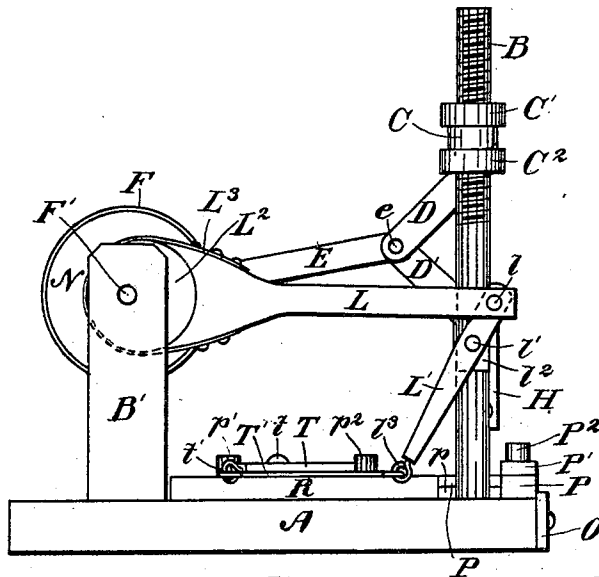
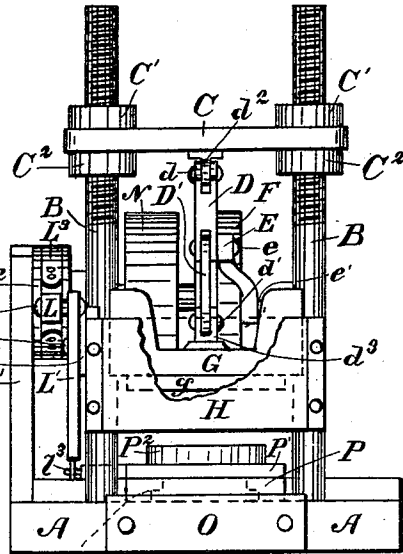
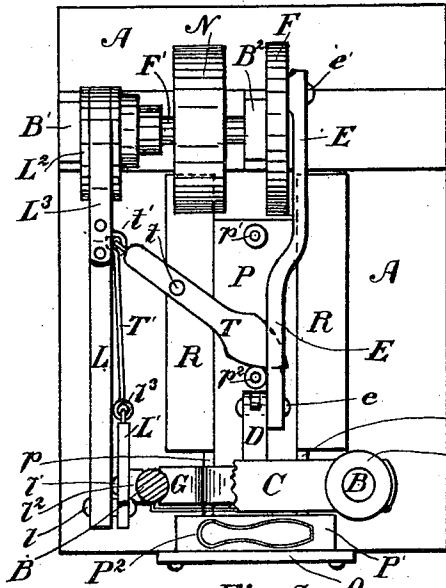


S. J. TALBOTT.
LEATHER CUTTING MACHINE.

Patented Sept. 15, 1891.



Witnesses

Albert E. Leach
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Inventor

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UNITED STATES PATENT OFFICE.

SYLVANUS J. TALBOTT, OF MILFORD, NEW HAMPSHIRE, ASSIGNOR TO
MARTIN F. ELDREDGE, TRUSTEE, OF LYNN, MASSACHUSETTS.

LEATHER-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 459,715, dated September 15, 1891.

Application filed May 4, 1891. Serial No. 391,703. (No model.)

To all whom it may concern:

Be it known that I, SYLVANUS J. TALBOTT, a citizen of the United States, residing at Milford, in the county of Hillsborough and State of New Hampshire, have invented certain new and useful Improvements in Leather Cutting and Forming Machines, of which the following is a full specification.

My invention consists of certain improvements in leather cutting and forming machines of the class wherein a vertically-reciprocating plunger bearing a block or die moves downward upon a cutter or die mounted on the bed of the machine in such a manner as to cut a shoe-sole or similar article from leather placed above said cutter, or in the case of a forming-machine to form the soles placed between the dies.

The object of my improvements is to insure the safety of the operator by rendering it unnecessary to place his hand in the path of the moving plunger in order to put in position or to remove the leather. This I accomplish by having the bed of the machine bearing the cutter or lower die movable in a horizontal plane and actuated in such a manner that each time the plunger moves upward the bed moves forward into a convenient position for the operator to place the leather thereon, the bed drawing backward with the descent of the plunger so as to bring the cutter or lower die in the path of the plunger at the proper time for the cutting or forming to take place. I moreover provide the machine with a guard passing across the front thereof, which further prevents accident.

Referring to the accompanying drawings, Figure 1 is a top plan view of a machine embodying my improvements. Fig. 2 is a front elevation, and Fig. 3 is a side elevation thereof.

A is the base of the machine, from which arise the two plunger guiding-rods B B in front and the supports B' B² near the rear.

G is the plunger, which is adapted to move up and down easily between the guide-rods B B. The upper portions of the guide-rods are screw-threaded, as shown in Figs. 2 and 3, and the cross-piece C is bored out at either end to fit loosely over the rods B, being held thereon between the two nuts C' C² on each rod. In this manner the cross-piece C is ad-

justable in height and may be securely clamped at any desired height on the rods.

D and D' are two bars pivoted together at e. Of these the bar D is pivoted at d to a connection d² of the cross-bar C, and the bar D' is pivoted at d' to a connection d³ of the plunger G, the two bars D D' forming virtually a toggle-joint.

F' is a shaft mounted in bearings in the supports B' B² and having fixed thereon the pulley N, through which, by means of a belt, motion is transmitted to the machine.

F is a crank-disk, also fixed on said shaft to turn therewith, E being a connecting-rod pivoted at e' to the face of said crank-disk, and at e to the toggle-joint D D', the construction being such that as the shaft F' revolves the plunger G moves up and down in a manner readily apparent without further description.

P is the movable bed provided along both sides with the tongues p, which move in corresponding grooves in the guides R R, which guides are fixed to the base A.

T is a lever pivoted at t to one of the guides R.

L² is an eccentric disk fixed on the shaft F', over which disk fits the inner enlarged end of the eccentric-rod L and the strap L³ in such a manner as to give a reciprocating motion to the said rod L as the shaft F' revolves.

L' is a lever pivoted at l' to a connection l² on one of the guide-rods B. One arm of the lever L' is pivotally connected at l with the outer front end of the eccentric-rod L, while the other arm is loosely connected, as at l³, with the link-piece T', which is in turn loosely connected at t' with the outer end of the lever T.

p' and p³ are stops on the sliding bed P, with which the enlarged inner end of the lever T engages. In this manner the reciprocating motion of the eccentric-rod L, acting through the pieces L' and T', causes the lever T to vibrate and engage first with one and then with the other of the stops p' p³, with the result that the bed P moves intermittently forward and backward. On the front of the bed P is the block P', which, as herein shown, bears the cutter P², which is of proper shape to cut the sole or other article from the leather.

g is a block, fixed to the bottom of the plunger *G* in such a manner that it coacts with the cutter *P*² when directly under the plunger to shear the sole or other article to be cut from the leather.

The whole construction and arrangement of parts is such that when the plunger *G* moves upward the movable bed *R* moves forward, bringing the cutter *P*² some distance in front of the path of the plunger, the bed remaining stationary in this position long enough for the operator to place the leather upon it. Then during the descent of the plunger the bed moves quickly backward with the leather on the cutter until the said cutter is immediately under the plunger when the sole or other article is cut and the operation repeated. In this manner it is practically impossible for the operator's hands to get between the cutter and the quickly-moving plunger, which is a common accident in machines having a stationary cutter always in the path of the plunger.

To further prevent accident I provide the machine with the guard *H* passing across the front thereof, being secured to the upright guide-rods *B* in front of the plunger. By having the cutter carried on a movable bed in the manner just described, so that it is moved forward at the upstroke of the plunger into a convenient position for the leather to be placed thereon, the guard *H* may be carried down much lower than would be possible were the cutter stationary, so that the movable bed and the guard in front act together as safety devices in preventing accidental cutting or crushing of the hands of the operator.

By raising and lowering the cross-piece *C* by means of the adjusting-nuts *C'* *C*² the pressure of the block *g* on the cutter *P*² may be adjusted to a nicety.

Instead of the plain block *g* and the cutter *P*², a pair of forming blocks or dies may be employed, one secured to the plunger and one

on the movable bed *P*, fitting each other in such a manner as to form the soles between them.

O is a stop secured to the front of the base *A* in such a manner as to prevent the movable bed from passing too far forward.

I claim—

1. In a leather cutting and forming machine, a safety appliance consisting of the combination, with a vertically-reciprocating plunger provided with a block or forming-die, of a bed provided with a cutter or forming-block fixed thereon, said bed with its cutter or block being intermittently movable back and forth in a substantially horizontal plane, whereby on the upstroke of the plunger the bed moves the cutter or forming-block to some distance in front of the path of the plunger, and a protecting-guard practically covering the path of the plunger in front and occupying a position in a plane between the plunger and the cutter or block when said plunger is up, substantially as and for the purposes described.

2. In a leather cutting and forming machine, a vertically-reciprocating plunger *G*, operated by suitable mechanism from a driving-shaft *F'*, in combination with a suitably-guided movable bed *P*, provided with stops *p'* *p*³, a reciprocating eccentric-rod *L*, driven by an eccentric mounted on said shaft, a lever *L'*, pivoted to said eccentric-rod, a lever *T*, engaging with said stops, and a link-piece *T'*, loosely connecting said levers *L'* and *T*, whereby a continuously-reciprocating motion of the plunger produces an intermittent motion of the bed in a plane at right angles to that of the plunger-path, substantially as and for the purposes described.

In witness whereof I have hereunto set my hand.

SYLVANUS J. TALBOTT.

Witnesses:

WM. B. H. DOWSE,
ALBERT E. LEACH.