

W. KEENAN.
Hat-Pouncing Machines.

No. 223,144.

Patented Dec. 30, 1879.

Fig. 1.

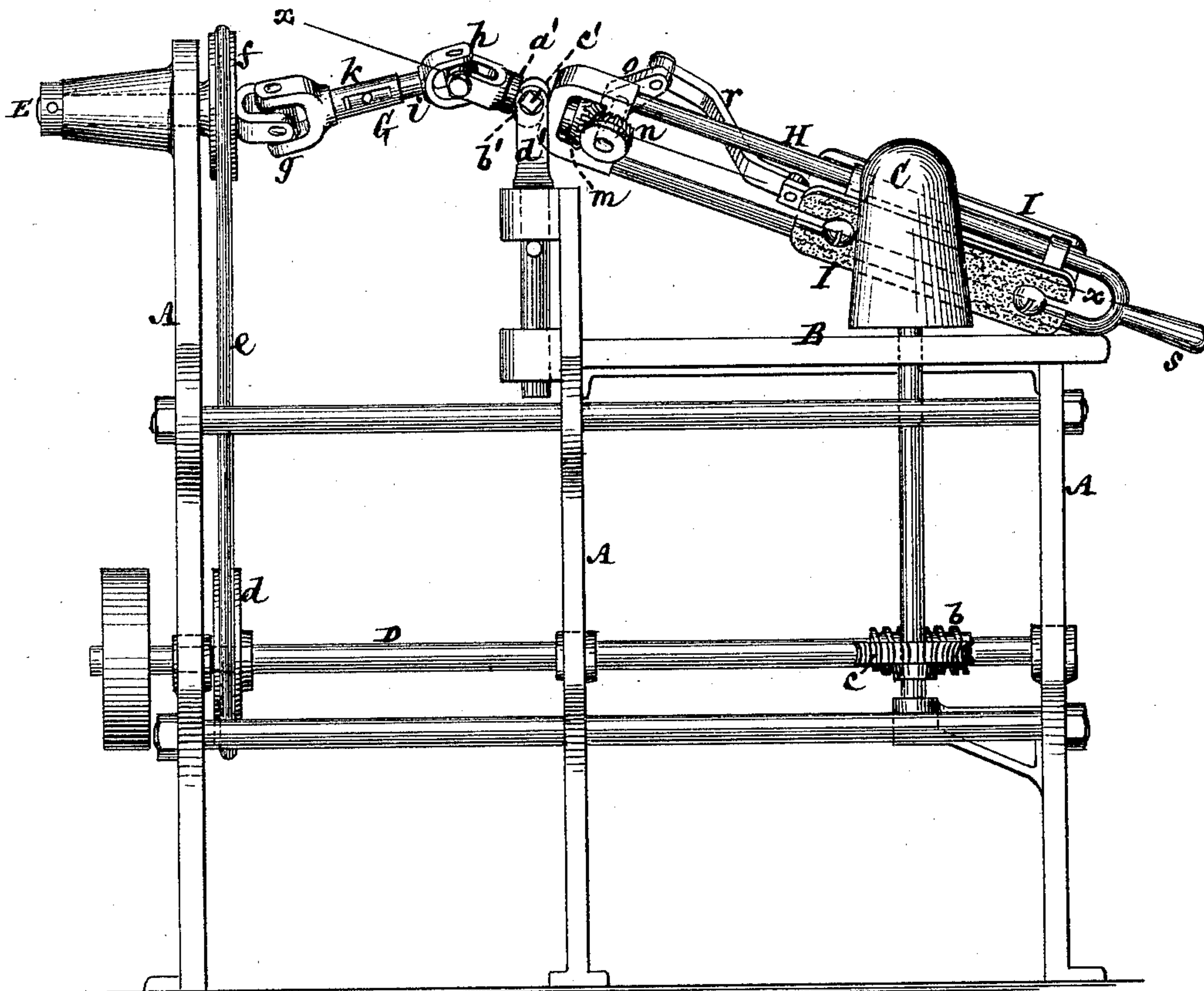


Fig. 2.

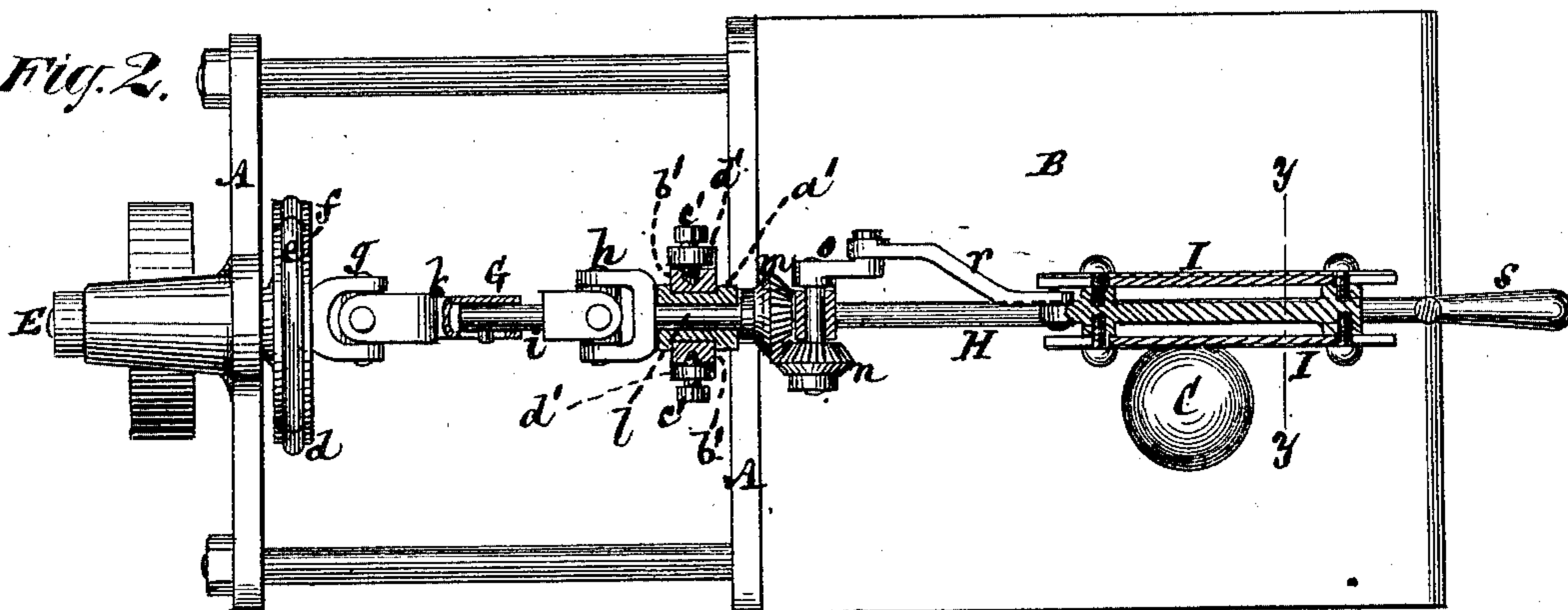


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM KEENAN, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO NICHOLAS B. HOOPER, OF SAME PLACE.

IMPROVEMENT IN HAT-POUNCING MACHINES.

Specification forming part of Letters Patent No. 223,144, dated December 30, 1879; application filed June 27, 1879.

To all whom it may concern:

Be it known that I, WILLIAM KEENAN, of the city of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Hat-Pouncing Machines, of which the following is a description, reference being had to the accompanying drawings, forming part of this specification.

This invention, like my invention for which Letters Patent No. 208,179 were granted September 17, 1878, is more particularly designed for pouncing the crown portions of hats, and, as in the apparatus described in said patent, employs a reciprocating pouncer carried by a manipulating-lever capable of movement in various directions, and operating, in conjunction with a revolving block on which the hat or article to be pounced is placed, to imitate and derive the advantages incidental to the ordinary process of pouncing by hand. This invention, however, essentially differs from my previous combinations of devices in various important respects.

To these ends the invention consists in a combination, with the rotating block which carries the hat-body or article to be pounced, of a universally-movable manipulating-lever, two or more reciprocating pouncers carried by said lever, and capable of turning about the longitudinal axis thereof to bring one or other of them, which may be of different grades, into action on the body or article under operation without stopping the machine.

Furthermore, the invention consists in certain combinations and arrangements of mechanism for operating the pouncers, and for providing for the free and universal movement of the manipulating-lever, including gearing directly applied to and carried by said lever for reciprocating the pouncers.

In the accompanying drawings, Figure 1 represents a side elevation of a hat-pouncing machine having my invention applied; Fig. 2, an upper section of the same, taken mainly as indicated by the line *x x* in Fig. 1; and Fig. 3, a transverse section, on the line *y y* in Fig. 2, through the frame-like lever which carries the pouncers proper.

A is the frame of the machine. This frame

may be of any suitable construction for support of the working parts, and has mounted on or carried by it a table, B, above which is arranged the block C, on which the hat-body to be pounced is placed. This block is made to rotate about an upright axis to vary the exposure of the hat-body to the pouncing devices, as in other hat-pouncing machines, and may be rotated in a slow but regular manner by means of an endless screw, *b*, on a main lower horizontal driving-shaft, D, arranged to operate a worm-wheel, *c*, carried by or connected with the upright spindle of the block C. Said block-spindle should be fitted to the worm-gear *c*, with a feather and groove or otherwise, in such manner that the block may be raised and lowered, preferably by means of a treadle actuated by the operator from the front of the machine, to adjust the part of the body or article being pounced to the right height for an effective operation; but otherwise the block C need have no motion excepting around its own upright or longitudinal axis.

The main driving-shaft D, which is driven by any suitable power, carries a pulley, *d*, that serves to communicate motion, by a belt or band, *e*, and pulley *f*, to a spindle, E, having its bearing in the rear upper portion of the main frame. This spindle E is connected by a flexible shaft, G, composed of universal-joint couplings *g h* and longitudinally-extensible sections *i k*, with a rotating stud or spindle, *l*, which carries on its advance end a bevel-pinion, *m*. This pinion *m* rotates within the manipulating-lever H of the machine, and gears with a bevel-pinion, *n*, carried by said lever. Upon the spindle of the pinion *n* is a crank, *o*, connected by a rod, *r*, with the pouncers I I, for giving the necessary longitudinal reciprocating motion to the latter. The manipulating-lever H is of a frame-like construction to form guides for the pouncers I I to reciprocate upon, and is furnished at its forward end with a handle, *s*, by which it is manipulated. Said lever is provided at its rear end with a sleeve, *a'*, through which the rotating stud or spindle *l* passes, and within which the latter has its bearing. This sleeve *a'* is arranged to freely rotate within and transversely through a rocking cross-bar, *b'*, ar-

ranged to work on centers $c' c'$ in an upright swiveling or vibrating jaw-like support, d' , said rocking cross-bar and vibrating jaw-like support d' constituting a universal-jointed bearing or support for the manipulating-lever H, and serving, in conjunction with the flexible shaft G, to provide for the most perfectly free and universal movement of said manipulating-lever. Furthermore, the provision which is made by the rotative bearing of the frame-like lever H in the cross-bar b' and on or around the spindle l allows for the turning of said lever on or around the axial line of said sleeve a' and spindle l to reverse the pouncers I I, which may be composed of boards or plates clad with sand-paper or other suitable pouncing material, and which may, respectively, be of different coarseness. This arrangement of the pouncers of different grades on opposite sides of the manipulating-lever H and the provision which is made for reversing them to act upon the hat-body on the block C allow for coarse and fine pouncing successively without stopping the machine; and, if desired, more than two sides of the lever H may be provided with pouncers of different relative grades, to thus vary the action of the pouncers on the goods without stopping the machine. The combination and arrangement of the working parts, too, is such that the pouncers may at all times have a straight reciprocating action in line with the manipulating-lever without straining on the gear which actuates them, and said lever is made capable of the most perfectly free and universal movement to adapt the pouncers to conform to the varying figure of the hat-body on the block C, and exert a rubbing action in different directions and on or over as well as on opposite sides of it, with

freedom for varying the pressure as required, and for removing them from contact with the hat-body when necessary, as in the case of pouncing by hand.

I claim—

1. The combination, with a rotating block on which the hat-body or article to be pounced is placed, of a universally-movable manipulating-lever, two or more reciprocating pouncers carried by said lever, and capable of turning about the longitudinal axis thereof to bring one or other of them, as described, into action on the body or article under operation, substantially as specified.

2. The combination, with the manipulating-lever which carries the pouncers, of gearing directly applied to and carried by said lever, for reciprocating the pouncers in direction of the length of said lever, essentially as described.

3. The combination of the rotating spindle l , the bevel-pinions $m n$, the crank o , the connecting-rod r , the pouncers I, the manipulating-lever H, the sleeve a' , the rocking cross-bar b' , and the turning or jaw-like support d' , substantially as specified.

4. The combination, with the spindle E, of the flexible shaft G, having universally-jointed couplings $g h$ at its opposite ends, and extensible sections $i k$, and the manipulating-lever H, provided with one or more pouncers, and supported by an independent universal joint at its connection with said flexible shaft, essentially as described.

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Witnesses:

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