

No. 668,785.

Patented Feb. 26, 1901.

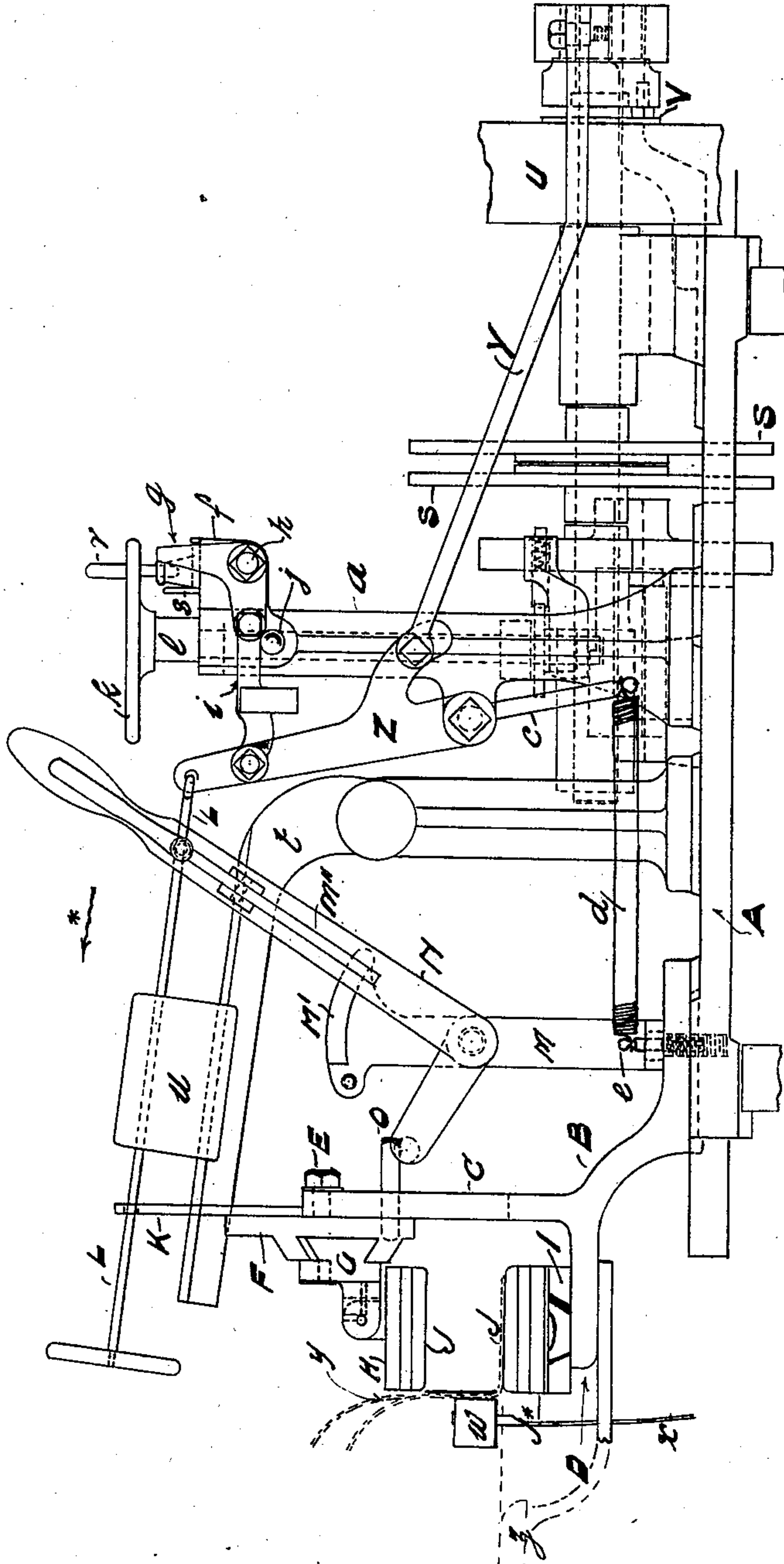
H. H. TURNER.
HAT POUNCING MACHINE.

(Application filed Aug. 6, 1898.)

(No Model.)

3 Sheets—Sheet 1.

FIG. 1.



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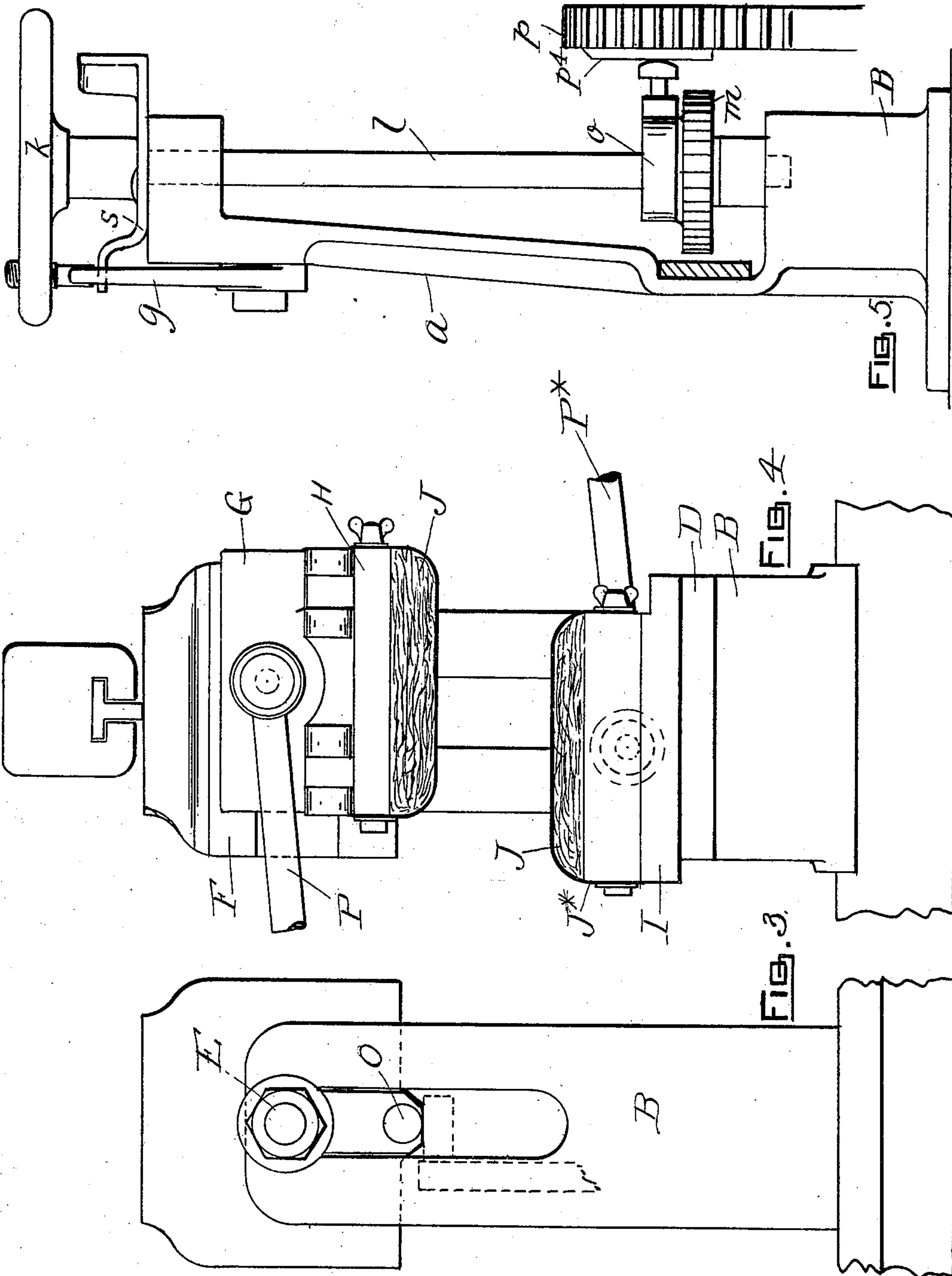
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3 Sheets—Sheet 3.



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UNITED STATES PATENT OFFICE.

HENRY HERBERT TURNER, OF DENTON, ENGLAND.

HAT-POUNCING MACHINE.

SPECIFICATION forming part of Letters Patent No. 668,785, dated February 26, 1901.

Application filed August 6, 1898. Serial No. 687,952. (No model.)

To all whom it may concern:

Be it known that I, HENRY HERBERT TURNER, a subject of the Queen of Great Britain and Ireland, and a resident of Denton, near Manchester, England, have invented new and useful Improvements in Felt-Hat-Crown-Pouncing Machines, of which the following is a specification.

My invention relates to a novel construction of machine for pouncing the brims of felt hats, consisting of two pouncing-pads arranged one over the other, with their working faces opposite each other, and by means of revolving disk wheels and connecting-rods caused to move rapidly to and fro and act simultaneously upon the respective sides or surfaces of a hat-brim placed between them, and thus remove the superfluous fur or wool.

Such machine also consists of a set of conical feed-rollers to draw and rotate the brim between the pouncing-pads and of a suitable escapement movement by which the movements of the pads and rollers are automatically arrested after the desired amount of treatment has been imparted to the hat-brim.

Such machine and the manner of its operation I will now describe, in reference to the accompanying drawings, in which—

Figure 1 is a side elevation, and Fig. 2 a plan. Fig. 3 is a detail rear view of the standard B of Fig. 1 with adjacent parts. Fig. 4 is a front view of said standard with the pads shown in place. Fig. 5 is a detail view of the automatic stop mechanism.

Upon a base or table A, I erect a bracket B with vertical and horizontal arms C and D. In the vertical arm is a slot, and through such slot a bolt E passes, carried by or screwing into the part F. In the face of part F is a dovetail groove, and in such groove a pad-carrier block G fits, and from the said block the pad-block H is pivotally suspended, as illustrated. Upon the horizontal arm D of the bracket B is another pad-carrier block I of dovetail formation, onto and by which the pad-block J^x is fitted. Each pad-block is fitted with a pouncing-pad J, composed of sandpaper tightly drawn over a soft elastic cushion.

To the upper end of part F a link K is connected which extends upward to engage with the rod L.

Directly behind the bracket B is another bracket M, to which is pivoted the double-armed lever N. The shorter arm of such lever extends toward the bracket B and terminates under a pin or stud O, carried by part F. The longer arm of said lever extends upward and terminates in a handle, by the pulling of which in the direction of arrow * the shorter arm of the lever moves downward and lowers the part F, and with it the upper pad J, until such pad rests upon lower pad J.

To upper pad-block H and lower pad-block J^x links P and P^x are connected, respectively, which in turn are eccentrically connected to disk wheels Q upon side shafts R. These latter are driven through gear or chain wheels S and chains T from pulley U when in gear with friction-clutch V. When set in motion, the disks Q impart a to-and-fro motion to the pad-block holders, and with a hat-brim between the pads they effectively pounce the same on both sides simultaneously.

To automatically pull the hat-brim between the pads J, I provide a pair of conical rolls W, which are driven by shafts W^x and bevel-gear W^{xx} from shaft X.

To cause the motion of pads to be automatically arrested after the hat-brim has been sufficiently pounced or pounced to a predetermined extent, the friction-clutch V is connected by rod or link Y to a lever Z, fulcrumed upon a pillar or standard a, and at its upper extremity secured to rod L, and at its lower extremity provided with finger or extension c, to which is hooked one end of spiral spring d, connected at its opposite end to a fixed stud e on the base A.

Near the upper part of pillar a is a bracket f, and on such bracket is a bell-crank lever g, pivoted at h, and to one end of such lever a link i is connected, secured in turn at its opposite extremity to the upper end of lever Z. Also on the said bracket f is a stud j, lying beneath the link i, as shown.

When the rod L, which constitutes the starting-rod of the machine, is pulled forward, it pulls the lever Z into the position shown in Fig. 1, and thereby puts the friction-clutch V into gear with the pulley and starts the machine. In doing so it also pulls lever Z forward and causes link i to lie in a horizontal position upon pin j and prevents the lever go-

ing back until the bell-crank is tilted or the "toggle" broken. To effect the breaking of the toggle automatically, a disk k is fitted to a shaft l , passing down the pillar a , driven by ratchet-wheel m at or near base and pawl or click n , carried by lever o , receiving intermittent motion by a swelling or cam p^4 on face of wheel p . In said disk k is a series of holes q , and into one of such holes a peg or pin r fits and projects downward beneath the disk to an extent which, with the disk in motion, causes it to strike a lever s , moving on a vertical pivot, and press such lever against the upper arm of bell-crank lever g , and so break the toggle, the time at which it is broken being determined by the position and traverse of pin r .

To afford varying degrees of pressure between the pads, I provide a hinged arm t , carrying a movable weight u and resting at its free end upon part F , identified with upper pad, and to enable the upper pad to be held away from the lower pad—say for renewal of sandpaper or introduction of hat-brim to be treated—I provide the bracket M with a segmental part M' with one or more notches into which the cranked end of a locking-lever M'' on lever N may take, and so prevent the return of the lever N when thrown back.

To properly hold the hat-brim between the pads and also to prevent the side of the hat being damaged by the motion of the pads, I provide one or more runners w , sustained within the hat by spring-rods x from the machine-frame, and outside the hat, and between it and the upper pad, as shown in Fig. 1, I provide a thin metal blade y , which is capable of being tilted out of the way by foot or hand lever and rod when putting a hat-brim between the pads.

The upper pad J is linked to its carrier-block for the better grip on the felt.

To support the hat while under treatment, I provide a wooden rest z , over which the hat may readily travel.

Although I show independent shafts and disks for operating the pads, which I prefer for the better balancing of the parts, I may

operate the pads by a single shaft with a double set of disks or cranks or one shaft within another.

Having thus particularly described and ascertained the nature of my said invention, I declare that what I claim is—

1. In combination, the standard C , the block F movable vertically thereon, means for controlling the vertical position of the block, the carrier-block G moving horizontally on the block F , the pad on the carrier, the opposing pad-carrier I with its pad, the shafts R at opposite sides of the machine, the disks, the links connecting the pad-carriers with the disks and means for moving the shafts R , substantially as described.

2. In combination, the standard C , the block F movable vertically thereon, the pad-carrier movable horizontally on the block F , the pad on the carrier, the pin O extending from the block F , the lever engaging the pin for controlling the position of the pad, a second pad-carrier with its pad and means for reciprocating the pad-carriers, substantially as described.

3. In combination, the shafts R , R , at opposite sides of the machine, the intermediate driving-shaft connected thereto, the clutch controlling the driving-shaft, the pad-carriers with their pads, the link connections between the shafts R , R , and the pad-carriers, the feed-rollers, the shaft X intermediate the shafts R , R , and connected with the feed-rollers, the face-wheel p , the toggle-arms for retaining the clutch in engagement, the perforated disk, the pin thereon to operate the toggles the vertical shaft carrying the disk, the pawl-and-ratchet mechanism for operating the vertical shaft and the lever to be operated from a cam on the face-wheel p for operating the pawl, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two witnesses.

HENRY HERBERT TURNER.

Witnesses:

WALTER GUNN,
ARTHUR GREY.