

W. HAMILTON.

Machines for Making Animal-Shoes.

No. 148,694.

Patented March 17, 1874.

Fig. 1

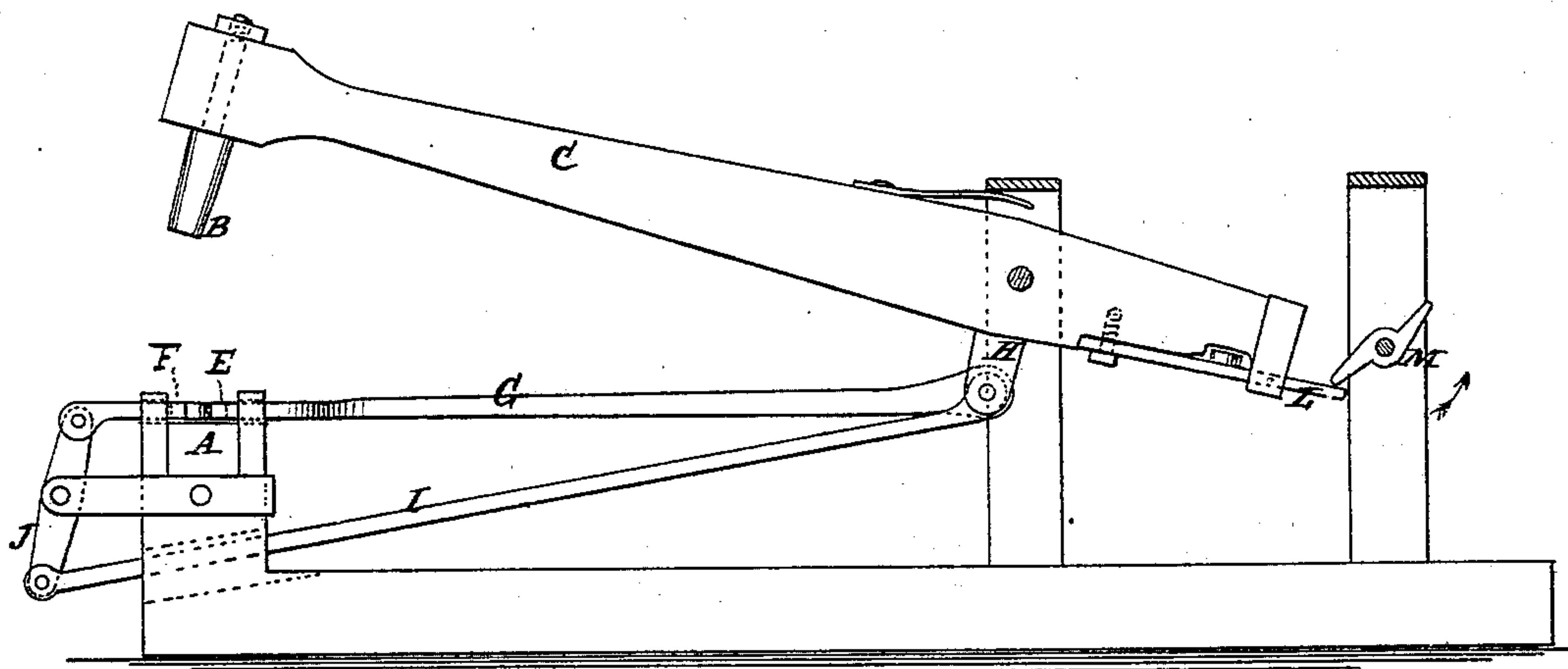


Fig. 2

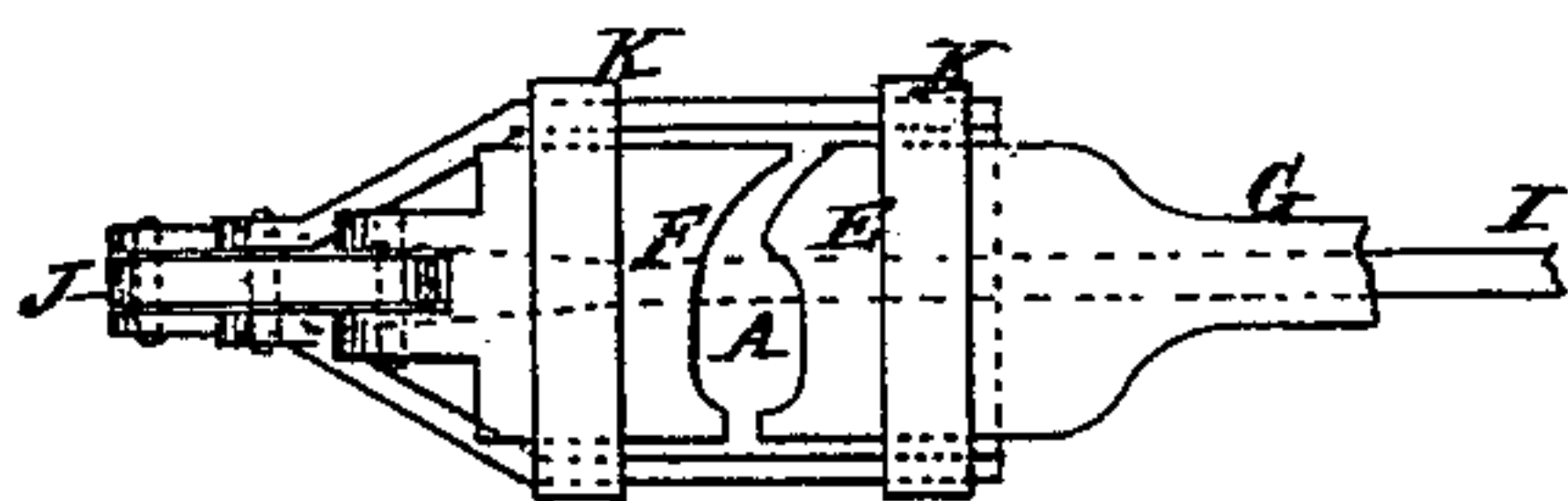


Fig. 3

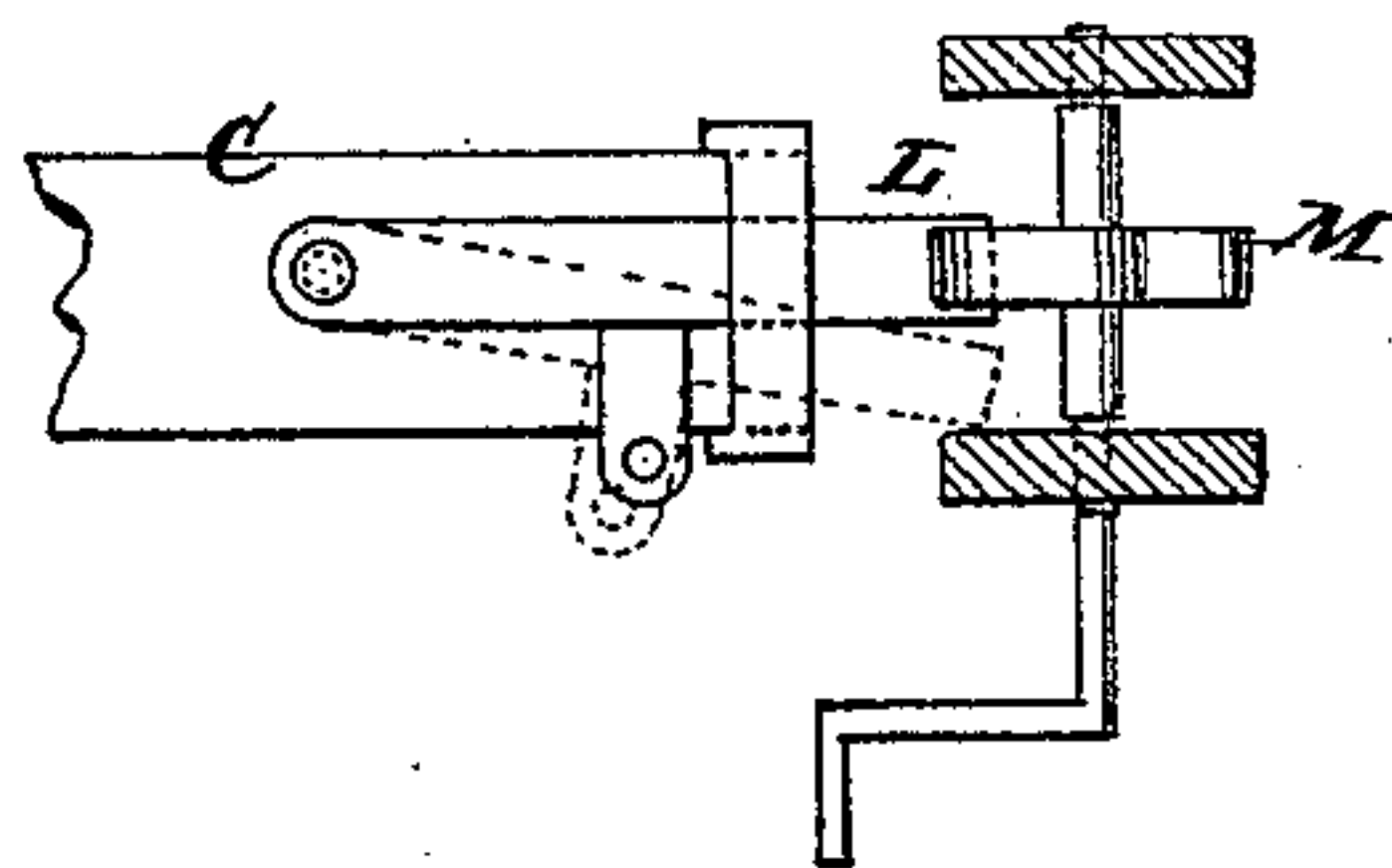
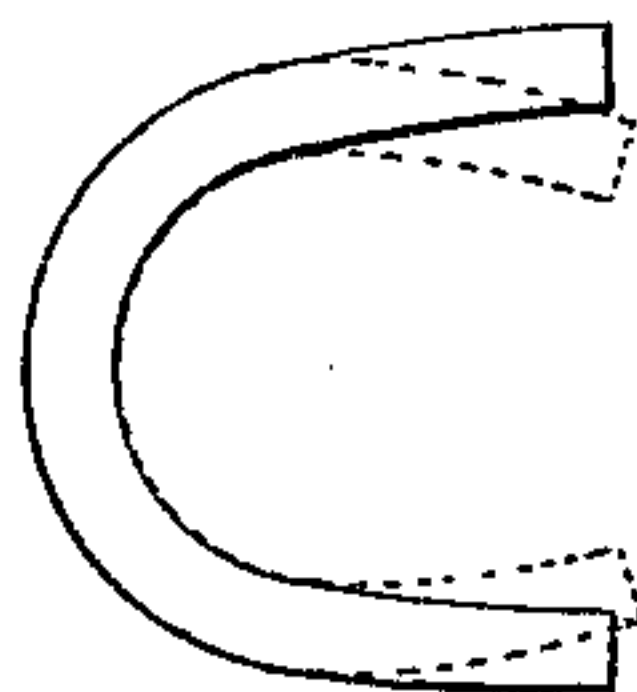


Fig. 4



WITNESSES:

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WILLIAM HAMILTON, OF FALLSBURG, ASSIGNOR TO JAMES L. LAMOREE,  
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## IMPROVEMENT IN MACHINES FOR MAKING ANIMAL-SHOES.

Specification forming part of Letters Patent No. 148,694, dated March 17, 1874; application filed  
November 22, 1873.

*To all whom it may concern:*

Be it known that I, WILLIAM HAMILTON, of Fallsburg, in the county of Sullivan and State of New York, have invented a new and Improved Machine for Making Ox and Horse Shoes, of which the following is a specification:

My invention consists of an anvil, trip-hammer, and two side hammers, for hammering the shoe on the sides and edges, the anvil being flat on the top, the hammer having a face which is the same form in outline as that of one side of the shoe to be made, but wider, so as to insure the hammering of the upper side of the blank over all its surface, and beveled or inclined to vary the thickness of the shoe and produce the requisite shape for the top; one of the side hammers being shaped in respect of the contour of its face to correspond with the required shape for the outer edge of the shoe, the other being shaped to correspond with the inner edge, and both resting on the face of the anvil, and working toward and from each other to hammer the edges of the blank which lies on the anvil between them, said hammers performing their operation while the trip-hammer is raised, and then moving out of the way when the trip-hammer falls, to give the necessary space for it between them which is required by the greater width of the hammer than that of the blank. The side hammers are operated by the helve of the trip-hammer, one being connected directly to an arm projecting from its axis by a rod or shank, so as to be thrown forward when the hammer rises, and the other being connected to the same arm by a similar rod, and an intervening rock-lever, by which it is moved toward the other side hammer by the same operation of the trip-hammer.

A bar is arranged on the trip-hammer helve, to be acted on by the tappet-wheel for raising the hammer, which said bar is jointed to the shank, and arranged to swing out of the path of the tappets to throw the hammer out of gear, and into their path to put it in gear again.

Figure 1 is partly a side elevation and partly a sectional elevation of my improved machine. Fig. 2 is a plan view of the anvil and the two side hammers. Fig. 3 is a plan of a part of the hammer-shank and tappet-wheel inverted, and a horizontal section of the supports of the tappet-wheel shaft, showing the arrangement for shifting the hammer

out and in gear. Fig. 4 is a plan of a blank for a horseshoe to be made by the machine, suitable hammer-faces being substituted for those used to make ox-shoes.

Similar letters of reference indicate corresponding parts.

A is the flat-faced anvil; B, the face or die of the trip-hammer, of which C is the helve or shank. E and F are the side hammers; G, the rod or bar connecting the side hammer E with the arm H of the hammer-helve C; I, the rod, and J the rock-lever, connecting hammer F with said arms; K, binders or yokes to hold the side hammers close down on the face of the anvil; and L is the shifting-bar on the hammer-helve for putting it in and out of gear with the tappet-wheel M. The side hammers are shaped in this case for making ox-shoes or half-shoes of the form of the space between the said dies in Fig. 2; but they are to be made detachable from their shanks in practice, for the application of other shapes—for instance, such as will produce a horseshoe-blank such as represented in Fig. 4, or any other shape required.

The principal advantage of this arrangement over the one heretofore patented to me lies in the substitution of the side hammer F for the stationary projection of the anvil above the face against which the blank was hammered by hammer E, and in the greater width of hammer-face B, by which the upper side of the blank is hammered smooth over both corners, whereas before it was difficult to make a finish along the edge of the blank against the stationary wall; and, besides, by this plan, the shoe is hammered better on the outer edge by the movable hammer than it was against the stationary part of the anvil.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the flat-faced anvil A, side hammers E F, and trip-hammer B C, arranged and operated substantially as specified.
2. The combination of the shifting-bar L with the hammer-helve and tappet-wheel of a trip-hammer, substantially as specified.

WILLIAM HAMILTON.

Witnesses:

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