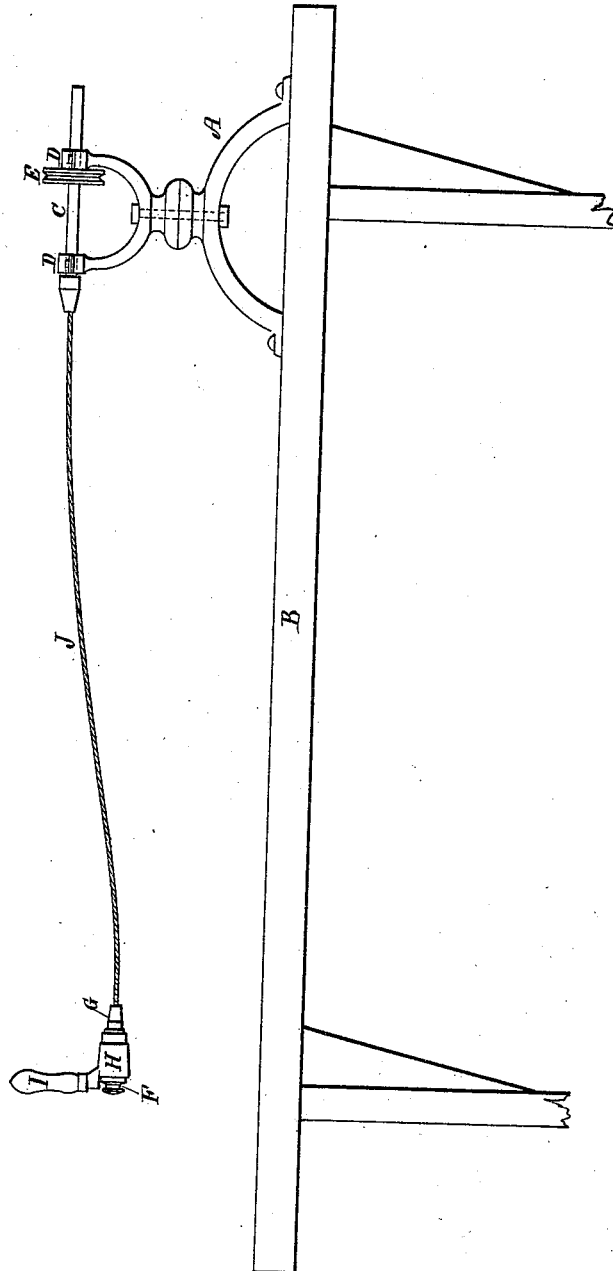


C. A. LAKE.

BOOT AND SHOE SOLE EDGE SETTING MACHINE.

No. 178,858.

Patented June 20, 1876.



Witnesses.  
*Geo. Clark*  
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# UNITED STATES PATENT OFFICE.

CHARLES A. LAKE, OF LYNN, MASSACHUSETTS.

## IMPROVEMENT IN BOOT AND SHOE SOLE EDGE SETTING MACHINES.

Specification forming part of Letters Patent No. **178,858**, dated June 20, 1876; application filed April 21, 1876.

*To all whom it may concern :*

Be it known that I, CHARLES A. LAKE, of Lynn, Essex county, Massachusetts, have invented certain Improvements in Edge-Setting Machinery, of which the following is a specification :

This machine is designed to accomplish the "setting" or burnishing of the edges of boot and shoe soles by the employment of means which enable me to dispense with the complicated, cumbrous, and expensive machinery heretofore employed for executing this work.

My invention consists, fundamentally, of an arbor supported and revolving in a suitable standard, and a hand tool-stock carrying the setting-tool, which revolves by and with a spindle mounted in such stock, the arbor and spindle being connected by a flexible rod, cable, or equivalent object, which shall rotate the tool and enable it to be presented to the sole-edge at any desired angle.

The object of the invention is to reduce the cost, simplify the construction, and relieve the operator of much of the labor, and the manifold movements now requisite to operate machines of this character.

The drawings accompanying this specification represent an elevation of a machine embodying my improvements.

In such drawing A represents a standard erected upon a suitable table or bench, B, and provided with a rotary arbor, C, which is properly journaled within boxes D D, of such standard, the arbor being provided with a pulley, E, by which, and a band from a driving-pulley, rotary motion is imparted to the arbor. The standard A, arbor C, and pulley E are substantially of the same construction and operation as the head-stock of a turning-lathe, with the exception that I mount the arbor in its bearings in such manner as to permit of an end play or shug between them in order to accommodate the movements of the setting-tool as it is carried about the sole-edge, and thus avoid sharp bends in the flexible cable or rod which drives such tool. The burnishing-tool for setting the edge of a sole is shown; at F, as a rotary disk, whose edge is of the form to which the sole-edge is to be reduced, this tool F being secured to the outer end of a spindle, G, which is mounted within

a stock or carrier, H, attached to one extremity of a handle, I. The inner or contiguous ends of the arbor C and spindle G are united by a flexible elastic rod or cable, J, or its equivalent, for transmitting the rotations of the arbor to the spindle and setting-tool, and permitting the latter, while in rotation, to be presented in any desired position to the sole edge.

In the present instance I have represented the transmitter J as a wire-cable, as I have found in practice that this combines the essential properties of sufficient torsive power to rotate the setting-tool with elasticity or flexibility enough to enable the tool to be changed in position to the extent requisite to present it to the edge of a sole.

I do not, however, confine myself strictly to any one material or form of transmitter so long as I retain the torsive resistance and flexibility which enable me to carry out the object in view.

In some instances a simple metallic wire may be found to embrace the desired qualities.

In the construction of the standard A I prefer to form it in parts united by a pivotal or swiveling joint in order that its upper part, or that carrying the arbor C, may be movable or adjustable upon its lower portion or base, and by this means increase the extent of variable movement of the setting-tool with respect to the fixed portion of the standard and the boot to be operated upon. This swiveling of the standard, or the end play of the arbor within it, or both, increases the extent to which the setting-tool may be changed in position without unduly straining the transmitter J, which might result from bending it at sharp angles.

In the use of my machine I employ a suitable jack confined to the table B in such a position with respect to the standard A and tool-stock as to be readily accessible to the setting-tool. I do not represent such jack in the present instance, as its use will be well understood, and I propose to employ some one of several jacks which are now in extensive use.

The only labor devolving upon the operator in using the above machine is to depress it upon the sole edge and guide it about the

latter—the machine performs the greater part of the labor.

Having thus explained the nature, operation, and advantages of my invention, I claim and desire to secure by Letters Patent of the United States, the following:

In a machine for setting sole-edges, the standard A, carrying a rotary arbor, C, a tool-stock carrying a rotary setting-tool, and

a flexible transmitter, J, for communicating the rotations of the driving arbor to the setting-tool, substantially as and for the purpose described.

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