

A. L. NELSON.

Machines for Pulling Lasts from Boots and Shoes.

No. 153,681.

Patented Aug. 4, 1874.

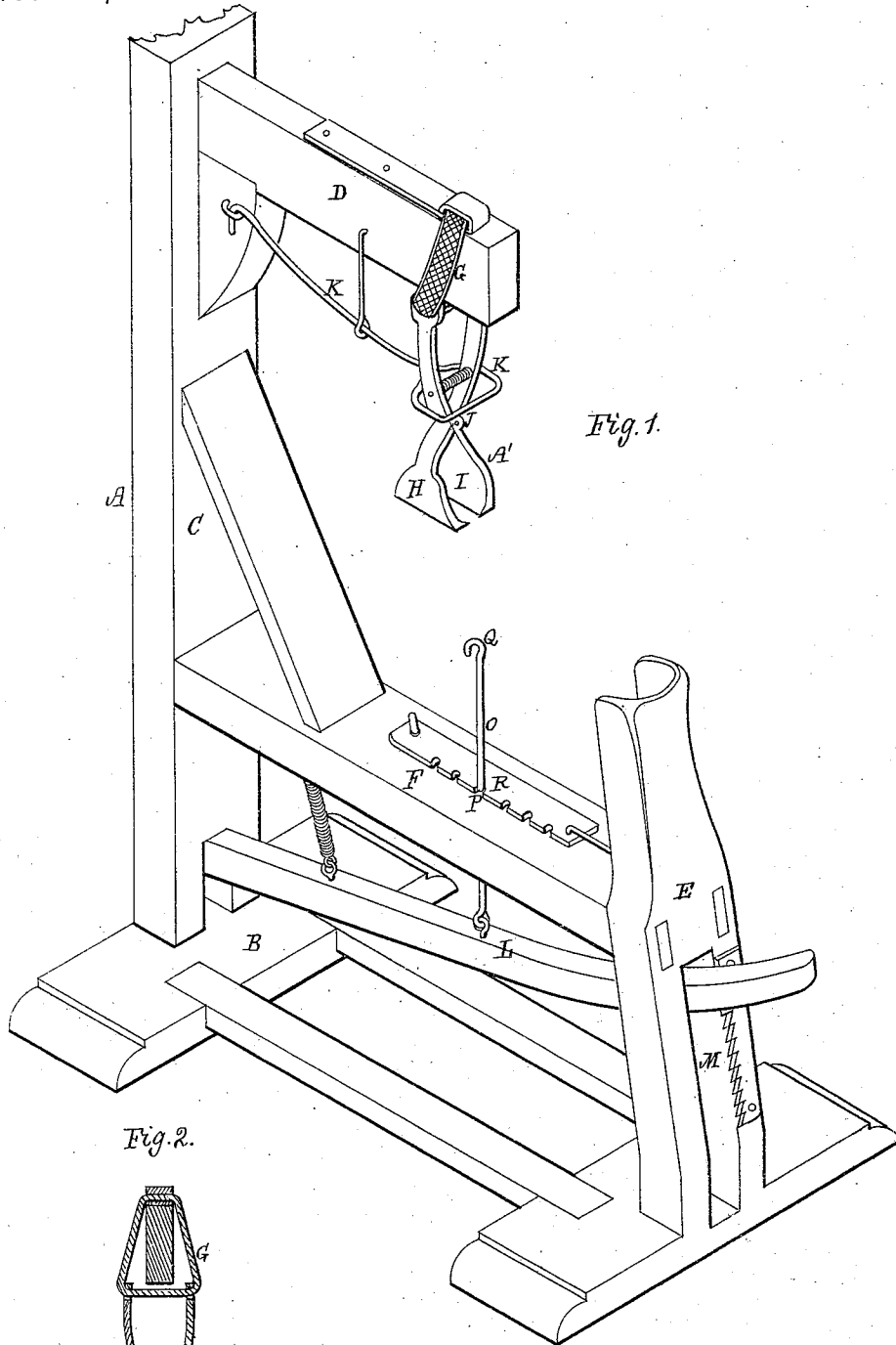
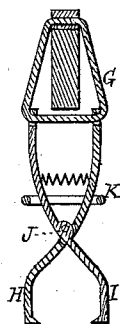


Fig. 1.

Fig. 2.



WITNESSES.

Louis Finger
W. Boardman

A. Lindsey Nelson.
J. Curtis. Atty.

UNITED STATES PATENT OFFICE

A. LINDSEY NELSON, OF HOPKINTON, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR PULLING LASTS FROM BOOTS AND SHOES.

Specification forming part of Letters Patent No. **153,681**, dated August 4, 1874; application filed April 16, 1874.

To all whom it may concern:

Be it known that I, A. LINDSEY NELSON of Hopkinton, Middlesex county, Massachusetts, have invented a Machine for Pulling Lasts from Boots or Shoes, of which the following is a specification:

This invention relates to means for removing lasts from boots or shoes, in the manufacture of the latter on a large scale, whereby such removal may be effected expeditiously and easily, and relieve the workman from the excessive labor which now results from pulling them out of the boot by a hook held in one hand while the boot is held in the other.

My invention, which embodies an organized machine for the above purpose, consists in the employment of a clamp of suitable character for automatically closing upon and suspending the boot, in conjunction with a toe-rest and a hook applied to a proper lever or treadle for removing the last, these elementary features of the machine being supported by or within a suitable frame, and the whole operating substantially as hereinafter explained.

The drawings accompanying this specification represent, in Figure 1, a perspective view of my machine; and in Fig. 2, a section of the clamp employed in it.

In these drawings, A represents a gallows-frame, of which B is the base, C the upright post, and D the cross-beam, additional features of this frame being a frontal post, E, and a horizontal bar, F, uniting the two posts C and D. From the outer end of the beam D, I suspend, from a suitable link or loop, G, a clamp, A', composed of two curved arms or jaws, H I, the loop passing through the upper extremities of these jaws, and a pivot, J, uniting them at their lower part in such manner that a downward pull upon them results in their being forcibly drawn together, and clamping securely any object introduced between them. K represents a looped wire, which passes about the clamp, and extends rearward to, and is attached to, the post D, and serves to steady and support the clamp in its proper position. At the lower part of the machine-frame, and below the bar or brace F, I dispose a treadle or hand-lever, L, which I pivot at its rear end to the bottom of the post D, and extend its outer and free end through a slot, M, created in the post E, a spring, N, being secured at one end to the treadle, and at the other to the post D, and

serving by its stress to elevate the treadle when released from the pressure which lowers it. To about the center of the treadle L, I swivel at its lower end an upright rod, O, which rises upward through a slot, P, in the brace or bar F, and terminates at its upper end in a hook, Q, whose office is to enter the hole in the heel in the last. A notched plate, R, is or may be swiveled to the upper surface of the bar F, and covering the slot P, such plate serving to support the hooked rod in an upright or a sloping position, according to circumstances or the size of the boot from which the last is to be removed. The upper end of the post E is scooped out to receive the toe portion of the boot or shoe, which is laid bottom up upon it, and this post thus becomes the toe-rest of the machine, while the clamp A' seizes the boot at or near its heel, the two serving to maintain such boot in a horizontal position while the hook is pulling the last from out it.

In operating with my machine, a boot or shoe containing a last to be extracted is placed bottom up with its toe portion resting upon the post E, and with the jaws of the clamp A' seizing its rear part, which is effected by each jaw entering the rand-seam of the heel upon opposite sides of the latter. The workman now inserts the hook Q within the hole in the heel of the last, and depresses the treadle L, the result being that the downward pull upon the clamp contracts its jaws, and causes it to seize the heel of the boot, and hold the latter while the workman removes the last by lowering the treadle.

If desirable, a toothed rack may be added to the post E, to confine the treadle in a low position against the power of the spring.

I claim—

1. The combination, in an organized machine for drawing lasts from boots and shoes, of the automatically-closing clamp, the hook, and the treadle or lever, substantially as and for purposes stated.
2. The notched plate R, in combination with the rod O and clamp A', substantially as and for purposes stated.
3. In combination with the clamp A', the loop K, substantially as and for purposes stated.

A. LINDSEY NELSON.

Witnesses:

JNO. B. COX,
CHAS L. CLAFINE.