MACHINE FOR CUTTING AND SKIVING SOLES OF SHOES

Filed Sept. 27, 1928

2 Sheets-Sheet 1
MACHINE FOR CUTTING AND SKIVING SOLES OF SHOES

Filed Sept. 27, 1928 2 Sheets-Sheet 2
This invention relates to a machine for cutting and skiving soles of shoes.

In half soling shoes, it is the usual practice to cut off the worn sole at a selected point by hand, and to cut the new sole by hand in an attempt to match the cut of the old sole. The result of this has usually been an imperfect joint.

This invention is designed to overcome the defect noted above, and objects of such invention are to provide a machine for cutting the old soles after they have been partially detached from the shoes at a predetermined angle and similarly cutting the new sole so that it will exactly match the old sole and form a perfect joint.

Further objects are to provide a machine having the characteristics noted above which may be adjusted to compensate for wear and successive sharpenings of the cutting knife, and which may be further adjusted to position the anvil or stationary member at the exact angle desired.

An embodiment of the invention is shown in the accompanying drawings in which:

Figure 1 is a vertical sectional view through the machine corresponding to the line 1—1 of Figure 2;

Figure 2 is a plan view of the structure shown in Figure 1 with parts broken away and in section.

Referring to the drawings, it will be seen that the machine comprises a pair of uprights or standards 1 joined by a base 2 and having an anvil or stationary member 3 carried between them. The member 3 is provided with end flanges 4 which bear against the corresponding faces of lugs 5, as shown in Figure 1, and which are bolted thereto adjacent one end by means of the bolts 6. This construction permits a slight pivoting of the member 3 with reference to the lugs.

At each end of the machine, a second bolt 7 is provided and passes through an elongated slot 8 formed in the corresponding flange 4. The bolts or cap screws 6 and 7 are tightened after adjustment and thus lock the anvil 3 in its adjusted position.

The uprights are provided with guides 9 within which sliding rack bars 10 are carried. These rack bars are integrally joined by a transverse rear portion 11 to which the cutting or skiving knife 12 is attached. The knife 12 extends completely across the machine and is provided with elongated slots 13 through which screws 14 pass. These screws are countersunk in the slots and the elongated slots permit adjustment of the knife.

The member 11 is provided with a pair of spaced lugs 15 through which set screws 16 provided with locking nuts are threaded. These set screws bear against the rear face of the knife 12 and thus lock the knife against rearward motion.

From the construction thus far described, it is apparent that the knife may be most easily adjusted and permanently locked in adjusted position.

The rack bars are engaged by pinions 17 rigidly carried by a transverse shaft 17 journaled in the upper ends of the uprights. This transverse shaft is rigidly attached to a handle 18 so that as the handle is rocked, the knife is caused to pass back and forth toward or from the anvil 3.

The anvil 3 is provided with a slanting rear edge to which is attached a toothed plate 19.

In using the device, the old worn sole is detached part way back from the remainder of the shoe. The old sole is indicated by the reference character 20 and the upper by the reference character 21, shown in dotted lines in Figure 1. The shoe is slipped into place with the old sole above the anvil 3, and with the remainder of the shoe below the anvil. When it is at the point where the skiving is desired, the handle is rocked rearwardly and thus forces the knife 12 forwardly. The knife skives off the sole at a slanting angle, indicated by the reference character 29 in Figure 1. The sole is prevented from slipping by the biting of the teeth on the plate 19 into the old sole.

After this operation, the shoe is removed and the new sole leather placed in position upon the anvil 3. Thereafter, the handle is...
rocked rearwardly and the knife again forms the cut, this time in the new sole.

Thus, the exact angle at which the old sole is cut is reproduced at the edge of the new sole and a perfect joint is secured.

The knife is stopped just prior to actual damaging contact with the anvil 3 by the striking of one of the rack bars 10 against the adjusting or limiting screw 23 (see Figure 1). This screw is threaded through the end of the guide 9 and locked in place by a lock nut.

As wear occurs, the knife may be ground and readjusted. Further, the stroke of the knife is controlled by the screw 23. In addition to this, the angular position of the anvil 3 may be varied, as desired, and the anvil subsequently locked rigidly in place.

It will be seen that a very serviceable, rugged, and practical form of device has been provided by this invention which will insure a perfect joint between the new sole and the old sole.

It will be seen further that the operations may be very rapidly performed without any skill or thought on the part of the operator.

Although the invention has been described in considerable detail, such description is intended as illustrative rather than limiting as the invention may be variously embodied and as the scope of such invention is to be determined as claimed.

I claim:

1. A machine of the class described comprising a body portion having a pair of spaced uprights, angularly disposed spaced guides on the upper ends of the uprights, an anvil adjustably mounted upon said supports and extending from one guide to the other, a pair of rack bars slidably mounted within said guides, a transverse member connecting said rack bars at one end, a transverse shaft above the rack bars, pinions carried by the shaft and cooperating with the rack bars, a hand lever for rotating said shaft, a knife blade adjustably connected to said transverse portion and disposed on an oblique angle with respect to the upper face of the anvil, and a toothed plate adjustably disposed at an angle with respect to the upper face of the anvil projecting above the upper face of the anvil.

2. A machine of the class described comprising a base having a pair of spaced uprights, spaced guides on the upper ends of the uprights, an anvil adjustably mounted on said uprights and extending from one guide to the other, a pair of rack bars slidably mounted in the guides, a transverse member connecting said rack bars at one end, a transverse shaft above the rack bars, pinions carried by the shaft and cooperating with the rack bars, means rotating said shaft, a knife blade adjustably connected through said transverse member and disposed at an angle with respect to the upper face of the anvil, and a toothed plate adjustably disposed at one edge of the anvil and disposed at an angle with the points of the teeth on said plate projecting above the upper surface of the anvil.

In testimony that I claim the foregoing, I have hereunto set my hand at Milwaukee, in the county of Milwaukee and State of Wisconsin.

CLEMENS A. HABERMAN.