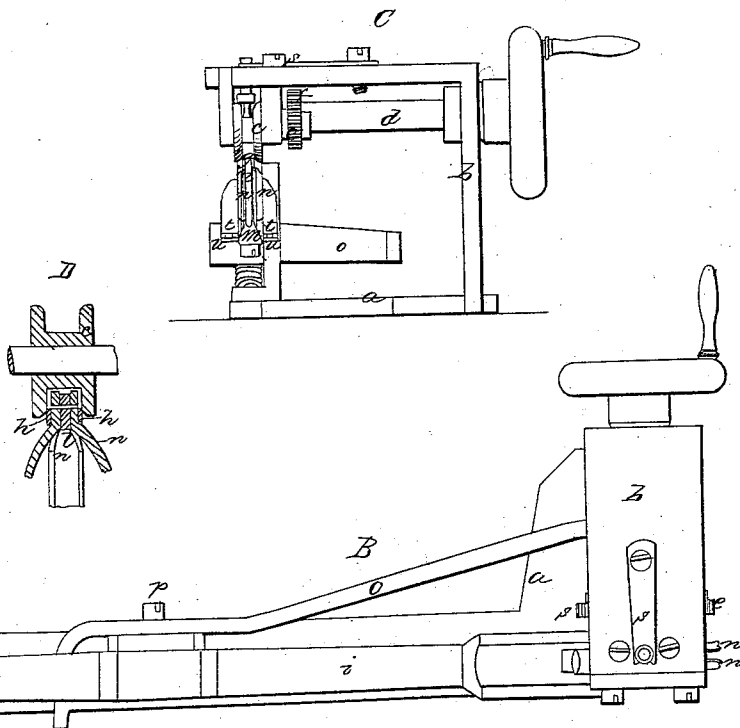
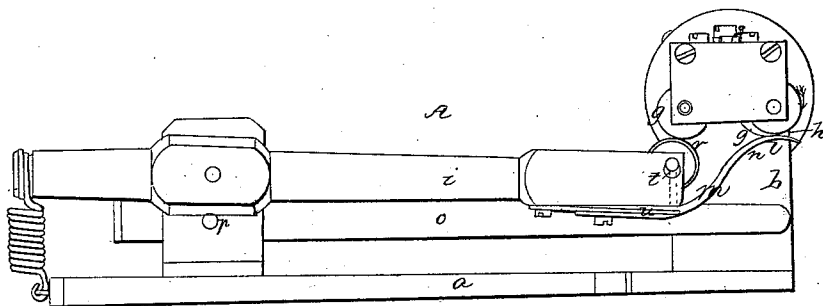


W. H. Rounds.

Boot and Shoe Upper Machine.

No 85.028.

Patented Dec. 15, 1868.



Witnesses.

Mr. W. F. Bingham.
C. W. W. Brown

Inventor,

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United States Patent Office.

WILLIAM H. ROUNDS, OF NORTH BRIDGEWATER, MASSACHUSETTS.

Letters Patent No. 85,028, dated December 15, 1868.

IMPROVED MACHINE FOR TRIMMING WELTED SEAMS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, WILLIAM H. ROUNDS, of North Bridgewater, in the county of Plymouth, and State of Massachusetts, have invented an Improved Machine for Trimming Welled Seams; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention, sufficient to enable those skilled in the art to practise it.

In sewing up boot-legs, it is common to stitch a welt-strip in between the edges, the two pieces of leather being laid face to face, and after a leg is stitched, the pieces are flattened out at the seam, the outer edge of the three thicknesses being trimmed and rubbed down, and the opposite projecting edge of the welt being also trimmed closely down to the face of the leather.

It requires a very skilful use of the knife to trim these edges accurately, without injury to the stitches or to the stock; and the object of our invention has been to so construct a feeding and cutting mechanism that the trimming of such and similar-stitched welts should be automatically and accurately effected by mechanism.

My invention consists primarily in combining, with a feed-mechanism, a forked cutter, which should receive the welt or welted edge between its prongs, and trim off the edge thereof, as the stock is fed through the machine.

It also consists in combining an upper and a lower cutter of this description, so as to trim both edges of the welt at one operation.

Also, in combining, with such cutters, finishing-rolls, that shall press and smooth the trimmed edges.

The drawings represent a mechanism embodying my invention.

A shows a side elevation of the machine.

B is a plan of the same.

C is a front-end elevation.

a denotes a base-plate; *b*, a standard or head, in which are bearing for supporting the journals of a feed-roll, *c*, driven by suitable power; said feed-roll being shown as geared to a driving-shaft, *d*, by gears *e f*.

This feed-roll is grooved, to admit the outer edge of the welted leather; and just below the roll is a cutter, *g*, having on each side of it a prong, *h*, the shank of the prongs and cutter being fastened to a long lever, *i*, hung on a fulcrum, *k*, the rear end of the lever being borne down by a spring or weight, the stress of which presses the cutter and prongs up towards the feed-wheel, or against the stock introduced between the wheel and the cutter.

Above the said cutter and prongs, is another cutter, *l*, projecting into the groove of the roll *c*, this cutter being on the end of a shank, *m*, and having prongs *n n* projecting forward from the sides of it.

The cutter *l* is for trimming the outer edge of the welt, that is to say, the edge which comes inside the

leg when finished, and the edge of the stock on each side thereof, and the cutter *g* is for cutting off the opposite or wide edge thereof, which lies between the two main pieces of stock.

In introducing the welted edge to be trimmed, the prongs of the upper cutter are made to straddle the upper or narrow edge of the welt and the adjacent edges of the stock, the three edges being pressed up against the teeth of the feed-wheel by the prongs *h* of the cutter *g*, and the main piece of stock below the seam, on each side of the welt, is passed down outside of the prongs below, the wide edge of the welt dropping between the prongs *n n*, and in front of the cutter *l*, as shown in section at D.

When the feed-roll is rotated in the direction of the arrow, the stock will be fed under the roll, the prongs acting as guides, and keeping the two edges of the welt in the vertical plane of the centre of the two cutters, the cutters trimming off the two edges of the welt, and the narrow edges of the stock projecting beyond the seam as the stock is fed up to and by them, the stock being held up to the action of the feed-roll, so as to insure its progression, by the spring or weight, at the outer end of the lever *i*, or by a treadle connected with said end of the lever.

When the welted seam has been fed through, the fork *l* may be thrown down from the feed-wheel, by means of a lever, *o*, fulcrumed at *p*, and having an arm extending under the rear end of lever *i*, pressure down upon the front end of the lever *o*, forcing up the rear end of lever *i*, as will be readily understood.

Just in rear of the two cutters and the feed-wheel is a pair of edge-finishing rolls, *q r*, the upper one of which turns on a shaft, journalled in stationary bearings in the head of the machine, while the shaft of the lower one is journalled in the end of the lever *i*, as seen at A.

The shaft of the upper roll carries a gear, *s*, meshing into and driven by the driving-gear *f*, so as to make said roll a feeding-device.

The edge of this roll is concave, while the edge of the lower roll is convex, and as the welted edge passes between them, upward pressure being applied to the front end of the lever *i*, the edges of the upper roll will compress and rub down the three adjacent outer edges of the welt and stock, while the under roll will act against the inner edge of the welt, pressing it into the seam, and smoothing and finishing it.

It will thus be seen that both edges of the welt are trimmed off and finished at one operation, and while the lower or the upper-pronged cutter may be employed alone, I prefer to employ both in the same machine, in order that both edges of the welt may be trimmed at once.

The action of the cutters is gauged by the lower prongs, which press against the stock, opened from the welt, as seen at D, and as the outer edge of the welt and the adjacent edges of the stock are irregular in width from the seam, before being cut, the upper

fork is so applied that it may yield vertically, in accordance with this irregular width of edge beyond the seam, the shank of the upper forked cutter being, for this purpose, fastened to a spring, *s*; and as the lower fork must be pressed hard against the stock, to insure its feed-movement while under the action of the cutters, the lower finishing-roll also has provision for vertical yield, its journals being supported upon posts *t*, which rest upon springs *u*.

I claim, in combination with a mechanism for feeding a stitched welted seam, cutters for trimming the edges of such welt and seam, such cutters being each provided with prongs for straddling the welt or seam,

and guiding it to the action of the cutter, substantially as described.

I also claim, in combination with the feed and trimming-mechanism, the edge-finishing rolls, substantially as shown and described.

I also claim, hanging the upper knife and the lower finishing-roll, with provision for yielding, substantially as described.

WM. H. ROUNDS,

Witnesses:

J. B. CROSBY,
FRANCIS GOULD.