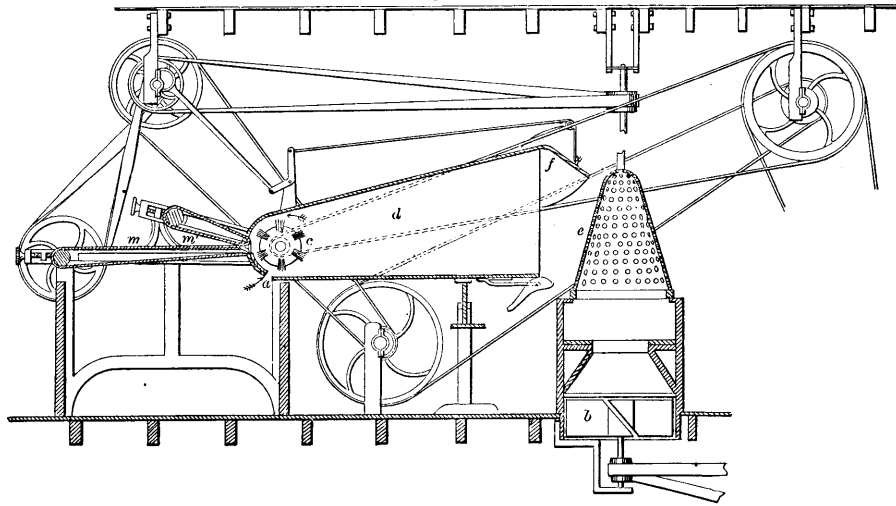


Hat-form'ing Ma-chine'. Slivers of wool are taken from the doffer of a carding-engine and wound

Fig. 2431.



Hat-Forming Machine.

in different directions upon a cone, which revolves and traverses or vibrates to and fro, by which motions the filaments of wool are crossed at different angles, and perfect felting is accomplished.

This class of machines is now superseded by that shown in Fig. 2431, which is a machine for loosening-up fiber and depositing it on a former, so as to form the hat-body. Various machines of this kind have been invented, embracing the same general principles, but differing in detail. That illustrated was patented by H. A. Wells, April 25, 1846. In this the fur, in regulated quantity, is supplied to the machine between a pair of feeding-belts *m m'*, and caught from the lips of the belts by a rotating brush or picker *c*, which separates the fibers and delivers them into the tunnel *d*, air being drawn through the aperture *a* by means of the draft caused by a fan-blower *b*, rotating with great velocity. The cloud of fur is drawn through the tunnel *d*, and deposited upon the revolving perforated cone *e*, from which the air is exhausted by the fan *b*. A vibratable deflector *f* hinged to the tunnel *d* governs the discharge of fur from the tunnel, so that an increased thickness may be given to the lower part of the hat-body.

When the charge or given quantity of fur to form a body has been deposited on the former, it is covered with a conical cloth or felt cap over which a metallic covering is placed and the whole removed from the machine, and immersed for a short time in a hot-water bath, to contract and compact the material. See also BLOWING-MACHINE, page 307.

The succeeding processes are those ordinarily employed in hat-making. See HAT ; FELTING.