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## Patents and Trade Marks in England.

The Commissioners of Patents for Inventions for Great Britain have just issued their report for the year 1877. They state that the number of applications for patents during the year was 4,949, or 120 less than in the preceding year, when the number was 5,069, to which amount they had increased from 1,211 in 1852—the year in which the Patent Law Amendment Act came into operation. The published tables show that only about 29 per cent of the patents from 1852 to 1870 paid the third year's stamp duty of £50, and continued in force to the end of the seventh year, and that only 10 per cent paid the seventh year's stamp duty of £100, and consequently remained in force for the full term of fourteen years.

The Patent Office Museum, containing models, machines, and instruments, principally illustrative of patented inventions, is at present at South Kensington, and is open to the public daily, free of charge. Any patentee who may be desirous of exhibiting a model of his invention in London may place it in this Museum, where models are received either as gifts or loans. While the number of applications for the registration of trade marks during the year 1877 has been considerably less than during the first year of the establishment of the Trade Marks Registry, the Commissioners state that, so extensive is the use of these marks in the cotton trade, special provision had to be made for dealing with them at Manchester, where, since the date of the last report, a committee of experts have been engaged

in the examination of 41,712 marks for cotton piece goods.

If more of our manufacturers in the United States would avail themselves of the protection offered by having trade marks registered on their products, both in this country and abroad, we believe they would derive a profitable return for a very small investment.

## THE MANUFACTURE OF THE CHICKERING PIANO.

In no department of American manufacture has the progress of the past half century been more marked than in the manufacture of pianos; and no establishment has had a greater or more commendable influence on the progress of that art than that of the celebrated house of CHICKERING & SONS.

This house, now the oldest and we believe the largest in the pianoforte business in America, was established in Boston in the year 1823. At that time the manufacture of pianos was but feebly carried on; the instrument itself was a poor affair compared with the modern piano, and all classes regarded it as a luxury for the few, rather than the household necessity for all well-to-do people which it has now become. To the inventive genius of Mr. Jonas Chickering, the founder of the house, and his thoroughgoing integrity and energy as a manufacturer, the present excellence of the American piano as well as the flourishing condition of the pianoforte business of this country is largely due. The most important and most conspicuous of the real im-

provements in all classes of pianos are those by which the compass of the instrument has been increased and the scale enlarged, thereby giving greater range and volume, and finer quality of tone. These improvements have been largely achieved by the labors and inventions of Messrs. Chickering & Sons.

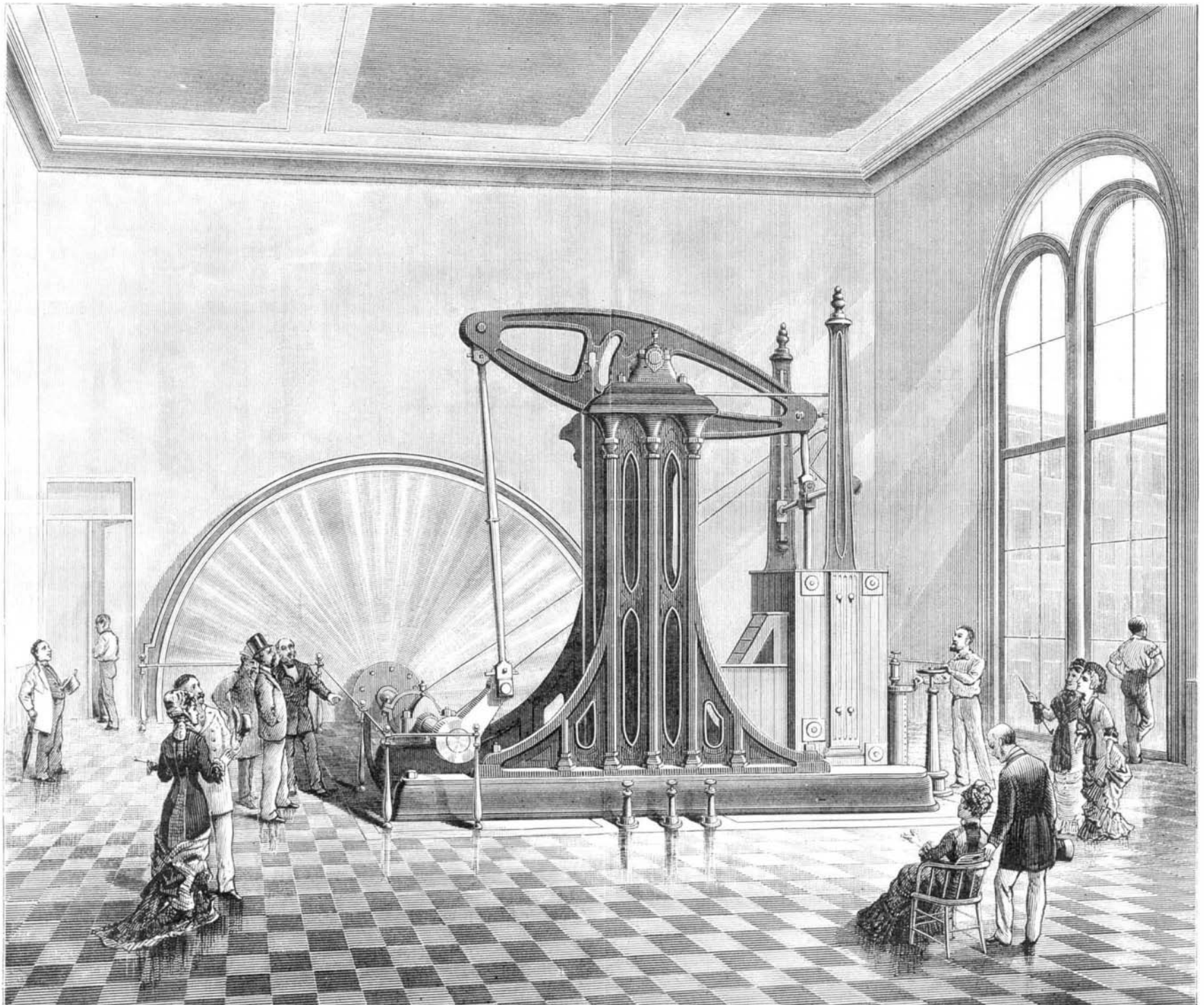
In selecting the factory of Messrs. Chickering & Sons to furnish typical illustrations of the leading operations incident to pianoforte making, our artist has chosen one that may fairly stand in the front rank with the best mechanical as well as musical establishments of the country.

In the manufacture of a superior pianoforte the selection and preparation of the wood is a matter of prime importance.

The various kinds of wood made use of must be selected with the most discriminating care, and even then but limited portions of such woods will answer for this exacting manufacture. After undergoing the necessary term of outdoor seasoning, the selected lumber is taken to the dryingrooms, where it remains until thoroughly seasoned. From the drying rooms the seasoned wood, now technically known as stock, is taken to the sawmill, and cut up into dimensions suitable for the three different styles of pianos, namely, grand, upright, and square.

In Fig. 6 (page 260) our artist has depicted the process of sawing veneers. From the mill room the prepared stock goes to a well ventilated apartment, the stock room, which is kept at a uniform temperature of eighty degrees Fahrenheit.

[Continued on page 258.]



THE CHICKERING PIANOFORTE MANUFACTORY.—VIEW OF THE ENGINE ROOM.—Fig. 1.