

C. W. GLIDDEN.

Lasting-Machines for Boots and Shoes.

No. 135,539.

Fig. 1.

Patented Feb. 4, 1873.

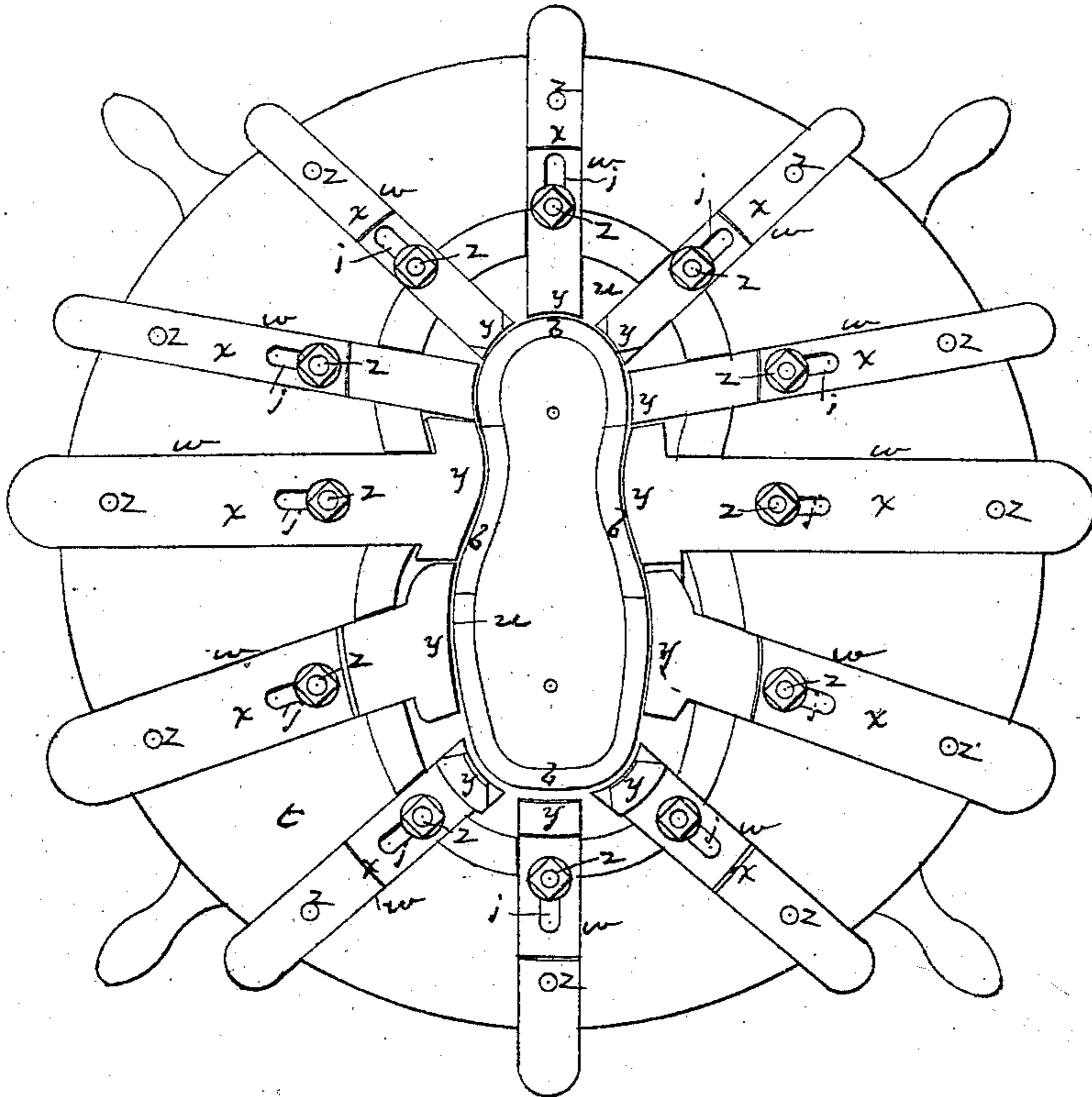
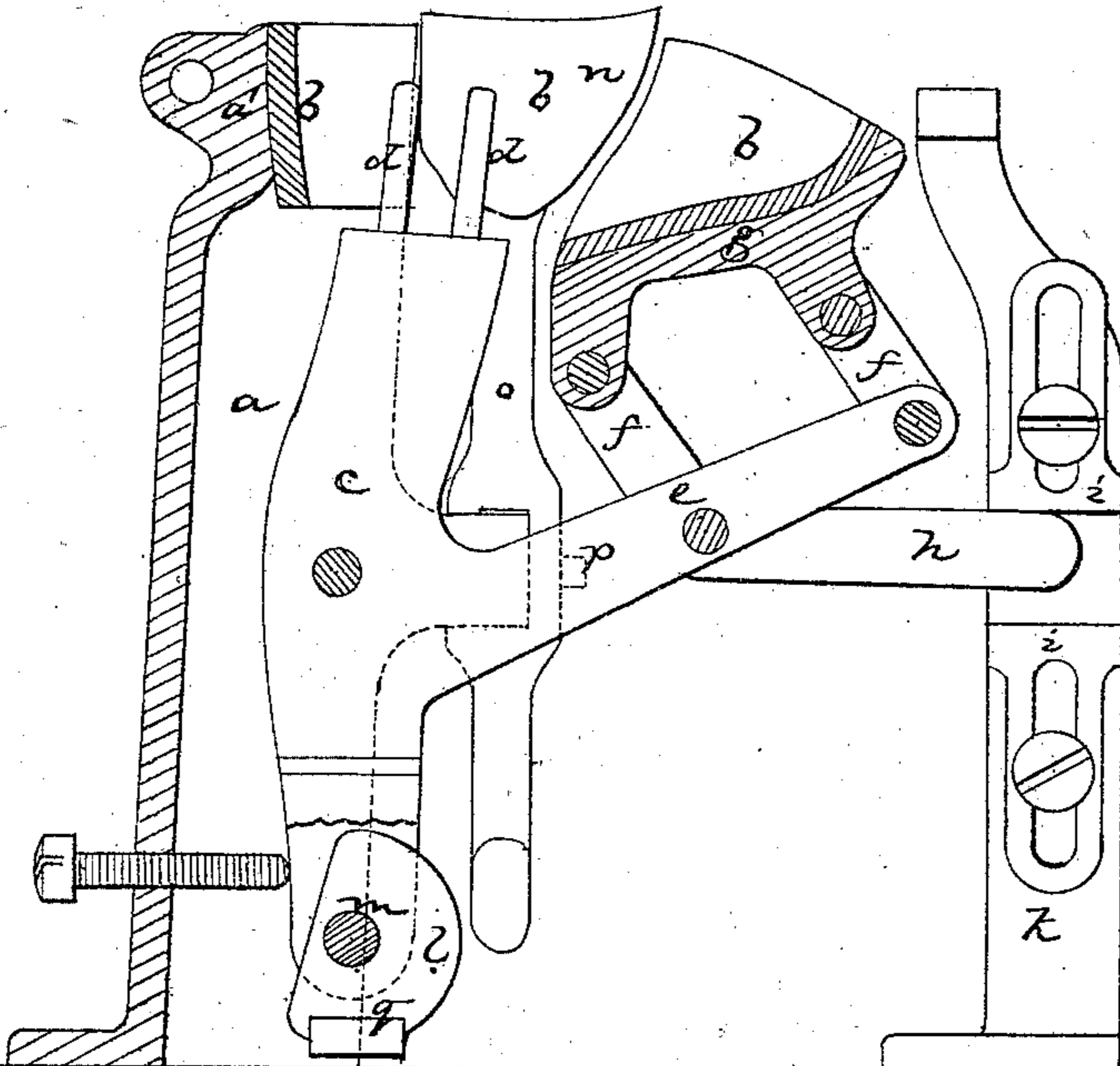


Fig. 3



Witnesses.
M. W. Frothingham.
L. H. Latimer.

In vendor
 G. W. Glidden
 By his Atty.

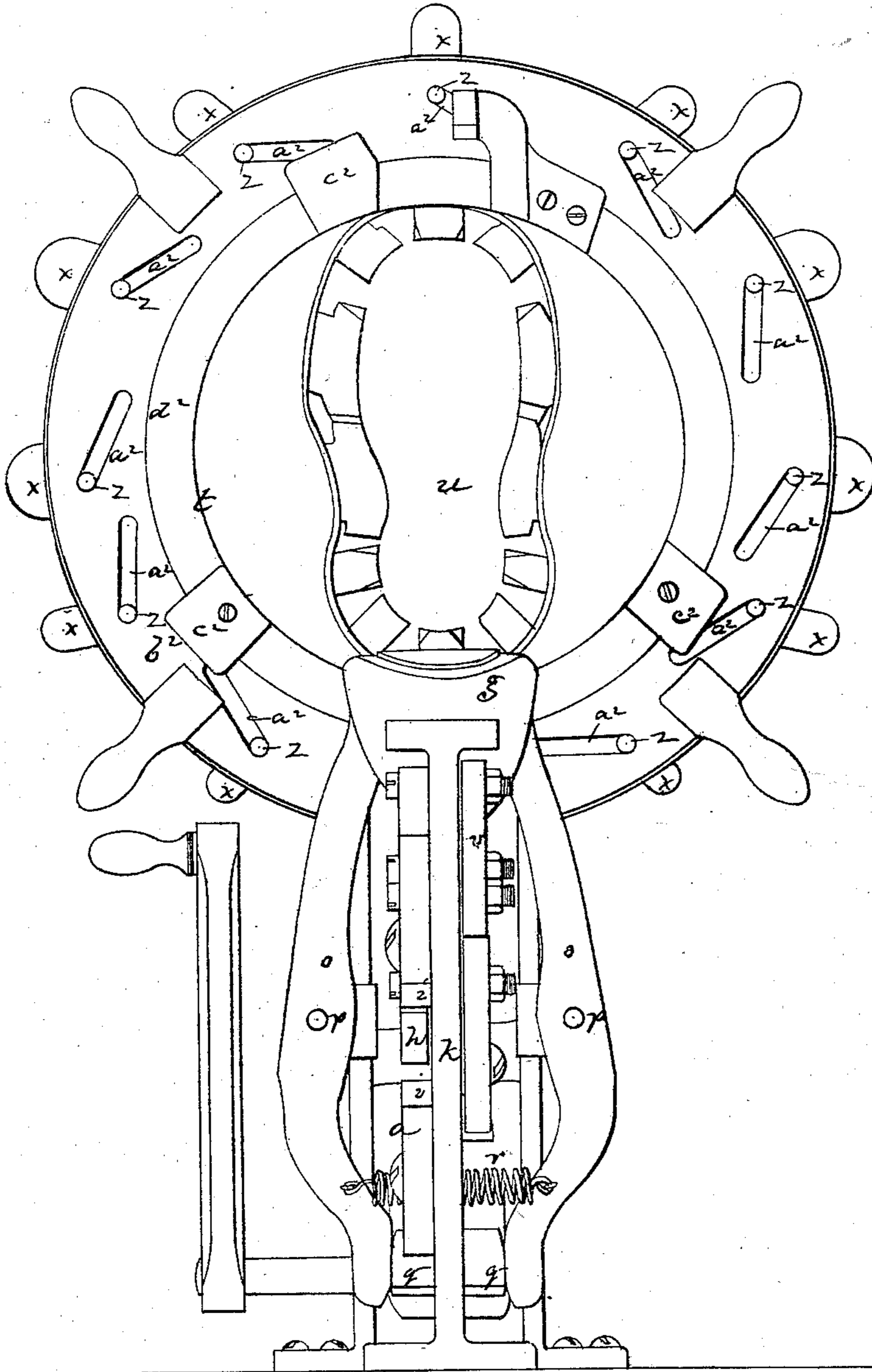
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Fig. 2.



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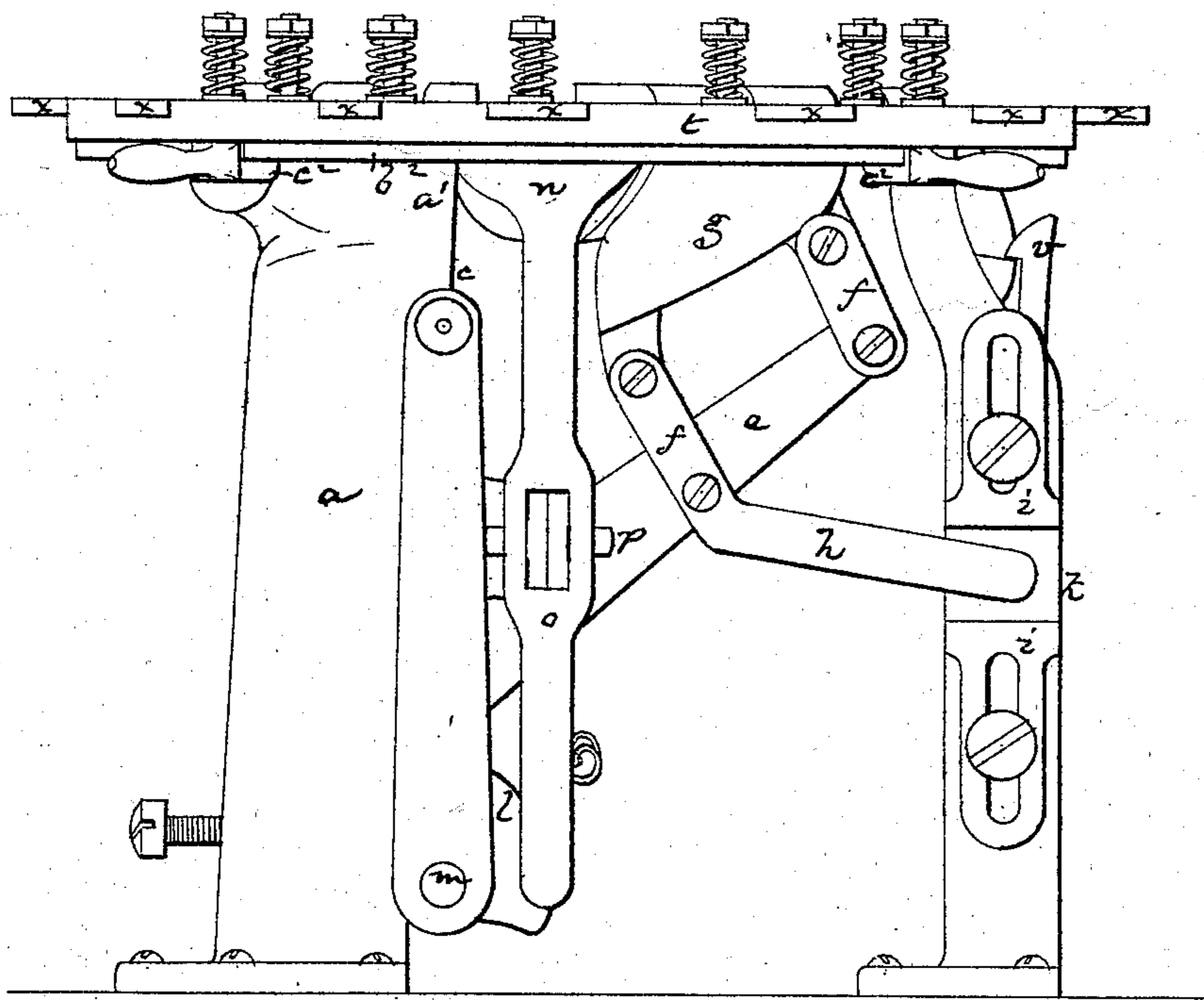
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Fig. 4.



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UNITED STATES PATENT OFFICE.

CHARLES W. GLIDDEN, OF LYNN, MASSACHUSETTS.

IMPROVEMENT IN LASTING-MACHINES FOR BOOTS AND SHOES.

Specification forming part of Letters Patent No. 135,539, dated February 4, 1873.

To all whom it may concern:

Be it known that I, CHARLES W. GLIDDEN, of Lynn, in the county of Essex and State of Massachusetts, have invented an Improvement in Lasting-Machines; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification is a description of my invention sufficient to enable those skilled in the art to practice it.

My present invention relates to details of construction of a lasting-machine; and consists, primarily, in combining, with a last-holder having a concave toe-jaw, a heel-jaw, and side jaws for receiving the toe, heel, and sides of the last, or a general concavity for receiving the whole last, an elastic cushion or elastic cushions, located on the inner sides of the jaws, and a series of presser-slides located around an opening in a horizontal plate, into which the top of the last extends, the cushion or cushions being so arranged that by compression against the last they force the upper over the sides of the last and up above its upper surface into the plane of the inner ends of the presser-slides, which are so arranged that in their inward movement they seize the upper and draw it over the inner sole laid upon the top of the last.

The drawing represents a lasting-machine embodying my invention.

Figure 1 shows a plan of the machine; Fig. 2 is a front elevation of it, the presser-slide ring being thrown up; Fig. 3 is a central vertical section of it.

a denotes a stationary post, made hollow or semi-tubular, the hollow at its upper end forming a concavity or stationary jaw for receiving the heel end of the last. *b* denotes the elastic or rubber cushion that directly receives the heel end of the last, this cushion preferably fitting into the hollow of the post, and the heel of the last preferably fitting into it. To this post is pivoted a vertical lever, *c*, at the top of which are the pins *d*, upon which the heel end of the last is supported, and from this lever extends an arm, *e*, to which, by links *f*, a toe-jaw, *g*, is connected, an arm, *h*, extending from one of these links, passing between adjustable stops *i* on the side of a post, *k*. When the jaws are open to receive a last and

upper the top of the lever tips to the front, and the toe-jaw tips down. By means of a cam or eccentric, *l*, fixed on a shaft, *m*, journaled in the lower part of the lever *c*, (at the end of which shaft is a winch, *j*,) the top of the lever *c* is thrown back, carrying the heel of the upper and last into the stationary jaw *a*, the movement of the lever at the same time throwing up the arm *e* and raising the toe-jaw *g*, and the jaw, by reason of the arm *h* striking the stop *i*, being pressed toward the toe of the last. Between the toe-jaw and heel-jaw are the two side jaws *n*, at the tops of vertical levers *o* fulcrumed at *p* to extensions of the post *a*. The lower ends of these levers stand in the path of movement of cam-pieces *q* on the side of the eccentric *l*, and as the eccentric is turned, and after the last is thrown back into the heel-jaw and the toe-jaw is thrown up and forward, the cam-pieces strike the lever and the side-jaws are thrown in against the sides of the last or upper. When the eccentric is turned in the opposite direction the toe-jaw falls by gravity, and the side jaws open by the stress of a spring. On the inner face of each jaw *g* and *n* is an India rubber or other elastic face or block, *b*, and when the jaws are moved toward the last, and the upper is thereby compressed against the last, the toe part of the upper and then the sides of the upper are compressed and squeezed upward beyond the edge of the last, thereby drawing the upper tightly over the last and projecting the edges of the upper above the last in position to be bent over upon and laid against the top of the inner sole. Hinged to the top of the post *a* is an annular plate, *t*, containing the oblong opening *u*, beneath which is the last. This plate swings up into vertical position, as seen at Fig. 2, for access to the jack, or for applying and removing the last, and when thrown down into horizontal position, may be locked by a spring-latch, *v*. In the upper face of the plate are radial guide-grooves *w*, in which are placed slides *x*, the inner ends of which extend over the opening *u* and form pressers *y*, that, when the slides are moved inward, push the upper over upon and down against the top of the last. Under each slide *x* is a slot, through which a pin, *z*, extends from the slide above it, the pin also extending

through an inclined slot, a^2 , in a ring, b^2 , that rests upon projections c^2 and turns on a boss, d^2 , this ring having a series of slots, a^2 , one for each pin of the slides x . When the ring is turned in one direction or the other, all the pins are brought to one or the opposite ends of the slots a^2 , and all of the slides and their presser ends are thereby moved against the projecting upper edge to force it down upon the upper, or back from the last after the upper has been tacked to the inner sole.

By the elasticity of the elastic faces or blocks and the disposition of the material to change form or position under pressure, the upper is forcibly pressed upward, and is held in an elastic grip that firmly secures the upper without liability to mar or otherwise injure it until

the pressers, simultaneously acting, carry the upper over upon the inner sole and hold it until properly secured by lasting tacks or nails.

I claim—

1. The combination of the block b having elastic faces, into which the last is pressed and the series of simultaneously-actuated pressers that press over upon the top of the inner sole the edges of the upper that are pressed up and held by the blocks.

2. In combination with the last-receiving mechanism the ring t , hinged substantially as shown and described.

C. W. GLIDDEN.

Witnesses:

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