No. 755,365. PATENTED MAR. 22, 1904.

M. A. CUMING.

HAT SHAPING MACHINE.

APPLICATION FILED OCT. 27, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

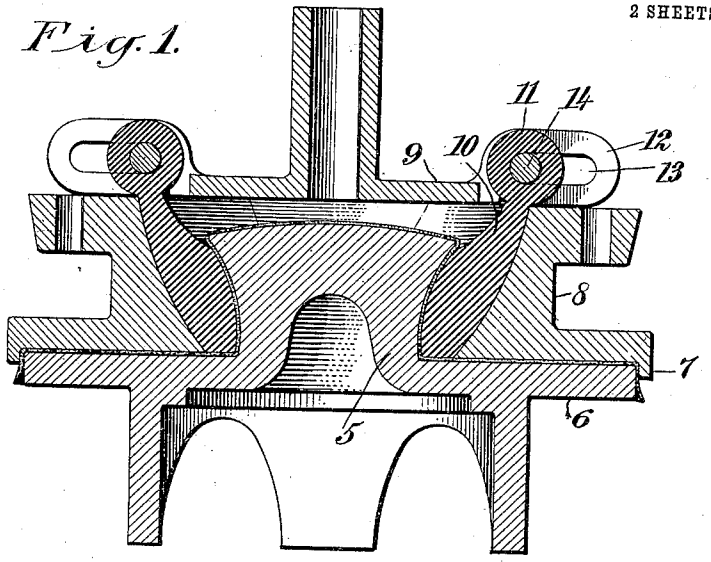
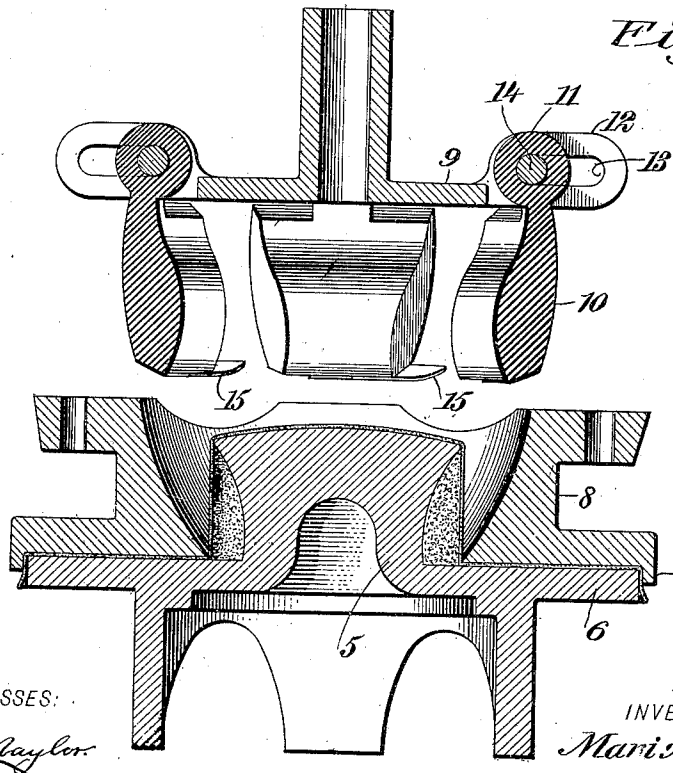


Fig. 2.



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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 3.

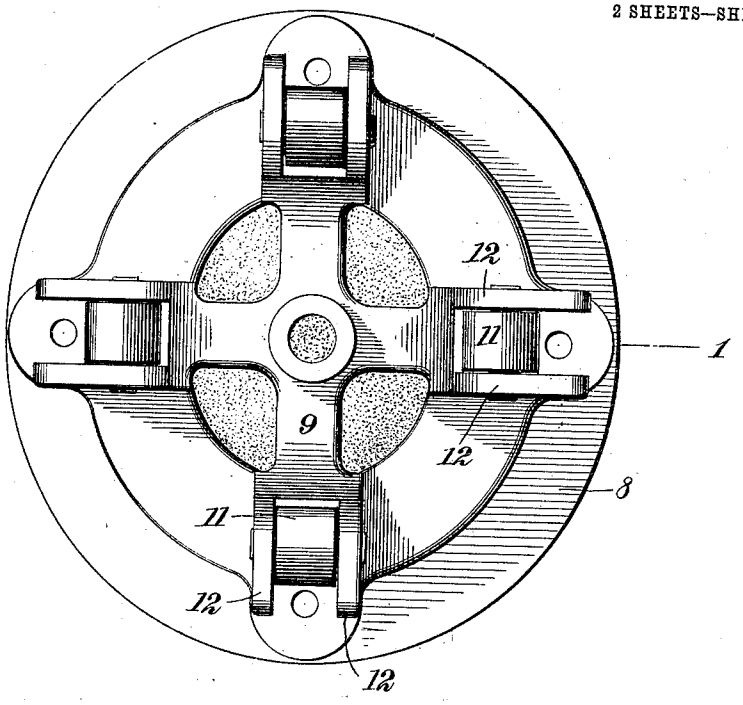
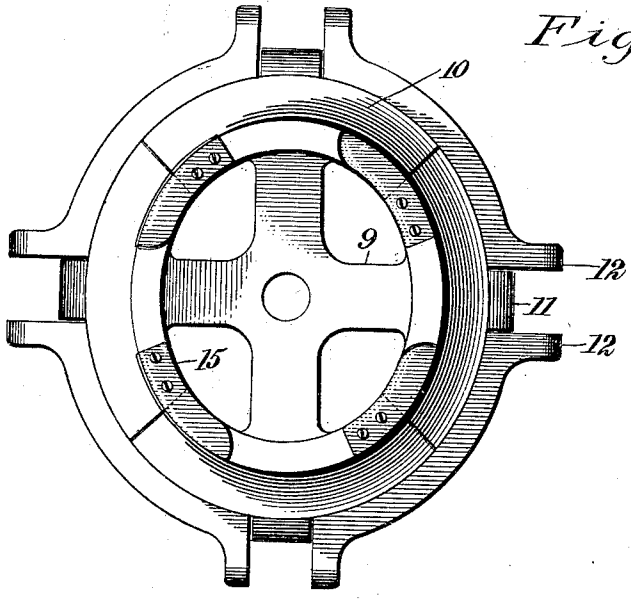


Fig. 4.



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No. 755,365. Patented March 22, 1904.

UNITED STATES PATENT OFFICE.

MARI A. CUMING, OF NEW YORK, N. Y., ASSIGNOR TO M. A. CUMING & COMPANY, OF NEW YORK, N. Y.

HAT-SHAPING MACHINE.

SPECIFICATION forming part of Letters Patent No. 755,365, dated March 22, 1904.

Application filed October 27, 1902. Serial No. 128,846. (No model.)

To all whom it may concern:

Be it known that I, MARI A. CUMING, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented new and useful Improvements in Hat-Shaping Machines, of which the following is a full, clear, and exact description.

This invention relates to improvements in machines for shaping or forming hats of felt, straw, or other fabric, the object being to provide a machine by means of which bell-crown hats may be rapidly and uniformly shaped.

I will describe a hat-shaping machine embodying my invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a section on the line 1 1 of Fig. 3 of a hat-shaping machine embodying my invention and showing the die members together. Fig. 2 is a similar section, but showing the die members separated. Fig. 3 is a plan view of the machine, and Fig. 4 is a bottom plan view of the upper die.

Referring to the drawings, 5 designates a crown-die adapted for the shaping of so-called "bell-crown" hats—that is, it diminishes in diameter from the top to the base. Extended outward from the die 5 is a table 6, on which the hat material forming the brim is secured. The material is secured in place by means of an annular flange 7 on a clamping-ring 8, the inner surface of which is curved downwardly and inwardly, thus forming a cam-surface for the forming-die. It will be noted that the flange 7 engages with the outer surface of the hat material, the inner surface being engaged against the edge of the table 6.

The forming-die consists of a carrier 9, on which segmental die members 10 are mounted to swing. The inner surfaces of the die members 10 are curved to correspond with the curve of the crown-die, and the outer surfaces are also somewhat curved, so as to pass readily down the cam-surface of the ring 8. To provide for this movement, the upper or outer ends of the members are provided with lugs 11, which pass between lugs 12, extended outward from the carrier. These lugs are slotted, as indicated at 13, and pins 14 in the lugs pass into said slots. This permits of using different sizes of swinging sections in accordance with the dimensions of the hat and the material thereof.

In the operation it is to be understood that the dies are to be placed in a suitable press, which it is not deemed necessary to show herein. When the forming-die is in a raised position and the part 8 also in a raised position, the felt or other hat material is cut to substantially the proper size, and after steaming the material and heating it in the usual manner it is placed upon the crown-die. Then the ring 8 is moved down, which will cause the material to assume the shape indicated in Fig. 2. After this the forming-die is to be moved downward, and the segmental members during the downward movement will be forced inward or toward the crown-die by the cam-surface of the ring 8, causing the material to assume the form indicated in Fig. 1—that is, finishing the hat so far as shaping the crown is concerned. To cause the swinging members to bear at all points upon the material forming the rim and adjacent to the crown-die, spacing-plates 15 are attached to the lower edge of one plate and overlap the lower edge of the next adjacent plate, as clearly illustrated in Fig. 4.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a hat-machine, a crown-die, a forming-die comprising segmental swinging sections, and a ring having a curved or cam-shaped inner surface for causing movements of the swinging sections, the said ring also forming a holding device for the hat material.

2. In a hat-machine, a crown-die and a forming-die, the said forming-die consisting of a carrier and segmental members mounted to swing on the carrier and also mounted to slide relatively to said crown-die.

3. In a hat-machine, a crown-die of bell shape, a ring for surrounding the crown-die,

the said ring having a curved or cam-shaped inner surface, a forming-die consisting of a carrier, segmental members mounted to swing on the carrier, and spacing-plates, the said spacing-plates being connected to the lower edge of one section and loosely engaged with the lower end of the adjacent section.

4. In a hat-machine, a crown-die, a ring for surrounding the crown-die, the said ring having a peripheral flange for engaging or clamping the hat material, and a forming-die consisting of a carrier, and segmental members mounted to swing on the carrier.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MARI A. CUMING.

Witnesses:
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C. R. FERGUSON.