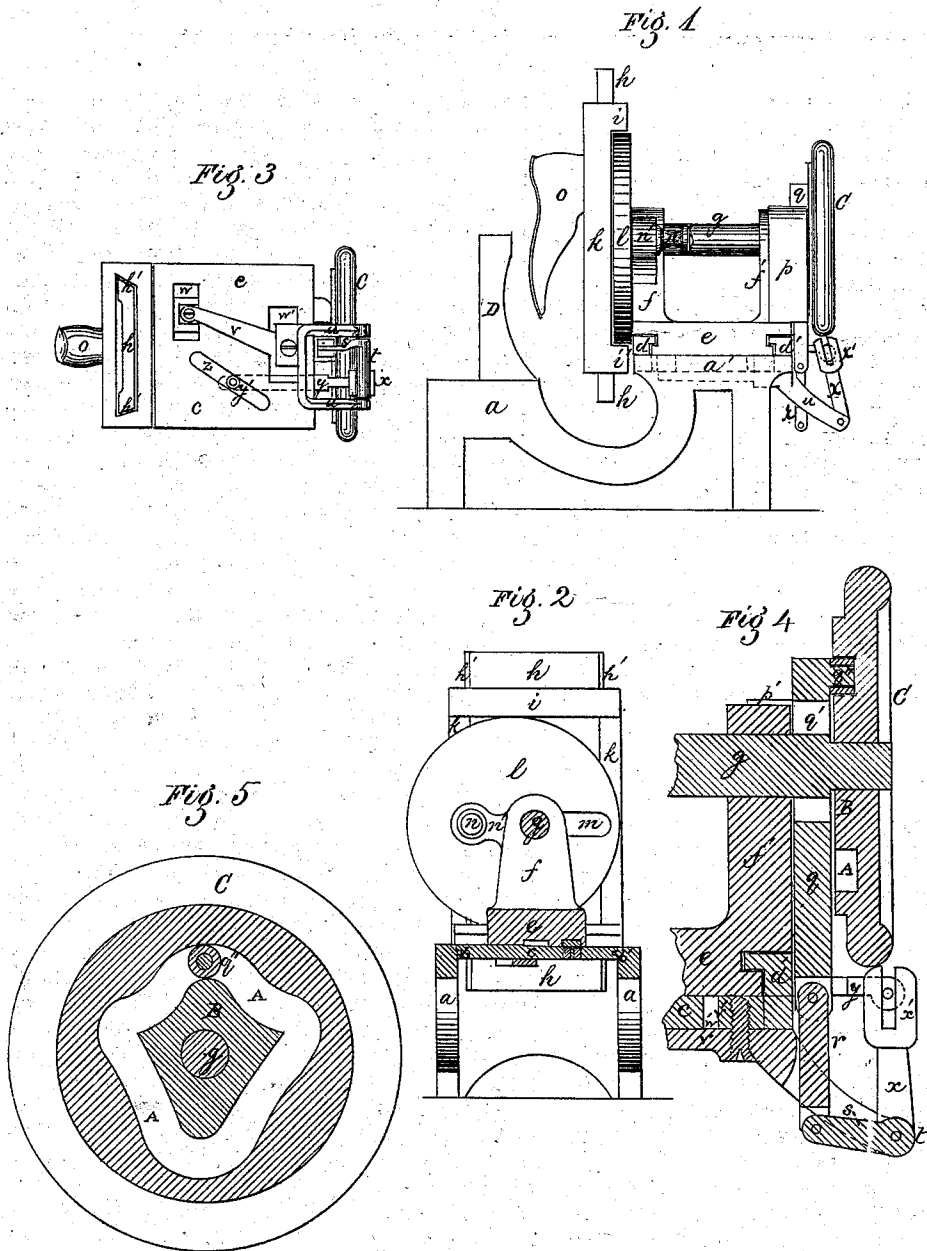


J. W. MALOY.

Machines for Trimming the Edges of Boot and Shoe Soles.

No. 136,080.

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IMPROVEMENT IN MACHINES FOR TRIMMING, &c., THE EDGES OF BOOT AND SHOE SOLES.

Specification forming part of Letters Patent No. 136,080, dated February 18, 1873.

To all whom it may concern:

Be it known that I, JAMES W. MALOY, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Machines for Trimming and Burnishing the Edges of Boots and Shoes, &c., of which the following is a specification:

Figure 1 of the accompanying drawing is a front view, and Fig. 2 is a transverse vertical section, taken through one end of my improved machine. Fig. 3 is a bottom view of the bed or platform, and Figs. 4 and 5 are, respectively, enlarged longitudinal and transverse vertical sections of portions of my invention.

The nature of the present invention consists, mainly, in a series of mechanical devices, arranged and operating as will be explained more fully hereafter, so that a jack, supporting a boot or shoe, and sliding on a revolving plate, is carried by the latter over a cam or disk having a horizontal adjustment either way, and is propelled forward and back transversely, or adjusted to and fro longitudinally, so as to bring the edge of a boot or shoe sole in any desired position against a stationary cutter attached to a permanent support, so as to act upon the edge of a sole in the manner required.

In the drawing, *a* represents the frame of my machine, one portion, *a'*, of which is of a higher elevation than the other portion, and is formed on the inside at the top with longitudinal ways, *b b'*, on which travels back and forth a bed or platform, *c*, formed with grooves, or otherwise suitably arranged to be held by and play freely on the ways *b b'*. Connected with the top of the bed or platform *c* at each end are transverse rabbeted or other suitably-formed ways *d d'*, that receive and allow the forward and back transverse travel of an upper platform or bed, *e*, suitably formed on the sides to engage with and be held by the ways *d d'*. On each end of the upper platform *e*, extending upward, is a standard, *f f'*, supporting a longitudinal shaft, *g*, to one end of which is attached an oblong plate, *h*, formed with beveled or other suitable sides, *h' h'*, on which slides, as the plate is revolved, a chuck or jack, *k*, formed on each side with beveled or other suitable ways, to receive the sides *h' h'* of the plate *h*, and having on its inner face, at top and bottom, projecting transverse bars *i i'*,

that hold and allow the free play of the chuck *k*, and impinge against the periphery of a disk or cam, *l*, arranged between the plate *h* and standard *f* on the shaft *g*, over which shaft it is allowed to be adjusted either way laterally, so as to vary its center and describe different curves by means of a horizontal transverse slot, *m*, formed partly across its center, and through which passes a thumb-screw, *n*, supported in a bearing, *n'*, connected with the standard *f*, and engaging with a suitable screw nut or button on the opposite side of the cam *l*, so as to hold or release it. Attached to the outer face of the chuck *k* is a last, which receives the boot or shoe *o* to be operated upon. Connected at the front and rear, and projecting from the standard *f'*, are vertical supports or ways, *p p'*, between which is a vertical beam, *q*, formed in the upper part with a slot, *q'*, that operates up and down on the outer end of the shaft *g*, and having a narrow lower end arranged to receive the pivoted end of a vertical arm, *r*, that is bifurcated or otherwise formed at the bottom to receive the pivoted end of a horizontal arm, *s*, connected with a transverse arbor, *t*, that turns in the ends of a supporting-frame, *u*, provided with an oblique lever, *v*, that is connected with the bottom of the upper platform *e* by blocks *v'*, which extend downward through transverse slots *w'*, formed in the bottom of the lower platform *c*. Attached to and extending upward from the arbor *t* is a stem, *x*, formed on the top with bifurcated arms *x'*, or otherwise formed, to receive and operate the pivoted end of a longitudinal lever, *y*, that operates forward and back in the bottom of the upper platform *e*, and which is provided at the other end with a stem and roller, *y'*, that travels to and fro in a diagonal slot, *z*, formed in the bottom of the platform *c*. The vertical beam *q* is provided on the face, at the top, with a stem and roller, *q''*, that engages in a groove, *A*, which forms an irregular-shaped cam, *B*, on the inner face of a wheel, *C*, that is attached to the outer end of the shaft *g*. Connected with and extending upward from the top of the lower portion of the frame *a* is a standard, *D*, curved on the inner face to allow of the passage of the boot or shoe, &c., and to the top of which is affixed a stationary knife or burnisher, &c.

The operation of my improved machine is

as follows: Power being applied to the wheel C, the shaft *g* is revolved, thereby revolving the plate *h*, which, in its revolution, carries with it the chuck *k*, and boot or shoe connected with it. The chuck *k*, in its revolution, slides on the plate *h*, and the inner surfaces of its transverse bars *i* *i'* impinge against the periphery of the disk or cam *l*, which, by means of the slot *m*, is permitted to slide on the shaft *g*, and is held by the thumb-screw *n* in the position it is desired to be set for the boot or shoe to describe the required curve. By the same operation of the wheel C, the groove A of the cam B, with which engages the roller *q''*, is carried around the stem and roller *q''*, thereby operating the beam *q* up and down on the shaft *g*, thus causing the arm *r* to actuate the arbor *t* and stem *x*, so as to shove in and out the lever *y*, and cause the stem and roller *y'* to travel to and fro in the diagonal slot *z* and operate the platform *e* back and forth transversely, and, consequently, the chuck *k*, connected with it, is carried to and fro transversely, and, by the operation hereinbefore described, revolved, and is made to travel longitudinally back and forth on the ways *b* *b'*, so as to carry the boot or shoe, &c., in any direction toward and from a stationary cutter, trimmer, or burnisher, against which a boot or shoe is made to describe any desired curve,

by the operation of the several devices above described, so as to trim, set, or burnish the edge of the boot or shoe sole in the desired manner.

Having thus fully described my improvements, what I claim as my invention, and desire to have secured to me by Letters Patent, is—

1. A chuck bearing the last for the boot or shoe, in combination with an eccentric which causes the chuck to slide, reciprocating platforms which carry the chuck both laterally and longitudinally, and a shaft which causes said chuck to revolve and said platforms to reciprocate, all substantially as described.

2. In a machine for trimming and burnishing, &c., the edges of the soles of boots or shoes, the bed or platform *e*, supporting a shaft, *g*, and operated by cam B, stem and roller *q''*, beam *q*, arms *r* *s*, stem *x*, levers *y* *y'*, all arranged as described, or equivalently, so as to travel and carry the chuck or jack *k* back and forth laterally, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

Witnesses: JAMES W. MALOY.

CARROLL D. WRIGHT,

SAML. M. BARTON.