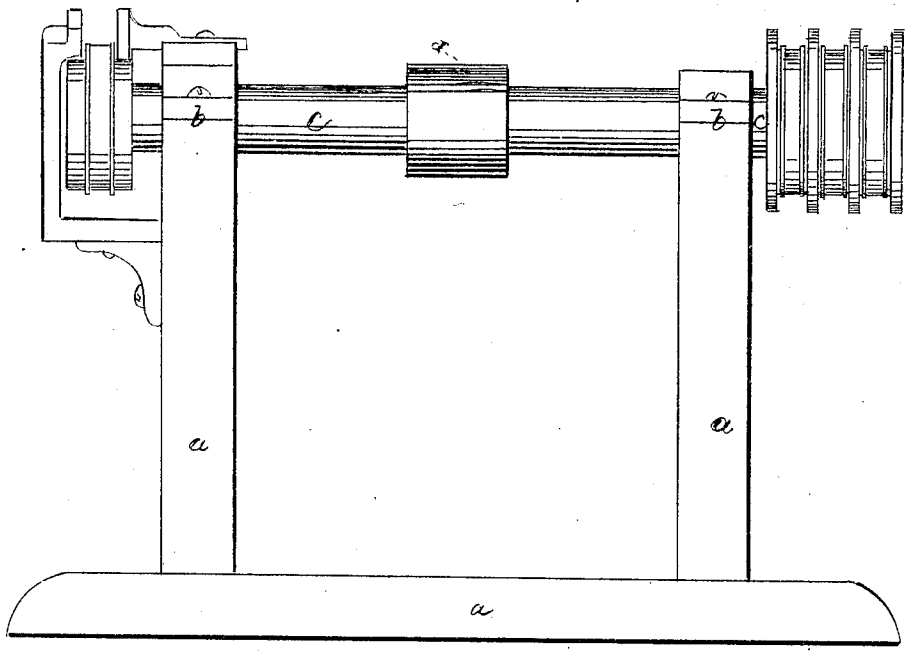
73638

Charles W. Palmer.

Imp'd Sole Edge Finishing Machine

PATENTED

JAN 21 1868



Witnesses: C. Warren Brown. L. H. Latimer.

Chas. W. Palmer By his Attys. Cross, Holcomb & Wheeler

United States Patent Office.

CHARLES W. PALMER, OF LYNN, MASSACHUSETTS.

Letters Patent No. 73,638, *dated January* 21, 1868.

IMPROVED MACHINE FOR FINISHING THE EDGE OF BOOT AND SHOE-SOLES

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, CHARLES W. PALMER, of Lynn, in the county of Essex, and State of Massachusetts, have invented an Improved Power-Machine for Finishing the Edges 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 practise it.

For certain classes of boots and shoes the soles are cut to form, or size and shape, by whole dies, or otherwise, so that they do not have to be trimmed or cut on the edges by hand-knives by the workmen.

For finishing the edges of such soles, hand-tools have heretofore been employed to give grooved edges of any desirable conformation, and the polished surface required. The use of such tools requires a great amount of muscular labor, consuming much time, and the object of my invention is to lessen the labor and time required, besides effecting the finishing of sole-edges in a superior manner.

In finishing sole-edges as described, by hand, it has been generally the practice to apply the hand-tools to the soles after they are secured in place on boots or shoes, though, more rarely, the finishing of the edges has been done upon the soles before they have been fastened to the uppers.

In making use of my machine, the edges of the soles are invariably finished by it before the soles are applied to the boots or shoes of which they are to form a part.

The drawing represents an elevation of a machine embodying my invention.

a denotes a frame, having bearings at *b*, in which a shaft, *c*, is made to rotate rapidly, by means of a belt applied to the pulley *d*, fixed on the shaft between the bearings. On the end of the shaft is affixed a cylinder, preferably of metal, into which are turned grooves of a width corresponding with the thickness of the sole-edges to be finished, the edges of the grooves, or the flanges on the cylinder, forming guides or gauges, which prevent any sidewise movement of the soles submitted to the action of the machine. On the bottom surfaces of these grooves may be left small ridges, which are such in number and shape as to produce in the sole-edges the grooved formation required for ornament. The sides of the grooves or the flanges are preferably made a little flaring, so that the sole will enter the groove easily. A number of these grooved cylinders may be made to shift off and on the shaft, so that a large variety of patterns or groovings may be impressed on the edges of soles of various thicknesses.

The finishing-operation is improved by heating the cylinder, which may be done by a flame applied beneath, the workman applying the soles to the upper part of the cylinder, rarely using that part which is below a horizontal plane passing through its centre. The cylinder may be made hollow, and steam may be introduced for the purpose of heating it.

The workman holds a sole in his hands, and introduces it into the groove, which is of a width corresponding to the thickness of the sole, and then, pressing the sole upon the rapidly-revolving cylinder, moves the sole so that all portions of its edge receive the frictional contact of the bottom surface of the groove, by which the edge is smoothed, polished, and grooved, if grooving is required, and if the beads or fillets are made on the bottom surface of the groove.

On the other end of the shaft is shown a modification of my invention. The cylinder there shown is not formed with flanges; only the grooving-fillets or beads are made on the cylinder, if desired.

The gauges or guides are made separate from the cylinder, and attached to the frame by means of screws, the screw-holes in the gauges being slotted, so that the gauges can be adjusted toward or from each other to fit any thickness of sole.

I claim, for the purpose of finishing the edges of detatched soles, the machine constructed and operating substantially as described.

CHAS. W. PALMER.

Witnesses:

J. B. CROSBY,

FRANCIS GOULD.

*Assor to L. B. Frazer, Trustee for C. W. Palmer, L. B. Frazer, H. E. Palmer and Charles Houghton.