

(No Model.)

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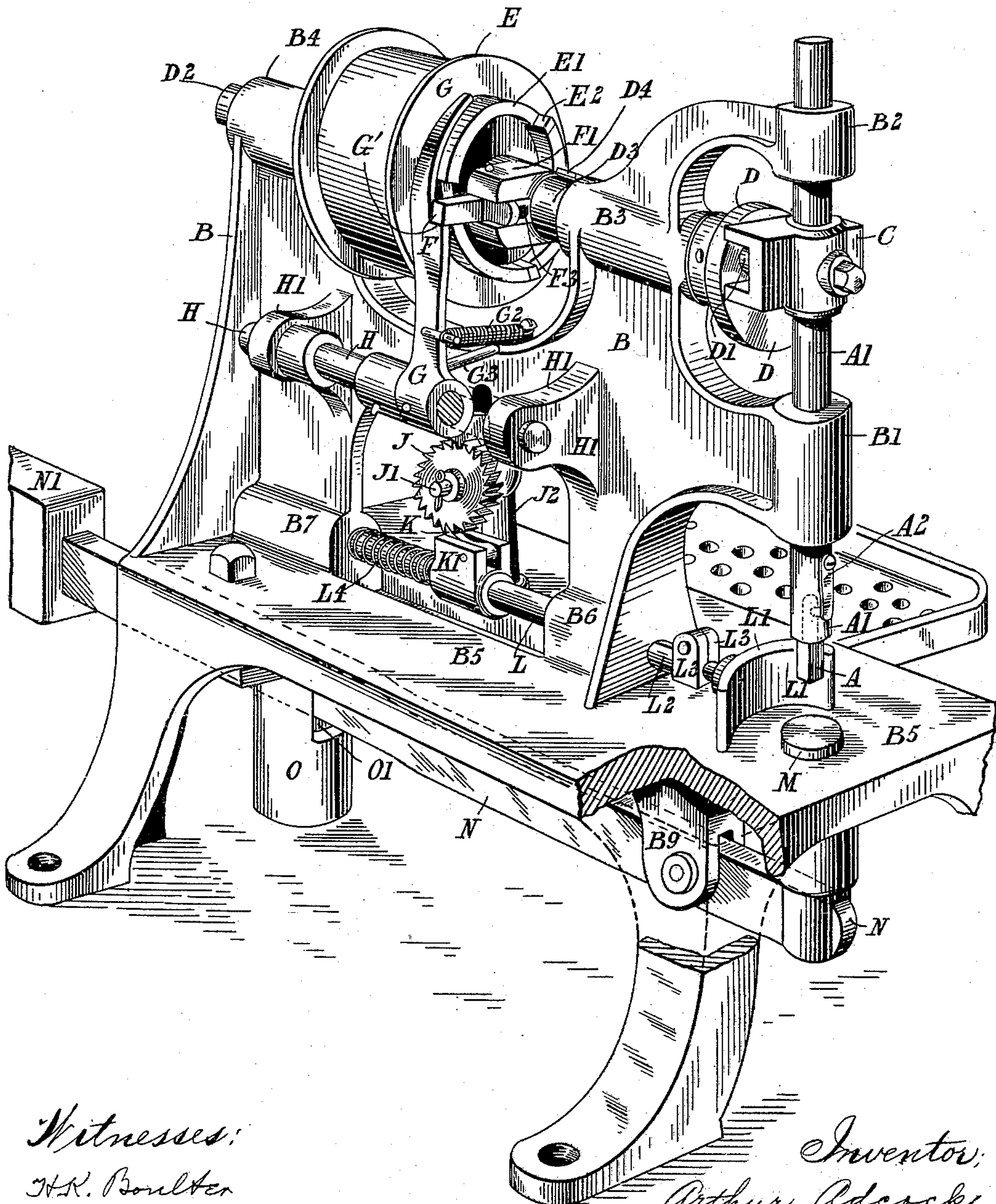
A. ADCOCK.

MACHINE FOR STAMPING SOLES OF BOOTS, SHOES, &c.

No. 604,106.

Patented May 17, 1898.

Fig. 1.



Witnesses:
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L. C. Hills

Inventor:
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(No Model.)

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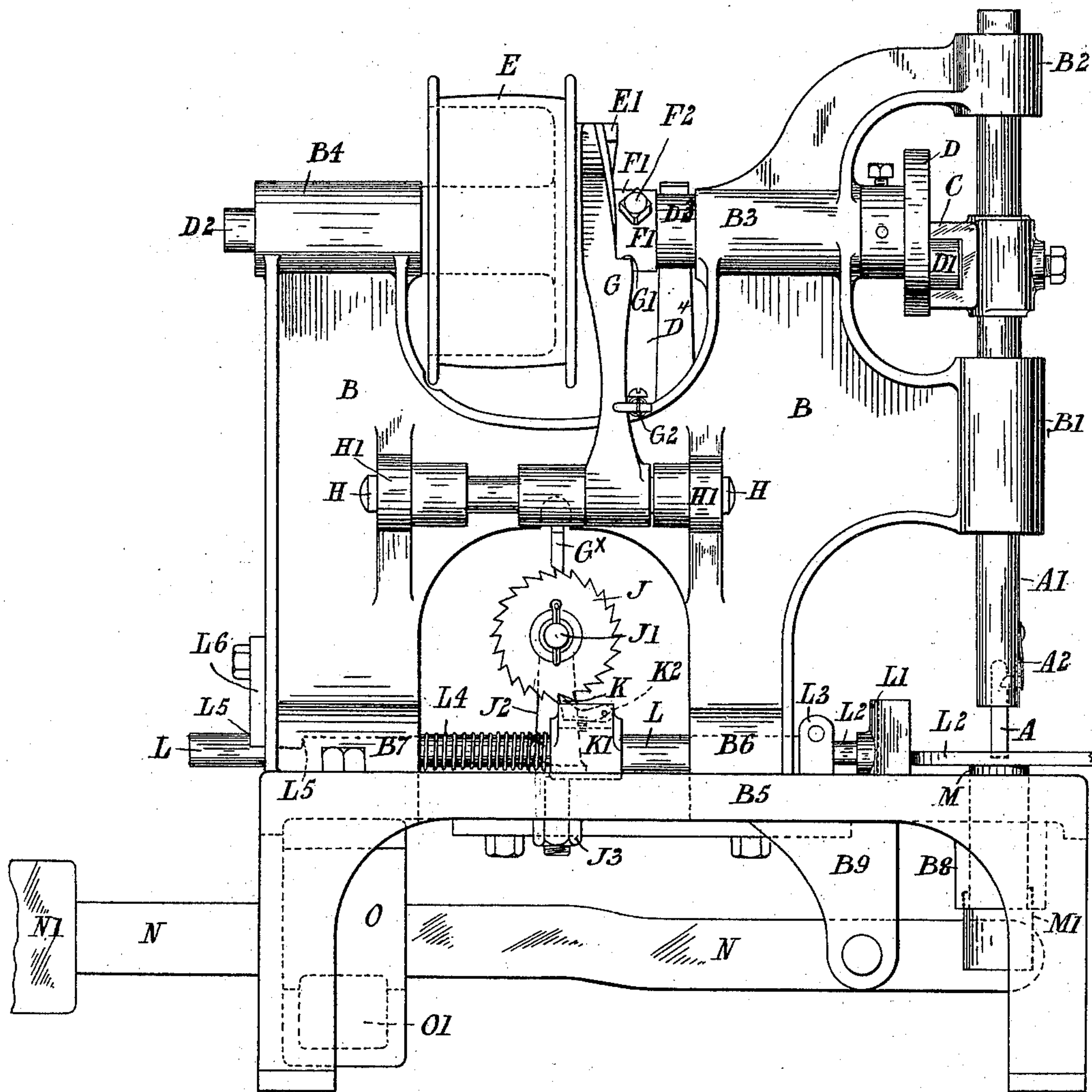
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Fig. 2.



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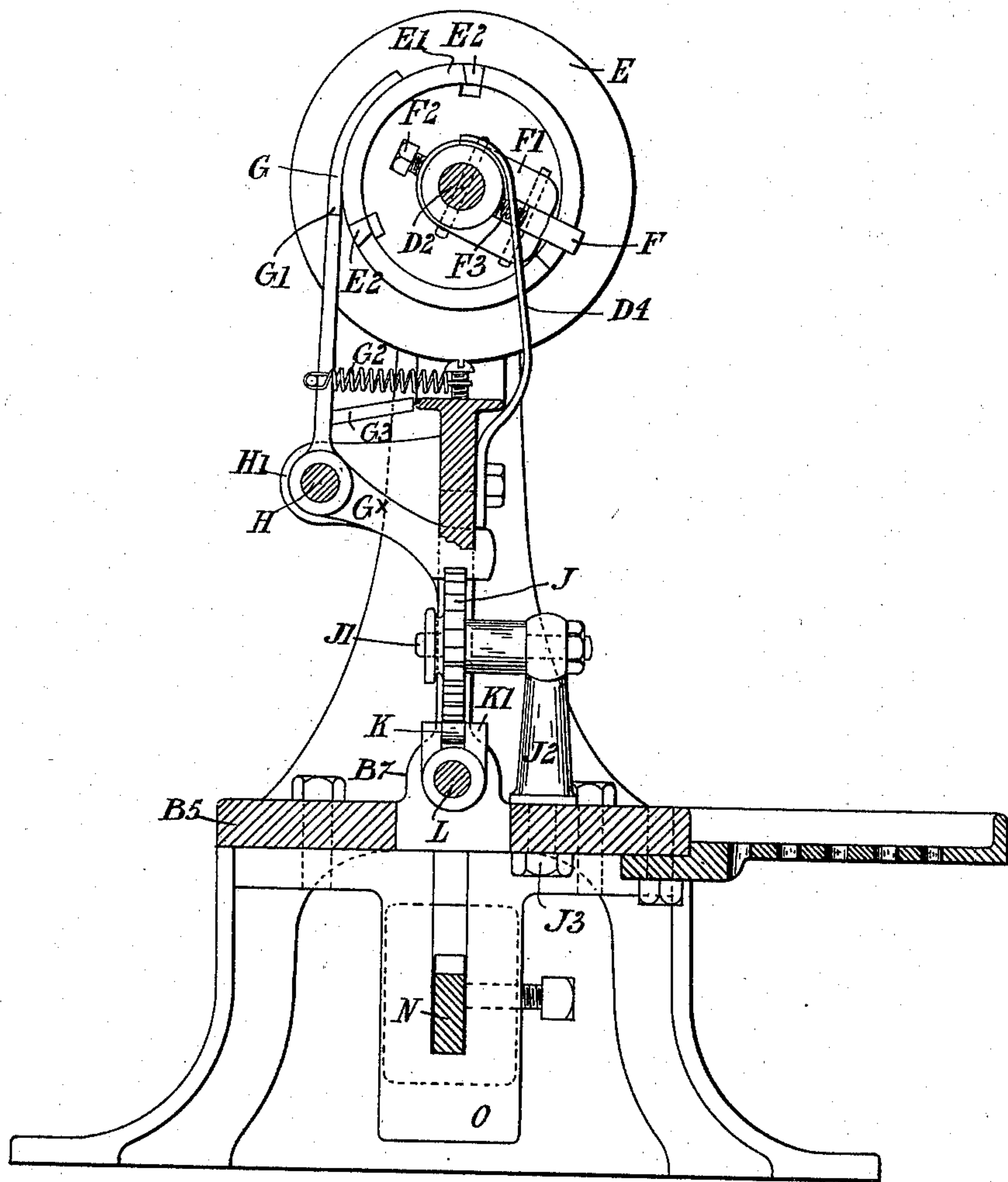
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Fig. 3.



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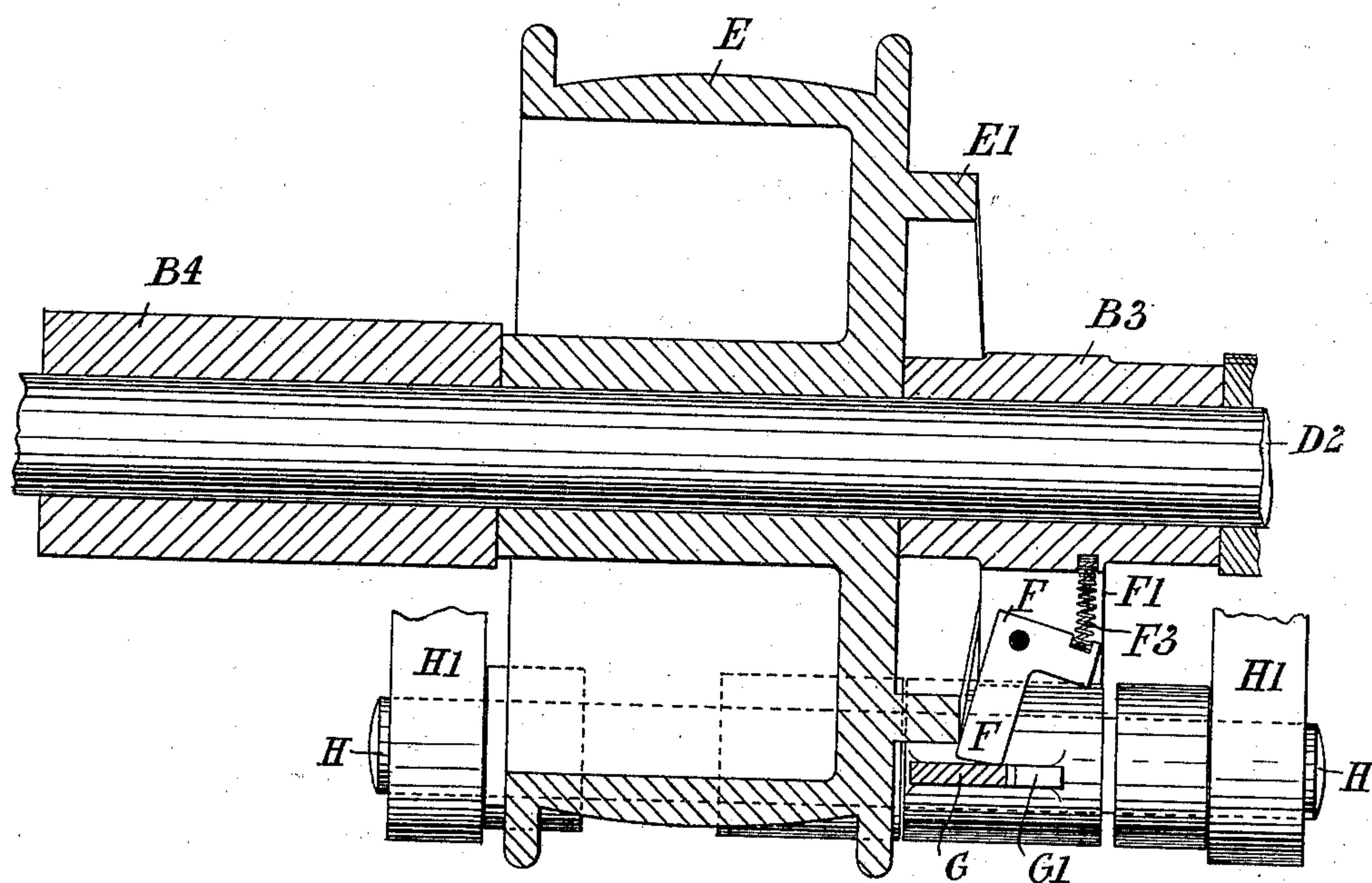
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(No Model.)

4 Sheets—Sheet 4.

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MACHINE FOR STAMPING SOLES OF BOOTS, SHOES, &c.
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Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

ARTHUR ADCOCK, OF SOUTH WIGSTON, ENGLAND, ASSIGNOR OF THREE-FOURTHS TO BENJAMIN TOONE AND JOHN WYCLIFFE BLACK, OF SAME PLACE.

MACHINE FOR STAMPING SOLES OF BOOTS, SHOES, &c.

SPECIFICATION forming part of Letters Patent No. 604,106, dated May 17, 1898.

Application filed August 24, 1896. Serial No. 603,707. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR ADCOCK, engineer, a subject of the Queen of Great Britain, residing at South Wigston, in the county of Leicester, England, have invented certain new and useful Improvements in Machines for Stamping the Soles of Boots and Shoes and other Articles, of which the following is a specification.

10 This invention relates to machinery for stamping or embossing the soles of boots and shoes and other articles, and is designed with the object of producing, first, a machine which will effect a clear and indelible impression
15 upon articles of different thicknesses without special adjustment for that purpose, and, second, be set in operation by the act of placing the sole or other article under the stamp.

20 Reference is made to the accompanying drawings, illustrating the invention, and to the following description thereof.

Like letters of reference represent the same parts throughout the figures.

25 Figure 1 is a perspective view, (certain parts being in section,) and Fig. 2 is a side elevation, of a stamping-machine constructed in accordance with this invention. Fig. 3 is a central vertical section of the machine, and Fig. 4 is a sectional detail of the clutch mechanism.

30 A represents the stamp, which may consist of letters, figures, or designs illustrative of price, size, quality, gage, or other denominative value of goods to be marked. The shank of this stamp is received into the correspondingly-recessed end of a vertical spindle A', and a pin on the free end of a spring-plate A², secured at the other end to the spindle, projects through the spindle and engages within
35 a notch in the stamp to prevent the latter being jerked out when the machine is in operation.

40 The spindle passes through tubular sockets B' B², forming part of the framing B of the machine, and has screwed thereon a block C, provided with a horizontal groove, in which
45 is located a pin or roller D', eccentric on the face of a disk D, fixed on the end of the driving-shaft D². At each revolution of the disk the plate D' raises and lowers the spindle A'
50 for stamping purposes, as will be understood.

Instead of the eccentric-pin a cam or equivalent may be mounted on the end of the shaft D² to raise and lower the spindle A', or, as is obvious, the cam or eccentric might be employed to raise the spindle and a spring on
55 the latter to suddenly depress it.

The shaft D² passes through tubular bearings B³ B⁴ in the framing and has loosely carried thereon a pulley E, which derives motion from a belt in the usual manner. Connected
60 to or formed as an integral part of the said pulley is a stepped clutch E', which in order to revolve the driving-shaft engages an angular projecting driving-pawl F, loosely pivoted at its angle in a bifurcation in a plate
65 F', the tubular portion D³ of which, besides being passed over the shaft D² and rigidly secured thereon by a screw-bolt F², Figs. 2 and 3, has a leather-faced spring friction-plate D⁴ pressing against it to steady the
70 movement of the shaft D² after the clutch is placed out of gear. Under the opposite end of the pawl F is a spring F³, which, as is obvious, maintains the said pawl normally in contact with the edge of the clutch E', as indicated in Figs. 3 and 4, and when the said
75 pawl gets under any one of the steps or noses E² on the clutch the latter takes it around with it, and thus revolves the shaft D² to set the stamp in motion. When the clutch has
80 made one complete revolution, the pawl F comes into contact with the inclined edge of a disengaging-lever G, whose upper end projects slightly beyond the narrowest part of the edge of the clutch E and whose width in-
85 creases downwardly, so that the said pawl while moving in contact therewith is gradually directed away from the clutch until it reaches a shoulder G' on the said lever and has its motion arrested thereby, whereupon
90 it will be moved sufficiently from the clutch to enable the latter to pass it and continue to revolve free of it until again brought into contact, as hereinafter described.

95 The lever G is by means of a spring G², connected thereto and to the framing B, maintained in the proper position to engage the pawl at each revolution of the clutch. A distance-pin G³, Figs. 1 and 2, on the lever and bearing against the framing is employed to
100

prevent the lever exerting unnecessary frictional pressure on the clutch. When the lever G is moved away from the clutch into the position indicated in Fig. 4, the said pawl, under the influence of its controlling-spring F³, is moved against the edge of the clutch, so that it becomes engaged thereby and makes another complete revolution, as before mentioned.

The lever G is furnished with a boss rigidly fixed on a spindle H, both of which latter are partly cut away in Fig. 1 to show the underneath mechanism. The said spindle is carried in bearings H', projecting from the framing B, and with the boss there is also formed an arm G^x, Figs. 2 and 3, the lower beveled edge of which rests on the teeth of a ratchet-wheel J, loosely carried on an arbor J' in the upper end of a vertical pillar J², fixed by a screw-bolt J³, Figs. 2 and 3, to the bed-plate B⁵. Each time the ratchet-wheel is moved forward the extent of a tooth the tooth which passes under the arm G^x raises the latter in doing so, and as a consequence moves the lever G away from the clutch, as before described.

The ratchet-wheel is actuated by a spring-controlled tooth K, loosely pivoted between the bifurcated upper end of a block K', rigidly secured to a horizontal slide-rod L, carried in bearings B⁶ B⁷ in the framing and movable to and fro therein, as hereinafter mentioned. The tooth K rests on a coiled spring K², (shown only in dotted line in Fig. 2,) and which is thereby kept up against the ratchet-wheel in position for moving the latter forward; but when after having done so it returns to its normal position, as shown in Figs. 1 and 2, the said spring becomes compressed and allows the tooth to yield sufficiently to pass under the ratchet-wheel to get in front of the next tooth of the latter.

The slide-rod L is preferably shaped at its front end to coincide with the shape of the article to be stamped.

In the sole-stamping machine as herein illustrated a curved plate L' is employed, against which the sole L², Fig. 2, (whose end fits therein,) is pressed. The operator exerts sufficient pressure with the sole to push forward the slide-rod L to cause the tooth K to move forward the ratchet-wheel, as before mentioned, so that the shaft D² makes one revolution and the stamp descends to impress the sole before the clutch is thrown out of gear and their action arrested. Thus, as already stated, the machine is put in action by the act of placing the article to be marked under the stamp, and after the operation of stamping the machine is brought to a standstill ready for the next article to be placed under the stamp.

The shank L² of the curved plate fits into the tubular front end of the slide-rod L, and may be tightened therein by the split block L³ on the end of the said slide-rod.

The curved plate may be readily withdrawn

and another of different shape substituted, according to the contour of the article to be stamped.

A spring L⁴, Figs. 1 and 2, located between the block K' and the bearing B⁷, returns the slide after it has been pushed forward, and the extent of its movement in either direction is regulated by two shoulders L⁵, formed on the said slide-rod by cutting away a segment of the latter, and the shoulders coming into contact, one each side of the stop-plate L⁶, Fig. 2, bolted to the framing.

The machine is adapted for making a perfectly clear and indelible impression upon soles or other articles of different thicknesses without special adjustment being necessary for each different thickness to prevent the stamp otherwise cutting through one material and indistinctly marking another. This is effected by placing the unstamped article upon a yielding rest or support consisting, preferably, of a movable block M, Figs. 1 and 2, resting upon a block M', of larger diameter, (shown in dotted line in Fig. 2,) entering a boss B⁸ on the under side of the bed-plate and bifurcated to fit over the end of a lever N and fulcrumed between two ears B⁹ and passing through an opening in a block O, containing an elastic buffer O', which supports and deadens the noise which would otherwise be caused through the counterweight N' on the end thereof consequent upon its falling each time after the block had been depressed by the impact of the stamp descending upon the sole.

It is obvious that either in lieu of or in addition to the counterweight a spring might be combined with the block M to insure its yielding under the stamp.

The invention is not confined to the particular clutch mechanism shown and described, as any of the well-known clutches may be employed so long as they are capable of being placed in and out of action by or through the action of the ratchet-wheel J.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. In a stamping or embossing machine, the combination with the stamp, of a shaft, an eccentric thereon, clutch mechanism on the shaft, a ratchet-wheel and means between it and the said clutch, to place the latter in and out of action, and a slide, movable by the article to be stamped, to actuate the ratchet-wheel substantially as described.

2. In a stamping or embossing machine the combination with the stamp, of a shaft, an eccentric thereon for actuating the stamp, clutch mechanism on the shaft, a two-armed lever, a ratchet-wheel to actuate the latter to place the clutch in and out of action and means for actuating the said ratchet-wheel and operated by the article to be stamped substantially as described.

3. In a stamping or embossing machine the

combination of a stamp and its spindle, an eccentric for actuating them, a shaft and clutch mechanism thereon, a lever for placing the latter in and out of action, a ratchet-wheel for actuating the said lever, a yielding tooth which when moved in one direction will partly rotate the ratchet-wheel and in returning will pass under it without actuating it substantially as described.

10 4. In a stamping or embossing machine, the combination of a stamp, a rotatable shaft, an eccentric thereon for actuating the stamp, a pulley loosely mounted on the shaft, a toothed
15 connected with the shaft adapted to engage with the teeth of the clutch, a pivoted lever

having an inclined edge adapted to free the pawl from a tooth of the clutch as described, a ratchet-wheel, a slide movable by the article to be stamped, a connection between the
20 slide and ratchet-wheel whereby the latter is actuated when the slide is moved in one direction, and a connection between the ratchet-wheel and the pivoted lever for the purpose
25 set forth.

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

ARTHUR ADCOCK.

Witnesses:

E. N. LEWIS,

GEORGE BLAKESLEY.