THE JAPANESE GOVERNMENT BUILDING AT THE CENTENNIAL GROUNDS IN FAIRMOUNT PARK.

By JOSHUA ROSE.

THE erection of the above building, to be occupied by the Japanese Commissioners, is exciting a great deal of curiosity, not only on account of its peculiar method of construction, but also on account of the peculiar tools and appliances used by the workmen employed in its erection. The workmen, who were sent from Japan with the four car-loads of timber necessary to the construction of the building, appear to be intelligent and expert artisans, and handle their tools in a manner showing that they feel a complete mastery over them.

The members of the building fraternity whom we met on a recent visit, after minutely examining the framework of the structure, pronounced it a "beautiful piece of workmanship," but "a complete Chinese puzzle." Not a nail or a screw is to

be found in the whole of it. The sills are of Japanese fir, the joints, mortices, and tenons fitting with great exactitude. Fig. 1 represents the external appearance of one of the sill splices. A representing a wooden wedge driven lightly home. In addition to the apparent joint, there is in this splice a dovetailed tongue and groove running along the centre of the wood from end to end of the splice. The splice presents the same appearance top and bottom and on opposite sides, and fits very neatly together. The splices and mortices and tenons were all cut in the timber when brought here; nor are there any evidences perceptible, upon a close examination, to indicate that they have ever been tried together, yet they go together, a driving or sliding fit, according as the necessity of the case demands, with great accuracy.

The finished pieces, such as the uprights, were brought from Japan, carefully packed and wrapped in paper, and when they are first unwrapped the surface of the wood has a gloss upon it almost amounting to a polish; exposure to the air, however, soon destroys the gloss, but leaves the face still smooth and even to a degree quite unusual in work of such a class.

The uprights are of Japanese red cedar, which is a very close as well as a straight grained wood, and free from knots. The panelling over the doorway is of a species of Japanese oak, being a very close-grained wood and a scarce one, even in Japan. The workmanship displayed in this panelling is exceptionally excellent and attracts much attention. The mortices and tenons go together a very even fit, and are fastened by taper square wooden pins, and are, we were informed, of peculiar construction. All the information, however, to be gathered upon this point was that they combined the principle of the dovetail and the mortice and tenon. Their external appearance, however does not indicate any internal intricacy. Referring now to the tools used by the workmen employed, the remarks of a house-carpenter made to his companion appears very appropriate. Looking at the Japanese saw represented in Fig. 3, he said, "Either us or them fellers has got a good deal to learn in the way of carpenters' tools."

JAPANESE ADZE. FRONT VIEW.

The blade of this saw is about 8 inches long and of about the thickness of the thin end of an ordinary dinner-knife, say $\frac{1}{2}$; it is of even thickness from end to end, including the tine, and is held to the handle by being wedged in a mortice. The handle is of a Japanese wood similar in appearance to red cedar, but somewhat closer grained, and is about ten inches long by an inch or an inch and an eighth in diameter.

Fig. 4 represents another of the saws, of about the same size and thickness as that shown in Fig. 3. Both of these

saws performed their cutting while being drawn towards, and not propelled from the workman, but we were told of one that would cut worked both ways, the form of tooth being after that shown at A in Fig. 3; we were not permitted, however, to see the instrument.

Two of the workmen are very skilful with the adze, which tool is represented half size in Fig. 5, the blade being cast-steel, and the eye of wrought-iron welded on. The handle is of round wood, of nearly an inch in diameter, the bark being merely stripped off. In appearance it much resembles English maiden ash; its length is about 2 feet, and it must have a little spring in it if wielded heavily. One particularly of the workmen uses this tool very dexterously, leaving but very slight tool-marks indeed. Their chisels are of the usual shape, save that the under face is hollowed as shown in Fig. 6.

Their planes are about $2\frac{1}{4}$ inches wide, $1\frac{1}{2}$ thick, and 10 inches long, and cut while being drawn to them, and not while being pushed. The plane-blades have no wedges to lock them, being simply fitted very finely to their places, and forced through with the palm of the hand, the workman forcing it through to the requisite distance by the eye. The

blade has a small amount of taper upon it, and forces through very evenly and slowly, nor does it appear to be liable to move from its position, while the shavings cut by it are in appearance like satin ribbons; part of this is no doubt due to the excellent quality of the wood, and part of it to the thinness of the shavings.

Instead of a mallet, iron hammers, of about half a pound weight, are used, both the faces being round, while to drive nails, a small hammer, having a round face at one end and a spike-point the other, is employed; a blow with the spike-end makes an indentation to receive the nail-point, the other face of the hammer being used to drive the nails home.

It will not be presumed, from the appearance of these tools, that the excellence in workmanship which undoubtedly exists in the structure being erected, is in any way attributable to the superiority of the tools, but rather to the quality of the workmen. Here, however, the element of time should be taken

Fig. 4.

into account; hence the only inference that can fairly, under the circumstances, be drawn is, that the workmanship is far superior to what we might have expected from the Japanese in so large a structure, especially considering their tools. Nor is it likely that improved tools would in their case produce greater excellence of workmanship, because all experience goes to show that with improved tools, machinery, and appliances, the necessity for super-excellence in craftsmanship departs, and the demand being gone the supply ceases with it. We have not succeeded in producing any better specimens of workmanship than our forefathers produced; we have only succeeded in being able to produce it in much larger quantity and much more easily and cheaply. We may have more to say on the building in question as its construction proceeds.

[[Building News.]]

PROSPECTS OF ARCHITECTURE IN THE UNITED STATES.

To spend any thought or study in designing a detail is to the American an unnecessary waste of labor, if he can save the trouble by any more expeditious process. He is always in a hurry. This notion is stamped on all the principal buildings in the United States. The Capitol at Washington displays the *hautecouture* of American art, with many of the faults we have named. We have here grandeur of conception spoiled by want of refinement in detail. The peristyle is overpowering for the substructure, and its cast-iron dome is another of the inconsistencies. Mr. Fogarty says he has seen most of the great domed structures of Europe, but none of them has so fine an effect seen under a clear sky. The enlargement of this structure is due to Mr. Thomas W. Walter. Another of the vices of the system of spurious architecture that prevails in America is the indiscriminate use of different styles. Classicism and Gothicism have by turns ruled the taste of the Americans. The Orders and Gothic features have been applied promiscuously to the buildings. A professing indifference to the merits of each has been carried so far that architecture has become a mere dressing-up of buildings, devoid of that conscientious application which has characterized the work of the older nations. There has never been such a thing as a distinctiveness of art creed in America. We should not count this a vice if architects had boldly originated any one idea; but this is so far from being the case that the use of the styles in these cities has degenerated into a vulgar travesty of features. Late buildings have been crude burlesques of Greek, Renaissance, and Medieval works. The most pretentious details of Italian and Gothic are conspicuous. We have seen Venetian Gothic used in structures

in the most literal sense; features selected in scrap-book order and stuck on to façades in which not the faintest regard to appropriateness appears. Consistency and connection of parts, grouping and adjustment of proportions, seem utterly lost sight of; and this is one great characteristic difference between English and American architecture. An American design has always too much of what we should call a schoolboy's attempt about it. It is overloaded with ungraceful ornament, or displays in a boasting way the vocabulary and exaggerated detail of the style. The Smithsonian Institute at Washington is an instance. Here a florid Norman Gothic is the style adopted, and there is scarcely a single feature omitted that belongs to this style. We find the same meaningless application of style in other buildings. The Treasury buildings in the same city have a cold machine-designed uniformity, as Fergusson calls it, in the wings and portico. Grace Church, New-York, is full to overflowing of this ornament. It has, of course, all the cathedral attributes, double-aisle transepts, internal plaster vaulting; a western tower and spire of most ornate and elaborate detail, with flying buttresses, and an array of pinnacles, which latter surround the church in nave and aisles, gabled buttresses, tracery, and all the other paraphernalia of Mediævalism in its highest flights. Many others, as the Church of the Holy Redeemer, in Third street, are in a sort of Lombardic, while the Mormon temples exhibit all the trumpery "magnificence" of the worst florid Gothic. Instead of discarding the mistakes of our earlier Gothic revivalists, the Americans seem to delight to reproduce them with a glaring and exaggerated vulgarity. They appear to follow our fashions pretty closely. Not long ago the pseudo-Gothic of forty years since was adopted for churches instead of Italian; and now the Americans are revelling in the vagaries of another of the exploded fashions we indulged in—the Venetian Gothic. Mr. Fogarty remarks the earlier Puritan settlers hated Episcopal and its surroundings, but built all their best churches as like those of the Episcopal Church at home as possible. Perhaps the writer is confounding the present buildings in vogue with the earlier works. The latter have been supplanted, and were in the heavy meeting-house style. It was only when prosperity began to appear that the change took place, and the churches, out of rivalry to those of the mother-country, began to assume Episcopal features. The writer says in Boston, Hartford, New-Haven, and other Eastern cities, duplicates of the London churches may be counted. St. Martin's-in-the-Fields appears to be a favorite model—probably, we imagine, because it is the first church that strikes our cousins in coming to London. Perhaps the spaciousness of the area it is located in, or the impression that it is "the finest site in Europe," may have had some influence. St. Martin's, we are told, has been reproduced frequently in wood, and sometimes in stone. In Boston the Unitarians have made a good copy of it in the latter material. In New-York, Trinity Church, by Mr. Upjohn, is an accurate reproduction of an English model; and in Brooklyn, Trinity Church vies with the earlier buildings of the Revival. Later efforts by well-known New-York architects, while indicating more knowledge of detail, are still far behind the works of the same class in England. Messrs. Renwick and Sande's Roman Catholic Cathedral in Fifth avenue is one of the most recent and pretentious buildings devoted to ecclesiastical purposes. It is built in the Decorated style in white marble. In nearly all recent attempts the same love of extravagance in detail and plan is evident; sensational and acrobatic effects are produced, and gilding

and color are applied by the yard with a manufacturer's taste. A Dutch Reformed Church in New-York, by Mr. Wheeler Smith, is spoken of as displaying a good deal of taste in Gothic detail, though rather extravagant. In some of the recent attempts to adapt denominational buildings to large congregations, the corners of the interior of these structures have been rounded off by studded partitions, "so that the internal plan and section are often circular or elliptical," the outer forms being square. A new church in Fifth avenue, for the Rev. John Hall (late of Dublin), by Mr. Carl Pfeiffer, and another by Mr. Eidlitz, are remarkable for this kind of planning, though the result may be extremely shocking to the orthodox European architect. Mr. Fogarty alludes to the temptation in America to solve the great problem of providing a spacious auditorium for hearing and seeing at the same time as maintaining a dignified ecclesiastical character. It is a puzzle to us why the American architects have not made a more successful solution—they are freer from ecclesiastical precedent and restraints than their brethren at home—they do not lack means; but it is, perhaps, the thoughtless hurry that prevents them. The Rev. Mr. Talmage's tabernacle at Brooklyn is an attempt to combine the semicircular plan with Gothic, but it is spoken of as "any thing but a success." The Rev. Mr. Hepworth's new tabernacle in New-York is the work of an architect enjoying an unenviable notoriety for dressing up these curvilinear buildings with cheap Gothic of galvanized iron. But, we repeat, these things need not be; there is no manner of reason why Gothic should not, in the hands of a real architect, be applied to any form of plan. It appears, however, with all these defects, the American churches are much more comfortable than our own—the pews and passages are carpeted, and warming and ventilation attended to. We are much afraid, however, some of our good Churchmen at home would shrug their shoulders at these atoning merits! But Mr. Fogarty gives us a glimpse of the progress of secular architecture, in which the American appears to be more "at home." Mr. Mullett, architect to the Treasury, has, during eight years of office, erected several buildings to the extent of some £100,000 to £1,000,000 sterling each. These are executed in a substantial manner, though architecturally they conform to the Governmental type—a style developing in the States, according to Mr. Fogarty, and which is called "American Renaissance." Among the new buildings in this style are the State Capitol, New-York, by Mr. Fuller, and City Buildings, at Philadelphia, by Mr. McArthur. The Fifth avenue at New-York is said to exceed in magnificence any street in Europe. The climate of this district is favorable to architecture; there is a total absence of smoke and a bright, clear sky—an advantage certainly not a little consolatory to the American when he compares his own climate to that of