

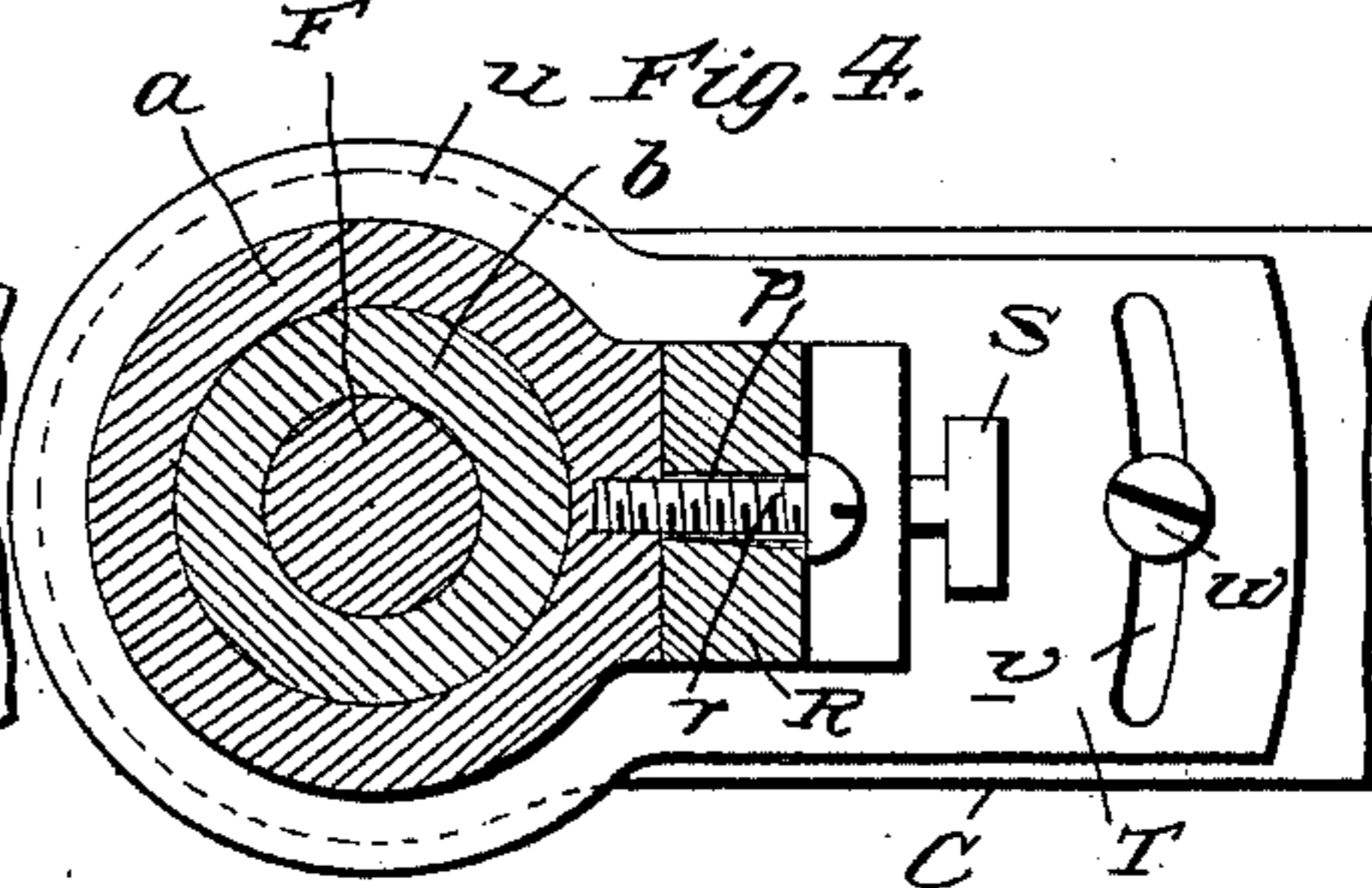
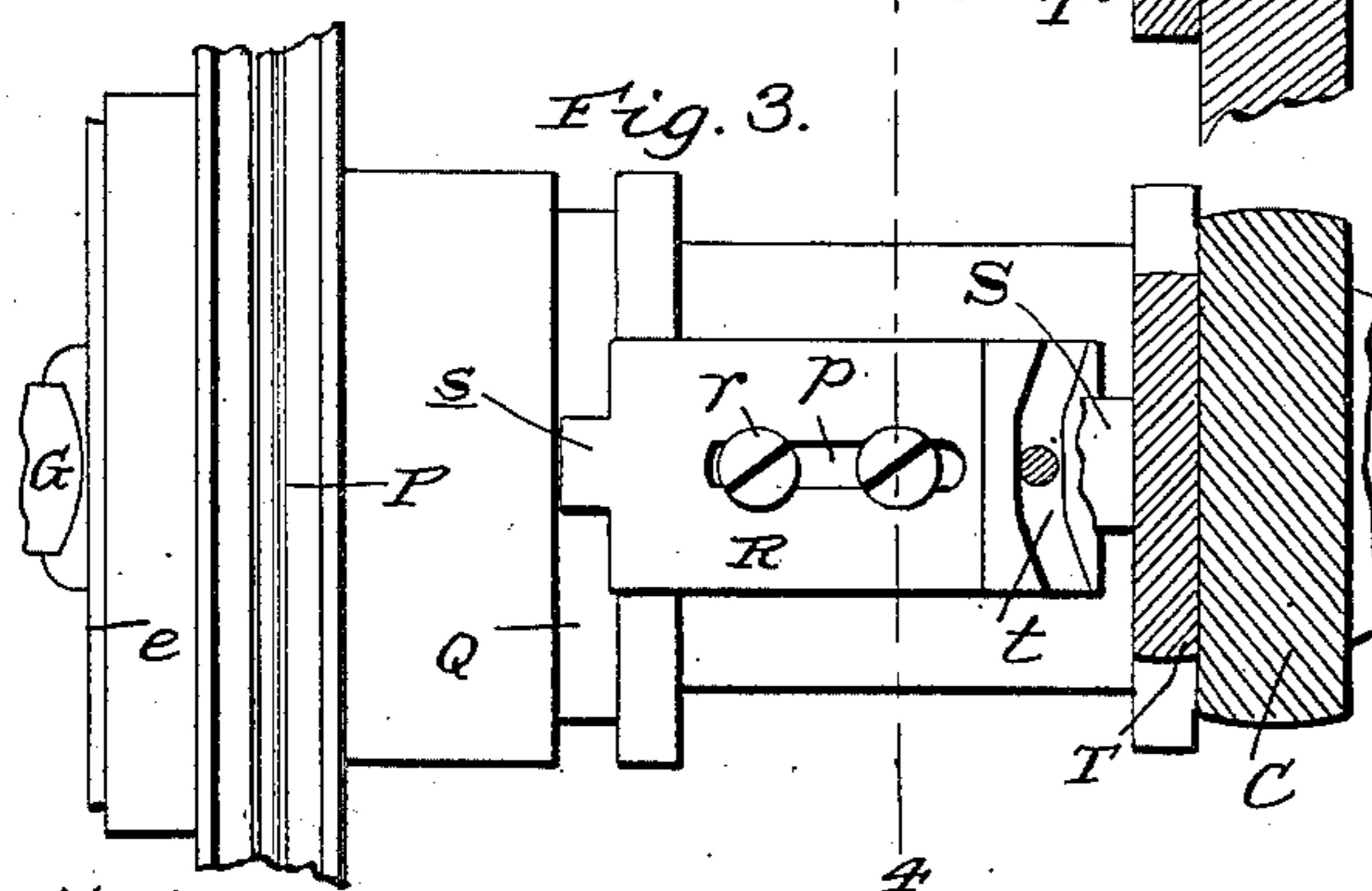
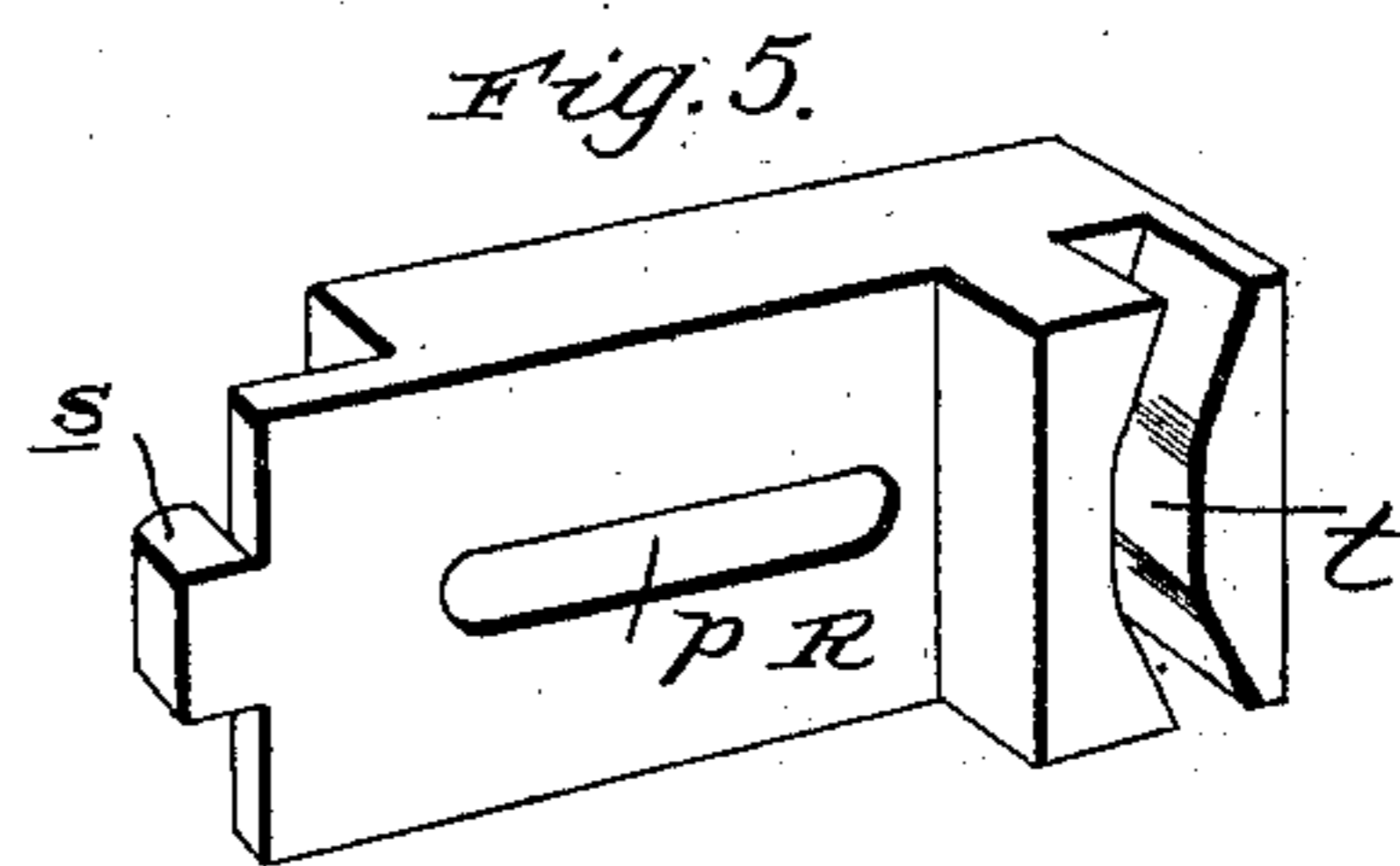
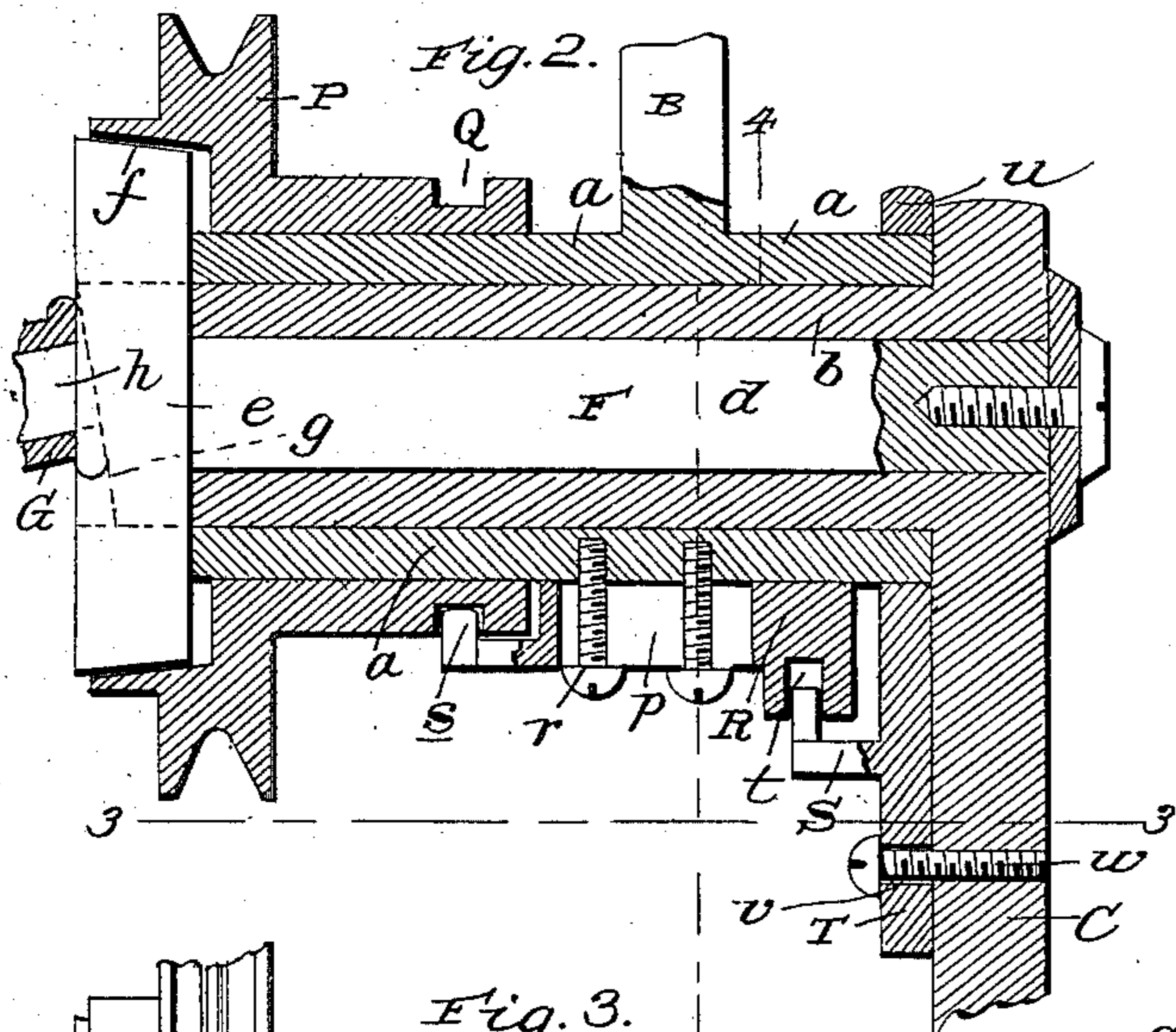
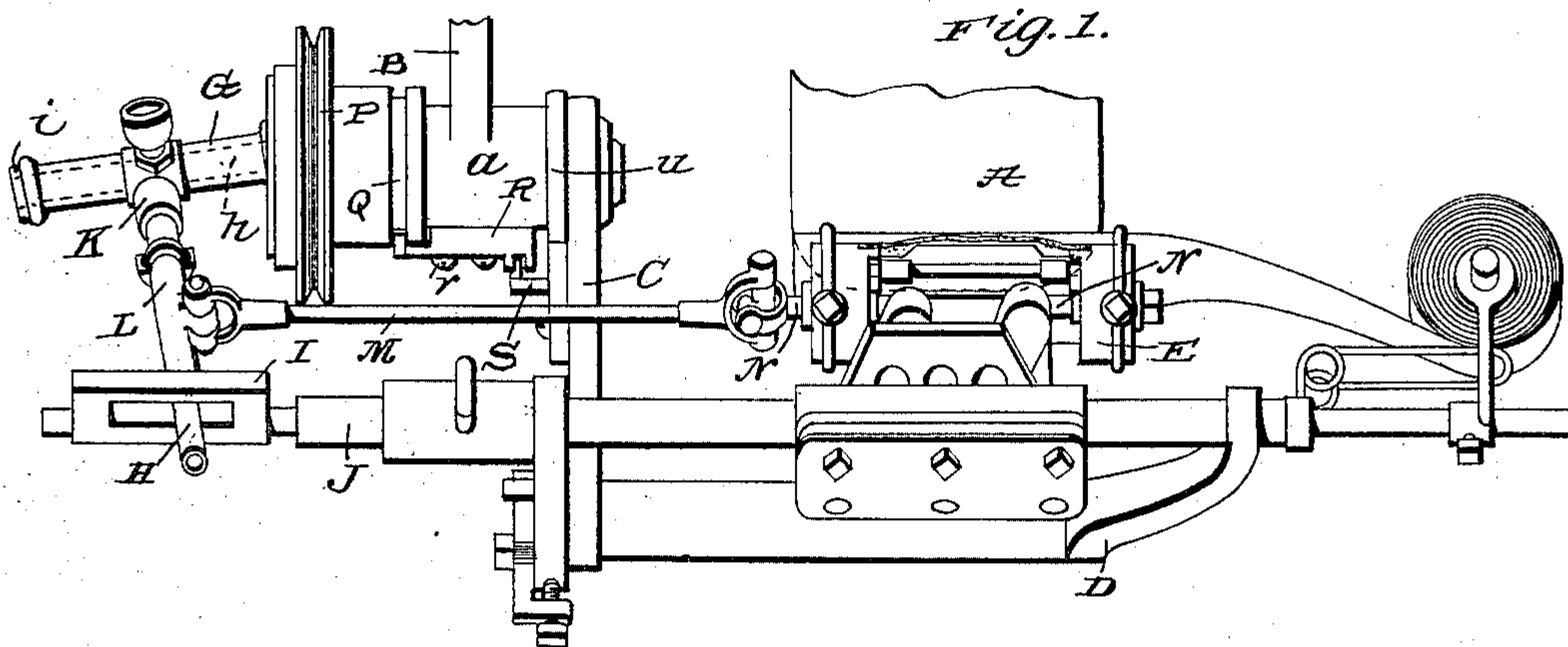
No. 674,986.

Patented May 28, 1901.

C. H. REID.
HAT POUNCING MACHINE.

(Application filed Oct. 4, 1900.)

(No Model.)



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UNITED STATES PATENT OFFICE.

CHARLES H. REID, OF DANBURY, CONNECTICUT.

HAT-POUNCING MACHINE.

SPECIFICATION forming part of Letters Patent No. 674,986, dated May 28, 1901.

Application filed October 4, 1900. Serial No. 32,031. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. REID, a citizen of the United States, residing at Danbury, in the county of Fairfield and State of Connecticut, have invented new and useful Improvements in Hat-Pouncing Machines, of which the following is a specification.

My invention relates to machines for pouncing hats, and is designed more particularly as an improvement upon the machine forming the subject-matter of my contemporary application, renewed August 2, 1900, Serial No. 25,705, in the operation of which a pouncer is carried up the body of a hat mounted on a rotary support to the tip thereof and incident to its travel is rapidly actuated to thoroughly and properly pounce the hat.

My present improvement is designed more particularly for use in the pouncing of hats which have flat or approximately flat tips, and consequently sharp or comparatively sharp angles at the juncture of the bodies and tips; and, broadly stated, it consists in the provision of means whereby the pouncer is caused to dwell incident to its travel over the corner or from the body to the tip, this being highly advantageous, since it effectually prevents excessive pouncing or wearing away of the fibers of the hat at the juncture of the crown and tip.

The invention will be fully understood from the following description and claims when taken in connection with the accompanying drawings, in which—

Figure 1 is a plan view of so much of a hat-pouncing machine as is necessary to illustrate my present improvement. Fig. 2 is an enlarged detail section illustrating the swinging lever of the machine and the parts which operate in conjunction therewith, the said section being taken in a horizontal plane with the lever in a horizontal or approximately horizontal position. Fig. 3 is a vertical section taken in the plane indicated by the broken line 3 3 of Fig. 2. Fig. 4 is a transverse section taken in the plane indicated by the broken line 4 4 which extends through Figs. 2 and 3, and Fig. 5 is a perspective view of the slide which forms part of my present improvements.

In the said drawings similar letters of ref-

erence designate corresponding parts in all of the several views, referring to which—

A is a hat support or block designed to be rotated after the manner disclosed in my aforesaid contemporary application.

B is a bracket which is common to the frame shown in my said other application and is provided at its forward end with a box *a*.

C is a T-lever which has a lateral sleeve *b*, journaled in the box *a*.

D is a pouncer-frame which is carried by and movable with the lever C and is by preference similar in construction and mode of operation to that included in the contemporary application, and E is a pouncer carried by the frame D, the said pouncer being preferably of the same construction as that shown in the contemporary application, although it might be of any other construction suitable to the purposes of my present invention.

The lever C is designed to be connected by a driving connection with the same means that rotates the hat support or block A, so as to cause the pouncer E to travel from its initial position adjacent to the brim of a hat on the support A up the body of the hat toward the tip thereof, as fully and clearly shown and described in the contemporary application. When the pouncer has completed its operations against the tip of the hat, the T-lever C is disconnected from the driving means and permitted to fall, when the pouncer-frame will topple backward to carry the pouncer away from the hat and place the machine out of operation, which, as stated in the contemporary application, is advantageous, since it enables a single operator to attend to several machines.

The pouncer and other parts are restored from their fallen position to the initial position before stated in the manner described in the contemporary application, which it is not deemed necessary to reiterate herein.

In order to steadily and uniformly actuate the pouncer incident to its travel up the body of a hat to the tip thereof and cause it to dwell for a short period while making the turn at the corner of the hat, I provide the mechanism best shown in Figs. 1 and 2 of the drawings. F is the drive-shaft of this mechanism. Said shaft comprises an inner portion *d*, jour-

naled in the sleeve *b* of the lever *C* and forming the pivot of said lever and intermediate diametrically-enlarged portion *e*, which has a beveled periphery *f*, whereby it is enabled to
 5 constitute one member of a friction-clutch, presently described, and also has the central portion *g* of its face obliquely disposed and an outer portion *h* arranged off the center of the portion *d* and enlargement *e* and disposed
 10 at right angles or perpendicular to the oblique face *g* of the latter.

G is a sleeve loosely mounted on the portion *h* of shaft *F* and held thereon by suitable means, such as a disk *i*. This sleeve is provided with a lateral arm *H*, which by reason
 15 of the disposition of the portion *h* of the shaft *F* and the loose arrangement of the sleeve on said portion *h* is adapted to oscillate when the shaft is rotated, as hereinafter described.
 20 Said arm *H* is arranged and adapted to oscillate in a guide *I* on a rod *J* of the pouncer-frame *D* and is thereby caused to move vertically with the said frame and the lever *C*, so as to always be in proper position to transmit
 25 motion to the pouncer *E* or the reciprocatory portion thereof. Such motion is transmitted through the medium of a sleeve *K*, adjustably fixed on the arm *H* by a set-screw (not shown) or other means, a sleeve *L* loosely mounted
 30 on the arm and connected in a swiveled manner to the sleeve *K*, and a pitman *M* interposed between the sleeve *L* and a rod *N* of the pouncer *E* and connected in a hinged manner to the former and by universal joint to the
 35 latter. As stated in my contemporary application, the adjustable fixture of the sleeve *K* on the arm *H* is provided in order that the thrust or throw of the pouncer may be regulated at pleasure, it being simply necessary
 40 to move the sleeve *K* toward the free end of the arm *H* to increase the throw and in the opposite direction to diminish the same. The arm *H* rocks on its axis incident to its oscillations, and the swivel connection between
 45 the sleeves *K* *L* is provided to prevent the communication of such rocking motion to the pitman *M*.

It will be readily appreciated from the foregoing that when the shaft *F* is rotated a steady
 50 working movement is transmitted to the pouncer or working portion thereof irrespective of its position with respect to a hat mounted on the block or support *A*; also, that the motion transmitting mechanism is free to accommodate itself to the movements of the lever *C*, pouncer-frame *D*, and pouncer *E*, and steadily actuate the body or working portion
 55 of the latter during its movements up the body and over the top of a hat. It will further be appreciated that the rotary movement of the shaft *F*, which is located at the center of movement of the lever *C*, is converted into reciprocatory motion, such as is necessary to properly actuate the working portion of the
 60 pouncer.
 65 The shaft *F* is designed to be rotated by a suitable motor (not shown) through the me-

dium of a band (also not shown) and a clutch member *P*, complementary to the clutch member or enlargement *e* of the said shaft *F*. The
 70 said clutch member *P* has a sleeve portion mounted and adapted to turn on the box *a* and provided with a circumferential groove *Q* and a sheave portion to receive the driving-band before mentioned and provided in
 75 its outer side with a circular recess, which is designed to receive the beveled enlargement *e*, after the manner shown in Fig. 2, and has its wall beveled in conformity with the periphery of said portion *e* of shaft *F*, as illustrated. When the clutch member *P* is rotated and rests in frictional engagement with the clutch member or enlargement *e* of shaft
 80 *F*, it follows that the said shaft will be rotated and the pouncer or working portion thereof actuated in the manner and for the purpose before described. When, however, the clutch member *P* is disengaged from the enlargement or clutch member *e*, it will be
 85 seen that while said member *P* may continue to rotate on the box *a* the shaft *F* will be rendered idle, and the pouncer *E* or working portion thereof will be caused to dwell. On the other hand, when the clutch member *P* is replaced in frictional engagement with the
 90 member *e* the rotation of the shaft *F* and resumption of motion of the pouncer or working portion thereof will be immediately effected.

In order to disengage the clutch member *P* from the member *e*, and thereby cause the
 100 pouncer or working portion thereof to dwell incident to the movement of the pouncer over the angular corner or juncture between the body and top of a hat and also to reengage the clutch member *P* with the clutch member
 105 *E* and again set the pouncer or working portion thereof in motion after the pouncer has reached the top of the hat, I provide the mechanism best shown in Figs. 2 to 5 of the drawings. Such mechanism comprises a
 110 thrust piece or slide *R*, which is longitudinally slotted at *p* to receive bolts *r*, which connect it to box *a*, and is provided at one end with a lug *s*, arranged in the groove *Q* of the clutch member *P*, and at its opposite end
 115 with a cam portion *t*, preferably shaped as shown, and a projection carried by and movable with the lever *C* and adapted to operate in conjunction with the cam portion *t* of the slide *R*, and thereby move the clutch member
 120 *P* out of engagement and into engagement with the member *e*. The said projection *S* in the preferred embodiment of the invention is carried by a plate *T*, which is provided with a collar *u*, surrounding the box *a*,
 125 and also with a curvilinear slot *v* for the passage of a screw *w*, which adjustably connects the plate to the lever *C*, this in order to permit of the operation of the projection *S* in conjunction with the cam portion of the slide *R*
 130 being properly timed.

In the practical operation of a machine embracing my present improvements it will be seen that when the pouncer reaches a position

where its working portion operates against the corner of a hat having a flat or approximately flat top the projection S on the lever C will have entered the cam-groove *t*, and thereby moved the slide R and the clutch member P in a direction away from the clutch member *e* and disengaged said clutch member P from the member *e* and caused the working portion of the pouncer to dwell. As the arm C swings outwardly or downwardly and the working portion of the pouncer is carried against the top of the hat the projection S on the arm or lever C moves toward the end of the cam-groove *t* opposite to that at which it entered, and in so doing will move the slide R and clutch member P toward the member *e* and place said member P in frictional engagement with the member *e*, and thereby reestablish the transmission of motion to the said working portion of the pouncer. From the foregoing it will be appreciated that the pouncer or the working portion thereof is actuated while operating upon the body and top of the hat, but while operating against the angular corner present in flat-top hats is caused to dwell. This is highly advantageous, for the reason that it obviates excessive pouncing or wearing away of the fibers of the hat at the corner thereof.

I prefer in practice to employ mechanism such as described for effecting the dwell of the pouncer or working portion thereof while the pouncer is presented to the corner of a hat. I do not desire, however, to be understood as confining myself to any particular mechanism for accomplishing such purpose, as such changes or modifications may be made in practice as fairly fall within the scope of my claims.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a hat-pouncing machine, the combination of a pouncer, means for moving the pouncer over a hat, means for actuating the pouncer, and means for causing the pouncer to dwell while it is presented to the corner of a hat and intermediate of its operations on the body and top of the hat.

2. In a hat-pouncing machine, the combination of a pouncer, means for moving the pouncer over a hat, means for actuating the pouncer, and automatic means for causing the pouncer to dwell while it is presented to the corner of a hat and intermediate of its operations on the body and top of the hat.

3. In a hat-pouncing machine, the combination of a pouncer, means for moving the pouncer over a hat, means for actuating the pouncer, and automatic means, operated by the pouncer-moving means, for causing the pouncer to dwell while it is presented to the corner of a hat.

4. In a hat-pouncing machine, the combination of a hat-support, a pouncer, means for moving the pouncer over a hat on the support, means for actuating the pouncer, and

automatic means, operated by the pouncer-moving means, for stopping and reestablishing the actuation of the pouncer before and after the same is presented to the corner of a hat.

5. In a hat-pouncing machine, the combination of a pouncer, means for moving the pouncer over a hat, and automatic means for stopping and starting the actuation of the pouncer at predetermined points and causing said pouncer to dwell for a predetermined period.

6. In a hat-pouncing machine, the combination of a pouncer, means for moving the pouncer over a hat, means for actuating the pouncer; said actuating means embodying a stop-motion device, and means, controlled by the pouncer-moving means, for operating the stop-motion device and thereby causing the pouncer to dwell, and subsequently reestablishing the actuation of said pouncer.

7. In a hat-pouncing machine, the combination of a hat-support, a pouncer, means for moving the pouncer over a hat on the support, means for actuating the pouncer, and automatic means, controlled by the pouncer-moving means, for stopping and starting the actuation of the pouncer at predetermined points, and causing said pouncer to dwell for a predetermined period.

8. In a hat-pouncing machine, the combination of a hat-support, a pouncer, means for moving the pouncer over a hat, and means for actuating the pouncer embodying a clutch for stopping and reestablishing the actuation of the pouncer before and after the same is presented to the corner of a hat; said clutch being controlled by the pouncer-moving means.

9. In a hat-pouncing machine, the combination of a hat-support, a pouncer, a lever, connected with the pouncer, for moving the same over a hat on the support, and means for actuating the pouncer embodying a friction-clutch for stopping and reestablishing the actuation of the pouncer before and after the same is presented to the corner of a hat; said friction-clutch being controlled by the movement of the said lever.

10. In a hat-pouncing machine, the combination of a frame having a box, a rotary hat-support, a pouncer, a lever, connected with the pouncer, for moving the same over a hat on the support, an actuating-shaft connected with the pouncer and arranged coincident with the center of movement of the lever; said shaft having an enlargement constituting a clutch member, a complementary clutch member loosely mounted on the box and adapted to turn thereon and be moved toward and from the clutch member on the shaft, and coacting means on the box and lever for moving the clutch member on the box, substantially as specified.

11. In a hat-pouncing machine, the combination of a frame having a box, a hat-support, a pouncer, a lever connected with the

pouncer, for moving the same over a hat on the support, an actuating-shaft connected with the pouncer and arranged coincident with the center of movement of the lever, 5 said shaft having an enlargement constituting a clutch member, a complementary clutch member loosely mounted on the box and adapted to turn thereon and be moved into and out of engagement with the clutch member on the shaft, and coacting devices on the 10 box and lever for moving the clutch member

on the box; the device on the lever being adjustably connected thereto, substantially as and for the purpose set forth.

In testimony whereof I have hereunto set 15 my hand in presence of two subscribing witnesses.

CHARLES H. REID.

Witnesses:

ROBERT S. ALEXANDER,
URBANE B. DUNAWAY.