

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

JULY 15, 1893.



SUMMARY:—

The Application of the New Law for the Designing of Government Buildings.—A New Use for an Old Building.—Testing Methods of Fireproofing in Berlin.—Some of the Results.—Xylolith its Composition, Use and Method of Application.—Burning of the Cold-storage Warehouse at the World's Fair.	33
DOORWAYS.—II.	35
ANOTHER ARCHITECTURAL KNOCKABOUT.—VIII.	38
ROYAL INSTITUTE OF BRITISH ARCHITECTS: PRESENTATION OF THE ROYAL GOLD MEDAL.	39
FROM THE MEXICAN NATIONAL MUSEUM.	42
THE BUILDING OF THE SPANISH GOVERNMENT AT THE WORLD'S FAIR.	44
THE OLD SORBONNE ABOUT TO DISAPPEAR.	45
SOCIETIES.	45

ILLUSTRATIONS:—

Cottage on Lehmann St., Germantown, Pa.—House at Hartford, Conn.—The Building of the Spanish Government at the World's Fair, Chicago, Ill.—Details of the Same.—The Lonja, Valencia, Spain.—The Old Swedes Church, Southwark, Philadelphia, Pa.	46
Additional: The Leland Stanford, Jr., University, Palo Alto, Cal.—The Hall of the Cottage, Walton Heath, Surrey, Eng.—Wurtzburg.—Marquis of Granby Public-house, Shops and Residential Suites and Stabling, London, Eng.	46

COMMUNICATIONS:—

Party-wall Foundations in Chicago.—Office-help: A Correction and Reply.	47
NOTES AND CLIPPINGS.	48
TRADE SURVEYS.	48

A STORY is going about the newspapers, to the effect that Secretary Carlisle, on being asked when he intended to give effect to the new law, which authorizes him to employ private architects to design and supervise the construction of public buildings, replied that he had no intention of "squandering" the public money in hiring architects, and that he should, for the present, at least, adhere to the present system, from motives of economy. Whether the story is true or not, we will not undertake to say, but if it is, the Secretary must have a queer notion of economy. It was proved beyond doubt, in the recent investigation into the usefulness of the Supervising Architect's office, that the public paid about twice as much for the official designing and supervision of its buildings as it would have to pay a private architect for the same work, and that the buildings themselves, under the official system, cost about twice as much as private owners had to pay for similar buildings erected under the care of private architects; while the quality of the results secured by the "plan factory" system is well illustrated in the Chicago Post-office, which, after years of warning from the technical journals, has just been emphatically denounced by the Building Commissioners of Chicago as being in "an unsafe and dangerous condition," while to the reporters the Commissioner adds that "when the building falls," which it must do sooner or later, the General Government will be "criminally responsible" for the consequences to the hundreds of persons employed there. Whether the Commissioner proposes death by hanging, or a term of imprisonment, as the proper penalty to be applied to the General Government by a Criminal Court does not appear, but his expressions certainly indicate the sentiments of a good many experts in regard to the way in which some, at least, of the Government building-work has been attended to in times past. Meanwhile, an order has been issued, assigning certain engineer officers of the Army to the duty of inspecting public buildings of doubtful solidity, and, while this task could hardly be entrusted to better hands, we cannot help wishing that a balance-sheet could be prepared for the public edification, showing the economy of paying two dollars for designing, supervising and building a structure for the Government for every dollar that would be paid for the same work under the care of private architects, and, shortly after the completion of the building, pulling it down in anticipation of its spontaneous fall, and beginning the whole operation over again, with a fresh supply of funds.

A VERY curious and instructive experiment was carried out in Berlin the other day. An old building, which was to be removed to make way for new constructions, was secured, and a competitive test of fire-resisting materials instituted. Of course, it was impracticable to rebuild the house with real fireproof construction, but in Germany, as here, there are many manufacturers of materials for building fire-proof partitions, or for protecting ordinary wooden construction against fire, and the architects and fire-engineers who instituted the test thought, with justice, that a thorough trial of these was of great importance, and that the opportunity of making it should not be neglected. In order to make the test conform as closely as possible to the conditions likely to be met with in practice, the different rooms were fitted up in various ways. Several were left as simple living-rooms, with such furniture as would be found in ordinary dwellings; one was fitted up as a furniture-manufactory, another as a drug-store, a third as a moulding-mill, a fourth as a storage-room for furniture, and two others as petroleum stores. The rooms were then assigned to the manufacturers who wished to compete, for them to protect according to their systems. In order to make the test as comprehensive as possible, however, the manufacturers were required to protect various pieces of iron-work by their own systems, and in some cases, where there was a doubt as to the capacity of the fireproofing material for enduring a sudden shock, heavy weights of iron were supported above them by light wooden frames, so that, on the burning of the frames, the weights would fall. Arrangements were made for extinguishing the fires both by hydrant streams and hose from a steam fire-engine, so as to test the resistance of the various materials to sudden cooling and to the violent impact of the engine stream, and, with the scientific thoroughness characteristic of the Germans, a set of pieces of different substances, made for the purpose and fusible at known temperatures, was placed in each room, so that the temperature produced by the fire would be registered.

A JURY of experts was appointed, and a large company of architects, fire-engineers, builders and scientific men was invited to witness the test. As this lasted several days, the rooms being separately set afire and extinguished, a restaurant in the neighborhood was engaged for the use of the guests, and there the manufacturers displayed drawings and models of their systems, while the preliminary discourse, by the veteran Herr Stude, the Director of the Berlin fire-service, was given, and the decisions of the jury announced, in the same place. According to the admirable description in the *Deutsche Bauzeitung*, from which we can, unfortunately, only borrow the most important particulars, it appears that the fire was first set in an upper chamber, which had been treated by an exhibitor from Breslau, a carpenter named Schubert. The novel portion of Herr Schubert's construction consisted in plastering on a network of square wooden rods, interwoven with wire. Plastering in Germany is usually done on reeds, instead of wooden lath, so that the Schubert construction was particularly interesting to the company, and, as his square laths were set with the edge toward the front, he secured a good key, besides protecting a larger part of the surface of the laths than is usual with wooden lathing. In the room tested, this sort of lathing was applied in various ways. The old walls, and the underside of the rafters, were covered with it, and plastered; a partition was made of two thicknesses of it, the laths of the two thicknesses crossing, and plastered on both sides; another partition was made of two thicknesses, but on studding, and the space between filled with slag, and a floor was laid with it and covered with cement, the ceiling under being lathed in the same way, and plastered, while a deafening of earth, in the ordinary German manner, was put between the beams. After the fire was extinguished, it was found that, although the temperature, as shown by the fusible standards, had exceeded one thousand degrees Centigrade, which is about the melting-point of cast-iron, the plastering on the Schubert laths showed only unimportant cracks. Where the laths were exposed in these places, they were charred, but the mortar at the back of the charred laths was uninjured. The floor of cement on laths was in good condition, and watertight. Besides this construction, however, Herr Schubert showed other devices, of a less simple and sensible sort. Among these was

a door, consisting of a single sheet of magnesite, applied on a double layer of jute fabric. This door, although it was very small, being only two feet wide, and less than six feet high, had warped under the heat, so as to allow the fire to pass through the opening into the next room, and patches of the magnesite had scaled off. He had also treated the wooden stairs, by soaking them for two weeks with brine, and then covering them with asbestos linoleum, a process which the *Deutsche Bauzeitung* calls an "excuse for protection, very disproportionate to the object sought," while it describes the appearance of the staircase as "anything but pleasing."

THE next exhibitor showed a material which reminds one strongly of the so-called "fireproof" materials to which the attention of architects here is frequently called. This substance was a linen canvas, made "fireproof" by impregnation with some mineral salt, and waterproof by painting, and represented to be desirable for protecting woodwork, covering roofs and laying over floors. According to the report of the jury, who watched its behavior, this valuable material "immediately blazed up" as soon as it was touched by the fire, and, so far as they could see, it presented "no noticeable resistance to fire," although they thought it possible that, being freshly painted, it might not have done so well in this instance as it would under more favorable circumstances. Next to the linen-canvas fireproofing came a system of covering with plates of cement-concrete, which was applied to walls, ceilings and floors in one of the rooms, as well as to iron beams; while a partition was built-up through the middle of the house, consisting of two thicknesses of it, with an air-space between. Although the heat in the room exceeded 1,000 degrees, the cement plates resisted admirably. Here and there the cement was slightly cracked, but the wood and iron under it was perfectly protected, the iron beams showing no loss of strength in testing subsequently. The report of the jury pronounced this system, known in Germany as "Boklen's construction," to be "thoroughly fireproof," so far as the results of the test showed. This seems to have ended the first day's testing. The results of the succeeding trials we may, perhaps, be able to give later.

WE were asked some time ago for information about the xylolith, or wood-stone, which is coming into such extensive use in Germany. We were unable at that time to say much more than that it was made of sawdust and cement, but a recent number of the *Bautechniker* gives a variety of additional particulars, which we are sure will be interesting, not only to our correspondent, but to many others. Xylolith, or steinholz, or wood-stone, is made of magnesia cement, or calcined magnesite, mixed with sawdust, and saturated with a solution of chloride of calcium. The pasty mass, before the cement sets, is spread out into sheets of uniform thickness, and subjected to an enormous pressure amounting to more than a thousand pounds to the square inch. The compressed sheets are then simply dried in the air. The original invention of this material dates back to 1883, but it is only within the last five years that a single firm, that of Otto Sening & Co., at Pottschappel, near Dresden, has undertaken the manufacture of it on a large scale, and has met with such success that it is already engaged in the erection of extensive additional works in the Austrian territory, to supply the South German market. In 1888, a series of tests of xylolith was made at the Royal testing-station for building-materials in Berlin, covering its chemical as well as mechanical qualities. In resistance to tension, it was found, naturally, that the dry material was much superior to the same soaked with water, dry specimens resisting a tension of about 100 pounds per square inch, while pieces saturated with water resisted only two-thirds as much. Soaking the dry material in linseed oil increased the tensile strength about ten per cent, and freezing diminished it slightly. The resistance to compression proved to be about 300 pounds to the square inch. This was diminished about ten per cent by freezing, and increased to about the same extent by careful drying and saturation with linseed oil.

THE specific gravity of the new substance was found to be 1.553. The fractured surfaces showed a yellow color, with a perfectly uniform and close grain. When immersed in water, unbroken sheets of perfectly dry material took up 2.1 per cent of their weight of water in twelve hours, and 3.8 per cent in two hundred and sixteen hours. Broken pieces absorbed in the same time about twenty per cent more water

than the unbroken sheets. To try the resistance to the influences of the weather, a large number of samples were taken, and subjected to boiling in water, brine, soda-lye, hydrochloric acid, and solutions of sulphate of iron, sulphate of copper and sulphate of ammonium, alternating the boiling with sudden cooling. After several days' treatment with hydrochloric acid a loss of 2.3 per cent in weight was observed, but the properties of the pieces under test were not perceptibly affected. In the other cases no loss of weight could be detected, nor was there any other apparent alteration, and the liquids used for treating the samples remained perfectly clear. Exposure to superheated steam, in a Papin's digester, also produced no visible effect. In hardness, the material was found to occupy a position between feldspar and quartz, being scratched by the latter, but not distinctly so by the former. As a conductor of heat, the xylolith was found to rank between asbestos and cork, being, therefore, one of the best non-conductors known. To test its fire-resisting qualities, sheets were exposed for three hours to the flame of a Bunsen gas-burner, by which the actual surface touched by the flame was charred, although there was no crumbling, or extension of the charring beyond the marks of the flame. Similar pieces, laid on the burning coal in the fire-box of a drying-oven, and kept for some time at a red heat, were rendered brittle, and crumbled at the edges, but kept their shape and cohesion, and showed no sign of breaking into a flame.

FOR use, xylolith is delivered in sheets, from a quarter of an inch to an inch and a half thick, and of all sizes, up to a metre square. The dimensions are almost unchangeable by dryness or moisture. A sheet measuring one metre square, when perfectly dry, will expand from one to two-tenths of one per cent when soaked in water, and a moist sheet will contract in drying to about the same extent. Being so little subject to contraction and expansion, it is extensively used for floors in railroad stations, hospitals and similar buildings, and for decks of vessels. It is readily planed, sawed, bored and fashioned with ordinary wood-working tools, and may be painted or decorated in the same manner as wood. It is itself nearly waterproof, and with suitable putty in the joints, and, a good coat of paint, it may be made entirely so. It is not surprising that a material possessing so many advantages should have come into extensive use abroad, and we trust that its manufacture may be introduced here. It is sold in Germany, in sheets of thickness suitable for flooring, at about seven cents per square foot, and the laying costs, complete, about four cents more.

EVEN the perfect drill and the experience which the fire-department at the World's Fair has had in handling the many beginnings of fires that have raised their threatening tongues during the construction of the Fair buildings were unavailing to prevent a score of deaths being the result of the burning of the Cold Storage Warehouse, just inside the grounds, on Monday last. As usual the newspapers, which from the outset have seemed to consider it the proper thing to attack the Fair and its management at every chance, are filled with rumors and reports which can hardly assist the Fair and can do no real good. The disaster has happened, it might, of course, have been prevented. Similar disasters in some of the other buildings also might happen and they ought not, and, if human endeavor can accomplish it, they will not happen. Yet when one considers the disasters of all kinds that may attend the congregation of people under the conditions that exist during exhibitions, with their temporary structures and hasty preparations, it is wonderful that the sacrifice of life is not greater than it is. A certain amount of risk has always to be reckoned with by the promoters of exhibitions and unfortunately the visitors have to assume their share but in most cases they assume it knowingly. At Chicago the risks are greater than they have been elsewhere because the risk due to the mighty lake winds is paralleled by the risk which the employment of wood as the chief building-material unquestionably entails. But the same vigilance and care that have preserved the buildings until now will safeguard them until the Fair closes. The buildings are temporary and are not fireproof and there are few men other than the present mayor of Chicago, who has the reputation of being before all things a demagogue, who would talk of descending on the Fair in his might, examining all the buildings and putting a stop to all use and occupation of them until they had been made fireproof!

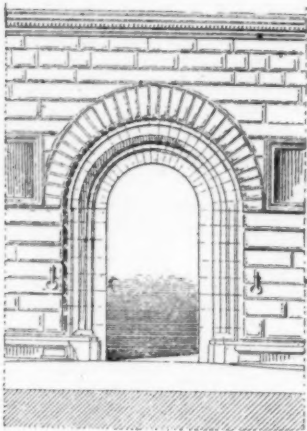
DOORWAYS.¹—II.

Fig. 7. From the Strozzi Palace, at Florence.

aces reared after the fifteenth century break away from all Gothic tradition, while asserting the characteristics of Tuscan architecture, with rude and stern exteriors; such are the doors of the Pitti, Ruccelai, Riccardi, Mannelli and Pandolfini palaces (See "Italian Architecture," *American Architect* for November 14, 1891, *et seq.*), and that of the Strozzi palace (Fig. 7), with its arches of powerful keys.

In the sixteenth century, Vignola, who, on account of his works and writings, has been surnamed the law-giver of modern architecture, built his masterpiece, the celebrated Castle of Caprarola, for Cardinal Farnese. He adorned the entrance with a monumental door, between beautiful windows, and with a Doric entablature, supported by an arch whose rustic construction constitutes the entire decoration (Fig. 8). The excellent proportions and noble simplicity alone of the work show what a great artist can do with quiet tastes matured by the study of the masterpieces of antiquity, and not by the awkward copies that may be made from them. And because of this very simplicity and sobriety, like the ancient productions, this bit of modern architecture has become a model, a point of departure for a world of conceptions developed from it as a basis; while another masterpiece, the door of the

IN order to resume a nearly chronological order as to doors in general, let us turn to the period of the Renaissance, those of the so-called Gothic era having been made the subject of important studies and numerous drawings contained in the oft-cited work of Viollet-le-Duc—a work which is in the hands of every one. Moreover, in the principal articles of this encyclopædia, a variety of illustrations will be found which amply answer all demands for information.

It is at Florence that the doors of the new pal-

finial, and also for the queer form of the basement and of the steps leading to it, the whole cut and profiled after the manner of a fountain-basin. The accessories give it, in fact, the character of a monumental fountain, which should not have been suggested.

Vignola, by analyzing the effects produced by the ancient models, was able to deduce principles applicable to the form

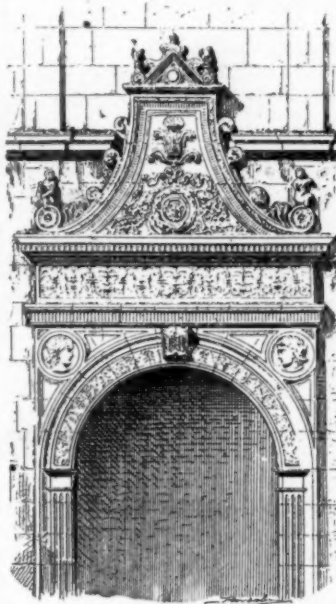


Fig. 11. Vaulted Passage in the Castle of Azay-le-Rideau.

and proportions of works modern in composition, while Michael Angelo drew from his imagination alone those wonderful and as yet unpublished formulas of a sculptor's architecture. He paved the way for and precipitated the decadence to which Borromini and Oppenord were to put the last touches; Vignola opened up the path to correct studies, to the interpretation soon universally adopted, though not always rationally understood, of the rules of ancient art. Michael Angelo rudely closed the door to reasoning, and uow admiration by the sublime barbarity of his forms or the awful profundity of his ideas.

However, though we may justly charge to the inaccurate genius of the one the picturesque decadence of the eighteenth

century in France, we may also attribute to the correctness and mathematical absolutism of the other, or, rather, of his empirical precepts, the cold insignificance of monumental art and the narrowness of its teaching down to a very recent date.

Divided, at the beginning of the sixteenth century, between the skill and traditional formulas of the Middle Ages and the necessity of adopting the types imported from Italy, the French, Spanish and Flemish artists strove to take advantage of Neo-Latin dispositions and decorative details introduced

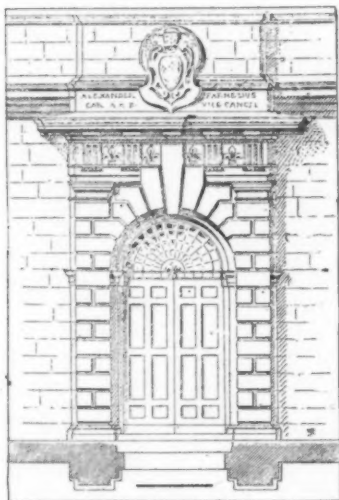


Fig. 8. From the Castle of Caprarola.



Fig. 9. From the Villa Grimani, Rome by Michael Angelo.

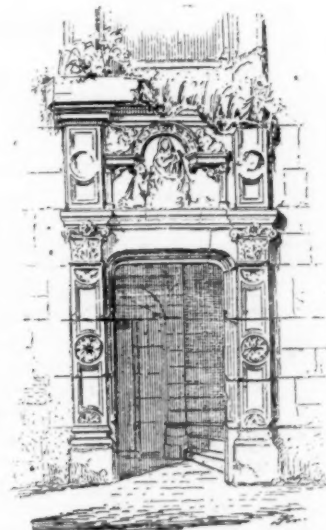


Fig. 10. From the Maison Jourde, at Cusset.

"Vigne" of the patriarch Grimani (Fig. 9), constructed after the designs of Michael Angelo, has evoked grotesque imitations and exaggerations of defects, which the genius of the inimitable master, however, rendered imperceptible to the ordinary observer. This door, superb in appearance and of a proudly picturesque silhouette, has, nevertheless, been criticised on account of its useless columns, which bear only a decorative

from Italy into France, Spain and Flanders through the infatuation of princes, lords or prelates. They at first reconciled the new demands with Gothic ways of structure and decoration; they accommodated the new predominating horizontals to the old instincts of verticality constituting one of the characteristics of Gothic art. Of the latter, they preserved the composition of the whole, clothing it in so-called Italian forms, mouldings and ornaments.

In the doors of private dwellings, for example, the architect

¹ From the French of E. Rivoalen, in Planat's *Encyclopédie de l'Architecture et de la Construction*. Continued from No. 915, page 21.

abandoned the discharging-arch which had become ogival, or the Gothic *accolade*, for the straight lintel, sometimes slightly rounded near its bearings; but he surmounted it with a tympanum, sometimes included within the exaggerated frieze of an entablature, as is the case in the door (Fig. 10) of a little "hostel" of the sixteenth century at Cusset (Allier), and sometimes framed, as at the Castle of Azay (Fig. 11), with a sort of Flemish pediment recalling the Gothic gable.

It is maintained as a much developed motive surmounting the still low door of the trans-

in the sixteenth in France. Under Henri II and Catherine de' Medici, Lescot and Bullant framed their doors with casings and surmounted them with pediments imitated from the fine models of antiquity. The more imaginative Philibert Delorme espoused the picturesque and rustic fancies of Serlio—whom he considered, he says, an artist of genius—and put them into practice at the Tuileries, at Saint-Maur, Chenonceaux, Fontainebleau, etc.

Elsewhere the artists of the provincial



Fig. 12. From the Château de Coucy, after Du Cerceau.

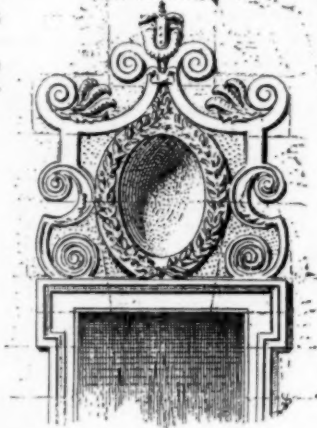


Fig. 13. From the Hôtel de Vogué, Dijon.

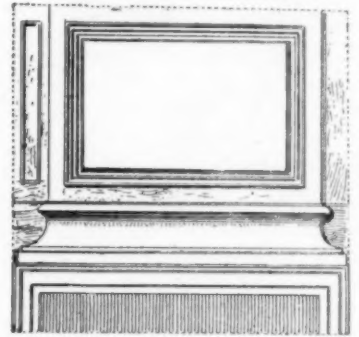


Fig. 17. Wooden Frieze-Panel, Seventeenth Century.

formed manors of the Middle Ages, like the frontispiece, the act of faith or the mark of nobility of the inhabitant. For a bourgeois, it presents perhaps a scene of religious imagery; while for the noble it may portray, as at Coucy (Fig. 12), an heroic episode in the life of an ancestor; or finally, as at Dijon (Fig. 13), it may show merely a monogram or an heraldic escutcheon surrounded by foliage.

Sometimes a secondary or service door, whether exterior or interior, is surmounted by an equilateral triangular pediment (a compromise between the Gothic gable and the antique

schools mixed the Classic style of these Parisian or Italian masters with the peculiar characteristics suited to the climate, materials and local customs and traditions; and these mixtures sometimes bore clearly the stamp of influences produced by a neighboring art.

In Burgundian architecture, of such an original and picturesque character [See "*Bourgogne*"], special study has been devoted to this motive, to which we will add the example of a door opening on the terrace of the Hôtel de Vogué (Fig. 13). The crowning, which is of secondary importance, exhibits in its silhouette indisputable traces of Flemish influence; the con-



Fig. 14. Entrance to the "Commutation," Toulouse.

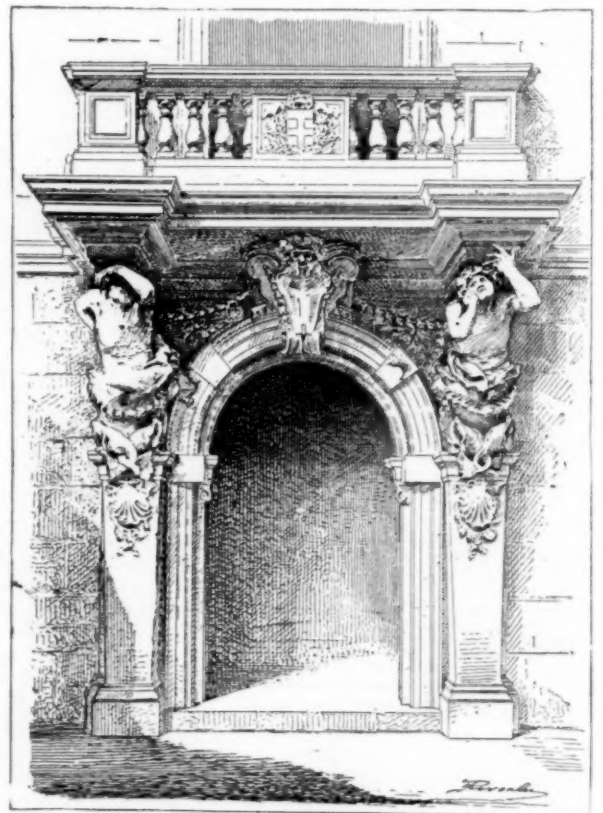


Fig. 15. Entrance of the Hôtel de Ville, Toulon.

pediment) or by a circular pediment with a tympanum adorned with a shell: that is to say, this architectonic motive of the niches of the Roman decadence, revived by the Italians of the fifteenth century, became an article of current importation

ceit is quite odd, but is corrected by the delicacy of the design and the skilfulness of the arrangement.

The door of the "Commutation" at Toulouse (Fig. 14), is also of the beginning of the sixteenth century; it is attributed

to the leader of the Toulousan Renaissance school, Nicolas Bachelier. This bit which recently still adorned the entrance of a store, after having decorated that of the Capitol (from 1555 to 1671), is to-day restored to an honored place as a monument of local history in the Botanical Garden of the town.

In the seventeenth century, the great

tablature with the ease of those of ancient art, which personified static force and passive resistance — not sinewy effort. However, simplicity and truth coupled with energy are Puget's characteristic qualities, and not nobility. He has too often modelled and carved frisky ocean sprites for the prows of royal vessels, to rein in the fury of his movements or still the intense life of his muscling, when carving in stone. But in sculpture as in architecture he was able to maintain beauty of form and harmony of proportions, in spite of projections and distortions.

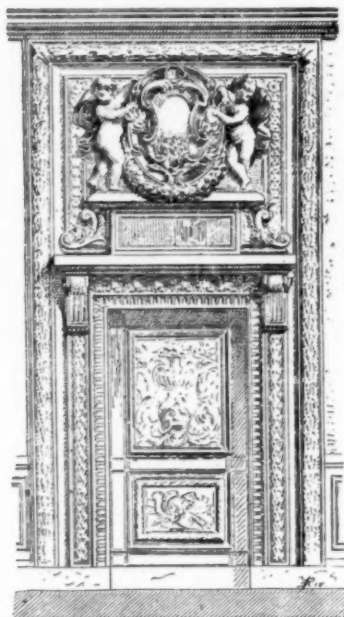


Fig. 16. Interior Door, after Le Paultre.

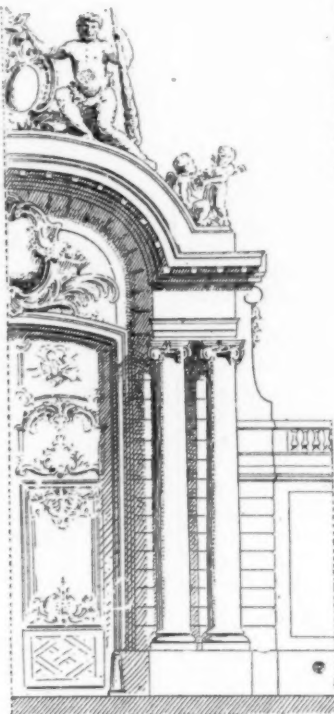


Fig. 18. From the Hôtel de Lassay.

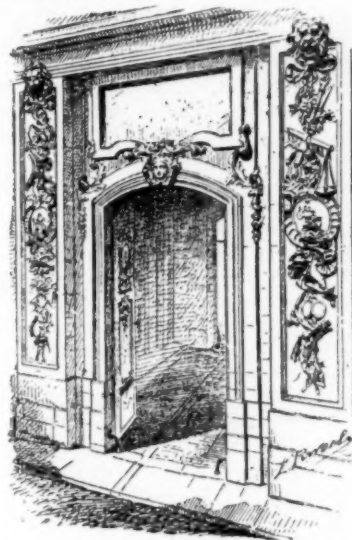


Fig. 19. Old Hôtel, Dijon.

sculptor Puget was engaged in architectural work. But, although a follower of Michael Angelo, whose energies seem to have inspired him; and whom he imitates in his superhuman strength and sometimes in his brute force or size, Puget remained French, that is to say, rational and free from pompousness. His door in the Town-hall of Toulon, executed in 1659

While Mansart (François) was sinking and framing his grand and beautiful doors of seigneurial mansions or churches in a kind of coved niche, — a disposition in vogue until the end of the eighteenth century and one that well indicated the opulence or grandeur of the place, while at the same time preserving a simplicity not inconsistent with nobility; while Le-

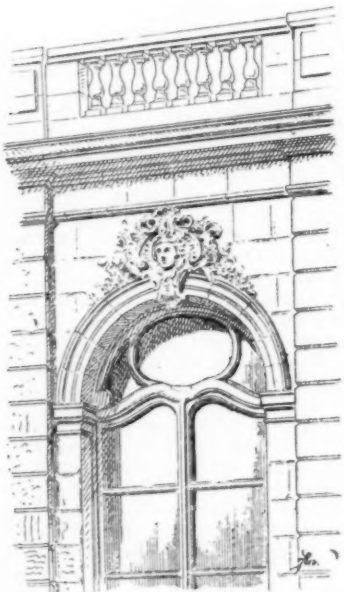


Fig. 20. From the Hôtel de Matignon, Paris.

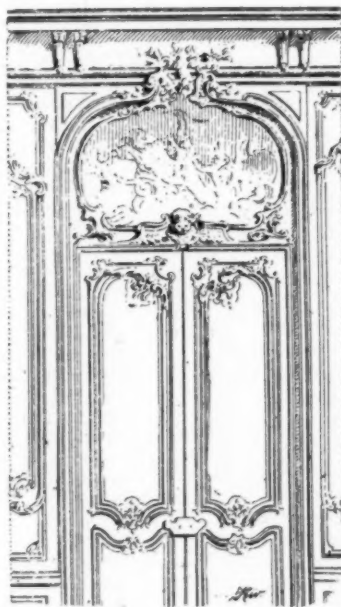


Fig. 21. Interior Door, Hôtel de Soubise, Paris.

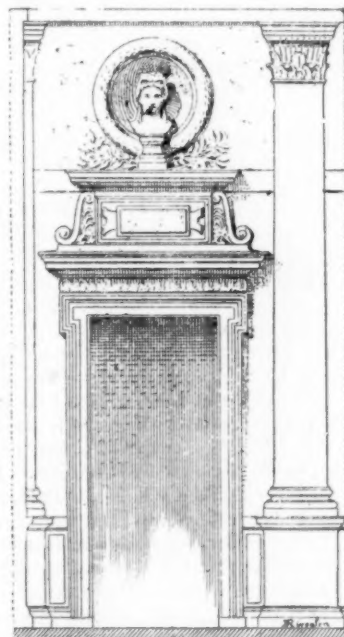


Fig. 22. From the Grand Staircase of the Court of Cassation.

(Fig. 15), a plain, simple work, betrays a certain research in the field of ancient architecture, — a study conducted by one whose temperament was too fiery to allow him to rest in the calm and serenity characterizing the noble models of antiquity. His caryatides live, suffer and shrivel, like the doomed of Dante, beneath a crushing weight, instead of bearing an en-

mercier, Le Muet and Antoine Le Paultre strove to secure convenience and give a grand air to the entrances of their houses, hôtels and castles, adapting them in general character to the degree of importance enjoyed by the proprietor, Jean Le Paultre (brother of Antoine) was lavishing the treasures of an inexhaustible imagination upon compositions marvellously

carved by himself. And it is from these sources that artists reaching out after intelligent originality, elegance and wealth have drawn and are still drawing inspiration. Figure 16 gives one of the beautiful interior doors composed by this preëminently French master. It is indeed a seventeenth-century bit, with its grand character, severe form, sober decoration and powerful projections; these qualities and features are brought out still more by the calm of the *nus*, on the one hand, and the sumptuousness of the ornamented mouldings, on the other. The whole, substantially framed by a robust casing, forms with ceilings and wainscoting a correct and austere *ensemble*, in spite of the petulance exhibited in the composition, in spite of the splendor of the golds, the vividness of the coloring and the boldness of the contours trenching on the sombre green of the tapestries.

Even in modest apartments, the frieze-panel or attic above the casing (Fig. 17), destitute of ornamentation and almost without mouldings, gave a grand appearance to the passage, which was often quite narrow before "le grand Roy," in his palaces, and, later, the Louis XV "paniers," introduced double doors almost everywhere. The *portes cochères* of certain great mansions like the Hôtel de Lassay (Fig. 18), became veritable monuments in the eighteenth century, as were the pylons of the Egyptian temples of remote antiquity.

In the provinces, people prided themselves upon a luxury nearly akin to that described above; such is a door in a *hôtel* at Dijon (Fig. 19), with its attributes and its broad marble slab, which has now disappeared, and which bore an inscription; the latter formed an elegant and simple frieze-panel; the attributes are disposed *en chute* on either side of the door.

The façades overlooking the gardens of these stately houses were pierced with broad, lofty bays spaced to secure proper balance, and, while in the interiors the fancy of the decorator was free to intertwine modillions and foliage, and introduce all sorts of interlacing patterns and wreaths gleaming with gilt, on the exterior a plain casing was used around the window-bays, as in the Hôtel de Matignon, at Paris (Fig. 20); the key was simply ornamented with a small piece of sculpture, often with a genuine masterpiece in workmanship and adjustment. Within, the wood seems to have become perfectly pliable under the hand of a sculptor like Harpin at the Hôtel de Soubise (Fig. 21), or of an architect like Boffrand or Blondel; and these sober, graceful conceits were placed almost parsimoniously at the top or bottom of a large panel-frame, or on the key of a basket-handle arch or in the gorge of a cornice.

Russia, Germany, Sweden, Norway, Parma and Rome, even, copied the charming archness and chubby conceits of the French *rocaille*; foreign princes and sovereigns paid the French artists of the eighteenth century the honors awarded to Italy by the Valois monarchs of the sixteenth.¹

But one need but glance at the reproductions of the works designed or executed by the various French artists settled abroad, about the time of Louis XV, to see that they did not become acclimated everywhere, and that the moral atmosphere or surroundings are in large measure the source of life for a master's talent. The most charming *rocaille* transplanted into Germany very quickly became *rococo*. It can hardly be taught, and cannot be exported.

With the reaction toward the antique which we have discussed under "Pilastre" and "Piédestal," the forms suddenly become severe and rectilinear again at the end of the eighteenth century, constituting, as it were, a new Renaissance; this was at first of a powerful character, owing to the comparatively strong contours and profiles. It reminds one of the wealth of Le Paultre. Then, with Louis XVI, everything is thin and over-refined; we return to a more or less indirect imitation of antiquity to more or less faithful copies of nature, only to reach, after the Revolution, the style of the Empire, a pseudo-Greek and pseudo-Roman style, the anæmia of archaism.

Since that time, though fine bits of architecture and works full of originality have seen their day—such, for example, as the beautiful interior doors of the Palais de Justice and of the Court of Cassation, by Duc (Fig. 22)—it is true we have lived very largely on the past, composed and designed from pseudo-ancient architecture. This has been done with greater

or less intelligence and success, with greater or less originality in the interpretation or the disguised copy. Yet we have never spoken so freely or so warmly of artistic propriety as we do to-day.

E. RIVOALEN.

ANOTHER ARCHITECTURAL KNOCKABOUT.²—VIII.



IT really seemed like home to me as we wandered around this quaint old town. A "country fair" was in progress. Here we both distinguished ourselves by shooting at plaster images and targets, which, when hit on the bull's-eye, caused a cannon to explode. As the distance from the shooting-platform to the target was hardly fifteen feet we rarely missed—in fact we hit so often that we ruined the proprietor of the shooting-gallery, as his cannons all burst from too constant use, and his powder gave out. We were requested to desist from shooting, as we never paid a centime, owing to the rule printed on the outside of his establishment declaring that if two consecutive bull's-eyes were made nothing was to be paid for the five shots allowed. It was simply child's play—but to see the soldiers of the town and the natives themselves miss again and again amused us greatly. Our record at this sport gained us no end of reputation on the fair grounds, and when it was known that we were Americans we were avoided as if we had been lepers. The

villagers were positive that we bristled with revolvers and shooting-irons of every description and were quite ready at a second's notice to open fire upon them.

After making a few sketches, we journeyed to Bordeaux and from thence to Poitiers. Here, receiving word from home that we must hurry back, we decided to take the steamer "Britannic" back to America and, as that vessel left in a few days from that time, we cast about us to see if it were possible to catch her.

On inquiring at the hotel at Poitiers about immediate *trains-de-luxe* to Paris, I was informed that a "Queen's Special" from Lisbon or Seville passed through the town *en route* for the great metropolis in an hour, but as that was a private train and only stopped for two minutes to throw off or take on some mail-bags, it was impossible to get a passage, and there was no other until midnight.

I did not stop to hear more, but begged George to hurry and get his luggage ready, telling him rapidly as I packed my own what I was about to attempt. We soon got off to the station. My cousin readily and cheerfully fell-in with my scheme as I explained that to be able to catch the steamer at Liverpool it was vitally necessary to get to Paris immediately, and to do this we must board this "Queen's Special," come what might. So into the station we rushed. Taking two porters aside I explained to them the situation and, making them comprehend it better by a liberal tip, I unfolded to them the following plan: when the train came to a standstill, they (the porters) were to knock furiously at the door of the baggage-car if it were closed, and as it was opened to see what the disturbance meant, they, without a word, were to thrust our trunks aboard and quickly retire, giving no explanation to the officials aboard the train.

As the train only stopped for two minutes, I felt certain that the trunks could not and would not be put off in that time. Meanwhile George and I would manage about boarding the train with our smaller luggage. The Frenchmen grinned and promised faithfully to do all I requested. Then we went and quietly bought our through tickets to Paris, which were sold to us without a word or look.

We were let in through a fence-gate to the tracks with our luggage by the faithful porters, as the passenger-gates and doors of the station were, of course, closed. We placed ourselves in a position to jump aboard. It makes me smile as I write this, to think of the curious sight we all presented; George and I astride our grip-sacks, on the alert, while farther up the platform were the two grinning porters with our trunks, and taking the whole affair as a grand lark, ready to fling them aboard according to orders.

With a rush and roar in came the train, the engine made completely of shining brass, and with only a baggage-car, a buffet and a private dining-room, and the compartments of her august Majesty.

At the moment the train came to a standstill, I cast one look at the porters who dexterously fulfilled their part of the work, and darting to the steps of the buffet-car with my baggage, I flung it aboard, George doing exactly the same thing, and we both jumped aboard the now moving train. Out ran two or three officials and flunkies who endeavored to forcibly eject us.

¹ At St. Petersburg, La Mothe was the first architect; at Berlin, Le Geay; at Copenhagen, Jardin; at Munich, Cuvilliers; at Stuttgart, La Guépière; at Mannheim, Pigage; at Madrid, Marquet; at Parma, Petitot; in the Duchy of Zweibrücken, Patte, author of the following remark on architects called abroad by the sovereigns of the different nations. "Our sculptors," said he, "are likewise scattered everywhere: Sally at Copenhagen; Hutin at Dresden; Larchevêque at Stockholm; Gillet at St. Petersburg." . . . etc. (Patte, "Monum à Louis XV.")

² Continued from No. 915, page 24.

I commenced to argue to gain time, but as they tried to push us off, we hung to the railings until the train got full headway — those were the longest two minutes I ever knew.

We were on the train, there was no doubt about that, and it did not stop until it reached Paris either. At once we were drawn roughly inside and, seated at a table in the buffet-car, were put through a very minute examination by the astonished and angry officials. I endeavored mildly to explain in reply to the Conductor-General's (or whatever he was) exclamations to this effect: "What impudence in us to take this train, in such a manner also." "Did we not know that this train was the Queen's own, and that no of πολλοί rode upon it, etc."

I replied that we were two peaceable Americans who took the first train to Paris we could get, and we were going to stay on it too. "How should we know," I said, "that this was a 'special' or 'royal train'?" They sold us our tickets at the depot, and must one ask every time one wants to take a train 'Is this a private car?' or 'Has this train been chartered by the 'Cid' himself?' How absurd," I continued, "we can't help it now, and as for the resistance and rough treatment we have undergone, are we to receive an apology from the conductor for it, or are we not?"

This piece of impudence and the explanation of our actions and our appearance so took his breath away, that he was utterly speechless for a while: then I informed him that if he would acquaint Her Majesty with the facts of the case, I would make our most abject apologies to her "Grace" for our apparently unseemly conduct. This he did, much to my surprise, and we two culprits were marched through the train to the royal compartments and soon stood in the august presence of the Dowager Queen of Spain. A smile suffused her face as I, in my best Franco-Spanish tongue, apologized for our intrusion in the most flowery language. I even went so far as to offer our services as pages, or even as stokers on the journey to Paris. (I had rather a hard time to say the word "stoker" in either French or Spanish.) She smiled very nicely and said that "we were forgiven, if we would put up with a seat in the buffet-car and take dinner with herself and suite afterwards." Overpowered by such graciousness, we confusedly bowed our thanks to the now convulsed royalty.

Back we went to the buffet-car and were received with open arms and gracious bows and smirks by the conductor, lackeys, flunkies and pages.

We put on all the lugs we possibly could think of, compatible to such petted favorites of Her Majesty. It worked splendidly, too: drinks and cigars were set before us, our shoes were polished, our clothes brushed, handglasses were offered us and in fact everything was done to make us happy and luxurious. We had never travelled "en prince" before, and George and I grinned from ear to ear when the admiring eyes of the Queen's retainers were not upon us.

As for the dinner — it was a banquet! We sat a few seats from "Her Graciousness" and made ourselves as agreeable as we could. I conversed in bad Spanish to a bad Countess at my right — and discussed the virtues and faults of cigarettes and cigars of American manufacture — with a decrepit Marquis for my vis-à-vis.

An occasional remark fell from the Queen concerning America, and on being asked if we were travelling for pleasure merely? I answered that we were, although I represented Labor if there was any, as I was an architect and had been sketching through Spain. I was asked if I had any sketches with me — whereupon I produced my sketch-books which seemed to produce a favorable impression upon all present, which fact put us well at our ease and made the otherwise most peculiar and singular dinner a very pleasant one. How dull it all seems now! We were sorry indeed to leave the train on its arrival at Paris where I had the honor of going through the ticket-gate with the Queen herself. We expressed our great gratitude and reiterated our apologies to her and the curtain fell upon the scene, which instantly became a memory.

Off we rushed, laughing heartily at our late experience. We drove directly to the Hôtel de Florence — where I had been before, and it seemed like arriving home again, to be greeted so cordially by the old *concierge* who recognized me at once and called me by name. This is one of the pleasantest things that can happen to an old traveller, that of being recognized and known at once by an old *padrone* or *maitre d'hôtel* after returning to a place after a long absence.

Thus we came to the end of our journey; we rushed over Paris — I knew the ropes and (as usual) became mentor to George who in that brief visit enjoyed himself greatly I am sure. I took him at once to the "Quatier Latin" where we had a Bohemian dinner with many of my old friends — all of whom I had known at home or met two years before in the "Quatier" there.

It seemed strangely familiar and it seemed also to be impossible that such a length of time had elapsed since my last "Knockabout" there. Then taking a fond farewell of the peculiar places and the splendid city itself, George and I started for London, via Dieppe and Folkestone, which latter city we reached after a very rough night passage on the Channel.

Arriving at London we went to our Hotel Arundel where we sat down to think it all over. Here we were back again at our starting-point, nearly five months later, and both of us alive and comparatively well, though I still felt the effects of the Spanish cuisine. We both simultaneously arose and shook hands on the fact of having returned intact and "unstilettoed."

We made but a few purchases in London, owing to our limited capital, then calling upon the N — s, who gave us another farewell dinner, we speeded for Liverpool and taking our good ship "Britannic" after a very rough voyage, which made us two days overdue, we arrived happily and safely and were welcomed in our families as joyfully as the advent of unexpected legacies. Thus ends this Architectural Knockabout, and my observations of Spain, fleeting though they were, proved a realization of many fond hopes and dreams — and the memories of Grenada, the Alhambra, Anita, the flower-girl, and the old Bohemian life, which I in a small way participated in, comes back to me, as alone with my pipe I sit and muse upon it all. So, good friends, "here's an end on't."

Go for yourselves — and just to celebrate the possible event of your departure, I mix a brew in my gas-jet sauce-pan, and so I pledge you and the profession all success — and may you have as good a time stinting and starving through Europe as I did, live your own Knockabout and return as I did satisfied for a little space of time.

F. L. V. HOPPIN.

[The end.]

ROYAL INSTITUTE OF BRITISH ARCHITECTS.

PRESENTATION OF THE ROYAL GOLD MEDAL.



THE closing meeting of Session 1892-93 of the Royal Institute of British Architects was held on Monday evening, June 19, at Conduit Street. The meeting was preceded by a reception in the lower galleries, and at half-past eight the members and visitors (including a large number of ladies) adjourned to the meeting-room, where the President, Mr. J. Macvicar Anderson, took the chair.

The President said that on such an occasion as the present it was, of course, gratifying to see present amongst them as many of the past Gold Medallists as possible. It was with sincere regret that they had received letters from M. Garnier, M. Daumet and M. César Daly, explaining their inability to be present, but he was pleased to see present on that occasion past Gold Medallists in the persons of Sir Henry Layard, Mr. Ewan Christian, Mr. Charles Barry, and last, though not least, Sir Arthur Blomfield.

The President, who, on rising to make the presentation of the Royal Gold Medal, was received with applause, said:

Colleagues and Gentlemen, — For the third time it becomes my privilege, as your representative, to present the Gold Medal which Her Majesty, the Queen, graciously confers each year on such distinguished architect or man of science of any country as may have designed or executed a building of high merit, or produced a work tending to promote or facilitate the knowledge of architecture in the various branches of science connected therewith. Two years since, I was permitted to be the medium of conferring this honor on an eminent English architect, whose name and works are alike appreciated and known by all in the realm of art — Sir Arthur Blomfield. Last year, no one who was present on the occasion can have forgotten the venerable Frenchman who accepted from my hands this gift of the Queen, or the striking address in which he testified his appreciation of the honor — an address which, as we were subsequently informed, had been perused with no ordinary interest by Her Majesty. It is gratifying to know that the prolonged and active life of Monsieur César Daly is still absorbed in the study of the art to which he has dedicated his powers, and ennobling to find octogenarian energy of such exceptionable vigor devoted to the pursuit of a cause so commendable, so irreproachable and so well calculated to benefit society. I have thus experienced the happiness of presenting this royal gift to an Englishman and to a foreigner; but when I regard the proceedings in which we are now engaged, I feel some difficulty in deciding what is the nationality of the recipient of the Royal Gold Medal in 1893, for the distinguished architect whom it is at once our pride and our privilege to be permitted to honor can scarcely be defined either as an Englishman or

as a foreigner. He is, no doubt, an Englishman in the sense that he speaks the Anglo-Saxon language, but, on the other hand, he is not an Englishman in the sense that he was born and finds a domicile beyond the limits of the British Empire. He is, no doubt, a foreigner in the sense that the scene in which he has achieved celebrity is not British soil, but, on the other hand, he is not a foreigner in the sense that his nationality is so intimately linked to our own that we scarcely regard it as separate or distinct. What shall I say, then? If he is not an Englishman, and if he is not a foreigner, there is but one word in our vocabulary that will truly describe his nationality—he is an American. Thus, whatever interest may have been associated with any or all of the forty-five eminent men on whom this medal has been conferred, it is obvious that the present occasion has no parallel, and is, indeed, unique, for we are about to do honor to a citizen of that great Western Republic, one whose name we are proud to enroll as one of our Royal Gold Medallists—not only on account of high personal and professional merit, but also because he is the first American whose name will appear in that roll-call of illustrious artists. That the selection should this year have fallen on one who has designed the principal building in the great Columbian Exposition which attracts the world's sight-seers to Chicago at the present moment, and which will hereafter associate the name of America with the most wondrous development that international exhibitions have ever reached or are ever likely to attain is, to say the least, a singularly fortuitous coincidence. In honoring Mr. Hunt in recognition of his eminence and of his works as an architect, we rejoice that we are thus able to pay a graceful tribute to the United States in the person of one of her most distinguished sons.

The art of a new country is necessarily devoid of the native inspiration and guidance to be found in the history of centuries and in ancient monuments, which are the glory of older countries. In the case of America, the possession of boundless resources and of illimitable wealth—the rapid development of which almost appals us—without the accompaniment of the experience of the past to guide lavish indulgence, presents a condition which, in respect of art, is beset with temptation and pregnant with danger, for without the restraining curb of necessity broad and easy is the road from luxury to extravagance, from liberty to license. In such circumstances, who will be so bold as to define or limit the influence exercised, for good or for evil, by the early masters of the arts in America. It cannot but be well, indeed, that the development of her architecture has been inspired by one possessing the refined taste, the educated judgment and the cosmopolitan experience of Richard Morris Hunt.

On the other side of the globe—even in these days of rapid intercommunication—men are born, rise to eminence, guide the interests of vast communities, reap great honors and pass away, creating comparatively little stir in the popular imagination here at home. Hence, if the name of Mr. Hunt—although well known to us—is not a household word in England to the same extent that it is in America, it is not because his achievements are less renowned or his works less important than those of men whose names are more familiar to the public here, but simply because we are geographically separated by the few thousand miles known as the Atlantic Ocean. I offer no apology, therefore—unless it be to Mr. Hunt for referring in his presence to his life and work—if I venture to review some of the more prominent particulars of his career, which I feel sure cannot fail to be of interest to all.

Mr. Richard Morris Hunt, born in Brattleboro', State of Vermont, in 1828, comes of an old New England family, and is the son of the late Honorable Jonathan Hunt, Member of Congress. On his father's death, his mother removed to New Haven, and his education was commenced at French's School, and continued at the Boston High School and Latin School. In 1843—at the age, therefore, of fifteen—he accompanied his family to Europe and entered a school at Geneva, commencing the study of architecture with Samuel Darier. From Geneva he went to Paris, and studied under Hector Lefuel, entering the École des Beaux-Arts in 1845. On leaving the École, he travelled through Europe, Asia Minor and Egypt, and on his return to Paris in 1854 he received from the French Government the appointment of "Inspecteur des Travaux" on the new buildings uniting the Tuileries to the Louvre. His master, Lefuel, having, during his absence, succeeded Visconti as architect, he was put in charge of the Pavillon de la Bibliothèque, opposite the Palais Royal, and had the honor of making, under Lefuel, all the studies and full-size drawings of that pavilion.

Having thus stored his mind with a knowledge of some of the celebrated monuments of the Old World, and acquired practical experience, he returned to America in 1855, at the age of twenty-seven, and spent about six months in assisting the late Thomas U. Walter at the Capitol at Washington. He then, at New York, commenced the practice of his profession, to which he has enthusiastically devoted his powers through an exceptionally busy and distinguished career.

Shortly afterwards he took an active and prominent part in founding the American Institute of Architects, a body which now has Chapters in various parts of the United States. He succeeded R. M. Upjohn and Thomas U. Walter as President, and subsequently was elected President of the Institute under its reorganized constitution. He was also for several years President of the New York Chapter of the American Institute.

Soon after commencing his career in New York, Mr. Hunt opened an architectural atelier for students on the French system, thus demonstrating in a practical form the native energy of his mind and the influence which his European studies had exercised. Many of the leading architects in America to-day—such men as Prof. William R. Ware, George B. Post, Frank Furness, Henry Van Brunt, Charles Gambrill and others—were students in this atelier, and it is natural that Mr. Hunt should feel proud of the eminent position they have achieved, for who will venture to say how much they owe to the teaching and inspiration they received in the first American atelier!

In 1867, Mr. Hunt served as a member of the Fine-Arts Jury at the International Exposition in Paris; in 1876, he held the same office in the Centennial Exhibition at Philadelphia; and in the present year of grace he served as a member of the Fine-Arts Jury of Selection and as President of the Board of Architects at the World's Columbian Exposition at Chicago.

In 1882, Mr. Hunt received from the French Government the decoration of the Legion of Honor, and was elected a Corresponding Member of the Institut de France in the following year. He is an Honorary Member of the Société Centrale des Architectes Français and of the Architects' and Engineers' Society of Vienna, and an Academician of St. Luke at Rome. He has been highly honored by Harvard University, the oldest and foremost seat of learning in America, which conferred on him the degree of LL.D., the first ever conferred by that university on an artist. Lastly, we have ourselves the honor of claiming Mr. Hunt as one of our Honorary Corresponding Members, and, in anticipation of the more intimate relationship we are now about to assume, it may not be uninteresting to note the views which have been expressed on behalf of both the United States of America and of France with reference to Mr. Hunt's acceptance of the honor which we are now permitted to be the medium of conferring on him. . . .

From France, the President of the Société Centrale des Architectes Français thus addresses Mr. Hunt:

"PARIS, le 8 Avril 1893.

"MON CHER ET HONORÉ CONFRÈRE.—Le Bureau et le Conseil de la Société centrale des Architectes français m'ont chargé de vous adresser les vives félicitations de notre Société pour l'honneur si justement mérité que vient de vous conférer l'Institut royal des Architectes britanniques, en vous octroyant, cette année, la grande médaille d'or de la Reine d'Angleterre.

"C'est, croyez-le bien, une profonde satisfaction pour nous de voir attribuer cette haute et rare distinction à un architecte que beaucoup d'entre nous ont connu, estimé et aimé comme condisciple à l'École des Beaux-Arts à Paris et comme collaborateur d'un de nos maîtres les plus éminents, M. Lefuel.

"Nous aimons à penser que c'est un peu l'architecture française qui vient d'être honorée en votre personne en même temps que l'architecture américaine.

"En tout cas, c'est de grand cœur que je me fais l'interprète de félicitations, auxquelles je m'associe pleinement, envers un membre correspondant de la Société centrale des Architectes français, envers un artiste à qui son talent et ses mérites ont valu le titre de correspondant de l'Académie des Beaux-Arts.

"Veuillez agréer, mon cher et honoré confrère, l'assurance de mes meilleurs sentiments confraternels.

"Le Président de la Société centrale des Architectes français, Membre de l'Institut.
H. DAUMET."

I have referred to these communications because it is pleasant to be thus assured that he whom we delight to honor is held in equally high regard by his compatriots alike in the United States and in France. To describe in detail the work of an architect whose practice has been extensive and varied entails considerable labor, and it would seem to be superfluous in the present case. Mr. Hunt's principal works, most of which are of Classical design, are characterized by both vigor and purity in composition, and many of them are well known to some here this evening.

I have said enough to demonstrate, were demonstration required, that the recommendation of the name of Mr. Richard Morris Hunt, which we humbly submitted to Her Majesty, is not merely justified by the meritorious works and by the distinguished career of the man, but has been confirmed by the unanimous testimony of those who are best able to judge of his qualifications both in Europe and in America.

Mr. Hunt, in presenting to you this gold medal, the gift of Her Most Gracious Majesty, Queen Victoria, I hand you what is the typical embodiment of the recognition by British architects of your distinguished and honorable career, and of the high architectural merit of your works. The fact that you have travelled some thousands of miles in order that you might personally receive this medal may be accepted as sufficient evidence of the high estimation in which you rightly regard the honor. It is, indeed, the highest which we are graciously permitted to offer to the most illustrious architects of the world, and we indulge the hope that our American brethren will recognize in this royal gift, which we are privileged to present to their most eminent representative, the embodiment of the hearty good-will, the sincere respect and the ardent admiration with which they are regarded by the architects of the Old World.

Mr. Hunt, in replying, said it would be useless to say that he was not in a most embarrassed position. Nothing that he could say would fairly represent his feelings of gratification and gratitude and

thankfulness to the Institute. He had been honored with numerous decorations by different institutes and societies, but the present gift of Her Majesty, the Queen, had a peculiar charm about it: it was presented by one's own *confrères*. He accepted it and was proud of it — proud of it for his country, for in accepting it he accepted it not altogether as a personal distinction or a personal honor, but as an honor conferred upon the whole profession in the United States, in which light it was so regarded "on the other side." Indeed, he would subdivide the honor with France. The Société Centrale des Architectes Français claimed a part of the honor, and rightfully so, because to the École des Beaux-Arts of France he owed everything. In the letter which had been read from the Société Centrale allusion had been made to his collaboration with his old patron, M. Lefuel, in the work at the Tuileries, and it might, perhaps, be of interest if he said a few words, by way of historical reminiscence, about the troubles and difficulties with which the architects for the completion of that work were met. He did not know that anybody now living knew the facts as he knew them. They all knew that the extensive works at the Tuileries and Louvre were commenced by Visconti, who made his designs for the work in the Empire style, like that of the Pavillon Marsan, facing the Rue de Rivoli. Although Visconti was a man of great merit, it was, in his (the speaker's) opinion, a godsend to France that he was replaced by M. Lefuel, because Visconti's work was not fairly representative of French architecture. When M. Lefuel was asked to undertake the work, he made it a condition of acceptance that he should have a *bureau des études*, and that the work should be carried out in the French style, taking as a guide the *petite façade* of the Louvre. But there were great difficulties in the way of the completion of certain portions of the works. Thousands of men were employed whom it would not have been politic to dismiss, and everything had to be driven. The *épannelage* had to be carried up according to Visconti's designs, and while that was being carried up the *bureau des études* was engaged in working out a totally different design. He merely alluded to this because there was one fault, he thought, in the Pavillon de la Bibliothèque, opposite the Palais Royal, namely, that the Ionic order on the second story was a little slim. The reason of that was that they could not get anything more out of it. What they wished to have there was the Ionic order of Philibert Delorme, which was that of the old Tuileries, but the *épannelage* having gone up in the shape in which it had gone, there was not sufficient stone left for the borders which Philibert Delorme would have introduced. The order was, therefore, a bit slim, though it was not the fault of M. Lefuel, who wanted to correct the defect by introducing marble bands such as Philibert Delorme used in the old Tuileries.

But he was, perhaps, becoming too tedious with these historical points. Since he had known that he was to be the recipient of the Royal Gold Medal, he had felt, frankly, that he had been too much favored as a follower of their profession. It was true that he had worked in it for now forty-nine years, but at the same time he had, perhaps, received too many compliments and decorations: he would, however, excuse the Institute for having been the medium of presenting him with the Gold Medal. But since he had to receive the honor — and there was no honor that he should esteem more highly — he did not think that the time of its presentation could have been better selected than in the present quadricentenary of America, which was being celebrated in the large exhibition buildings prepared for the "World's Fair" at Chicago. Did time permit, he should like to explain the *modus operandi* of the carrying-out of those buildings. Generally speaking, all other nations proposing to hold a great exposition had "taken Time by the forelock"; but that was not the case in regard to this World's Fair. It was a long time before the site could be agreed upon. New York wanted the Exhibition, Washington wanted it, and Chicago wanted it, and finally it was given to Chicago within less than two years of the time fixed for the opening. As it was unquestionably the greatest exhibition that had ever been held in point of area, at any rate, not much time had been lost. Almost the first question that arose was whether they should appoint an architect to design the whole of the buildings, whether the different buildings should be put out to limited or free competition, or whether the architects should be selected. The principle of selection was decided upon, and even if he had not been one of the architects selected, he should still have thought that the principle of selection was a wise one, for by selecting the architects for different sections of the work a great deal of time was saved. Months would have been lost if the buildings had been put out to competition. The Commission had the luck to select architects from the different parts of the United States to carry out the various buildings, and the Commission had acted towards the architects in the most liberal spirit, being always anxious to do everything they could to get up an exhibition that should be worthy of the United States. If there was any fault to be found with the Exhibition buildings, the architects, and not the Commission, were to blame. The selected architects were called upon to make sketches of their allotted buildings after consultation with each other. They were a board of ten architects, five of them so-called "foreign" architects — i. e., architects not practising in Chicago being entrusted with the buildings on the great Plaza. When they met they discussed the question of materials, and were reminded that, strictly speaking, iron construction, glass and tiles were the proper materials to be used for such buildings. But, they asked themselves, had that

problem ever been satisfactorily solved? In his (the speaker's) personal opinion — and he was the chairman of the Board of Architects — it had not. He did not think that any of the Exhibitions or "World's Fairs" had had the monumental look about them that they should have had. But, they asked themselves, if that problem could not be solved in the City of Paris, where they had the best artists and artisans in the world, where they had the work right under their hands, and where they had had a twofold or threefold experience in the matter, would it not be futile and useless for them, at distances of a thousand miles apart and a thousand miles from their objective, to attempt to solve it?

The Fair grounds to be covered by the buildings were about 600 acres in extent. Would there not be hundreds of small, light and fancy buildings spread all about the grounds? At any rate, they resolved to seize the opportunity and to give to the buildings something of a monumental aspect — the principal buildings, at any rate. They resolved to work in the Classic style, perfect freedom being given to each architect, except that, in order to prevent one man outweighing another, a module of 60 feet as the height of the main cornice above the terrace was adopted, excluding towers, etc.; and they determined for the first time to introduce on a grand scale sculpture and painting, which in his opinion were absolute necessities in monumental architecture. To give his hearers an idea of the Administration Building — the smallest yet the highest and most central of the World's Fair buildings, he would remind them that it covered an area of four acres; it was 280 feet high, and the dome was only about 6 feet less in diameter than that of St. Peter's at Rome. On that dome, which had been a great school for painters and sculptors, there were from sixty to eighty groups, with figures from 20 feet to 30 feet high. They looked upon that work as an object-lesson for the United States Government. In no country in the world was there so much money spent yearly upon public buildings as in the United States, and yet one man, the Supervising Architect to the Treasury Department, was called upon to build all the new post-offices, custom-houses and court-houses of the United States, from Maine to California, besides attending to keeping all the old ones in repair! Every Congress voted millions of dollars annually for public buildings, and there were on the books of that architect a few months ago at least 300 buildings. They had been trying for several years to break up that system. For one public building in Detroit, Congress had eleven years ago appropriated \$1,200,000, and the works were still in the foundations! In regard to other buildings for which appropriations had been made, they had not even sharpened their pencils, or given the matter a second thought. But to return to Chicago. He should like to say that of all the forlorn places that could possibly have been, Jackson Park, the site of the exhibition, was the most forlorn when he and his architectural *confrères* first saw it. A good portion of it — quite one-third — was under water, but advantage had been taken of that circumstance in the general laying-out of the exhibition by the introduction of a new and beautiful feature in such exhibitions — that of water communications — an idea due to the genius of Frederick L. Olmstead and Harry Codman. On these waters visitors glided about in electric boats and launches. The earth dug out from these canals was made into terraces in front of the buildings. In conclusion, Mr. Hunt said he had again to thank the members of the Institute most sincerely, not only for himself but for the profession at large in the United States, for the honor conferred upon him, and he should try to hold himself ready to do all that he could to prove himself worthy of the honor conferred. (Mr. Hunt, on resuming his seat, was warmly applauded.)

The President said that the meeting had already learned, from the charming letter which he had read from Mr. Bayard, the Ambassador of the United States, the reason why he was absent that evening; but they were favored with the presence of the Secretary of the Embassy in London, Mr. Henry White.

Mr. Henry White, Secretary of the United States Embassy, said that although he should have thought it superfluous after the letter which had been read from his chief to have trespassed even for one moment upon the time of the meeting, he felt he could not refrain from expressing the very great gratification and high appreciation which not only they of the Embassy, but almost every one in the United States, could not fail to feel at the great honor done by Her Majesty the Queen, upon the recommendation of the Institute, to their distinguished countryman, Mr. Hunt. It would be superfluous and indeed presumptuous, in one who had no technical knowledge on the subject, to attempt to refer to Mr. Hunt's valuable services to architecture in the States; but his name was associated in the mind of every American with all that is most progressive and beautiful in the architecture of their country.

Baron H. von Geymüller, Honorary and Corresponding Member of the Institute, said he wished to be permitted, as a Correspondant de l'Institut de France and a *confrère* of Mr. Hunt come over from Paris for the present solemnity, to say a few words of the feelings of the Academy of Fine Arts on this occasion. Though he had received no mandate from the Académie des Beaux-Arts to represent the Institut de France at that meeting, he felt that there could be nothing unconstitutional whatever in his simply expressing, like a faithful document, what he knew to be the absolute truth, namely, the great sympathy of all the members of the Academy of Fine Arts who for many years had known Mr. Hunt personally, and the great

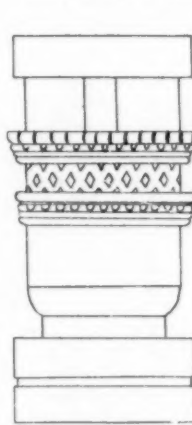
satisfaction they felt at the high distinction conferred on him that night. Two days previously, at the regular meeting of the Academy of Fine Arts, having asked M. Charles Garnier and the Vice-president, M. Daumet, if they were coming over to the present solemnity, he gathered, from the way in which they expressed their regret at being prevented from doing so, how warm an interest they took in the great distinction conferred on Mr. Hunt by his English *confrères* in the name of the Queen. Personally, not only as a foreign *confrère* often residing at Paris, but still more as nephew of Count Delaborde, the Permanent Secretary of the Academy of Fine Arts, he (the speaker) was often able to be a witness of the great sympathy of the Academy for their American *confrère*. Fully aware of this sympathy, and having some time ago to write to Mr. Hunt on some personal affair, he asked M. Delaborde if he might send his compliments to Mr. Hunt. He warmly answered about as follows: "Je crois bien, mais non seulement les miens, mais ceux de tous les Membres de l'Académie, car tout le monde l'aime beaucoup." It was his personal impression that Mr. Hunt enjoyed at the Academy of Fine Arts a sort of popularity, if it might be permitted to him to apply that word to the feelings of an assembly considered to be composed of immortals. Might he be permitted to add a few words more? He believed the choice of this year's recipient of the Gold Medal to have been particularly happy, since the distinction fell on an artist of whom old Vasari would no doubt have written: "*Fu il primo che introdusse in America il buon disegno.*" By doing so Mr. Hunt had become the Brunelleschi of the United States. The fact that the Old and the New Worlds were commemorating the fourth centenary of the Discovery of America was particularly fortunate. Did that fact not proclaim that the highest conceptions of art, of which the Academy of Fine Arts in France strove to hold up faithfully the immortal principles, were spreading over the whole world, and that those principles from which perfection alone derived were equally as well honored on the banks of the Thames and beyond the wide Atlantic as on those of the Seine?

Mr. Paul Sédille [*Hon. Corr. M.*].—Messieurs et chers Confrères, excusez-moi tout d'abord de prendre ici la parole en français. C'est dans la langue qui vous est propre que je voudrais pouvoir m'adresser à vous pour exprimer aux Membres de l'Institut Royal des Architectes Britanniques, et à mon honoré confrère, M. Richard Hunt, en particulier, les sentiments de bien réelle confraternité qui m'animent. Heureusement que la plupart d'entre vous, Messieurs, sont plus savants que moi et que la langue française ne leur est pas étrangère. M. Hunt a passé d'ailleurs de longues années en France; je me plais à le rappeler en cette circonstance solennelle de sa carrière d'artiste. Il a conservé de son séjour parmi nous non seulement sa connaissance approfondie de notre langue, mais surtout de bons souvenirs qu'il ne manque jamais de rappeler avec une cordialité dont nous lui sommes profondément reconnaissants. Aussi, nous autres français, pouvons-nous être fiers de venir applaudir à Londres au grand honneur qui est fait à notre éminent confrère américain par les architectes anglais, en lui attribuant cette Médaille d'Or que notre vénérable M. César Daly recevait l'année dernière de vos mains, que, sans remonter plus haut, vous décerniez, il y a quelques années, à notre illustre maître et ami, M. Charles Garnier. Monsieur Hunt nous permettra de prendre grande part à son succès, car nous n'oublions pas, comme il le répète avec complaisance lui-même, que c'est à l'Ecole Nationale des Beaux-Arts de Paris, que c'est sous la direction de nos maîtres les plus reconnus, qu'il est venu se pénétrer des grands principes de son art. M. Hunt a gardé de ces études fondamentales une élévation de style, une distinction dans les formes qui ennoblissent tous les édifices, tous les monuments qu'il a élevés. Très sensible aux élégances de la Renaissance française, il a transporté au-delà de l'Atlantique les délicatesses de cet art charmant, tout en l'appropriant à des besoins modernes et à un milieu nouveau. L'hommage rendu en ce jour à un confrère américain réputé touche donc intimement notre cœur de Français, car nous pouvons considérer M. Hunt comme beaucoup le nôtre et je suis certain qu'il ne me démentira pas. Mais si nous sommes heureux de voir beaucoup de jeunes artistes américains suivre l'exemple des longtemps donné par M. Hunt et venir chercher en France des leçons et des modèles, nous ne nous flatons pas que là seulement ils puissent trouver les enseignements nécessaires. L'art n'a pas une patrie restreinte, il est de tous les temps, de tous les pays, ses manifestations ne sont que différentes. Car des principes immuables gouvernent ces manifestations différentes, et si les formes apparaissent dissemblables, elles sont toujours dans leur diversité la consécration des principes de logique et de vérité qui sont la gloire de l'Architecture. La France ne saurait donc être que dépositaire d'une parcelle de cette vérité qu'elle a fait briller dans ses œuvres anciennes ou modernes suivant le propre de son génie. Cette vérité, nous devons la rechercher dans l'étude des monuments de tous les pays. Personnellement, je me suis fait un plaisir et un devoir de signaler les remarquables travaux exécutés en Angleterre depuis un certain nombre d'années, travaux qui témoignent chez vous, Messieurs, de cet ardent amour de logique et de sincérité qui doivent être, je le répète, la source la plus féconde de nos inspirations. J'ai admiré vos beaux travaux si expressifs des besoins matériels comme de l'idéal qui vous sont particuliers. Je suis heureux de pouvoir dire que maintenant mon admiration est partagée par grand nombre de

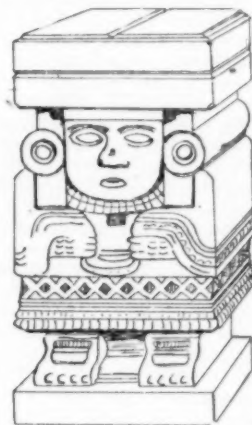
mes compatriotes et que, spécialement, nous venons emprunter à l'Angleterre beaucoup de ce qui fait le charme de vos habitations à la fois si confortables et si pittoresques. Mais dans cet échange artistique d'idées, il ne faut pas oublier que ce qui convient ici ne convient pas là. A des besoins différents, il faut des formes différentes. Les principes seuls sont communs aux manifestations diverses de notre art. Il faut que nous restions Français comme vous restez Anglais, et il faut que les architectes américains deviennent réellement Américains. Dans notre vieille Europe, nous disons souvent en parlant de l'Amérique: "La jeune Amérique!" Je pense que mon confrère M. Hunt ne m'en voudra pas de cette appellation. C'est si beau la jeunesse! Et M. Hunt doit être fier de la représenter si vaillamment! Or, en fait d'art, l'Amérique est encore, je crois, dans une période de tâtonnements, cherchant sa voie. Comme l'abeille, elle butine un peu partout, dans tous les pays du monde, pour faire plus tard son miel. Ce miel sera assurément exquis; de plus heureux que nous pourrions y goûter dans l'avenir. On ira alors aux Etats-Unis étudier les merveilles d'un art jeune et nouveau, comme on vient en Europe s'inspirer des arts du passé. Ce n'est peut-être pas un rêve que je fais là, Messieurs. Hélas! tout change, rien ne dure! Je ne dirai pas tout meurt, car l'Art et le Beau sont immortels! Je termine, Messieurs, en vous disant combien je suis heureux d'avoir pu en ce jour me faire l'interprète de la Société Centrale des Architectes Français, en saluant dans mon éminent confrère, M. Richard Hunt, un des plus illustres représentants de l'Art aux Etats-Unis d'Amérique.

The President having congratulated the Institute upon having so auspiciously concluded its session, the company adjourned to the lower galleries, where light refreshments were provided, and the Meister Orchestra performed some selections of music.

FROM THE MEXICAN NATIONAL MUSEUM.



Outlines of Brantz Mayer's Illustration of the "Fainting Stone."



Chalchiuhtlicue, the Goddess of Water.

IN the field of Mexican archaeology, if we in this country have heard much of the work of the Le Plongeon, of Biart, of Charnay, of Baudelier and of others representing the scientific spirit of other nations, and scarcely anything of work done by Mexicans themselves it is, nevertheless, neither a safe nor a just inference, to presume that Mexico has no savants or that her men of science have been neglectful of this field. The list of native scholars who have devoted attention to the antiquities of Mexico is a long one and includes the names of Alfredo Chavero, Mariano Barcena, Garcia Cubas, Troncoso, José Icazbalceta, Dr. Peñafiel, Orozco y Berra and others who have worked industriously, intelligently and with admirable results. Of late years the Mexican government has given great encouragement to the conservation of the monuments of the past ages, by inhibiting their exportation and by asserting the right of eminent ownership over every new discovery. It has further sought to encourage the study of archaeology by means of the collection of relics known as the *Museo Nacional*.

The history of this collection properly begins with an incident which was the reverse of propitious. It is already so well known as scarcely to require repetition here, that Fray Juan Zumarraga, the zealous ecclesiastic who was first placed at the head of the Mexican hierarchy, sought to efface every relic of the heathenism he had been sent to destroy. Idols, temples and valuable picture-writings were all destroyed without regard to their historical value. Such as were combustible were burned. The others were buried out of sight. Subsequently another archbishop pursued the same mistaken policy in the early years of the seventeenth century. The Spanish kings, however, were disposed to preserve all documents that might throw light upon American history, and made it the duty of their Viceroy in Mexico to seek out, collect and care for all such relics. The documents thus brought together and added to the viceregal archives included the rich collection made by Don Lorenzo Boterini Bena-duci, confiscated by the government in 1744. Before 1773 this collection had been largely dispersed. In that year the Viceroy, Don

Antonio Maria de Bucareli y Ursua, one of the most distinguished benefactors of Mexico, sought to check the destruction of this valuable historical matter by ordering its removal from the place of the viceregal archives to the Royal University, the building now occupied by the Conservatory of Music.

The year 1790 was marked by the recovery of several ancient monoliths from beneath the surface of the Plaza Mayor of the City of Mexico, where, presumably, they had been buried by the orders of Zumarraga. The Count of Revillagigedo, then Viceroy, directed that these be added to the collection at the University. The so-called



The so-called War God "Huitzilopochtli," otherwise "Coatlicue."



The so-called "Chac-Mool."



Sculptured Disc formerly used in the Game of Pelote.

"Calendar Stone," however, was, by the special request of the Commissioners of the Cathedral Building placed in the base of the southwestern tower of that edifice.

In 1822, Iturbide, then in the midst of his brief imperial career, established in the University, a "Conservatory of Antiquities and a Cabinet of Natural History." It is not strange that the subsequent government of Mexico, in which Don Lucas Alaman, the distinguished historian, was so prominent a figure, should take an interest in this subject. It was in accordance with Alaman's suggestions that the Conservatory and the Cabinet were combined and reformed as the National Museum of Mexico.

The Second Empire with its infusion of European ideas, was especially calculated to encourage the collection and study of the historical and archaeological monuments of the country. In 1864, the Emperor Maximilian appointed a Mexican Scientific Commission and sent it to explore various localities where such monuments were likely to be found and to collect such as were readily movable. In 1865 he had the entire collection removed from the University Building to an apartment in the National Palace, then just vacated by the Mint. He was the means of having the "Shield of Montezuma" (which had been retained since 1530 in the Royal Museum in Vienna) restored to Mexico. After the fall of the Second Empire, the National Library was separated from the Museum and housed in the confiscated Monastery of San Agustin. The restored Republic assumed the support of the Museum—placing the sum of \$500 annually at the disposal of the Director, to be expended at his discretion. The sum has since been doubled though still absurdly inadequate.

In 1884, Mr. W. W. Blake, an American resident of Mexico, prepared a complete catalogue of the Museum, the first attempt ever made to give English-speaking visitors an intelligent knowledge of the collection of antiquities to be found therein. But scarcely had the little book made its appearance (a paper-covered 24mo of 119 pages), when the whole collection was rearranged and additions were made thereto. Mr. Blake, however, watched the changes taking place in it, and in 1891 published a revised catalogue, under the title, "The Antiquities of Mexico, as illustrated by the Archaeological Collections in its National Museum." This pamphlet of ninety-two pages, profusely illustrated, is restricted to the archaeological department of the Museum, assuming that the Historical and Natural History departments are sufficiently self-explanatory to the interested visitor.

In the archaeological collection are comprised the monoliths, pottery and paintings produced by the native races prior to the Conquest. Of the greatest architectural interest are the sculptured monoliths. They exhibit the extent of the art of design among the native races, their manner of working stone and their ability to transport immense weights considerable distances without the aid of draught animals. Fortunately these monoliths are well arranged in a lower hall. It is only recently that the proper designations have been given to some of the most notable of these, while it is still a matter of speculation as to what others represented to their former possessors. The so-called "Aztec Calendar Stone," "Sacrificial Stone" and "War-god Huitzilopochtli," have been heretofore pictured in the *American Architect* (No. 638), and have been elsewhere so frequently commented upon as to be already familiar to the reader. The proper name for the curious figure unearthed by Dr. A. Le Plongeon at

Chichen-Itza in 1877, and named by him "Chac-Mool" ("the Tiger King"), is still in dispute among scientists. Pending the settlement of the dispute, however, the statue continues to be known as "Chac-Mool" and to be one of the striking features of the collection of monoliths.

Among objects of interest less known than those already mentioned, the huge stones composing the Toltec column, brought from the plaza of Tula in 1885 are worthy of special mention. These stones are five pieces of dark basalt, so mortised and tenoned as to be fitted together into a column, pilaster or caryatid, whose base consists of a huge pair of feet and whose capital is an enormous vase. Three sides of these stones are sculptured and the back is left unadorned, indicating that the rear of the column was set against or into a wall. The column furthermore implies a greater height for the Tula building than is the supposed height of any structure among the Aztecs excepting the pyramidal temples; and that the Toltec

buildings were similar in character to those of Mayapan, Chichen-Itza and Mitla.

In a monolith ten and a half feet in height and five and a half feet square at the base, removed from San Juan de Teotihuacan in 1890, and now going by the name of Chalchiuhtlicue, the Goddess of Water, are amusingly illustrated errors into which archaeologists in Mexico have fallen. Early in this century several writers made mention of a certain stone lying at the base of one of the tumuli near the Pyramid of the Moon in Teotihuacan. Brantz Mayer described it, not only in words but also by means of a drawing, and stated that he had heard that whoever would sit or recline upon it would immediately be seized with a fainting fit. All this while the stone was lying with the side pictured by Mayer upward. Since 1884 no further mention has been made of the fainting stone by visitors to Teotihuacan. In that year a commission sent by the Emperor Maximilian to inspect and report upon the ruins at Teotihuacan, reported the discovery of a monolith lying with its face buried in the earth, which, upon being raised and set upon its feet proved to have a sculptured face, though resembling in other respects a Ninevite column. Subsequent writers have referred to the presence in Teotihuacan of a huge altar or pillar of a temple. A correspondent of the *American Architect* pictured the stone, its base buried in rubbish, as it appeared in 1883. (See No. 415.) It has only recently been suggested that the "Fainting Stone" mentioned by writers prior to 1864 and the sculptured figure mentioned by those since, are identical, both being described as located in the same spot. The earlier writers saw the back of it and pictured or described it as reversed or standing on its head. The latter writers saw its sculptured front standing in its proper position. This opinion is strengthened by comparing the outlines of



Pelote. Sketched from Painting.

Brantz Mayer's illustration with the sketch furnished by the Commissioners in their report to the Emperor Maximilian. The name of the Goddess of Water has been conferred upon the figure since its removal to the Museum.

Certain stone discs in the south room of the Museum appear to have escaped the notice of visitors, no mention of them being made in the published works on Mexico. These discs held an important

place in the ancient game of *pelote*, answering among the aborigines to the great national game of base ball with us. The discs are about three feet in diameter and each has a round hole in the centre. With slight variations the game was played by the Mexicans, the Acolhuans, and the Maya-Quiches. The ball was of rubber, the players were nude with the exception of the breech-cloth and the game was played in a court-yard having high stone walls. In the Acolhuan game the ball once put in motion was only to be touched by the naked thighs or shoulders of the players. The disk was the distinctive feature of the Maya-Quiche game. The skill of the players was exerted to send the ball through the hole in the disk, which was fastened into the side wall of the court. The game of *pelote* has been made the subject of a painting by a Mexican artist who has a penchant for archaeological subjects.

Not to extend this paper further by specific descriptions of other objects, let these already mentioned serve to exhibit the skill of the aborigines in the art of sculpture. They certainly justify Banderier's criticism in "*An Archaeological Reconnaissance into Mexico*" (p. 77). "I have already alluded," he says, "to the imperfections of aboriginal art in Mexico. While many of the faces and heads are well done, particularly those in clay, this excellence very rarely, if ever, extends to the other parts of the body. On the contrary, there is always a certain disproportion and consequent lack of harmony. The Chac-Mool, which (excepting, perhaps, the *Indio Triste*) is the best of all, still shows strange defects in the proportion of its lower limbs. The same is true in regard to the figures of animals. Quadrupeds are mostly rude in shape; still I have seen more than one head of a tiger which is fairly executed. Birds are always monsters, the workmen being unable to overcome the difficulty of rendering the plumage; but all simple forms, like snakes, turtles, frogs and reptiles generally, seem to be well imitated. Thus the head, coils and rattles of the rattlesnake are excellent. Fishes are poorly represented; and plants, which rarely occur except as leaves and single flowers, are mostly of stiff conventional types. The art of sculpture in aboriginal Mexico, while considerably above that of the Northern Village-Indians, is still not superior to the remarkable carvings on ivory and wood of the tribes of the northwest coast, and often bears a marked resemblance to them."

ARTHUR HOWARD NOLL.

THE BUILDING OF THE SPANISH GOVERNMENT AT THE WORLD'S FAIR.



Staircase in the Courts of Justice, Cologne. From *Architektonische Rundschau*.

THE significance that the Columbian Exposition has for Spain, not only in that it institutes a comparison between the Old and the New World, but also on the account that it commemorates one of the most glorious pages of her history, has been the cause that the Spanish Government has selected as the theme of composition for the Spanish Pavilion a building which can characterize the epoch, and the people that knew and contributed to the glory that is here commemorated.

The Exhibition taking place here in a large country of free institutions, amid people so progressive as the North Americans are, it was opportune and proper to select a civil edifice of the epoch and date that we commemorate, giving in this way to the study of the observer not only a visible sample of the condition of Spanish art in general at that historic moment but also a manifestation of the public spirit, free institutions, progress, richness and power of the nation that could give and gave, language, laws and customs, to the greatest part of the American Continent.

The Spanish nation on the other hand, being conscious of its relation in this glorious success, which is being commemorated and which gave motive to this Exhibition, could not come and take part only with an economical point-of-view; it was necessary for Spain to have an ideal to support the moral and philosophical part so as to characterize its presence in this competition. To find an ideal was not difficult, as it was only necessary to select from amongst the innumerable monuments, which, as stone pages, illustrate the History of our Fatherland, the one which could best characterize this Historic Moment of the Nation of the Great Queen.

Of all this great number of buildings, La Casa Lonja de la Seda Valencia (or the Silk Exchange), for what it is, for its noble treatment, its grandeur and its aesthetic value, characterizes the Nation and the people that erected it. "The man makes the home, the home makes the man." And not only this building characterizes by its tangible forms the manner of the country which erected it, but also its destination as a general house of transaction, (silk was a principle article of exchange in the agricultural and industrial trade, one being complementary of the other), and the way taken to accumulate the elements necessary to complete its construction, show the powerful and practical strength of this country, as can be seen by its structure, and principally in the moral worked upon the frieze, where can be read at the level of the caps of the Main Columns Hall: "Famous house I am, in fifteen years erected. Compatriots! Look and prove how good is the merchant who does not carry the fraud in the word, which promises to the other and proves true. Who do not give their money with usury. The merchant who lives in this way, will grow with richness, and enjoy eternal life."

DESCRIPTION OF THE SPANISH PAVILION.

The portion of the Casa Lonja of Valencia erected in Jackson Park, taken from model, shows only two parts of the original building, the Column Hall and the Tower; the other part, called "Consulate," has been omitted because the architecture is decidedly of the Renaissance style; these two parts are reduced in proportion to three-fourths of the original. The reason for this was as follows: Every architect of experience, who carefully studies the original structure, will notice that the building was projected on the idea of erecting only the said Column Hall and the Tower, and it was erected in this way at first, that is in 1482, in which year the vaults were completed. This conviction is based principally on the fact that a complete separation exists between the ashlar of the tower and the third part of the building called the "Consulate." The separation is a vertical joint without break, continuing from bottom to top between the tower and the Consulate, hence there not only exists an historic reason in the difference of style, which is very significant, but also a material fact and evident reason in this discontinuation of the ashlar, which has no other explanation than that the other part of the building, called the "Consulate," was an addition, not taken into consideration in the first project; it was an entirely new idea outside of the first one and of a later date. Taking these facts into consideration, the Spanish Government decided to take as a theme for the Spanish Pavilion here the portion of the Casa Lonja of Valencia that was erected, without any doubt, before the date of the discovery of America, that is the said Column Hall and the Tower. But we found that the ground granted by the World's Fair Commission to the Spanish Government was too small even for these two parts of the building, and consequently, we were obliged to reduce the building here, to three-fourths the size of the original building in Spain; hence the Chicago building measures 84 feet 6 inches, instead of 112 feet and 8 inches, the measure of the original in Spain, including the tower in both instances.

In Column Hall the space is distributed, as in the original, in three naves longitudinally, and five naves transversely, corresponding to eight columns or pillars in the centre, with corresponding halves and quarters in the lateral walls and corners, forming in all fifteen vaults. The columns are of the same form as the originals, and are 2½ feet in diameter and 28 feet high (or 8m. 40). These columns are composed of eight colonnettes separated by fillets and scotias, and, as in the originals, constructed and developed in spiral form. Each colonnette has its corresponding base penetrating the base of the pillar. In the upper part, these colonnettes end in the general caps of the pilaster, and die away into the members of the ribs that form the construction of the vaults. The principal ribs have their origin in the drums of the bosses. The other ribs, or the secondary ribs, cross from one to the other and they end in the drums of the bosses.

The capitals have the same character and form as the original, and consist in a thin impost without any ornament; beneath this and filling each one of the scotias, is a plain ornament representing a kind of braid of silk. The ornaments of the rosettes represent

the four antique branches: the Church, Magistracy, Military and Artisan trades, also the Agricultural, Commercial and Industrial. The hall receives its light by five large bentnals [sic], four doors and two windows over the line of the frieze.

In the interior can be seen the beautiful doors from main hall to the tower, and the door from the same hall to the spiral stairs. All the tower floors are destined for the staff of the Royal Commission, and connect with one another by a stair we call the principle stair.

The construction of the building is of wood, covered with "staff," which gives the appearance of solid stone, resembling the original building, and the walls are hollow, so as to have the proportionate thickness of the walls of the original in Spain.

As we had to build this building three-fourths the size of the original, it was necessary to draw full-size windows, doors, pinnacles, jambs, bases, caps, archivolt, carvings, coats-of-arms, etc., for the interior and for the exterior, in order to have the models for the new castings made in the right proportion. These drawings were so much the more necessary that we did not have any genuine drawings from the original, but only small photographs from which had to be deduced the jambs and cornice sections; we also had a few engravings and some casts from Spain, and finally the intuition born of the knowledge that the subscriber has of his country's method of building, and the great desire, if not the sufficient intelligence, to do justice and homage to the work of a compatriot. But, there are exhibited as vouchers, for any insufficiency of composition, or want of right execution, the castings from the original, received from Valencia, Spain; honoring in this way, the memory and the work of one of the classic architects of that Golden Epoch of the Architectural Art, in which the architect was the contractor of his own conception, and the contractor his own architect, as was the case of Pedro Compto, Architect, Builder and Stone-cutter of the Casa Lonja de Valencia.

R. GUASTAVINO.

THE OLD SORBONNE ABOUT TO DISAPPEAR.

THE old Sorbonne, which is already bounded on three sides by new buildings, is about to disappear, with the exception of the chapel, where Cardinal Richelieu is buried, and where his head, cut off and carried away by the Jacobins in 1793, was replaced in 1867. The materials were sold lately, so European journals announce, and the front and quadrangle, erected in the reign of Louis XIII, will speedily be demolished. There have been, it would appear, but a few faint protests against this demolition of the halls associated with Victor Cousin, Villemain and Geoffroy Saint-Hilaire.

This ancient and famed institution is situated in the Faubourg Saint-Germain, between the Musée de Cluny and the Panthéon, to the east of the Boulevard Saint-Michael. The original building, founded under Louis V (St. Louis) in 1253 by Robert de Sorbon, his chaplain, was rebuilt in 1629 by Jacques le Mercier, under orders from Richelieu. The intention of the founder was to bring together a society of secular ecclesiastics who should live in common, who should have no other thought but study, and who should give instruction gratuitously. The school at once took the name of the *Pauvre Maison*, and the masters were called *pauperi magistri*. Letters patent establishing the foundation were granted by the King in 1255, and four years later the Pope, Alexander IV, confirmed these by a brief, which bore the title "*Congrégation des Pauvre Maîtres de la Sorbonne*."

From the earliest times the Sorbonne was known as a theological college. Theology and the Sorbonne, until the end of the last century, were synonymous. From its humble beginnings it quickly became the chief institution of scholastic theology, which promulgated its opinions in such an *ex cathedra* manner that it not infrequently opposed the spiritual authority of the Pope. Its influence on the Catholic Church has been for many centuries paramount. The teaching of the Sorbonne was hostile to the Reformation, and had much to do with the persecutions of the Huguenots. In the same way it has always been opposed to the Jesuits, while, on the other hand, it rejected the Papal bull launched in 1713 against the Jansenists. The masters of the Sorbonne, who were at first poor and modest in their acquirements, became headstrong, despotic and fierce against the progress of human learning. Such was the actuating spirit that guided the Sorbonne until the Revolution; its statutes were the same in 1790 as in 1290.

A chronicler of the reign of Henri III (1574-89) speaks of the Sorbonne as "thirty or forty pedants, besotted masters of arts." Half a century earlier the Faculty of Theology forbade the translations from Latin into French of "*Les heures de Notre Dame*." It was far from approving of the translation already made from the Bible and other books; the Holy Scriptures had been written and sanctioned in the Latin language, and in that language they ought to remain. But at the same time, it must also be remembered that to the Sorbonne belongs the glory of having established within its walls the first printing-press known in Paris. This was about the year 1470. A hundred and fifty years later the Sorbonne possessed one of the finest libraries in Paris.

As already said, the object of the Sorbonne was to develop the importance of theological studies. The college has always formed a part of the University of Paris, but the connecting link between the two institutions gradually grew to be less firm. The congrega-

tion, that is the college, had at its head a *proviseur*, who had under his orders a *prieur*, intrusted with the general discipline of the place; there were four *docteurs*, who saw that the statutes were properly observed, and there were several *procureurs*, to whose care was given the particular administration and the provisioning. Lectures were given, professorships were founded, and degrees of bachelors and of doctors were looked upon as marks of earthly glory.

Every graduate was called a Sorbonniste, and degrees were not conferred until after long and very arduous preparation. The *thèse Sorbonnique*, which every aspirant to a doctor's honor had to pronounce before the collected assembly, was considered as the greatest effort of human intelligence. It began at six o'clock in the morning and lasted until six in the evening. During the Revolution the Sorbonne was suppressed, but in 1808, when Napoleon founded the University of Paris, the old college was handed over to the university, the Emperor incorporating the Chair of Theology in the system of education of France. By a royal decree passed in 1821, the Sorbonne was henceforward to be used for the purpose of public instruction, and within its walls were established the Faculties of Theology, of Letters and of Sciences. It was ordained that public lectures should be given upon these subjects, and now the Sorbonne is the headquarters of the Academical University of Paris. Some of the professors of the Sorbonne have made for themselves a reputation by their lectures, but, as a rule, the lectures are not printed after they are delivered. Men of note and high ability are always selected, and the post is one which carries with it a certain distinction.

For some years past the Sorbonne has been undergoing great changes, as it has been necessary to enlarge the buildings. The older part of them, which is entered by the Rue de la Sorbonne, that erected by le Mercier, contains, on the rez-de-chaussée, an amphitheatre which holds 1,500 people. The library contains 170,000 volumes. Above the entrance which leads to the vast room wherein are stored the books bequeathed by him to the Sorbonne, together with his collection of autographs, is a large marble medallion of the testator by Carrier-Belleuse. On the first floor is the famous amphitheatre, which can accommodate 2,000 persons, and wherein are held the great meetings of the university, such as the one which takes place yearly on the occasion of the distribution of the prizes won at the *concours général*, or general competition among the lycées and colleges of Paris and the Lycée of Versailles.

Close by, in the place of the same name, is the Church of la Sorbonne, which, first built in the thirteenth century, was rebuilt from 1635 to 1659 by le Mercier at the expense of Cardinal de Richelieu. Its dome is really the first erected in Paris, for the cupolas of the Eglise des Carmes and of Saint-Paul-Saint-Louis represent merely timid attempts at such architecture. Within its walls is the tomb of Cardinal de Richelieu by the sculptor Girardon, after drawings by Lebrun. — *New York Times*.



ENGINEERS' CLUB OF PHILADELPHIA.

AT the business meeting June 17, 1893, Mr. C. H. Roney opened a verbal discussion on some data in reference to modern office-buildings, by calling attention to the rapid changes which had taken place in the construction of buildings in this class within comparatively a few years. Formerly they were built like dwellings, and of not more than five or six stories, but now the introduction of elevators has been followed by an increase in height to an average of twice the above number of stories. All parts of the construction are made as fireproof as possible, wood being used only where nothing else can be substituted for it. Methods of supporting the floors, and bracing to withstand wind-pressure, were described and illustrated by blueprints of typical buildings in Chicago and Philadelphia. In some cases the columns of successive stories support one another, and in others are made practically continuous. A model of the Phoenix column, showing the latter method, was presented as an illustration. Other details of construction were described by Mr. Roney, and in conclusion, a series of photographs were projected by the lantern, giving typical examples of modern office-buildings in various stages of completion.

Mr. Howard Constable inquired of Mr. Roney whether he had formed any opinion as to what was the practical deviation from the vertical allowable in the erection of the main columns of high buildings and framework of elevator shaft.

Mr. Constable's opinion, in a special case, was that one and one-half inches in 200 feet was too much in an elevator shaft to be passed as first-class work, and not within the limit of what should be allowed for general practice. He called attention to the fact that this was a point upon which engineers would have to post themselves, as it bears an important relation to disputes between the structural contractors, the stair-builders and elevator people. These disputes arise from the pressure that is brought to bear to complete these buildings in a very short period; therefore, the rapid getting-in of stairs and elevators becomes very important, although very little of the work is got out until measurements from the building can be taken,—the manufacturers of these parts generally finding it very unsafe to work from drawings, and feeling no certainty as to what the deviation on the part of the other mechanics will be.

He also called attention to the fact that as yet, very little attention is given by the architect and structural engineer to providing for the various pipe-systems necessary in all high buildings. He thought they ought to be planned for as carefully as many other parts, and showed how the putting-in of gas, steam and electric piping, etc., very seriously weakens some beams in the floor-arching or the wall, also that the ordinary hollow tile for the floor-arches is peculiarly ill adapted for being cut through for piping.

In answer to a question from Mr. James Christie regarding the corrosion of iron buildings from the effect of the dampness in the brick and mortar, he said he had found no case where any iron section resisting a strain was injured over one-half per cent of its effective section, but that where columns are used for leaders, or where there are pockets where water can collect and remain, the corrosion might be very serious.

Mr. Christie called attention to the probable inadequacy of the transverse bracing on many high metallic buildings. For thin floors, substantial metallic plates of corrugated section are now used, having ample stiffness, with total vertical depth not exceeding one-thirtieth of the span, and the weight of metal in the floor can be safely reduced to fifteen pounds per square foot.

There was then a general discussion between the members as to the ordinary straight arch-tile for the floors.

Mr. Constable took exception to the circle formed by the radius of arch-blocks being considered as representing the line of force in the arch, first, because a circular arc does not represent the line of pressure in the arch, and second, because the radius and bevel of these blocks is an assumption by the manufacturers for some special span, and is not varied to suit every span, additional blocks simply being added for increase of span. A simple rule for approximating the strength of these arches is to consider the load as concentrated in the middle, and to represent it graphically by the efficient depth of the block, and then to find what would be the resultant from the top of the arch down to the springing-line where the arch-block bears against the iron beam. Then if there is enough cross-section of material to resist this resultant, the arch will stand.

Mr. Henrik V. Loss stated that the existing friction between the surfaces in action, undoubtedly made the arch act partly as a bearer, by preventing or offering resistance to any sliding action that otherwise would occur with joint lines and theoretically correct.

Mr. John C. Trautwine, Jr., described a fireproof floor designed by E. D. Lindsey, of New York, consisting of a wire netting suspended over two adjoining floor-beams, and encased in a mass of light concrete containing plaster-of-Paris and saw-dust.

Mr. Constable called attention to the very important consideration in all of the tile and concrete floors, of the effect of concentrated weight, such as is caused by a heavy safe resting on four wheels. (Mr. Trautwine suggests by letter that this difficulty might be obviated by placing under the safe an iron plate sufficiently large to receive all four feet and thus distribute the weight).

Mr. Constable illustrated a floor that he had recently used consisting of a series of arch-bars interlaced together and butting against a frame extension around the room. The triangular space between these bars was filled-in by pressing an air-bag up from the other side, and casting a plaster-of-Paris arch over the bag, and when the plaster was set, removing the bag; then on top of these bars and plastered arches filling-in with ribs of fine concrete and then putting on the wooden or mosaic floor. He stated that he had got better results in ordinary brick arches, between beams, by placing the tie-rods close at the bottom flange of the beam instead of half-way up, as is usual.

Mr. Trautwine brought before the Club a question respecting the position of the line-of-pressure in a flat arch consisting of a key-stone, two blocks with parallel sides adjoining the key-stone, and two end blocks between these last and the beams. One member, A, maintains that the line of pressure may be found by producing the sides of the keystone to meet in a line below the arch, and by drawing from a point in this line, as a centre, two circular arcs from the top and bottom respectively of the bearing of the arch upon the beams. Another member, B, maintains that the position of the line-of-pressure must be found by the usual method of statics, and is entirely independent of such geometrical considerations, as is shown by the fact that we might as well find our centre by producing the parallel sides of the next two blocks.

Mr. John L. Gill, Jr., supported A's position, drawing a more nearly correct sketch of the construction, and further criticised the character of the materials used, and the manner of putting them together.

Mr. Constable claimed that B was right, pointing out that the line-of-pressure in an arch is not in any case a circular arc.

Mr. H. C. Luders held that the line-of-pressure must pass through the extrados at the centre and through the intrados at the skew-backs.

L. F. RONDINELLA, Secretary.

CHICAGO ARCHITECTURAL SKETCH-CLUB.

CHICAGO, ILL., June 26, 1893.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—I enclose the programme for the "Robert Clarke" Competition for this year, together with a drawing from which to make cut.

I will consider it a favor if you will find space for this in your next publication.

Very truly,

HUGH M. G. GARDEN, Secretary.

FIFTH ANNUAL COMPETITION FOR THE ROBERT CLARKE TESTIMONIAL. CONDITIONS.

The author of each design must execute all drawings without assistance, and non-adherence to these conditions will cause the rejection of the design or designs in question.

The competition is open to architectural draughtsmen under thirty years of age, residents of the United States and not practising architects.

The awards will be made by the Adjudicating Committee on the "Robert Clarke Testimonial" competition, and are:

First prize,	Gold medal.
Second prize,	Silver medal.
Third prize,	Bronze medal.

The prize drawings are to become the property of the Chicago Architectural Sketch-club.

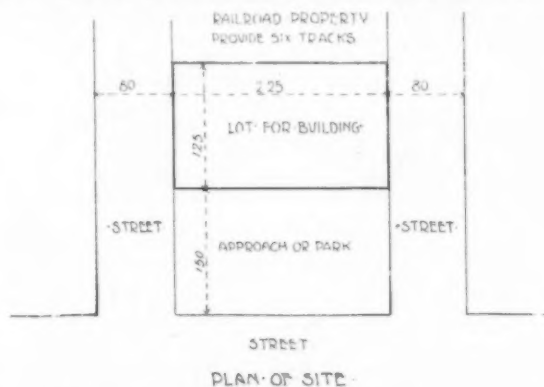
PROGRAMME.

A design for an elevated railroad terminal station for suburban traffic, in the business centre of a large city.

The building is to have three general stories, the first or ground floor to contain a lobby, stairways, offices and all necessary conveniences.

The second floor is to be on a level with the platform and to contain one general waiting-room, one waiting-room for women and one for men, toilet-rooms, ticket-office, depot-master's office and necessary stairway to reach the Railroad Co.'s offices on the third floor.

The building can be smaller than the lot outlined on the accompanying diagram, and the space in front is to be used as an approach or park.



The drawings are to consist of the following, their arrangement and the number of sheets being left to the discretion of the competitor:

First or ground floor plan, second-floor plan, front and side elevations, transverse or longitudinal section, perspective and block plan.

Size of sheets to be 22 x 28 inches.

Plans, elevations and section to be drawn to a scale of 1-16 of an inch to a foot, pen and India ink rendering. The perspective to be drawn from an 1-8 scale plan, rendering optional.

The drawings are to be marked with a motto or *nom de plume*, and accompanied by a sealed envelope marked in the same manner, containing the name and full address of the author, with the place and date of birth, and must be delivered flat to Hugh M. G. Garden, Secretary, Chicago Architectural Sketch-club, at the Club Rooms, 913 Masonic Temple Building, Chicago, on or before Monday, October 2, 1893. Charges to be prepaid. All drawings other than those receiving prizes will be returned at the expense of the contributor.

The Adjudicating Committee on the Robert Clarke Testimonial:

W. L. B. JENNEY, Chairman.
SAMUEL A. TREAT.
CHAS. A. COOLIDGE.
D. H. BURNHAM.
LORADO TAFT.



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

COTTAGE ON LEHMANN ST., GERMANTOWN, PA. MR. WILSON EYRE, JR., ARCHITECT, PHILADELPHIA, PA.

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

HOUSE FOR C. E. BILLINGS, ESQ., HARTFORD, CONN. MESSRS. COOK, HARGOOD & CO., ARCHITECTS, HARTFORD, CONN.

THE BUILDING OF THE SPANISH GOVERNMENT AT THE WORLD'S FAIR, CHICAGO, ILL.

For description see article elsewhere in this issue.

DETAILS OF THE SAME.

THE LONJA, VALENCIA, SPAIN.

THE OLD SWEDES CHURCH, SOUTHWARK, PHILADELPHIA, PA.

WICACO or Gloria dei Church was erected in 1699 on the site of a block-house which was used as a place of religious worship by a small colony of Swedes, nearly half a century before William Penn set foot on the soil of Pennsylvania. It contains a baptismal font said to have been brought to this country by the early colonists, and used in the block-house mentioned. The bell in use at present was made from the material of the old bell, dated 1643. It bears the inscription:

"I to the church the living call
And to the grave do summon all."

The oldest stone in the yard is dated April 21, 1708, and among the most interesting is that which covers the remains of Alexander Wilson, author of "American Ornithology."

[Additional Illustrations in the International Edition.]

THE LELAND STANFORD, JR., UNIVERSITY, PALO ALTO, CAL.
MESSRS. SHEPLEY, RUTAN & COOLIDGE, ARCHITECTS, BOSTON, MASS.

[Quadruple-page Copper-plate Etching.]

The general plan of the University consists of a series of rectangles, the longer axes of which follow the general trend of the valley in which the University is situated. The approach is through a broad avenue about a mile and a quarter in length, from the county road running between Menlo Park and Mayfield. On either side of the avenue are groves of trees up to a point at which a view is obtained of the whole front of the University. The frontage of the University on the avenue is about two-thirds of a mile in extent, being flanked on either side by the large dormitories respectively for girls and boys. Immediately in the centre is the grand memorial arch forming the entrance to the principal quadrangle. The frieze of this arch is intended to typify emblematically the progress of civilization. On either side of this arch are the buildings for the use of the libraries and museums.

The main quadrangle, 586 feet by 246 feet in the clear, enclosing about three and one-quarter acres, is surrounded by one story buildings opening on a covered arcade. The motive of the design was taken from the old Spanish missions in California.

Immediately opposite the entrance arch is the chapel with the central tower rising to a height of about 130 feet and forming the principal feature of the quadrangle.

East and west of the main quadrangle the grounds have been laid out for two quadrangles, making five in all, the smaller quadrangles to be used for the future growth of the University.

At the rear of the principal quadrangle are located the boiler-house, power-house, work-shops for the mechanical department, etc. The principal quadrangle is entirely surrounded by two sets of buildings, all of which are connected together by cross arcades so that a person may pass from one to the other without going from under cover. The arcades are 18 feet wide and are paved with artificial stone laid in squares.

The buildings are all of a gray sandstone varying in color from a white, through yellow, to a red, and the face of the stone is left rough. The roofs are of red Spanish tile unbroken by any dormers or other windows. The scheme of the buildings has been to leave them in condition to divide by partitions in any manner desired, only the exterior walls and roofs being entirely permanent.

The large dormitory for the boys is at the east end of the frontage and is 312 feet long by 172 feet deep, furnishing accommodations for over three hundred students. The dining-hall has a seating capacity of 350 and is furnished in white cedar and opens directly from the entrance lobby. The sleeping-rooms are arranged with alcoves which are curtained off from the rooms, and in almost all cases are intended for two occupants.

[The non-appearance of the dormitory, which should be shown in the space in the upper right hand part of the plate, is due to a series of misunderstandings. While the plate was being etched in Paris Senator Stanford chanced to see it and stated that the design of the dormitory had been materially changed and asked that work on the plate should be stopped. On being notified of this stoppage we procured from the architect a sketch of the revised design and forwarded it to Paris. Apparently the sketch miscarried in transit and the artist hearing nothing from us and weary of waiting—more than a year—finished the plate and forwarded the prints. Eds.]

THE HALL OF THE COTTAGE, WALTON HEATH, SURREY, ENG.
MR. B. VAUGHAN JOHNSON, M. A., ARCHITECT.

An exterior view and plan of this building has already been published in *The American Architect*.

WURTZBURG.

MARQUIS OF GRANBY PUBLIC-HOUSE, SHOPS AND RESIDENTIAL SUITES AND STABLING, LONDON, ENG.

The block of buildings, as illustrated, covers an area of 7,000 superficial feet, and the accompanying plan will best show the general arrangements. The stable plan has been very carefully considered,

and by means of two entrances (in Down Street and Brick Street) from different levels three floors have been utilized, without necessitating any steep gradients for the horses. Haylofts, harness-rooms and accommodations for the men have been arranged over the stables, which are well ventilated and lighted throughout. The Marquis of Granby public-house covers the exact site of the old house, and the bar fittings and other joiner's work are executed in walnut, panelled and enriched, of a handsome character. The shops in Down Street are constructed to let with basements, and the upper floors contain bachelors' suites. The elevations are carried out in red brick, with stone dressings and granite pilasters to ground floor. Messrs. Martin & Purchase, of 11 Queen Victoria Street, E. C., were the architects for the stabling, shops, chambers etc.; and Messrs. Boehmer & Gibbs, of 11 Spring Gardens, S. W., superintended the erection of the Marquis of Granby public-house.



[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.]

PARTY-WALL FOUNDATIONS IN CHICAGO.

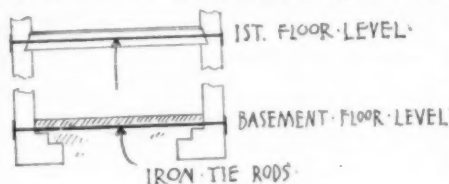
CHICAGO, ILL., June 16, 1893.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—Relative to the spread of footing-stones under foundation-walls which abut directly on adjoining property, I find the *Engineering Record* of the date you mention, to be out of print. Will you briefly explain the principle of footing-stones under such walls, showing how they are placed to avoid tilting up?

Yours respectfully, F. F. D.

[On referring this question to a Chicago architect we have received the following reply: "As far as my experience and observation goes, there is but one absolutely safe method of putting in line wall [footings], and that is to carry the walls by a cantilever from the interior of building [and therefore practically have no footings!] This method is, of course, extremely expensive, but was satisfactorily used by Messrs. Burnham & Root in the Rand & McNally Building. Fortunately, in Chicago we are rarely forced to any such expense, for the Illinois law compels every owner to take care of his own property, no matter how much an adjoining owner may dig under existing walls (and consequently endanger the old building). As a result, compromise is generally brought about by which the party building agrees to hold up the old adjoining building on jack-screws, in return for which footings are permitted to extend onto adjoining land. Occasionally, as a makeshift, piles are driven very near together, which with their heavy carrying power will permit of a moderate wall without any offsets. If I were brought to it and felt it necessary to build line



walls. I should carry out a scheme, once studied out, which I think would be fairly successful, provided the building was not an extremely wide one and it was not feasible to use cantilevers on account of expense. As shown by adjoining little sketch, I should build both walls alike, expecting them to both have a tendency to tip out, which would be counteracted by numerous tie-rods both below basement floor and also at the first-floor level, in which case the two tipping forces would counter-balance each other and establish an equilibrium. All of which theory is probably not to the point in question. The cantilever construction, if I remember correctly, was described in some of the engineering papers at that time, but I have no files to refer to that I may give dates."—Eds. AMERICAN ARCHITECT.]

OFFICE-HELP: A CORRECTION AND REPLY.

MILWAUKEE, WIS., June 29, 1893.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—Referring to the article "Office-help for Architects," by Mr. George Hill, in your issue of June 3d, I wish to call attention to the section relating to wood-girders.

Formula 34 is evidently a misprint and should read: "Tension in $R = \frac{0.3 LR}{C}$, or to be more exact, $= \frac{1}{6} L$ sec angle formed by R and C ."

But what I wish to bring particularly to your mind is the statement: "The beam should be made so that B is strong enough to support the $\frac{1}{2} L$ which comes on it."

To judge from this, Mr. Hill disregards the stress in B which he finds approximately by his formula (36) and does not consider it a factor in determining the dimensions of the beam. The low fibre-stress which Mr. Hill employs for beams (one-half that used by the engineers of the World's Fair) may make it safe, in certain cases, to disregard the column action in a trussed beam, but where a higher fibre-stress is assumed it would surely be advisable to have a more exact method of calculation.

Yours truly,

ALEXANDER C. ESCHWEILER,

NEW YORK, N. Y., July 5, 1893.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—Concerning Mr. Eschweiler's criticism of June the 29th, it seemed to me that the form of Formula 34 was a more convenient one for quick office use than the more exact one stated by him, and was therefore preferable since in either case the size of R would be but slightly affected.

Concerning the size of B , it would perhaps have been a little better to have added the words "in addition," so that the sentence would read: "The beam should be so made that B is strong enough to support the $\frac{L}{2}$ which comes on it, in addition."

The fibre strains employed are an essential part of the formula necessarily, and the formulas given both here and elsewhere must be interpreted in that light, as otherwise they might lead the unwary into trouble.

Concerning the amount of fibre-stress, while I am not satisfied that it is appreciably below that employed at the World's Fair in their later structures, I am satisfied that it is as high as it should be for ordinary every-day commercial timber.

Yours truly,

GEO. HILL.

NOTES AND CLIPPINGS

THE ROMANTIC STORY OF ST. BARTHOLOMEW'S, LONDON.—The further instalment of restoration which St. Bartholomew's Church, Smithfield, has undergone, and which will be formally inaugurated on Monday by the Prince of Wales, is an interesting feature in the history of one of the oldest and most curious churches in London. It marks the removal of the last secular encroachment upon the old ecclesiastical building, which formed a part of the ancient Priory of St. Bartholomew, founded under the most romantic circumstances by Rahere, the King's minstrel, who had been companion of Hereward, the last of the Saxons. The church is almost unique, as having been preserved from its erection, in the reign of Henry I, to the present day. The entrance is still through the pointed arch of the Early English period, with dog-tooth ornaments and four gracefully moulded orders, under which the monks passed when the church was surrounded by cloister, chapter-house, refectory, great and little close and all the other appurtenances of a monastic community. All the pilasters except one have disappeared, but the capitals remain, and the noble gateway, though much crumbled with age, has stood here since the days when it led to the monastic enclosure. Seven hundred and seventy years have passed since the erection of this church, and yet so much remains still to show what it was when seen by its founder. If the church has had a strange history its origin is stranger still. It borders, in fact, on the grotesque. Henry I had a jester named Rahere, a curious fellow, who lived hard and with no thought of hereafter. But while still a young man he had a sudden awakening, and to still his conscience went on a pilgrimage to Rome. This was the initial incident which led to the founding of the church. At Rome Rahere fell ill, and being in fear of death made a vow that if he recovered he would found a hospital for poor men. He did recover and journeyed home, still intent on carrying out his purpose, an intention that was confirmed by a vision from St. Bartholomew, who pointed out Smithfield to him as the place where he was to build it. Smithfield then was an unpromising spot for the purpose—a place outside the city walls, little better than a marsh, celebrated mostly as a place of execution, as, indeed, it was for centuries afterward. Rahere, however, was a man of his word. He got a grant of the land from Henry, drained the marsh, built the church and a priory round it, and himself became the prior. With little money to build the place, he had resorted to a trick to get a great deal of the work done—donning, metaphorically, his cap and bells, and starting men carrying stones as a jest until the contagion spread, and vast numbers entered into the huge joke of building the place. In this way was the place built at a minimum of cost, yet so satisfactorily that the part remaining intact is still substantial and durable. The London of to-day has practically grown up around it, and in the nearly eight centuries of its existence strange scenes have been enacted. Mention cannot be made of St. Bartholomew's without calling to mind the fair, which was originally started for the purpose of procuring funds for the Abbey. The dispersal of the monks, the degeneration of the fair, the gradual decay and removal of the old Abbey buildings until only the church remains, and the spreading of dense populations for miles around is as much the history of London as it is of St. Bartholomew's; but on the occasion of the dedication of the restored building it will be recalled to mind and form a prominent part in the congratulatory speeches that are to be expected.

—The London Globe.

TUNNEL VENTILATION.—In the important matter of ventilation, the method resorted to in the tunnel beneath the Mersey at Liverpool is claimed to present one of the most striking achievements. Extending as does this tunnel deep below the bed of the Mersey to the solid red sandstone, and approached at either end by elevators of seventy and ninety feet lift, it was foreseen that ventilation was a necessity of the gravest character. The tunnel is large enough to avoid the piston action, its cross section being several times that of the trains, and, at and near the middle of the tunnel, are openings to a smaller side drift or tunnel running alongside of the main tunnel to the shore end, where is fixed a large fan, the result being that air constantly enters at the stations, which are thus swept clear of all foul air. A train starting in pure air at the station follows the air travelling in the tunnel up to the centre, and any change of air between train and tunnel is thus less than it would be if the air in the tunnel were not moving. Past the tunnel centre the train begins to travel against the moving air, by which time the air in

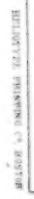
the train will be more or less fouled by the passengers, and the ventilation due to train motion then begins to increase. The first air entering from the tunnel to the train is perhaps as good as that time as the air in the train, and, as the train proceeds, it meets purer air at every foot forward, and when it reaches the station is in air of surface quality again. —New York Sun.

BUILDING OPERATIONS IN WASHINGTON.—Nearly \$9,000,000 were expended in this city during the fiscal year just ended in brick and mortar. This is the story that the figures in the office of the Building Inspector tell. The year before the amount reached over \$9,000,000, but the building then done in this city was unprecedented. More money was spent in putting up new houses and in improvements of various kinds during the year ending June 30, 1892, than in any previous year in the history of the city. It was an increase over the previous year of about \$1,250,000. In the number of new houses alone there were 783 more houses put up in the year ending June, 1892, than in the year ending June, 1891. During the past year, the year ending June, 1893, there were 2,720 new houses erected in this city, a decrease over the phenomenal record of the previous year of only about 200. The total amount expended in building improvements is only slightly less than that which is the record of the banner building year. It is probable that the decrease is due largely to the law which went into effect in June last, which practically prohibited the erection of houses in alleys. Now, in order to get a permit to erect a house in an alley, it is necessary, in the first place, that the alley should have a width of thirty feet and that the building-line should be five feet back. Then the alley must have water, sewer and gas, and must run through from street to street. —Washington Star.

TRADE SURVEYS

THE business world is no better off than a month ago. Less business is being transacted than one and twelve months ago, and probably at lower margins. Prospects are favorable for better things. The production of wealth goes on as usual on both sides of the Atlantic. Workers are busy. Compensation is fair. Employers and middlemen make less than in other times, but their disadvantage is the advantage of others. Fear actuates some who should foresee clearly. Bankers, whose business it is to understand the drift of things and the causes of abnormal conditions, either do not, or act as though they do not, understand what is fundamentally wrong. Gold goes because there is not enough to go around, and because it is needed to pay debts due in gold. The selfish interests of money-lenders and the selfish interests of silver-miners becloud their judgment and mislead the people. Surprises are in store for financiers in all parts of the world. That of India is the first. There is an underlying necessity in regard to economic questions which will work out their own conclusions, regardless of selfish interests on one side or the other, and he is the wiser man to-day who will hold his words and watch patiently. The expansion of population throughout the world, the upbuilding of energetic communities, the building of railroads, the cheapness of ocean travel, the development of mineral and agricultural resources, are all working up new material with which to build new walls and new superstructures. Our bee-hive is full of honey. Our productive capacity has been expanded beyond present consuming-capacity. The wheels of industry can go faster than they need go. This gathered energy it is that is making demands which money-lenders accustomed to canal-boat conceptions of progress do not understand. The present contest, stripped of its feathers, is to do the business of the world on a gold basis. Uncle Sam is scratching his head over it. In business circles apprehension is deep. Failures last week show a further increase. Liabilities were large, but the July settlement day passed more comfortably than was expected. The promise of repealing legislation gives some encouragement. Bankers are beginning to be more accommodating, but at the savings banks there is nothing going on. Hundreds—in fact, nearly all—are standing in expectation of runs. Deposits have declined sixty per cent. Among merchants and jobbers, especially in New York, the feeling is more hopeful. The depression has hardly yet touched the little country towns. The small store-keepers have been selling goods along as usual, and comparatively little cash due is unpaid—much less than one would suppose. Counters and shelves are low in goods. At manufacturing centres, very little time has been lost so far this year, especially in New England, nor is there any accumulation of goods. Distribution is progressing even now at a healthy rate. In the heavier lines, as iron, steel, coal, lumber, petroleum, cotton, etc., there has been no more than a slight contraction of business, and that only a prudential contraction. In those regions of Pennsylvania and Virginia which ship coal East, the production this year is two million tons in excess of same time last year up to June 30. Taking lumber in the South, it appears the production is greater, especially in yellow pine and cottonwood, a new substitute for poplar. Looking at the building trades, especially as shown in reports for June for the larger cities, there are evidences of a falling off, which is laid to tight money. Yet the material-men do not complain, and there is no word of cancelled contracts for brick, lumber, cement or anything else. The planing-mills are, as a rule, busy. Parties familiar with movements of real-estate in cities say the strong upward tendency of prices has been checked, and attribute it partly to the growth of manufacturing facilities in suburban localities, and to the greater desirableness of such localities for residence purposes. True it is that fancy prices for building-lots in built-up sections have received a setback. Some authorities on rural real-estate have lately asserted—perhaps in a prophetic vein—that should trolley-road building progress at the threatened rate for two or three years, it would work a most desirable transformation in country real-estate in making markets for products not now raised. The fact has been heretofore noted that the growth of agriculture has stimulated manufacturing activity, especially in lines identified with agriculture. Recent observation confirms this. Much material has been contracted for in Chicago and St. Louis during the past two or three weeks for concerns engaged in making all manner of things used on and about farms and plantations. The industrial situation is satisfactory. Labor is quiet. Organizations are passive. The short-hour movement, which has been making so much stir in England, seems not to have taken root here. Possibly it may later on, when conditions are more favorable, but meanwhile legislation is planting stakes down where they will do most good, in defining the limits within which agitation is legitimate.

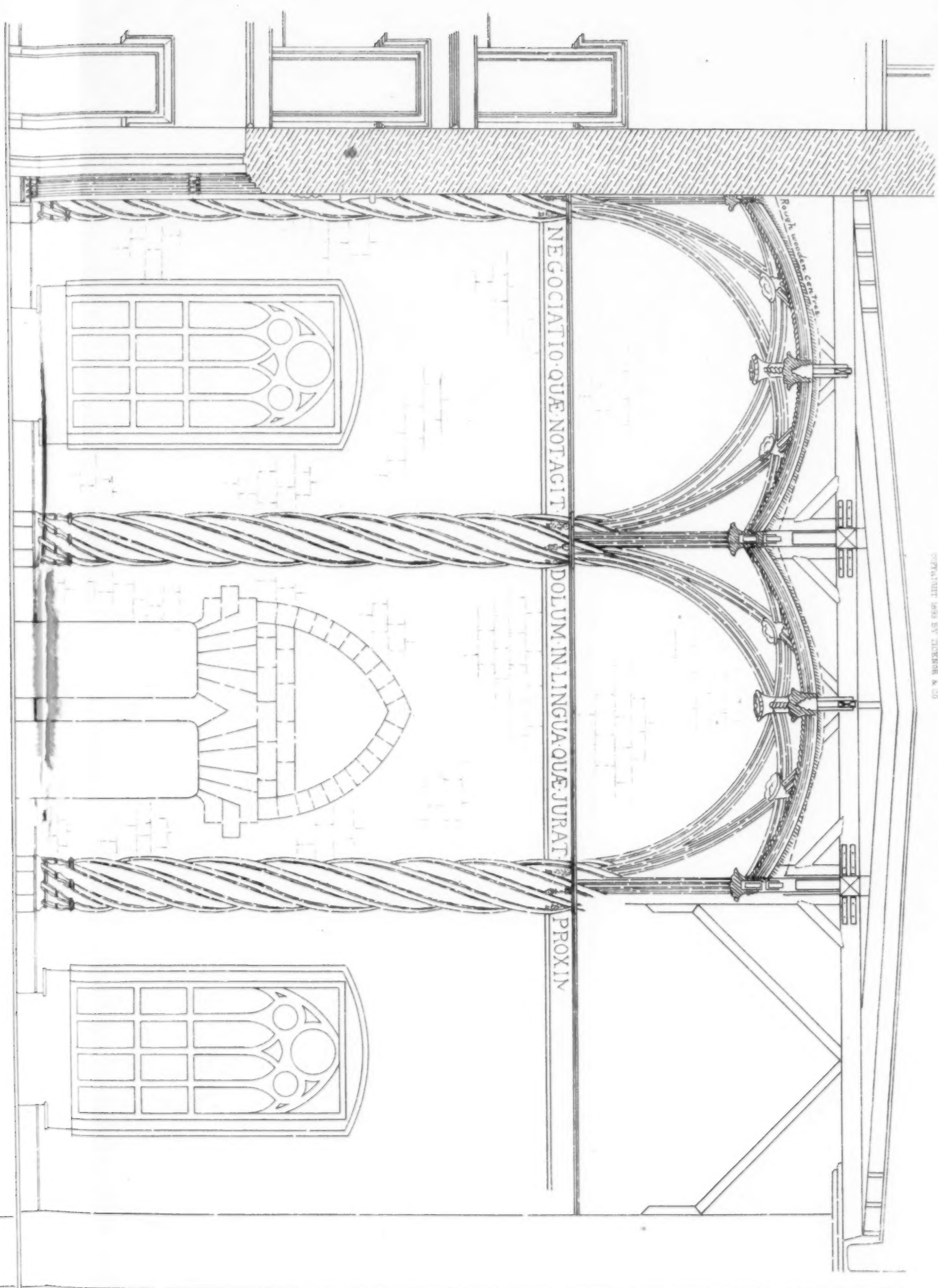
NEW YORK AND CHICAGO

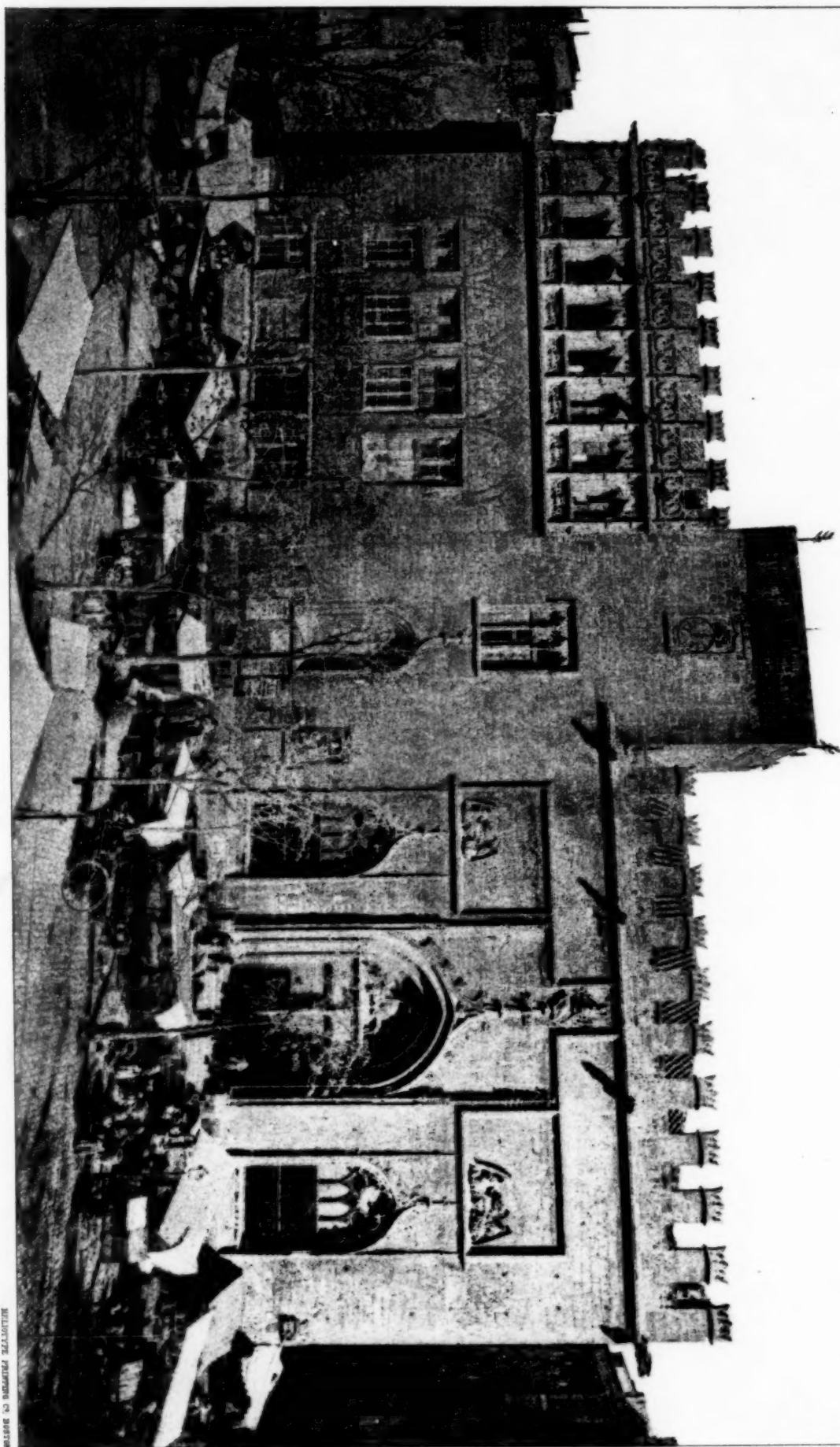


No. 916.

AMERICAN ARCHITECT AND BUILDING NEWS, JULY 15, 1893.

DESIGNED AND DRAWN BY T. C. HERRICK & CO.





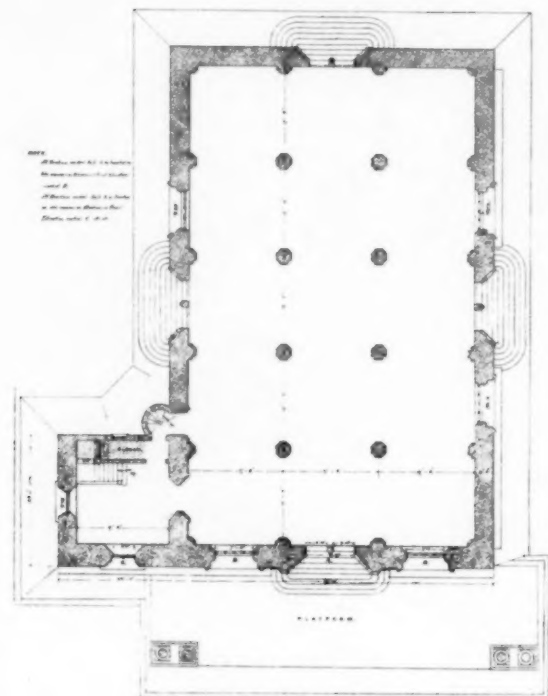
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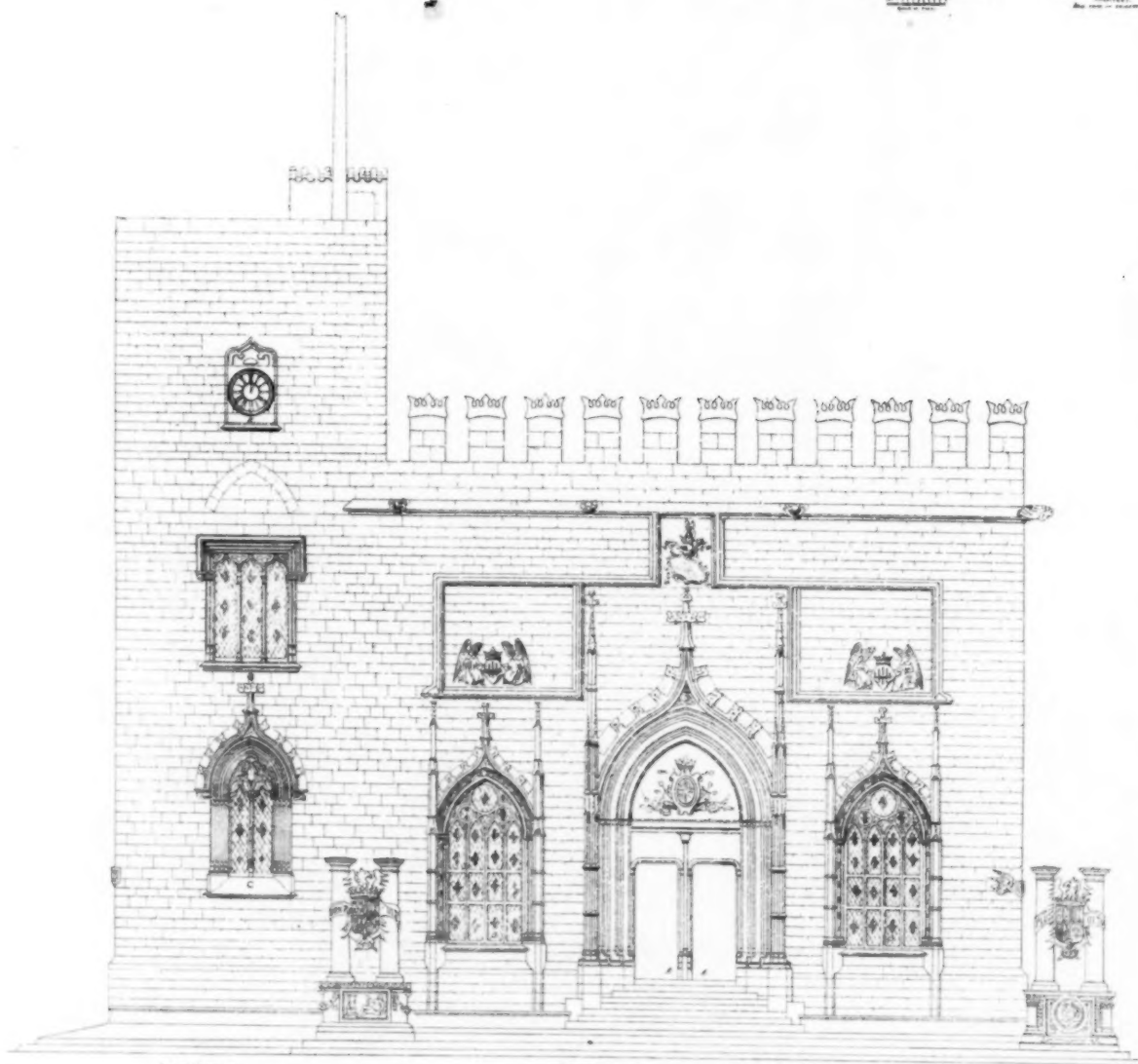
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— WORLD'S — COLUMBIAN — EXPOSITION —
— FRONT ELEVATION OF THE BUILDING —
— OF THE —
— SPANISH GOVERNMENT PAVILION —



PLAN OF FIRST FLOOR.

RAFAEL GUASTAVINO
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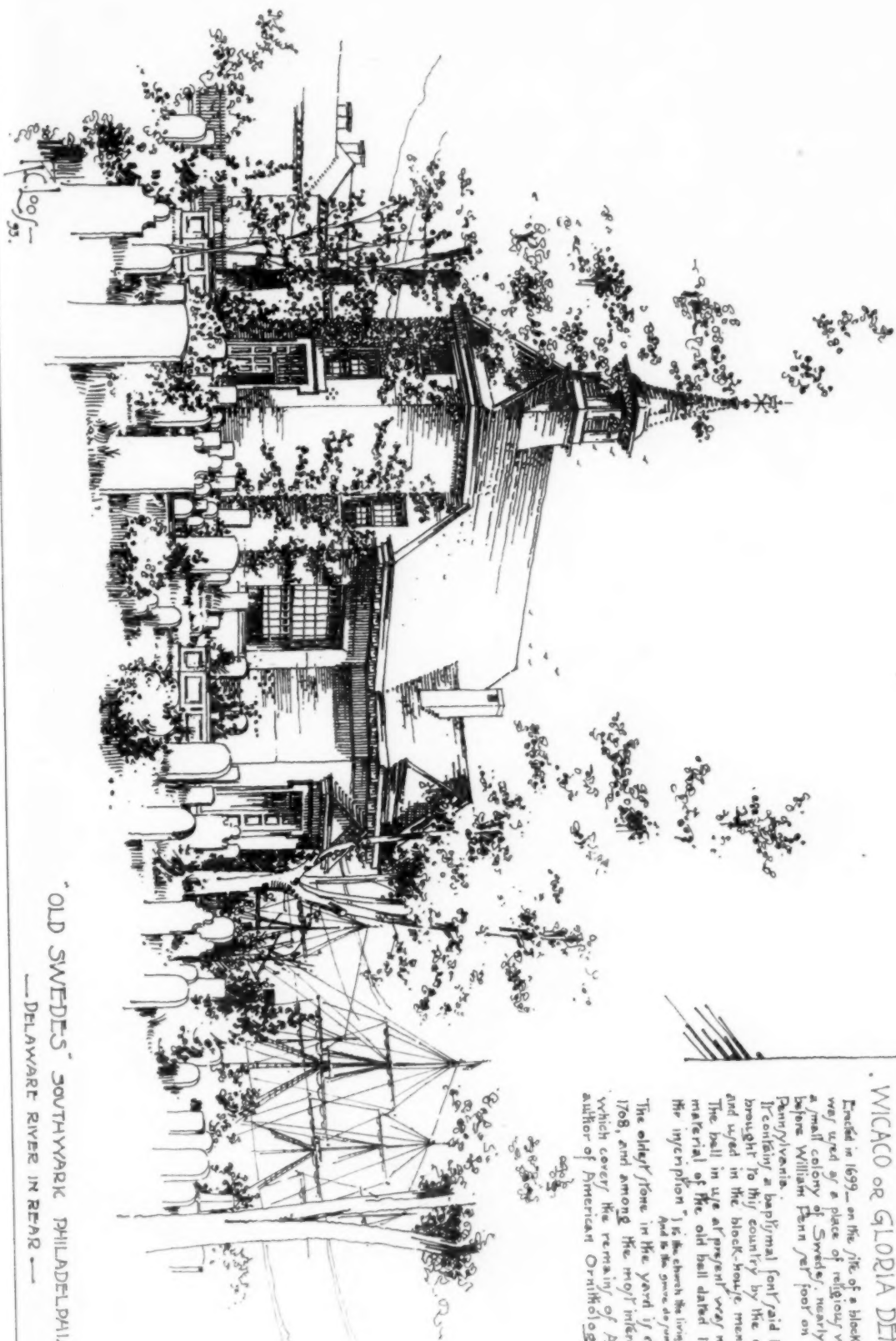
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— FRONT — ELEVATION —

RAFAEL GUASTAVINO
ARCHITECT
NEW YORK AND CHICAGO.

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"OLD SWEDEN" SOUTHWARK PHILADELPHIA PA.
— DELAWARE RIVER IN REAR —

WICACO OR GLORIA DEI CHURCH.

Founded in 1699—on the site of a block-house which was used as a place of religious worship by a small colony of Swedes, nearly half a century before William Penn set foot on the soil of Pennsylvania.

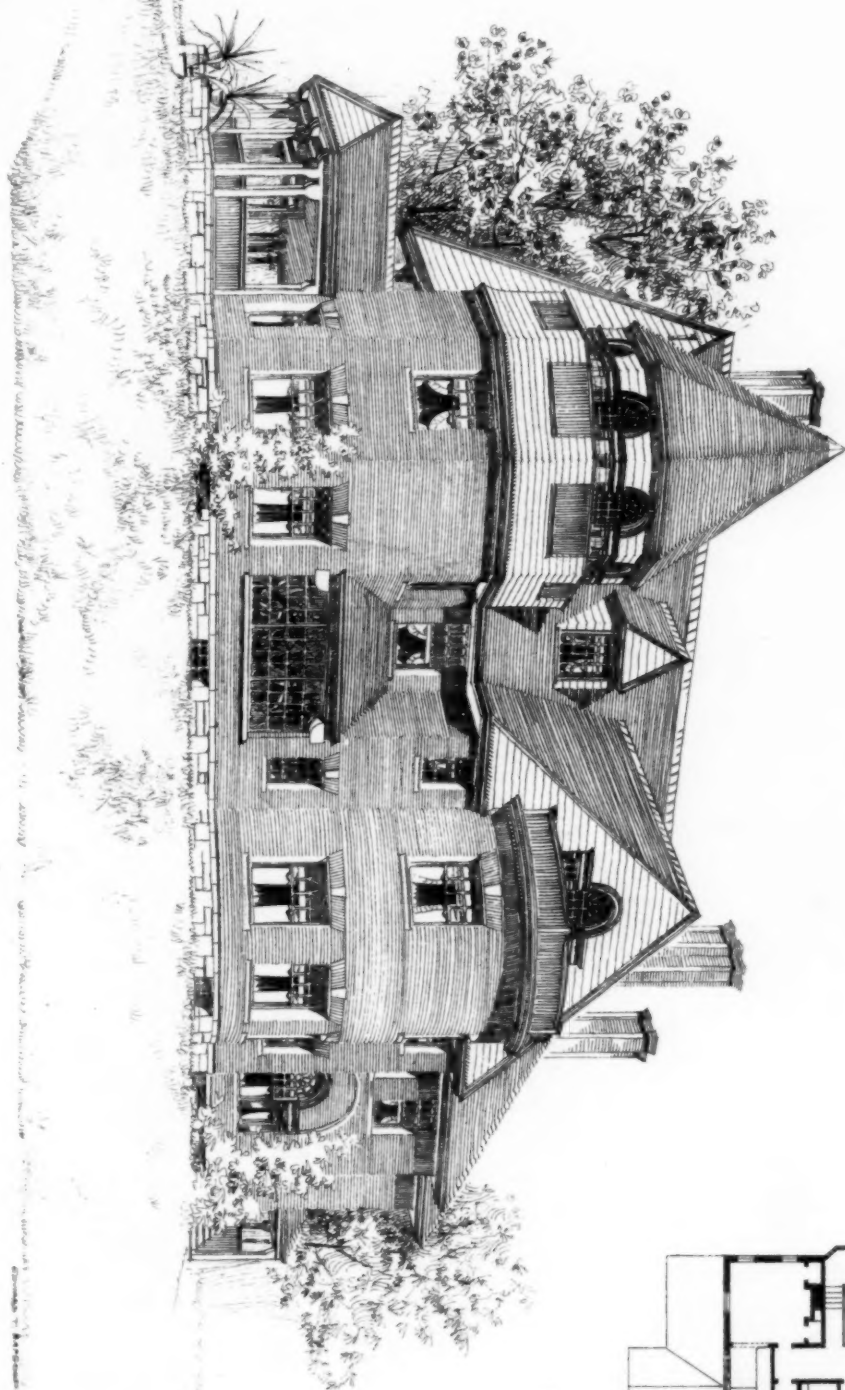
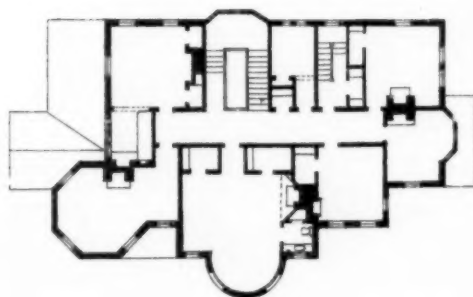
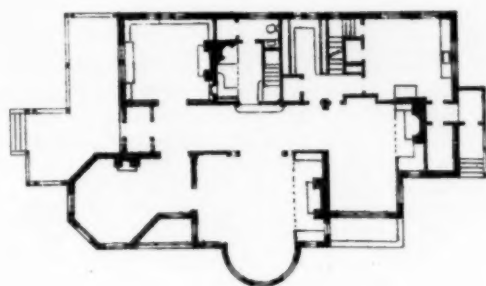
It contains a baptismal font said to have been brought to this country by the early colonists, and used in the block-house mentioned.

The hall in use at present was made from the material of the old hall dated 1643. It bears the inscription "Is the church the living cell And is the grave the journey all."

The oldest stone in the yard is dated April 21, 1708, and among the most interesting of that which covers the remains of Alexander Wilson, author of American Ornithology —

Pl. 9.

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