June 3, 1941. W. L. BAXTER 2,244,043

SHOE REST

Filed April 29, 1940

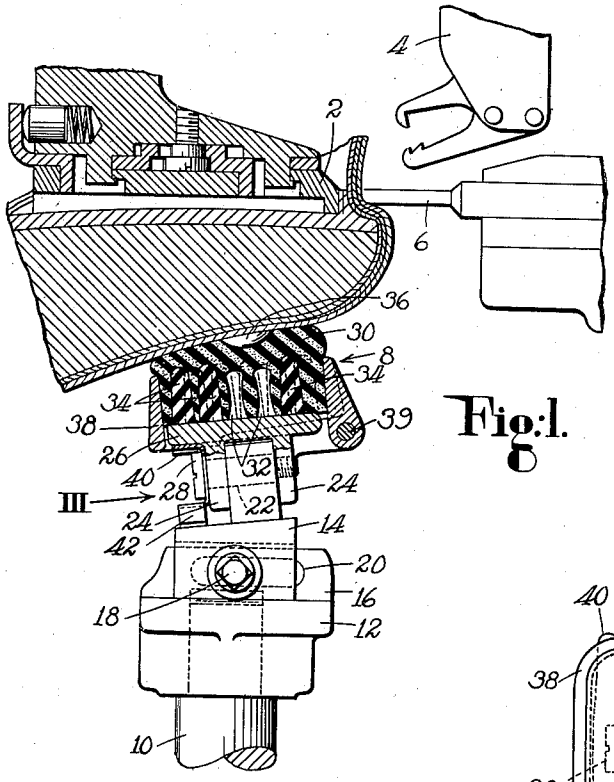


Fig. 1.

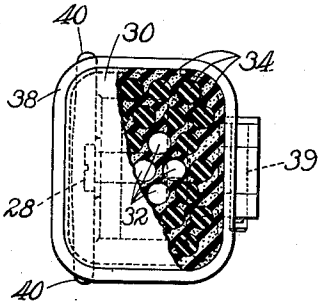


Fig. 2.

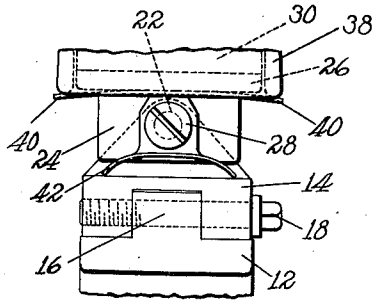


Fig. 3.

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SHOE REST

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10 Claims. (Cl. 12—123)

This invention relates to shoe rests or supports for use in machines for operating on shoes, and is herein illustrated as embodied in a shoe rest particularly adapted to engage the top of the toe-end portion or forepart of a shoe. The invention is further herein illustrated by reference to its use in a toe-lasting machine such as disclosed in United States Letters Patent No. 2,160,846, granted on June 6, 1939 on an application of F. C. Eastman and A. F. Pym, but it will be understood that it is applicable to machines of various kinds.

Shoes are sometimes provided on the tops of their toe-end portions with ornaments made of various materials which protrude from the uppers and may be differently positioned on shoes of different styles. An object of the present invention is to provide a shoe rest which, in engaging the portion of a shoe where such an ornament is located, will not injure the ornament. To this and other ends, the shoe rest herein shown comprises a rubber block or pad having therein a plurality of cavities containing removable plugs, so that by removing one or more of the plugs in a location opposite an ornament on a shoe the pad may be made more yieldable in that location than in other locations. As illustrated, the cavities and the plugs therein are arranged in series both lengthwise and widthwise of the shoe and afford a wide range of choice as to the plug or plugs to be removed. Preferably, although not necessarily, the plugs are made of rubber which is harder than that of the main body of the pad, in order to make more pronounced the increase in the yieldability of any portion of the pad where a plug is removed.

As a further feature, the invention provides novel means for controlling a shoe rest pad in such manner as to facilitate relative yield of different portions thereof and yet to guard against contact of the shoe with a holder in which the pad is mounted. The construction shown comprises a support for the toe rest pad on the opposite side thereof from the shoe, and a holder engaging faces of the pad which extend heightwise of the shoe, the holder being yieldingly movable heightwise of the shoe relatively to the pad support by the action of the pad thereon as the pad tends to spread outwardly over the holder in response to pressure of the shoe against it.

The above and other features of the invention, including various novel details of construction and combinations of parts, will now be more particularly described with reference to the accompanying drawing and thereafter pointed out in the claims.

In the drawing,

Fig. 1 is a view partly in side elevation and partly in section showing a shoe rest in which the present invention is embodied as it appears mounted in a toe-lasting machine such as disclosed in the above-mentioned Letters Patent;

Fig. 2 is a plan view of the shoe rest with a portion of its rubber pad broken away; and

Fig. 3 shows certain parts as viewed in the direction of the arrow III in Fig. 1.

The above-mentioned toe-lasting machine is provided with a plate 2 which by engagement with an insole on a last determines the position of the last and shoe relatively to toe-lasting instrumentalities comprising upper-pulling grippers and toe-embracing wipers, one of the grippers being shown at 4 and one of the wipers at 6. The shoe is clamped against the plate 2 by a toe rest 8 which engages the top of the toe end of the shoe and is supported on a post 10. The post is moved upwardly to carry the toe rest into clamping position after the shoe has been presented by the operator in the position determined by the plate 2, and in the operation of the machine the toe rest serves to support the shoe against the downward pressure of the toe wipers thereon when the wipers are over the margin of the insole as illustrated in Fig. 1.

In the construction herein shown there is mounted on the upper end of the post 10 a block 12 along which another block 14 is adjustable in directions lengthwise of the shoe. The block 14 is bifurcated to embrace a rib 16 on the block 12 and is held in adjusted position by a clamping screw 18 which extends through a slot 20 in the rib 16 and is threaded in one of the forks of the block 14. An upwardly extending portion of the block 14 is bored lengthwise of the shoe to receive a stud 22 which is threaded at one end in one of a pair of ears 24 extending downwardly at opposite sides of the upwardly extending portion of the block from a plate 26 included in the toe rest 8. The stud 22 has a head 28 overlapping the other ear 24, so that it serves to clamp the plate 26 in any position of adjustment about the axis of the stud 22. The plate 26 serves as a support for a shoe-engaging pad 30 which is preferably made of comparatively soft rubber. Extending into this pad from that face which is on the opposite side thereof from the shoe are a plurality of cavities 32 arranged in series both lengthwise and widthwise of the shoe to receive plugs 34 which are preferably made of

rubber harder than that of the body of the pad and substantially fill the cavities in which they are mounted. The plugs are removable from the cavities, and it will be evident that when any one of them is removed the portion of the pad where the plug was located becomes more yieldable. As herein illustrated four of the plugs located in a portion of the pad which is opposite an ornament **36** on the top of the toe portion of the shoe have been removed, thus rendering that portion of the pad sufficiently yieldable to avoid any danger of injury to the ornament. It will be understood that the number and locations of the plugs removed will depend upon the size and shape of the ornament and its location on the shoe.

The pad **30** is confined on its support **26** by a holder **38** engaging the faces of the pad which extend heightwise of the shoe. The holder herein shown extends continuously around the pad and terminates somewhat short of the shoe-engaging face of the pad. It is pivotally mounted for swinging movement heightwise of the shoe on a rod **39** on the pad support **26**, the rod extending widthwise of the shoe in a location substantially adjacent to the portion of the pad which is nearest the toe end of the shoe. The holder **38** is further controlled by a leaf spring **40** opposite end portions of which extend outwardly under the holder in supporting relation thereto from beneath the support **26**. A portion of the spring is held against one of the ears **24** by the head **28** of the stud **22**, and to assist in maintaining the spring in proper supporting relation to the holder **38**, while permitting adjustment of the support **26** and the parts thereon about the axis of the stud **22**, the spring has a lower bowed portion **42** the opposite ends of which rest on the top of the block **14**. It will be understood that in response to pressure of the shoe thereon the pad **30** tends to spread outwardly over the upper edge of the holder **38**, as illustrated in Fig. 1. The pressure of the pad on the upper edge of the holder therefore tends to swing the holder downwardly against the resistance of the spring **40**. This facilitates conformity of the pad to the contour of the shoe by permitting it to yield more readily in response to pressure of the higher portions of the top of the shoe thereon, and at the same time guards against any danger of contact of the edge of the holder with the shoe, especially adjacent to the portion of the pad which is farthest from the end of the toe where such contact would be most likely to occur if at all.

It is to be understood that not only with respect to the yieldability of the pad holder **38**, but also with respect to the removable plugs **34**, the utility of the invention is not restricted to the manufacture of shoes having ornaments on their toe portions. In operating on shoes which are so shaped as to involve danger of excessive pressure of the toe rest on a comparatively limited area of the upper any such danger may be avoided by removing plugs located opposite that area, thus permitting the shoe to sink farther in the toe rest pad with a resulting increase in the area of the upper engaged by the pad.

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

1. A shoe rest comprising a pad of yieldable material for controlling a shoe by pressure thereon, said pad having a cavity therein and a plug substantially filling said cavity but removable therefrom to increase the yieldability of the portion of the pad where the plug is located.

2. A shoe rest comprising a rubber pad for controlling a shoe by pressure thereon, said pad having a cavity therein and a plug of harder rubber than the body of the pad mounted in said cavity but removable therefrom to increase the yieldability of the portion of the pad where the plug is located.

3. A shoe rest compriisng a pad of yieldable material for controlling a shoe by pressure thereon, said pad having a plurality of cavities therein and a plurality of members mounted in said cavities and serving to render the pad less yieldable, said members being selectively removable from the cavities in which they are mounted to increase the yieldability of a portion or portions of the pad.

4. A shoe rest comprising a pad of yieldable material for controlling a shoe by pressure thereon, said pad having a plurality of cavities extending into it from that face which is on the opposite side thereof from the shoe, and a plurality of plugs mounted in said cavities but selectively removable therefrom.

5. A shoe rest comprising a rubber pad for controlling a shoe by pressure thereon, said pad having a plurality of cavities extending into it from that face which is on the opposite side thereof from the shoe, and a plurality of plugs of harder rubber than the body of the pad mounted in said cavities but selectively removable therefrom.

6. A shoe rest for engaging a shoe at the top of the forepart, comprising a pad of yieldable material having a plurality of cavities therein arranged in series both lengthwise and widthwise of the shoe, and a plurality of members mounted in said cavities and serving to render the pad less yieldable but selectively removable to increase the yieldability of a portion or portions of the pad.

7. A shoe rest for engaging a shoe at the top of the forepart, comprising a rubber pad having a plurality of cavities extending into it from that face which is on the opposite side thereof from the shoe, the cavities being arranged in series both lengthwise and widthwise of the shoe, and a plurality of plugs mounted in said cavities but selectively removable therefrom.

8. A shoe rest for engaging a shoe at the top of the forepart, said shoe rest comprising a rubber pad, a support for said pad on the opposite side thereof from the shoe, a holder arranged to extend heightwise of the shoe over portions of the pad on said support to control the pad, said holder being movable heightwise of the shoe relatively to said pad support in response to pressure of the pad thereon when the pad presses on the shoe, and spring means against the resistance of which the holder is thus movable.

9. A shoe rest for engaging a shoe at the top of the forepart, said shoe rest comprising a rubber pad, a support for said pad on the opposite side thereof from the shoe, a holder arranged to extend heightwise of the shoe over portions of the pad on said support to control the pad, said holder being mounted for swinging movement heightwise of the shoe relatively to said pad support about an axis located substantially adjacent to the portion of the pad which is nearest the toe end of the shoe in response to pressure of the pad thereon when the pad presses on the shoe, and means for yieldably resisting such swinging movement of the holder.

10. A shoe rest for engaging a shoe at the top of the forepart, said shoe rest comprising a rubber pad, a support for said pad on the opposite side thereof from the shoe, a holder arranged to extend substantially all around the pad opposite the faces thereof which extend heightwise of the shoe to control the pad, said holder being mounted for swinging movement heightwise of the shoe relatively to said pad support about an axis located substantially adjacent to the portion of the pad which is nearest the toe end of the shoe in response to pressure of the pad thereon when the pad presses on the shoe, and a leaf spring against the resistance of which the holder is thus movable.

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