

(No Model.)

2 Sheets—Sheet 1.

J. H. REED.
SOLE TRIMMING MACHINE.

No. 475,608.

Patented May 24, 1892.

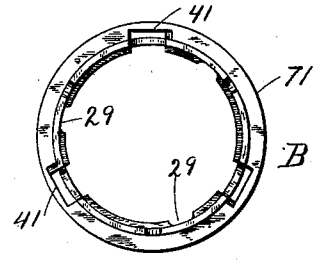
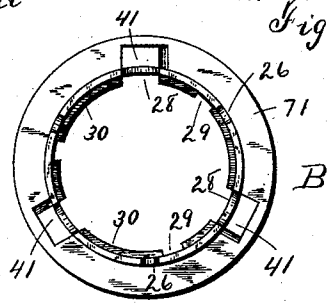
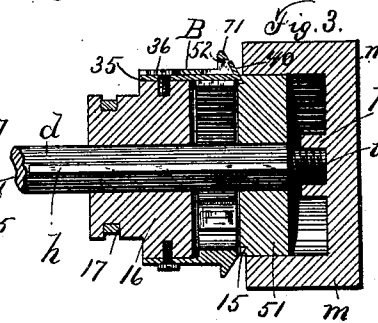
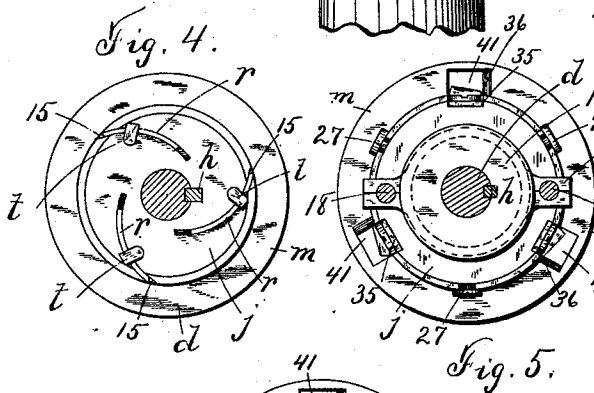
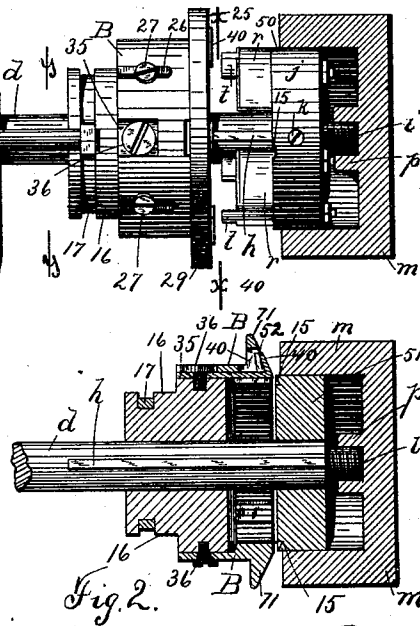
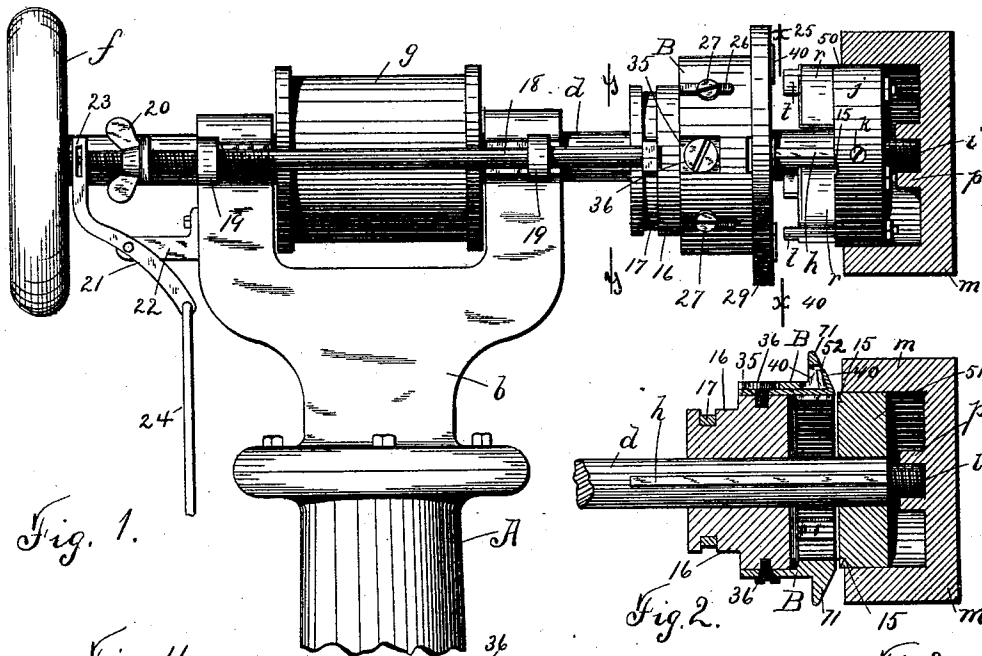


Fig. 6.

Fig. 7.

WITNESSES
Dwight Bay.
A. M. Ellis

INVENTOR
James H. Reed
By C. A. Shaw & Co.,
ATTORNEYS

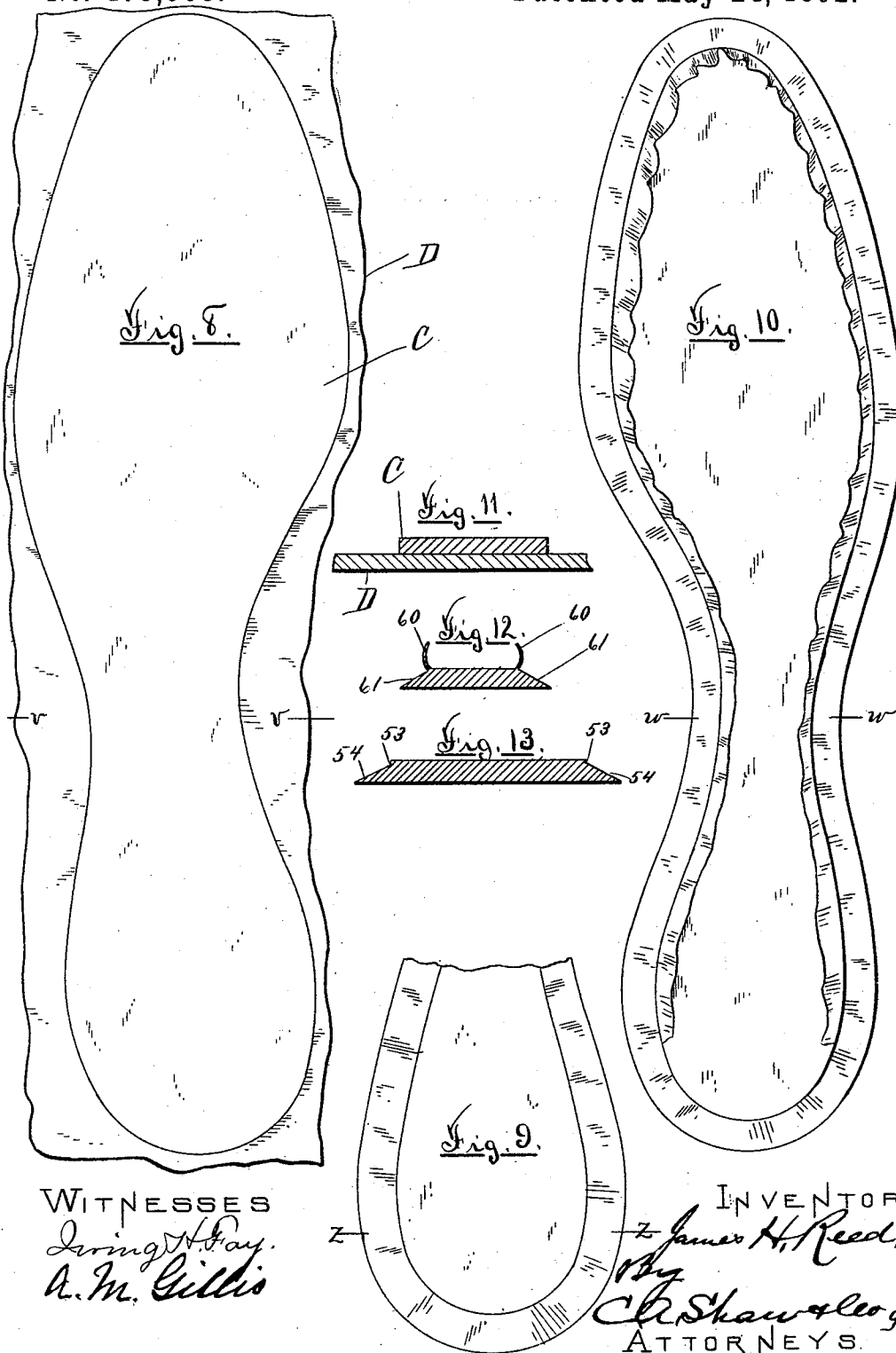
(No Model.)

2 Sheets—Sheet 2.

J. H. REED.
SOLE TRIMMING MACHINE.

No. 475,608.

Patented May 24, 1892.



WITNESSES
Loring H. Fay.
A. M. Gillis

INVENTOR
J. H. Reed,
By
C. S. Shaw & Co.
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JAMES H. REED, OF LYNN, MASSACHUSETTS, ASSIGNOR TO AMAZIAH M. PREBLE AND JOSIAH H. PREBLE, OF SAME PLACE.

SOLE-TRIMMING MACHINE.

SPECIFICATION forming part of Letters Patent No. 475,608, dated May 24, 1892.

Application filed October 31, 1890. Serial No. 369,923. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. REED, of Lynn, in the county of Essex, State of Massachusetts, have invented certain new and useful Improvements in Machines for Cutting and Beveling Boot or Shoe Soles, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a front elevation of my improved machine, the standard being represented as broken off; Figs. 2 and 3, vertical longitudinal sections showing different forms of beveling cutter-heads; Fig. 4, an elevation of the rotary cutter-head viewed from the left in Fig. 1, the shaft being shown in cross-section taken on line *xx*; Fig. 5, a like view of the sliding cutter-head, taken on line *yy* in Fig. 1; Fig. 6, an elevation of the gage-ring shown in Fig. 2 detached; Fig. 7, a like view of the ring shown in Fig. 3; Fig. 8, a plan view showing section of leather with pattern attached; Fig. 9, a plan view of a portion of the sole, showing edges beveled; Fig. 10, an inside plan of the sole, showing the welt; Fig. 11, a vertical section taken on line *vv* in Fig. 8; Fig. 12, a like view on line *ww* in Fig. 10; and Fig. 13, a like view taken on line *zz* in Fig. 9.

Like letters and numerals of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to a machine for shaping and chamfering boot and shoe soles; and it consists in certain novel features hereinafter fully set forth and claimed, the object being to produce a simpler, cheaper, and more effective device of this character than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation:

In the drawings, A represents the standard or body of the machine, which is provided with a forked head *b*. A horizontal rotary shaft *d* is journaled in the arms of said head and is provided with a fly-wheel *f* and drive-

pulley *g*. The shaft is splined at *h* and has its ends screw-threaded at *i*. A circular cutter-head *j* is detachably secured on the threaded end of the shaft by a set-screw *k*. A gage-cap *m*, provided interiorly with a threaded socket *p*, is turned onto the end of said shaft and incloses the head *j*. A series of curved blades *r* are secured to the face of the head *j* opposite the cap *m* by clamping-bolts *t*, passing through said head. Said blades are eccentrically arranged, (see Fig. 4,) and are adjustable longitudinally, their cutting-edges being within the peripheral line of said head, which is notched laterally at 15. A head 16 is fitted to slide on the spline, and has an annular groove in which a collar 17 is disposed. Rods 18, fitted to slide longitudinally in lugs 19 on the fork *b*, are secured to said collar. One end of said rods is threaded and a check-nut 20 thereon limits their longitudinal movement. A lever 21 is pivoted to a bracket 22 on the fork, one end being slotted at 23 to receive a pin on the rod. Said lever is connected by a rod 24 with a treadle at the foot of the standard, whereby the head 16 may be moved longitudinally on the shaft. A cylindrical stock B is adapted to inclose the head 16, and is provided at one end with an annular flange 25, arranged at right angles to the body of the stock and at the opposite end with longitudinal slots 26. Set-screws 27 pass through said slots into the head, securing the stock thereon. The stock has an interior flange 30, grooved at 23 and 29 (see Fig. 6) to respectively receive the blades *r* and bolts *t* on the head *j* when said heads are forced into engagement. A series of blades 35 are longitudinally adjustable on the head 16 by set-screws 36, the stock B being slotted to receive said screws and admit adjustment of the knives. The cutting-edges 40 of the blades may be arranged vertically at right angles, as in Fig. 1, or inclined inwardly, as in Figs. 2 and 3. The flange 25 of the stock has openings 41, through which said edges project, said openings occupying the position and performing like functions with the abutment of an ordinary plane.

In the use of my improvement the cap *m* is adjusted on the head *j* at a suitable distance from the inner edge thereof, leaving a bearing-space 50 to receive the edge of the pattern

C. The pattern, being secured to the stock D in the usual manner, is held vertically with its edge resting on the head at 50. The treadle is then depressed, forcing the sliding head 16 outward, its blades 40 engaging the rough or unfinished face of the leather. Said heads being rotated, the blades *r* trim the leather D, shaping the sole to conform to the outline of the pattern, which is turned by the operator against the head *j*. The knives 40 reduce the stock to even thickness while the sole is being formed.

In Fig. 2 the head *j* is replaced by a plain head 51 without knives *r*, and the stock B has a flange 71, beveled vertically. The knives 35 in this form have cutting-edges which are inclined at the same pitch as the stock-flange, but are slightly shorter than the opening 41, leaving a space 52. This form is employed to scarf the edges of an inner sole, as shown at 54 in Fig. 13, and leaves a slight shoulder 53 for stitching said sole. The head 51 is provided with notches 15, into which the toe of the blades project when the sliding head is forced outward. The sole is held against the cap and head and the knives form the bevel. By moving the cap toward the blades the bevel may be adjusted to reduce the leather to a "feather-edge," if desired.

In the form shown in Fig. 3 the beveled flange 71 is shorter and the knives 35 have a shorter cutting-edge. This is employed to chamfer the inner edges of an outer sole after the welt 60 (see Fig. 12) has been turned up, forming the bevel 61. The openings 41 in the stock-flanges 25 permit the leather shaved from the sole to pass through after the manner of the ordinary plane.

Any number of adjustable stocks B, provided with inclined flanges and interchangeable on the sliding head, may be employed, the cutting-edges of their knives being inclined to suit the character of the work.

Having thus explained my invention, what I claim is—

1. The combination of the rotary shaft with the head *j* fixed thereon, the adjustable gage-cap *m*, adjustable on said shaft and overlapping said head from its outer face, and the eccentrically-arranged curved knives *r*, clamped on the inner face of said head and adjustable longitudinally, substantially as described.

2. The rotary shaft and guide-head fast thereon, in combination with the sliding head 16 on said shaft, a treadle mechanism for moving said head longitudinally, the stock B, adjustable on said sliding head and provided at its inner end with the beveled flange having blade-openings 41, and the adjustable knives 35 on said stock, provided with vertically-inclined cutting-edges projecting through said openings, substantially as described.

3. In a sole cutting and beveling machine, the rotary shaft, notched guide-head fast thereon, and adjustable gage-cap overlapping said head, in combination with the shaping-knives *r* on said head, the sliding head 16 on said shaft, and actuating mechanism, the detachable knives 35, secured to said sliding head, and the adjustable flanged stock B on said sliding head, having blade-openings 41, 28, and 29, arranged substantially as described.

JAMES H. REED.

Witnesses:

EUGENE S. MCCARTHY,
HENRY F. HURLBURT.