

A. BATES.
SHOE BEATING MACHINE.
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1,016,388.

Patented Feb. 6, 1912.

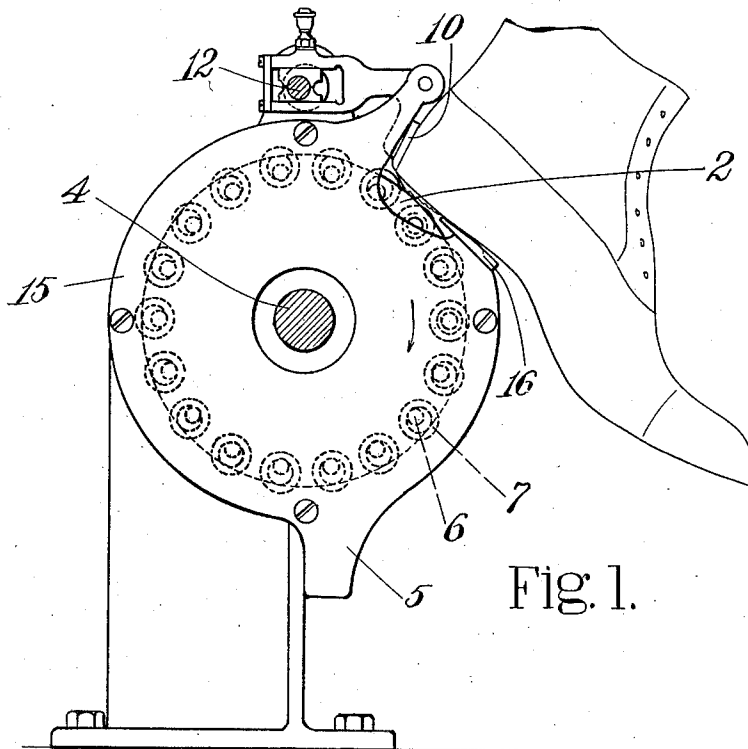


Fig. 1.

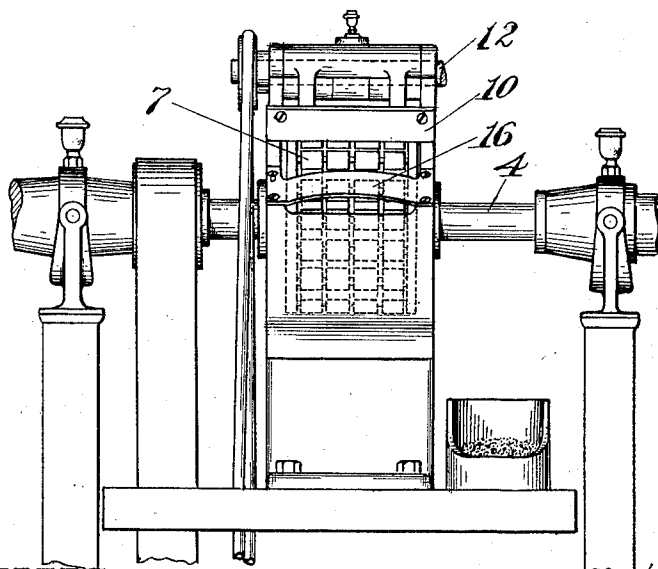


Fig. 2.

WITNESSES.

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ARTHUR BATES, OF LEICESTER, ENGLAND, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

SHOE-BEATING MACHINE.

1,016,388.

Specification of Letters Patent.

Patented Feb. 6, 1912.

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To all whom it may concern:

Be it known that I, ARTHUR BATES, a subject of the King of England, residing at Leicester, in the county of Leicester, England, have invented certain Improvements in 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 guards and work rests for shoe pounding and similar machines and is herein shown as applied to the rotary pounding machine which forms the subject-matter of British specification No. 16,589 of 1908. That machine comprises a rotary carrier upon which are mounted in circular series a plurality of beating elements which are loosely hung and capable of yielding inwardly against the action of centrifugal force while the machine is in motion. With this main working tool which is used primarily for beating the bottom of a shoe there is employed a side beater which is reciprocated in a plane which is substantially tangential to the path of the rotary bottom beater. The work is presented bottom downwardly against the upper portion of the rotary beater and with the side of the shoe against the side beater. In accordance with a feature of this invention a work rest is arranged relatively to two beaters so that the work may be positioned thereon in operative relation to either or both of said beaters. In the contemplated use of the illustrated embodiment of the invention the side beater forms a back rest. This is carried upon a shell which partially encircles the rotary beater and the new rest is formed as a bar extending across the periphery of the beater below the side beater. The shoe is presented to the action of the bottom beater through the opening formed between the side beater and the bar, these two upper and lower parts serving to position and steady the shoe. The bar forms a guard located approximately the length of the heel seat of the shoe from the side beater to limit the area of the shoe bottom which can be engaged by the bottom beater. This is important in treating welt shoes the heel seats only of which should be beaten and the lasting tacks or the welt of which in the shank should not be liable to contact with the beater. This bar also forms a guard to

protect the operator's fingers from being knocked by the beater while he is holding the shoe. The shoe can be fulcrumed on the bar to concentrate the action of the bottom beater upon the edge of the shoe bottom or to concentrate the action of the side beater upon the edge of the shoe side. While the shoe is rested on the bar it can be presented to the action of either beater without being engaged by the other beater if desired.

The foregoing and other features of this invention will appear in connection with the following description of a preferred embodiment of this invention and will then be pointed out in the claims.

Figure 1 is an end view; Fig. 2 is a side view.

The illustrated machine comprises a rotary carrier 2 on a shaft 4 turning in the head of a frame 5. The carrier has an annular series of spindles 6 upon which are strung rings 7 the interior diameter of which is larger than the spindles so that the rings which are held outward by centrifugal force while the carrier is in motion, can yield inwardly when they strike the work. These rings form the beating elements and are adapted to strike, yield and then glide over the shoe bottom with a very effective action for compacting the shoe materials upon the last bottom and particularly for beating down the lasted-over upper materials on the margin of the shoe bottom.

Coöperating with the rotary bottom beater in the work of shaping the shoe is the side beater 10 which has an appropriately shaped acting face and is connected with actuating mechanism driven from the supplementary shaft 12. The side beater is guided and has a reciprocating movement in a path substantially tangential to the path of the bottom beater so that the two beaters shape the shoe at both sides of its edges when the shoe is presented as indicated in Fig. 1. In this presentation of the work to the bottom beater the side beater serves as a back rest. The rotary bottom beater is partially inclosed by a guard or shell 15 which may conveniently be a part of the frame. A bar 16, shown attached to the frame by upwardly directed end arms, extends across the periphery of the bottom beater as appears in Fig. 2 in position to serve as a rest for the bottom face of the shoe. This rest is spaced from

the side beater about the length of the heel seat of the shoe and through the opening between the parts 10 and 16 the heel seat of the shoe is presented to the action of the bottom beater. The shoe can be fulcrumed on the rest 16 and tipped either downwardly to concentrate action of the bottom beater on the margin of the shoe heel seat or upwardly to concentrate action of the side beater on the marginal portion of the side face of the shoe. The bar serves as a rest over which the shoe can be pressed both backwardly and downwardly against both beaters simultaneously. It steadies the shoe so that less vibration is transmitted to the operator and it also guards from contact with the rotary beater both the fingers of the operator and the portions of the shoe which should not be beaten.

Having stated the nature of this invention, described a preferred embodiment thereof and explained how it may be used, I claim as new and desire to secure by Letters Patent of the United States:—

1. A machine of the class described having, in combination, a rotary shoe beater and a second beater arranged relatively thereto to treat the side of the shoe while the shoe bottom is being treated by the rotary beater, a bar extending across the periphery of the rotary beater to sustain the work for the action of both beaters simultaneously.

2. A machine of the class described having, in combination, a rotary shoe beater and a second beater arranged relatively thereto to treat the side of the shoe while the shoe bottom is being treated by the rotary beater, and means arranged relatively to the two beaters and in the same plane as the rotary beater to constitute a fulcrum about which the shoe may be rocked to force against either beater the edge portion of that face of the shoe which is being treated by that beater.

3. A machine of the class described having, in combination, a rotary shoe beater and a shoe bottom rest comprising a bar extending across the periphery of the beater in close proximity thereto and forming a fulcrum about which the shoe may be rocked to concentrate the action of the beater upon the marginal portion of the shoe bottom.

4. A machine of the class described having, in combination, a rotary shoe beater and a second beater arranged relatively thereto to treat the side of the shoe while the shoe bottom is being treated by the rotary beater, and a bar extending across the periphery of the rotary beater in position to guide the shoe in its presentation to the side beater without necessarily engaging with the bottom beater.

5. A machine of the class described having, in combination, a rotary shoe beater and means forming a back-rest for the shoe, and a rest for the bottom of the shoe which extends across the periphery of the rotary beater in position for use simultaneously with the back rest in positioning the shoe for the action thereon of the bottom beater.

6. A machine of the class described having, in combination, a rotary shoe beater, and means partially encircling the beater and including an upper part against which the side of the shoe may be rested and a lower part or bar spaced from the said upper part a distance approximating the length of the heel seat of the shoe and against which bar the bottom of the shoe may be simultaneously rested in presenting the heel seat to the action of the beater through the opening between said upper and lower parts.

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

ARTHUR BATES.

Witnesses:

ARTHUR ERNEST JERRAM,
KATHERINE PEXTON.