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THE INTERNATIONAL EXHIBITION.

From the *London Mechanics' Magazine* of the 9th of May, we copy the following extracts relating to the WESTERN ANNEXE, or Machinery Department, of the International Exhibition. This is the first of a series of articles we shall from time to time publish from this and other similar journals, which we doubt not will be of great interest to our machinists and practical men, and may be the means of inducing some amongst them—who might otherwise have been indifferent to the subject—to put forth all their energies and skill to make a suitable display in the corresponding department of our own Provincial Exhibition, to be held in this City in September next.

“The Western Annexe is undoubtedly the point of attraction to mechanical men. It is impossible, indeed, for any one who has been accustomed to the music of machinery in motion to pass along what Mr. Robert Hunt designates ‘the fine perspective arcades’ of the Western Annexe without being himself moved. The amount of thought and labour (to say nothing of money) which have been expended in preparing that show can be fully appreciated by those alone who have been engaged in the fitting up of engines and machinery, and who are conversant with the duties of the drawing office, the pattern shop, the foundry, and the erecting department. There is not a point of minutest detail in the whole of the varied and ingenious mechanical appliances which fill the Western Annexe which has not demanded careful calculation, and the exertion of great practical skill. The curious may find an ample field for study in the peculiarities of workmanship exhibited in the machinery and tools of different manufacturers; little crotchets and quirks reveal themselves to the close observer which by the general looker-on are unnoticed. Indeed, some makers of machinery, although ever engaged in devising machines for accomplishing new purposes, or superseding hand labour, yet have their individualities so strongly stamped on their productions, that it needs no brass plate nor ‘spirit from the grave’ to tell us whence those productions came. As the botanist does not fail to decide to what family or genus a plant belongs by an examination of its petals or its stamens, so does the initiated mechanist at once declare from whose factory came the engine, the planing machine, or the steam hammer which may be brought under his notice. We have long been aware of this mechanical idiosyncrasy, so to speak, but the idea was strengthened by our examination of the thousand and one specimens of engines and engineers’ tools which fill the Western Annexe.

“The steam-power which gives motion to the whole of these—or at least to those which are intended to be put in motion—is derived from a nest of boilers placed in a boiler-house beyond the Annex, and in the rear of the conservatory of the Horticultural Gardens. The arrangement and the construction of the boilers somewhat pleased us, and it may be well to give a few particulars in reference to them. There are in the whole six boilers; these are cylindrical, and of the high pressure kind. They are each thirty feet in length, six feet six inches in diameter, and they all have double fire-places within their flues.

“Ranged side by side, horizontally, at convenient distances from each other, and placed high enough and not too high for the stoker’s convenience, they form a model of good boiler setting. There are no abominable stoke-holes, the temperature and dust of which stifle and choke their unhappy occupants, but all is above ground and accessible. Messrs. Hick, of Bolton, were the makers of the Exhibition boilers, and they have no reason to be ashamed of their work. So extensive is the demand made upon the steam mains—two of which traverse longitudinally each of the ‘fine perspective arcades’ of the Annex, in trenches made for their reception—so great is the demand made upon these for keeping the machinery moving, that the whole of the boilers have to be in use at the same time, and a pressure of not less than 70 lbs. on the square inch maintained.

“Smoke-consuming fire-doors are attached to the furnaces of the boilers, but these, we believe, effect but partially the object sought. The flues communicate with a chimney of large diameter, but of low elevation at the back of the boiler-house, and the whole of the building containing the boilers with the chimney itself were completed, under the superintendance of Mr. Jacobs, in the short space of nineteen days.

“This, then, is the source of power for moving the masses of machinery within the Annex, and it would have been unwise to have omitted describing it. Of course, from the main steam arteries, in their subterranean but easily accessible beds, branch veins diverge to, and connect them with, the various engines to be put in motion, and these branches again are fitted with stop-valves, under control of the respective attendants.

“It was our intention to have spoken, in the first instance, of the foreign machinery in the Western Annexe, for it would be far more gracious and graceful to do so than to bemoan our own inordinately, and have no words of kindness for the inventions of our neighbours. It is a fact, however, that much remains to be done to make the foreign mechanical branch complete, and possibly it may be well to defer remarking thereon until it be so. There are some excellent tools displayed by Zimmerman, of Chemnitz, Saxony. These are put in motion by two or three lines of light shafting, supported on columns, and fitted with drums and straps, and each machine has its price affixed. From the excellence of the workmanship about these contrivances, which, generally, are for the fittings of an engineer’s shop, and their low price, we much question whether our English toolmakers will not find it difficult to compete with the Chemnitz work.