S. N. CORTHELL.

Heel-Scouring Machine.

No. 207,394 Patented Aug. 27, 1878.

FIG. 1.

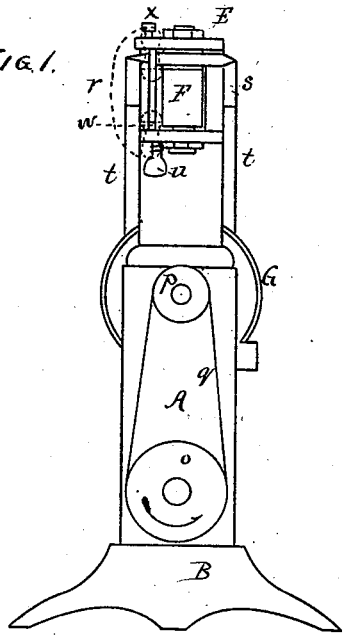


FIG. 2

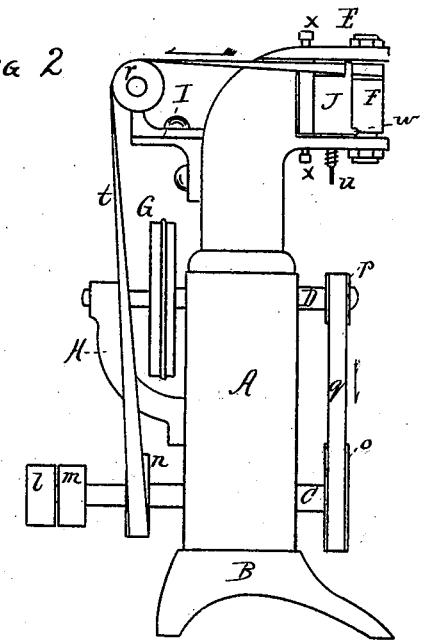


FIG. 3

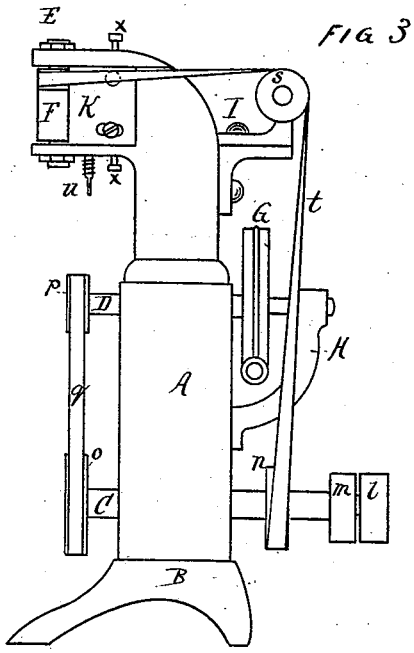
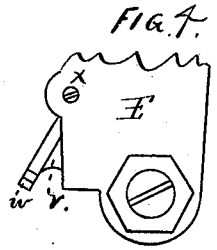


FIG. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

SAMUEL N. CORTHELL, OF QUINCY, MASSACHUSETTS, ASSIGNOR TO DAVID WHITTEMORE, OF SAME PLACE.

IMPROVEMENT IN HEEL-SCOURING MACHINES.

Specification forming part of Letters Patent No. **207,394**, dated August 27, 1878; application filed May 11, 1878.

To all whom it may concern:

Be it known that I, SAMUEL N. CORTHELL, of Quincy, in the county of Norfolk and State of Massachusetts, have invented a new and useful or Improved Heel-Scouring Machine, which invention is fully set forth in the following specification, reference being had to the accompanying drawings.

My present invention relates to machinery employed in shaping and finishing the edges of boot and shoe heels; and the invention consists of certain details of construction, combination, and arrangement of devices constituting a heel-scouring machine, as hereinafter described.

In the accompanying drawings, Figure 1 is a front elevation of my machine, and shows the manner of applying a boot-heel to the scouring-roll. Fig. 2 is a side elevation, viewed from the left of Fig. 1. Fig. 3 is a side elevation, viewed from the right of Fig. 1. Fig. 4 is a detached top view of the head which supports the vertical scouring-roll, and shows the inside projection on the bottom of the hinged guide.

A is the upright body of the machine; B, its base; C, the driving-shaft extending through the body; D, the blower-shaft, also extending through the body; E, the head of the machine, which supports the vertical scouring-roll F.

The body of the machine, above the line of the blower-shaft, is hollow. Upon shaft C are a fast pulley, *l*, a loose pulley, *m*, and a fixed driving-pulley, *n*, and on the opposite side of the body another fixed pulley, *o*. On the blower-shaft is a small driving-pulley, *p*, which serves to drive the fans of the exhaust-blower G, being itself operated by the pulley *o* through the belt *q*.

A bracket, H, supports the back end of the blower-shaft, and an adjustable bracket, I, supports two guide-pulleys, *r s*, over which the driving-belt *t* passes from pulley *n* to the top of roll F, for the purpose of revolving the latter. The bracket I is made adjustable vertically and horizontally for taking up the slack in said belt.

Hinged to the head is an adjustable guide and work-rest, J, which is secured in proper relative position to the scouring-roll by the thumb-screw *u*, turned up through the head against the ledge *v* on its inner side. This guide has also a rest, *w*, projecting outward from its front edge. Upon the opposite side of the head is an adjustable slide, K, secured in position by screws, as shown.

x x are two pivots, upon which the work-rest J turns when being adjusted.

The roll F is coated with sand-paper, or any other suitable material, to give it the requisite scouring-surface.

The hinged guide and work-rest J forms, in combination with the vertical scouring-roll F, an important part of my present invention. When adjusted in proper relation to the roll, the operator places the breast of the heel upon the rest *w*, and then, keeping the edge of the heel against the roll with the requisite degree of pressure, he steadies the face or top-lift thereof against the front edge of the guide J, which is parallel to the axis of the roll, while he swings the toe of the boot or shoe upward, turning upon the heel-edge, and thus bringing the entire circumference of the latter in contact with the scourer at a single operation, as indicated in Fig. 1. This guide J thus serves to support the work at the start and to aid the operator in presenting the heel-edge properly to the scouring-roll, and also guards against the liability of injury to the upper from being drawn into contact with the scouring-surface by the action of the roll. The roll being set vertically, the operator is, by the aid of said guide, enabled to present the entire edge of the heel to the roll without shifting hands upon the boot, and to do so very advantageously and expeditiously, having all the time a clear view of the operation and effect of the roll upon the heel-edge, thus gaining advantages which cannot be practically derived from a roll placed horizontally.

The action of roll F in scouring the heel, it will be observed, is transverse to the edge, and not in the direction of its circumference, in which heels are usually reduced by rotary cutters, and consequently the degree of concavity of the heel-edge will depend upon the size of the roll or convexity of its surface. Therefore, different sizes may be required, and, to accommodate such changes of rolls, and adapt the machine to the same, the guide J is pivoted to swing, as described, or made ad-

justable in any other suitable manner, and the opposite side, K, is adapted to slide, the object of this slide being to keep the air-passage closed on that side between the roll and head, so as to make the exhaust-draft to the blower G more effective on the side next to guide J, where the dust is produced, and thus drawn through the hollow body of the machine to the blower, and discharged therefrom through a pipe in the usual manner.

The movements of the several parts being obvious, a further detailed description thereof is not deemed necessary.

What I claim as my invention is—

1. In a heel-scouring machine, a vertical scouring-roll, F, an exhaust mechanism, and a hinged adjustable guide, J, arranged to operate with and relatively to such roll, substantially as and for the purpose specified.

2. The combination of the scouring-roll F, the adjustable guide J, and slide K, arranged to operate together, substantially as and for the purposes specified.

3. The combination of the roll F, guide J, slide K, hollow body A, and exhaust-blower G, constructed and arranged to operate together, substantially as and for the purposes specified.

4. The combination, with roll F, of the adjustable guide J, provided with a rest, *w*, and an adjusting-screw, *u*, all arranged to operate relatively to each other, substantially as and for the purposes specified.

SAMUEL N. CORTHELL.

Witnesses:

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