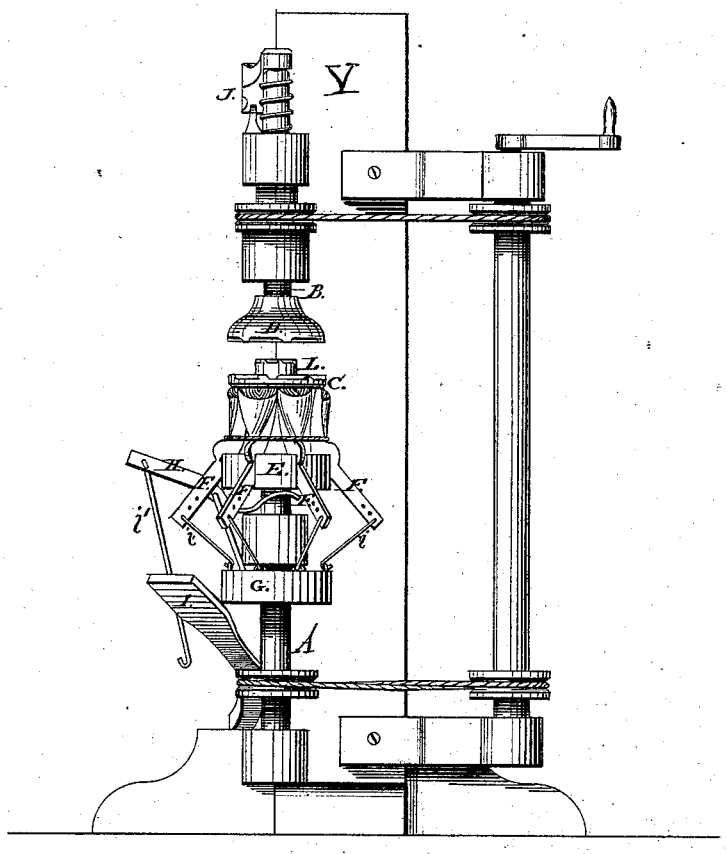
2 Sheets—Sheet 1.

J. E. WELLS.

MACHINE FOR STRETCHING HAT-BODIES.

No. 169,663. Patented Nov. 9, 1875.

Fig. 1.



Witnesses:

Edw. M. Dowd

D. W. Lain

Inventor:

James E. Wells

Henry N. Fanton

Attorney

2 Sheets—Sheet 2.

J. E. WELLS.

MACHINE FOR STRETCHING HAT-BODIES.

No. 169,663. Patented Nov. 9, 1875.

Fig. 2.

Fig. 3.

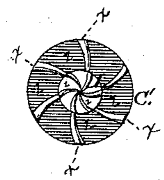
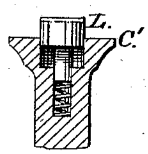
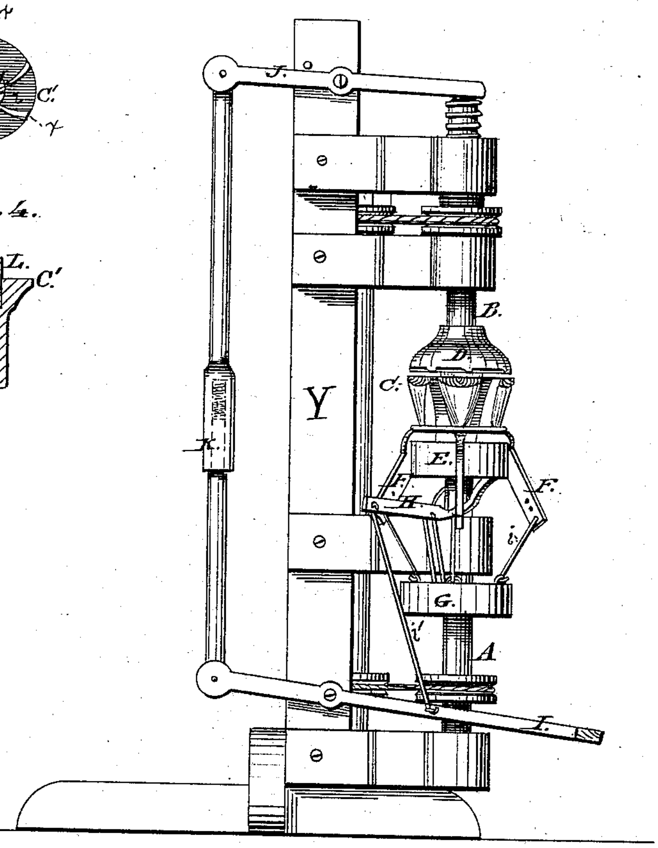


Fig. 4.





Witnesses:
Edw. W. Donn
L. M. Cain

Inventor:
James E. Wells
Henry. N. Stanton
Attorney

UNITED STATES PATENT OFFICE.

JAMES E. WELLS, OF NEW MILFORD, CONNECTICUT.

IMPROVEMENT IN MACHINES FOR STRETCHING HAT-BODIES.

Specification forming part of Letters Patent No. **169,663**, dated November 9, 1875; application filed April 15, 1875.

To all whom it may concern:

Be it known that I, JAMES E. WELLS, of New Milford, Litchfield county, Connecticut, have invented a new and Improved Machine for Stretching Hat-Bodies, of which the following is a specification:

The object of my invention is to stretch hat-bodies preparatory to blocking; and consists of the shafts A and B, as shown in Figs. 1 and 2 of the drawing, to which are secured the heads C and D, said shafts being set in line—the shaft B directly over the shaft A—and fastened in their bearings to any frame suitable for the purpose, and run in opposite directions, by any well-known means. The head D, on the bottom of the shaft B, is fitted with curved ribs X, shown in Fig. 3, on its face, running from its center to its circumference, thereby forming through furrows or channels between said ribs, and the shaft and head arranged to move up or down, as required to put on or take off the hat, by any convenient mechanism. The head C on the top of shaft A is made in two parts, the tip or center portion being constructed with a shank fitting into a socket or bore of the other, and set on a spring, and settling down level with the other part of said head, when the top B is brought down on it, and designed to work more readily up into the tip of the hat, and with curved ribs corresponding to those on the head B. On the shaft A the collar E is loosely fitted, so as to have a free movement thereon, to which are pivoted in an annular groove between its center and circumference the arms or levers F, which are connected by rods *i* to the collar G, for the purpose of operating on the inside of the hat, and acting simultaneously with the heads C and D in stretching the same, said fingers or levers being moved or operated by the lever H, raising the collar E, giving the fingers or levers an upward and outward motion, the lever H connecting with the foot-lever I. J is a lever pivoted to the main shaft or standard Y, one end of which bears on top of shaft B, for operating the same, and connecting with the foot-lever I by the rod K, which is in two pieces, connected by a spring, for the purpose of extending the fingers or levers F without pressing the heads together harder than may be desirable. The tops of the fingers or levers are ribbed diagonally from the center to the outside, for the purpose of facilitating the stretching of the part on the said fingers evenly, as well as assist in holding onto the hat.

To operate the machine, (the shafts being in motion, the head D up, and the fingers or levers being close under the edge of the head C,) place the hat over the head C and fingers F, place the foot on the lever I, which brings the head D first onto the tip, and finally onto the entire head, and also extends the fingers or levers until the head is sufficiently hard on the head C, when the fingers F may be brought out as required, the foot taken from the lever I, and the hat removed.

I claim—

1. The rotary hat-stretching disk or disks, having curved ribs X extending across the face or faces thereof, forming a central intersection, and provided with one or more through furrows or grooves, Z, for the purpose described.

2. In combination with the hat-stretching disk D, having curved ribs X extending across its face, forming thereby a central point of contact, and provided with one or more through furrows or channels, Z, a stretching-disk, constructed of two or more concentric sections, the "tip" or central section of which being spring-seated, and adapted to lie flush with the outer section while under pressure.

3. In combination with the rotary stretching-disks D C, the stretching-arms F, connected to the sliding collar E and links *i*, whereby an outward movement in their ascent is produced.

4. The combination of arms F, collar G, links *i*, lever H, rod *i'*, treadle I, sectional spring-seated connected rod K, and rock-arm J.

5. In a rotary stretching-disk, the combination of sections L and C', operating in unison with each other, and the former susceptible of being distended above or compressed flush with the face of the latter, substantially as herein described, and for the purpose set forth.

JAMES E. WELLS.

Witnesses:

AARON C. SEELEY,

ANDREW J. WILLIAMS.