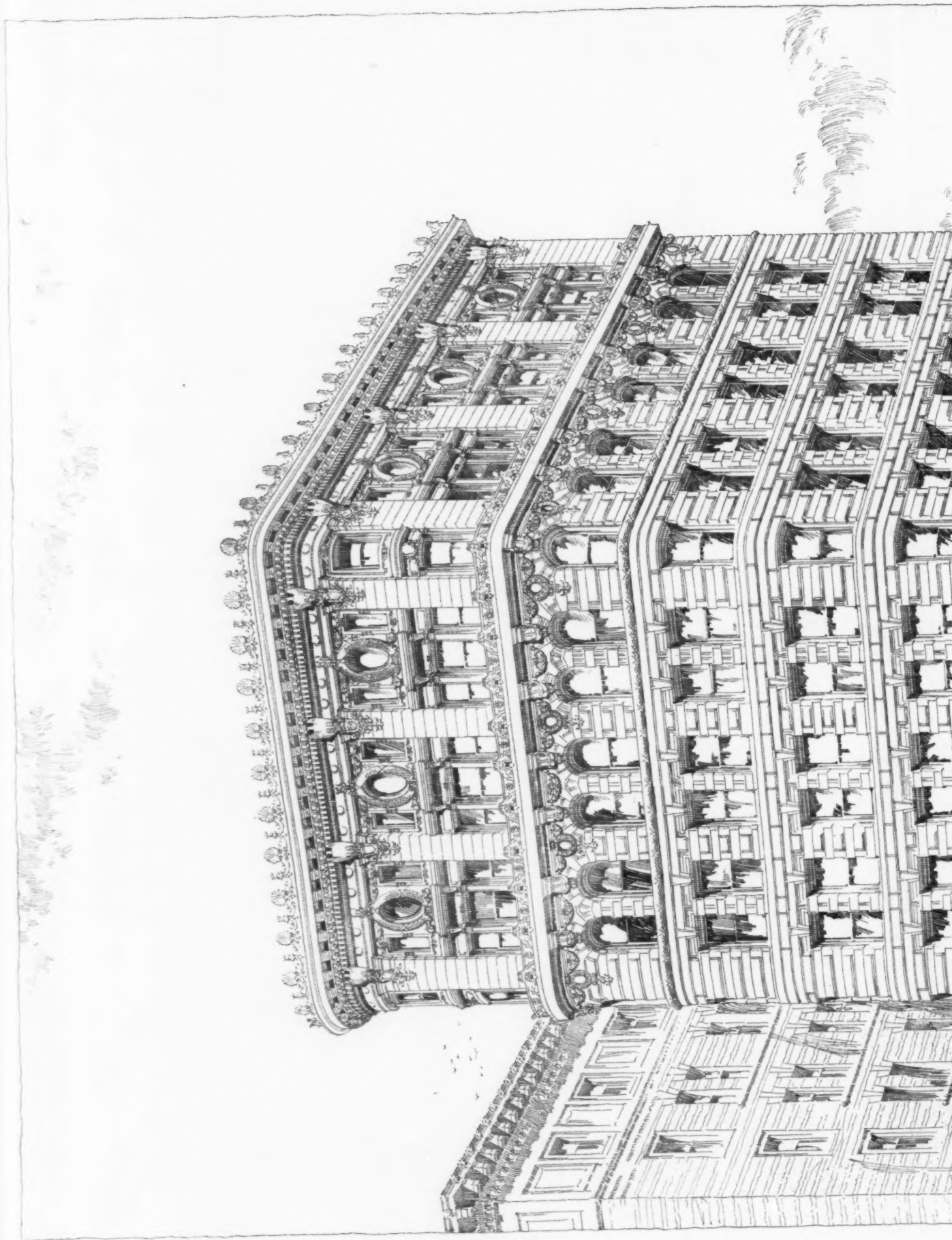
THE SCULPTOR'S PROFITS. — One of the most puzzling problems is to ascertain the ratio between artists' fees and the cost of works at different periods. An attempt of the kind has been made in Berlin, à propos of the memorial of the Emperor William I. For that work the Reichstag voted a sum of 4,000,000 marks, and the expenses, it is believed, will not exceed that sum. Professor Reinhold Begas has received one-fourth of the amount, but as he has not furnished a debit and credit account — nor should he be expected to prepare one for the public gratification — it cannot be ascertained whether he has gained or lost by his great work. But it may well be doubted whether his commission was as profitable as Rauch's when he executed the fine memorial of Frederick the Great, which is so prominent an object in the Unter den Linden. The payment was arranged differently. During the twelve years he was engaged on the work he received 3,000 thalers annually, and he was therefore able to devote himself to his task without anxiety. On the completion of the memorial he received 20,000 thalers, so that in all he obtained 168,000 marks, which was a fourth of the total cost. But the money, amounting to over 8,000*l.*, was mainly for his own services, while Professor Begas has had heavy disbursements. Schlüter, the sculptor, was paid 2,000 thalers for his design for the memorial of Frederick I, or the "Reiterbild des Grossen Kurfürsten," which is so prominent an object on the Lange Brücke, near the Schloss, in Berlin. About the same time he was entrusted with the superintendence of the enclosure of the royal palace. He received from 800 to 1,000 thalers yearly, but whether that was for sculpture alone is uncertain. It is calculated that he was rewarded with 11,000 thalers, or 33,000 marks, which would be about one-eighth of the cost of the most excellent example of German sculpture in the beginning of the eighteenth century. — *The Architect*.

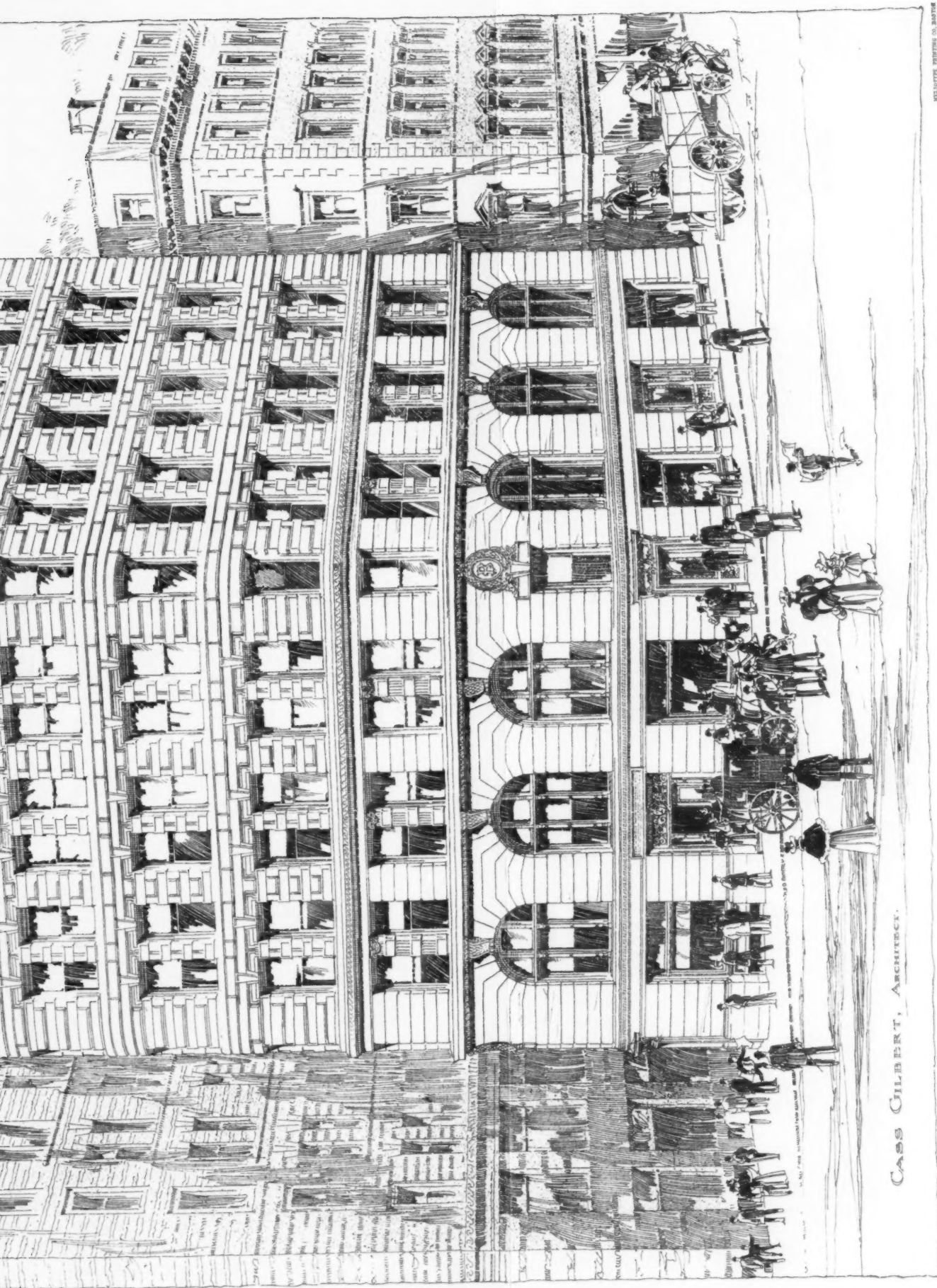
THE LONGEST BRIDGES. — The longest bridge in the world is that over the Tay, in Scotland, which is 3,200 metres = 9,600 feet long; and the next longest is also in Great Britain being that over the Firth of Forth 2,394 metres = 5,552 feet in length. The following table gives, in metres and in feet, the lengths of the principal bridges in various countries:

	Metres.	Feet.
Tay, Great Britain.....	3,200	9,606
Forth, Great Britain.....	2,394	5,552
Moerdyk, Holland.....	1,470	4,820
Volga, Russia.....	1,438	4,715
Weichsel, Germany.....	1,325	4,346
Thoen, Germany.....	1,272	4,172
Grandenz (Elbe), Germany.....	1,092	3,580
Brooklyn, United States.....	488	1,601

The greatest single span of the Forth Bridge is 521 metres = 1,725 feet; of the Elbe Bridge, 420 metres = 1,378 feet; of the East River Bridge, 488 metres = 1,610 feet. — *Scientific American*.

A REDWOOD FLUME. — A flume 35.34 miles long has been constructed to carry water from the mountains into the City of San Diego, Cal. The flume is of redwood, and required 9,000,000 feet to build it. From 75 to 125 men, besides teamsters, were employed in the work. In the course of the flume there are 315 trestles, the longest of which is 1,700 feet, and 85 feet in height. The building of this trestle required 250,000 feet of timber. The Sweetwater trestle is 1,200 feet long and 85 feet high. The main timbers used in this trestle are 10" x 10" in size. There are eight tunnels in the course of the flume, the longest of which is 2,100 feet. The tunnels are 6' x 6' in diameter, with a convex-shaped roof. Much of the lumber for construction had to be hauled 700 to 800 feet up the rocky sides of mountains. The lumber was loaded on cars that ran on a portable track, and the cars were pulled by a heavy wire cable. — *Northwestern Lumberman*.

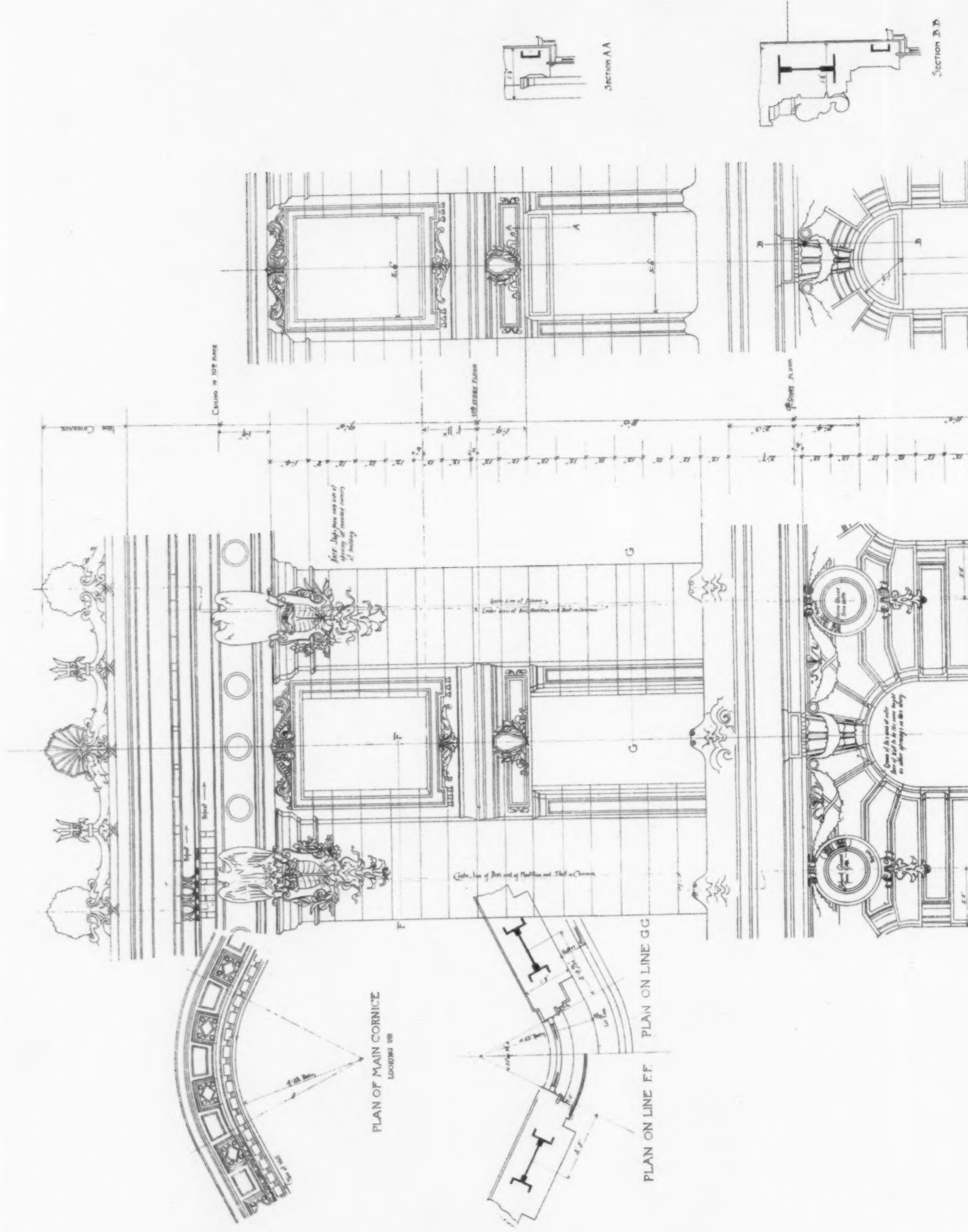




THE BRAZER BUILDING, BOSTON, MASS.
CASS GILBERT, ARCHITECT.

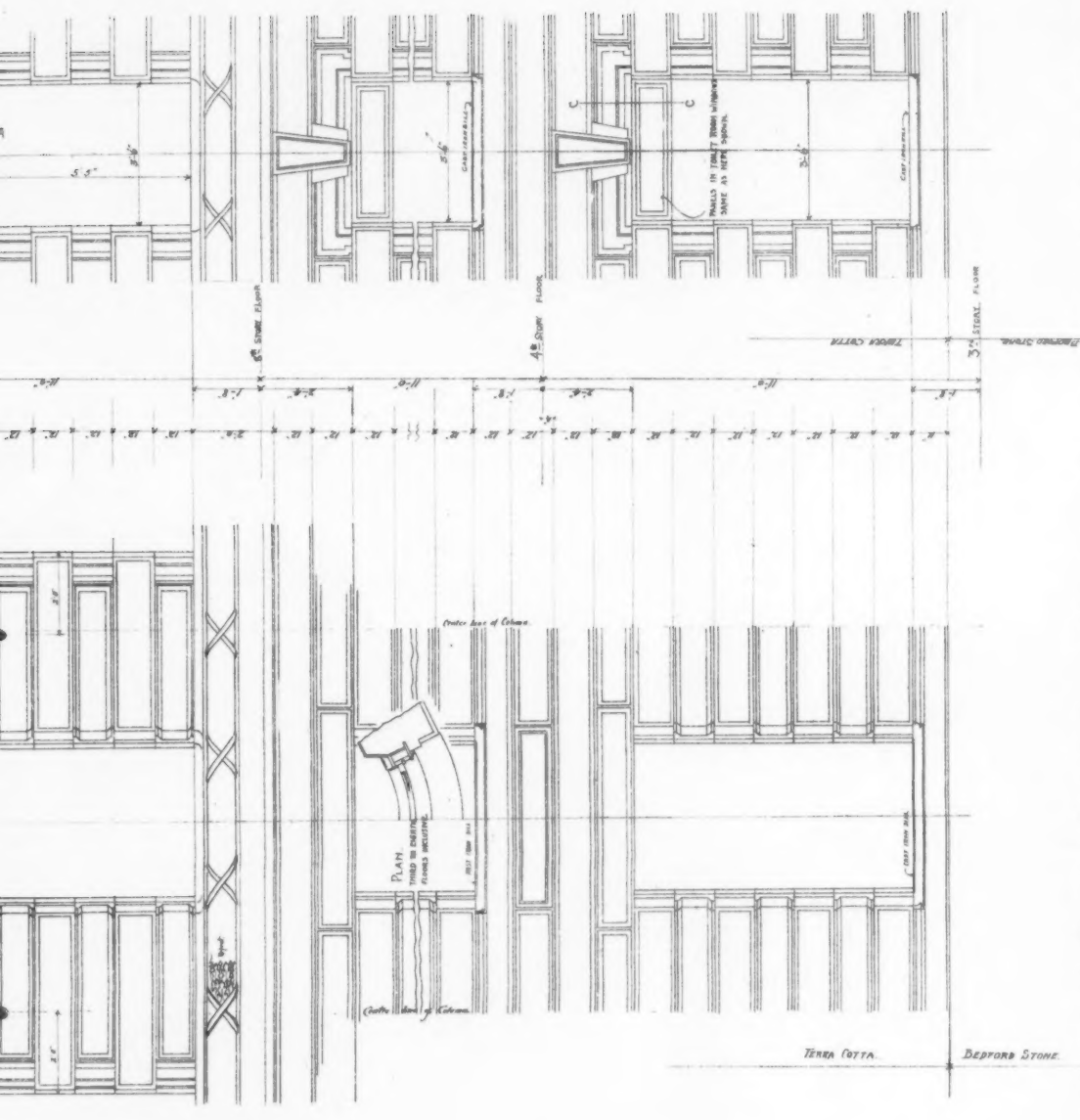
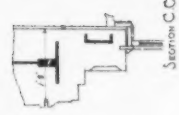
CASS GILBERT, ARCHT.

RELIQUARY ENGRAVED BY BARTON



Section B-B

See the section of 2' in
the plan of the
see stairs, below.



ELEVATION OF WINDOW OPENINGS ON STAIR LANDINGS.

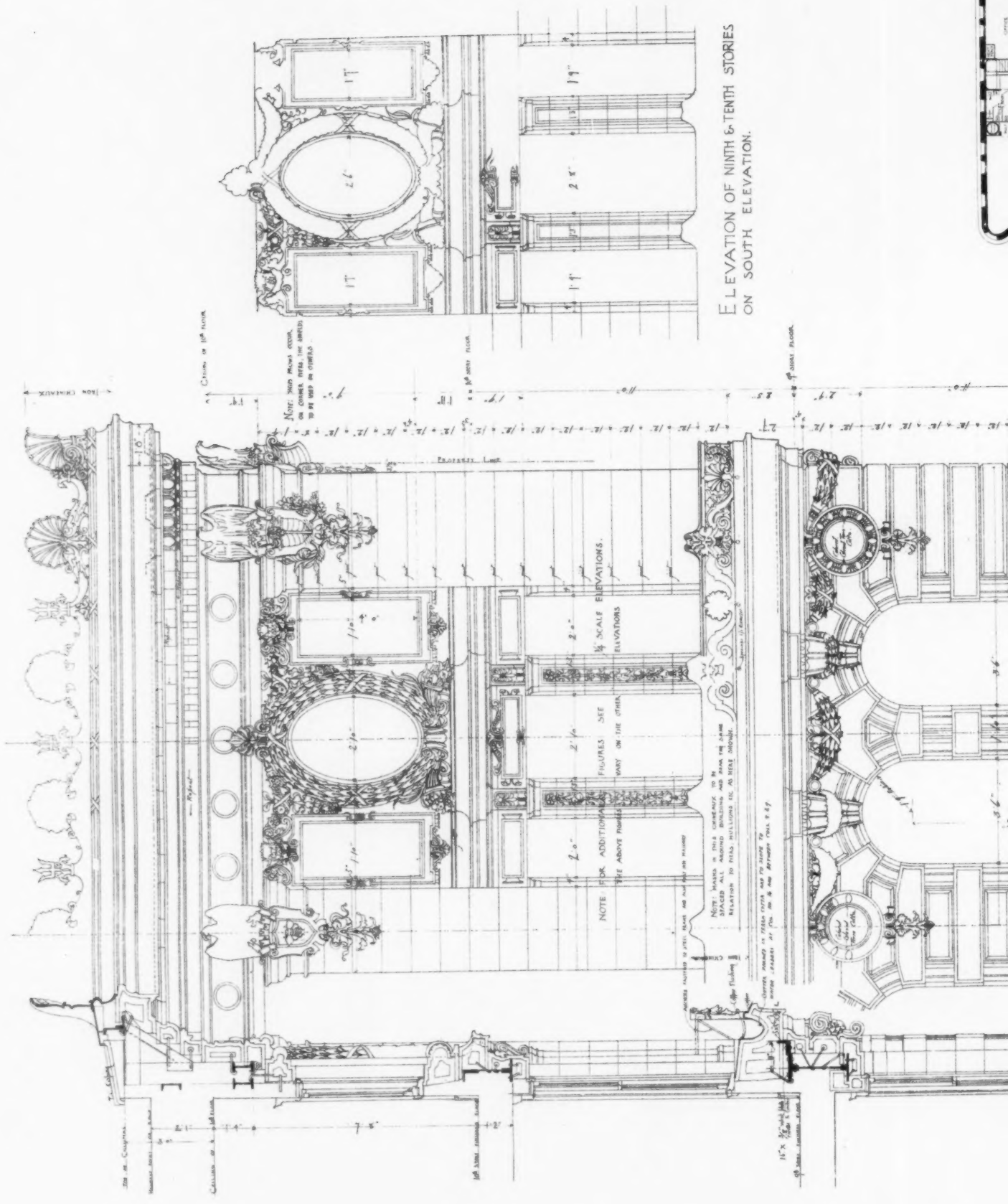
DETAIL OF TERRA COTTA WORK ABOVE SECOND STORY
(DEVELOPED) ELEVATION OF OPENINGS COR STATE & DEVONSHIRE ST.

NB THIS DETAIL APPLIES TO THE CORNER OF STATE & CONGRESS PLACE
CHANGING ONLY TO CONFORM TO THE GREATER ARC.

• BRAZER BUILDING BOSTON MASS •

CASS GILBERT ARCHITECT ENDICOTT BLDG STPAUL MINN.

MILFORD PRINTING CO. BOSTON



ELEVATION OF NINTH & TENTH STORIES
ON SOUTH ELEVATION.

Center of 1st floor

Note: This shows work on corner, etc., the details to be used as shown.

1st floor

2nd floor

NOTE FOR ADDITIONAL FIGURES: SEE DRAWING ON THE OTHER SIDE ABOVE MENTIONED.

SCALE ELEVATIONS.

NOTE: BRASS IN THIS CONNECTION TO BE USED IN CONNECTION WITH THE BRASS RELATION TO THIS BUILDING, ETC. AS HERE SHOWN.

DETAILS SHOWN IN THIS CONNECTION TO BE USED IN CONNECTION WITH THE BRASS RELATION TO THIS BUILDING, ETC. AS HERE SHOWN.

14" x 14" x 1/2" BRASS

10' 0"

10' 0"

10' 0"

10' 0"

10' 0"

10' 0"

10' 0"

10' 0"

10' 0"

10' 0"

10' 0"

10' 0"

