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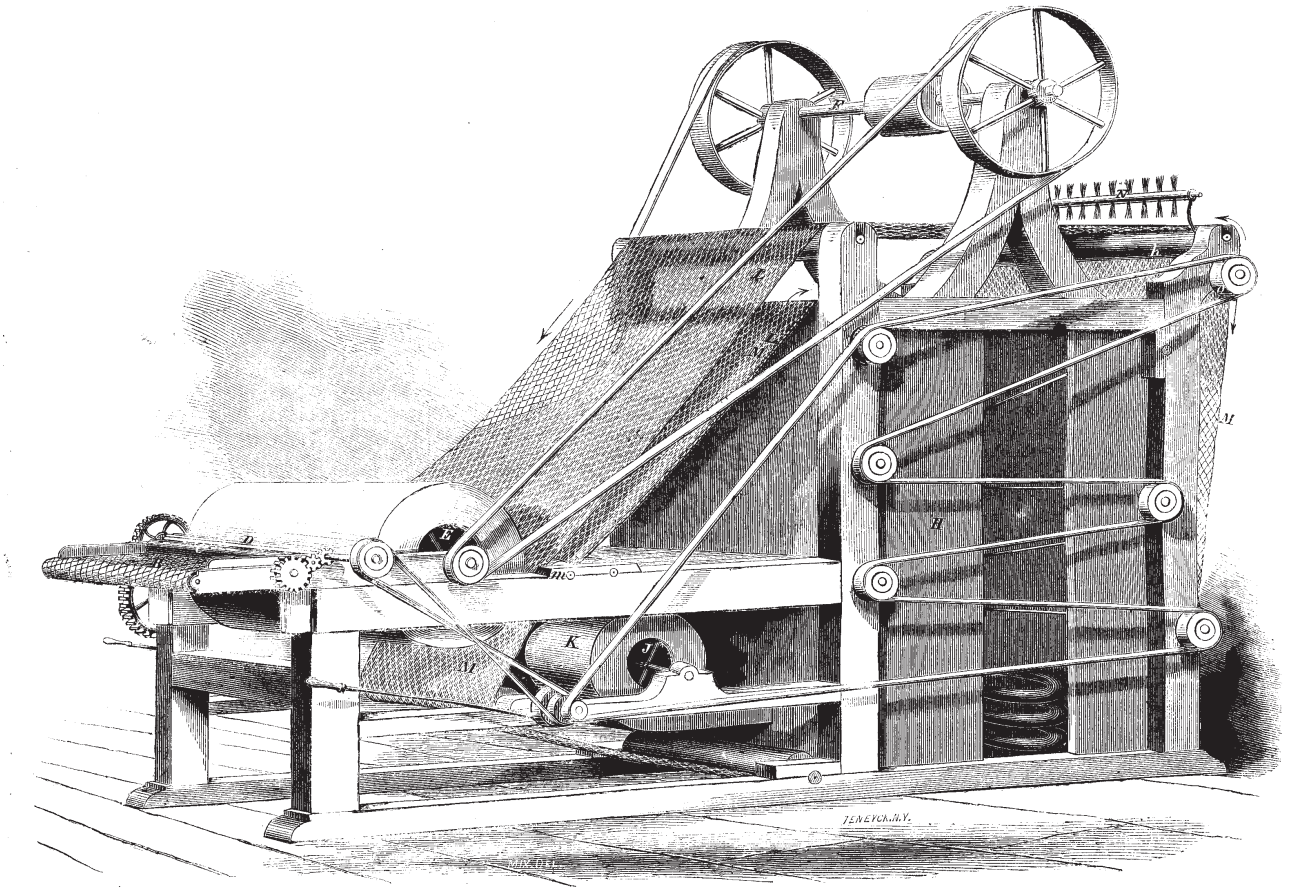
Improved Wool-drying Apparatus.

In the manufacture of wool the first process, after assorting it according to its fineness, is to cleanse it from the oily matter and dirt which it collects while on the sheep's back. To this end, it is washed very thoroughly with soap suds or with alkaline lye, after which it must, of course, be dried, or colored and then dried. The accompanying engraving illustrates an apparatus by which wet wool may be dried in a very expeditious manner and in a very small space.



JAMES'S WOOL-DRYING APPARATUS.

The wool or cotton is spread upon the horizontal endless apron, B, which carries it slowly between two india-rubber rollers, one of which only, C, is shown in the engraving. These rollers press out a considerable portion of the water from the wool. As the wool leaves the india-rubber rollers it is carried by the fluted roller, D, to the revolving picker, E, which beats it up into a light state, and throws it down upon the upper surface of the endless apron, M. This apron as well as its fellow, L, is made of wire cloth, and the wool is carried in a thin sheet between the two aprons into the drying box, H. The apron, L, comes down as indicated by the arrows, and, passing around the roller, *m*, comes upon the upper side of the stratum of wool which is carried up to the top of the drying box, as indicated by the arrow.

Coiled in the bottom of the drying box is the steam pipe, I, which supplies the heat for the operation. Directly over this pipe the box is divided by a diaphragm of metal, perforated with numerous small holes, which serves to divide the air and distribute it evenly through all parts of the box. Hot air is supplied to the box through a pipe, G, by a fan, K.

After the wool has been carried back and forth several times across the interior of the box as shown, it passes out, and the two aprons, entering between the rollers, *o* and *h*, are separated; the apron, L, passing over the the roller, *h*, and the apron, M, passing over the roller, *o*, and returning down under the box, as indicated by the arrows. The rapidly revolving fan, N, brushes off any wool which might be inclined to adhere to the apron, L.

In case any portion of the stratum of wool should not be thoroughly dried by the passage at the ordinary speed through the box, provision is made for stopping the aprons for such time as may be required to complete the drying process. Motion is communicated to the mechanism by the shaft, F.

A patent for this useful invention was granted, through the Scientific American Patent Agency, on May 28, 1861, and further information in relation to it may be obtained by addressing the inventor, Benjamin James, at Worcester, Mass.