J. HOUSHOLDER.

SHOE BEATING MACHINE.

APPLICATION FILED OCT. 26, 1908.

1,030,584. Patented June 25, 1912.

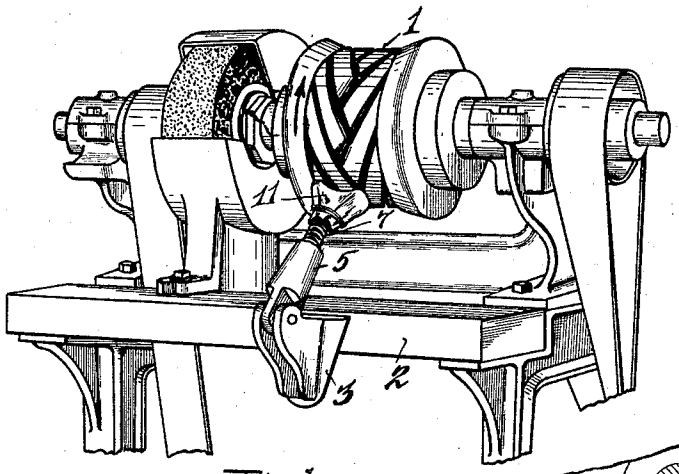

Fig. 1.

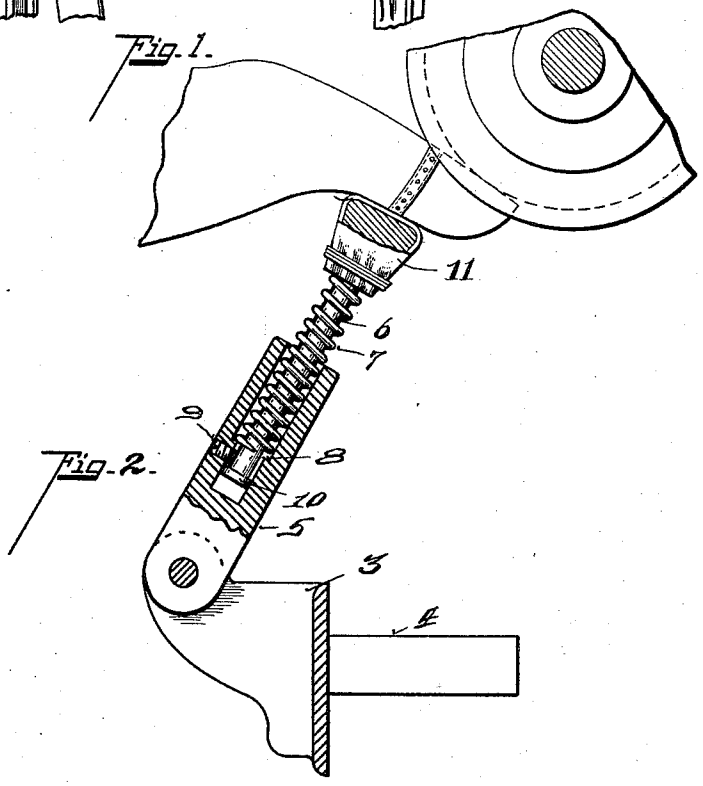

Fig. 2.

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JACK HOUSHOLDER, OF COLDWATER, MICHIGAN, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

SHOE-BEATING MACHINE.

1,030,584. Specification of Letters Patent. Patented June 25, 1912.

Application filed October 26, 1908. Serial No. 459,531.

To all whom it may concern:

Be it known that I, JACK HOUSHOLDER, a citizen of the United States, residing at Coldwater, in the county of Branch and State of Michigan, have invented certain new and useful Improvements in Shoe-Beating Machines, of which the following is a specification.

My invention relates to shoe beating machines and is herein shown for the purpose of illustration as embodied in a machine of the type shown and described in the patent to Samuel J. Wentworth, No. 896,873, of August 25th, 1908.

An important feature of the invention consists in the combination with a rotary shoe beater, such for example as one of the type shown in said Letters Patent, of a toe support arranged to permit the operator to fulcrum the shoe thereon and, by depression of the heel, rock the bottom of the toe forcefully upwardly against the revolving beater. By this combination a powerful beating and leveling action on the toe portion of a lasted McKay shoe can be obtained to compact and smooth the lasted-over upper materials without the fatiguing exertion on the part of the operator which has heretofore been required. This combination in which the operator governs the pressure by moving the shoe with his hands has the advantage over a treadle raised shoe rest that the action of the beater on the shoe can be regulated with much more facility through the hands than through a foot treadle and connections.

A further feature of this invention is found in the relative arrangement of the rotary beater and a shoe rest which is movable as by tipping or sliding in a direction, relatively to the periphery of the beater, to carry the shoe along under the beater to treat the toe progressively from the end rearwardly as above described. While the greater part of the beating operation is to be done on a small area near the end of the toe where the fullness left by the lasting operation is greatest it is desirable to advance the toe under the roll and beat the upper from the end of the toe backwardly progressively. The beater roll referred to is particularly adapted for this use because the beating elements are formed and arranged to act obliquely inwardly from the opposite edges toward the middle of the shoe.

In the illustrated embodiment of the invention the toe rest is pivoted in such relation to the rotary beater that it swings toward the beater to carry the toe into position to be treated and can swing farther to carry the toe along under the beater for progressive treatment of the bottom. The arrangement of the toe rest to permit the pressure of the shoe against the beater to be regulated by fulcruming the shoe enables the operator to maintain the pressure, or to give the required varying pressure with great facility as the rest is tipped toward the beater and the shoe thereby advanced under the beater. A spring under the rest renders the fulcrum normally yielding to prevent too severe action on the shoe. For treating an especially difficult piece of work, however, downward pressure on the heel of the shoe may be sufficient to cause the fulcrum rest to be depressed until it comes to a firm bearing after which the toe portion of the shoe will be unyieldingly upheld against the beater.

These and other features of the invention will be more fully understood from the following description of the embodiment of the invention which is illustrated in the drawings.

The features of the invention are more fully set forth in the description of the accompanying drawings, forming a part of this specification, in which:—

Figure 1 is a perspective view of my device in its relation to the rotary beating tool of the machine. Fig. 2 is a central vertical section through the rest and shows diagrammatically an operative relation of a shoe fulcrumed thereon and pressed against the beater.

1 represents the forming tool which is a rotary wheel having spring actuated beaters, adapted to strike a series of blows toward the medial line of a lasted upper.

2 represents the table.

3 is the bracket attached to the edges of

the table and horizontally adjustable thereon by means of the extension 4 to change the relation of the pivot for the toe rest to the axis of the beating wheel. Between the bracket arms is pivotally supported an arm 5, which is of sleeve form.

6 represents the stem secured in the sleeve.

7 represents a coil spring surrounding the stem and resting against the shoulder 8 within the sleeve.

9 is a screw, engaging the boss 10 on the inner end of the stem and thus retaining the stem in position and at the same time permitting of rotatable and longitudinal movement of the stem, the longitudinal movement being spring actuated.

11 represents a padded rest on the outer end of the stem, having a concave face for the reception of the last upon which the upper is secured.

By means of this device the last can be moved to and from the wheel and turned at any angle or applied with any pressure desired by the operator, the different characters of work and different conditions of work rendering desirable such selective presentation.

In the use of the machine above described the toe rest 11 is swung toward the operator and away from the rotary beater to permit the shoe to be properly positioned with its toe portion upon the rest. The rest is then swung with and by the shoe backwardly toward the beater to introduce the toe of the shoe under the beater and between it and the rest, it being understood that the beater turns forwardly and upwardly as indicated by the arrow thereon in Fig. 1. As the over-lasted upper material on the bottom face of the shoe is engaged by the beater the shoe is fulcrumed upon the rest by downward pressure upon the heel portion of the shoe to force the toe portion being beaten into firm contact with the beater. By thus fulcruming the shoe the operator is enabled to hold the work hard against the beater with comparatively slight exertion and to vary the pressure according to the requirements of the work as he watches the operation. By turning the rest farther backwardly the shoe is advanced under the beater to cause successive portions of the shoe bottom to be treated by the beater and the pressure with which different portions are beaten can be varied at the will of the operator. The construction and arrangement of the beating elements of the rotary beater are such as to cause the lasted upper on the shoe bottom to be worked inwardly on opposite sides of the shoe simultaneously. The spring 7 allows the rest to yield and thereby prevents excessive pressure being exerted at any time. It is to be noted that the relation of the pivot for the toe rest and the axis of rotation for the beater is such that as the shoe on the rest is introduced under the beater, as above described, it is wedged between the rest and the beater or introduced into the angle that is formed by the paths of the rest and the beater. As thus presented, the portion of the shoe bottom engaged by the beater will be substantially tangential with the portion of the beater with which it contacts and as the shoe is farther advanced it can be rocked upon the toe rest to maintain each portion being beaten in substantially that relation to the face of the beater.

Having described my invention, I claim:—

1. A shoe beating machine having, in combination, a rotary beating tool and means for turning it forwardly and upwardly, and a toe rest mounted for movement relatively to the beater to carry the toe of the shoe under the beater, said rest and associated parts being constructed and arranged to permit the shoe to be fulcrumed on the rest to control the pressure as the shoe is advanced to present different portions of the toe bottom successively to the action of the beater.

2. A shoe beating machine having, in combination, a rotary beating tool and means for turning it forwardly and upwardly, and a toe rest pivotally supported in front of and below the beater for swinging movement to carry the toe of the shoe under the beater, said rest being formed and arranged to permit the operator to fulcrum the shoe thereon for maintaining the bottom of the shoe substantially tangential to the portion of the beater engaging it as the shoe is advanced under the beater.

3. A shoe beating machine having, in combination, a rotary beater, means for turning it forwardly and upwardly, and a toe rest pivoted below and in front of the beater, the axis of revolution of the beater and the pivot of the rest being so related that the toe portion of a shoe carried on and moving backwardly with the rest will be wedged between the rest and beater with the engaged portion of the bottom substantially tangential to the beater.

4. A shoe beating machine having, in combination, a rotary circumferential beater having beating members inclined forwardly and inwardly from opposite ends to work the upper inwardly from opposite sides of the shoe bottom, and a toe rest pivoted in front of and below the beater to swing backwardly with the shoe thereon under the beater and arranged to permit the shoe to be fulcrumed on the rest to control upward pressure thereof against the beater as the shoe is advanced to subject different longitudinal portions of the shoe bottom successively to the action of the beater.

5. A shoe beating machine having, in combination, a rotary beating tool and means for turning it forwardly and upwardly, a

toe rest arranged relatively to the beater to permit the toe of the shoe to be inserted under the beater and the shoe to be fulcrumed on the rest to force the bottom of the toe against the revolving beater, a support for the rest, and a spring arranged to render the said fulcrum rest yielding, said machine having provision for rendering the fulcrum rest rigid after a limited depression thereof.

In testimony whereof, I have hereunto set my hand.

JACK HOUSHOLDER.

Witnesses:

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