C. J. ADDY.

Machines for Trimming and Burnishing the Edges of Boots and Shoes.

No. 142,756. Patented September 16, 1873.

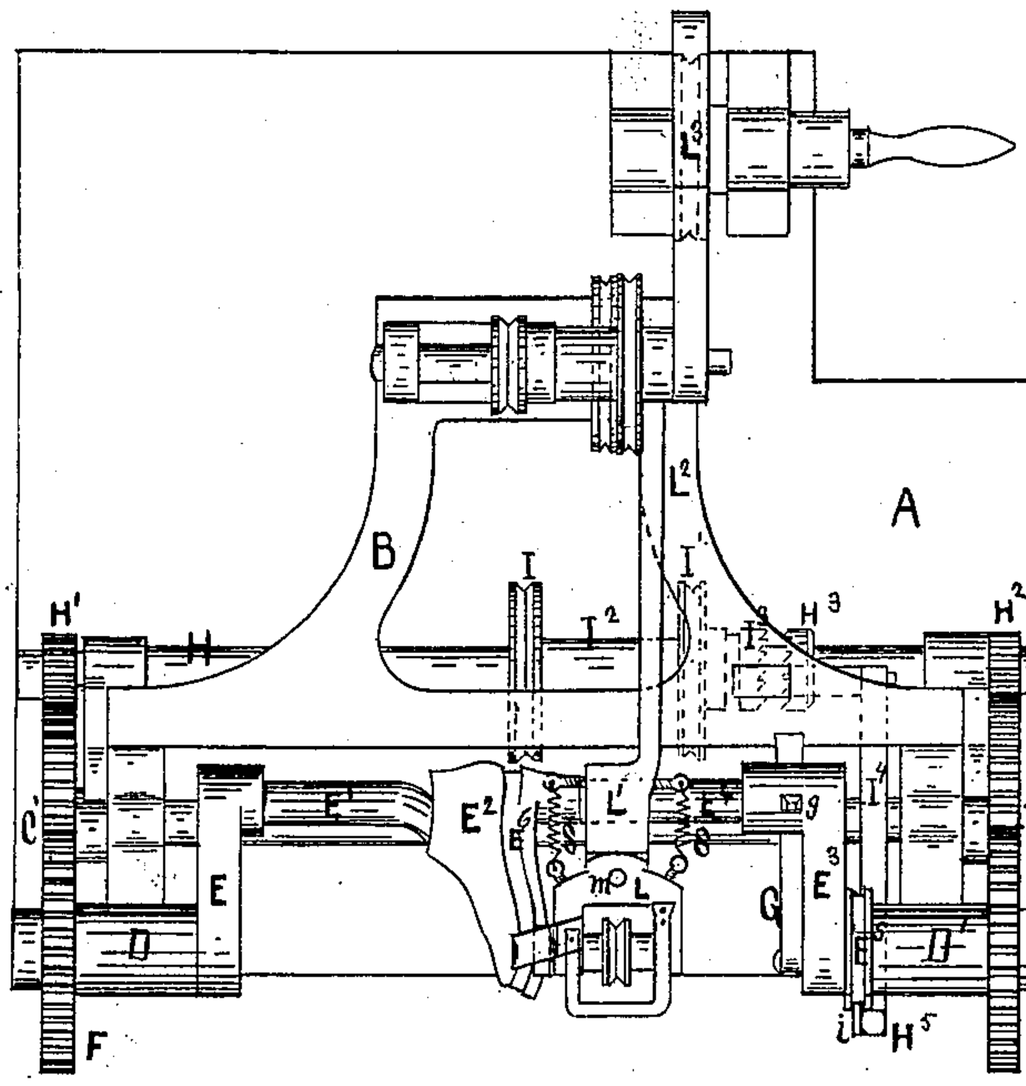

Fig. 1.

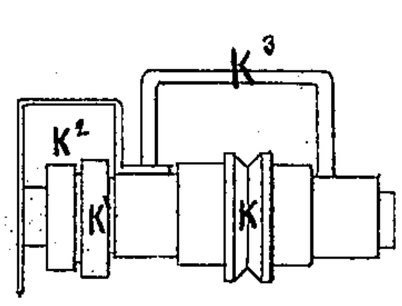

Fig. 3.

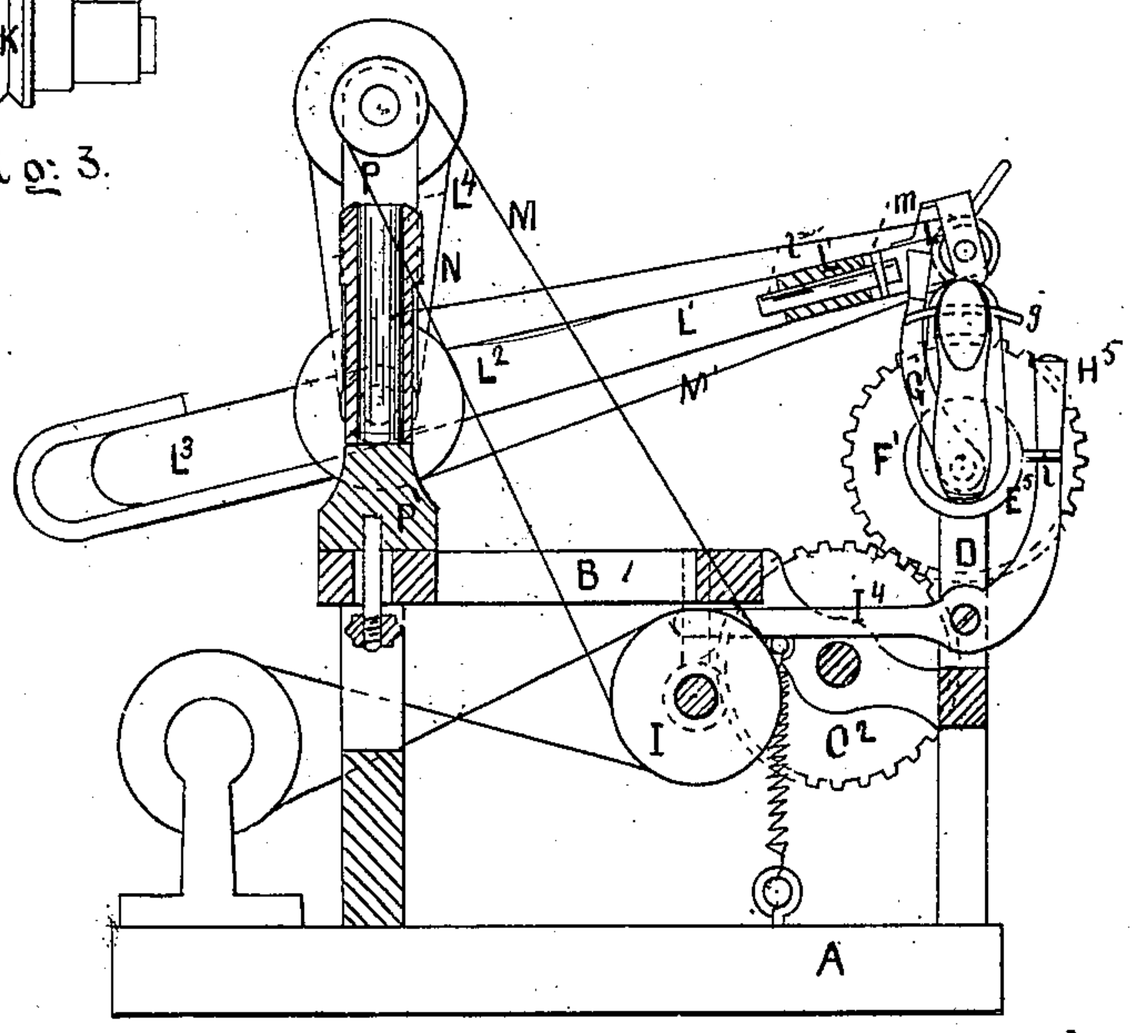

Fig. 2.

WITNESSES

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CHARLES J. ADDY, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR TRIMMING AND BURNISHING THE EDGES OF BOOTS AND SHOES.

Specification forming part of Letters Patent No. **142,756**, dated September 16, 1873; application filed June 28, 1873.

To all whom it may concern:

Be it known that I, CHARLES J. ADDY, of Boston, in the county of Suffolk and State of Massachusetts, have invented a certain new and useful Machine for Trimming and Burnishing the Edges of Boots and Shoes, of which the following is a specification:

The nature of my invention consists, first, in new devices for holding the shoe while being operated upon; second, in new devices by which the cutter or burnisher can be adjusted to the work to be accomplished.

Figure 1 is a plan of my machine. Fig. 2 is a cross vertical section of the same. Fig. 3 is a front elevation, showing the burnishing or cutting arbor.

A B represent the frame of the machine. D and D′ are two standards, through centers of the upper ends of which two arbors pass, said arbors being operated by the gear-wheels F and F′. At the inner end of the arbor, which passes through D, a crank-arm, E, is attached. From the end of this arm E the last-supporter E^1 extends and rigidly holds the last E^2, as shown in Fig. 1. The arbor that passes through D′ has a crank-arm, E^3, and a pattern-supporter, E^4. As the arbors that pass through D and D′ are centered exactly in line with each other, and are both driven by the shaft H, which acts through the gears H^1 H^2, C^1 C^2, F and F′, it will be seen that their movements are precisely the same; hence the pattern attached to the supporter E^4 will move in exact accordance with the shoe attached to the last E^2. The pattern-supporter E^4 slides freely through the arm E^3, and is held in position by the pin or key *g*, which is attached to and swings with the arm G.

To jack a shoe, I remove the pin *g*, which allows the supporter E^4 and pattern E^6 to slide back from the last E^2. Now, the shoe may be placed upon the last and the pattern E^5 brought up against it, where it is held firmly by replacing the pin *g*, the pin *g* being made wedge-shaped, so that it can be pushed in until the desired pressure is exerted against the sole of the shoe. Motion is communicated to the shaft H by the pulley I^1, this pulley being connected, by a sleeve, I^2, to the pulley I and to the ratchet-clutch I^3. H^3 is a fixed clutch on the shaft H. I^4, Figs. 1 and 2, is a lever arranged to operate on the clutch I^3. By pulling the upper end H^5 of the lever I^4 outward, the clutch I^3 is made to engage the clutch H^3, thus causing the shoe and pattern to revolve. This revolution will continue until the shoe gets around into a horizontal position. Then the pin *i* will fall into a notch in the wheel E^5. This will allow the lever I^4 to spring downward and release the clutch I^3, and thus stop the revolution of the shoe. The action of the pin *i* also serves to hold the shoe in position until the presented edge is trimmed or burnished. To restart the shoe, I have simply to draw out the upper part H^5 of the lever H^4. This will engage the clutch, as before, and the shoe will continue to revolve until the other side is presented to the burnisher. Then the pin *i* falls into the notch provided for it and the machine stops.

The trimming and burnishing device is shown more fully in Fig. 3, in which K^3 represents the handle for guiding it; K, the arbor; K^1, the guard, which is intended to run on the pattern E^6. K^2 represents the cutter or burnisher. This arbor K is hung in a frame, L. This frame L is pivoted, by a vertical pin, *m*, to a horizontal pin, *l*, so that the joint between L and L^1 is of the class called universal joint. S and S are springs, which serve to keep the frame L steadily up to the lever L^1. The lever L^1 L^2 has a counterpoise, L^3, to balance the weight of the burnishing-arbor. The lever L^1 L^2 L^3 is hung on the lower end of a link, L^4, which is suspended from the standard P, so that the lever can be drawn backward and forward to suit the work expected of the cutter or burnisher.

Motion is communicated to the arbor K by a system of belts and pulleys, M N M′, &c. The standard P revolves on a vertical axis, P′, Fig. 2.

I claim as my invention—

1. The combination of the clutch I^3 H^3 and

the lever I^4 H^5 with the pin *i* and wheel E^5, substantially as described, and for the purpose set forth.

2. The combination of the last-holding device E E^1 and the pattern-holding device E^4 E^3 with the gears H^1 C^1 F and H^2 C^2 F^1, arranged to operate as described, and for the purpose set forth.

3. The combination of the pattern E^6 and supporter E^4 with the crank-arm E^3 and wedge-shaped key *g*, substantially as described, and for the purpose set forth.

4. The combination of the frame L, springs S S, and balanced lever L^1 L^3 with the revolving standard P, substantially as described, and for the purpose set forth.

CHARLES J. ADDY.

Witnesses:
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