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THE profession of architecture has suffered a great loss, in the death of César Daly, who passed away at his country house, at Wissoux, near Paris, a few days ago. Daly was born at Verdun, in Northern France, in 1811, his father being an Irishman, and his mother a French woman. He studied his profession under Félix Duban, but his active mind was not content with the enforced leisure of a young architect's early years of practice, and he soon became distinguished as a writer, both on professional and social topics. His success in this field encouraged him to establish the well-known *Revue d'Architecture et des Travaux Publics*, and to this, with various technical books, he devoted most of his time, although he designed and carried out a considerable number of important buildings, and held the appointment of architect to the Government. Later, the weekly journal, known as *La Semaine des Constructeurs*, was established in connection with the monthly *Revue*, and has been lately carried on, under his general direction, by his son Marcel. We need hardly remind our professional readers of the merit of these admirable publications, but a little reflection may be necessary to judge of the learning, as well as the energy, discretion and fertility of resource, which were required to secure and maintain for them the reputation which they have for so many years held. Besides these, however, the profession owes to César Daly a great number of the most valuable architectural books ever published. His "*Architecture Privée*" was, in its time, constantly consulted by many American architects, and is still the best guide that we know to the art of planning, in which the French architects are unrivalled; while the "*Architecture Funéraire*," though less known, is in its way, not less valuable. His "*Motifs Historiques d'Architecture et de Sculpture d'Ornement*," perhaps, represents more labor and knowledge than any of his other works, but the host of cheap collections of a similar character that have since been published have, in this country, rather obscured its value. It is needless to say that the author of these splendidly illustrated books was a draughtsman of the first order, and Daly was not only this, but a very brilliant and graceful sketcher, and a master of perspective, which French architects, as a rule, know little about, while his graceful writing lent a charm to his works that learning and taste alone might not have given them. Personally, César Daly was the embodiment of energy and affectionate enthusiasm. Everything that affected architects was a matter of deepest interest to him, and, even under the weight of eighty-

two years of active life, he was still ready to help wherever he could be useful to the profession. He leaves a widow, and three sons, the eldest of whom, the accomplished Marcel Daly, has long been associated with his father in the management of his various periodicals, and will, it may be hoped, continue the work which the profession could so ill afford to have interrupted.

THE visitors to the recent League Exhibition in New York will have noticed a curious piece of work, which was rather imperfectly shown in one of the front rooms. This curiosity deserves to be explained to those who have not seen it, as it certainly offers some valuable suggestions. Briefly, it consists, so to speak, of a stained-glass window, or, perhaps we should say, of a "transparency," made out of marble. Most people have seen the lamp-shades, which were once so fashionable, consisting of frames, filled with panels of unglazed porcelain, modelled in relief, in such a way that the light of the lamps shining through them, gave the effect of a monochrome picture. In the present case, a thick slab of rather translucent marble, from Vermont, is cut and drilled, in a similar way, so as to present, by transmitted light, an image of a nymph, standing by a pool of water, in which her figure is reflected. The work is said to have been executed by means of an atmospheric drill, something like the machines with which dentists excavate the interior of their patients' teeth; and the effect is certainly pleasing. It is already common to use translucent variegated marbles, such as Mexican onyx, for windows, and the step to regulating the variegations, by cutting, so as to present a pretty design, is not a long one to take.

A DISCUSSION is going on in Boston, just now, which recalls the famous "baldachino" controversy in London, only that, while the baldachino dispute set a large part of the English Church by the ears, and resulted in the severe punishment of an injudicious ecclesiastic, the Boston affair has, as yet, resulted in nothing worse than the airing in the newspapers of some rather singular ideas about church furniture. Every architect knows the plan of Trinity Church, in Boston, the most noted work of the late Mr. Richardson, and will remember that the arrangement of the chancel was originally as eccentric as the other portions of the design, the altar, or rather communion-table, being really a table, set in the middle of the chancel floor, encircled by the rail, which left a wide passage-way all around, between the rail and the wall. The object of this disposition was said to be to accommodate a large number of communicants, and provide for expeditious service from the central altar. It must be confessed that, to the architectural visitor, the arrangement savored of more of the railroad restaurant, or the picnic tent, than of the sanctuary; and notwithstanding the richness of the decoration, the building has never had quite the look of being devoted to a sacred purpose that most of us like to see in a church. To the professional observer, it was evident enough that this effect, or rather, want of effect, was mainly due to the absence of a conspicuous central object, which should first draw the attention, and then, by its realistic or symbolical powers, suggest the religious purpose of the structure of which it formed the principal feature. Quite recently, an amiable lady, whether at the suggestion of an architect, or led by her own perception, we cannot say, offered to pay for, and present to the church, a suitable reredos, to be placed behind and above the altar, for the purpose of giving the latter the prominence which it now certainly lacks. If she had called this ornament a mantel-piece, or a carved panel, there would probably have been no opposition to her plan; but there are a great many people in Boston to whom the name of a reredos, like that of a baldachino in London, immediately suggests incense and images, to say nothing of Pope Joan and the Spanish Inquisition, and protests against the introduction of such an object into Trinity Church began to pour in from all quarters, addressed to the newspapers, as well as to the rector and wardens of the church, and expressing various opinions, with an emphasis proportioned, as a rule, inversely to the qualifications of the writer for giving one of any value. As the intending benefactor of the church is a kind and modest lady, instead of an obstinate young clergyman, it is probable that the idea of presenting the reredos will be abandoned, for

fear of causing real unhappiness in the church, but there is no doubt that the building needs, æsthetically, something of the sort, and it might be an interesting task for some of the Boston architects to try to devise some mode of raising the importance of the altar, without distressing the feelings of the Low Church members of the congregation.

THE largest statue ever modelled is said to be waiting pathetically on a wharf in Brooklyn, until some one shall pay the freight bill for transporting it from Rome, and so purchase its release. The statue is the work of Mr. John Donoghue, now of Rome, but once of Boston. It is moulded in plaster, and was intended for the Chicago Fair. According to the story told by the New York papers, the United States Government sent a ship to Europe, to collect and transport to this country works of art by American artists, destined for the Chicago Exhibition. Mr. Donoghue had engaged room on this ship for his statue, which would have been ready by the day fixed for the departure of the vessel, but, for some reason, orders were sent to have the ship start four weeks before the time originally set, and, as the statue could not be got ready so much earlier, it was left behind. Mr. Donoghue shipped it, when it was ready, by a steamer of one of the regular lines, and, on its arrival in New York, the bill for the freight, amounting to two thousand dollars, was sent to the World's Fair Commissioners. These declined to pay it, saying that they had no authority to do so, and, as the steamship company would not allow it to be removed until the bill was paid, it has remained on the wharf ever since.

MR. PENROSE has recently contributed to the Transactions of the Royal Society a paper on the orientation of certain Greek temples, which has an extraordinary interest: There has long been a tradition that the Egyptian temples and pyramids were set out with relation to certain stars, and it is said in the school geographies, we do not know with how much truth, that the North Star is always visible from the entrance passageway of the Great Pyramid. How this may be, we cannot say, but a hieroglyphic inscription has been found, dating from about 1445 B. C., in which it is distinctly said that "the corners of the temple of the mistress of Denderah" were established by stretching a rope, sighting at a certain star in the constellation of the Bull; so that the tradition, that this was the ordinary practice in setting-out such buildings, appears to be fully justified. Whether the Greek temples, built a thousand years later, were planned in any such way, would, naturally, be quite uncertain, notwithstanding the derivation of many of the Greek architectural fashions from Egypt; but there is internal evidence that they were, and, by the light of the supposition, the variations in plan among them assist in a curious way in elucidating their history. Mr. Penrose, who is something of an astronomer, calculated the positions of the principal stars during the Greek classical period, and, applying the necessary correction to their present position, examined the orientation of the principal temples on the Acropolis with reference to them. He found that the axes of the two ancient temples of Athena, on the Acropolis, the so-called archaic temple, and the one which occupied the place of the present Parthenon, were directed, as shown by the plan of their substructure, which still remains, toward the group of the Pleiades, at its setting. It is known that the Pleiades were connected in some way with the worship of Athena, and the orientation could hardly have been the work of chance. Moreover, the axes of the two temples converge slightly, indicating that the constellation was not seen in exactly the same direction from both. Owing to the movement of the solar system through space, the direction of any fixed star slowly changes, and the fact of the want of exact parallelism in the orientation of the two structures confirms the idea that both were directed toward the Pleiades, since the foundation of the archaic temple is laid out from an axis directed toward what was the position of the Pleiades about 1500 B. C., while that of the later temple, the date of which is approximately known, agrees with the position of the constellation at the time of its erection. It is evident that these differences promise to establish, with a considerable degree of accuracy, the dates of some of the older Greek buildings, concerning which no other information is attainable, and two temples at Rhamnus, of different dates, but both dedicated to

the same divinity, are laid out with axes not quite parallel but directed toward the position, at different periods, of the bright star Spica. In some cases, the orientation appears to be such that, on a particular festival day, the rising sun will shine directly into the temple door; but there seems to be reason to believe that most, if not all, the Greek temples were planned, as to position, with reference to some heavenly body. This supposition, as the *Builder* sensibly observes, accounts much more satisfactorily for the varying orientation of the temples on the Acropolis at Athens than the old theory, that the Greeks faced their buildings in different directions for the sake of picturesqueness. Nothing else in Greek work shows any tendency to seek picturesqueness by violent irregularity, and it is much more likely that the Greeks sacrificed their natural love of symmetry to religious considerations than that they should have placed their buildings at all sorts of angles with each other for the sake of variety in light and shade.

THE Berlin Society of Architects has called a convention of architects, artists, clergymen and others interested in the improvement of the design and arrangement of Lutheran Protestant churches, to meet in Berlin at Easter. Whether the invitation is really to include all Protestants, as well as the Lutherans, we do not know, but presume that representatives of other denominations would at least be welcome. In any case, the convention is likely to be an animated and interesting one. While there is hardly, in Germany, anything like our High Church and Low Church division of parties in the matter of ritual, little liberty being allowed there in such things by the Government supervisors of the State Church, there are two strong parties in ecclesiastical architecture, one looking to the mediæval church-buildings as the proper models to be followed, while the other rejects mediæval architecture and mediæval theology together. A majority of the architects and artists of the convention would probably incline toward the mediæval notions of church architecture, but the Lutheran ministers, who are highly-educated and able men, and, from their similarity of training, would naturally think and act together, are not likely to accede to any æsthetic notions which do not commend themselves to their clear and positive minds; so that if the convention succeeds in agreeing upon any important innovation upon the present practice of Protestant church-planning, such innovation is likely to provide the starting-point for an interesting development of the art.

FOR ourselves, we think that there is ample room for the introduction of novelties in church architecture, which would commend themselves to artists and ecclesiastics alike. To say that a church cannot be artistic and, as Mr. Fugusson would say, phonetic also, without being mediæval or Romish, is pure nonsense. No doubt, a conscientious Lutheran minister would be sorry to see a statue of the Virgin set up in his church, and strings of little silver hearts hung around it; but it does not follow, because ignorant and sensual people like better to atone for their peccadilloes by making a ten-cent votive offering to their favorite fetish than to consult and obey their consciences, that persons who try to act from their knowledge of right and wrong, rather than from their impulses, may not derive support and comfort, in their spiritual struggles, from the glimpses of heavenly peace that art can reveal to them; and, impolite as it would seem to suggest the existence of evil in a fashionable church, we imagine that some of us, who remember the youthful days which we spent over the illustrated "*Pilgrim's Progress*," would be ready to believe that a clever painter, or sculptor, or glass-stainer, might make upon the minds of the younger frequenters of the church which he was called upon to adorn, an impression, not of the sharpness of Apollyon's claws, but of the misery of selfishness and sin, which no amount of intellectual casuistry could afterwards obscure. We all know that the churches of the Middle Ages were the books of the people who went into them. There, in the sculptures and paintings and stained-glass windows, they learned not only the lives of the saints, but the story of creation, redemption and judgment, and, with this, so much of natural science as could be taught in this way. Our modern science could no longer be taught by pictures and sculptures, but art has not yet lost its power of appealing to the soul, and our churches might be made, much more than they are, the books of the spirit.

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patent sheathing-lath put on diagonally, nailed to every bearing and the openings sawed out after the nailing is done. After the building is enclosed, the sheathing-lath should be plastered one heavy coat of scratch-coat mortar, or the outside can be sheathed with  $\frac{7}{8}$ " tongued-and-grooved stuff, put on diagonally and covered with sheathing-felt, affording an excellent protection against the cold.

The treenails or pins should be so laid out as to bring all parts to a firm bearing without splitting anything. All openings should be bridged over as shown, by using a section of a floor-beam or by making a girder similar to Figure 46 *a* and *b* of strips spiked to the studding.

**Laying-out:**— This should be done so that there will be the same amount of shrinkable material between the masonry and the plate all around. This can be secured by following the detail of Figure 119. In planning, sections should be made of every wall throughout the building showing the method of framing to be used throughout, and the carpenter should be held to it rigidly. This will save many alarming cracks in the plaster, which it would otherwise be necessary to cut out and repair. All framing in regular frames should be in bents one floor at a time.

**Partitions:**— These should be treated in manner similar to the outside walls, interties, etc., being as carefully laid out and the shrinkage as carefully planned for, or following the general lines of Figure 119, *g*, *h*, *j*, *k*, *l*. These are framed as follows:

In *g* the girder *f* has two pieces *e*, *e*, bolted to its side on which the floor-beams frame; the height of *e* being the same as the height of the sill. In *h*, in which the girder carries not only the floor-beams but the partition, it is made of two parts with three strips, the central one being made 4" broad, the outer ones 3" broad, and all of them bolted through to the girder-members *f*. The height of *e* being the same as the height of the sill, the shrinkage is the same. The studding, which comes down and rests on the central piece, should be gained out so as not to rest in any way on the floor or the girders. In *j* the girder carries a sliding-door partition, and can be made with a wide centre or, in the event of considerable weight, the space between the studs can be filled with another girder-member as indicated by the dotted line so as to give still greater strength. The top of this partition would have a member *b* carrying two strips well bolted to the side of it, which strips would be gained into the studs at either side of the opening, and would serve to carry the partition studding coming from above. Underneath it, to carry the door, there would be placed a strip to which the door-track would be secured. This would come at the height of the top of the door-frame. In section *l*, the partition is indicated starting on an upper floor and running at right angles to the line of beams. The partition studs should be brought close beside each beam and bolted to the beam with a  $\frac{3}{4}$ " bolt, and their bottom should rest on a  $\frac{5}{8}$ "  $\times$  4" strap, secured to the floor-beams by means of a  $\frac{3}{4}$ "  $\times$  5" lag-screw. In *k* the partition is shown starting on an upper floor, running parallel with the beams. Here two beams would be brought side by side and each stud would go between them, being supported on a  $\frac{5}{8}$ "  $\times$  4" strap secured to the beams with  $\frac{3}{4}$ "  $\times$  5" lag-screws at each end. The partition would be carried on two or more beams secured together forming a girder. All openings should be bridged with floor-beams spiked to the studding at the ends or gained to them with the ends of the beams provided with a firm bearing. The sizes of the principal partitions should be carefully computed as they often carry more weight than the outside walls. Sliding-door partitions should be so framed that the studdings that carry the beams above run through continuously. The opening should be spanned as before described. Partitions should be framed in bents resting on caps or sole-pieces, only when the side walls are also so framed, thus keeping the framing of the same kind. Do not permit a partition to be framed on the top of a sole-piece spiked to the top of the floor-beams. Never attempt to make a truss of the rough framing; make a girder of strips placed close together and nailed to every stud as shown in Figure 46 *a* and *b*. If the load that the partition carries is too great for a girder of four floor-beams, the cheapest and best means of carrying it is by means of a steel beam. All sliding-door pockets should be lined with tongued-and-grooved stuff so as to be approximately draught-proof.

**§ 316. Balloon-Framing:**— This is now the usual method and consists of relatively light pieces in sufficient number and of

sufficient depth to secure the necessary stiffness and strength. The studs carry through as far as possible, and the floor-beams frame onto a 1"  $\times$  4" or 1 $\frac{1}{2}$ "  $\times$  4" ribbon or girt gained 1" into the studs. (Fig. 120.) Slow-burning is secured by

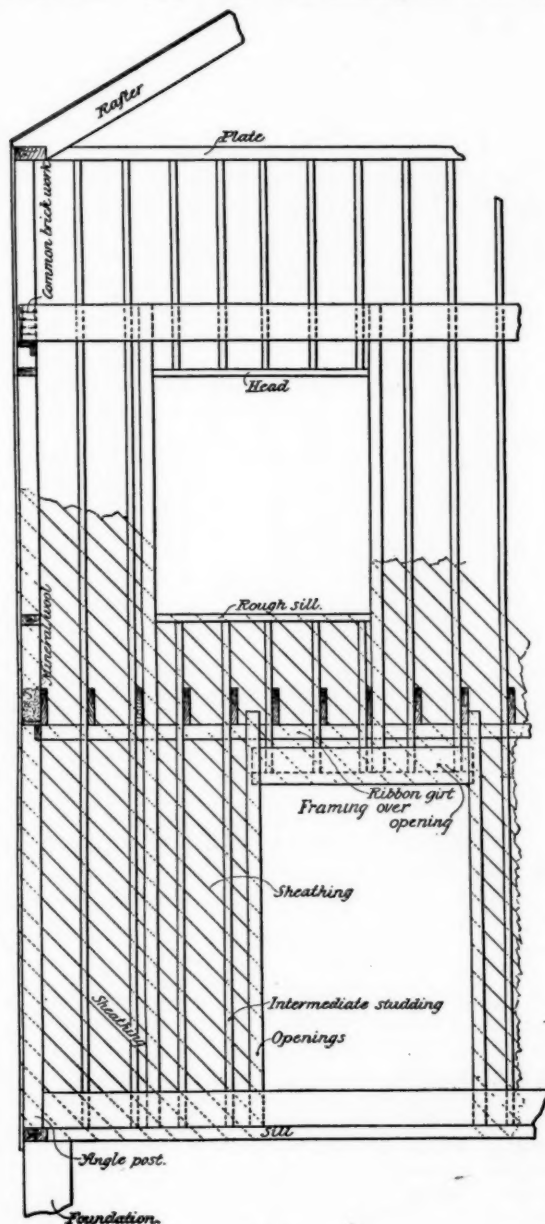


Fig. 120.

using the Byrkit-Hall sheathing, back-plastering on it and filling the space between all floor-beams at each story the full depth of the beams and the full width of the studs with mineral-wool or common brickwork in lime-mortar, thus preventing the rapid spread of fire through the voids of the frame.

Sizes for good practice are as in Table XXXVII.

TABLE XXXVII.

SIZES OF PIECES FOR BALLOON-FRAMING.

| Parts.              | Size of house in square feet, (3) stories high.              |                                                               |
|---------------------|--------------------------------------------------------------|---------------------------------------------------------------|
|                     | 1,200 $\square'$ or less.                                    | More than 1,200 $\square'$ .                                  |
| Angle posts.....    | $\begin{cases} 4'' \times 6'' \\ 2'' \times 4'' \end{cases}$ | $\begin{cases} 6'' \times 8'' \\ 2'' \times 6'' \end{cases}$  |
| Sill.....           | $\begin{cases} 4'' \times 6'' \\ 3'' \times 8'' \end{cases}$ | $\begin{cases} 4'' \times 8'' \\ 4'' \times 10'' \end{cases}$ |
| Plate.....          | $\begin{cases} 3'' \times 8'' \\ 1'' \times 4'' \end{cases}$ | $\begin{cases} 4'' \times 10'' \\ 2'' \times 4'' \end{cases}$ |
| Ribbons.....        | $\begin{cases} 3'' \times 8'' \\ 1'' \times 4'' \end{cases}$ | $\begin{cases} 4'' \times 10'' \\ 2'' \times 4'' \end{cases}$ |
| Studs at openings.. | $\begin{cases} 3'' \times 4'' \\ 2'' \times 4'' \end{cases}$ | $\begin{cases} 4'' \times 6'' \\ 2'' \times 6'' \end{cases}$  |
| All other studs.... | $\begin{cases} 3'' \times 4'' \\ 2'' \times 4'' \end{cases}$ | $\begin{cases} 4'' \times 6'' \\ 2'' \times 6'' \end{cases}$  |

**Bracing:**—The sheathing is entirely depended on for the bracing; the sills are usually laid down in a bed of fresh mortar and well settled, then studs are put up all around, 16" on centres, and of the full height from sill to cap, but not cut to length. Then the ribbons are cut in and spiked and the plate put on, the side being held in place by means of stays spiked to the studs and to the floor-beams. The floor-beams are sized to the sills as soon as they are laid and before the studding is placed.

As soon as the two bearing-walls are up, the floor-beams of the second tier are put in place, and then the side walls are placed and the beams spiked to the studs; then additional studs are put in, framing out the openings, rising from sill to girt above the opening. Then all sides of the building are sheathed with the sheathing decided on, nailed with at least two nails to every bearing. The openings are sawed out, of just the proper size to admit the frames, and studs are cut in,

each side of the partition, making an *A* truss, be carried by means of a steel beam, or supported between beams.

**§ 317. Slow-Burning:**—Slow-burning or mill construction is similar to regular framing except that unpainted, mill-dressed timber should be used. End of girders in walls should be carried on columns, same as interior ends. All columns should be made with 1" allowed for loss of strength by charring and a  $1\frac{1}{2}$ " hole should be bored down the centre of the columns with  $\frac{1}{2}$ " transverse holes at each end, affording ventilation to the interior. Ends of all bearing-pieces should be exactly square, and when setting into metal sockets should have the edges slightly chamfered, setting into a lip on the socket. The sockets should be so arranged as to drain themselves of all water falling into them. When columns rest on the side of a sill, the joint should be made with a piece of tin interposed to distribute the strain and to prevent cutting. Increase the dimensions of all pieces 1" so as to provide for

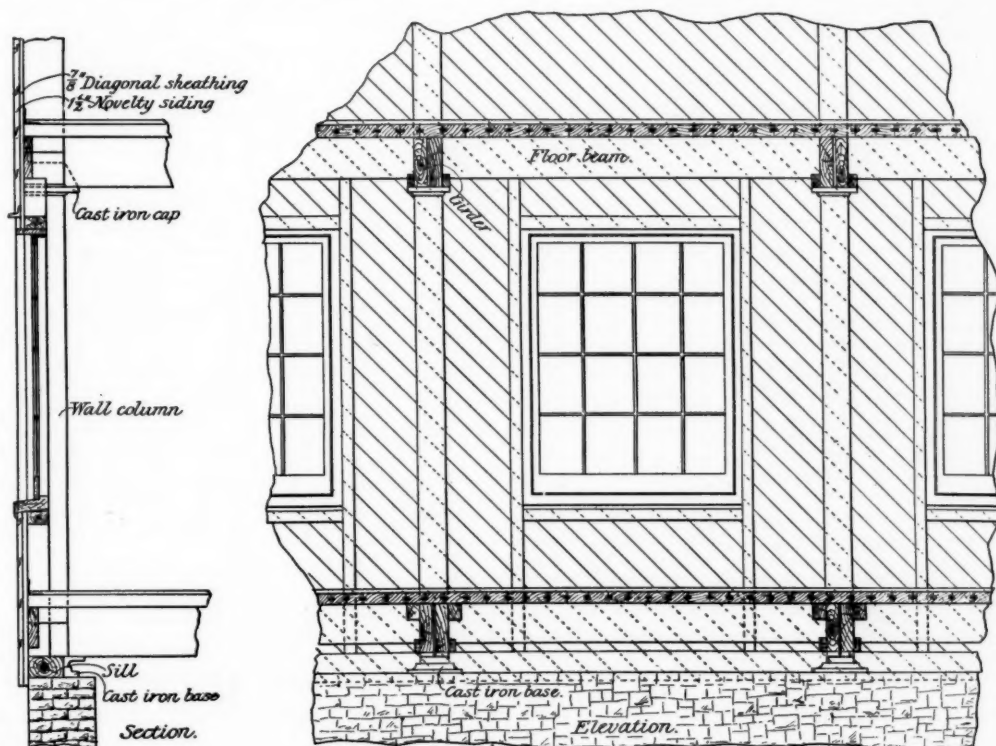


Fig. 121.

framing out the top and bottom, and the sheathing nailed to them. The sheathing should always be put on diagonally, and should run in different directions on different sides of the house. A building so braced and with the under floor laid diagonally is practically indestructible by anything but fire, and will burn slowly if the precautions above noted are taken.

**Laying-out:**—See the same heading in § 315 and Figures 119 and 120. In balloon-framing when floor-beams run end-on to studs they should be brought close to the studs and well spiked to them. When the beams run parallel to the studs, the first and last beam of the tier should be against the studding and well spiked to it. Lay-outs for the framing should be made the same as for regular framing, showing the framing of every partition and wall throughout the house.

**Partitions:**—These should be framed the same as with the outside walls, the same precautions being taken as described under this heading in § 315. It is especially necessary that the studs of all partitions lining up through two or more stories should be made continuous and the framing be done with a ribbon strip. Hot-air flues should be provided for in the spacing of the studding, as the usual 16" centre spacing does not give a sufficient size to the flue to heat a large room. The details of supporting girders, door-openings, sliding-doors, etc., should be the same as in Figure 119.

**Bridging:**—All studding not carried down to a solid bearing should be bridged by having a  $2" \times 4"$  piece cut in 1" on

charring in case of fire. Use plenty of iron ties around all columns to hold the girders together. (Fig. 121.) Put in  $4" \times 6"$  stuff, framing out openings and for intermediate studding in panels, about 3' 0" on centres.

**§ 318. Strength:**—The sizes as given are sufficient for all ordinary work, but for warehouses, public halls, isolated columns and the like, the strength should be computed as per § 172.

**Stiffness:**—This is as important as strength and will usually be secured when the columns are properly proportioned, and when walls are properly braced.

(To be continued.)

**TO MOUNT PHOTOGRAPHS WITHOUT BUCKLING.**—The satisfactory mounting of photographs is a troublesome operation, and the following suggestion from a contributor to the *Outlook* may be of assistance to amateurs: I have found a method by which a photograph or engraving can be mounted on the thinnest paper without curling or wrinkling. If the picture is a photograph it should be ironed out smooth with a hot iron and then trimmed. Mix a little gum-arabic in hot water, so as to make a rather thick mucilage. Place the picture on the page in position and mark the page just inside the corners. Remove the picture and take some of the mucilage on a ruling-pen and draw a heavy line of mucilage from one point to another, so as to make a line of mucilage all around the place where the picture is to be. As soon as the mucilage is sticky, put the picture in place, and a book over it to keep it flat. When dry, you will have a smooth mount that will not curl.

TOPOGRAPHICAL AND ARCHITECTURAL HISTORY OF THE CITY OF MEXICO.<sup>1</sup>—IV.

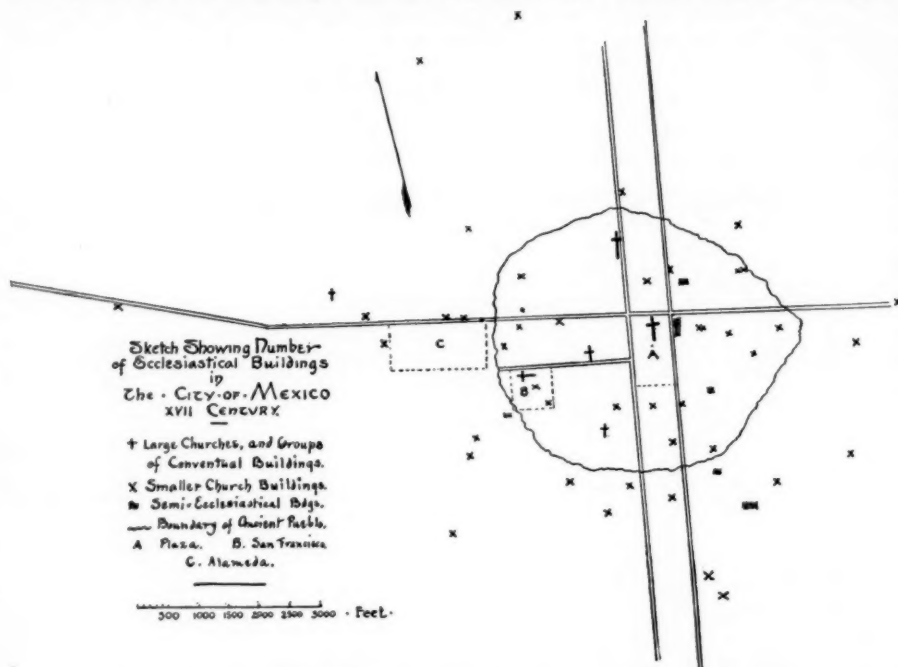
## THE CITY IN THE SEVENTEENTH CENTURY.

THE changes in the City of Mexico witnessed by the seventeenth century consisted not only in its expansion and the addition of many new buildings, but also in the gradual disappearance of some of the earlier structures, and, as it were, a second growth upon their trunks. This occurred to fourteen church buildings of the previous century. Four churches begun in the former century were completed in this. The Cathedral was so far completed in 1656 that a provisional dedication was held. Its final dedication was postponed until ten years later, and the towers were not completed for another century and a quarter. The amount expended, up to the year 1656, upon this edifice, was \$1,752,000. Other large sums were expended upon church buildings in Mexico during this century,

of Belen de los Padres were rebuilt. The administrators of the estate of Cortés appropriated \$43,000 towards the completion of the Church of N. S. de la Purisima Concepcion at Huitzillan. Don Cristobal Zuleta added a beautiful chapel to the gradually expanding group of buildings of the Franciscans, to which were also added within the century the Chapel of San Antonio and the most important member of the group, the Chapel of N. S. de Aranzazu. At enormous cost the Marquesa de la Cadena built the Convent of Santa Inez for the Concepcionistas. The existing Church of Santa Teresa la Antigua was built at the cost of Don Esteban Motina de Moquera. Upon the Church of N. S. de la Merced \$150,000 were expended. Don Manuel Gomez built the Church of the Betlemitas, and Don José Retes Larzuche built San Bernardo Church and Convent. Thus, largely by private means old ecclesiastical edifices were rebuilt and new ones to the number of seventeen erected. The City of Mexico was rapidly assuming the appearance of a vast ecclesiastical

establishment. To these may be added the erection of a Theological Seminary and several colleges. And such a marked reform was effected in the hospital system that for the first time in the history of the city each patient was provided with a bed for his sole occupancy in the Hospital de los Desamparados. Of these ecclesiastical buildings a large number remain to-day, changed only by the hand of time, and by circumstances pertaining to the present century, to which reference will hereafter be made.

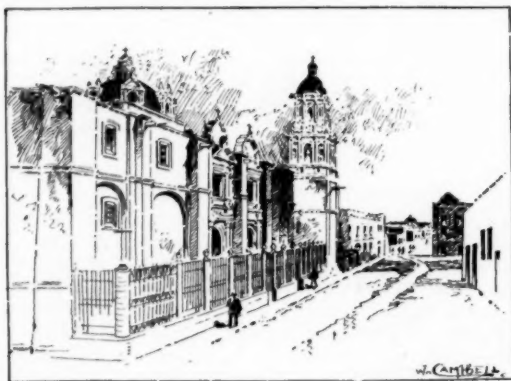
Meanwhile a long succession of Viceroy and various municipal officers were devoting attention to works of public importance in



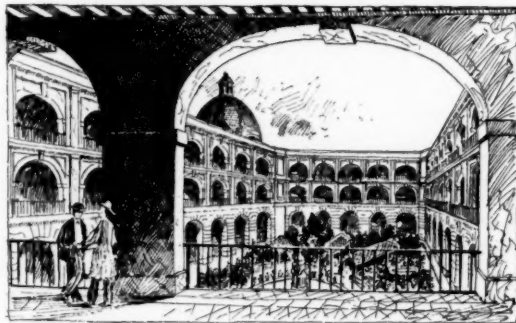
Church of San Jose de Gracia, still standing, Seventeenth Century.

indicative of the wealth of the city and the grandeur of its architectural enterprises. Upon the choir alone of the San Agustin church and monastery (rebuilt after its destruction by fire in 1676), \$240,000 were expended. Private wealth was lavished upon church-building. Don Tomas Suaznaba, and Don Simon de Haro and his wife contributed \$250,000 towards the rebuilding of the Convent of Nuestra Señora de la Concepcion. Don Alvaro Lorenzana gave \$100,000 towards the completion of the present Church of N. S. de la Encarnacion built in 1648. A private purse bore the expense of rebuilding the Church of San José, a building still standing. It was from a bequest of the wife of Don Simon de Haro (who also bequeathed her house and \$10,000 to the church and monastery of the Capuchins) that the present Church of Santa Catarina was built. From

the capital of New Spain. The water-supply was the first subject to receive attention. Under the supervision of Juan de Mendoza, the tenth viceroy, the longer of the two aqueducts which now supply the city with water was constructed from beyond Tres Cruces, four miles from the city, skirting Chapultepec, entering the present city at Tlaxpana, following the Tlacopan causeway and ending abruptly at San Cosme. It comprises more than 900 arches of brick and stone, set upon a solid foundation and carrying a solid stone wall five feet thick with an open channel on top. Its present condition speaks well for the honesty of the masonry of the seventeenth century. Its cost, given as \$150,000, indicates the cheapness of labor and materials in those days and also hints at the architectural results possible of attainment by means of the sums mentioned as bestowed upon ecclesiastical edifices. The system of repartimientos



Convent of La Concepcion, City of Mexico, Seventeenth Century.



Principal Patio of the Convent of La Encarnacion, City of Mexico, Seventeenth Century.

a bequest of Doña Beatriz de Miranda the Church and Convent of Jesus de la Penitencia were rebuilt. Captain Don Domingo de Cantabrana bestowed \$70,000 upon the church and monastery of San Cosme. It was out of private means that the church and monastery

had been seriously impaired through the agitation of reformers, but there yet seems to have been slaves enough to perform the gigantic works undertaken in this century. In the viceregal administration of Diego Fernandez de Córdoba (1613-1621), this aqueduct was extended along the causeway to the Convent of Santa Isabel at

<sup>1</sup> Continued from No. 936, page 112.

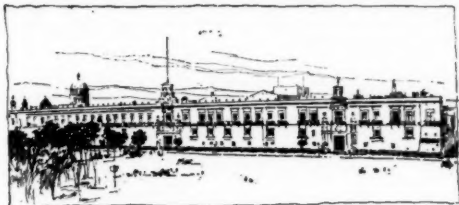
an additional cost of about \$100,000. The extension has since been removed, leaving the aqueduct as at first built.

The cleansing of the *acequias* and the paving of some of the streets are set down as work done in 1605, under the progressive viceroy



San Cosme, City of Mexico, Seventeenth Century.

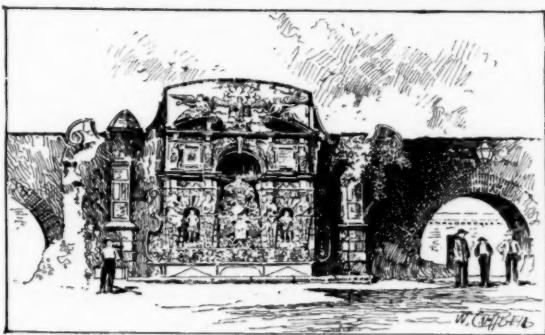
Mendoza. An inundation in the previous year had damaged much property, and especially the *calzadas*. Under the direction of a Franciscan friar, the causeway leading to Tepeyacac (now Guadalupe) was repaired and enlarged. In the repairing and enlargement of the Acachinanco causeway the branch formerly running to Coyoacan seems to have disappeared. New causeways to Chapultepec and Piedad were constructed. Later in the century (1675-6) under the viceroy Rivero, who was also Archbishop of Mexico, the Calzada Nueva was constructed nearly parallel with the northern causeway to Tepeyacac. It was intended for the accommodation of religious pilgrimages to Guadalupe, that place having by that time become an important religious point by reason of an alleged apparition of the Blessed Virgin Mary. Calzada Nueva was adorned with a large *glorieta* near the middle and throughout its length with fifteen beautiful shrines or altars dedicated to the mysteries of the Rosary.



Santa Teresa Antigua and the National Palace, City of Mexico, Seventeenth Century.

These were twenty feet in height and richly sculptured. Since the middle of the present century a railroad company has found it convenient to use this magnificent causeway as its road-bed between Guadalupe and the capital.

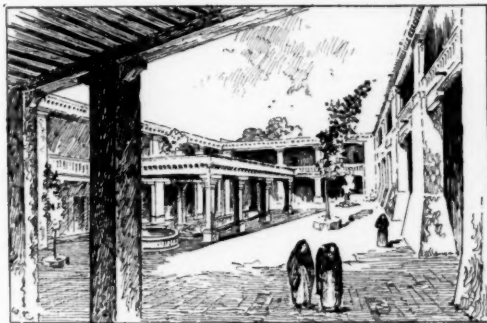
The inundation of 1604 precipitated plans for protecting the city from such perils. Enrico Martinez submitted a proposition to make a tunnel at such a level as to drain Lake Texcoco and carry off all the waters precipitated upon the Valley of Mexico. Such in general is the scheme now being carried out. It was abandoned in the seventeenth century because of its great cost. In November, 1607, Martinez began the execution of a plan scarcely less daring, and in eleven months from that time he had constructed a tunnel eleven feet wide and thirteen feet high from Huehuetoca to the river Tula, a distance of over four miles, for the purpose of carrying off the surplus water of Lake Zumpango, the highest of the lakes that menaced the city.



Fountain at Tlaxpana Gate and Aqueduct from Tres Cruces, Seventeenth Century.

The tunnel was soon found to be insecure, however. The inner facing was of adobe which soon softened and caved. A stone facing, having no firm foundation, was found to be equally insecure. The thirteenth viceroy, Diego de Córdoba, upon his arrival in

Mexico, in 1613, took a deep interest in the schemes for protecting the capital from inundation. Upon his application the Spanish king sent Adrian Boot, an engineer from Holland, to inspect the work of Martinez. He reported the tunnel insufficient, and as



Patio of the Convent of Sta. Isabel, City of Mexico, Seventeenth Century.

might be expected from an engineer of the Low Countries, favored dikes. To catch the overflow from Lake Zumpango and prevent its being precipitated upon the city, dikes were accordingly built about Lake San Cristobal.

In 1629 the time came for testing the utility of tunnel and dikes. The rainy season that year set in with unusual violence. On the 29th of June, Martinez, either to prevent the destruction of his work or through pique at the popular criticism upon it, and at having the advice of an engineer from Holland preferred to his, closed the mouth of his tunnel. Soon Zumpango overflowed into San Cristobal, and that lake overflowed the dikes, and in a short time the streets of Mexico were three feet under water, and thus they remained for three years, Martinez spending the time in prison.

It would be impossible to picture the result of this inundation. Many edifices suffered total destruction. The population was decreased by the death of 3,000 Indians and the removal of nearly all the European families. Court and local legislative bodies suspended their sittings, churches were abandoned and mass was celebrated on the balconies and housetops. People moved from place to place in canoes. The city really became what it had been called before the conquest, "The American Venice." Its removal to the high ground between Tacuba and Tacubaya was discussed, the cost of the removal being estimated at \$50,000,000. It has even been stated that a royal edict was procured, ordering the removal. But in 1632 the water subsided, and the royal edict (if any there were) was suppressed. In 1634 the fearful scenes of 1629-31 were repeated to some extent, but after the rainy season of that year earthquakes opened rents in the ground causing the rapid subsidence of the waters. Martinez was released from prison and commanded to employ such measures as would prevent any further inundation of the capital. He re-opened the tunnel, and so far made concession to his Holland rival as to rebuild the dikes about San Cristobal as they remain to-day, — two in number, two miles and three-quarters and a mile and a half in length, respectively, and eight or ten feet high by twenty-eight feet wide.

The prominence of ecclesiastics in the engineering works of this century is noteworthy. A Jesuit was consulted previous to the employment of Martinez, and after his death three Franciscans took charge of his work. Franciscans had charge of the reconstruction of the *calzadas*.

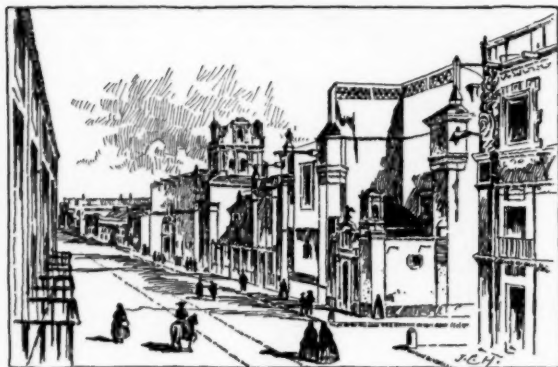
Directly under the eyes of the viceroys as they sat in the palace, was that which should have demanded earlier attention than it did, that is to say, the plaza. That it is reported to have remained above water during the great inundation of 1629-32 would indicate that the great *teocalli* had not been razed to the ground, but that the debris therefrom still made the main plaza several feet higher than



La Piedad, City of Mexico, Seventeenth Century.

the level of the city streets. Buildings were encroaching upon it. In 1611, by viceregal order the market was removed, but large numbers of sheds and shanties that had been built in the southern half of the square, were allowed to remain. It is a notable fact that

Mexican trade with China was already established at this time, and Chinamen composed a part of the population of the capital of New Spain. In November, 1658, a fire began in a barber-shop belonging to a Chinaman in the plaza and spread to all the inflammable sheds in the vicinity. It was the great historic fire in a city which has

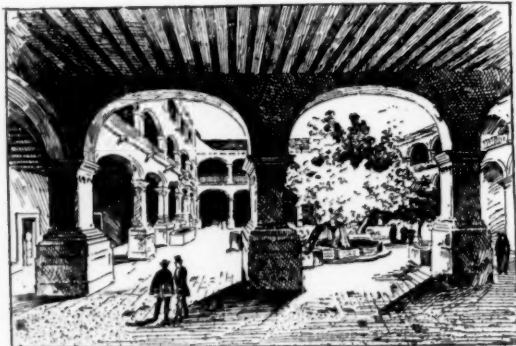


Convent of Sta. Clara, City of Mexico, Seventeenth Century.

long since solved the problem of slow-burning construction, if it has not actually produced fireproof buildings. To quench the flames resort was had, not to fire-engines or pumps and water, but to the sacred relics in the possession of the Church, and to a procession of the clergy headed by the archbishop. The fire cleared away the objectionable buildings, and a viceregal order relegated all fruit-sellers, pork-dealers and bakers to certain grounds south of the palace, — a marshy tract where, previous to the Conquest, the Aztecs had indulged their fondness for the game of *pelote* or *volador*. It had subsequently been used for an occasional bull-fight or an *auto de fé*. The chief market of the city was now established there. For nearly two centuries the city paid rent for the land to the heirs of Cortés to whose lot it had fallen in the first partition of the island.

The reform in the plaza was only temporary, however. The city was shortly afterwards collecting rent from two hundred and eighty *cajoncitos* (little shops) upon the plaza, and apparently well satisfied with their occupancy of that ground. So, forming the group of sheds known as the *Cajoncitos de San José*, they awaited destruction in another great historic event — the riot of 1692. This riot grew out of the famine of that year. A mob of Indians rushed to the plaza, sought the viceroy and the archbishop, assaulting the viceregal palace and *Arzobispado* with sticks and stones. Failing to gain an entrance by these means the insurgents built fires at the doors of the two palaces and of the *Diputacion*, using the *cajoncitos* for fuel. Damage to the buildings thus attacked amounted to \$3,000,000. The cathedral clergy finally quieted the tumult by marching to the scene of the conflict with the Sacred Host borne aloft before them.

This second clearing of the plaza was as shortlived as the first, though the city authorities, in 1703, erected a handsome building on the south side of the plaza for the accommodation of the merchants of the better class. In the meantime the fruit-venders again took possession. Nor were they and their *cajoncitos* the only object to shock an æsthetic taste in the plaza of Mexico in the seventeenth or even in the eighteenth century. Directly in front of the viceregal palace stood the gallows and frame for displaying the heads of executed criminals. A statue of Ferdinand VI not far off was a work of no artistic merit. The cemetery of the Cathedral extended far



Patio of the Convent of Sta. Clara, City of Mexico, Seventeenth Century.

beyond the present garden and was surrounded by a high wall. The Cathedral was without its two towers. Altogether the plaza at the end of the seventeenth century presented a far less prepossessing appearance than the Zocalo of the present day.

The large and imposing building erected directly south of the plaza for the Palace of the *Ayuntamiento* (*Diputacion*) remained for nearly thirty years in the ruinous condition in which the mob had left it. But the work of rebuilding the viceregal palace was begun immediately and from the end of the seventeenth century the building at present known as the National Palace dates its existence. Not unlikely it preserves the general form of the building erected by Cortés in that locality.

ARTHUR HOWARD NOLL.

[To be continued.]



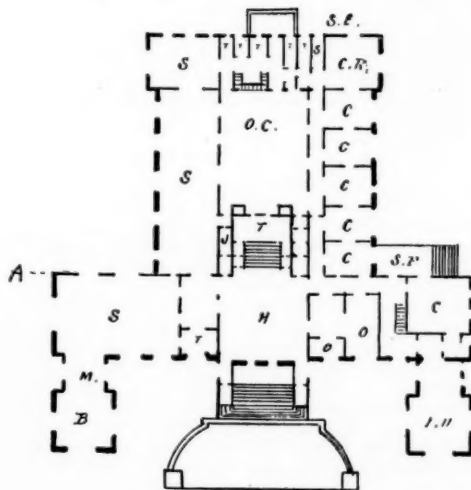
EXHIBIT OF COMPETITIVE PLANS FOR THE NEW CORCORAN GALLERY OF ART.

SOME years ago the Trustees of the Corcoran Art Gallery purchased a piece of ground on Seventeenth Street and New York Avenue. After the purchase they called in Mr. Ernest Flagg, architect, of New York, and for a year, more or less, he worked with the Trustees of the Gallery. At this stage of the proceedings it was determined to invite a limited number of Washington architects to make competitive drawings, paying them a small sum each. As might have been expected, Mr. Flagg, who was admitted to the competition and who had full knowledge of the desires of the committee and a long time to study the problem, was awarded the building.

At the last meeting of the Washington Chapter of the A. I. A. the drawings submitted in this competition by Messrs. Ernest Flagg, Hornblower & Marshall, Robert Stead, Bruce Gray and P. J. Pelz, were placed on exhibition in the Chapter-room.

The scheme was for a building to be erected in two sections. The first for present use, the second portion for future use.

Hornblower & Marshall and Bruce Gray in their scheme for immediate use ignore the shape of the lot, which is an acute angle formed by the intersection of New York Avenue and Seventeenth Street.



Hornblower & Marshall, Architects.

Their fronts run parallel to Seventeenth Street, and their side at right angles thereto. Mr. Gray arranging his in the form of a cross with a central stairway and dome above, with sculpture-galleries on the first floor and picture-galleries on the second floor. Halls on either side. The trustees', curator's and other office rooms are behind the steps, probably intended to be cleared away when the future rooms are built. The future addition is grouped around two interior courts of size ample to light the rooms on the lower floors. The design is an Italian Renaissance, the most prominent and effective features of which is the entrance. The centre is surmounted by a dome of good form, but which would probably cast disagreeable shadows when the light fell upon the skylights over the picture-galleries. The only design that suggests a commemoration of Mr. Corcoran is shown in this drawing, in the form of a statue prominently located on the entrance front.

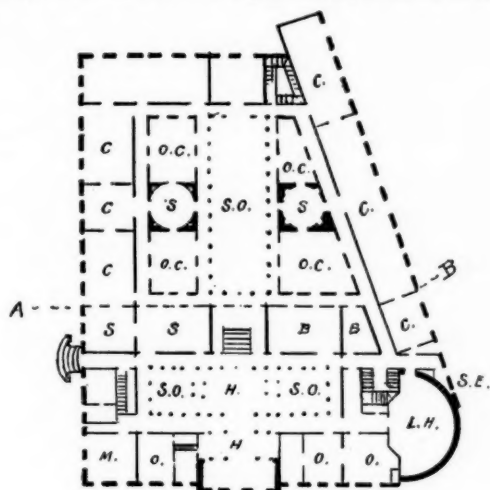
Hornblower & Marshall make their addition for future use without any reference to the street lines, and on this rests one of its chief attractions. There are two prominent wings, the main building and entrance being placed more than fifty feet back from the building-line of the street. This gives an opportunity for green grass and broad effects and effective, generous steps. A square entrance-hall, leads to a broad, well-lighted flight of steps. On the left of which

and with a separate entrance are placed the class-rooms for the Corcoran School of Art, as well as rooms for the trustees and executive officers of the Gallery; on the right are the sculpture-galleries, so grouped that visitors would pass naturally and readily from room to room. It was suggested that the large interior court be roofed-in for heroic statuary.

The whole of the second story is arranged for picture-galleries. Visitors would naturally pass from one room to another around the large interior court. The staircase and entrance-hall are effectively arranged and the elevator, toilet-rooms, etc., grouped where one would naturally expect to find them.

The exterior of this scheme is simple and refined, conveying at a glance the suggestion that it was made for an art-gallery. All the suggestions as to details, ornamentation, mouldings and general treatment, indicate a refined and dignified building. The perspective-drawing is a very sketchy water-color, which hardly does the idea justice. There is a slight suggestion of color on the wall-surface back of the columns of the porch over the doorway. The grass-plot between wings, and the triangle on New York Avenue would add much to the pleasing effect in the completed structure.

Ernest Flagg's scheme covers the whole lot with the exception of a small portion on the west. You pass directly from the street into



Ernest Flagg, Architect.

In front of line A B for present use — back for future construction.

- |                                       |                                  |
|---------------------------------------|----------------------------------|
| T. Toilet-room.                       | S. Sculpture — Picture-galleries |
| C. Class-room — Picture-galleries and | above.                           |
| Class-rooms above.                    | S. O. Sculpture — Open to Roof.  |
| C. E. Class Entrance.                 | M. Medals.                       |
| O. Offices — Picture-galleries above. | E. Bronzes.                      |
| O. C. Open Court.                     | J. Janitor.                      |
| H. Entrance-hall.                     | L. H. Lecture-hall.              |

a large statuary-hall, divided into three squares by six rows of columns in its length and two in its breadth. These columns will interfere materially with any effective view of the sculpture *en masse* and must interfere seriously with the placing of pieces of sculpture so they can be viewed from different standpoints and to the best advantage. The smaller rooms are so arranged that you must always come back into the statuary-hall before passing into another room. The executive officers and janitor have no access to their rooms without passing through the statuary-hall, and all who wish to pass up the main stairway must go through this hall. In the portion of the building for future use is another large statuary-hall running at right angles to the one in the building for present use. This hall is two stories high, surrounded by a colonnade. This hall is the effective feature of the plan. On each side of it are open courts. The rest of this floor is taken up by class-rooms; the whole frontage on New York Avenue being used in this manner as well as the principal frontage on E Street. It is necessary for any one using the class-rooms in connection with the former rooms to pass through the large statuary-hall. I presume the committee and architect had some reason for this.

A peculiar feature of this plan is the apparent lack of reason for the open courts, as they seem to seriously complicate the plan in both stories without being of any real use. The statuary-hall enlarged would have formed a much better entrance to these rooms, would have lighted this portion better than the interior courts, and certainly would not have cost any more.

In the second story, the space over the small executive rooms, and class-rooms on the east (Seventeenth Street) and west is taken up by picture-galleries. The ones in the portion for present use are accessible from the corridor or colonnade over the statuary-hall, two being so detached that they would be probably missed by the general visitor without a plan to guide him. The open courts interfere seriously on this story with the simplicity of the plan, for any one on the corridor of the main statuary-hall would hardly think to find the

principal picture-gallery by passing down a comparatively narrow passage, as if it were leading to some private apartments.

The plan would be materially simplified by at least leaving out the southern open court. Standing east of the stairway, quite an effective vista could be obtained if it were not for its destruction by the four cross-lines of columns. This extensive corridor around the statuary-hall for future use leads practically nowhere; where we might expect a series of interesting rooms, opening upon it, there is nothing.

There seem to be serious defects in the lighting of the lower floor which will doubtless be rectified in the working-drawings, although it will require a material alteration of the plans to accomplish this end.

When the portion for future use is added it leaves the rooms for antique casts and bronzes (S, S, B, B,) lighted only by what is borrowed across the hall from an interior court, some twelve or fourteen feet away: while the main entrance or statuary-hall will be but indifferently lighted by its two open wells, seventy-two or more feet apart, and the light that will come down the stairway.

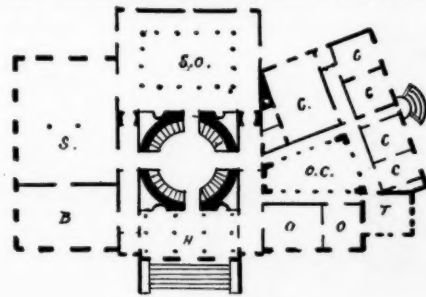
The building is unfortunately placed directly on the street line. The front on Seventeenth Street is treated as if it were the main building. The corner and, judging from the perspective, the New-York-Avenue front is treated as if it were an annex. The New-York-Avenue front will, when used, be the most important one and the corner of intersection is the view which the larger number of people will obtain of the building. The portion on Seventeenth Street as a detached part is simple and Classical. The massing and general arrangements were evidently intended to convey the idea of massiveness, durability, strength, instead of refinement, grace and beauty.

The treatment of the roof in no way indicates the manner in which it could actually be built. In the perspective, the corner does not agree with its form as shown on the plan. The treatment of this important corner is the evident weak spot in the design.

P. G. Pelz gives another plan in which the whole available street-front is utilized. The entrance is from the corner. The sculpture-hall extends around Seventeenth and E Streets, well lighted by windows, while back of it and parallel to it are the bronze-galleries. The front on New York Avenue is devoted to the class-rooms. Above the sculpture-gallery are a series of picture-galleries on the streets with water-color galleries facing the interior court.

This seems to be a simple, business-like scheme, without any effort at large or effective rooms, being small rooms simply to show the pictures and statues to advantage, and arranged so that visitors would not fail to go directly through the building from room to room. The corner is capped with a dome, making this portion of the design the most prominent feature. The whole is a straightforward Renaissance in its method of treatment.

The scheme submitted by Robert Stead contemplates only a plan for immediate construction. The arrangement of class and administration rooms in a detached wing is, in my judgment, to be commended. The large central hall leads directly into the sculpture-halls on the first floor, and into the galleries for paintings over a portion of them on the second floor. The design is Renaissance and has quite a prominent tower on the corner of Seventeenth Street and New York Avenue. It is suggestive of Italian work, the details and groupings being carried out strictly on a Classical basis. The dome of Mr. Pelz's and the tower of Mr. Stead's are so placed that they would not cast shadows across the skylight. The pen-and-ink perspective is a good piece of drawing but being drawn to a much smaller scale than the other perspectives, and being in simple



Robert Stead, Architect.

black-and-white, while the others are in color, it is overshadowed by the size of its neighbors on the wall.

This competition, if it may be called one, shows clearly the difficulties of comparison where the drawings are made in different styles, and drawn to different scales, and the mistake an architect makes who enters a competition where one of the competitors has been working with and is familiar with the ideas of the building-committee.

LABOR COMES TO THE AID OF CAPITAL.—To prevent a general shutdown of the Chambers glassworks at Pittsburgh, the Workers' Union met and decided to loan the company from its surplus funds the sum of \$50,000. Who dares say now that Labor is the enemy of Capital! — N. Y. Commercial Advertiser.



THE MUTUAL LIFE INSURANCE BUILDING. —  
THE WALKER CONVALESCENT HOSPITAL.  
— PROPOSAL TO PROCURE A RAILWAY  
COMMISSIONER FROM AMERICA.

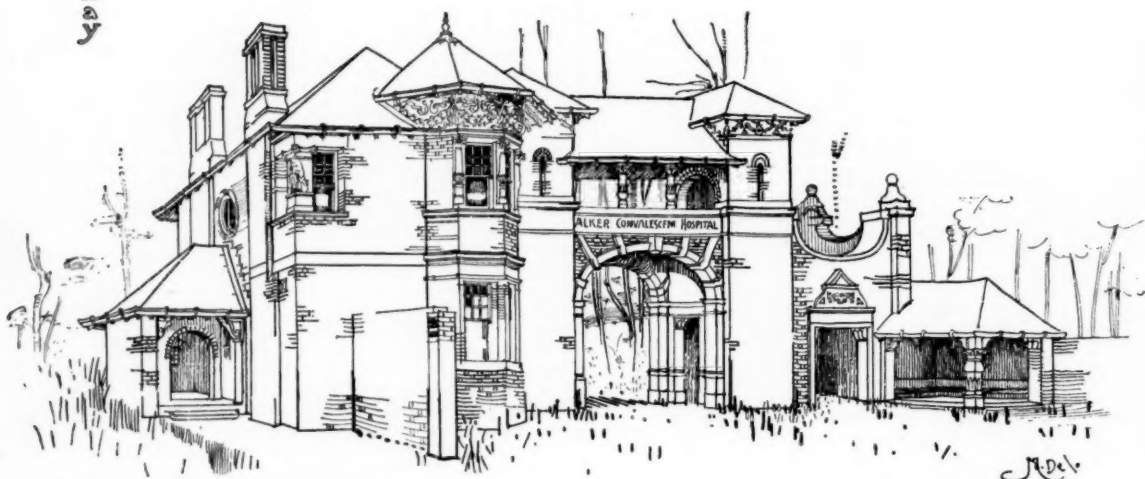
SYDNEY, N. S. W.

**T**HE strike of masons engaged on the new offices for the Mutual Life Insurance Company of New York, to which I have previously referred, has not interfered in any way with the rapid progress of the building. The architect of this fine structure is Mr.

offered of inspecting the drawings in either case; though in matters of arrangement Mr. Kirkpatrick is not likely to be behind, for planning is considered to be his strong-point.

There has lately been opened here a Home for Convalescents which has been called after its founder the Thomas Walker Hospital. By the rules of this hospital it is stated that "it was founded and privately endowed for the purpose of affording the advantages of change of air and proper care and diet in a comfortable home to those requiring, but otherwise unable to obtain, these essentials to perfect restoration to health." The Hospital is built at Concord on the Parramatta River, and the intention is to carry out the wishes of the founder without asking for any contributions from patients, the public, or the Government. When it is stated that about £75,000 have been spent on this institution, exclusive of the value of the site on which it stands, some idea may be formed of the munificence of the bequest, especially as the number of patients is at present limited to sixty-two. Architecturally the hospital has been most success-

G. A. G. A. G.



**Walker CONVALESCENT  
Hospital**

John Kirkpatrick of Sydney, whose design was awarded first place by the New York committee of management in a competition which took place some time ago, and which has been spoken of before in these letters. Mr. Kirkpatrick has been singularly successful in contests of this kind, his designs having been premiated in every competition of note held here during the last few years. The Mutual Life Insurance Building is to be of a free Renaissance type, and will when completed, divide with the new Equitable offices, the distinction of being the largest block of office-buildings in Australia. These



**WALKER CONVALESCENT  
Hospital: Sydney: N.S.W.**



**Water Gate**

two great edifices are within a few yards of each other, and though the Equitable is an exceedingly fine example of American Romanesque, which as an architectural style has all the advantages of novelty in Sydney, still, I think, the Australian architect will have nothing to fear with regard to the comparisons which the size and proximity of the two structures will inevitably elicit. I speak only with regard to the exteriors; the respective merits, or demerits, of the planning I know nothing of, as no opportunity has yet been

fully treated: the planning is excellent and the general effect eminently picturesque. The buildings have been erected from the designs of Messrs. Sulman & Power, architects, of Sydney, and are of an Italian type of architecture. They are constructed of red brick, with stone facings, and are covered with tiled roofs of a low pitch, having great overhanging eaves. These eaves, and the masses of shade produced by deeply-recessed verandas and balconies, give a character to the structure which is unfortunately lacking in most

Australian buildings. It was pointed out some time ago in a paper read before the Institute of Architects of New South Wales, that the besetting sin of nearly all the work erected here is its flatness: "Here in the old Georgian time the builders with the simplest means, and nothing more decorative than a coat of limewash, attained good results; but it was principally because they recognized the value of shadow, and left broader and bolder wall-surfaces than we do." Most of our buildings look as if they were cut out of cardboard.

A charming feature of the building under notice is the water-gate by which the visitor approaches the hospital from the river. Another characteristic gateway adorns the entrance on the land side.

Owing to the scarcity of work in Melbourne it has been found necessary to have the architectural staff in the Works Department reduced; and the President of the Institute of Architects of New South Wales has also deemed it incumbent on him to publish a letter in the *Journal* of the Royal Institute of British Architects, warning draughtsmen not to come to Australia without first making careful inquiries as to the prospects of obtaining employment.

The Government of Victoria will shortly find it necessary to appoint two Railway Commissioners in place of some of those who retire in March next. The Premier who was struck with the management of the railways when he was travelling a few years ago in the United States, is of opinion that it would be advisable to select a successor to the present Chief Commissioner from among the traffic-managers on the American lines. The salary in connection with this office is about £3,000 per annum, and as the Commissioners are appointed for a term of years, and are not subject to political interference, there should be no difficulty in getting a competent man for the post.



## T-SQUARE CLUB.

A MEETING of the T-Square Club was held at the club-rooms, January 17, the subject for competition being a "Club-house for a Rowing-Association." There were eleven designs submitted. First mention was awarded to Wm. C. Hays; second mention, Geo. B. Page; third mention, David K. Boyd.

The next competition was announced "A Monumental Column to commemorate a Battle." Required drawings: plan and perspective view rendered in color. GEO. BISPHAM PAGE, *Secretary*.

## WASHINGTON CHAPTER OF THE AMERICAN INSTITUTE OF ARCHITECTS.

At the meeting in January, the Washington Chapter A. I. A., held its election of officers with the following result:

Glenn Brown, *President*; Robert Stead, *Vice-President*; Leon E. Dessez, *Secretary*; C. A. Didden, *Treasurer*; J. Rush Marshall, J. G. Hill and J. C. Hornblower, *Committee on Admission*.

The officers and Committee on Admission constitute the Executive Committee.

## WORCESTER CHAPTER OF THE AMERICAN INSTITUTE OF ARCHITECTS.

At the regular monthly meeting of the Worcester Chapter of the American Institute of Architects, held at Geo. H. Clemence & Co.'s Office, Walker Building, the following officers were elected for the year:

Elbridge Boyden, *President*; Stephen C. Earle, *Vice-President*; Clellan W. Fisher, *Secretary and Treasurer*.

The reports of the past Secretary and Treasurer were read and accepted. The new Secretary was instructed to prepare a letter addressed to Secretary of the Treasury Carlisle, urging upon him the opening of the designing of Government buildings to competition by private architects. A general discussion followed on foundations, cements, etc.



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

ORGAN-LOFT IN THE CONGREGATIONAL CHURCH, PROVIDENCE, R. I. MESSRS. CARRÈRE & HASTINGS, ARCHITECTS, NEW YORK, N. Y.

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

IN the interior, the Guastavino vaults are very similar to the brick on the exterior, excepting in texture. The ornamentation and plain surfaces are of plaster, which is painted a gray, somewhat similar to the color of Indiana limestone. All the woodwork is painted about the same color as plaster, and much of the ornamenta-

tion is gilded solid, matt. The Ionic columns in the transepts and main nave are of terra-cotta. The pews are of oak, natural finish; also all of the altar furniture and other furniture; the ornamentation being of papier-maché, and gilded solid. The decorations of the chancel are very rich in color, and not easily described. It was very interesting to the architects to have to do with a committee where every man was in absolute earnest, to the extent of travelling to New York, Philadelphia and other cities to examine the materials that were to be used, when they objected to them, but still liberal enough to be finally convinced that they were satisfactory, and to acknowledge the fact when they had seen them.

MERCHANTS' NATIONAL BANK, NEW BEDFORD, MASS.: THE MAIN VESTIBULE. MESSRS. CHAPMAN & FRAZER, ARCHITECTS, BOSTON, MASS.

[Issued with the International and Imperial Editions only.]

## ENTRANCE TO SAME BUILDING.

[Issued with the International and Imperial Editions only.]

## DETAIL OF ONE BAY OF SAME BUILDING.

[Issued with the International and Imperial Editions only.]

IMPROVEMENT OF TWELFTH STREET, ST. LOUIS, MO., AS SUGGESTED BY MESSRS. STEWART, MCCLURE & MULGARDT, ARCHITECTS, ST. LOUIS, MO.

APROPOS of the suggested improvement of Twelfth Street mentioned in the *American Architect* for December 23, 1893, we reproduce the design prepared by the above-named architects at the instigation of a syndicate interested in the scheme.

The picture is not intended to represent an exact or settled plan, but to embody in suggestive form the general idea of the proposed improvement. The idea is one that has been persistently set forth in the columns of the *Post-Dispatch*, and now that the property-owners in the district and the city officials have awakened to the grand opportunity Twelfth Street affords St. Louis to construct, at comparatively small expense, a boulevard which will be famous the world over, they have taken the matter in hand and by their united efforts promise to completely change the present character of the street within the next five years. The plan here shown provides for the widening of Twelfth Street, from Franklin Avenue on the north to the entrance to the Twelfth Street Bridge on the south. This it had been suggested should be done by the city by condemnation proceedings in order that there might be no delay caused by property-owners who did not want to act in concert with the others.

This would make Twelfth Street a grand boulevard 175 feet wide. This is a matter which has already been considered and recommended by the Street Department. The sections that would have to be condemned to make this width would be from Market Street to Clark Avenue and from St. Charles Street to Franklin Avenue. Then to obviate the danger incident to crossing so wide a street, a midway path is constructed down the centre of the thoroughfare made of granitoid or tiling. This is to be thirty-five feet in width and along its length, at intervals, ornamental monuments could be erected. On either edge a high curb of at least one foot would be erected to prevent vehicles from coming too close to pedestrians and immediately next to this pathway the street-car lines would be placed. This would leave a space of seventy feet on either side to the building-line, or fifty feet clear for traffic, allowing twenty feet for sidewalk purposes. A new idea also is to avoid tacking up signs on posts or houses to identify the streets by having their names inlaid in large letters in the granitoid sidewalks.

These improvements, magnificent as they are, will not make the street famous: it is the character of the buildings that may line it that will make it historic.

At present there is much talk of a new court-house, of which, setting aside sentiment, the city is really in need. The old city-hall will soon be vacant, and by the sale of this property and the court-house the city would realize sufficient cash to purchase the west half of the block in which the city-hall is located—that is, the half fronting on the east side of Twelfth Street between Market and Chestnut Streets and to almost complete a new court-house. The half-block in question would cost the city about \$500,000 and the new court-house about \$1,500,000, a total expenditure of \$2,000,000. With two such buildings on Twelfth Street, the success of the Twelfth-Street plan would be assured.—*St. Louis Post-Dispatch*.

HOUSE FOR MRS. LADEW, GLEN COVE, LONG ISLAND, N. Y. MESSRS. ROMEYN & STEVER, ARCHITECTS, NEW YORK, N. Y.

This building is now in course of construction and will cost about \$25,000.

MERCHANTS' NATIONAL BANK, NEW BEDFORD, MASS. MESSRS. CHAPMAN & FRAZER, ARCHITECTS, BOSTON, MASS.

THE BANK OF NORTH AMERICA, PHILADELPHIA, PA. MR. JOHN T. WINDRIM, ARCHITECT, PHILADELPHIA, PA.

## [Additional Illustrations in the International Edition.]

BALCONY OF THE HÔTEL CZARTORISKY [FORMERLY HÔTEL LAMBERT], ÎLE-ST.-LOUIS, PARIS, FRANCE.

[Copper-plate Etching.]

THE building which this balcony adorns was built about the middle of the seventeenth century by the architect L. Leveau, for the President Lambert de Thorigny, and at that time the interior was decorated by Lesueur, Lebrun and Perier. The building was carefully restored in 1860 by M. Lincelle who took the greatest care to preserve its original character. It is probable that the sculpture shown in this plate was modelled by the Flemish sculptor, Van Opstal, under the direction of Lepautre. The building is one of the "show places" of what is left of old Paris.

DETAIL OF THE FRENCH GOVERNMENT BUILDING, WORLD'S COLUMBIAN EXHIBITION, CHICAGO, ILL. M. RENÉ DUBUISSON, ARCHITECT AND M. HENRI MOTTE, SCULPTOR AND DECORATOR.

[Gelatine Print.]

S. FAGAN'S CASTLE, CARDIFF, WALES. — FRONT VIEW.

PROPOSED CAFÉ FOR THE SCARBOROUGH CLIFF BRIDGE COMPANY. MESSRS. BEDFORD &amp; BARRY, ARCHITECTS.

THE illustrations show a proposed café to be erected at the south end of the promenade of the Scarborough Spa. The authors have arranged the café on the first-floor level, with a veranda running round, facing the sea and promenade. On the ground-floor below the café, are the kitchen, larder, etc., with shops and a porter's lodge adjoining the entrance from the beach. It is proposed to carry up the sea-wall to the café level, the upper portion to be built in half-timber work, with a tiled roof. The alternative scheme shows a one-story building at the side of the promenade and facing the sea.

BOAT-HOUSE, RUDYARD LAKE, LEEK, ENG. MR. LARNER SUGDEN, F. R. I. B. A., ARCHITECT.

THE boat-house (with fishing-lodge above) is strongly built of red stone got on the shores of the lake, with brindled-tiled roofs and gables, brick chimney and rough oriels. The bridge, which is of cleft oak, rests on stone piers. There is sixteen feet of water on the boat-house sill at high water as shown in the drawing. The windows of the fishing-lodge are glazed in lead-lights, but those of the boat-house beneath are left open. The effigy of the Lady of the Lake is an old ship's figurehead, of unusual merit, picked up in a Bristol yard, which must have "sailed the Spanish main" for centuries, but is come to an anchorage in still waters at last.

S. GIORGIO MAGGIORE, VENICE, ITALY.



[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.]

## THE MEDFIELD ASYLUM MATTER: A CORRECTION.

BOSTON, MASS., January 17, 1894.

TO THE EDITORS OF THE AMERICAN ARCHITECT: —

Dear Sirs, — I received a marked copy of your paper January 6, 1894, with its editorial criticism on the Medfield Insane Asylum.

The editorial contains a number of mistakes, especially in its statement that the work has been going on and is without the supervision or direction of any architect. Permit me to say there never has been a minute when the work has not been under such supervision. Upon the discharge by the Commission of their late architect, Mr. Tobey, they immediately employed Mr. Wentworth, an architect of good character and standing, I believe, in his profession, who drafted the plans originally of the asylum and who has since the discharge of Mr. Tobey, had full charge, as architect, of the construction of the buildings.

Your further statement that the contractors were invited to name some person to whose satisfaction they would consent to do their work, is also clearly erroneous. A difference having arisen between the contractors and the Building Commission as to payments to be made on account, and claims for extra work, an arbitrator was appointed by both parties to adjust these differences. I suppose such a course is not only proper and expedient, but a very usual proceeding under such circumstances.

Yours truly,

WM. E. RUSSELL.

[As Governor Russell when in office did not make a practice of correcting mistakes that appeared in the public prints, we must, apparently, have gone farther astray than we thought possible in our comments on the Medfield Asylum matter, since he now finds it worth while to make the above corrections. We can only say that our remarks were not intended to do injustice to any one. — Eds. AMERICAN ARCHITECT.]

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A PHILADELPHIAN'S PRESENCE OF MIND. — There are a good many stories about presence of mind, and M. Dupuy's behavior in the chair of the House of Deputies when Vaillant threw his bomb has been the means of recalling some of them. Few are more worthy of being held in remembrance than that told by "R. P. S." in the current number of the *Spectator*. It refers to an incident which happened fifty years ago, but has never become widely known. A collection of Chinese treasures, very rare at that time, as coming from what was then known as the sealed kingdom, was on view in Philadelphia before being brought to London. A meeting was being held in a long and narrow, but lofty upper room above the exhibition. About 3,000 persons were present. At near 9 o'clock the manager of the building came to the leader of the meeting, white with fright, and told him that the floor had sunk nearly a foot, and that in a few minutes more the tenons of the joists might be out of their sockets. The floor would then fall through onto the Chinese museum, and the walls, sixty feet in height, would collapse and be precipitated, with the roof, upon the assembly. This might have caused the death of those present — the foremost people in Philadelphia. The leader explained to the person whom the audience expected to hear that by addressing the assembly from the end of the hall he could withdraw the company from the sunken part of the floor to that where the front walls strengthened the joists to bear the weight of the people. The reply to this was that his family was in the audience, and that he must get them out first. "You shall not," said the leader. "A hint of danger, — a rush — and we shall all be under the fallen walls and roof. Five minutes delay may kill us all together." "R. P. S." continues: "As a boy in the audience I can well remember my surprise at seeing the leader suddenly appear at the far front of the room and tell the people that they would next be addressed from where he stood — the organ-loft. As the audience turned and moved to the front the flooring rose six inches. The people were entertained, partly by an impromptu sentimental song, in a voice without a quaver, in the very face of death, and as soon as practicable they were quietly dismissed. Not a single individual in that great assembly was aware that, by the presence of mind of one man, an awful catastrophe had been averted." — *London Daily News*.

NEW YORK CITY'S AREA. — How many people have ever stopped to inquire how many dwelling-houses there are in New York City? There are 81,828, with an average of 3.82 families to a house and 5 persons to a family, or 19 persons to a house. Twenty years ago the average was 14. Ten years ago it was 16.5. Ten years hence, from present appearances and at the present rate of increase of flats and apartment-houses and the abandonment of small brick dwellings, it will be 22. New York does not stand very high on the list of American cities in respect to area, being, in fact, the smallest geographically of any of the big cities except Baltimore, Cincinnati and Brooklyn. New York covers about the same area as Fall River, Buffalo, Denver, Duluth, or Sioux City. Chicago is four times as large, Philadelphia is three times as large, and New Orleans, St. Louis and Washington cover territory 50 per cent greater. Des Moines, St. Paul and Minneapolis are each of them larger than New York. San Francisco, one-sixth of the population, is slightly larger. Advocates of a "greater New York" find encouragement in the fact that the population of the two cities of New York and Brooklyn, exclusive of outlying towns and regions included in the scheme, would foot up 2,915,000 against 2,447,000, the population of Paris, and 4,230,000, the population of London. New York-Brooklyn would then be the second largest city in the world. New York is now third and Brooklyn the tenth. Together they would have an area of 68 square miles. The area of London is 122 and of Paris 20. New York is one of the healthiest cities in the world, and is becoming more so each year, the death-rate from consumption, for instance, now being 3.09 against 3.89 in 1880, 4.41 in 1872 and 4.65 in 1865. — *N. Y. Sun*.

FLEXIBLE STONE. — Flexible stone, though by no means a novelty, is a material with which every one is not acquainted. Most museums containing geological specimens have a piece of elastic or flexible sandstone in the collection, but looking at it through a glass case is not an altogether satisfying process. The peculiarity of the stone is that, while it looks like an ordinary piece of sandstone, it is capable of being bent in the hand with considerably less force than is required to bend a piece of wet leather of equal thickness. When examined with a lens, by reflected light the particles of which it is built up are seen to be movable individually by using a needle-point. When a thin slice of the stone is looked at under a lens by transmitted light, the fragments are seen to be locked together, like the parts of a section puzzle-top, fixed, but only loosely. — *Invention*.

PIRATED FRENCH STATUETTES. — A decision was given at Paris last week in favor of the Soleaus against the Meriden Britannia Company of Meriden, Ct. Judgment was also given against Simpson H. Miller of Wallingford, Ct. In the former case the Company was condemned to pay a fine of 1,000 francs and to publish the judgment in 10 newspapers. In the case of Miller the court ordered that he pay a fine of 1,500 francs and also publish the judgment in 10 newspapers. The plaintiffs charged that the defendants "pirated" French statuettes, the original models of which were owned by the plaintiffs. It was stated during the trial that the defendants, by supermolding, reproduced thousands of these statuettes, and these were sold not only in America but in France, at less cost than the Soleaus charged for their copyrighted production. The case had been pending for two years. — *Springfield Republican*.