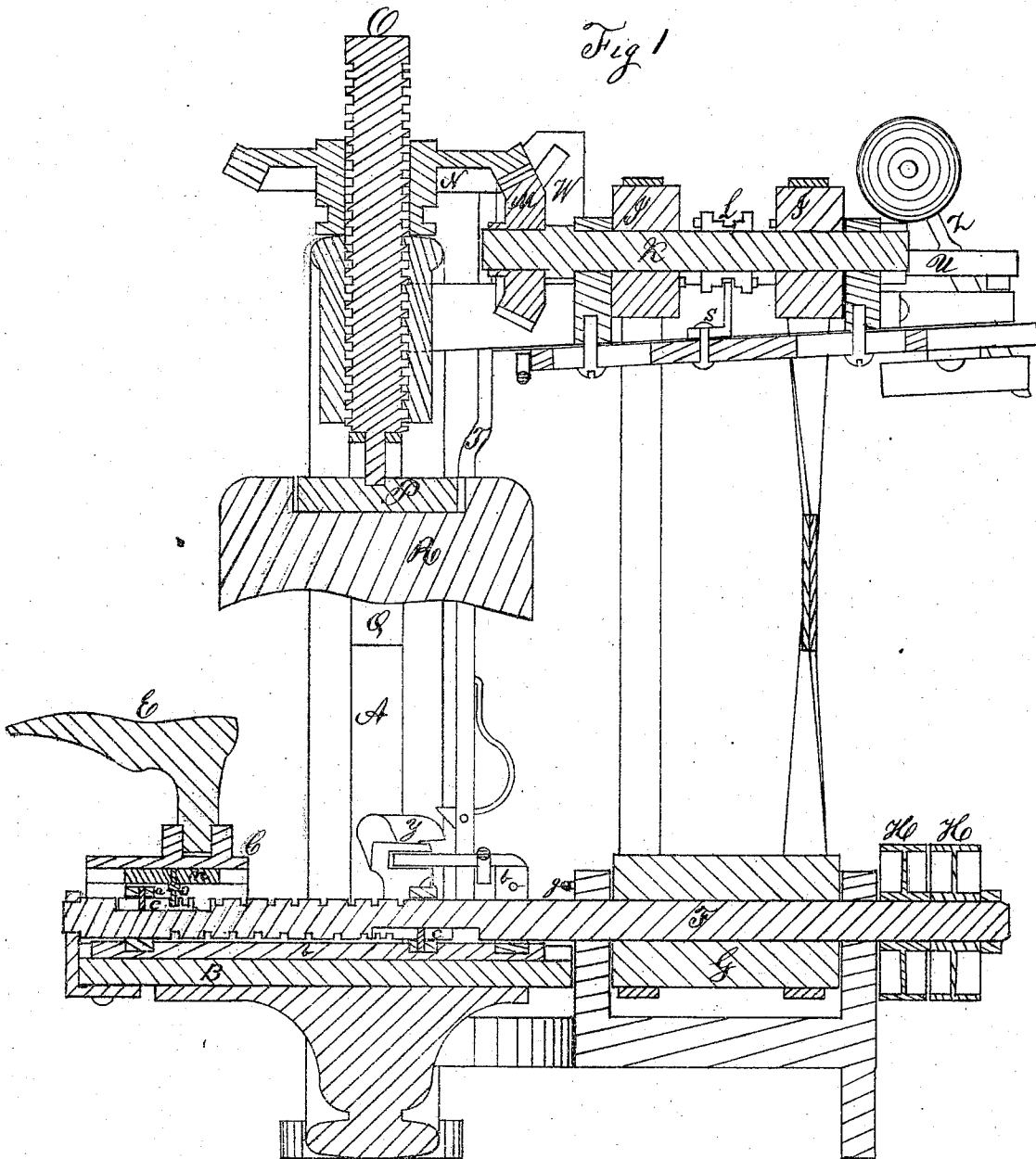


ELIAS BLANEY.

Improvement in Machines for Shaping the Soles of Boots and Shoes.

No. 118,185.

Patented Aug. 22, 1871.



Witnesses
Wm. A. Perkins
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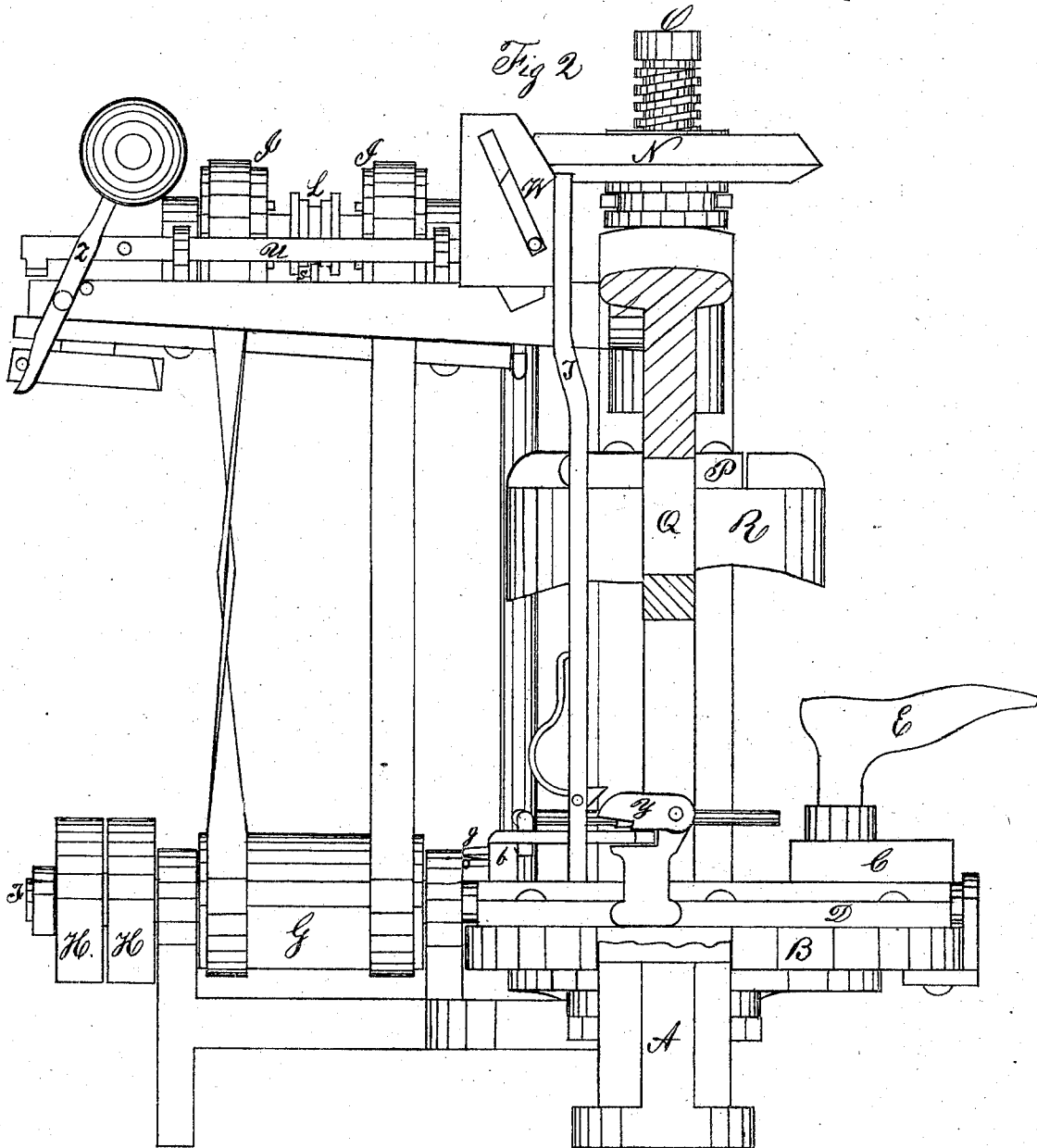
Inventor
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UNITED STATES PATENT OFFICE.

ELIAS BLANEY, OF MARBLEHEAD, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR SHAPING THE SOLES OF SHOES.

Specification forming part of Letters Patent No. 118,185, dated August 22, 1871.

To all whom it may concern:

Be it known that I, ELIAS BLANEY, of Marblehead, in the county of Essex and State of Massachusetts, have invented certain Improvements in Machines for Shaping the Soles of Shoes, of which the following is a specification:

My invention has for its object the shaping of shoe-soles after they are pegged or sewed; and is designed to supersede the necessity of shaping by the hammer. It belongs to that class of machines in which a die or former is depressed by a screw upon the sole, which is placed upon an iron last arranged beneath the former, sufficient pressure being given to form the sole into proper shape; and my invention consists in an arrangement of devices by which the last carrying the shoe is reciprocated alternately under the former to be pressed, and out toward the front of the machine for changing the shoes, and combining with this movement an automatic method of raising and depressing the screw, the two movements corresponding with each other, so that the machine may be operated by power rotating continuously in one direction.

The drawing represents, in Figure 1, a sectional elevation of my machine. Fig. 2 is a sectional elevation showing the shipping apparatus.

Similar letters of reference indicate like parts in all the figures.

The frame of the machine A is substantially made of cast-iron. B is the platen or bed, upon which the sliding socket C traverses between the guides D. The last E is fitted into the socket C. The sliding socket C is reciprocated by means of the screw-shaft F, having a right-and-left-hand screw-thread cut on the same portion of the shaft. At each end of the termination of the screw-threads on the shaft F two movable collars, *aa*, are placed, to which is attached a sliding piece, *c*, having guide-slots in one end so arranged that the traversing fork *o* will be guided in a straight groove around the shaft when the sliding socket is required to be stationary, and guiding the fork into the right-and-left-hand threads to move the socket out or in. The collars *aa* fit in a groove in the sliding guide *b*. By moving this sliding guide the collars, with their pieces *c*, are moved to their proper position to form the straight groove around the shaft or turn the fork into the threads of the screw. The sliding guide *b* is moved by the operator to start the machine, and automatically by a spring, *g*, after the shoe is pressed. The travers-

ing fork *o* is fitted into a movable piece, *n*, which is held by a set-screw, allowing the sliding socket to be moved out or in, so that different-sized shoes may fit under the former. On the shaft F is placed the drum G and driving-pulleys H H. Motion is communicated by belts from the drum G to the clutch-pulleys I I on the shaft K. One of the clutch-pulleys is driven by an open belt and the other by a cross-belt. A clutch, L, is fitted on the shaft K, and as it is connected with either of the pulleys I I the shaft K is revolved in opposite directions. A bevel-gear, M, is placed on the shaft K and drives a bevel-gear, N, which is placed on the screw O, which it turns by means of a sliding key in a spline in the screw O, the gear being held in place by a clasp fitted into a groove in the hub. At the lower end of the screw O the follower P is fastened, which is moved up or down by the screw O, and guided by the ways Q. A former, R, is placed on the follower P and is depressed upon the shoe with sufficient power to shape the sole by means of the screw O. The surface of the former may be nickel-plated to prevent the oxidation of the iron and soiling the leather. The clutch L is made to connect either pulley I I by means of a sliding fork, S, which is operated by the attendant by a lever, to engage with the pulley driven by the cross-belt. This gives a rotary motion to the shaft and bevel-gears, which turn the screw to depress the follower and former. The arm T is fastened to the follower, and as it is depressed a slide, U, is forced outward by means of a pin working in the inclined slot W and striking against a weighted lever, Z, moving it just beyond its center of gravity, so that it falls over, and its lower end, striking on a pin in the slide *u*, throws the clutch into the pulley driven by the straight belt just as the requisite pressure is given to the sole, thereby reversing the screw and raising the follower. The arm T extends from the follower through the platen, by which it is guided, and carries a movable catch, which, as it rises, trips the latch-catch Y, which holds the sliding guide in place, throwing the fork *o* into the screw-thread and moving the shoe out to the front of the machine.

As the screw O raises the arm T the inclined slot W moves back the slide U, a pin on this slide strikes the weighted lever Z, carrying it just beyond its center of gravity, so that it falls over, and its lower end striking on a pin in the slide U moves

the clutch midway between the pulleys II, stopping the rotation of the shaft K while another shoe is being placed on the last. The hand-lever is then moved by the operator, which throws the clutch L into the pulley driven by the cross-belt at the same time it moves the slide U to throw the fork *o* into the screw on the screw-shaft F.

The screw on the screw-shaft F may be dispensed with, and the sliding socket moved by hand.

I claim as my invention—

1. In a machine for shaping the soles of shoes, the devices shown and set forth, by which the last is reciprocated alternately under the former

and out toward the front of the machine, substantially in the manner and for the purpose described.

2. The combination of the screw-shaft F with the clutch L and pulleys II, operating in the manner substantially as and for the purpose specified.

3. In a machine for shaping the soles of shoes, the sliding piece *c*, for the purpose of guiding the traversing fork *o*, substantially as set forth.

4. The sliding socket C, made adjustable by means of the movable piece *n*, for the purpose set forth.

Witnesses:

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