

O. ASHTON.
 ROTARY SHOE BEATING MACHINE.
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1,048,638.

Patented Dec. 31, 1912.

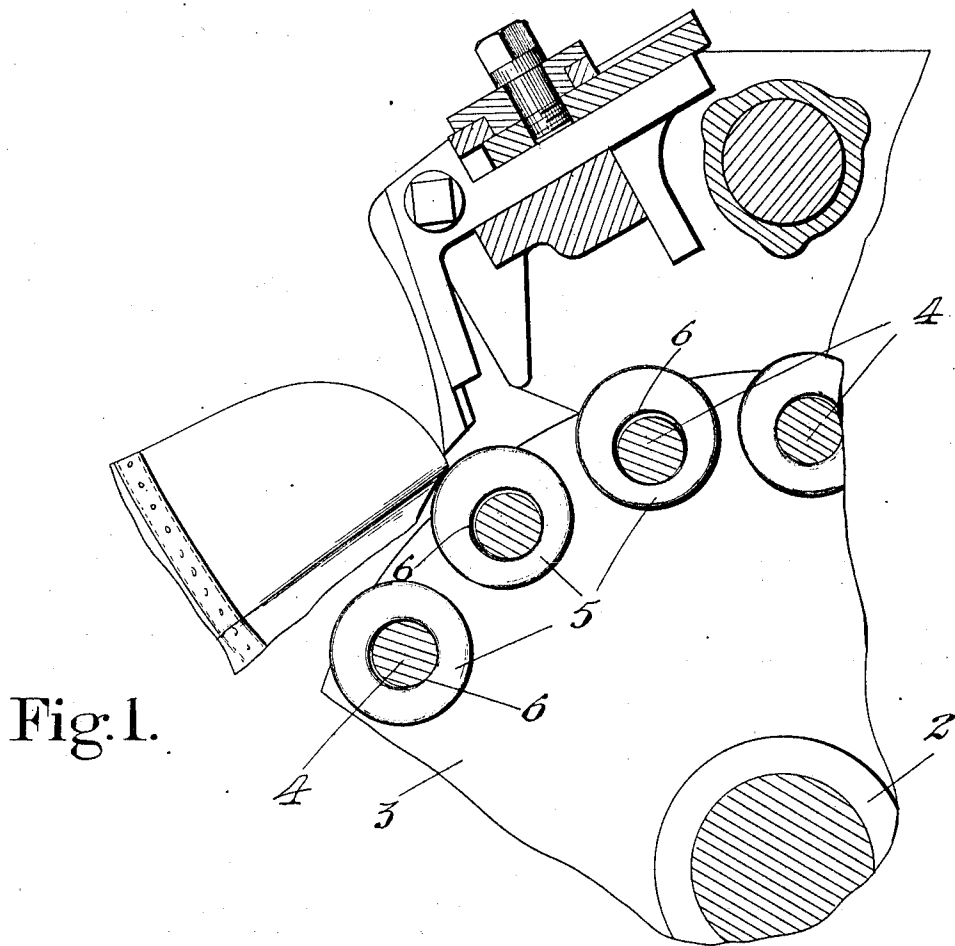


Fig. 1.

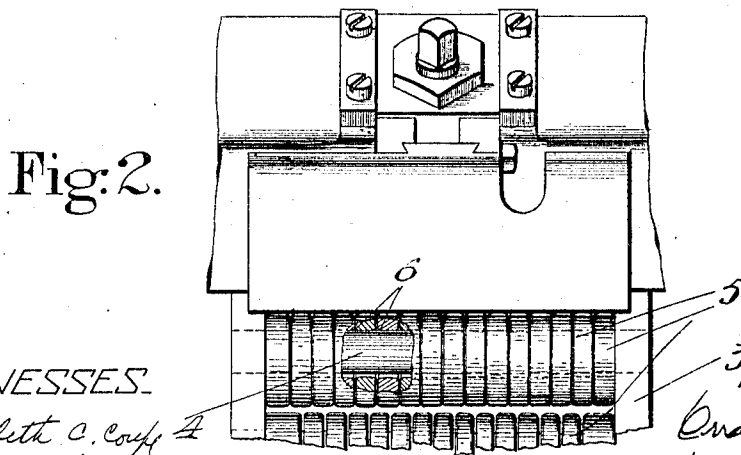


Fig. 2.

WITNESSES.

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UNITED STATES PATENT OFFICE.

ORRELL ASHTON, OF SWAMPSCOTT, MASSACHUSETTS, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

ROTARY SHOE-BEATING MACHINE.

1,048,638.

Specification of Letters Patent.

Patented Dec. 31, 1912.

Application filed June 25, 1912. Serial No. 705,725.

To all whom it may concern:

Be it known that I, ORRELL ASHTON, a citizen of the United States, residing at Swampscott, in the county of Essex and State of Massachusetts, have invented certain Improvements in Rotary Shoe-Beating Machines, of which the following description, in connection with the accompanying drawings, is a specification, like reference characters on the drawings indicating like parts in the several figures.

This invention relates to rotary pounding machines of the type shown in Letters Patent of the United States No. 1,030,837, granted June 25, 1912, on my earlier application, Ser. No. 406,213, filed Dec. 12, 1907, which comprise a rotary carrier and beating members arranged about the periphery of the carrier, each member consisting of one or more rings loosely mounted on the carrier to permit them to turn and also to yield toward the axis of the carrier against centrifugal force. I have found by experiment that such loose rings if eccentrically bored so that they are held by centrifugal force with the heavier sides outward will strike a heavier blow than concentric rings will strike and that the effectiveness of the blow is further increased by the fact that the eccentric rings both yield inwardly and also turn backwardly less quickly or readily when they strike the work. They therefore cause a drawing or a dragging action over the work to a greater extent and less of a rolling action. This is probably because centrifugal force is operating continuously, while the eccentric ring is passing over the work, to turn the roll back to the position in which its heavier side is outermost. I have also found it advantageous to mount the rings to have capacity for a slight lateral tipping movement for adapting themselves to transverse irregularities in the work.

The invention will now be described in connection with the accompanying drawings and then be particularly pointed out in the claims.

Figure 1 shows in vertical section so much as is necessary for the understanding of this invention of a machine of the type of my earlier patent equipped in accordance with this present invention. Fig. 2 is a fragmentary front view.

The rotary carrier 2, driven as usual, has

end plates 3 between which extend rods 4 on which the beating rings 5 are strung. The beating rings are bored eccentrically and to permit radial play on the rods so that the eccentric rings are turned and also pressed radially outward by centrifugal force when the carrier is in motion as indicated by the position of the rings which are approaching the work in Fig. 1. Each ring then strikes the work with the weight of its heavier outer side, which is less than balanced by its inner side, and upon striking the work turns as well as yields inwardly against the resistance of this weight which centrifugal force tends to bring back to outermost position as the ring drags over the work the surface of which is usually approximately tangential to the path of the rings moving with the carrier. The inner edges of the rings formed by the eccentric boring are also preferably beveled as at 6 to permit the rings to have a limited lateral tipping movement for better adaptation to irregularities in the surfaces over which they pass.

Having explained the invention, I claim as new and desire to secure by Letters Patent of the United States:—

1. In a machine of the class described a shoe beater comprising a rotary carrier and beating members arranged about the periphery of the carrier, each member consisting of a plurality of eccentrically bored rings loosely mounted on the carrier.

2. In a machine of the class described a shoe beater comprising a rotary carrier having an annular series of pivot rods and eccentrically bored rings loosely hung on the rods to have radial play, substantially as described.

3. In a machine of the class described, a rotary shoe beater comprising a carrier, an annular series of rods therein and an annular series of beating members on said rods in the form of rings having larger interior diameters than the rods whereby they may be moved bodily outwardly by centrifugal force when the carrier is rotated, said rings being eccentrically bored whereby their heavier sides are turned back to striking position by said force after each passage over the work.

4. In a machine of the class described a shoe beater comprising a rotary carrier and

beating members arranged about the periphery of the carrier, each member consisting of a plurality of rings loosely mounted on the carrier to have radial play and having
5 their inner edges beveled to permit of limited lateral tipping movement.

In testimony whereof I have signed my

name to this specification in the presence of two subscribing witnesses.

ORRELL ASHTON.

Witnesses:

JENNIE P. ANDERSON,
MARTHA W. COUPE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
