

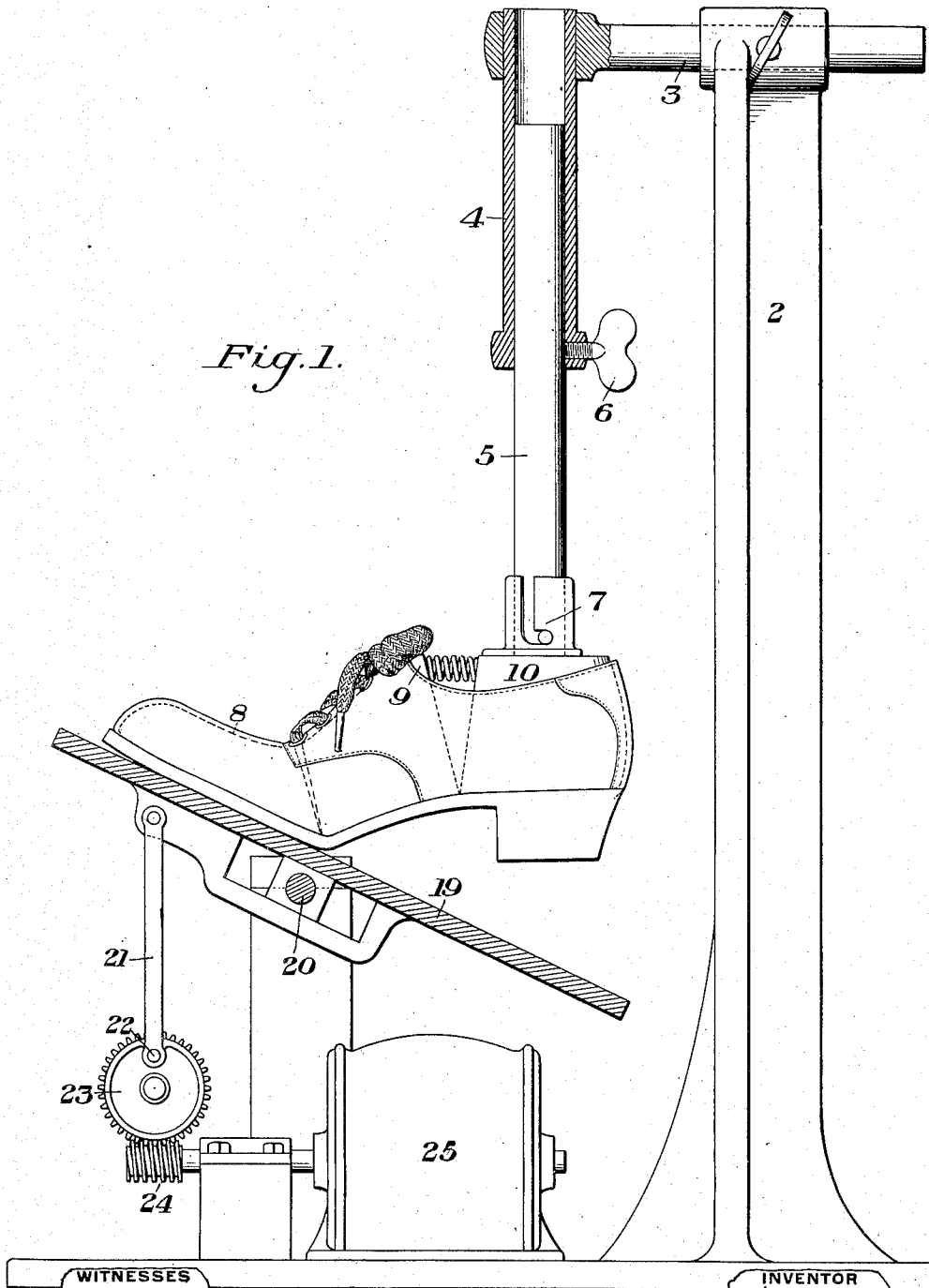
C. P. BYRNES.  
 APPARATUS FOR BREAKING IN SHOES.  
 APPLICATION FILED APR. 28, 1909.

1,015,291.

Patented Jan. 23, 1912.

2 SHEETS—SHEET 1.

*Fig. 1.*



WITNESSES

INVENTOR

*R. A. Balderson*  
*R. S. Little*

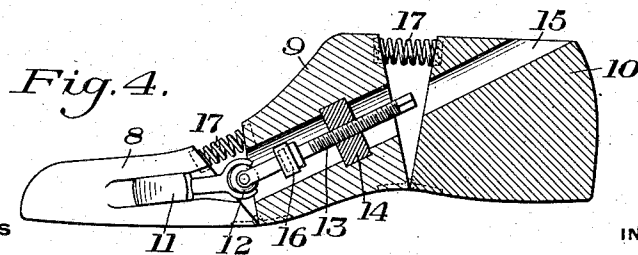
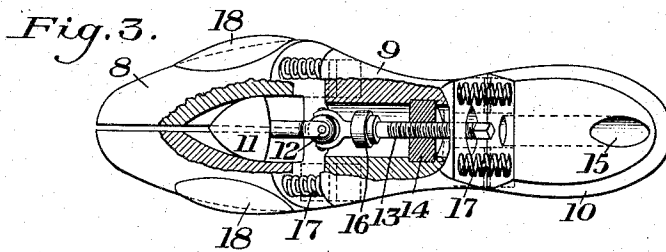
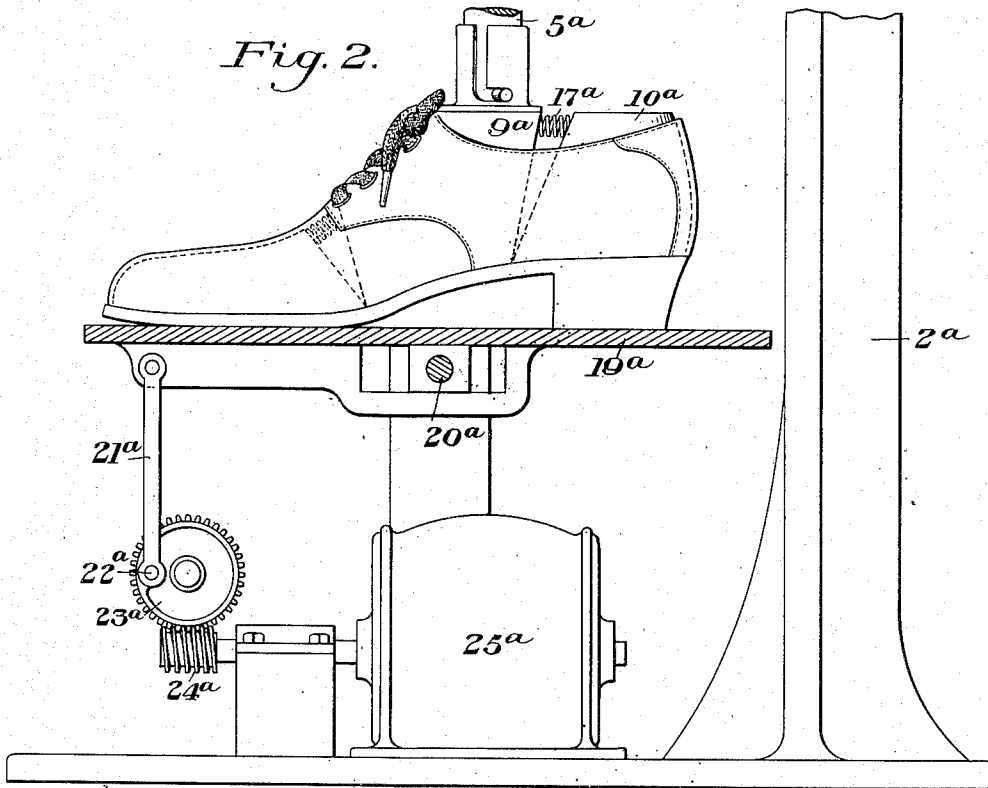
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# UNITED STATES PATENT OFFICE.

CLARENCE P. BYRNES, OF SEWICKLEY, PENNSYLVANIA.

## APPARATUS FOR BREAKING IN SHOES.

1,015,291.

Specification of Letters Patent.

Patented Jan. 23, 1912.

Application filed April 28, 1909. Serial No. 492,660.

### *To all whom it may concern:*

Be it known that I, CLARENCE P. BYRNES, of Sewickley, Allegheny county, Pennsylvania, have invented a new and useful Apparatus for Breaking in Shoes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a sectional side elevation of one form of apparatus arranged to carry out my invention; Fig. 2 is a similar view showing a modified form; and Figs. 3 and 4 are detail views showing one form of last which may be employed.

My invention is designed to overcome or reduce the time, inconvenience and discomfort of breaking in new shoes upon the foot of the wearer.

To that end, it consists in mechanically breaking in shoes, either before or after the manufacture of the shoes is completed.

In carrying out the invention I mechanically flex one or more portions of the shoe, preferably by mechanism which is rapid and quick-acting, and in connection with a suitable flexible last or inner support, so that in a comparatively short time the shoe will be loosened up and broken-in, to largely reduce the discomfort and sometimes pain of new shoes.

In the form of Fig. 1, 2 is a supporting bracket, having at its top an adjustable transverse bar 3, to which is secured a depending sleeve 4. Within this sleeve telescopes a stem 5, which may be secured in adjusted position by a set-screw 6, or other suitable means. To this stem is detachably secured by a bayonet lock device 7, or other suitable means, a flexible foot or last of proper size and shape to fit within the shoe to be operated upon. This last or artificial foot should preferably be made of sufficiently rigid material, such as wood, &c., to give a rigid and efficient breaking-in action when the shoe is flexed.

In the form shown in Figs. 1, 3 and 4 the last is made in three parts, 8, 9 and 10, the parts 8 preferably being longitudinally divided or split so that it may be spread by the wedge 11 operated through the universal joint 12 by the screw-threaded stem 13 extending through threaded block 14 and operated by a wrench which may be inserted through the hole 15 in the rear part. A swivel connection 16 is provided in the

screw-threaded stem. The three parts may be separated by springs 17 to resist the flexing action and return the shoe to its normal position. The last is also preferably provided with detachable patches 18, which may be applied to different parts thereof in order to stretch or ease up any portion of the shoe during the breaking-in action. The shoe is rested upon the oscillating support 19, pivoted at 20 and rocked through the connecting rod 21, pivoted to crank pin 22 on the combined crank disk and worm wheel 23. This worm wheel is rotated through a worm connection 24 on the shaft of an electric motor 25, the motor thus being geared down to give a fairly rapid oscillating movement to the shoe support. The support may also be preferably adjusted along its pivot and secured in adjusted position by a slotted block connection therewith, as shown.

In using the device the last is inserted in the shoe, with or without any suitable patches. It may then be distended as desired, and the stem connected and the shoe placed on the support by sliding the stem downwardly or otherwise. The motor is then started into action and a rapid flexing of the shoe is obtained somewhat similar to the action in walking. As the front portion of the shoe is flexed upwardly, its heel portion will tend to draw down and thus ease up the heel portion. The artificial foot will give more or less the action of the foot in breaking in the shoe, and the rapid flexing will quickly loosen the shoe and relieve its binding tendency when placed on the foot. After a suitable period of breaking in, the shoe may be removed and is then ready for wear.

In Fig. 2 I show a form similar to that of Fig. 1, except that the stem 5<sup>a</sup> is connected to the intermediate portion 9<sup>a</sup> of the last; and the support 19<sup>a</sup> is oscillated both upwardly and downwardly so that both portions of the shoe will be alternately flexed. Other parts similar to those of Fig. 1 are marked with similar numerals with the letter "a" applied.

The advantages of my invention result from reducing the discomfort and pain incident to breaking in new shoes. The mechanical breaking-in operation may be carried out either at the factory before or after completion of the shoe, or at shoe stores, and will not only ease up the shoe and make

it more comfortable, but may also be used to stretch portions of the shoe to suit the particular wearer.

I am aware that exhibiting devices for shoes have been proposed, in which a shoe is cut open and given a movement somewhat similar to a walking movement in order to exhibit the action of a particular style of cushion shoe; but this operation does not break in uncut shoes designed to be worn.

I am also aware that it has been proposed to break in shoes by strapping the shoe down on a flexible plate and flexing the toe portion up and down. In this case, however, the heel portion of the shoe is not moved, and the shoe must be held down to the stationary support.

The last-support may be actuated to flex the shoe instead of moving the shoe support, and many other changes may be made in the form and arrangement of the apparatus without departing from my invention.

I claim:—

1. In apparatus for breaking in shoes, a shoe support, a flexible last, a support for the last, and connections arranged to set up an alternating relative movement between the last and shoe support to flex both the heel and toe portions of the shoe, substantially as described.

2. In apparatus for breaking in shoes, a flexible last arranged to be inserted in the

shoe, a carrier for the last, a support on which the shoe loosely rests, and connections arranged to set up an oscillatory movement between the last and shoe support.

3. In apparatus for breaking in shoes, a flexible last, a carrier therefor, a support for the shoe, and connections arranged to set up a relative motion between the last carrier and the support corresponding to the movement in walking, whereby the shoe is flexed both at the heel and toe; substantially as described.

4. In apparatus for breaking in shoes, a flexible last, a fixed support therefor, a carrier on which the shoe rests, and mechanism for oscillating said carrier in both directions to flex both the heel and toe portions of the shoe; substantially as described.

5. In apparatus for breaking in shoes, a rigid support for the shoe, a flexible last, a support for the last, and connections arranged to set up a relative motion between the last support and the shoe support to oscillate at least a portion of the shoe; substantially as described.

In testimony whereof, I have hereunto set my hand.

CLARENCE P. BYRNES.

Witnesses:

G. M. VIERS,

H. M. CORWIN.