

(No Model.)

W. H. AUSTIN.

MACHINE FOR MANUFACTURING LASTS FOR BOOTS OR SHOES.

No. 526,987.

Patented Oct. 2, 1894.

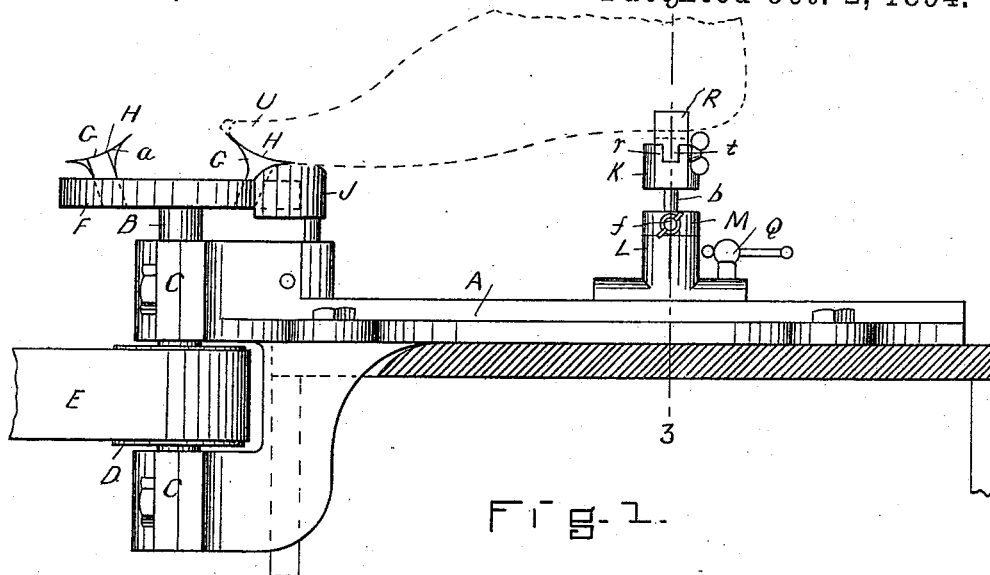


Fig. 1.

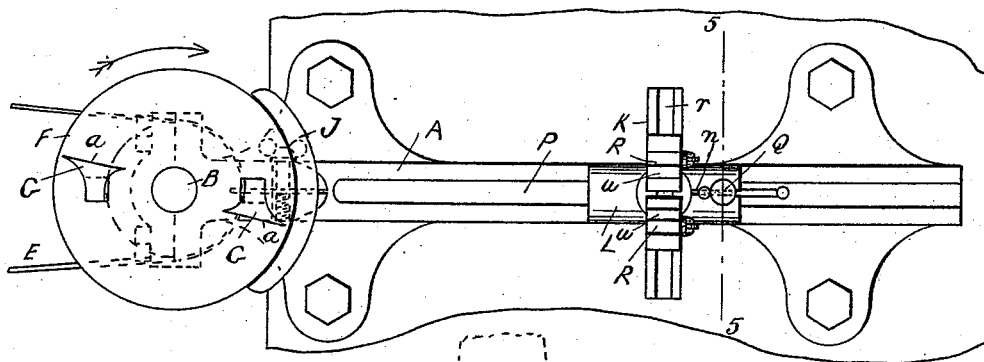


Fig. 2.

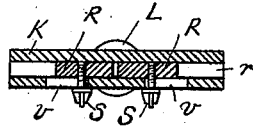


Fig. 4.

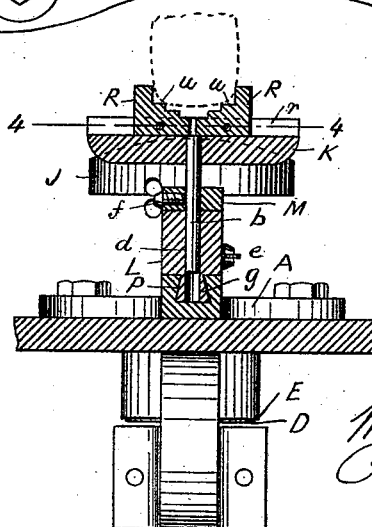


Fig. 5.

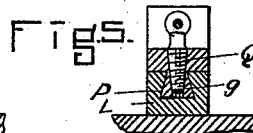


Fig. 6.

WITNESSES.

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MACHINE FOR MANUFACTURING LASTS FOR BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 526,987, dated October 2, 1894.

Application filed February 1, 1892. Serial No. 419,919. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. AUSTIN, of Brockton, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Machines for Manufacturing Lasts for Boots or Shoes, of which the following is a full, clear, and exact description.

In the manufacture of lasts for boots and shoes in a last machine, there is left on each last at the toe end, as it leaves the machine a stub or projecting piece, by which the last is held in the lathe at such place, which necessitates leaving a portion of the under surface of the last at the toe in an unfinished condition and which portion has to be cut and trimmed away and which has heretofore been done by hand, and this invention consists of a machine constructed and arranged for operation substantially as hereinafter described to cut and trim off the under portion of the toe of a last, or that part at the toe end, which is not cut away in the last machine, to make the under side of the last at the toe of the proper outline and finish, all substantially as hereinafter fully described reference being had to the accompanying sheet of drawings, in which—

Figure 1, is a side view and partial section of the present machine, showing in dotted lines in side view a last in position for operation thereon. Fig. 2, is a plan view. Fig. 3, is a vertical cross section on line 3—3, Fig. 1. Fig. 4, is a detail horizontal section on line 4—4, Fig. 3, and Fig. 5, is a detail cross section on line 5—5, Fig. 2.

In the drawings A represents a bed frame for the support of the various parts of the machine which can be supported on any suitable stand or bench.

B is a vertical shaft adapted to rotate in bearings C, of the bed and having a pulley D, and belt E, for the turning of the shaft. Secured to the upper end of this shaft is a plate or disk F, having secured on its upper side in any suitable manner diametrically opposite to each other, two cutters G, having cutting edges *a*, their upper surfaces H, being hollowed out or concave to correspond to

the convexity required for the under surface of the toe of the last which is to be trimmed. At the side of the disk or plate is secured in the support a rest or guide J, on which the last near its toe end rests in operation thereon, and which is the guide or gage for the trimming of the toe, it being curved horizontally and has its upper side rounded in cross section as shown in Figs. 1 and 3.

K is a plate or holder having a central downwardly projecting pin *b*, which freely fits in a vertical socket *d*, of a support L, of the bed frame, on which the plate or holder can swivel, and it can be secured rigidly in position by a set screw *e*, which screws into the support to bear against the pin *b*.

M is a collar on the pin *b*, to which it can be secured by a set screw *f*, which collar serves as a rest or bearing for the holder and on which it can freely turn, and which being moved up or down, the holder K can be adjusted as to its height on its support.

The support L, has an under dovetail rib *g*, which freely fits in a corresponding longitudinal groove P, in the bed A, along which groove the support can freely slide to and from the cutters, and it is secured at any desired point therein by a tapering screw Q, screwing in a corresponding screw socket in the portion *m*, of the support, which portion has a longitudinal vertical central slit *n*, separating it into two longitudinal parts through and between which the screw passes, so that screwing in the screw Q, it will by its taper, force or spring the two parts apart sidewise and causing them to bind against the sides of the groove in the bed will firmly hold the support from moving along the bed.

The holder K has a groove *r*, in its upper side at right angles to the bed groove P, in which fit the under ribs *t*, of two blocks R, opposite to each other, and in which groove they can freely slide back and forth, and to and from each other, the blocks having on their upper side and facing each other shoulders *u*, as shown in Fig. 3, more particularly. The holder has on one side two horizontal slots *v*, through each of which freely passes a screw S, each screwing into a block R, and

by which after the blocks are moved along their holder into proper position are there secured by tightly screwing up the screws S.

The last T to be operated upon is placed
 5 by its heel portion in between the two blocks R, resting on its shoulders *u*, and its toe end U, resting on the semi circular rest J, the blocks being moved along the groove *r'*, to
 10 adjust the proper position of the last laterally upon its support and being pressed against the last are secured in place by tightening the screws S. The rest or support for
 15 the heel end of the last is then moved along its groove P, until the toe end of the last projects over the path of the cutters the proper distance for the proper cut of the toe of the last by the cutters. Then the screw Q, is turned
 20 to secure the support in place on the bed, the last being free to be moved or swung to the right or left on the collar M, on its central pin or pivot *b*, all as shown in Fig. 3. The
 25 last being properly adjusted in position the shaft B, is revolved which revolves the plate and its cutters G, and as they revolve the last is pressed on and across its rest or guide J, swinging on the pivot or pin *b*, its toe end
 30 passing over the cutters which then cuts off the under side of the toe of the last, accordingly, the form of the upper side of the guide regulating the amount of cut by the cutters
 35 and the shape given to the toe by them in operation. The blocks R are then loosened in their positions by turning out their screws S, and another last put in place and secured
 35 and its toe operated upon as before.

When lasts of the same size are to be cut

or trimmed one after the other, the support is not changed in its position but if a different size, longer or shorter, is to be cut, the support L, is moved along the groove P, correspondingly and there secured in place. 40 Only one cutter need be used at a time and in that case the one not used can be lowered in its socket in the plate.

Having thus described my invention, what I claim is— 45

1. In a last trimming machine, a support for the heel of the last, a revolving shaft, a cutter or cutters supported by said shaft and a guide or rest for the fore part of the last, 50 its bearing surface extending in a horizontal plane in a curved line or arc of a circle outwardly from the heel support, and transversely rounded on such surface in cross section. 55

2. In a last trimming machine, a swiveling support for the heel of the last, a revolving shaft, cutter or cutters supported by said shaft, and a guide or rest for the fore part of the last, its bearing surface extending from 60 the heel support in a horizontal plane in a curved line or arc of a circle outwardly from the heel support, and transversely rounded on such surface in cross section.

In testimony whereof I have hereunto set 65 my hand in the presence of two subscribing witnesses.

WILLIAM H. AUSTIN.

Witnesses:

W. THOMPSON,
 EDWIN W. BROWN.