

C. W. GLIDDEN.
Lasting-Machines.

No. 135,111.

Patented Jan. 21, 1873.

Fig. 3.

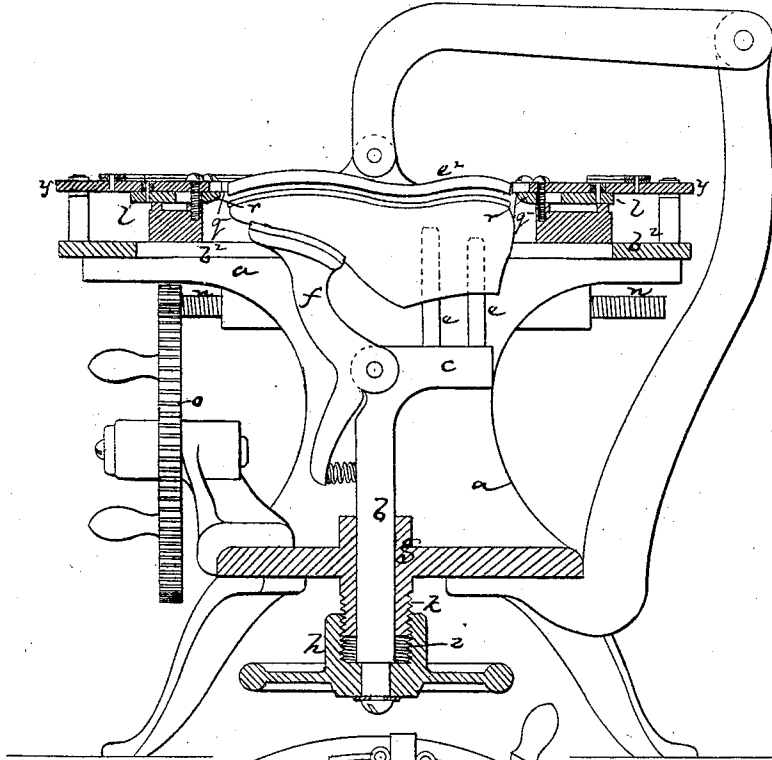
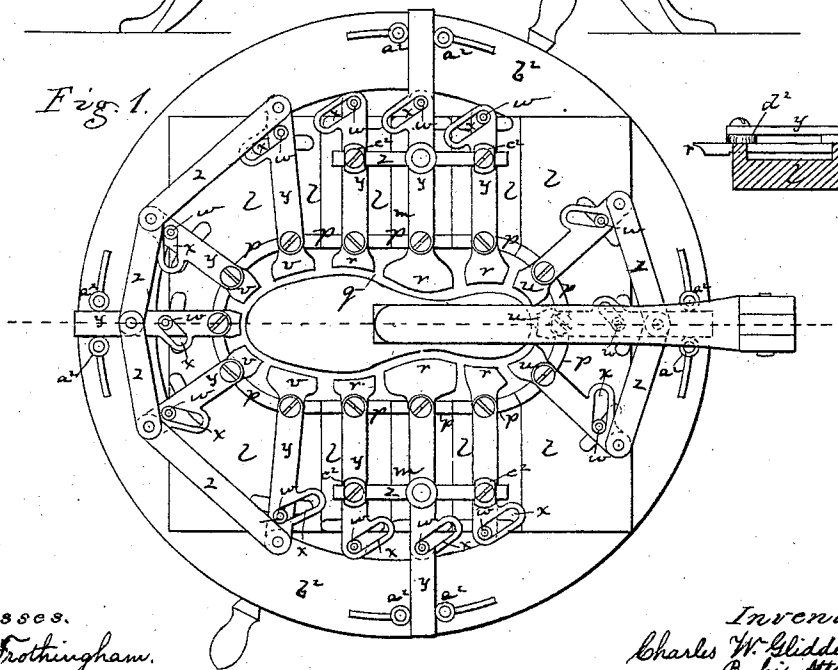


Fig. 1.



Witnesses.
M. W. Frothingham.
L. H. Lortimer

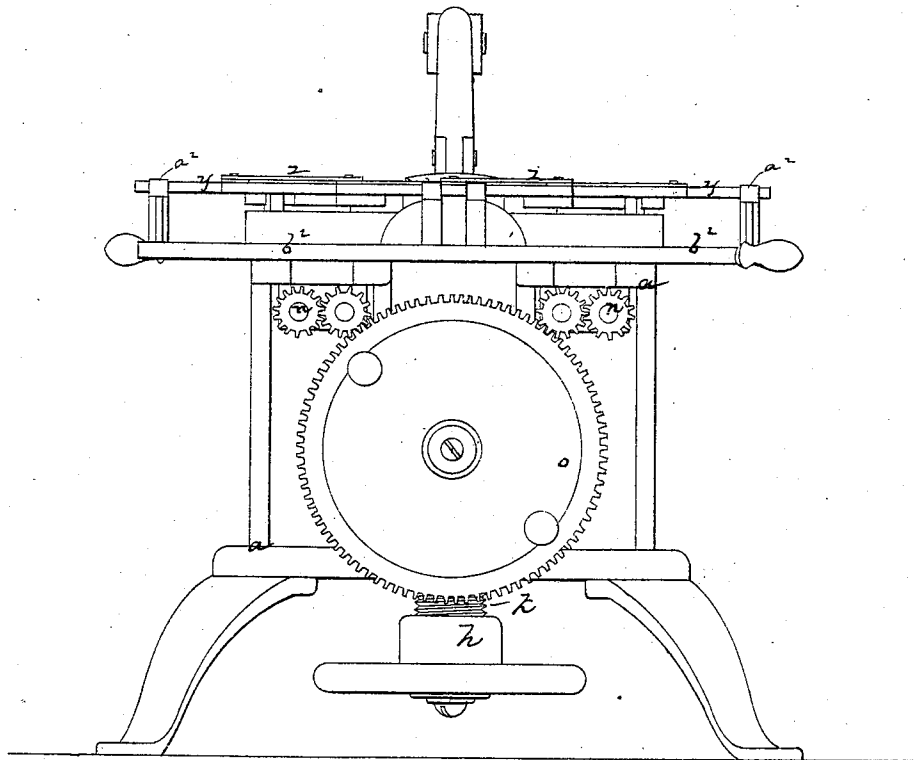
Inventor.
Charles W. Glidden
By his Atty.
Crosby & Gould

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Fig. 2.



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

In witness
Charles W. Glidden,
By his Attys.
Crosby & Gould

UNITED STATES PATENT OFFICE.

CHARLES W. GLIDDEN, OF LYNN, MASSACHUSETTS.

IMPROVEMENT IN LASTING-MACHINES.

Specification forming part of Letters Patent No. 135,111, dated January 21, 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 certain Improvements 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.

The invention relates particularly to a method of simultaneously laying the whole edge of the upper of a boot or shoe over upon the top of the inner sole in lasting the upper to the inner sole.

In my invention I combine, with a jack that supports the last and upper, a frame carrying a series of horizontal slides, said series extending around the last, just above the plane of the top surface thereof, and each slide having a capability of inward radial movement that will cause its inner end to press the edge of the upper over upon the top of the last, and strain or draw the upper tightly as it so pushes it over. Each slide has a pin extending through an inclined slot in a plate forming one of a series of plates connected with a ring that has a slight rotative movement, and as the ring is turned in one direction all the slide-plates are moved laterally, and are thereby pressed inward, so as to simultaneously press down to the surface of the inner sole on top of the last, and forward over such surface the entire length of upper edge, drawing and straining all parts thereof equally. The invention consists primarily in this method of lasting the edge of the upper, or in the combination, with the jack mechanism, of a series of simultaneously-operated presser-slides that press inward the edges of the upper, and strain them over upon the upper surface of the inner sole placed upon the last.

The drawing represents a machine embodying the invention.

Figure 1 shows the machine in plan. Fig. 2 is a front elevation of it. Fig. 3 is a sectional elevation.

a denotes a stand or frame, in the center of which is a spindle, *b*, having projecting from an arm, *c*, at its top one or more last-pins, *e*, that support the heel part of the last, and having jointed to it a toe-piece, *f*, that supports

the front part of the last. This spindle passes through a hub or bearing, *g*, and is raised or lowered by a nut, *h*, through which the foot of the spindle passes, the nut having a nut-thread, *i*, that works upon a screw, *k*, cut on the hub or bearing *g*. By raising or lowering the spindle the top of the last is positioned with respect to the lasting-slides. On top of the frame or stand is a series of slide-plates, *l*, between which may be two stationary plates, *m*, and extending through tail-pieces of these plates are right-and-left screw-shafts *n n*, which, by a gear-train, are connected to a driving-gear, *o*. The inner ends of these plates have shoulders or flanges *p* that form an oblong opening, *q*, in which is the last. By turning the gear *o* in one direction the plates are separated to enlarge the opening, and permit the upper and last to be applied and removed, and by turning the gear in the opposite direction the plates are closed together and inclose the last between them, but without touching the upper. *r* and *s* denote two sets of pressers at the inner ends of slides which rest upon the plates *l* at opposite sides of the opening *q*. *u* denotes another set of such pressers at the inner ends of slides resting upon the plate *l* at the heel end of the opening *q*. *v* denotes another set of pressers at the inner ends of slides resting upon the plate *l* at the toe end of the opening *q*. Each of these pressers is so arranged as to be capable of an inward and outward or radial sliding movement, and to effect and control such movement each has a pin, *w*, extending through an inclined slot, *x*, in a bar, *y*, resting upon and pivoted to the slide, the end of which the presser forms. Lateral or rotative movement of the bars will of course cause the slots to so act upon the pins as to move the slides inward or outward. To actuate all the pressers simultaneously all of those of each set are connected together by links or connectors *z*, while one bar of each set extends outward and between pins *a*² *a*² projecting up from a rotatively-moving ring, *b*². This ring rests upon the frame *a*, and is so arranged that it may be rotated horizontally and sufficiently to cause the several bars *y* to swing laterally, bringing the pins to the inner ends of the slots *x* to move all the pressers outward, or to the outer ends of the slots to throw them in. Each bar *y* might be extended outward between

pins; but by connecting those of each set the arrangement is much simplified. The bars over the end plates l need only to be jointed together; but for the plates between, which are opened and shut relatively to each other, the connection is a sliding one, the outer bars having bearings c^2 , through which the connecting-rod z extends, and the bearings sliding upon the rod.

When the last with the upper drawn over it is applied to the jack, and the inner sole is laid upon the top of the last, the slide-plates l are closed inward around the last; and the jack being raised or lowered to bring the top of the inner sole about into the plane of the pressers, the ring b^2 is turned, and, by its rotative movement, simultaneously throws the inner ends of all the pressers against the edge of the upper, pressing the upper forward and down upon the inner sole all around its edge, and locking or holding it in position at all points to permit it to be tacked to the inner sole.

The pressers may of course be actuated by other mechanism than that shown, it being

only necessary in this respect that they be operated simultaneously.

Each presser is preferably made yielding vertically, or is held in place by the stress of a suitable spring, so that in its inward movement it conforms to the thickness of the inner sole and upper, or to the position of the upper surface of the inner sole in reference to the edge of the presser. This spring may be arranged as seen at d^2 , or in any other suitable manner. A sole-plate, e^2 , may be used to press the upper down toward the inner sole; but such plate is not essential.

I claim—

1. In combination with the last-holding jack, the plates l simultaneously opened and closed, substantially as described.

2. In combination with the pressers r and bars y , springs d^2 , against the stress of which the pressers may yield vertically, substantially as described.

Witnesses:

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FRANCIS GOULD,

M. W. FROTHINGHAM.