

carried to the heating room adjoining, and hung up on the rack to dry till next morning.

There are on the premises six milling rooms, with three mills in each, and having three men attendant upon each mill. The adjoining rooms for drying are heated by three rows of pipes laid along the wall. These pipes, during the day are at a temperature of about 130°. The temperature is increased towards the evening, and during the night to 160°, and it is the duty of the watchman to open the doors for ventilation and cooling preparatory to the men resuming their work for the next coating.

Of course, in a building so greatly heated, and having so much inflammable material within it, the danger of fire is imminent, but every precaution has been taken which prudence could dictate. The building is fire proof, the floors are of metallic lava, and the roof which is flat, is of the same material. A large pipe runs up the outside wall by the partition which divides the drying rooms, into each of which runs a branch pipe with a valve, which can be worked from the outside. A deluge of steam can by these means be poured into the rooms in a few minutes by day or night. There are fourteen fire plugs around the buildings, on the main of the East London Water Works, with hose and turncock at hand, so that ample means of extinguishing fire exist on the premises.

But to return to the manufacture. The coating being thoroughly dry, the cloth is then taken to the "rubbers" whose business it is to remove all inequalities from the surface and make it perfectly smooth. This is done by the "rubbing machine," (an ingenious contrivance of Mr. Eagles, the manager,) by which the cloth is made to pass between two rollers revolving in opposite directions. These rollers are covered with pumice stone, and do the work completely and expeditiously, which, till lately, was done by hand at great expense of labor. The "coating" and the "rubbing" being repeated four, and in the case of heavy goods, five times, the cloth is ready for the "painters." The "painting rooms" contain machines similar to the "mills;" but instead of a drum they have a roller at each end, over which the cloth passes slowly, and a man at each side supplies the paint, "meeting each other half way." Dependant partly on the colours, and partly on the article to be produced, is the number of coats of paint to be applied. Sometimes two will be sufficient, at other times four are necessary. The last coat receives several applications of a peculiar elastic enamel, chiefly of copal varnish, to protect it from the action of the atmosphere.

At this stage of the process the edges of the cloth are rough and have to be trimmed, and the seam by which the ends are sewn together has to be cut. This is done by a machine called the "Guillotine," and we now follow the cloth to the "grainer." This latter, and to the ordin-

ary leather cloth, finishing process, is done by remarkably beautiful iron machine, having rollers, the upper one being of polished iron c obliquely on the surface, the other one of paper. Between these two rollers the cloth passes twice and receives its external resemblance to more co leather. There are six machines used in this finishing process, and others for embossing from the small diamond to the large medallion pattern. The latter consumes much more time, passing through the machines. The cloth is now stamped with the trade mark, labelled, and rolled up ready for transmission to the warehouse in Cannon Street West.

On looking at the pieces when finished, one is struck by the extreme cleanness of the inside after passing through so many soiling operations; this is owing to the practical skill with which the men handle the cloth, and to the agility with which they remove it from the several machines, and carry it to the drying room. While watching the process, we thought that many respects, it was similar to the tanning of sumach, from the leaves and stalks of the *Rhamnus coriaria*, by means of which skins are made into morocco leather. As the leather cloth cannot be made permanently soft and elastic by the matter combining with the texture of the cloth as it does with the fibres of the skin, the imitation is complete and successful.

There is another room in this establishment specially interesting to the artist, where the cloth is printed in gold and colours, in designs which are really chaste and beautiful, and which when used for the furniture and hangings, add rooms with something of oriental splendour. Here, too, there are table-covers with floral borders rich in colour and choice, in grouping, and centre-pieces, which, as specimens of decorative art, are very effective. Many of these can be displayed at the International Exhibition, and, we doubt not, will excite both surprise and admiration.

The mixing room is a kind of *sanctum* of the manager's, and we suppose that from the establishment with which the colours are prepared arises much of the excellence of the company's manufacture. In a room adjoining there are sixteen coffee grinding mills, constructed on the American principle, and worked by machinery, and almost everything on the premises seems to be done by machinery. The machine which sets all in motion is a high pressure double cylinder engine of 50-horsepower made by Woods, of Halifax. There are three immense Cornish boilers by Hill, of Loughborough, which have been tested to a water pressure of 130 lbs. to the square inch and are rated 60 horse power. One of these is sufficient to work the engine by day and heat the drying rooms by night. We observed that, by the generosity of the company, a part of their premises had been given for the use of the Fifth