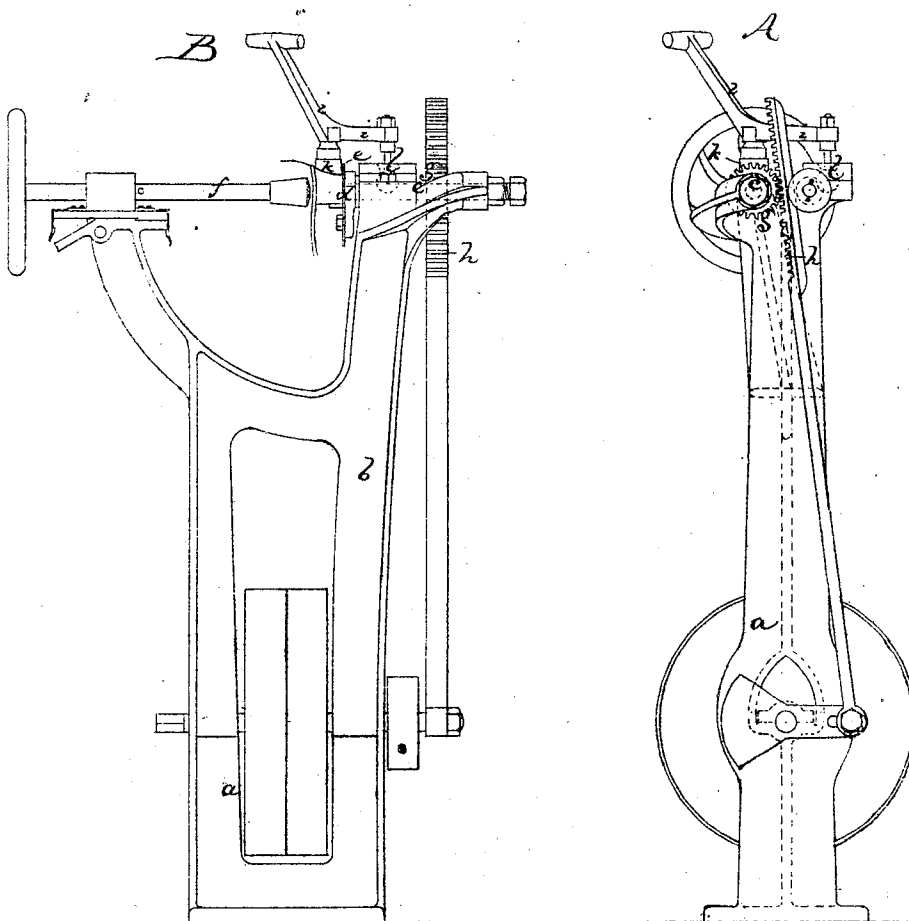


R C. LAMBERT.

Improvement in Heel Burnishing Machines.

117,955.

Patented August 8, 1871.



R. C. Lambert
by his Attys.
Crosby & Gould

Witnesses
J. B. Kilders
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UNITED STATES PATENT OFFICE.

RICHARD C. LAMBERT, OF QUINCY, MASSACHUSETTS.

IMPROVEMENT IN HEEL-BURNISHING MACHINES.

Specification forming part of Letters Patent No. 117,955, dated August 8, 1871.

To all whom it may concern:

Be it known that I, RICHARD C. LAMBERT, of Quincy, in the county of Norfolk and State of Massachusetts, have invented an Improved Heel-Burnishing Machine; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description of my invention, sufficient to enable those skilled in the art to practice it.

My invention relates to an improved organization of machines for burnishing the heels of boots and shoes. In my machine I employ, in combination with a boot-holding or jacking mechanism having a positive reciprocating semi-rotative or vibratory movement, a polishing or burnishing-tool, which is pressed down against the vibrating heel-edge, and which is so hung as to be capable of a free movement to bring all parts of the heel-edge to its action. My invention consists in a heel-burnishing machine in which the boot or shoe, being jacked to a frame that has a semi-rotative movement, has its heel subjected to the action of a burnishing-tool which is attached to a lever, pivoted by a universal joint, so that the burnishing-tool can be tipped in any direction to bring all parts of the heel-edge equally to the action of the burnisher, and, in the combination with such an arrangement, of a heel-plate against which the heel-tread or face is clamped, such plate projecting beyond the tread and the burnishing-tool being so formed as to polish and condense the heel-edge up to and against the plate.

The drawing represents a machine embodying the improvement. A shows the machine in rear elevation. B is a plan of it. C is an end elevation. D is a front view of the boot-holding frame and burnisher-lever.

a denotes the main frame, through the standard *b* of which extends a shaft, *c*. On the front end of this shaft is the jack-frame *d*, to which the boot or shoe is fastened, the heel-tread being clamped against a plate, *e*, and the inner surface of the boot or shoe at the heel being held by a screw, *f*. On the opposite end of this shaft *c* is a gear, *g*, and to this gear a reciprocating rotative movement is imparted by a reciprocating gear-bar or rack-bar, *h*, driven by any suitable mechanism. Over the jack-frame *d* extends a

lever, *i*, to which is fastened the burnisher or burnishing-tool *k*, this tool being made with a polishing-face corresponding to the edge of the heel, or of such form that, as the heel passes under it, it can be brought into contact with every part of the edge-surface of the heel. The tread of the heel is clamped against the vertical plate *e*, and the inner corner of the burnisher can reach into the angle of the heel and plate, thereby polishing and solidifying the leather to the extreme face of the heel-tread, and preventing the formation of any bur at the corner or angle of the edge and tread-face.

The pressure of the burnishing-tool is produced by hand manipulation of the lever *i*; and to enable the tool to be tipped so as to conform to or reach the whole surface to be polished and condensed I pivot the lever on a compound universal joint, the operator being thereby enabled to apply whatever pressure may be necessary on different parts of a heel-edge, according to the varying quality of the stock and the varying condition of the surfaces as left by the heel-trimming mechanism. The reciprocating movement of the jack is sufficient to bring the whole length of heel-edge under and into contact with the burnisher; and, to vary the extent of such reciprocation for different sizes of heels, the throw of the gear-bar *h* may be variably adjusted.

I do not claim in this application the reciprocating jack for holding the boot and shoe and presenting the heel to the action of a burnishing-tool, as that is claimed by me in a pending application filed May 27, 1871.

I claim—

1. In combination with a reciprocating boot or shoe-holding jack, a burnishing-tool attached to a hand-operated lever pivoted by a universal joint, substantially as described.

2. The heel-plate *e* against which the heel-tread or face is clamped, such plate projecting beyond the tread and the burnishing-tool being made at its inner corner to fit into the angle formed between the heel and plate to polish and condense the heel-edge up to and against the plate, substantially as described.

RICHARD C. LAMBERT.

Witnesses:

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