

Brim Stretch'er. A machine for stretching the brims of felt hats, developing them out of the edge of the crude cone. See Fig. 427.

The brim-stretching ribs which support the brim are mounted upon a vertically reciprocating spindle which is operated by the treadle, and these ribs are provided with a spreading mechanism and are operated by the hand lever on the side of the machine. An adjustable metallic block supports the crown, and by its position determines the height of it. The upper stretching devices consist of a series of automatically reciprocating brim-stretching ribs, arrayed in a horizontal plane, equidistant from each other, in a circular line; each operating from a common center in a different vertical plane. A crank-shaft which has its bearings in the framing receives motion through the belt from a counter-shaft, and should make 500 revolutions per minute.

Through the connecting rod a reciprocating motion is given to the rocking shaft and the rods which carry the ring to which the outer ends of the vibrating stretching ribs are attached.

The hat body to be stretched, having previously been drawn out on the tip by a *tip-stretcher*, is placed upon the former of this machine and the treadle depressed, bringing the two sets of stretching ribs in working position. The hand lever is now gradually raised, and the hat-body thus spread to cause the vibratory ribs to act upon it.

When the hand lever has been raised sufficiently high to bring the spreading ribs to their full extension, the former is lowered, the hat-body shifted slightly upon it and the operation repeated until the brim is perfectly flattened out.

The rapid motion of the vibrating ribs enables the operator to stretch the hat while it is hot and injury by tearing is thereby prevented.

Machines made on the same principle for use in factories where all the work is done by hand are now very generally used, and but a very small percentage of all the soft wool and fur hats are now blocked in the old manner.

The finishing of fur hats is done upon a fur hat blocking machine which has an oval former, and acts upon the crown and brim simultaneously. See HAT-SHAPING MACHINE.