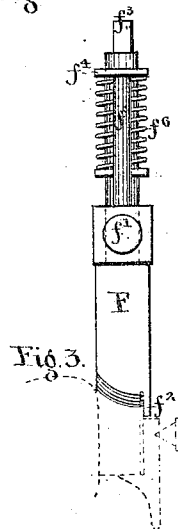
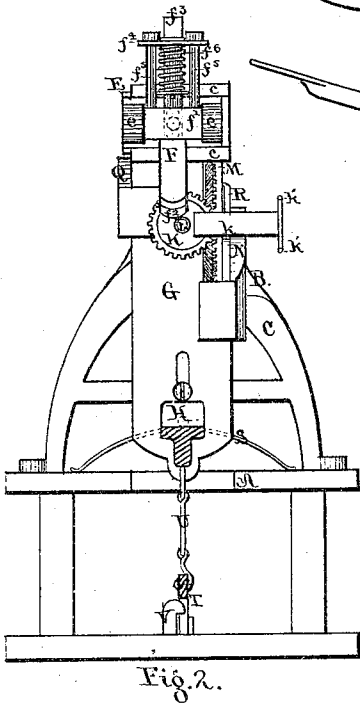
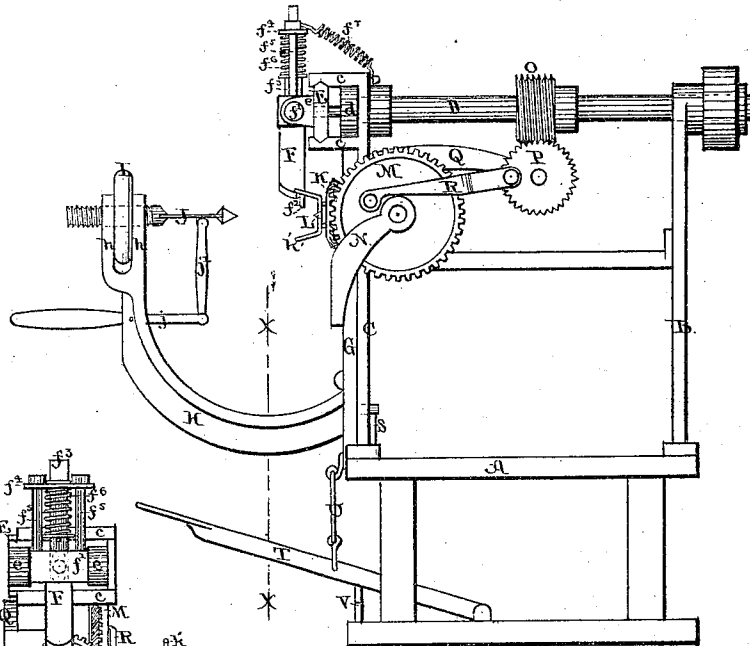


I. VAN NOUHUYS.

Machinery for Burnishing the Heels of Boots and Shoes.

No. 141,678.

Patented August 12, 1873.



Witnesses

A. F. Low

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UNITED STATES PATENT OFFICE.

ISAAC VAN NOUHUYS, OF ALBANY, NEW YORK.

IMPROVEMENT IN MACHINERY FOR BURNISHING THE HEELS OF BOOTS AND SHOES.

Specification forming part of Letters Patent No. 141,678, dated August 12, 1873; application filed January 28, 1873.

To all whom it may concern:

Be it known that I, ISAAC VAN NOUHUYS, of the city and county of Albany and State of New York, have invented certain Improvements in Heel-Burnishing Machines, of which the following is a full and exact description, reference being had to the accompanying drawings making a part of this specification, in which—

Figure 1 is a front elevation, Fig. 2 a vertical section at the line X X, and Fig. 3 an enlarged and detached view, of the burnisher.

The nature of my invention consists in the combination and arrangement of the devices herein shown and described, for the purpose of giving motion to and controlling the action of the burnisher, and in imparting automatically sufficient revolving or vibratory motion to the shoe to pass the entire circular portion of the heel under the action of the burnisher.

My improved machine, as shown in the drawings, consists of the following parts: A is the table or bed for sustaining the machine. B is a frame erected at one end of the table, in which the driving-shaft has one of its bearings. C is a frame erected upon the other end of the table, and furnishing a bearing for the crank-end of the driving-shaft. It is provided with the guides *c c* for receiving the sliding block. D is the driving-shaft, to which a rapid motion is imparted by pulleys or any equivalent means. It has a crank, *d*, secured to one end of it, the pin of which, working in a vertical slot in the sliding block, gives it a reciprocating motion. E is the sliding block, working in the guides *c c*. F is the burnisher, the lower end of which is made to conform to the vertical curve of the heel. It swings upon the rocker *f*¹ in the lugs *e e* of the sliding block, and has a lip, *f*², extending down partially over the top lift of the heel, for the purpose of guiding the burnisher upon the heel. It is also made with a suitable groove or crease for forming a bead upon the edge of the top lift, thereby effecting the burnishing of the heel and beading the top lift at one operation. It is guided vertically by means of its stem *f*³, which passes through the rocker *f*¹, and is kept from twisting by means of the cross-head *f*⁴ and rods *f*⁵. Sufficient pressure to properly effect the burnishing is imparted by the spring

*f*⁶, and its lip is held in contact with the top lift by means of the spring *f*⁷. The sliding plate G is placed upon the face of the frame C, and arranged so as to admit of a vertical motion to facilitate the adjustment of the shoe in the machine and its removal therefrom. At its lower end a curved arm, H, is attached, terminating at its upper end in the jaws *h h*, between which the hand-wheel I is placed. This wheel has a thread cut in its center for working upon the screw of the centering-spring J. A lever, *j*, is connected, by the rod *j'*, to the centering-spring, for the purpose of rocking the shoe so as to adjust the heel in position to have the burnisher touch upon its entire surface. K is a bevel-pinion, which has its bearing upon a centering-stud, L, attached to the sliding plate G. Projecting from one side of the pinion is an arm, *k*, terminating in the prongs *k' k'*, for receiving the sole of the shoe. M is a bevel-wheel, gearing into the pinion K. Its bearing is formed in the upper end of the bracket N attached to the sliding plate G. O is a worm secured to the driving-shaft D. It meshes into gear with the worm-wheel P, which has its bearing in the bracket Q secured to the sliding plate G. R is a pitman-rod for connecting together the bevel-wheel M and worm-wheel P, by means of which motion is transmitted from the latter to the former, the rotary motion of the worm-wheel being converted into an oscillating motion at the bevel-wheel by placing their respective wrist-pins at different distances from their centers. S is a spring for holding the sliding plate G up to its required position during the operation of burnishing. T is a lever placed beneath the bed of the machine for the purpose of drawing down the sliding plate G, to which it is attached by means of the links U. The hook V catches over the lever T, and retains the sliding plate G in its depressed position.

The operation of the machine is as follows: A quick reciprocating motion, which closely assimilates the motion of hand-burnishing, is imparted to the burnisher F, the equality of its pressure being maintained and governed by means of the springs *f*⁶ and *f*⁷. The shoe, retained upon its last, and having an ordinary centering-plate attached to its heel by means

of points, is placed in position upon the points of the centering-stud L and centering-spring J. To accomplish this the sliding plate G must be depressed by means of the lever T, and secured by pressing the lever beneath the hook V. While in this position, the worm O and worm-wheel P are disconnected, and consequently the various parts used for giving motion to the shoe are at rest. After securing the shoe in its proper position the sliding plate G is released and forced upward, by means of the spring S, to its place, thereby throwing the worm O and worm-wheel P into gear, whereby motion is given to the shoe, which brings every part of the circular surface of the heel under the operation of the burnisher, and completes its finish in a very perfect manner.

What I claim as my invention is—

1. The combination of the worm O and worm-wheel P with the bevel-wheel M and pinion K, having an arm, *k*, when used for giving motion to the shoe during the operation of burnishing the heel, as and for the purpose herein set forth.

2. The combination of the sliding block E and burnisher F, having a lip, f^2 , with the rocker f^1 and springs f^6 and f^7 , when arranged to operate as herein specified.

3. The combination of the automatic reciprocating burnisher F, having a lip, f^2 , with the rocker f^1 and spring f^7 , when arranged to operate as herein described.

4. The combination of the sliding block E with the burnisher F and rocker f^1 , as herein described, and for the purpose set forth.

5. The combination of the sliding plate G and worm-wheel P with the worm O, when arranged as herein described, for the purpose of connecting and disconnecting the shaft for actuating the burnisher, and the mechanism for giving motion to the shoe.

ISAAC VAN NOUHUYS.

Witnesses:

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