

March 18, 1924.

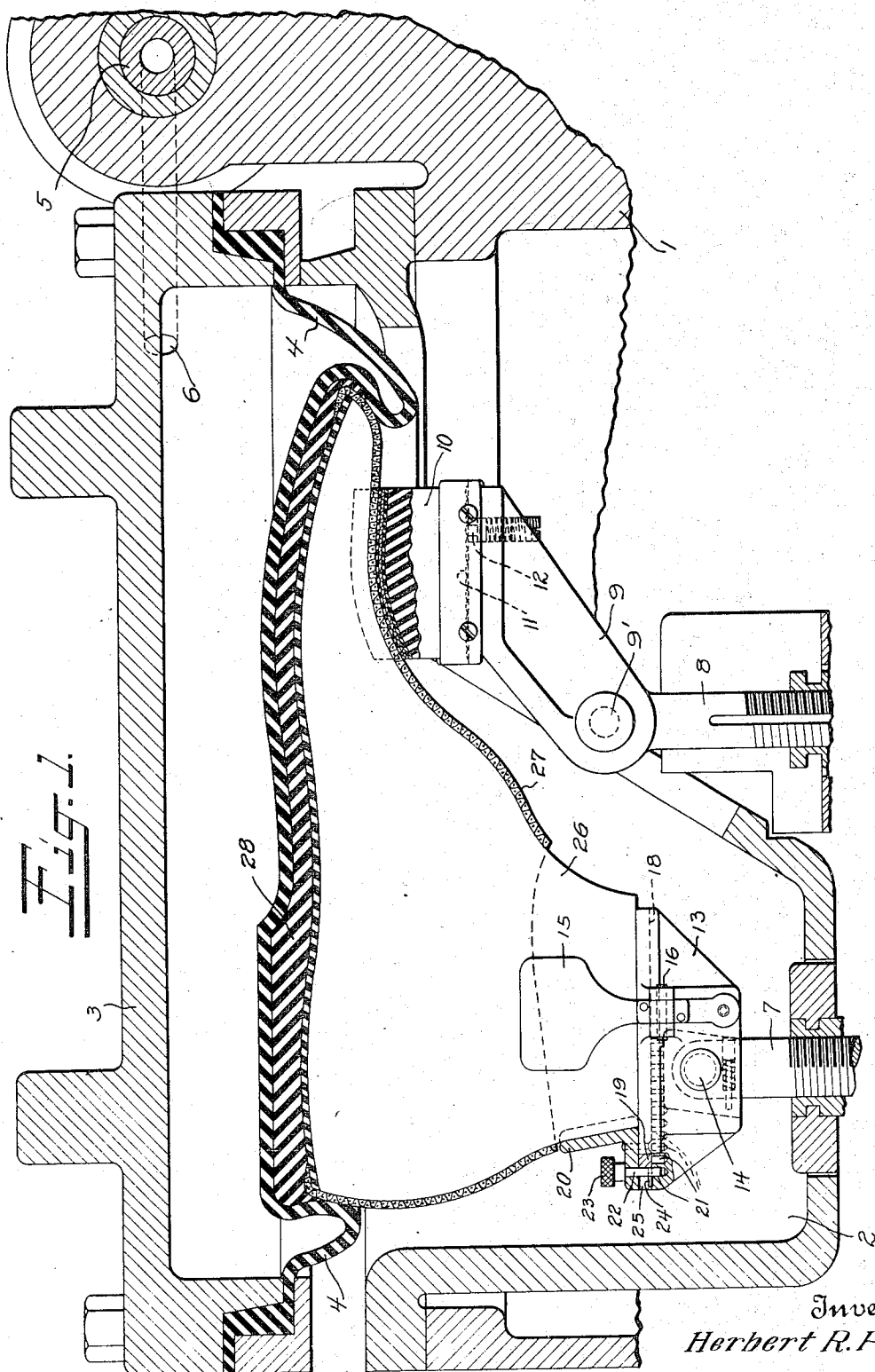
1,487,178

H. R. POLLEYS

LAST POSITIONING DEVICE

Filed Feb. 11, 1922

2 Sheets-Sheet 1



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By his Attorney
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Fig. 3.

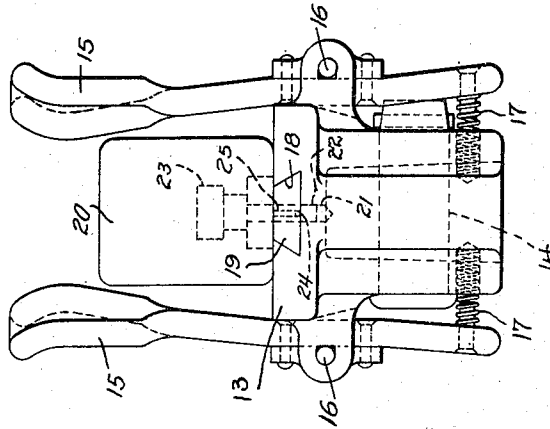
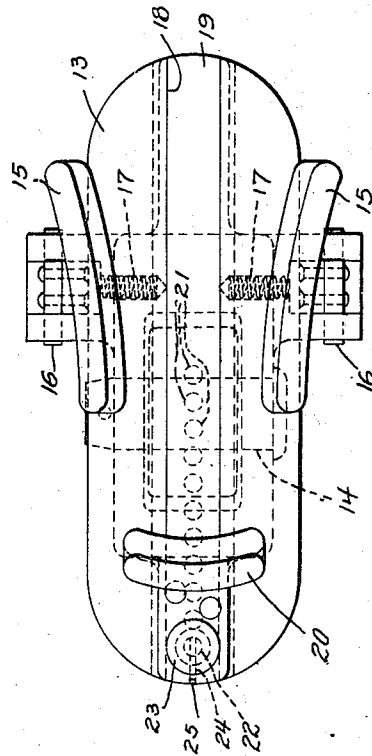


Fig. 2.



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UNITED STATES PATENT OFFICE.

HERBERT R. POLLEYS, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO L. CANDEE & COMPANY, A CORPORATION OF CONNECTICUT.

LAST-POSITIONING DEVICE.

Application filed February 11, 1922. Serial No. 535,789.

To all whom it may concern:

Be it known that I, HERBERT R. POLLEYS, a citizen of the United States, residing at New Haven, county of New Haven, and State of Connecticut, have invented a certain new and useful Last-Positioning Device, of which the following is a full, clear, and exact description.

This invention relates to a last positioning device, more particularly to one for positioning lasts in a sole press.

Sole presses are in general of two types, one in which the last is held in upright position with the sole downward and the sole pressing means is disposed below the last, the other in which the last is held in inverted position with the sole upward and the sole pressing means is disposed above the last. Machines of the first type are objectionable in that the mechanism for positioning and holding the last must be swung to one side or moved upwardly while placing the last on the sole pressing device in order that the operator may have free access to the sole pressing mechanism. As the racks on which the shoes are supplied to the operator hold the shoes in an inverted position on the usual last supporting pins, the last after removal from the rack must be turned over by the operator before insertion in the machine. These machines are also objectionable in that the last must be manually steadied by the operator until the last positioning means engages it, and on account of this the machine is adaptable for pressing only one shoe at a time. The operator also cannot inspect the sole readily when in the machine. In machines of the second type in which the last is held in inverted position the last is usually positioned by a toe block and some means for engaging the body portion of the last where it projects from the shoe. This latter means usually consists of a pin or pins on a support, which engage corresponding recesses in the last. Machines of this type cannot be operated as rapidly as desired for the reason that the operator cannot use the eye in inserting the pins in the last recesses owing to the inverted position of the shoe, but must depend almost entirely on the sense of touch. Moreover, as the pin spacing must be varied for different sizes of shoes, time must be taken for this adjustment when changing sizes.

The present invention contemplates the

provision of a positioning means which is especially adapted for use with sole presses operating on inverted shoes and consists of a last positioning means adapted to engage the last externally.

An object of my invention is to provide an improved last positioning means for sole pressing machines.

Another object is to provide for a more rapid and accurate operation of sole pressing machines.

Still another object is to provide a last positioning means which operates externally of the last.

A further object is to provide a last positioning means which is in part self-adjusting for different sizes and styles of lasts.

For a detailed disclosure of the invention reference is had to the accompanying specification and drawings, in which latter:

Fig. 1 is a longitudinal sectional view of one embodiment of my invention as applied to a sole pressing machine of the inverted type.

Fig. 2 is a plan view of the positioning device for the last body; and

Fig. 3 is an end view thereof.

Referring to the drawings the numeral 1 represents the frame of a sole pressing machine which is provided with a cavity 2 for the reception of a last. Above the cavity is a hollow cover 3 closed at its lower portion by a flexible diaphragm 4, the cover being pivotally mounted on the hollow hinge pin 5, which latter is adapted to supply fluid under pressure to the cover through the passage 6. The construction so far described is substantially that shown in the patent to Stuart, 1,337,532, April 20, 1920, but any other suitable means for pressing the sole may be substituted. As the machine in the present instance is not intended to press the uppers of shoes, the lower diaphragm shown in the Stuart patent has been omitted and threaded last supporting rods 7 and 8 are provided, which rods may be vertically adjusted relatively to each other or in unison, in the manner fully disclosed in my copending application, Serial No. 465,804, filed April 30, 1921. A bracket 9 is angularly adjustable on the rod 8 at 9' in the manner disclosed in my copending application above mentioned, which bracket supports a toe block 10 which may be of rubber or any other suitable material, and is preferably

curved to approximately fit the last in the manner shown. This block may be longitudinally adjusted in any desired manner, such as that shown in one embodiment in my copending application above mentioned, in which the base of the toe block is provided with a longitudinal series of recesses 11, any one of which may be engaged by the spring pressed detent 12 to yieldingly hold the block in adjusted position.

A block 13 is pivotally and resiliently mounted on the rod 7 at 14 in the manner fully described in my copending application above mentioned, the upper face of the block forming a support or rest with which the top, or that portion of a last usually projecting from the shoe, may engage. Last positioning arms 15 are pivotally mounted at 16 at each side of the block 13, and coil springs 17 interposed between the lower ends of the arms and the block yieldingly press the upper ends of the arms inwardly toward each other. A longitudinal dovetail groove or keyway 18 is cut in the upper face of the block 13 (Fig. 3), and movable in this groove or keyway is a dovetail slide 19 having secured thereto the upwardly and slightly rearwardly inclined heel stop 20. In order that this stop may be held in adjusted position the block 13 is provided with a longitudinal series of recesses 21 below the keyway 18, and a reciprocable pin 22 carried by the slide 19 is adapted to be engaged with any one of the recesses to hold the slide in position. The pin 22 is provided with a knurled thumb piece 23, and projecting from the pin is a stop pin 24 movable in the slot 25 in the slide 19, which stop pin acts to prevent the accidental complete withdrawal of the pin 22.

In operation, the last supporting rods 7 and 8 are adjusted to the proper vertical position in the manner shown in my copending application above mentioned, and the bracket 9 and block 10 properly adjusted for the style and size of shoe to be operated upon, the slide 19 carrying the heel stop 20 being also adjusted to properly conform with the toe block 10. The operator then places the inverted last 26 with its accompanying shoe 27 on the block 13, sliding the top of the last body between the spring pressed arms 15 until the upper heel portion of the last engages the stop 20, while the curved toe portion of the last engages the toe block 10. The cover 3 is then moved down into closed position, locked, and fluid under pressure admitted within the cover in a manner described in the patent to Stuart above mentioned, and the downwardly extending diaphragm 4 firmly presses the outsole 28 into adhesion at all points with the body of the shoe and rolls over the edges of the sole.

The fluid under pressure is then exhausted from the cover, the latter unlocked and opened, the shoe removed, and another substituted. By adjusting the supports for the different styles and sizes the machine may be used for pressing soles on various kinds of footwear such as overshoes, tennis shoes, arctics, etc.

It is obvious that any other suitable sole pressing device may be used in place of that illustrated, and that, while the last positioning device is particularly adapted for sole presses operating on inverted lasts, it may also be used with sole presses in which the sole is pressed while the shoe is in an upright position. In particular, with prior presses of the inverted type it has been found that proportionally a rather large part of the time occupied in pressing a sole is taken up in positioning the last on its support, as the actual sole pressing operation is accomplished within a few seconds, hence, by the use of my device, the output of a sole pressing machine is very greatly increased, the work can be done by unskilled operators with practically no attention, and the work can be more accurately done, since the sole is in plain view of the operator both before and after the pressing operation. In the use of wooden lasts with the former types of sole presses in which last supporting pins engage recesses in the last, the wear and tear on the lasts is very great unless the recesses are provided with metal bushings, since the operators handle the lasts very roughly in forcing the pins up into the recesses when not accurately centered over them. On account of this wear and enlargement of the pin recesses the last tends to tip slightly during the sole pressing operation, thereby causing defective pressing. By the use of my invention, however, this objection is completely obviated, since the last positioning means engages the last externally only, and it is immaterial whether or not the last is centered with respect to the block 13 when presented thereto by the operator, since the spring pressed arms 15 will automatically position it laterally with respect to the block, and the stop 20 and toe block 10 position it longitudinally.

Having thus described my invention what I claim and desire to protect by Letters Patent is:

1. A last positioning device comprising a rest with which the top of the last may engage, spring pressed retaining means for the sides of the last pivoted to said rest, and a stop for one end of the last adjacent said retaining means and adjustable longitudinally of said rest.

2. A last positioning device comprising a rest for the top of the last, a pair of last positioning arms pivoted to the rest at its

sides, springs for yieldingly urging said arms toward each other, a stop member slidably connected to the rest and movable longitudinally thereof, and means for retaining said stop in adjusted position.

3. A last positioning device comprising a rest having an unobstructed surface for freely engaging the top of a last, spring pressed arms for yieldingly retaining the last at the sides against lateral movement, and a longitudinally adjustable stop adapted to engage the upper heel portion of the last.

4. A last positioning device for sole pressing machines comprising a pivotally and resiliently mounted block having an unobstructed last-top engaging surface, and three point last engaging means carried by the block for externally properly positioning the last for the sole pressing operation.

5. A last positioning device for sole pressing machines comprising a pivotally mounted block having an unobstructed last-top engaging surface, last positioning means at each side of the block for externally engaging the sides of the last, and additional last positioning means for engaging the last at its end.

6. A last positioning device for sole pressing machines comprising a pivotally mounted block having an unobstructed last-top engaging surface, last positioning means at each side of the block for externally engaging the sides of the last, and adjustable last positioning means for engaging the upper heel portion of the last.

7. A last positioning device for sole pressing machines comprising a pivotally mounted block having an unobstructed last-

top engaging surface, yieldingly mounted last positioning means adapted to externally engage the last at its sides, and longitudinally adjustable last positioning means for engaging the upper heel portion of the last.

8. A last support for sole pressing machines comprising a pivotally mounted block having an unobstructed last-top engaging surface, pivotally mounted spring pressed last positioning arms disposed at each side of the block, said block having a longitudinal slideway therein, a heel stop mounted in said slideway, and means for retaining said stop in adjusted position.

9. A last positioning device for sole pressing machines comprising a support having an unobstructed extended surface adapted to engage a complementary surface on the last body, said support being provided with adjacent external last side engaging means for preventing lateral displacement thereof and also longitudinal displacement in one direction, and means independent of said support for preventing longitudinal movement in the other direction.

10. A last positioning device for sole pressing machines comprising an unobstructed support for the last body provided with external last engaging means for preventing lateral displacement thereof and also longitudinal displacement in one direction, and a longitudinally and angularly adjustable toe block for preventing longitudinal displacement in the other direction.

Signed at New Haven, in the county of New Haven, and State of Connecticut, this 7th day of February, 1922.

HERBERT R. POLLEYS.