# O. Gilmore

## Sole Machine.

No. 44,946. Patented Nov. 8, 1864.

Fig: 2.

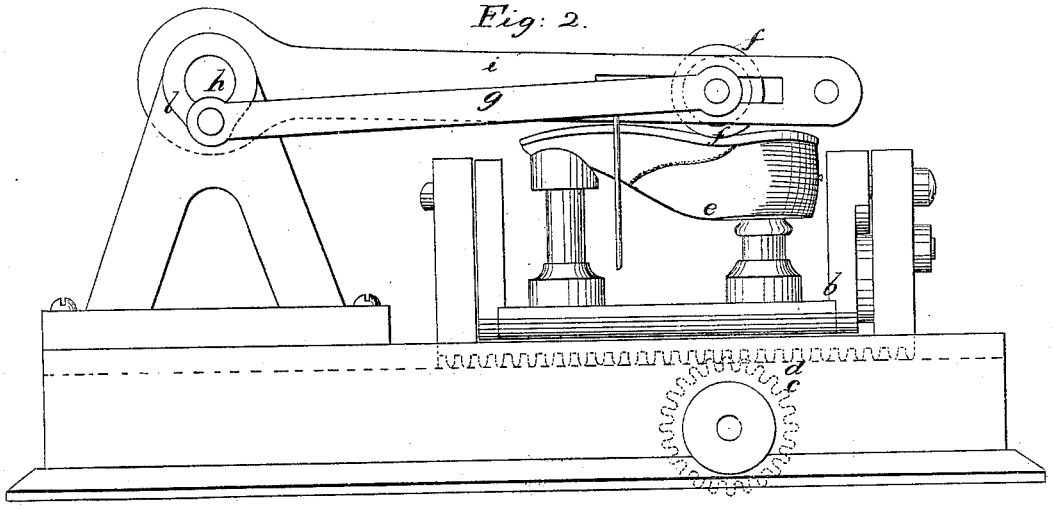



Fig: 1.

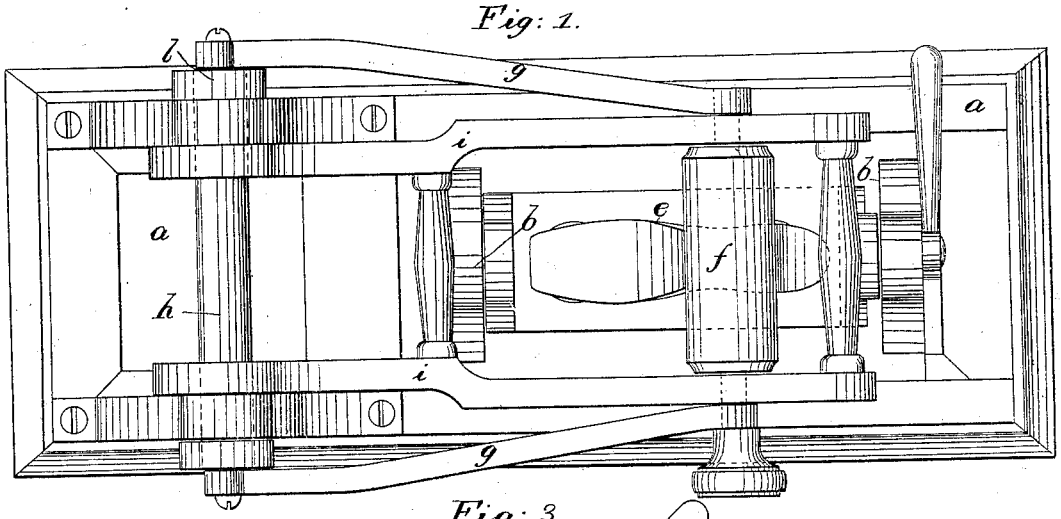
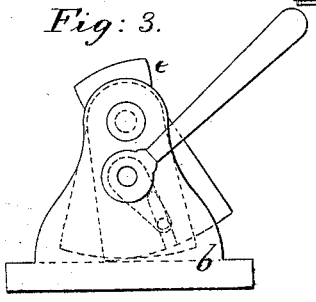



Fig: 3.

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# UNITED STATES PATENT OFFICE.

OTHNIEL GILMORE, OF RAYNHAM, MASSACHUSETTS.

## POLISHING THE SOLES OF BOOTS AND SHOES.

Specification forming part of Letters Patent No. **44,946**, dated November 8, 1864.

*To all whom it may concern:*

Be it known that I, OTHNIEL GILMORE, of Raynham, in the county of Bristol and State of Massachusetts, have invented an Improved Machine for Polishing and Finishing the Soles of Boots and Shoes; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

On the 21st of April, 1863, Letters Patent of the United States, numbered 38,257, were granted on the invention of B. Q. Budding, on a machine for polishing and solidifying the soles of boots and shoes. In such machine there was employed a jack for holding the boot or shoe stationary to the action of a polishing or rolling rubber or tool, which roll had a reciprocating motion imparted to it over the sole, while it was capable of being rocked laterally over the surface of the sole, and of being brought with more or less force against said surface by the operator. Each longitudinal movement of the roll in such machine was over the entire length of surface to be polished.

My invention may be considered as an improvement upon such machine; and it consists in combining with a reciprocating roll a rocking-jack, and in giving to the roll an extent of movement over a part only of the surface at each reciprocation in connection with a capability of longitudinal movement in the jack.

The drawings show a machine embodying my invention; Figure 1 representing a top view, and Fig. 2 a side elevation thereof. Fig. 3 is an end view of the jack frame and jack.

*a* denotes the bed of the machine; *b*, a jack-carriage sliding thereon, longitudinal movement being imparted to the carriage by a gear, *c*, working in a rack, *d*, on the bottom surface of the carriage. In this carriage a jack, *e*, is hung, the jack being so suspended in the frame as to be capable of freely rocking therein, so that the boot or shoe can be turned laterally to the action of the polishing-tool F. This tool or roll is hung upon a shaft which is connected at its opposite ends by connecting-rods *g* to crank *l* on a rotary shaft, *h*. A rocking frame, *i*, is hung upon this shaft, and the shaft of the roll works through slots made in the opposite arms thereof, as seen in Fig. 1. The frame is connected by rods, cords, or other suitable mechanism with a treadle or foot-piece, by means of which the pressure of the roll upon the surface being polished is produced and regulated at pleasure, as will be readily understood. The throw of the crank is short as compared with the length of the sole, so that the movement of the polisher is only over a portion of the sole.

In the Budding machine referred to, where the polishing-tool has a movement over the whole length of surface to be polished, much difficulty is experienced in operating because of the varying degree of pressure required upon different portions of the surface to be polished. As, for instance, in polishing or leveling along the sole and in the shank much greater pressure is required in the shank than upon the sole, so that the operator has to use great exertion in changing the degree of pressure at each stroke of the roll, while he also has to vary the degree of lateral or rocking movement given to the polisher during each forward and back movement, the shank, from its greater curvature, requiring, of course, much greater lateral movement of the polishing-tool, the whole operation being rendered very laborious, especially with some particular classes of work. By my construction I remedy these difficulties by giving the short throw to the polisher and so arranging the jack that it can be fed forward or back to bring the different parts to be polished successively under the polishing-tool, and by so arranging the jack that the shoe can be freely turned laterally to the extent required by the parts of the shoe successively brought under the polisher. The jack is rocked by a handle, *k*, and crank-lever *l*, or in any other convenient manner.

I claim—

1. Combining with the polishing or leveling roll or tool a rocking jack, for turning the shoe under the action of the roll, substantially as set forth.

2. So arranging the jack-carriage and the mechanism which impels the polisher that the polisher has a reciprocating movement but partially over the surface to be polished, while the carriage is fed through this plane of movement substantially as described, to bring the entire length of surface to the action of the polisher.

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Witnesses:
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