

MANUFACTURING REVIEW.

FEBRUARY.

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ENGLISH INDUSTRIAL EXHIBITION FOR 1862.—The building now in course of erection at South Kensington, and intended for the great World's Fair of 1862, will be completed by the middle of February next, and opened to the public by the 1st of May. It will be the largest building in the world. It is said that more than 18,000,000 bricks will be used in constructing the enormous walls, and that the 800 girders and 1200 columns required for the support of the dome and building, will contain about 4000 tons of iron.

Great enthusiasm has everywhere been manifested in the project. Already many of the departments are closed to exhibitors, as the space has been taken up by earlier applicants.

There are 4,425 applications for places from French manufacturers alone—although in the great London Exhibition of 1851, their number did not exceed 1,700.

Our national industry will, no doubt, be fully represented there, as every facility is open to all exhibitors. The Commissioners appointed by the President to represent American interests on the occasion, have already taken measures to secure, from our government, the grant of a means of transport, by which articles for Exhibition are to be conveyed from the United States to London and back, free of charge to the exhibitor. Persons desiring to forward goods, &c., can make all necessary arrangements by communicating with Robert Partridge, Esq., the Secretary of the Commission, Patent Office Building, Washington.

Each foreign Commission is expected to nominate a jurymen for every class and sub-class in which staple industries of their country are represented, the whole to constitute an international jury, by whom the medals and prizes are to be awarded.

The many whose occupations or limited means will, on the coming occasion, prevent their going to the Great Exhibition, will, doubtless, enjoy the satisfaction of having "the mountain come to them," in the shape of innumerable photographs and stereoscopic views, the exclusive right of taking which, has been purchased by an enterprising photographer for the modest sum of £7,000.

HOW STRAW PAPER IS MADE.

The art of manufacturing paper of straw has made rapid progress since its discovery. The paper was first made in this city in 1854. Although of a dingy yellow hue, harsh and brittle to the touch, and scarcely to be handled without tearing, its production was deemed the marvel of the age, (as, indeed it was), and

the very least of the many glorious auguries of it was, that it should entirely revolutionize the newspaper business in time. In those days the straw was most unscientifically boiled in open tubs, and consequently it was never perfectly freed of its silica; and being silicated it was found almost impossible to wet it down for presswork, so that the paper was either too much printed, or not printed at all, and a growl went up from the reading public of alarm and indignation.

Under various mitigated forms, the evil, nevertheless, continued for years, and the growls grew fainter and fainter as the people's eyes and perverted tastes became accustomed to it.

About eighteen months ago letters patent were secured for various important modifications of the original process. The method of making straw paper is as follows:—

The straw is first passed into a cutter, where by it is reduced to lengths of from three to four inches. It is then thrown into large vats, and thoroughly saturated with weak alkali. A most unpleasant odor hence arises, somewhat similar to that perceptible in large breweries, but we are informed it is not prejudicial to the health of the workmen. This operation of mixing is termed "breaking down," and changes the straw in colour to a dark biske. It is next filled into large air-tight boilers, fourteen feet in diameter, subjected to a pressure of steam ninety pounds to the square inch, and another alkali. Each of these boilers will contain eleven thousand pounds of broken straw. It is then ground into pulp, in the same method and by the same machinery that have hitherto been employed in the manufacture of rag paper. It has now been changed to a very dark slate colour, and it would be difficult for us to recognize in it any element of the bright yellow straw of an hour since, if we were not previously acquainted with the marvellous nature of the transformation. After this it passes into a series of vats, where, by means of certain bleaching powders, it is brought to a hue of snowy whiteness, and reduced to a proper consistency by water. The mass now bears much resemblance to plaster-of-paris in solution, and is ready to be worked up into paper.

The most interesting process yet remains to be described, but we must pass into another apartment to witness it. At the eastern extremity of the room is a sort of trough, into which the pulpy liquor is pumped by steam power, and from which it flows upon a horizontal sieve of very fine copper wire. The fibres of the pulp at once arrange themselves on this