

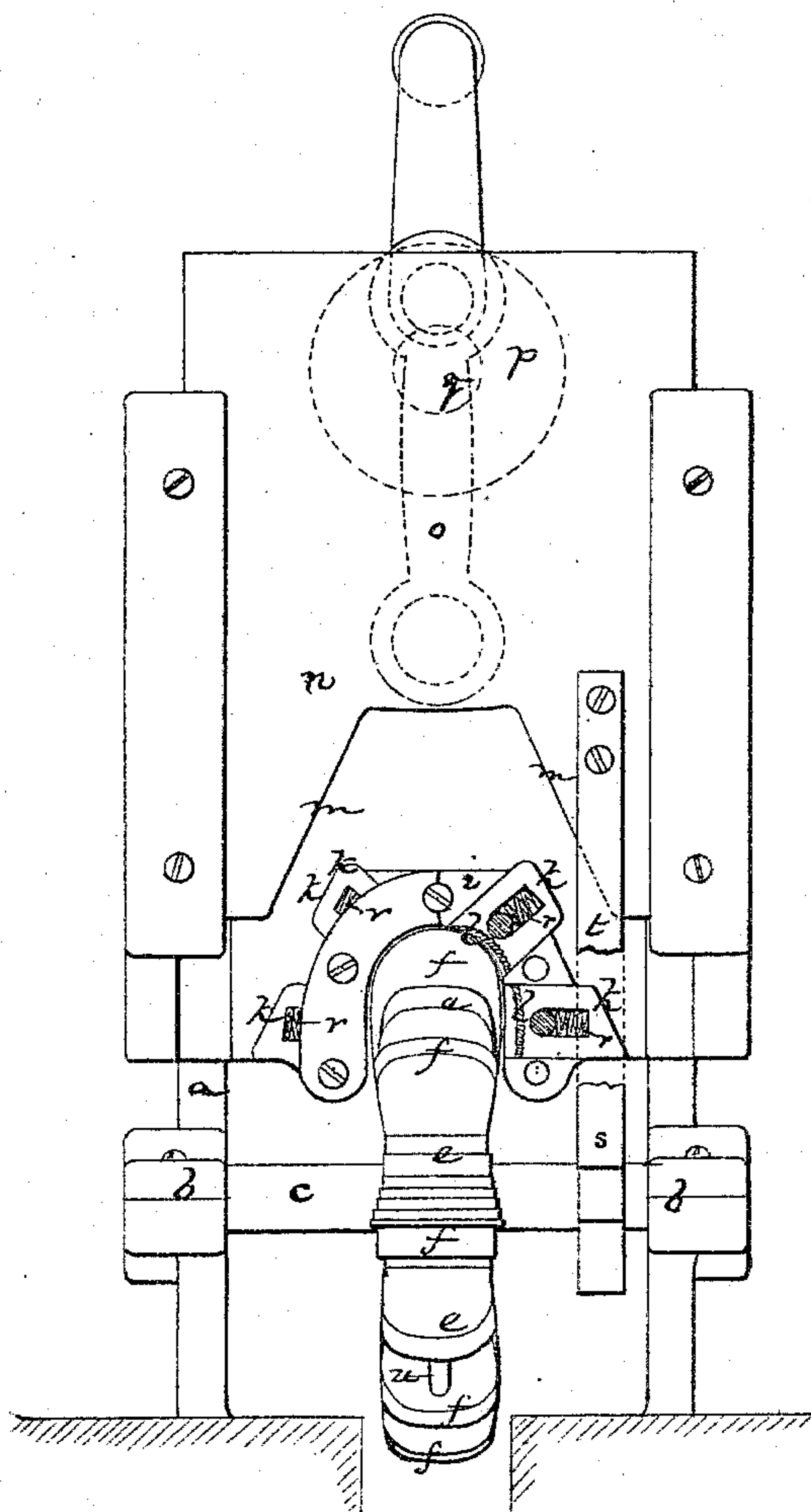
C. W. GLIDDEN.

Machines for Shaping the Edges of Boot and Shoe
Heels.

No. 135,538.

Patented Feb. 4, 1873.

Fig. 1.



Witnesses,
M. W. Frothingham,
L. H. Atimer,

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

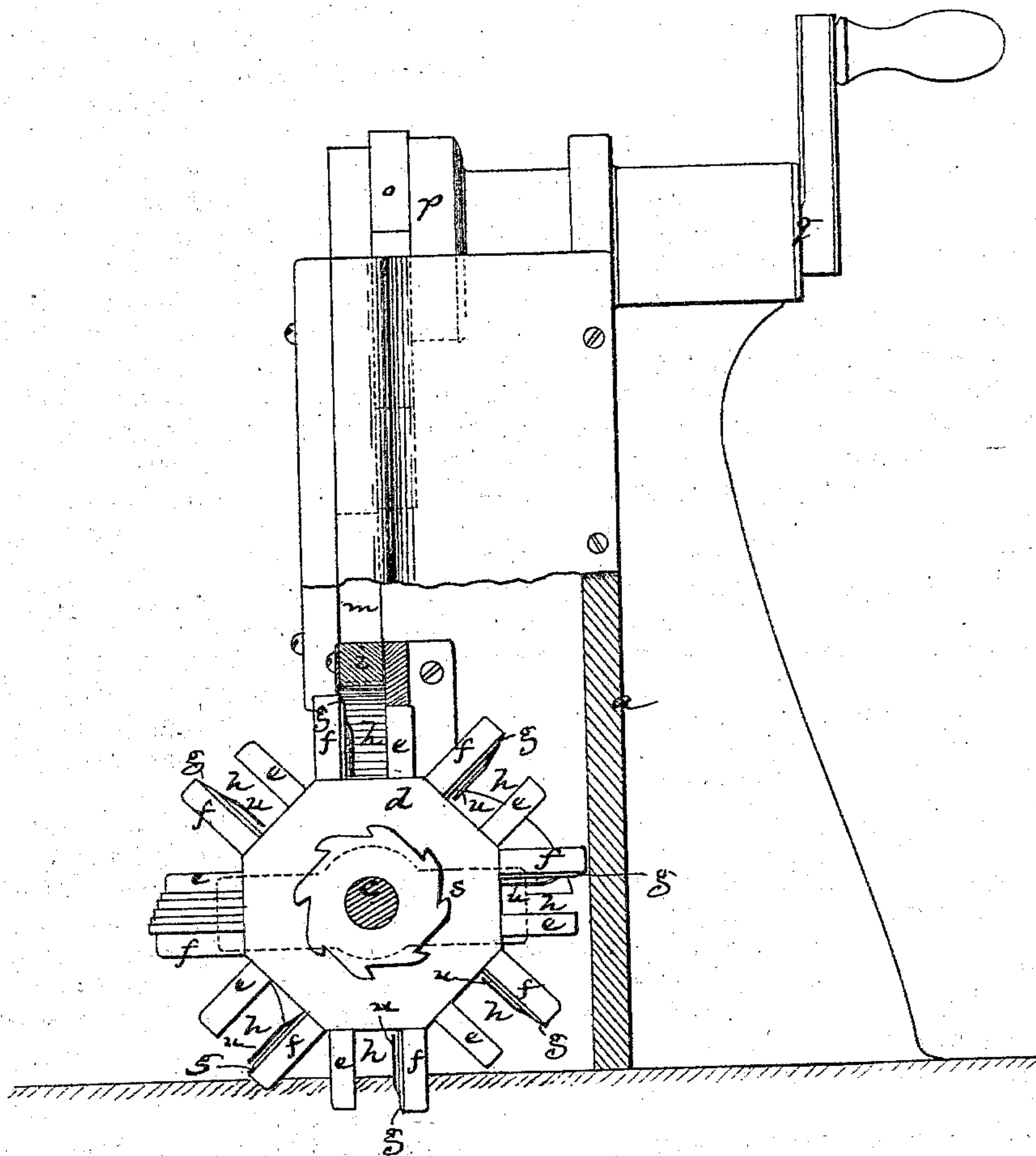
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Fig. 2



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UNITED STATES PATENT OFFICE.

CHARLES W. GLIDDEN, OF LYNN, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR SHAPING THE EDGES OF BOOT AND SHOE HEELS.

Specification forming part of Letters Patent No. 135,538, 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 Improved Machine for Shaping the Edges of Heels of Boots and Shoes; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms a part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

In the manufacture of boot and shoe heels each heel is generally made up of a series of heel-lifts having edges more or less rough, and these edges are usually trimmed prior to the burnishing operation which imparts the finished surface.

In this invention the heel-blank made of the assembled and united lifts (the edges of the lifts being but roughly trimmed) is placed and held between two jaws or plates, and the edges of the blank are then subjected to the pressure of shaping-dies or dies having shaping-faces, these dies moving radially, and their conjoint faces compressing the edges of the blank, and bringing them all to a uniform or smooth surface extending around the curve of the heel. A series of heel-holding plates is preferably formed around the periphery of a rotating wheel, each holder being filled as it approaches a vertical position, and the heel-blank when in a vertical position being subjected to the pressure of the dies, which are forced inward by the action of a suitable drop or other device for actuating the dies, they being forced back by suitable springs when the drop or plunger rises. The invention consists primarily in the method of shaping the heel-edge by placing it between plates, and subjecting the edge to the radial pressure of sliding dies.

The drawing represents a machine embodying the invention.

Figure 1 shows a front and sectional elevation of it. Fig. 2 is a vertical central section.

a denotes a strong stand; *b*, housings for the journals of a shaft, *c*. Upon this shaft is a wheel, *d*, having extending from its periphery a series of pairs of plates, *e f*, the inner surfaces of the two plates of each pair being parallel, except immediately adjacent to the periphery of one of them, and each plate *e* being of the size and shape of the tread or bot-

tom lift of the heel, while each plate *f* is of the size of the rand or split lift, each plate *e* being chamfered near its edge, as seen at *g*. The space *h* between the two plates of each pair is a heel-holding space, and the heel-blank when placed in the holder has edges extending beyond the two plates, which edges are to be so compressed and solidified as to give to its rough lift-projecting surface a form and smoothness according with the shape and position of the plates, the displaced leather being condensed into the body of the heel and forced toward the chamfer *g*, the chamfer forming the hollow or concavity in the heel-seat, and enabling the heel to be finished and applied without a rand or split lift. Over the top of the wheel is a stationary die-holder, *i*, containing a series of radially-sliding dies, *k*, the inner face *l* of each of which is of the shape to be given to a portion of the heel-edge, the die-faces of the several dies meeting when the dies are pressed in, and forming the continuous shape to be imparted to the curved-edge surface of the heel. These dies at their outer ends are shown as inclined, so as to be struck by the inclines *m* of a drop or plunger, *n*, which is raised and lowered by a link, *o*, and a crank-wheel, *p*, on a shaft, *q*, the dies being forced inward against the heel-edge at each descent of the plunger, and being forced outward when the plunger rises by suitable springs *r*.

To position the blank with respect to the dies, and to bring each blank automatically into position by the movement of the plunger, the shaft *c* may be provided with a ratchet, *s*, with which engages a spring drag-pawl, *t*, the pawl turning the wheel when the plunger rises and bringing the heel-blank into position with relation to the dies, and slipping over the ratchet-teeth without moving the wheel when the plunger descends.

In placing a blank in the holder it may be retained in position by a suitable spring, *u*, until the blank comes into position for the action of the dies.

By this method of edge-shaping the heel I obviate the necessity of trimming off the edges of the heel-lifts, and I obtain a very hard and enduring heel-edge.

I claim—

1. In combination with blank-holding plates

e f, sliding dies, substantially as shown and described, for compressing the edges of the lifts and shaping and forming the heel-edge.

2. In combination with the sliding and shaping dies, the wheel having the series of heel-holding plates, arranged substantially as shown and described.

3. The combination of the rotating wheel *d* having the blank-holding plates, the stationary die-holder *i*, and its sliding dies *k*, and the follower, arranged and operating substantially as shown and described.

4. In combination with the wheel *d* and fol-

lower *n*, the ratchet *s* and drag-pawl *t*, substantially as and for the purpose described.

5. The method of shaping heel-blanks by subjecting their edges to the pressure of a series of dies, *k*, having faces which unitedly form the shape to be imparted to the curved heel-edge, substantially as described.

Executed this 19th day of December, A. D. 1872.

C. W. GLIDDEN.

Witnesses:

FRANCIS GOULD,

M. W. FROTHINGHAM.