of a uniform thickness throughout. All these conditions, which could not be obtained by hand sawing, are incidental to machine work.

As soon as the log has been broken down, and cut into boards of the requisite thickness, it is, if wanted for immediate use, placed in the seasoning house. This is a steam-tight building, constructed of rivetted iron plates, in the same manner as the boiler of an engine. It is fitted with steam-pipes, and it is by the action of the steam that the wood is seasoned—a few hours being sufficient to produce the same effect by this process, as would require months in the ordinary way. When seasoned it is handed over to the department by which it is intended to be worked up.

There are separate buildings, each having the necessary staff of workmen, for the manufacture of each description of article. One set of men make nothing but bedsteads, another only chests of drawers, a third packing cases, a fourth doors, a fifth sashes, a sixth doors, and so on. The wood for each kind of article is sawn out by the machinery and stacked separately. It may give some idea of the amount of work produced in this establishment by this division of labor, when we state that a thousand bedsteads are undergoing the process of manufacture at once; that a single boy, with a morticing machine, is capable of morticing one hundred doors in a day; that, on an average, four hundred pairs of sashes are sent out, glazed, and ready for use every week; that the wood consumed annually in making soap, candle, wine and other cases, alone, amounts to four million feet, and that the value of this single article of production is over £6,000 annually.

The rapidity and ease with which the circular saws, working on rack benches, reduce heavy pieces of timber into boards is something startling. A log, say fifteen inches square, and fifty or sixty feet long, is reduced into strips as easily, and almost as rapidly as a lady could cut a sheet of paper with a pair of scissors. These rack-benches are among the most expensive machines used. They were made on the premises, at a cost of about £1,500 each. The men attending them have little else to do than look on, and supply the machine with fresh timber as often as required.

Another ingenious tool, and one peculiar to this establishment—the invention of Mr. Nicolls, and made on the premises—is a machine for cutting laths. It is capable of producing ten thousand laths per day, and is said to be superior to any thing of the kind ever before invented. To enumerate all the purposes to which steam machinery is here applied would be tedious. In addition to the large sawing machines there are others for planing, for cross-cut sawing, for grooving and tongueing, for morticing, for cutting tenons, for moulding and for various other purposes.

The consumption of cedar amounts to 80,000 feet of cedar and 40,000 of pine weekly. No imported wood is used, unless, from some unusual circumstance, colonial cannot be procured—as the latter is deemed preferable on many accounts. The stock on hand usually amounts to about 2,000,000 feet. The consumption in 1862 was upwards of 4,000,000 feet, and is fast increasing. A considerable export trade is rapidly springing up to Victoria, Queensland and other places. The Sydney made articles are fast driving the American out of the market to the other colonies, as they can be produced much cheaper than foreign goods can be imported, and are very superior in finish and general quality.

It is somewhat surprising to know that notwithstanding the enormous quantity of goods manufactured, and with all the facilities at their command, Messrs. Moon & Co. are unable to supply orders fast enough. The demand is always in advance of their powers of production, although new adaptations of machinery are constantly offering greater facilities for the supply of the goods which they manufacture.

We may mention, in order to show the facilities effected by machinery, that a boy can mortice 100 four-panel doors daily, at a cost for wages of 3s. 4d. and that this work, if performed by hand-labor, would cost about £10. That is, perhaps, an extreme instance, but the difference in the cost of making mouldings, &c., if not quite so great, is sufficiently remarkable. Most persons not acquainted with the facts are under the impression when seeing packages of doors and sashes being taken into the interior from Sydney that they are imported American goods. This used to be the case, but it is not so at present. We are assured that very few sashes and doors have been imported during the past two years, and that they cannot now be introduced for less than about 50 per cent. over Sydney manufacturers' prices.

Photography.

PHOTOSCULPTURE.

BY A. CLAUDET, F.R.S.

Read before the British Association for the Advancement of Science.

If in our time opinions are divided as to whether photography is finally to exercise a beneficial influence upon the fine arts, or the contrary, there is no question that its innumerable useful applications are a boon to the community.

After having been habituated to photography, we can scarcely suppose it possible to do without photography, as we might say of railways or of the electric telegraph.

Photography may have been the enemy of all that was inferior in the arts of painting and engraving, but is that to be regretted?

Instead of the dabblers in portraiture who were satisfying a morbid taste, we have a great army of photographers capable of representing the human form and features in the utmost perfection. Printing itself, that universal and powerful aid of civilization, was only established by superseding a class of artists who had, at least, the merit of spreading by their work knowledge and literature during many centuries. They indeed produced *true works of art*, which, though no longer repeated, are to be admired in the museums where they are preserved.

As to the art of painting, instead of being injured, it is served by photography, which enables artists to be more perfect in their design,