

his friends, his family, and his successors, the high estimation in which he was held by his professional brethren; and a prize which he might feel as much pride in accepting, as they did in offering it. Nor were they the only persons who had appreciated Mr. Donaldson's services: he was a corresponding member of the French Institute, and Professor of Architecture to one of the more recent, and he hoped one of the more enlightened, institutions of the present day. He had been severely afflicted for some time; and, therefore, had no opportunity of knowing the wish of his colleagues to present to him this medal; and their gratification was increased by seeing him again in health and vigour. His lordship, in conclusion, again expressed the extreme pleasure, satisfaction, and happiness he felt, in being the medium of conveying to Mr. Donaldson a testimony of the esteem and regard of his professional brethren.

We need scarcely say this address was received with great applause.

Professor Donaldson, on rising to acknowledge the honour conferred upon him, was greeted most warmly by the meeting. He should have been glad, he said, if, with propriety, in receiving this medal, he might have said without speaking a word; for words were quite inadequate to express his sentiments on this occasion; but he should be sorry if his silence were to lead to any misinterpretation of the gratitude he felt for the high honour conferred upon him, and more especially in receiving it at the hands of his lordship, who had ever been the great friend of the institute. It was now nearly twenty years since many members of the profession were led to reflect that architecture and its professors had not that position in society to which they were entitled. The members of the three "learned professions" had peculiar advantages; and surely architects were entitled to the like distinction. It was true the members of the professions referred to, devoted many years to most important studies, and came into the world after gaining honours and distinction; but in what respect were the architects behind them? They also had to pass years in learning the inferior departments of their professions; and also many years abroad in the study of the principles of ancient art. Such sacrifices, such privations, and such dangers for travel was not devoid of danger, entitled them to an equivalent position in society.

With that feeling the Institute was proposed; and his lordship, their President, shared that feeling, and placed himself at their head; and they had consequently achieved the utmost success. In speaking of a topic of the day, which was every one's mouth, he might, perhaps, compare that institution to the Great Exhibition, not certainly in the nature of the rooms they occupied, but in their diversified contents; for the honorary and corresponding members of the Institute had sent, for the instruction and delight of the members, most interesting contributions; books, prints, and drawings, of the greatest value, from every country of Europe, and indeed almost every part of the world. It had been said that architects had not rendered full justice to the designer of that wondrous edifice; but justice was not done to the profession in the accusation. He, like all his brethren, was ready to acknowledge merit wherever it was to be found; and certainly the highest credit was due to Mr. Paxton. It must be remembered, however, that Mr. Paxton was a man of one idea. Brought up to a gardener, he constructed with the greatest ingenuity a building for the reception of that noble plant the Victoria Regia; and finding in that a construction capable of extension, he multiplied that idea till he produced the great building which had been so successful. No one could deny that this was a happy idea; but considering the scientific skill of Messrs. Fox and Henderson, the valuable suggestions of Mr. Barry, and the artistic taste of Mr. Owen Jones, it must be felt that to such a combination we were indebted for the most successful edifice of modern times. One other subject he would beg to mention. He had been engaged for many years in the

instruction of the junior members of the profession; and feeling a peculiar pleasure in being so associated with the freshness and ardour of youth, he could not but feel a deep interest in their welfare. It had, therefore, produced in him great sorrow, as it was deeply regretted by the council of the Institute, that the younger branches of the profession had not responded to the appeals made to them by the council and the members. They would do well to imitate the course of study pursued in the learned professions, the younger members of which gained university and other honours, which were afterwards of the greatest value to them. They might be assured that the designs submitted to them in competition for the Institute prizes were worthy of their most careful study; and nothing could be more gratifying, as an assurance of their future success, than the ability to say that the members of that body,—their seniors in the profession,—had rewarded their early studies. Such honours had a most impressive effect upon the minds of others, whilst they enabled their recipients to offer themselves with greater advantages than others could, in any situation in which they might wish to place themselves. They, the senior members of the profession, had done all they could; but they must look to their successors to maintain and elevate its character in the sight of Europe. He feared he had pursued the subject too far, but he could not avoid impressing these views upon the generous energies of the younger members of the profession. He would conclude by expressing his deep sense of the honour conferred upon him by the selection of his name on this occasion by the Institute, and by the confirmation of that selection by Her Majesty and the Prince Albert. He should ever retain a deep sense of gratitude for so high a distinction, and his best efforts would be always at the service of the Institute, to promote its interests, and confirm its successes.

A liberal display of drawings, prints, and illustrated books, attracted the attention of a crowded meeting; and we may especially mention a very choice collection of autographs exhibited by Mr. Robert Cole.

MATTERS CONNECTED WITH THE GREAT EXHIBITION.

Portland Cement Beams.—The exhibitors of the Portland Cement Beam, mentioned in a communication signed "H. B.," in our last number (p. 324), write as follows:—

"In noticing the beam of hollow bricks and Portland cement which we have erected in the outside court of the Great Exhibition, your correspondent discovers that no less than four courses of the brickwork of the said beam are interwoven in every course and under every brick with strong hoop-iron; which induces him to stigmatise the whole experiment as a mere farce, and to suggest that the Royal Commissioners should have the whole deception at once removed. He then refers your readers to a large slab of the same cement, made by another firm, very near to our beam, and recommends it to their inspection; but had he been an impartial critic, he should have read the notice affixed to the beam, which is to the effect that this beam, constructed of Portland cement and hollow bricks, is identical in size and general character with one built of common bricks and Roman cement by Messrs. Fraucis, White, and Co. in the year 1836, at Nine Elms, and which, after standing eighteen months, was broken down by a weight of 50,000 lbs. The notice also refers to General Pasley's work on Cement, p. 164, which describes that beam as built at the suggestion and under the advice of Mr. Brunel, who having, in the year 1835, built one himself, in which he employed a quantity of hoop-iron, prescribed to Messrs. F. and Co. the dimensions of this beam, and the way in which the pieces of hoop-iron, fifteen in number, should be disposed. Everybody knows the extent to which iron bond is now used in walls to give them additional strength, and while we fully allow that it would be an interesting experiment to try the strength of a beam so bonded against

one without iron, it is clear that such was not the intention of the present experiment. Our object was to test the strength of Portland against Roman cement, and the only way to do this was to build a beam under the same conditions as the Roman cement beam above referred to.

With this explanation we leave you to judge whether it be right to pronounce this experiment a deception. The substitution of hollow for common bricks in this experiment, only serves to give additional interest to it, though it places us at some disadvantage in respect of the surfaces to be cemented."

We get the following from the *Expositor*.

"**The Boiler-House.**—To supply steam for the gratuitous use of exhibitors of machinery in motion the commissioners erected a boiler-house without the Great Building, on the south side of 'Roten-row,' at a distance of 155 feet from the north-west angle of the Palace. The whole length of the boiler-house is 96 feet from centre to centre of columns, and the width 24 feet, the principle of construction being the same as that adopted in the 'Industrial Palace'—cast-iron columns at intervals of 8 feet and 24 feet respectively, and 24-foot truss-girders, forming the framework of the structure; while, instead of riose boarding as an inclosure, 9-inch brick walls are substituted. The building is divided into three compartments by two cross-brick walls of one brick and a half in thickness, which support a capacious cold-water tank. The largest compartment, at the east end, is for the boilers, being 50 feet in length; the middle compartment, intended for stores, 20 feet; and the western compartment, also for stores, 26 feet in length respectively. From the level of the ground to the top of the truss-girders is 22 feet 2 inches. Over the boiler department the roofing will be of corrugated iron, whereas over the western division Mr. Paxton's 'ridge and furrow' roofing, exactly similar to that of the great building, is in the course of construction. The tank is formed of cast-iron plates, bolted together by means of internal flanges, in the ordinary way. It is 21 feet square, and 4 feet 6 inches in depth; consequently will contain rather more than 5½ tons of water. There are altogether five boilers, all set in brick-work: the largest one is in the middle, and is from the works of Messrs. Galway, of Manchester, consisting of two large horizontal tubes or cylinders communicating with each other at 4 feet 10 inches from the front of the surface, and at the other end four vertical tubes of 8 inches diameter, passing from the lower to the upper part of the boiler, and 10 conical tubes for the same purpose; the whole length of the boiler being 13 feet, and the diameter 2 feet 4 inches. The smaller boilers, two on each side of that already mentioned, are of the high-pressure multitubular construction, as used for locomotive engines, being 3 feet 9 inches in diameter, and consisting of 41 horizontal tubes, each of 2½ inches diameter: a cast-iron bracket is riveted to each side of the boiler, to secure it to the brickwork, the flange first acting on the bottom and sides of the boiler, which is supported intermediately by two cross walls, and returning through the tubes towards the chimney, which is fixed at the furnace end of the boiler. The chimney is constructed of iron plates, riveted together, being circular, of 16 inches clear diameter, and 21 feet high. The pipes to convey the steam into the 'machinery in motion' department are of cast-iron, of 8½ inches diameter internally, connected together by flanges in the usual way, and coated externally with felt. The underground channel for these pipes is formed by a foundation of 3-inch paving, on which are built dwarf 9-inch sides of brick, in cement, 21 inches high, the whole being covered at top by two planks, the lower one of 4 inches and the upper one of 3 inches in thickness respectively."

"**Effect of the Exhibition on the Operatives.**

—The *Times* makes the following remarks:—"It is a question of deep and general interest how the Exhibition will tell on the masses, particularly on those who are somewhat prepared by the nature of their employment. All has been done that can be done, and it now only remains to await the