

No. 616,623.

Patented Dec. 27, 1898.

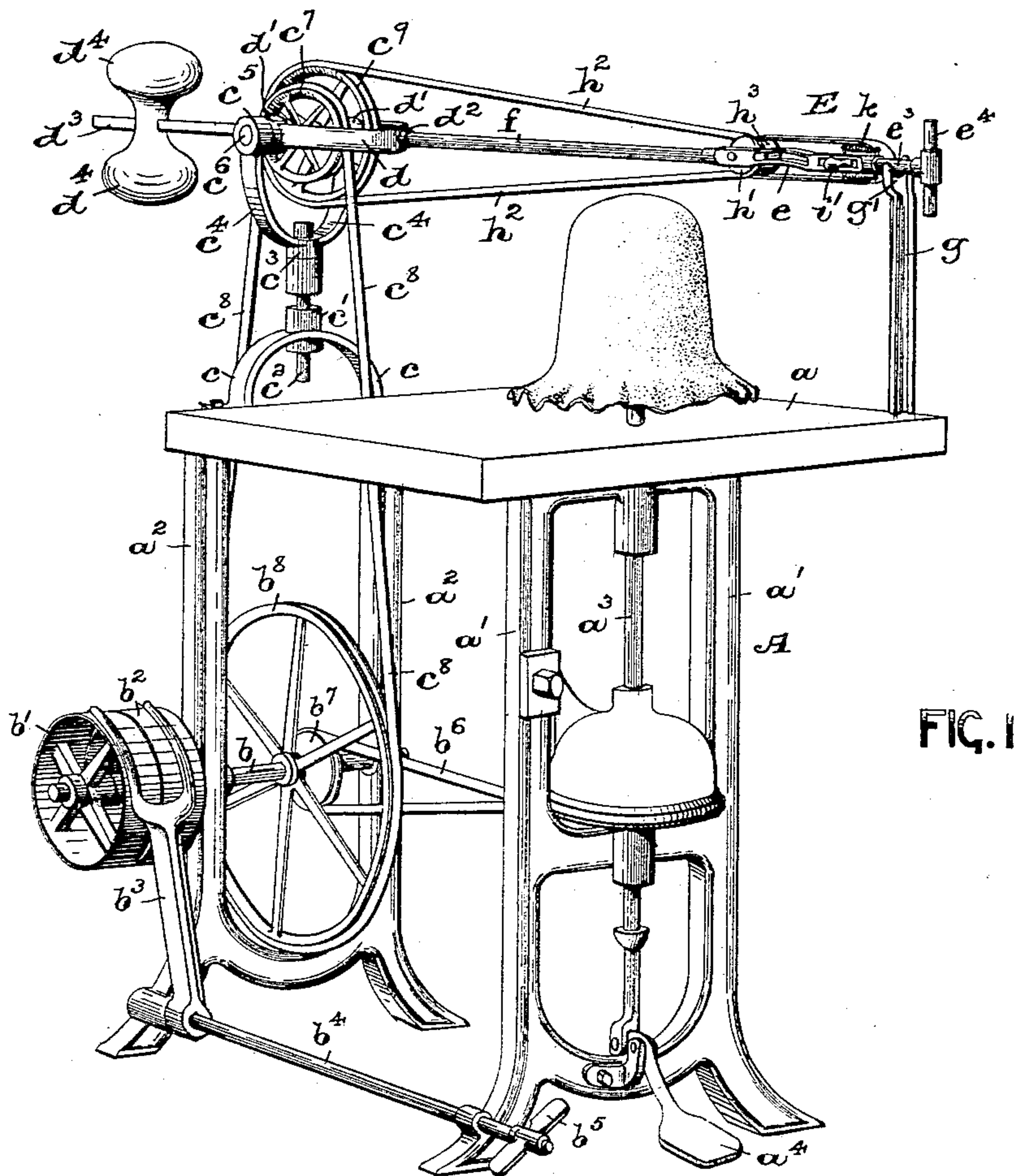
G. F. LARKIN.

MACHINE FOR POUNCING HAT BODIES.

(Application filed Apr. 5, 1898.)

(No Model.)

2 Sheets--Sheet 1.



WITNESSES:

Wm. H. Campfield, Jr.
Marcy Z. Trusdell.

INVENTOR:

GEORGE F. LARKIN,

BY
Fred C. Fraentzel,
ATTORNEY

No. 616,623.

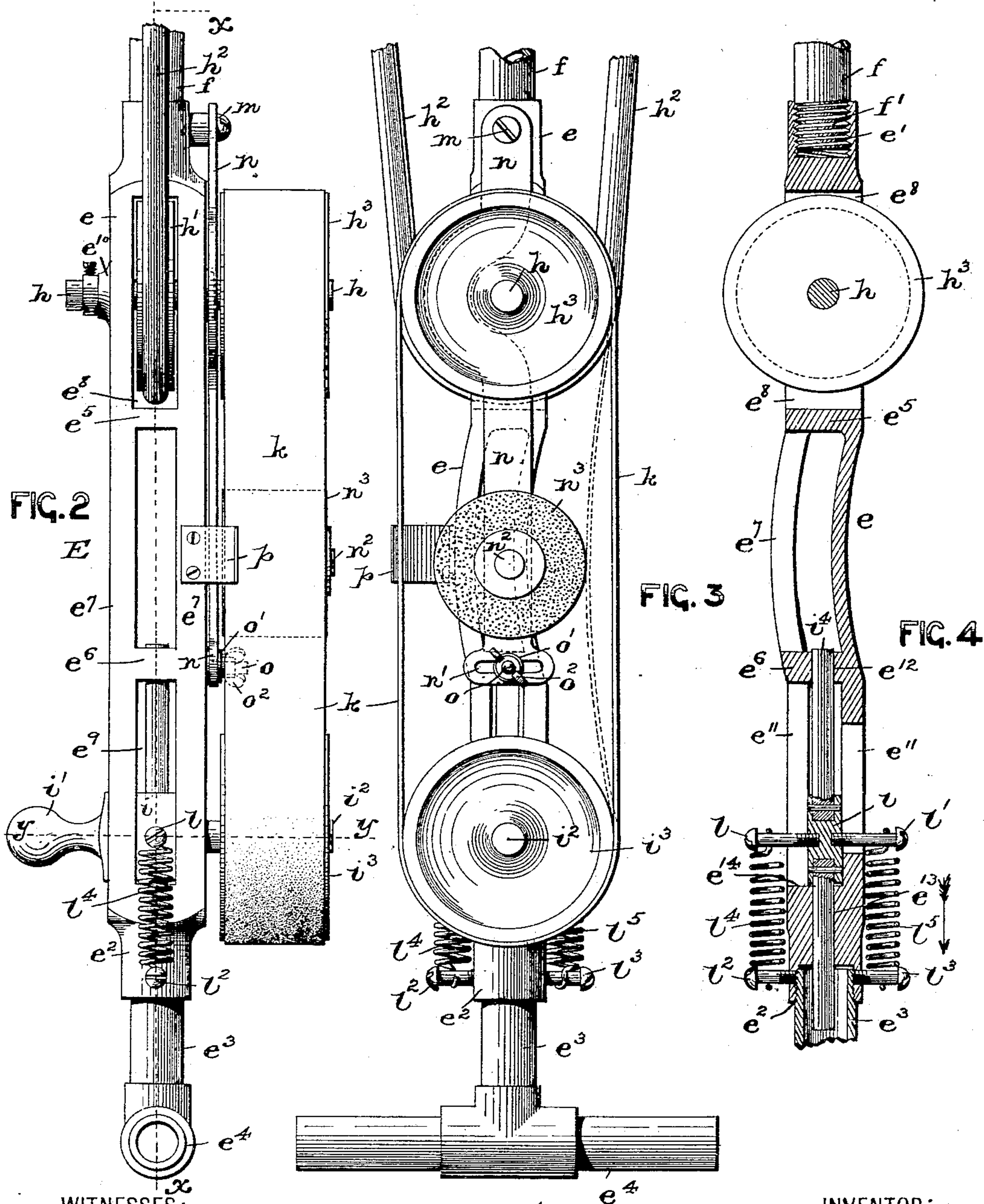
Patented Dec. 27, 1898.

G. F. LARKIN.
MACHINE FOR POUNCING HAT BODIES.

(Application filed Apr. 5, 1898.)

(No Model.)

2 Sheets—Sheet 2.



WITNESSES:

Wm. H. Campfield, Jr.
Marcy J. Crussell.

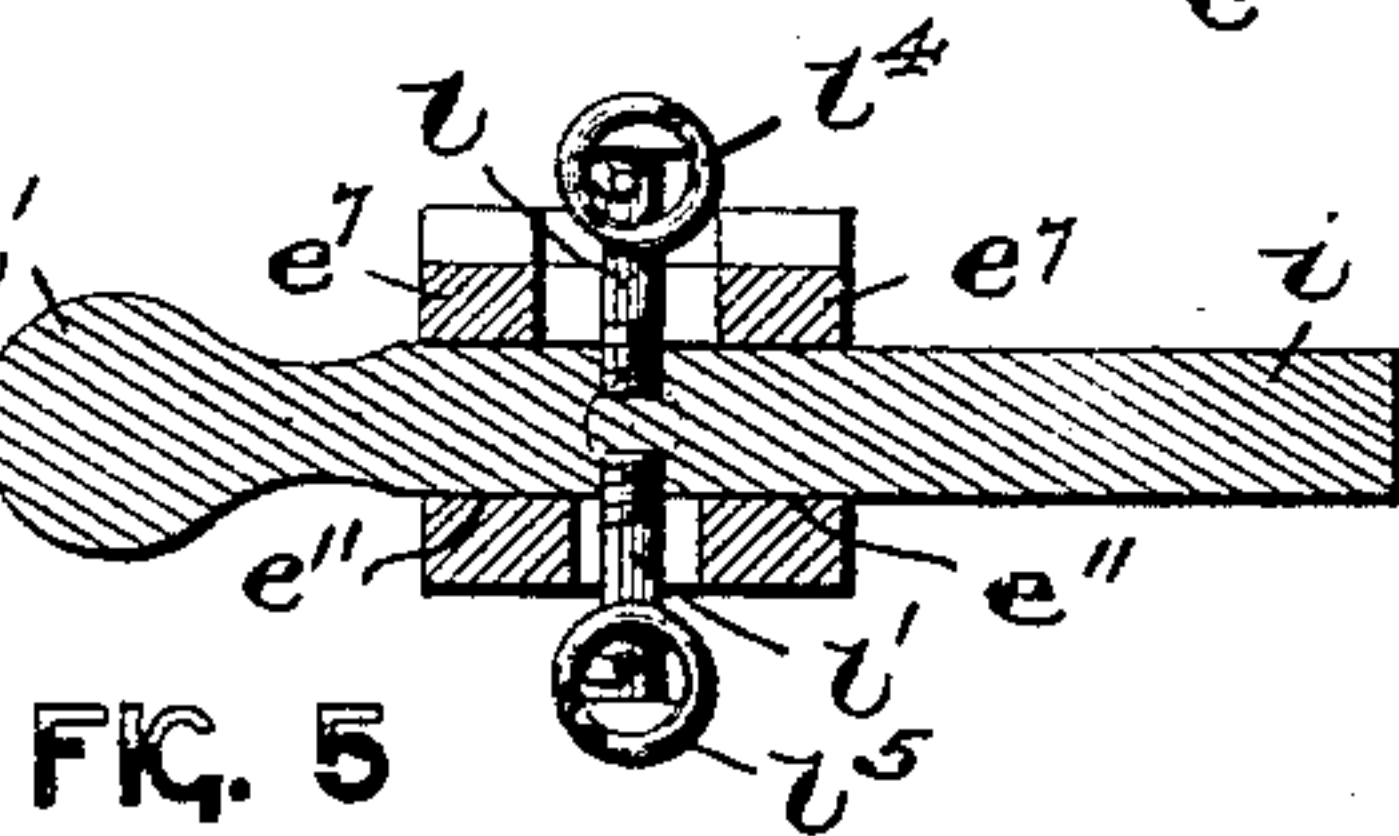


FIG. 5

INVENTOR:

GEORGE F. LARKIN

BY

Fred C. Fraentzel,
ATTORNEY

UNITED STATES PATENT OFFICE.

GEORGE F. LARKIN, OF NEWARK, NEW JERSEY.

MACHINE FOR POUNCING HAT-BODIES.

SPECIFICATION forming part of Letters Patent No. 616,623, dated December 27, 1898.

Application filed April 5, 1898. Serial No. 676,529. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. LARKIN, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Machines for Pouncing, Shearing, or Finishing Hat-Bodies; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention has reference to improvements in hat-pouncing-machines; and the object of the invention is to provide a machine of this general class which shall be of a very simple, compact, and effective construction and which is especially adapted for the pouncing, shearing, and finishing of hat-bodies, as well as the luring of the hat-body after the same has been pounced.

Heretofore hat-bodies have been pounced by the application of a granular material, such as sand or emery, applied to the periphery of a rotary roll or, in the case of crown-pouncing, to the flat surface of a revolving disk or plate which is brought against the hat-body on the revolving hat-block of the machine. Several objections are found to exist in the employment of such roll or disk provided with the granular material, the more serious objection being that the operator in bringing the granular surface of the roll or disk against the hat-body may do so with greater pressure than necessary, thereby causing great heat due to friction, which has a damaging effect upon the hat-body and if not having entirely ruined the hat-body giving the same a dingy and dull appearance, or, owing to the hard material of which the roll or disk is made, the surface of the hat-body will become unevenly pounced.

My invention therefore has for its principal object to overcome these objectionable features by producing a machine for pouncing, shearing, or finishing hat-bodies having a mechanism for applying to the surface of the hat-body a moving granular surface in the nature of a flexible and endless belt, whereby a

soft, even, and elegant finish of the surface of the hat-body will be the final result.

With these several objects in view the invention consists in the novel construction of hat-pouncing, shearing, or finishing machine hereinafter fully set forth, and also in the novel arrangements and combinations of the several parts, all of which will be more fully described in the accompanying specification and finally embodied in the clauses of the claim.

The invention is clearly illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the complete hat-pouncing-machine, to which the pouncing attachment embodying the principles of my present invention is applied. Fig. 2 is a plan view of the pouncing attachment, on an enlarged scale; and Fig. 3 is a side view of the same. Fig. 4 is a longitudinal vertical section taken on line *x* in Fig. 2, and Fig. 5 is a cross-section taken on line *y* in said Fig. 2.

Similar letters of reference are employed in all of the above-described views to indicate corresponding parts.

In said drawings, A indicates a suitable machine-frame comprising a table *a* and supports *a'* and *a''*. In suitable bearings in the supports *a''* at the back is a shaft *b*, on which there is a loose pulley *b'* and a fast driving-pulley *b''*, and *b'''* is a fork connected with a rod *b''''* and a foot-piece *b'''''* for forcing the driving-belt from the loose pulley *b'* upon the fixed pulley *b''*, or vice versa. In suitable bearings in the supports *a'* is the usual form of vertical shaft *a'''*, operated from the belt *b''''*, connected with the wheel *b'''''* on the shaft *b*, and *a''''* is the usual form of foot-lever for causing said shaft *a'''* to move vertically in its bearings, as will be understood from an inspection of Fig. 1. Said shaft extends through the table *a* and has a hat-block thereon, on which the hat-body to be pounced is secured in the usual manner.

Secured upon the top of the standard or support *a''* is a yoke or frame *c*, having a bearing *c'*, and arranged in said bearings is a stem *c''*, which is rotatively secured in a hub *c'''* of an upper yoke or frame *c''''*. The upwardly-extending arms of said yoke or frame *c''''* have suitable bearings *c'''''*, in which there is a shaft *c''''''*. On said shaft *c''''''* is a pulley-wheel *c'''''''*, over

which passes a belt c^8 , driven from a wheel b^8 on the shaft b , as clearly illustrated in said Fig. 1. Said upper frame or yoke c^4 is thus rotative horizontally in relation to the lower frame or yoke c . Pivoted upon the shaft c^6 are the bearings d' of a yoke or U-shaped frame d , to which is pivotally attached in a bearing portion d^2 a rod or bar f . Said rod or bar f is connected at its forward end with the hat pouncing, shearing, or finishing attachment E, the same normally resting in the forked end g' of a standard g on the table a of the machine. Said U-shaped frame d has a rearwardly-extending arm or rod d^3 , on which there is a weight d^4 , acting as a counterbalance to the weight of the attachment E and facilitating the handling of the same by the workman while the machine is in operation. The said attachment E, which is more clearly illustrated in Figs. 2, 3, 4, and 5, consists, essentially, of a frame e , having a screw-threaded socket e' for attaching it on the screw-threaded end f' of the rod or bar f , as will be seen from Fig. 4. In the opposite end of said frame e is a similar screw-threaded socket e^2 , into which is screwed the end e^3 of a suitable handle e^4 . Said frame e has suitable webs e^5 and e^6 , connecting the longitudinal side pieces e^7 , whereby certain open spaces e^8 and e^9 are formed in said frame e . In suitable bearing portions e^{10} in the sides e^7 , contiguous to the open space e^8 , is operatively secured a pin or small shaft h , having a grooved or other suitable driving-wheel h' , over which passes a belt h^2 , said belt being operatively arranged over a driving-wheel or pulley c^9 on the shaft c^6 hereinabove mentioned. On one side of the frame e and secured directly on the projecting end of said pin or shaft h is a pulley-wheel h^3 .

Slidably arranged in the open spaces e^{11} in the sides e^7 of the frame e and contiguous to the open space e^9 is a slide or block i , having a finger-piece or handle i' projecting from one side of the frame e and a pin i^2 projecting from the opposite side of the said frame e , said pin i^2 having a pulley i^3 loosely, but operatively, arranged thereon, said pulley i^3 being in alinement with the pulley h^3 on the pin or shaft h and a pouncing, shearing, or finishing belt k being arranged over said pulleys h^3 and i^3 , the same being set in motion by the pulley, which is driven from the driving-wheel h' and its belt h^2 when the operator has set the machine in motion.

In order that the slide or block i is operatively retained to slide back and forth in the open space e^{11} , as may be necessary to keep the belt k taut and permit of its yielding contact with the surface of the hat-body to be operated upon, said slide or block i has a pair of guide-arms i^4 and i^5 , which extend on opposite sides of the slide or block i and are adapted to reciprocate in suitable guide portions e^{12} in the hub e^6 and in the part e^{13} in said frame e , as clearly illustrated in Fig. 4. In order that the said block or slide i may be

normally forced up against or in close proximity to the offset e^{14} in said frame e , (see Fig. 4,) said block i has a pair of oppositely-extending screws or pins l and l' , and on the frame e are another set of screws or pins l^2 and l^3 , said screws or pins l and l^2 having a connecting-spring l^4 and the screws or pins l' and l^3 a connecting-spring l^5 , which constantly act to draw the said block or slide i in the direction of the arrow in said Fig. 4.

The operation of the device is as follows: After a hat-body has been placed upon the block on said vertical shaft a^3 and the mechanism of the machine has been set in operation to cause the rotary motion of said shaft, its block, and the hat-body thereon the operator lifts the pouncing attachment off the support g and brings the moving belt k in operative contact with all parts of the hat-body. The rotary motion of the rod f in the bearing d^2 in said frame d and the pivotal motion of said frame d on the shaft c^6 , as well as the rotary motion of said shaft and the frame or yoke c^4 in which it revolves, allows the operator to twist the rod f to bring the device E in the several positions upon the top or crown and the sides of the hat-body, as will be clearly evident. The said belt k is provided with a granular surface of sand or emery, which serves to dress and remove the hair in the hat-body in the manner of pouncing, shearing, or finishing hat-bodies, and owing to the yielding condition of the belt k when pressed against the surface of the hat-body no damage can be done to the hat-body by excessive heat or pressure.

Owing to the sliding arrangement of the slide or block i and the parts connected therewith the shape of the contact-surface of the belt k will correspond to that of the hat-body on the block, whereby a greater surface of the hat-body is pounced, sheared, or finished at one time than by means of the constructions now used for these purposes and with much better results in that a better-finished and a more even surface of the body is produced.

The belt k , which is usually but a piece of sand or emery paper or cloth, is of a simple and cheap construction and is quickly and easily replaced by a new belt when worn out with constant use.

As an extra precaution to prevent too great a pressure upon the belt k due to careless handling of the attachment E, I have pivoted upon a pin or screw m on the frame e , as will be seen from Figs. 2 and 3, a lever or bar n , provided with a slotted end n' , which is arranged over a pin o on said frame e , and by means of a washer o' and a nut or thumb-screw o^2 can be locked in its properly-adjusted position against the side of the frame e . On a pin n^2 , extending from one side of said lever or bar n at a suitable point between the pulley-wheels h^3 and i^3 , is a roller or wheel n^3 of a flexible material, such as rubber, which acts as a cushion against the under surface of the moving belt k when the

latter is forced to assume the curvature indicated in dotted outline in said Fig. 3. Owing to the arrangement of the slotted end n' of the bar n and the thumb-screw o^2 said wheel n^3 can be brought farther away or closer to the under surface of the belt k , as will be clearly understood.

When it is desired to use the attachment for luring the hat-body after it has been pounced, the sand or emery belt can be removed and a felt or other suitable belt can be arranged over the pulleys h^3 and i^3 , said belt having been previously subjected to a treatment of vaseline or other suitable substance of a greasy nature.

By my improvements herein set forth a simple and efficient machine for the purposes stated is the result for operating upon a hat-body with less liability to injury by the belt than by the ordinary pouncing-roll or pouncing-disk covered with a surface of a granular nature, and the machine can be run more economically and with better results in producing a more finely-finished surface of the hat-body.

To prevent any curling of the edge of the belt k with constant use, I have secured upon the top of the frame e , by means of screws or in any other suitable manner, a plate p , which extends upwardly and slightly against the upper edge of the belt k , nearest the side of the frame e , and is in slight contact with said edge of the belt, substantially as represented in said Figs. 2 and 3.

Of course I am aware that changes may be made in the several arrangements and combinations of parts, as well as in the details of the construction thereof, without departing from the scope of my invention. Hence I do not limit my invention to the exact arrangements and combinations of the parts described in this specification, and illustrated in the accompanying drawings, nor to the details of construction thereof.

Having thus described my invention, what I claim is—

1. In a machine for pouncing, shearing or finishing hat-bodies, the combination, with a rotary hat-block on which the hat-body is placed, of an attachment E, comprising a frame, a driving-wheel in said frame, a spring-actuated slide or block in said frame, a pulley-wheel connected with and operated from said driving-wheel, and a pulley-wheel connected with said slide or block, an endless belt on said pulley-wheels to be brought in movable and operative contact with the hat-body on said block, and means for operating said driving-wheel in the frame of said attachment E, substantially as and for the purposes set forth.

2. In a machine for pouncing, shearing or finishing hat-bodies, the combination, with a rotary hat-block on which the hat-body is placed, of an attachment E, comprising a frame, a driving-wheel in said frame, a spring-actuated slide or block in said frame, a pul-

ley-wheel connected with and operated from said driving-wheel, and a pulley-wheel connected with said slide or block, an endless belt on said pulley-wheels to be brought in movable contact with the hat-body on said block, and means for operating said driving-wheel in the frame of the attachment E, consisting, essentially, of a driving mechanism of the machine, a frame c , having a bearing c' , a frame c^4 rotatively arranged in said bearing c' , a shaft c^6 in bearings on said frame c^4 , a frame d pivotally arranged on said shaft c^6 , a connecting rod or bar between said frame d and said attachment E, and cooperating pulleys and belts, all arranged, substantially as and for the purposes set forth.

3. In a machine for pouncing, shearing or finishing hat-bodies, the combination, with a rotary hat-block on which the hat-body is placed, of a pair of frames c and c^4 arranged, as set forth, a shaft in said frame c^4 , a frame d on said shaft, a rod or bar f pivotally connected with said frame d , an attachment E, on said rod or bar f , comprising, a driving-wheel in said frame, a slide or block in said frame, a pulley-wheel connected with and operated from said driving-wheel, and a pulley-wheel connected with said slide or block, an endless belt on said pulley-wheels to be brought in movable and operative contact with the hat-body on said block, and cooperating pulleys and belts, all arranged, substantially as and for the purposes set forth.

4. In a machine for pouncing, shearing or finishing hat-bodies, the combination, with a rotary hat-block on which the hat-body is placed, of a pair of frames c and c^4 arranged, as set forth, a shaft in said frame c^4 , a frame d on said shaft, a rod or bar f pivotally arranged in said frame d , an attachment E on said rod or bar f , comprising, a frame, a driving-wheel in said frame, a spring-actuated slide or block in said frame, a pulley-wheel connected with and operated from said driving-wheel, and a pulley-wheel connected with said slide or block, an endless belt on said pulley-wheels to be brought in movable and operative contact with the hat-body on said block, and cooperating pulleys and belts, all arranged, substantially as and for the purposes set forth.

5. The herein-described attachment E for pouncing, shearing or finishing hat-bodies, consisting, essentially, of a frame e having open spaces e^8 and e^9 , a driving-wheel in said space e^8 , and a block or slide in said space e^9 , pulley-wheels respectively connected with said driving-wheel and said block or slide, and an endless belt on said pulley-wheels, and springs connected with said block or slide and the frame e , and a roller of a flexible material connected with said frame e arranged between the pulleys for said endless belt, substantially as and for the purposes set forth.

6. The herein-described attachment E for pouncing, shearing or finishing hat-bodies, consisting, essentially, of a frame e having

open spaces e^8 and e^9 , a driving-wheel in said
space e^8 and a block or slide in said space e^9 ,
pulley-wheels respectively connected with
said driving-wheel and the said block or slide,
5 an endless belt on said pulley-wheels, a lever
or arm pivotally connected with said frame e ,
and a roller of a flexible material on said
lever or arm, and a means of adjustment on
the free end of said lever or arm for securing
10 said lever or arm in its adjusted position

against the side of said frame e , substantially
as and for the purposes set forth.

Intestimony that I claim the invention set
forth above I have hereunto set my hand this
1st day of April, 1898.

GEORGE F. LARKIN.

Witnesses:

FREDK. C. FRAENTZEL,
WM. H. CAMFIELD, Jr.