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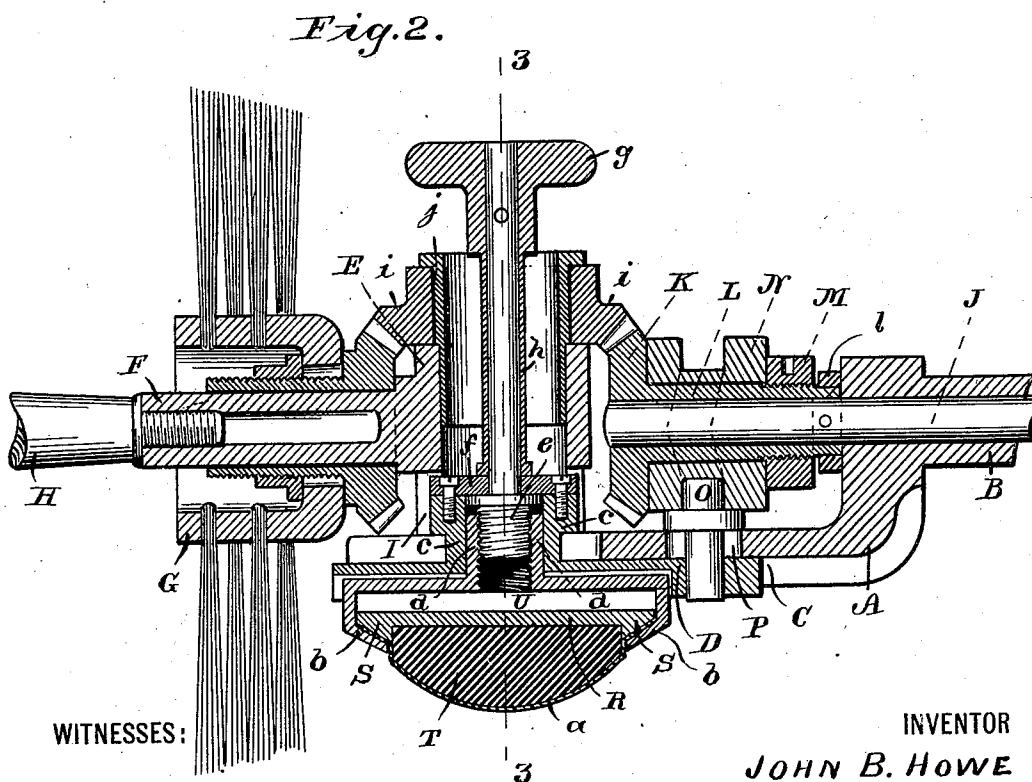
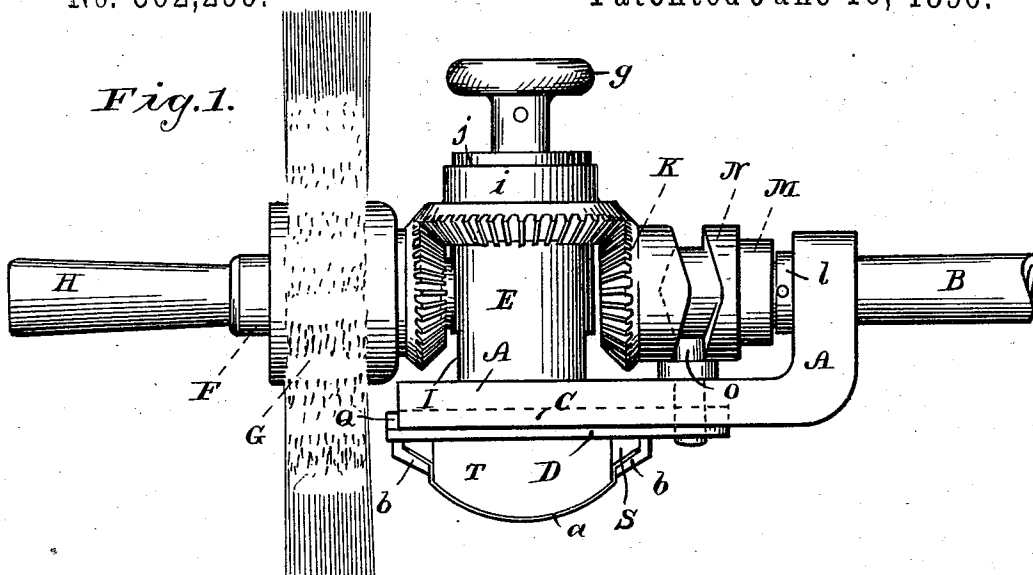
2 Sheets—Sheet 1.

J. B. HOWE.

POUNCING HEAD FOR HAT POUNCING MACHINES.

No. 562,299.

Patented June 16, 1896.



WITNESSES:

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(No Model.)

2 Sheets—Sheet 2.

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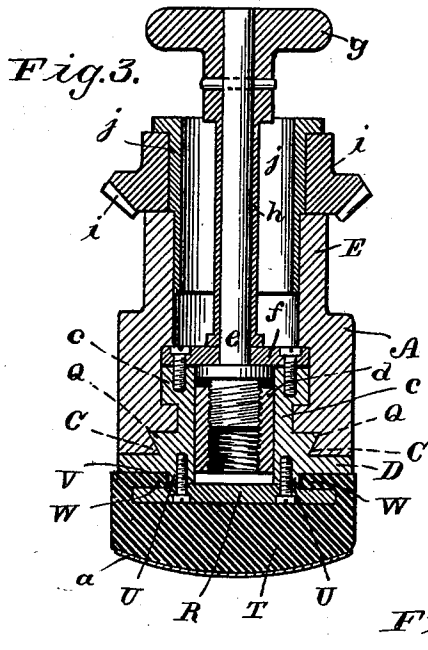


Fig. 7.

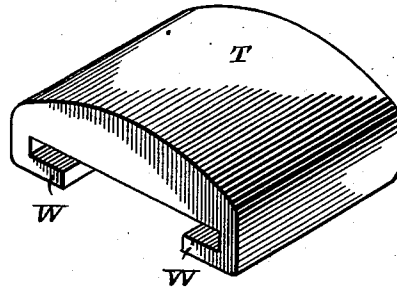


Fig. 4.

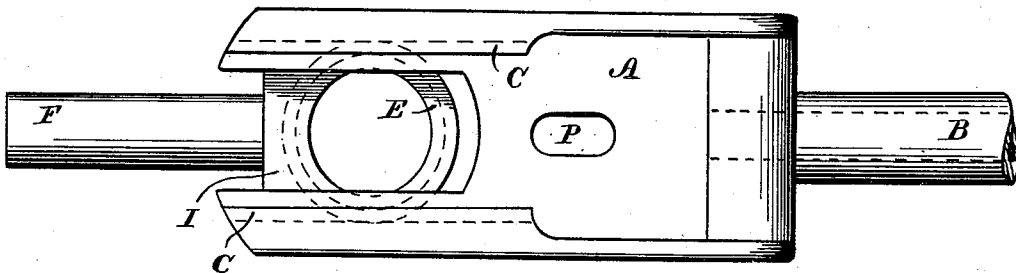
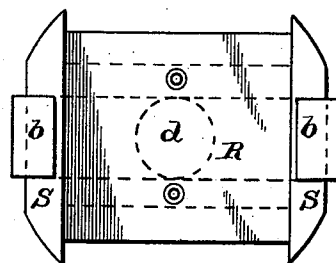
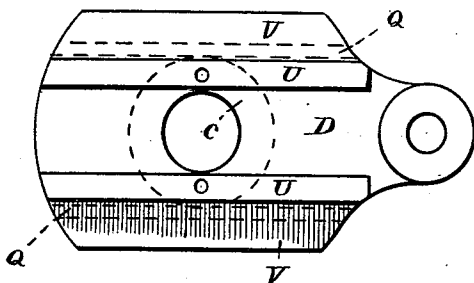


Fig. 5.

Fig. 6.



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JOHN B. HOWE, OF DANBURY, CONNECTICUT.

POUNCING-HEAD FOR HAT-POUNCING MACHINES.

SPECIFICATION forming part of Letters Patent No. 562,299, dated June 16, 1896.

Application filed December 11, 1894. Serial No. 531,483. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. HOWE, a citizen of the United States, and a resident of Danbury, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Pouncing-Heads for Hat-Pouncing Machines, of which the following is a specification.

This invention relates to hat-manufacturing machinery, and more especially the class of machines employed in the art of pouncing or finishing. It directly relates to the operative portion of the machine known as the "pouncing-head." This head is adapted to various forms of finishing-machines, for instance, that shown in my Patent No. 480,098.

It is the object of this invention to construct a head which shall be well adapted for light and fine grades of work, and also to construct a head the operative position of which may have a reciprocatory movement during its travel over the crown of a hat-body or which may be changed into a still head during said travel. Further, to provide a durable and light-running head.

With these ends in view I have devised the novel construction illustrated in the accompanying drawings, of which—

Figure 1 is a side elevation complete, the shank or attachable part being broken away. Fig. 2 is a slightly enlarged central vertical section. Fig. 3 is a central vertical cross-section on line 3 3 of Fig. 2. Fig. 4 is an inverted plan view of the main frame of the head, all operative parts being removed. Fig. 5 is a detached inverted plan view of the slide supporting the pouncing-pad. Fig. 6 is a detached inverted plan view of the plate to which the flexible pad is attached, also showing in position the jaws for retaining the pouncing material upon the pad. Fig. 7 is a detached perspective view of the pouncing-pad, which is formed of soft rubber, or other suitable flexible material.

Upon the accompanying drawings the same letters of reference denote like or corresponding parts throughout the several figures.

My novel head consists first of a suitable framework A, which is provided with a shank B, by means of which it is attached and supported to any suitable form of machine. This frame is also provided upon its under side

with ways C, in which is fitted a dovetail operating-slide D. (See Figs. 4 and 5.) Upon the top of the frame is formed a hollow hub E, and extending therefrom is a bearing F, upon which the rotary brush G is journaled. To the outer end of this bearing is attached the manipulating-handle H. Part of the outer portion of the hub, together with a part of the frame, is milled out, as shown, (see Figs. 2 and 4,) forming a slot I, which serves to permit of the introduction and operation of the before-mentioned slide D.

As before stated the movement of the operating portion of the hand is reciprocatory in a horizontal plane. Said operating portion consists of the slide D, and may be operated from a driven shaft J, journaled in the shank of the framework. Upon the inner end of the shaft is pinned a bevel-gear K, bearing a threaded sleeve L. Upon the threaded portion of this sleeve is fitted a threaded nut M, adapted to lock the adjustable cam N in its proper position. This cam N is provided with a pitched groove upon its periphery, as shown, in which is fitted a connection-pin O. Said pin passes freely through an orifice P of the frame and engages the before-mentioned operating slide D, and whereby the latter is given a reciprocatory movement.

From the above construction it will be seen that if it is desired to operate the head as a still head, that is to say, to carry it over the hat-body without the reciprocatory movement of the slide, the operator has simply to turn the nut M back against the collar *l*, thereby freeing the cam N and allowing it to become idle while the spindle J and its gear K revolves freely within it.

Referring to Fig. 3, (also see dotted line, Fig. 5,) it will be seen that the slide is provided with dovetails Q, which fit into the before-mentioned ways of the frame. To the under side of the slide is secured, by means of screws, a plate R, (see Figs. 2, 3, and 6,) which is provided with shoulders S at opposite ends, and between which is fitted the flexible pad T. By means of ribs U U upon the under face of the slide there is formed between said slide and the before-mentioned plate R recesses V V. (See Fig. 3.) These recesses, as shown, are for the purpose of re-

ceiving the overlapping projections W W of the flexible pad. This pad may be attached after the remaining parts of the slide have been assembled.

5 The face of the pad is covered with pouncing material *a*. Said material is retained upon the pad by means of its opposite edges being engaged by jaws *b*. The inward-turned edges of said jaws fit snugly against the shoulders S S of the plate. In order to provide for the attachment and removal of the pouncing material, I have made the before-mentioned jaws vertically adjustable within the slide in the following manner, viz: The slide
10 is provided with a hollow hub *c* upon the top thereof, as shown, (see Figs. 2, 3, and 5,) in which a shank *d* of the before-mentioned clamping-jaw is movably fitted. This shank is provided with a central threaded opening, as shown, to receive the threaded end of a lead-screw *e*. Said lead-screw is journaled in a cap *f*, fitted to the hub of the slide. Upon the outer end of this screw is attached a thumb-wheel *g*, by means of which said screw
25 is turned, and the jaws raised or lowered, as desired. This nurl-wheel *g* has a sleeve *h* thereof extending down and abutting against the before-mentioned cap *f* of the hub of the slide.

30 From the mechanism thus far described it will be understood that by the rotary movement of the shaft J and its cam *a* reciprocatory movement is imparted to the slide and the parts supported thereon, including the lead-screw. In connection with this head I also employ a rotary brush to relieve the hat-body of all surplus dust and dirt. This brush is similar in construction to that shown and claimed in my former patent, No. 495,491.
40 As will be seen, it is journaled upon the bearing F, having a bevel-gear attached to its side, meshing with an idler *i*, which is journaled upon a bearing *j*, attached to the hub E of the main frame. This idler is in turn driven from the before-mentioned gear K.

45 Having thus described my invention, I claim—

1. A reciprocating pouncing-head, comprising a frame provided with ways and driving
50 mechanism, a slide fitted in said ways and bearing ribs U U, a plate secured to said ribs, a flexible pad secured to said plate, movable jaws within said slide, a lead-screw journaled in cap *f* of said slide and having a lower threaded extremity engaging the shank of the jaw, whereby the latter is raised and lowered to permit of the insertion and removal of pouncing material.

2. The combination with the frame having
60 ways and driving mechanism, of a slide bear-

ing a hub, a clamping-jaw fitted in a recess of the slide and having a shank operatively fitted in the hub aforesaid, a cap *f* covering said hub, a lead-screw journaled in said cap and bearing a threaded extremity to engage the shank of the jaws, a shouldered plate attached to the slide, a flexible pad fitted between the shoulders of said plate and overlapping the sides thereof.

3. In a device of the class described, the combination with the frame and the driving-shaft, of a gear and cam mounted on said shaft, a reciprocating pouncing-pad mounted in the frame and driven by said cam, an idle-gear mounted upon the hub of the frame-work and meshing with the gear upon the driving-shaft, and with the gear of the rotary brush, a stud integral with said hub, and a brush mounted thereon, a manipulating-handle to the stud.

4. A pouncing-head comprising a framework having a driving-shaft mounted therein, a gear and grooved cam mounted on said driving-shaft, a reciprocating pouncing-pad mounted in the base of the framework and driven by said cam, a detachable hollow hub secured in the top of the frame, an idle-gear mounted thereon and meshing with the gear aforesaid, a brush and gear mounted upon a stud of the frame, and driven through the idler mentioned, substantially as described.

5. In a reciprocating pouncing-head, the combination with the framework having a pouncing-slide mounted therein, of a driving-shaft mounted in the framework of said head, a cam mounted upon said shaft, operative connections between the slide and the cam, a brush adjacent to the slidable pad, and gear connections therewith from the driving-shaft, whereby the said brush is driven.

6. In a pouncing-head of the class described, the combination of the reciprocating slide and mechanism for driving the same, of a plate attached to said slide having recesses in the sides thereof, a flexible pad having inward-extending projections adapted to engage the recesses aforesaid.

7. In a pouncing-head of the class described, the combination of the pouncing-pad comprising a plate having recesses in the sides thereof, and a flexible pad having inward-extending projections adapted to engage the recesses aforesaid.

Signed at Bridgeport, in the county of Fairfield and State of Connecticut, this 5th day of December, A. D. 1894.

JOHN B. HOWE.

Witnesses:

C. M. NEWMAN,

GEO. N. SEARS.