

J. H. RIGBY.
SOLE LEVELING MACHINE.
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916,021.

Patented Mar. 23, 1909.

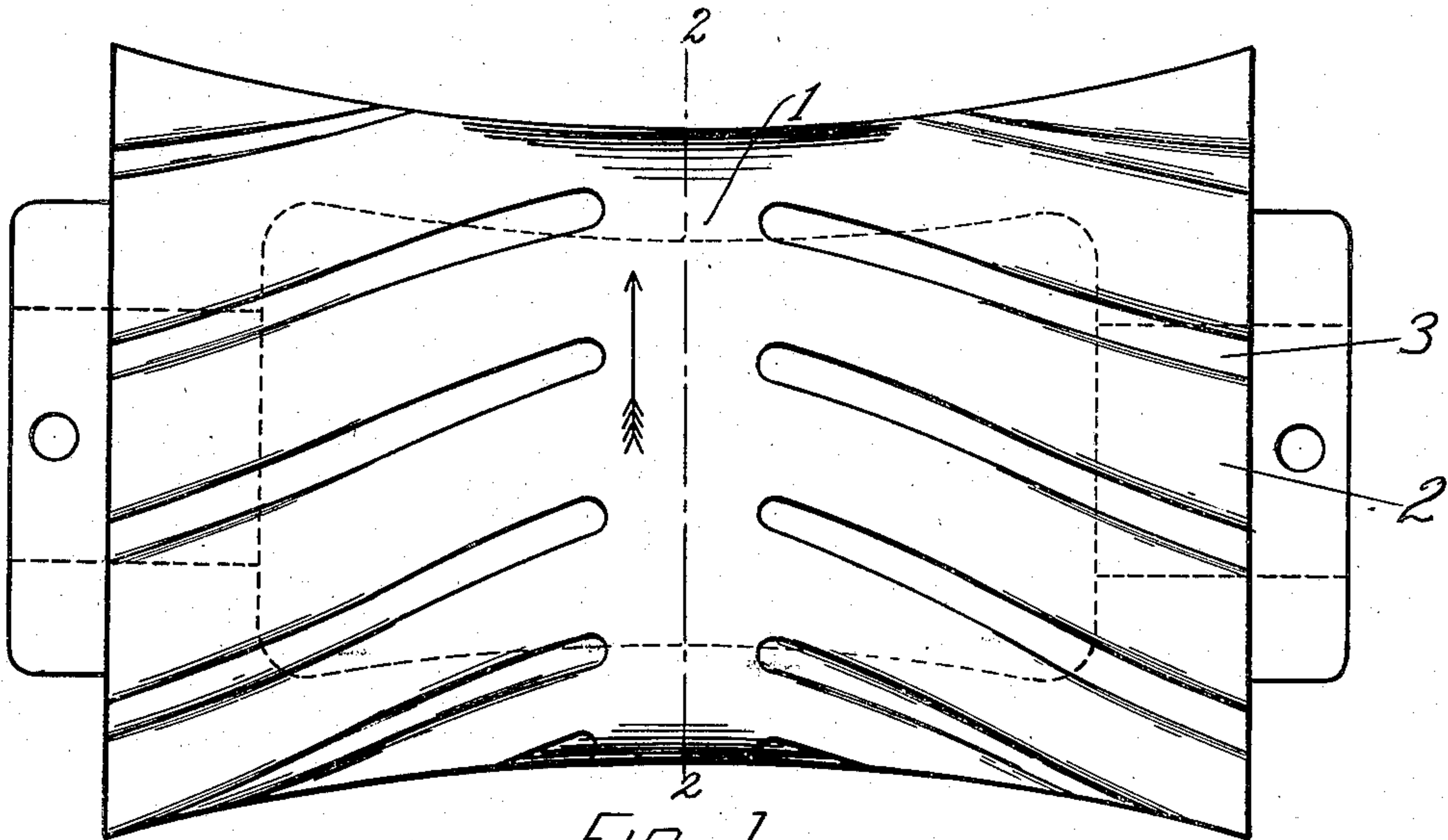


FIG. 1.

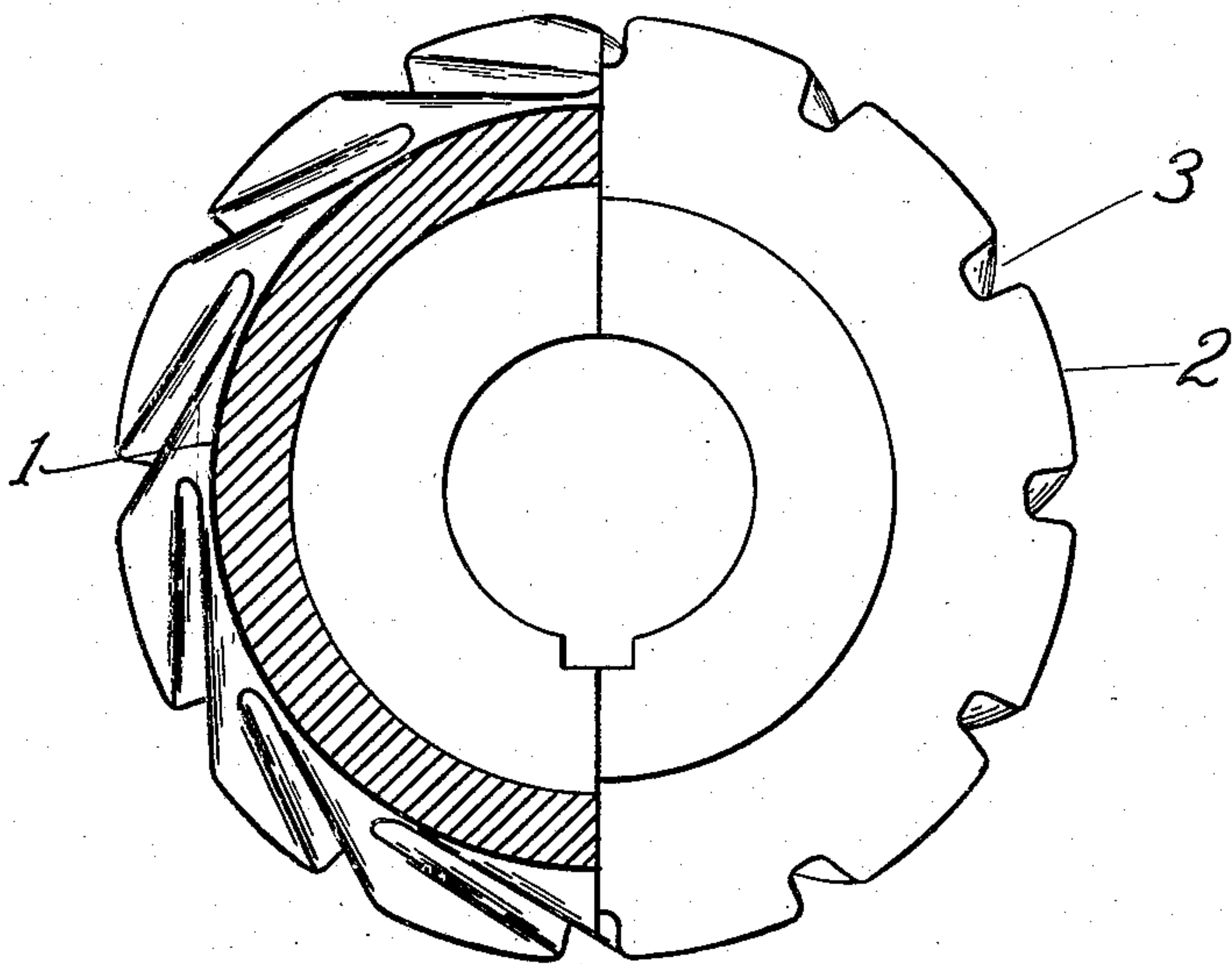


FIG. 2.

WITNESSES.

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JOHN H. RIGBY, OF LYNN, MASSACHUSETTS, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

SOLE-LEVELING MACHINE.

No. 916,021.

Specification of Letters Patent.

Patented March 23, 1909.

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To all whom it may concern:

Be it known that I, JOHN H. RIGBY, a citizen of the United States, residing at Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Sole-Leveling Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to sole leveling rolls for use in sole leveling machines and particularly to sole leveling rolls adapted to operate upon turned shoes.

To level the sole of a turned shoe it is necessary to subject the sole to both a rubbing and a pounding or beating action. When the leveling operation has been performed by a machine this rubbing and pounding action has usually been secured by means of a rotating leveling roll, the surface of which is interrupted so as to form a series of projections. To provide an interrupted surface, the roll has been made in various ways as for instance by providing the roll with slots or by forming the surface of the roll by a series of suitably arranged small rolls. In every instance, however, the sole pounding or beating ribs or projections have extended entirely across the roll so that the central portion as well as the end portions act to beat out the sole. The entire surface of the sole of a shoe is thus subjected to the beating or pounding action of the ribs of the roll and as a consequence the sole is liable to be stretched longitudinally especially if the roll is pressed against the shoe with a heavy pressure. Accordingly, considerable care must be exercised by the operator, and because a heavy pressure cannot be applied to the sole, the shoe must be gone over a number of times and considerable time consumed before the sole is brought into the desired condition.

The object of the present invention is to provide a sole leveling roll which can be used to level the sole of a turned shoe with less liability of stretching the sole longitudinally and which can be forced against the shoe with greater pressure without liability of injuring the sole so that a superior quality of work can be produced and the amount of time required for the leveling operation can be substantially reduced.

With the above object in view the present invention contemplates the provision of a sole leveling roll, the central portion of which is provided with a smooth sole rubbing surface and the end portions only of which are provided with sole beating projections. The central smooth portion of this roll bears upon the central portion of the shoe sole during the leveling operation and acts efficiently to smooth out the sole in a satisfactory manner, the character of this portion of the sole being such that it can be satisfactorily leveled without being subjected to any beating out operation. The end portions of the roll engage the edges of the shoe sole and since these end portions are provided with sole beating projections the edge portions of the sole are subjected to the necessary beating out action, and the entire sole is leveled in a satisfactory manner. By reason of the fact that the central smooth portion of the roll does not act appreciably to stretch the sole, the leveling roll can be pressed against the sole with a much greater pressure than has heretofore been possible and consequently the sole can be leveled in a much more satisfactory manner and in a much shorter space of time than when a roll is employed in which the sole beating projections extend the entire length of the roll.

Broadly considered, the present invention contemplates forming the projections at the ends of the roll at each side of the smooth central surface in any desired manner. Preferably, however, these projections are formed by interrupting the surface of the roll by means of slots which are the same width throughout their length, as thereby projections are formed which have substantially the same beating out action throughout their length and which present wide surfaces to support the roll in contact with the shoe and prevent the projections from sinking too deeply into the surface of the sole. Also, preferably, the projections extend obliquely to the axis of the roll and the projections at each end of the roll converge toward each other so that the projections exert an outward wiping action on the sole.

The present invention will be clearly understood from an inspection of the accompanying drawing in which—

Figure 1 is a view in side elevation of a roll embodying the same in its preferred form, and Fig. 2 is a view of the roll illustrating one

half of the roll in end elevation and the other half in section on the line 2—2 of Fig. 1.

The roll illustrated in the drawing is of substantially the same shape as rolls which are ordinarily used in sole leveling machines, being concave longitudinally to fit approximately the transverse curvature of the shoe sole. This roll is adapted to be secured to the shaft of a sole leveling machine and to be rotated in the direction indicated by the arrow on Fig. 1. The central smooth sole rubbing surface of the roll is indicated at 1 and the sole beating projections are indicated at 2. These projections, as indicated in the drawing, are formed by slots 3 cut in the end surfaces of the roll and extending diagonally to the axis of the roll. The edges of the projections 2 are slightly rounded off, as best shown in Fig. 2, to prevent injury to the sole as these edges strike the sole during the rotation of the roll. As indicated in Fig. 1, the slots 3, at opposite ends of the roll converge toward each other and it will be apparent from an inspection of the figure, that this arrangement of the slots causes the projections 2 to exert an outward wiping action on the sole of a shoe acted upon by the roll. The slots 3 are of a width sufficient to cause the projections to deliver blows of the desired force upon the sole.

The manner in which the roll acts upon a shoe sole and the advantages secured by its use will be obvious to those skilled in the art without further description.

The nature and scope of the present invention having been indicated and a preferred form of the invention having been specifically described, what is claimed is:—

1. A sole leveling roll provided at its cen-

ter with a smooth sole rubbing surface and at its ends with a series of sole beating projections.

2. A sole leveling roll provided at its center with a smooth sole rubbing surface and at its ends with a series of sole beating projections arranged obliquely to the axis of the roll and adapted to exert an outward wiping action on the sole of a shoe.

3. A sole leveling roll provided at its center with a smooth sole rubbing surface and having its end surfaces interrupted by a series of slots dividing said surfaces into a series of sole beating and rubbing projections.

4. A sole leveling roll provided at its center with a smooth rubbing surface and having its end surfaces interrupted by a series of slots extending obliquely to the axis of the roll and dividing said surfaces into a series of sole beating and rubbing projections adapted to exert an outward wiping action upon the sole of a shoe.

5. A sole leveling roll provided at its center with a smooth sole rubbing surface and having its end surfaces interrupted by a series of slots of the same width throughout their length, and dividing each of said surfaces into a series of sole beating and rubbing projections, the slots at opposite ends of the roll converging toward each other and being arranged obliquely to the axis of the roll whereby the projections exert an outward wiping action upon the sole of a shoe.

In testimony whereof I affix my signature, in presence of two witnesses.

JOHN H. RIGBY.

Witnesses:

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ANNIE C. RICHARDSON.