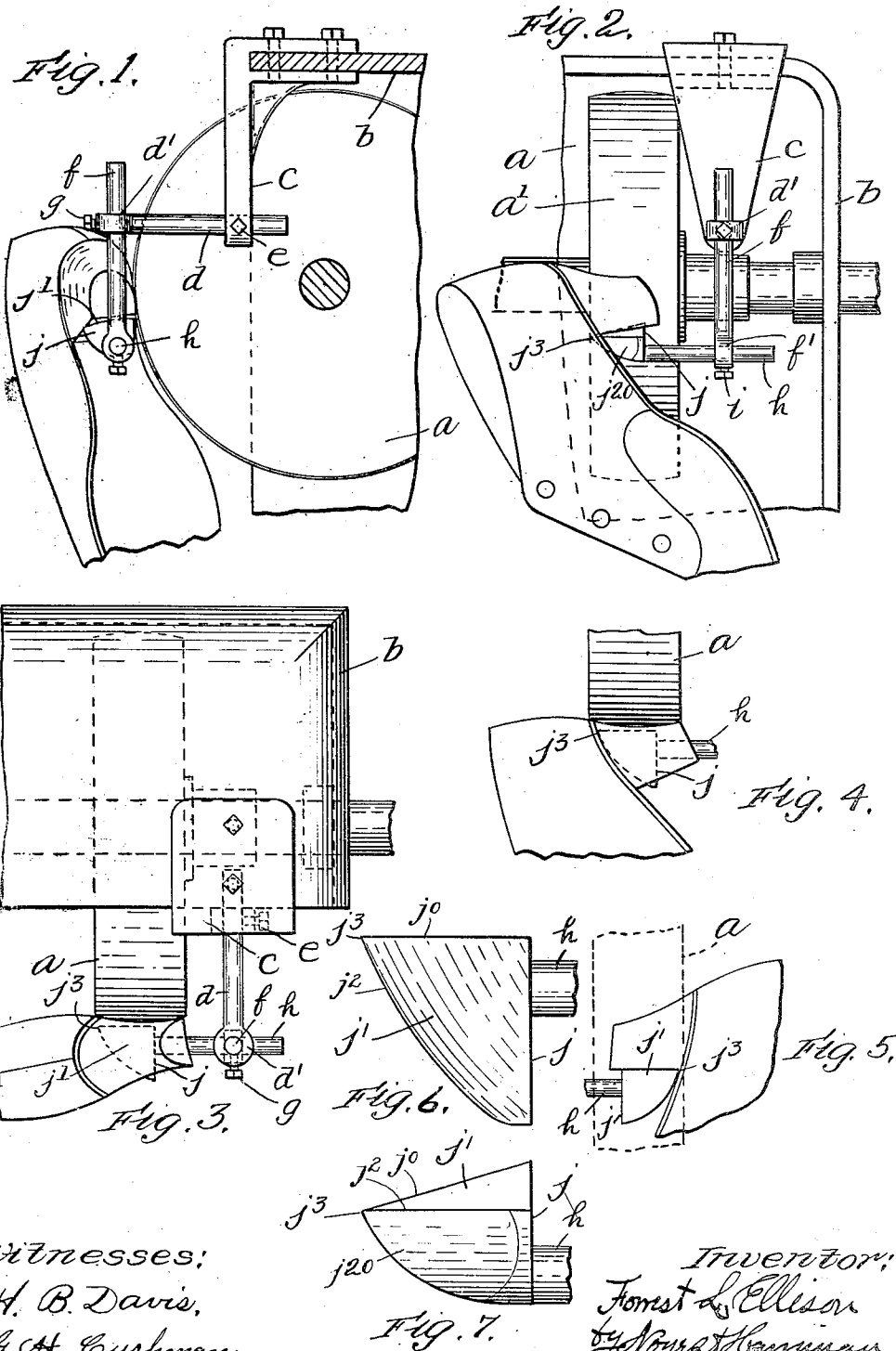


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F. L. ELLISON.
HEEL REST FOR SCOURING MACHINES.
APPLICATION FILED MAR. 20, 1911.

1,042,773.

Patented Oct. 29, 1912.



Witnesses:
H. B. Davis,
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Inventor:
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Att'y

UNITED STATES PATENT OFFICE.

FORREST L. ELLISON, OF EXETER, NEW HAMPSHIRE, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

HEEL-REST FOR SCOURING-MACHINES.

1,042,773

Specification of Letters Patent.

Patented Oct. 29, 1912.

Application filed March 20, 1911. Serial No. 615,672.

To all whom it may concern:

Be it known that I, FORREST L. ELLISON, a citizen of the United States, residing at Exeter, in the county of Rockingham and State of New Hampshire, have invented an Improvement in Heel-Rests for Scouring-Machines, of which the following is a specification.

This invention relates to certain improvements in heel-rests or guards for heel-finishing machines, and more especially for heel-scouring machines, in which a wheel having an abrasive covering is employed.

It has usually been customary, when performing the heel-scouring operation, for the operator to hold the shoe in his hand, and it is particularly difficult to do this when the heels are rough, so that an unusual amount of scouring is necessary, and, moreover, ridges are frequently formed in a heel on account of the fact that it is not firmly supported.

The object of my invention is to provide a rest for the heel, in a machine of this character, which will enable the operator to perform the scouring operation without inconvenience, and more readily than it can be done by supporting the shoe in the hands alone, which is adapted to perform the function of a guard for preventing damage to the upper about the heel seat, and in front of the shank, by being carried into contact with the wheel, and which is adapted to be adjusted so that it may be held in any position, within necessary limits, so that the work may be done to the best advantage. I accomplish these objects by the means shown in the accompanying drawing, in which,

Figure 1 is a side elevation of a heel-scouring machine provided with my invention. Fig. 2 is a front elevation thereof. Fig. 3 is a plan view. Figs. 4 and 5 are detail views showing different steps in the scouring operation, and Figs. 6 and 7 are detail plan and front elevations of the rest.

In the drawing *a* indicates a common form of heel-scouring wheel having the usual pe-

ripheral abrading face *a'* and *b* the hood of the machine which incloses the rear half of the wheel.

According to my invention I provide a bracket *c*, which is adapted to be secured to the front edge of the top of the hood and to depend at one side of the wheel, as shown, and mount a supporting rod *d* in the lower end thereof, at right angles thereto, so that the rod will be held in a horizontal position and may be adjusted longitudinally and rotatably in said bracket, a set-screw *e* being provided to hold said rod in any position to which it may be adjusted. The front end of rod *d* is provided with a head *d'* in which an extension rod *f* is adjustably mounted at right angles thereto, said rod *f* being rotatably and longitudinally adjustable therein and a set-screw *g* being provided in said head *d'* to hold the rod *f* in place. A rest-supporting shank or arm *h* is mounted in a head *f'* at the lower end of the rod *f*, and at right angles thereto, said arm *h* being rotatably and longitudinally adjustable with relation to said rod *f*, and a set-screw *i* being provided for holding the arm *h* in the position to which it is adjusted. A heel-rest in the form of an angularly shaped head *j* is mounted on the end of arm *h*, and, while it is usually preferable to mount it on the end of the arm at the left of the operator, as he faces the machine, a reversal of the position of the parts would be an obvious matter. Said head is formed to provide a heel-supporting face *j'* on its upper side, the rear edge *j''* thereof, next the abrading face of the wheel, extending parallel to the arm *h*. The left-hand side-edge *j²* extends from the left-hand end of the rear edge *j''* at an acute angle thereto, or obliquely to the right, as it extends forward, in a slightly convex line. The left side of the head *j* is cut away obliquely from the edge *j²*, forming a face *j³*, and the supporting-face *j'* is inclined upwardly, with relation to the arm *h*, from the edge *j²*, so that the right-hand end of the rear edge *j''* is materially higher than the left, the face sloping downwardly from the

right-hand rear portion of the head, to the edge j^2 , the extent of said inclination being such that when the side of the heel is supported on said face j' the heel will be held in the desired position to perform the scouring operation. It may be stated in this connection that it is desirable that the abrading action on the heel shall be, as nearly as possible, in the direction of the joints between the lifts. The faces j' and j^{20} meet with the rear side of the rest in a vertex j^3 , and, as these faces are arranged at acute angles, said vertex may be termed, for convenience, a projection.

In practice the rest is adjusted so that its rear edge j^0 is a short distance from and approximately parallel to the abrading face of the wheel and its supporting-face j' is a short distance, varying according to conditions, below the level of the center of the wheel and at such an angle with relation to the adjacent surface of the wheel that it inclines downwardly therefrom. Said rest is also adjusted transversely of the face of the heel to such a position that the end of the projection j^3 is at a distance from the edge of the wheel face opposite the rest support equal to the thickness of the heel-seat or sole to which the heel is attached, or the distance from the base of the heel to the upper, see Figs. 2, 3, 4 and 5.

In using the device, after the rest has been properly adjusted, the back of the heel is supported on the face j' of the rest, with the shoe upper in front of the rest as shown. The shoe is first held with the toe pointing up and the side of the heel next the breast is brought into engagement with the scouring wheel and then the forepart of the shoe is swung forwardly, downwardly and rearwardly, to the position of Fig. 1. As the forepart is swung downward from the horizontal position of Fig. 4 and below the level of the upper face j' , the edge of its shank would engage said face if the edge j^2 extended perpendicularly to the rear edge j^0 on account of the pitch of the back side of the heel, which makes it necessary to hold the forepart of the shoe to the right, but, as the edge j^2 and face j^{20} extending downward therefrom, extend obliquely to the right from the rear edge j^0 , the edge of the shank of the shoe will engage said oblique edge and be forced to the left, as the forepart is swung down, so that the end of vertex j^3 will bear on the shank close to the breast of the heel. As the distance from the end of vertex j^3 to the adjacent edge of the abrading face is equal to the thickness of the heel-seat, said vertex will act as a guard permitting the heel-seat to be scoured close to the upper, and preventing actual engagement of the upper with the wheel. As the shoe forepart is swung down it will

also be swung beneath the rest, as indicated in Fig. 2, the operator being permitted to hold the shoe at any necessary angle according to the pitch of the heel and also to cause the scouring wheel to act on the heel approximately in the direction of the edges of the lifts. The edge j^2 , face j^{20} and the vertex j^3 all have practically the same function, which is to act as shank-engaging portions for pressing the shoe laterally and for holding the upper out of contact with the wheel, and, as said edge and vertex are boundaries of the face j^{20} , they may be considered as one element.

The rest is so adjusted that its height and the angular relation of its upper surface j' to the wheel is such that when the forepart of the shoe is swung downward and rearward until the breast of the heel rests evenly on the surface j' , beyond which position the shoe cannot be so readily swung, the portion of the upper in front of the shank will be held out of contact with the wheel, as shown in the position of Fig. 1, so that damage to this portion of the shoe, which might otherwise be caused, is prevented. When the shoe is swung to this position, the side of the heel will have become scoured up to the breast and the operation will be finished. The handling of the shoe in performing the scouring operation is thus not only not interfered with, as the shoe may be moved to all necessary positions while supported on the rest, but accidental damage of the shoe is prevented, and, as a firm rest for the heel is provided, ridges will not be formed in the heel but it will be more smoothly and rapidly finished, with less exertion on the part of the operator than if the device were not employed.

I claim:—

1. In a heel-scouring machine having a scouring-wheel provided with a peripheral abrading-face, a support at one side of said wheel, a heel-rest mounted on said support and having a shank-engaging portion extending to a point at a distance from the edge of said face opposite to said support corresponding to the thickness of the sole of the shoe, said portion having a heel-supporting face on its upper side and a shank-engaging edge extending from its end transversely of and obliquely from said abrading-face, and being recessed beneath said supporting face from said edge as and for the purpose set forth.

2. In a heel-scouring machine having a scouring-wheel provided with a peripheral abrading-face, a support at one side of said wheel, a heel-rest mounted on said support having a heel-supporting face on its upper side, extending transversely of said abrading-face adjacent thereto and terminated in an obliquely disposed shank-engaging edge

opposite said support, said supporting-face
at the rear end of said shank-engaging edge
terminating at a distance from the adja-
cent edge of said abrading-face correspond-
5 ing to the thickness of the heel-seat of the
shoe to provide a guard, and said support-
ing-face being inclined upwardly from said
engaging edge and the under side of said
rest being cut away from said engaging-

edge, substantially as and for the purpose 10
described.

In testimony whereof, I have signed my
name to this specification, in the presence of
two subscribing witnesses.

FORREST L. ELLISON.

Witnesses:

JOHN F. O'ROURKE,

J. E. CAHILL.