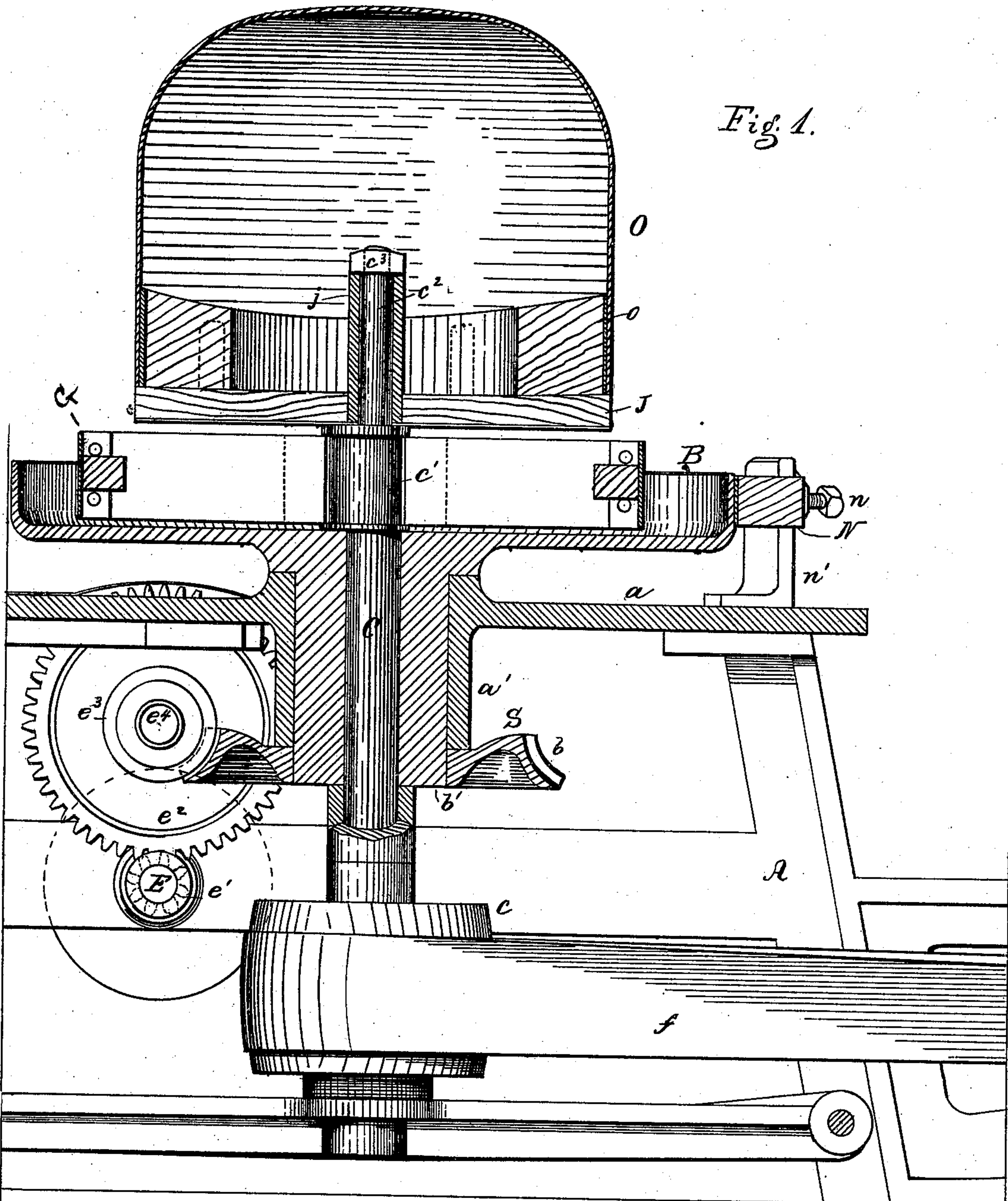


F. R. GOING.
MACHINE FOR POUNCING HATS.

No. 173,402.

Patented Feb. 15, 1876.

Fig. 1.



WITNESSES.
L. H. Latimer.
Wm. Pratt.

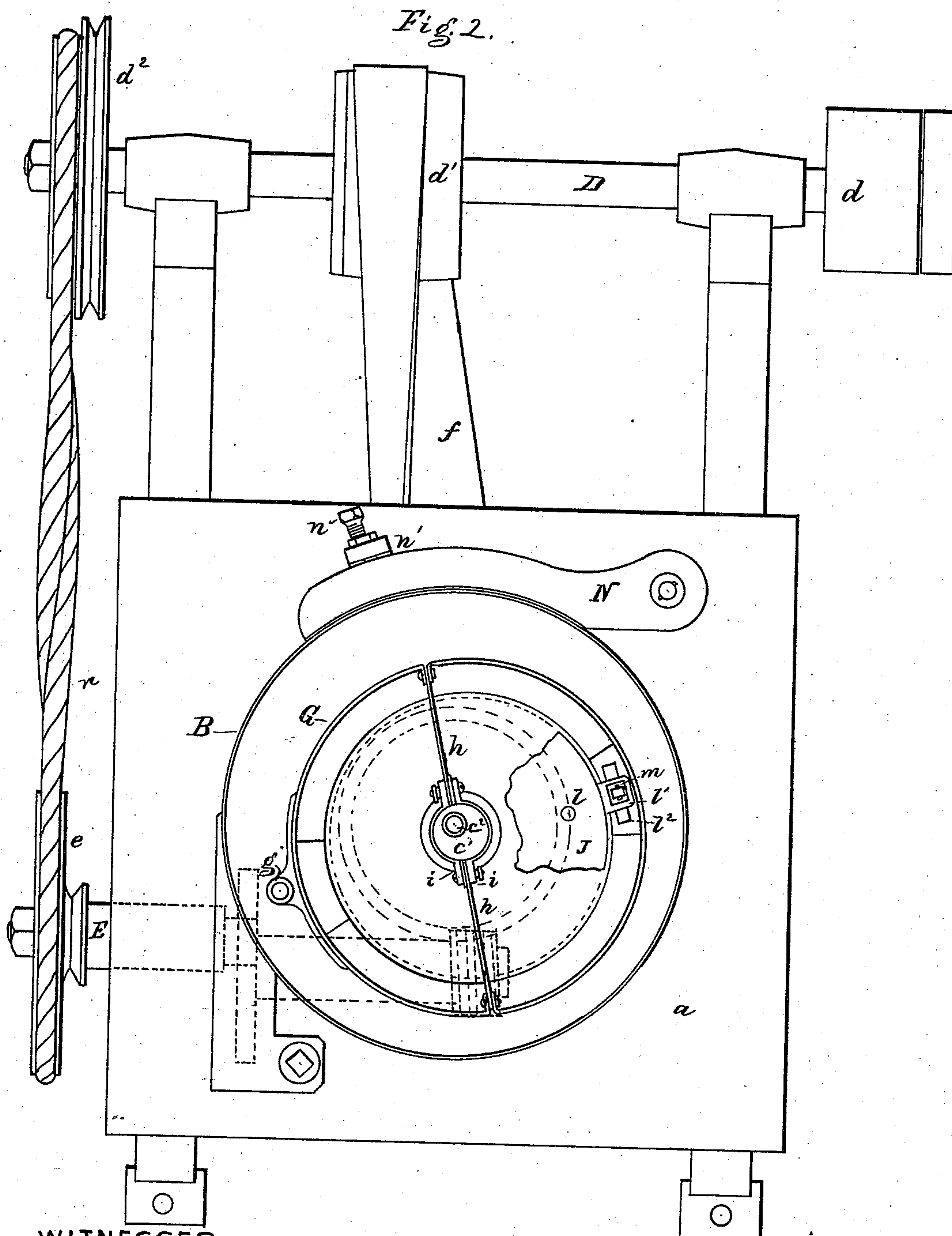
INVENTOR.
Francis R. Going
PER Crosby & Morgan ATTYS

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PER Crosby & Gregory

ATTYS.

UNITED STATES PATENT OFFICE.

FRANCIS R. GOING, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR POUNCING HATS.

Specification forming part of Letters Patent No. **173,402**, dated February 15, 1876; application filed January 22, 1875.

To all whom it may concern:

Be it known that I, FRANCIS R. GOING, of Boston, in the county of Suffolk and State of Massachusetts, have invented Improved Machine for Pouncing Hats, of which the following is a specification:

My invention relates to a machine for pouncing hats; and consists in mechanism whereby the hat-block, as it is rotated, has imparted to it a rapidly-vibrating motion in the arc of a circle.

Figure 1 is a partial section of a pouncing-machine provided with my improvements. Fig. 2 is a top view thereof, with the block and block-carrier broken away.

In the drawing, A represents the frame of the machine, of any desired shape, to support the working parts. D is the driving-shaft, provided with the usual fast and loose pulleys d , and with belt-pulleys d^1 and d^2 . Pulley d^2 is double, and scored to receive a band, r , that connects such pulley with the scored pulley e on shaft E, provided at its other end with a toothed wheel, e^1 , that engages another toothed wheel, e^2 , on a shaft, e^4 , provided with a worm-gear, e^3 , that engages teeth b of a toothed rim, S, secured to hub b' of rotating platform B, sustained in a tubular bearing, a' , projecting from the top plate a , mounted on frame A. The band r may be changed in the grooves of the pulleys d^2 e , to change the speed of shaft E, and consequently the speed of the platform B, which derives its progressive rotary motion from the shaft E, by the gearing described. The hub b' serves as a bearing for and to support the rotating spindle C, resting on a suitable footstep in the frame, and, preferably, provided with means for lubricating it or containing oil. This spindle C derives its motion from the belt f , connected with pulley d^1 on shaft D, the pulley d^1 being larger than pulley e on spindle C, so as to drive the spindle rapidly. The spindle has, just above the top of the rotating platform B, an eccentric, c^1 , and above that a projecting pin, c^2 . A vibrating connecting-link, G, preferably made as a ring, is pivoted at g to the top of the rotating platform, and arms h , preferably flexible, and made of leather, or steel, or india-rubber, connect the sides of the link or ring centrally with an eccentric strap or collar, i i ,

that surrounds the eccentric c^1 . The rotation of the spindle C causes the eccentric to vibrate the link G about its pivotal point g , and this it does as the rotating platform B revolves slowly. The block-carrier J has a sleeve, j , that surrounds the end c^2 of the rotating spindle C, and an ear, l^1 , projecting from the block-carrier is connected with a pin on a projection, l^2 , rising from link G. This block-carrier is a disk provided with pins l , preferably three, that enter holes in the bottom piece o of the shell-like hat-block O. A brake N, pivoted to top plate a , and controlled by a screw, n , in a lug, n' , bears on B, and keeps its motion steady.

The operation of the machine is as follows: A hat-body is fitted over the hat-block or shell O, held on the block-carrier by the pins l . Rotation of shaft D imparts a slow rotary movement to the rotating platform, and it, as it rotates, carries with it the pin that connects the link G with the platform. As the platform moves, this pin g changes its position about the central spindle C, yet the eccentric on the spindle, as the spindle rotates, vibrates the link, and the link, through its connection at l^1 l^2 with the block-carrier, vibrates the block-carrier and hat-block rapidly in the arc of a circle about the central pin c^2 . The hat-body in this way gets a short, rapid, vibrating or giggering motion, and at the same time its position is constantly changed, owing to the slow rotation of the platform B. The workman holds the pouncing material by hand, or by a suitable pouncing-tool, preferably such a one as is described in an application made by me for patent; and the movement of the hat-body is such that the action of the pouncing material is substantially the same as it would be if the hat were pounced in the best manner by hand, for then the operator holds the hat-body while he rubs the pouncing-surface held in his hand back and forth on the body, and at the same time turns the hat-block and hat-body gradually around.

In all hat-pouncing machines heretofore made, so far as I am aware, the hat-blocks have been round, and such construction was necessary, as the spindles that carry the blocks were turned around, first in one and then in the other direction, giving to the hat-block

such an extent of movement that it has been considered impossible to machine-pounce a hat with an oval crown, because the pouncing material held by the operator would bear with unequal force against the surface of the hat-body, continually changing its position with reference to its center of motion.

With this my machine, giving the hat-body a short vibrating or gigging motion, coupled with a slow rotation about its central spindle C, I am enabled to pounce a hat of any desired shape, round or oval, and either stiff or unstiffened, and a hat may be completely pounced or finished on the machine, instead of being finally hand-pounced a little, as is the usual custom in connection with good work.

By the term rotary platform, I mean to include a rotating surface or arm, capable of carrying the pin on which the link G is pivoted, and it will be seen that the remaining portion of the platform B, shown in the drawings, could be easily dispensed with.

It will also be obvious that the construction of the parts might be otherwise changed without departing from my invention, and I may employ any other configuration of the parts B G J, so long as they, in connection with their rotary driving mechanism, impart to the hat-block the motions herein described.

The hat-block is preferably a shell of felt, paper, wire-gauze, or any other thin light ma-

terial, substantially as set forth in another application made by me.

Having described my invention, I claim—

1. The combination of a rotating platform and a hat-block, with mechanism connecting the hat-block and rotating platform, and adapted to impart to the hat-block a rotary and a vibrating motion, substantially as described.

2. The combination, with an oval or elongated hat-block and block-carrier, of mechanism adapted to impart to such block a combined rotary and rotary reciprocating or vibrating motion, substantially as described.

3. In combination, the rotating platform, the link pivoted thereto, and the spindle and eccentric for imparting movement to the link, substantially as and for the purpose set forth.

4. In combination, the rotating platform, the link, its flexible arms *h*, the collar *i*, the eccentric, and the block-carrier, connected with the spindle, and with means for rotating the platform, substantially as and for the purpose set forth.

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

FRANCIS R. GOING.

Witnesses:

R. G. SPRUHAM,
G. W. GREGORY.