

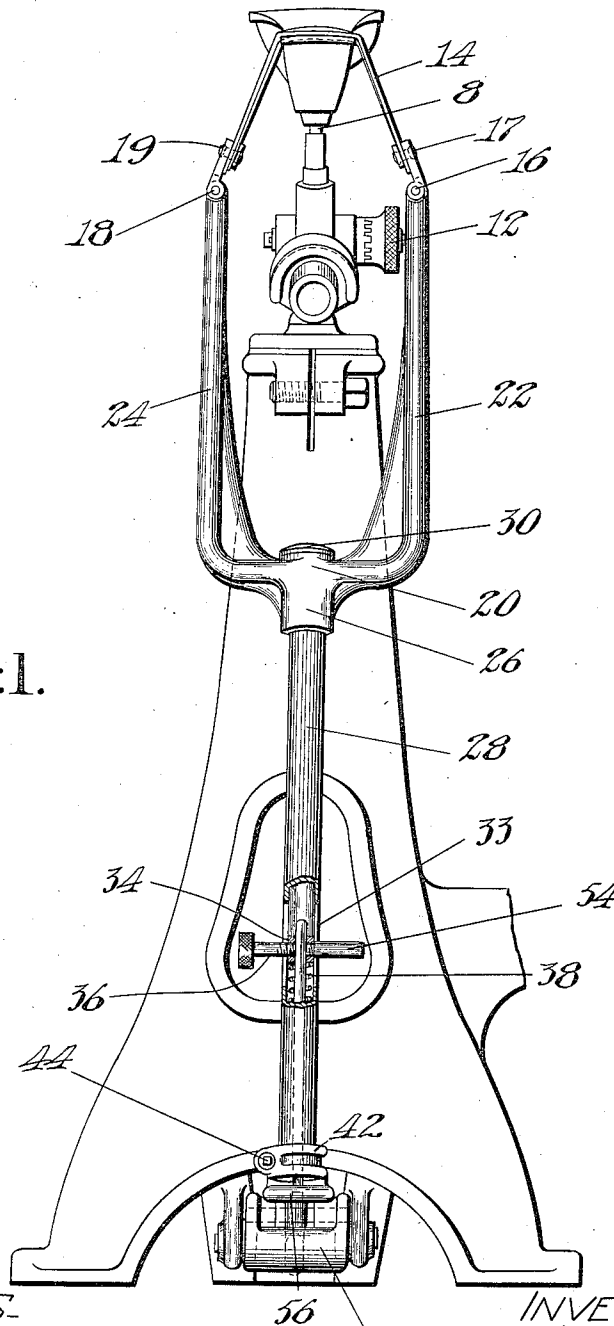
A. BATES & E. A. CRIDLAND.
 WORK SUPPORT.
 APPLICATION FILED FEB. 10, 1913.

1,060,735.

Patented May 6, 1913.

2 SHEETS—SHEET 1.

Fig. 1.



WITNESSES:

Elizabeth C. Coups
O. Blanche Hargraves

INVENTORS:

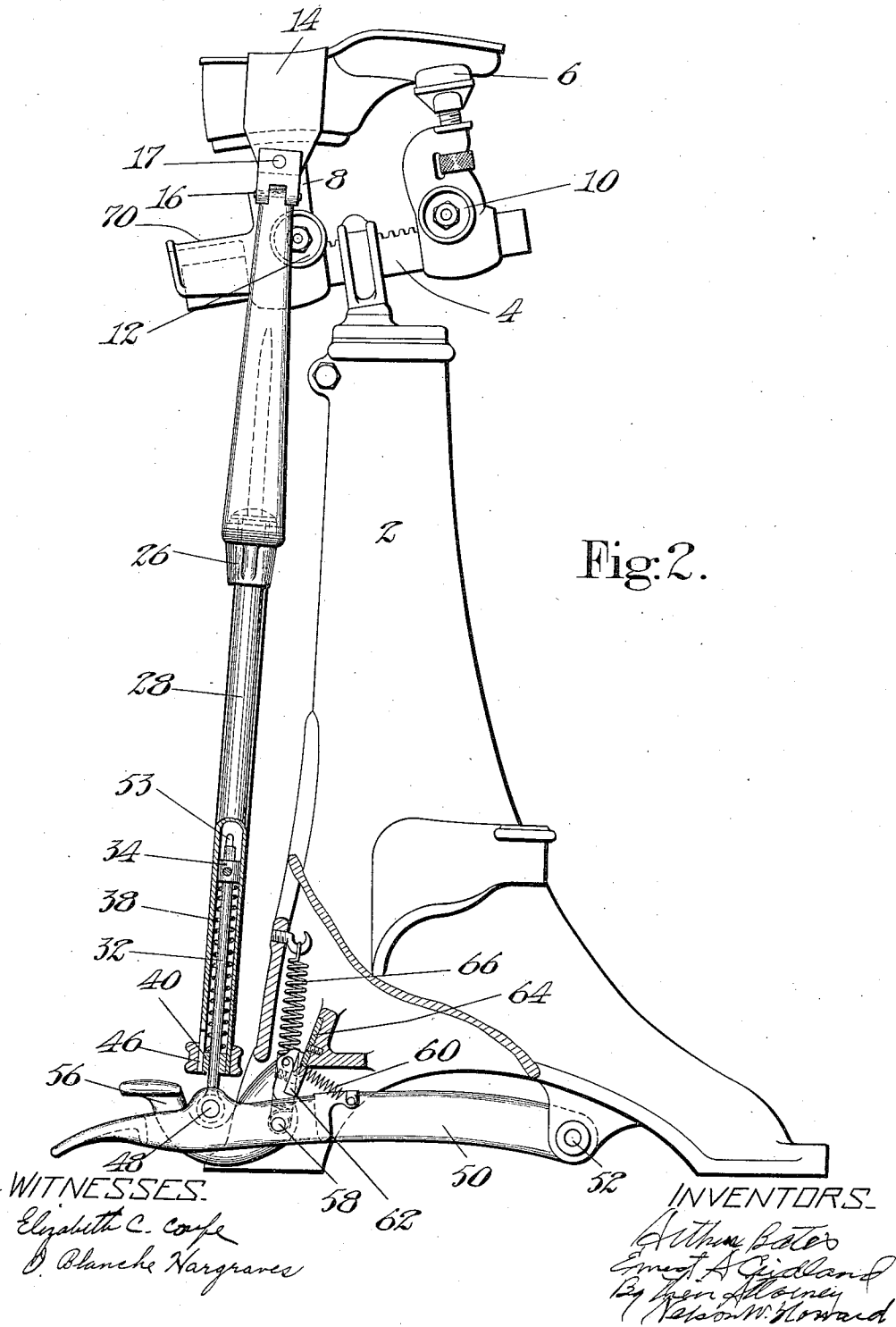
Arthur Bates
Ernest A. Cridland
By their Attorney,
Nelson McDonald

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2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

ARTHUR BATES AND ERNEST ALBERT CRIDLAND, OF LEICESTER, ENGLAND, ASSIGNORS TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

WORK-SUPPORT.

1,060,735.

Specification of Letters Patent.

Patented May 6, 1913.

Application filed February 10, 1913. Serial No. 747,412.

To all whom it may concern:

Be it known that we, ARTHUR BATES and ERNEST A. CRIDLAND, subjects of the King of England, residing at Leicester, Leicestershire, England, have invented certain Improvements in Work-Supports, 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 improvements in or relating to machines for reforming turn shoes or for leveling the bottoms of boots or shoes.

More particularly the invention is applicable to machines for reforming turn shoes of the type described in an application for United States Letters Patent Serial No. 492,489 filed Apr. 27, 1909.

The object of the present invention is to provide a device for holding the shoe firmly on the jack or for both holding it and molding the waist of the shoe.

A feature of the invention, which is applicable to machines for reforming turn shoes or for leveling the bottoms of boots or shoes, comprises means for holding the shoe firmly on the jack or for both holding it and molding the waist of the shoe comprising a stirrup or strap and mechanism operatively connected thereto which is adapted to force the said stirrup or strap into contact with the shoe bottom and hold it there under pressure while the shoe bottom is being operated upon.

As another feature of the invention the strap holding means is arranged so that it will yield whereby the stirrup or strap is held yieldingly or resiliently in contact with the shoe bottom and preferably means is also provided for varying the pressure applied by the yielding means.

These and other features of the invention, including novel details of construction and important combinations of parts, will appear more fully from the following description when read in connection with the accompanying drawing and will be pointed out in the appended claims.

In the accompanying drawing,—Figure 1 is a front elevation of a machine embodying the present invention; and Fig. 2 is a side elevation, partly in section, of the machine shown in Fig. 1.

Referring to the accompanying drawing 55 the machine comprises an upright frame or support 2 at the head of which is mounted a rack bar 4. Mounted on the rack bar 4 is a toe pad 6 for supporting the toe and at its other end a last pin 8 for supporting the heel end of a last upon which is carried the shoe to be operated upon. The toe support 6 and the heel support 8 are mounted so that they can be adjusted toward and from each other by means of hand wheels 10, 12.

A leather stirrup or strap 14 is adapted to embrace and bear on the waist of the shoe as shown in Fig. 2 and is attached in any convenient manner, for example by hinged connections having longitudinally extending pintles 16, 18, and transverse pivots 17, 19, to a fork or yoke 20, having arms 22, 24. The said strap is preferably attached to the fork so that it is readily detachable. The arms 22, 24 are situated one on either side of the rack bar 4 at points adjacent to the heel support as shown and the said fork or yoke 20 is provided at its lower end or bight with a hollow boss 26 through which passes a tubular post 28 having a head 30 which is adapted to rest on the boss 26.

When the strap 14 is released from pressure against the shoe it may be raised from contact therewith by a spring 66 and may then be swung backwardly over the heel of a shoe on the support and relatively to the yoke about the transverse pivots 17, 19, the yoke and post remaining in a position of substantially stable equilibrium over the pivot 48 about which further movement of the strap may be had if desired. By reason of the pivotal connection of the yoke 20 with the post 28 the strap is adapted to be turned around by the yoke for use upon right and left shoes without removal from the yoke which carries it. This construction enables a non-symmetrically-shaped strap to be used which has one end thickened so as to fit the unequally inclined sides of the unsymmetrical shanks of right or left shoes, for, as is well-known, the shanks of shoes, particularly ladies' shoes, are unequally inclined at the opposite sides, the greater lateral inclination of the shank being upon the inner side. Inside the said tubular post 28 is situated a rod 32 having a block 34 secured thereto by means of a knurled headed set screw 36. A spring 38 is pro-

vided which surrounds the said rod and contacts at one of its ends with the block 34 and at its other end with a plug 40. The plug 40 is fixed in the interior of the post 28 at its lower end by means of a clamp 42 which surrounds the lower end of the post 28 and is provided with a screw 44 so arranged that when the screw is turned it will act to contract the lower end of the post to hold the plug in place, a slot 46 being provided in the post to permit such contraction. The rod 32 is thus yieldingly supported in the post 28.

The lower end of the rod 32 is pivoted at 48 to a treadle 50 fulcrumed at 52 to the frame 2 of the machine and it will be understood that when the treadle is depressed the strap 14 will be pulled downwardly against the shank of the shoe through the rod 32, spring 38 and the parts just described. A handle 54 is provided for raising the block 34 and connected parts. The handle 54 has a shoulder and a reduced threaded portion which is screwed into the block, the shoulder preventing contact of the threaded portion with the rod 32. Slots are provided in the post 28 for the handle 54 and the set screw 36. The pull on the work is determined by the tension of the said spring 38. In order to vary the tension of this spring the set screw 36 is unscrewed and the block 34 raised or lowered by means of the handle 54. When the required adjustment is obtained the screw 36 is again set up tight.

In order to hold the treadle 50 in its lowermost position and consequently maintain the pressure on the shank of the shoe while the work is operated on, a pedal 56 is provided which is pivoted to the treadle 50 at 58 and is acted upon by a spring 60 one end of which is attached to the pedal 56 and the other to the treadle 50 so that when the treadle 50 is in its lowermost position (see Fig. 2) the pedal 56 will engage, by means of a face 62, a catch 64 fixed to the frame 2 of the machine. It will be understood that when the pedal 56 is depressed the face 62 will be released from the catch 64 and the treadle 50 will then return to its inoperative position under the action of the spring 66. The face 62 and catch 64 are held in place by screws so that a new face and catch can be substituted therefor if they become worn.

The screw 36 prevents rotative movement between the post 28 and the rod 32 and when the treadle 50 is in its highest position it will bear against the top of the slot 53 and lift the post 28 bodily upward so that the said strap is clear of the work and can be swung away therefrom to enable the shoe to be lifted from off the jack, the said spring supported rod 32 swinging about its pivot 48 on the pedal 50. The boss 26 beside being loose on the post 28 may be arranged for

longitudinal movement thereon so that the post will slide through the boss without raising the yoke when the treadle is raised by the spring 66. The strap may in this case be lifted off the shoe by hand and hung upon the projection 70 of the jack.

Having described our invention, what we claim as new and desire to secure by Letters Patent of the United States is:—

1. A jack for turn shoe reforming machines comprising a shoe support, a strap arranged to pass over the shank of the shoe and having one end thicker than the other end to fit the greater lateral inclination at the inside of a shoe shank, a support for the strap located below the shoe, and pivotal sustaining means therefor to permit the strap to be turned around relatively to the shoe support to fit the contour of a right shoe shank or a left shoe shank.

2. A jack for turn shoe reforming machines, comprising a shoe support, a stirrup to pass over the shank portion of a shoe on said support, a yoke carrying the ends of the stirrup, a member having a swiveled connection with the yoke arranged to permit lateral turning movement of the yoke and stirrup independently of the shoe support to adapt the stirrup to varying positions or shapes of shoe shanks, and treadle means for depressing the member to force the stirrup against the shoe shank.

3. A jack for turning shoe reforming machines comprising a shoe support, a strap arranged to pass over the shank of the shoe on said support, a yoke located wholly outside the shoe support and having its arms hinged to the ends of the strap, a post passing freely through the bight of the yoke and having a head to engage the yoke to depress the strap against the shoe, a treadle, a spring connection between the treadle and the post, and a catch for holding the treadle in a predetermined relation of depression.

4. A jack for turn shoe reforming machines, comprising a shoe support, a strap arranged to pass over the shank of a shoe, a yoke having its arms secured to the ends of the strap, a post passing freely through the bight of the yoke and having a head to engage the yoke to depress the strap against the shoe, a spring in the post having a block resting thereon, a treadle, a rod connected with the block and passing through the spring to a pivotal connection with the treadle, and means for locking the treadle in depressed position.

5. A jack for turn shoe reforming machines comprising a support for the shoe and a strap arranged to pass over the shank of the shoe and to bend the shank of the shoe into conformity with the transverse curvature of the shank portion of the last bottom, a support for the strap located below the shoe and sustained for rotation on a

vertical axis independently of the shoe support whereby the strap may be turned around to adapt it to varying positions or shapes of shoe shanks without removal from its carrier.

6. A jack for turn shoe reforming machines, having, in combination, a shoe support, a treadle lever, a yoke yieldingly connected to the lever for rotation about a vertical axis and having its arms 22, 24 extending upwardly at either side of the shoe support, and a shank forming strap having its ends connected to said arms and arranged to be turned around independently of the shoe support by the yoke to adapt it to conform to varying positions and shapes of shoe shanks.

7. A jack for turn shoe reforming machines, having, in combination, a shoe sup-

port, a treadle lever, a yoke yieldingly connected to the lever and having its arms extending upwardly at either side of and free from engagement with the shoe support, said yoke being arranged to turn about a vertical axis, and a shank forming strap having its ends pivotally connected to said arms for movement to permit the strap to be swung forwardly and backwardly over the heel of a shoe on the support and relatively to said yoke.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

ARTHUR BATES.

ERNEST ALBERT CRIDLAND.

Witnesses:

FREDERICK WILLIAM WORTH,
JOHN RICHARD LAW.

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