W. F. Edson

Shoe Heel Machine,

No. 25,326. Patented Sep. 6, 1859.

Fig. 1.

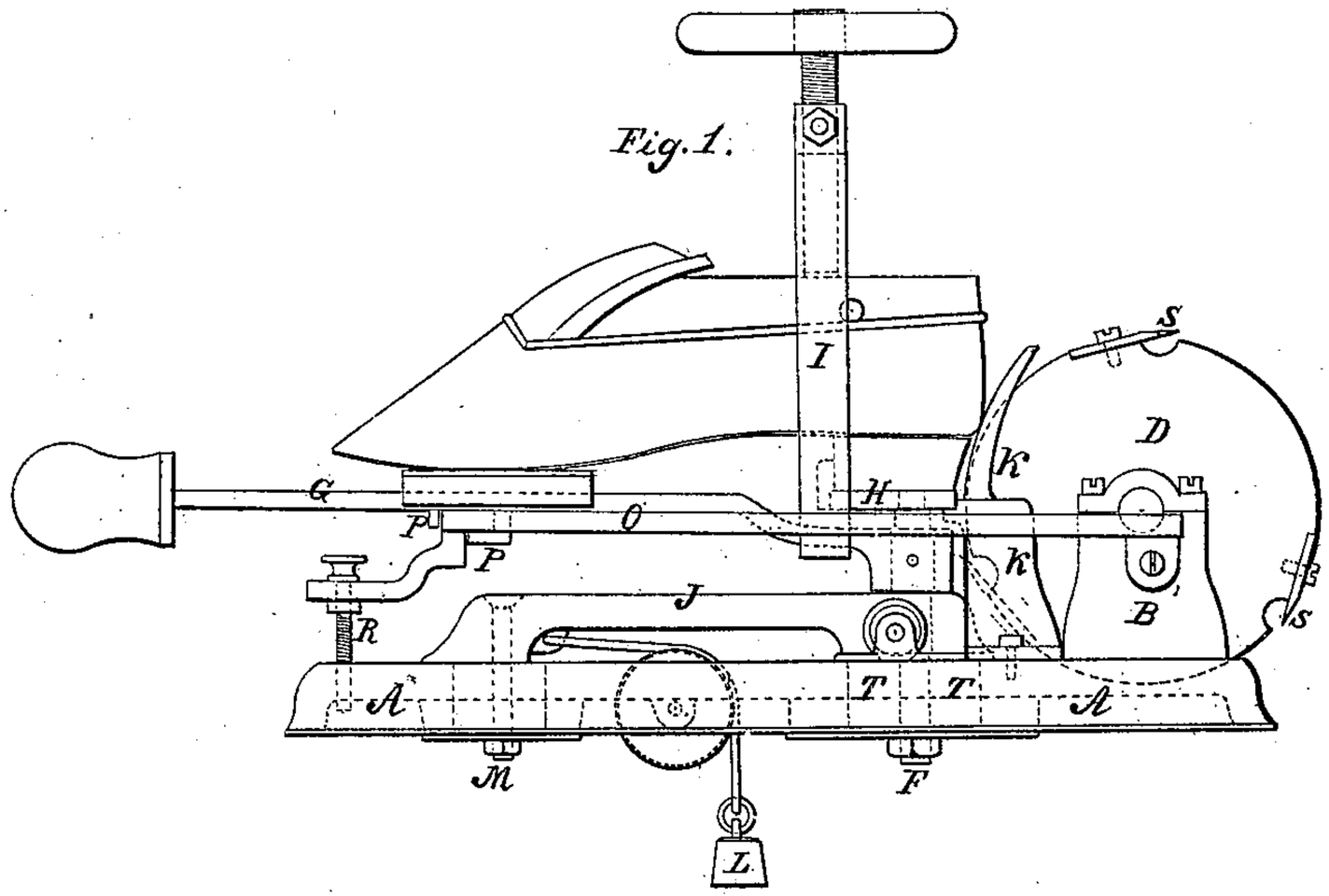


Fig. 2.

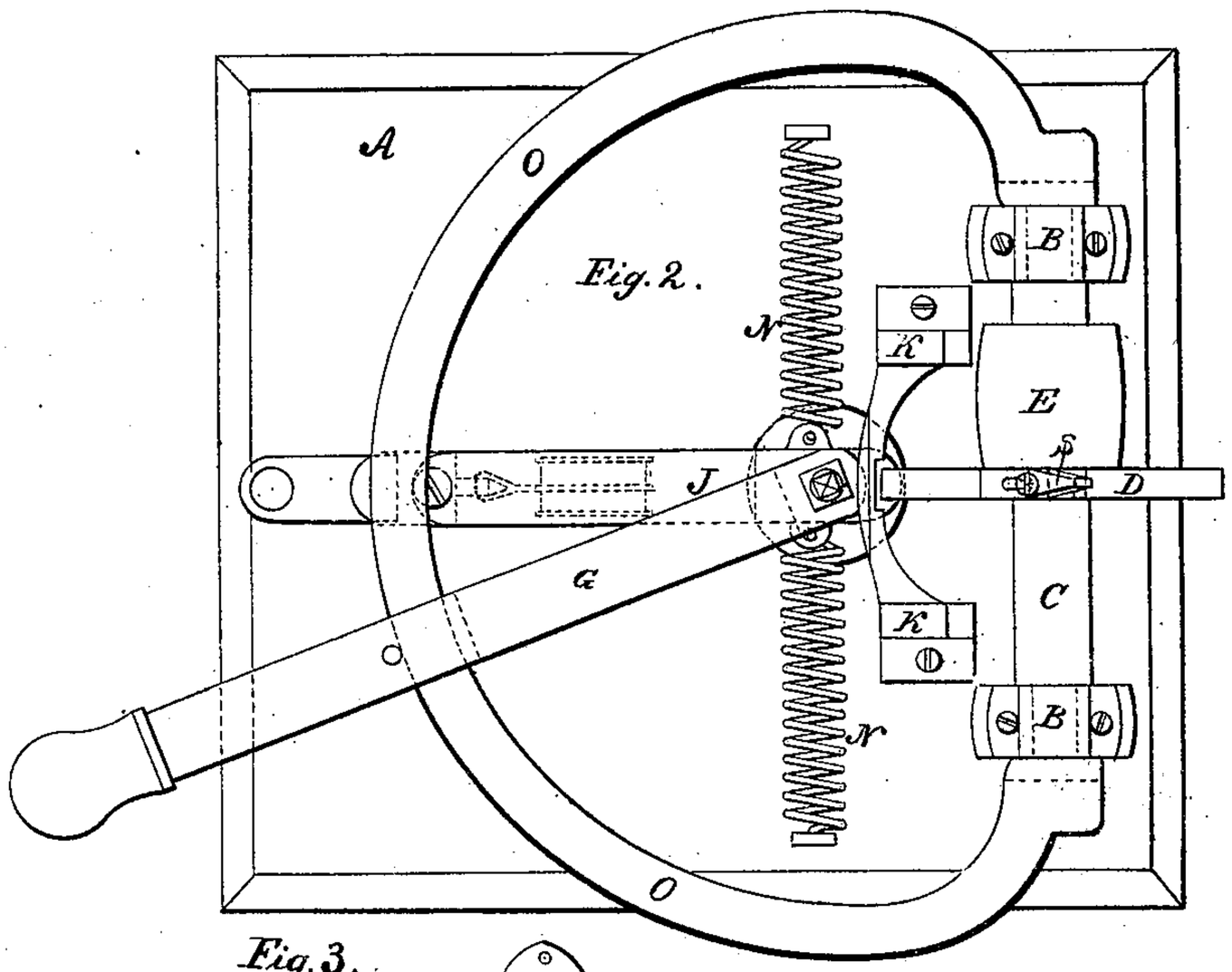


Fig. 3.

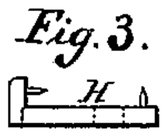
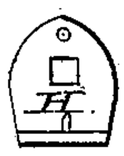


Fig. 4



Witnesses
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Geo T Knott

Inventor
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UNITED STATES PATENT OFFICE.

WILLIAM F. EDSON, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVED MACHINE FOR CUTTING AND FINISHING SHOE-HEELS.

Specification forming part of Letters Patent No. **25,326**, dated September 6, 1859.

To all whom it may concern:

Be it known that I, WILLIAM F. EDSON, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Machine for Cutting and Finishing the Heels of Shoes in Process of Manufacture, either on or off the shoe; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, the letters of reference being the same in each, in which—

Figure 1 is a side elevation of the machine, showing the shoe in position during the process of manufacture. Fig. 2 is a plan of the machine without the shoe and clamp-yoke. Fig. 3 is a side view of the former. Fig. 4 is a plan of the former.

A is the bed-plate.

B B are journal-bearings.

C is a cutter-shaft, D cutter-wheel, and E pulley on same.

F is a movable upright post or shaft working in an aperture T in the bed-plate, of sufficient size to give it the play required in the operation of the machine. The lower end of the post F, on which is cut a screw-thread, passes through a metal plate of sufficient size to entirely cover the aperture in the bed-plate on its lower or under side, and is steadied or secured to it by a nut.

To the post F is attached the hand-lever G. The upper end of the post F is made square, and on it is fitted the former H—a metal plate of the shape of and a little less than the size of the bottom of the heel to be shaped, smoothed, and burnished. To this former the leather cut and prepared for the heel of the shoe is secured by dowel-pins, and the clamp-yoke I, attached to the lever G, holds the shoe or the leather prepared for the heel firmly in place, and the whole revolves in a vertical bearing on the radius-arm J and has no fixed center, but moves in any required direction laterally to conform to the shape of the former H, bearing against the guide K, which also acts as a shield to protect the upper of the shoe from injury by the cutters of the wheel D, and also sometimes as a bearing or guide for the hind part of the upper of the shoe to press against. The hind part of the upper in such case, bearing against the shield, gives the direction or form independent of the former H. The former H is held closely against the guide K (or sometimes when the leather prepared for the heel has been fastened to the upper of the shoe the hind part of the upper is held closely against the shield formed by the upper part of the guide K) by the radius-bar J, which is provided with a weight L or with a spring. The outer end of this bar is held in position by a bolt M, and is allowed to slide in or out as the former H or upper of the shoe requires. The other end is secured by two springs N N, which hold it and the post F, passing through it, in equilibrium, when in the central position and tend to keep it central without rigidly confining it there.

O is a bow-guide, which, in combination with the former H, (or the upper of the shoe,) gives shape to the heel of the shoe by the lever G being fitted with slide-guides P P to the bow O. The angle of the heel can be varied, if desired, by raising or lowering the bow O by means of the adjusting-screw R.

The wheel D is provided with one or more cutters *s s s*, extending a little beyond its periphery.

Having thus described the machine in detail, its operation is as follows: The former H is fixed to the leather prepared for the heel of the shoe and then set on the square end of the post F and secured in its place by the clamp-yoke I. The lever G is then set to the right or left of the bow O. The shaft and cutter-wheel are then set in rapid motion by a running belt on the pulley E, the former H or the upper of the shoe being pressed against the guide K by the radius-bar J, acting on the post F, by means of the weight L or a spring, the cutters *s s s* being so set as to just clear the guide K when in motion. The operation of shaping the heel has commenced, and by moving the lever G around on the bow O the cutters continuing to cut into the leather, the form and angle of the heel are produced, the post F moving as the shape of the former (or upper of the shoe) and bow directs or compels it. If it is desired to increase or diminish the angle or slope of the heel, this is readily effected by raising or lowering the bow O by the adjusting-screw R. In moving the lever G to the right or left of the center of the bow

O the slide-guides P P force the post F in the opposite direction, so as to give the straight or long shape to the heel, and the springs N N, acting central, hold it firm and replace it on return of the lever. The heel being cut in the proper shape, the wheel D is taken off and an emery wheel or stone is put in its place, and by the same movements the smoothing is effected, and then a burnishing-wheel is substituted, by which a fine polish is given and the heel finished.

Having described my machine as constructed, which I find to work well in practice, what I claim as new and of my invention, and desire to secure by Letters Patent, is—

The combination of the movable post F, the former H, or the upper of the shoe, the guide K, and the cutter-wheel D, or an emery or burnishing wheel, with the hand-lever G, bow-guide O, springs N N, and radius-bar J, acting as hereinbefore substantially set forth, for cutting or shaping, smoothing, and burnishing the heels of shoes either before or after they are fastened to the shoes.

In testimony whereof I have hereunto set my hand.

WM. F. EDSON.

Witnesses:

J. COOKE LONGSTREET,

WILLIAMS OGLE.