E. A. HOLBROOK.

Machine for Cutting Leather.

No. 125,457. Patented April 9, 1872.

Fig. 1

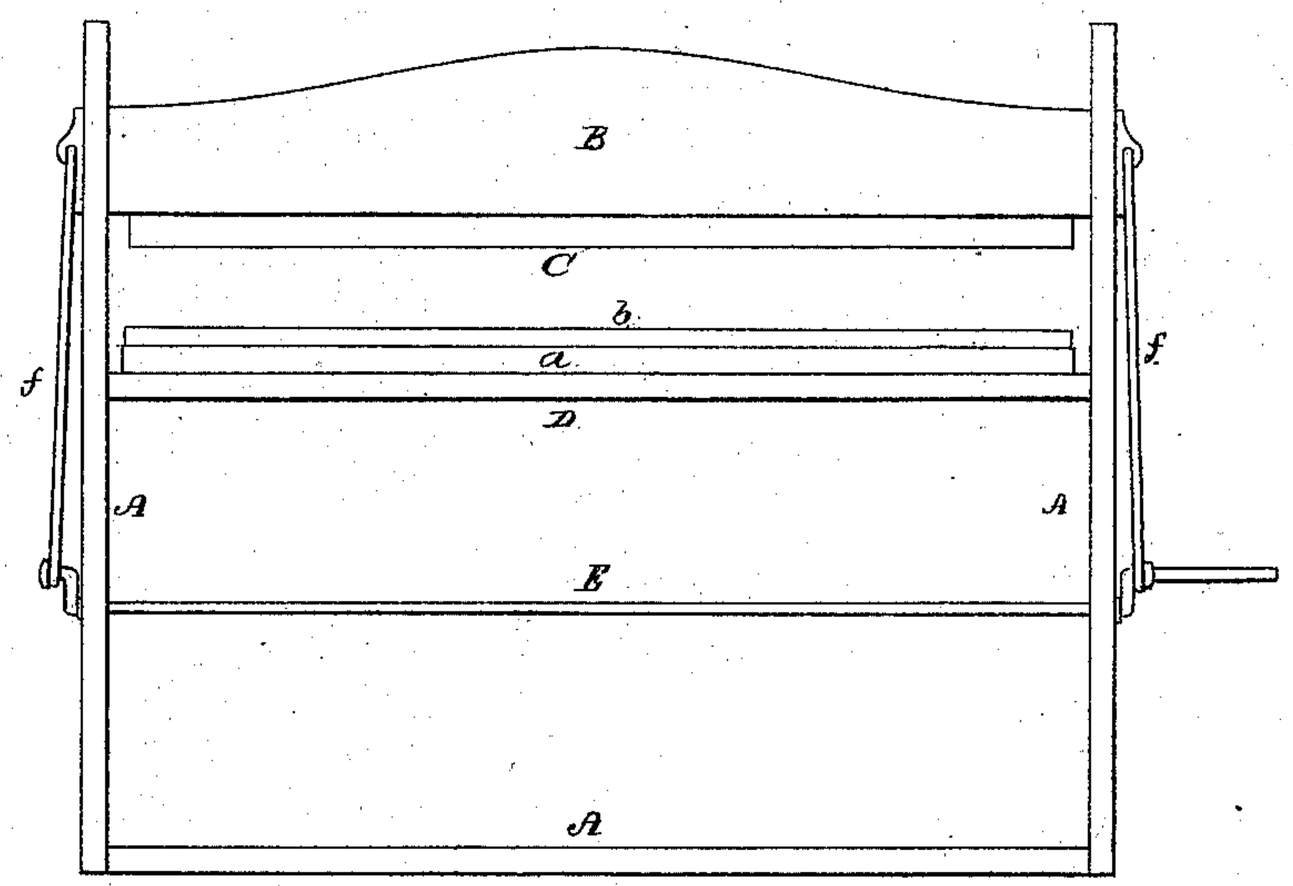


Fig. 2

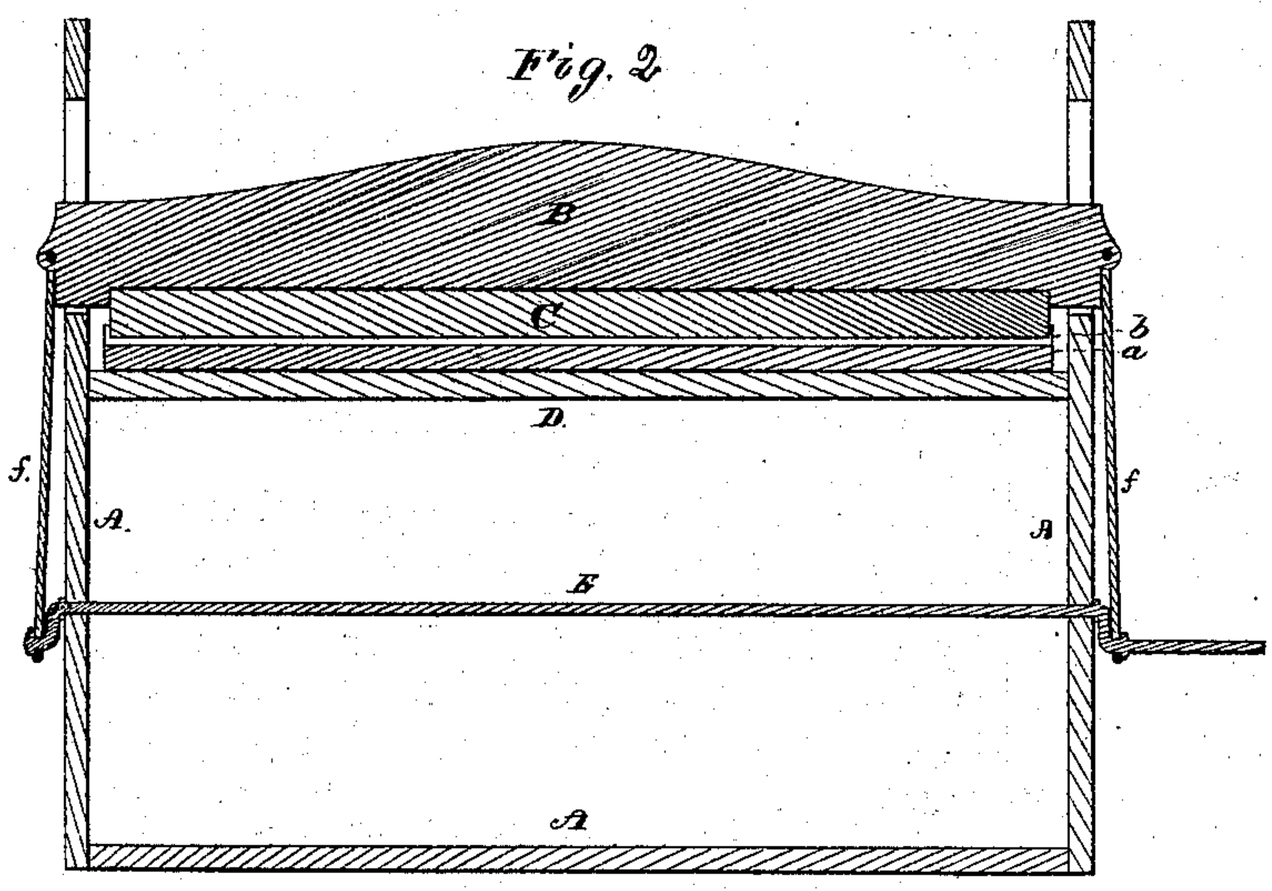
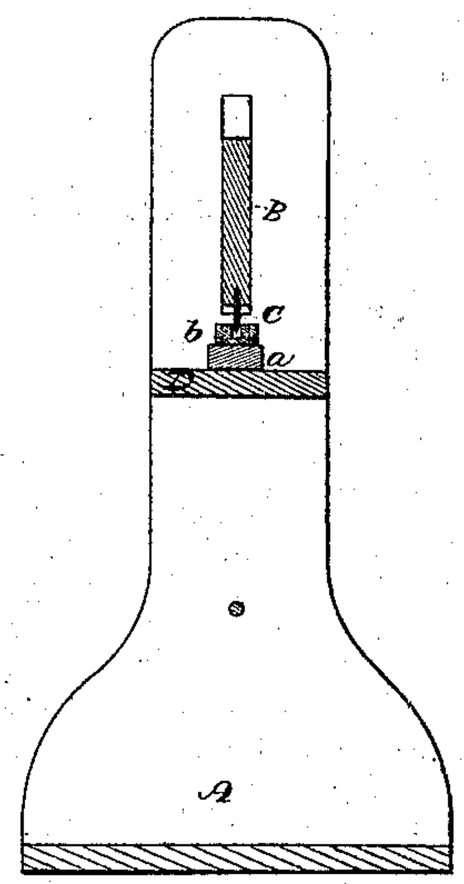


Fig. 3



Witnesses.

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UNITED STATES PATENT OFFICE.

ELIHU A. HOLBROOK, OF EAST RANDOLPH, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR CUTTING LEATHER.

Specification forming part of Letters Patent No. 125,457, dated April 9, 1872.

To all whom it may concern:

Be it known that I, ELIHU A. HOLBROOK, of East Randolph, in the county of Norfolk and State of Massachusetts, have invented a new and useful Improvement in Machines for Cutting Leather; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 is a side elevation, Fig. 2 a longitudinal section, and Fig. 3 a transverse and central section of a machine embodying my improvement.

My invention relates to that class of machines employed in cutting "sides" or sheets of leather into strips or bands. Heretofore machines of this class for reducing "hides" or sheets of leather into strips have been constructed with a solid wooden bed or lead-plate, against which the edge of the knife or cutter at each downward movement, after cutting through the leather, was brought in contact. This continued impact of the edge against the hard surface soon so dulled or blunted the edge as not only to require an increased expenditure of power in operating the machine, but rendered the knife less effective in its operation. To obviate these difficulties is the object of my invention; and which consists in combining with the leather-supporting table a steel or grooved metallic bar or plate, upon which the leather is supported while being cut, such plate being so formed as to allow the knife to pass freely into the channel or groove without coming in contact with the bottom thereof.

In the said drawing, A denotes the frame of the machine; B, the knife or cutter carrier; and C, the knife, which is secured to the lower part of the carrier. D is a bed or table, which is disposed below the knife-carrier and secured to the upright parts of the frame A, as shown in Figs. 1 and 2. Upon the upper surface of this table, and directly under the cutter, a bar, *a*, is arranged, such bar having a steel or metallic bar, *b*, affixed to its upper surface. The latter bar has a narrow channel made longitudinally through it of a width a little greater than the thickness of the knife. The said cutter-carrier, with its cutter, is so applied to the frame as to have vertical reciprocating movements imparted to it, such cutter-carrier being guided in its vertical movements by means of slots formed in the upright parts of the frame, as shown in Fig. 2. These movements may be attained by means of any suitable mechanism. As shown in the drawing, the mechanism consists of a shaft, E, having a crank at each of its ends, with the wrists of each of which a connecting-rod, *f*, is affixed, the other ends being, respectively, pivoted to the ends of the knife-carrier, as shown in Figs. 1 and 2. The limit of the vertical movement of the knife should be such that, while it may freely enter the channel in the metallic bar, it cannot be so depressed as to come in contact with the bottom thereof. This may be effected by giving the proper length to the pitmen connecting the knife-carrier with the driving-shaft; or, if desirable, the plate *a* may be provided with set-screws, by which the grooved bed or plate may be either raised or lowered, as may be desirable. By providing the machine with the metallic knife-edge protector, as described, I have found that a knife will run more than double the time that it would under the old method without being ground, while the leather being supported upon a smooth, unyielding, unhacked surface enables the knife to cut through it with greater ease than when the bed has been rendered rough by the continued impact of the cutter against the same.

From the above it will be seen that by my improvement the edge of the knife is so protected that it cannot become dulled except by the resistance of the leather, it cutting through thin and thick sides with perfect smoothness and without that great strain brought to bear upon the knife and its connection that is incident to the old method; and, besides, it effects a great saving in the cost of the knives and in the time required to grind or sharpen them.

Having described my invention, what I claim is as follows:

I claim the improved leather-cutting machine, the same consisting of the frame A, the reciprocating knife or cutter C, the bed or table D, and the rectangular slotted bar *b*, arranged and combined together in manner as shown, and for the purpose set forth.

ELIHU A. HOLBROOK.

Witnesses:
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