J. H. RYDER.

Machine for Polishing the Edges of Boot and Shoe Heels.

No. 165,260. Patented July 6, 1875.

Fig. 1.

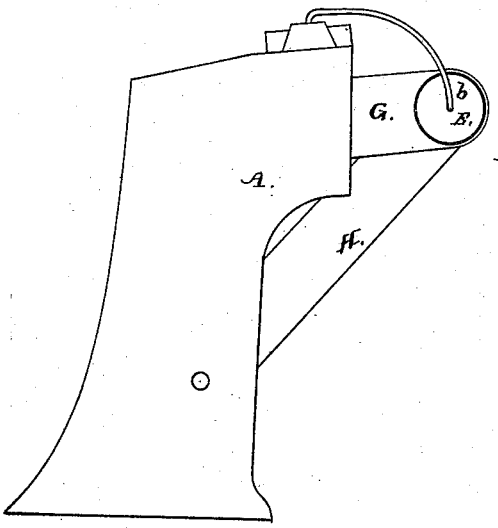


Fig. 2.

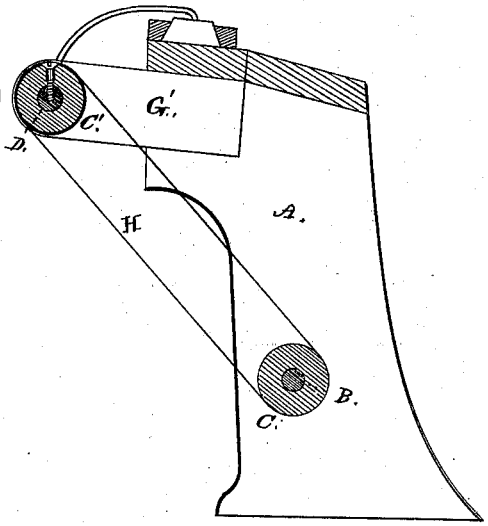
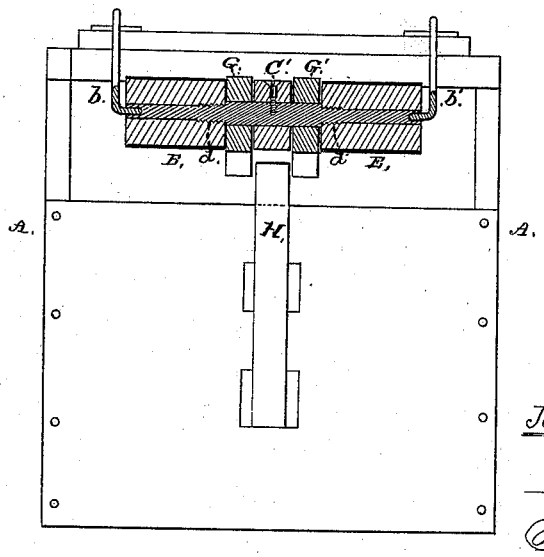


Fig. 3.



Witnesses.

Geo Gray

H. C. Hale.

Joshua H. Ryder

by his attorney.

H. P. Hale

N. PETERS. PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOSHUA H. RYDER, OF BROCKTON, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR POLISHING THE EDGES OF BOOT AND SHOE HEELS.

Specification forming part of Letters Patent No. **165,260**, dated July 6, 1875; application filed January 8, 1875.

To all whom it may concern:

Be it known that I, JOSHUA H. RYDER, of Brockton, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Machines for Scouring the Edges of Boot and Shoe Heels, as well as the bottoms of such boots and shoes; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

In the said drawing, Figure 1 denotes a side elevation, and Fig. 2 a vertical and transverse section, of a machine constructed in accordance with my invention. Fig. 3 is a vertical section taken longitudinally through the axis of the scouring-rolls.

Heretofore, in the construction of machines for scouring the edges of boot and shoe heels, and the bottoms of such boots and shoes, the machine has had a long roll and a short narrow roll (termed a shank-roll) rigidly affixed to their shaft, and driven by a pulley disposed near one end thereof.

It has been found in practice that such machines are imperfectly adapted to scouring the edges of heels of different sizes, which vary not only in height, but in their concave form, the length of the roll employed to scour the tread-bearing portion of the sole being, of necessity, so great as to prevent the requisite manipulation or turning of the boot or shoe in order to bring the concave of the heel in due relation to the periphery of the roll, and thereby the heel-edge was imperfectly scoured or the harmony of the concavity destroyed.

To produce a machine which shall remedy these defects, and one by which all the different-sized heels having concave edges may be readily and evenly scoured, as well as the bottoms of such boots and shoes, is the object of my invention, which consists in the peculiar construction and arrangement of the parts, as hereinafter described and claimed.

In carrying out my invention, which has more immediate reference to the scouring of the edges of the heels, I employ two separate rolls, disposed on opposite sides of a driving-pulley, and screwed upon the shaft, these rolls being of the same diameter and length, and so applied as to be readily either attached to or detached from the shaft. I use any required number of such sets of rolls of different diameters, in accordance with the nature of the work, or the height and concavity of the wheels. In scouring the bottoms of the boots or shoes the heel-scouring rolls are to be removed, and the ordinary long roll and the shank-roll are to be substituted, such being supplied with screw-connections, like those of the heel-scouring rolls, so as to be readily applied to or detached from the shaft, as may be required.

In the drawing, A denotes the frame of the machine. B is the driving-shaft, which extends horizontally across the frame, and has its journals suitably supported in bearings in the sides thereof. Such shaft carries a pulley or drum, C. D is the driven shaft, carrying the edge-scouring cylinders or rollers E E, the outer surface or peripheries of which are to be covered with sand-paper, or other suitable abrading material, in the ordinary manner. The shaft D also carries a pulley, C′, which is disposed on the middle of the shaft, and between the rolls E E. An endless band, H, passing around the pulleys C and C′, serves to impart motion to the scouring cylinders or rolls. The shaft D extends through, and has bearings in, the arms G G, which are affixed to the top of the frame, and project horizontally therefrom, as shown in the drawing. Each end of the shaft is formed with a socket, *a*, to receive the journals or the ends of the arms *b b′*, such having their upper ends connected with dovetailed sliders *c c*, which slide in ways arranged on the top of the frames. Such sliders, if desirable, may be provided with set-screws, to preserve them in position. The shaft D has formed on opposite sides of the pulley C two short male screws, *d d*, the cylinders or rolls E E also having corresponding female screws formed on the inner surface of their bores, by which the rolls may be secured to the shaft.

By the employment of the two short cylinders E E, disposed on opposite sides of the pulley C, a workman is enabled, without chang-

ing his position, to so hold the boot or shoe as to present the edge of one-half of the heel to the action of one of the rollers without any impediment, which having been effected he reverses the boot or shoe, and presents the other half of the heel edge to the surface of the opposite roll, which will effect the scouring of the other half of the heel with equal facility.

Having effected the scouring of the heel-edges, the edge-scouring rollers may be removed by unscrewing them, and the ordinary bottom-scouring roll and the shank-rollers (which are to be provided with screw-connections, like the edge-scouring rolls) may be substituted, and the bottom or tread portions of the boot be scoured thereon.

By the employment of the sliding arms *b b'* for supporting the ends of the roll-shaft, the rolls or cylinders may be readily removed from the shaft, or applied thereto, as may be desirable.

Having described my invention, what I claim is—

In a heel-edge scouring-machine, the combination of the shaft D, rolls E E, pulley C, and sliding arms *b b*, the whole being constructed and arranged substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own invention, I affix my signature in presence of two witnesses.

JOSHUA H. RYDER.

Witnesses:
F. P. HALE,
F. C. HALE.