T. GRIFFIN.

INTERCHANGEABLE SHOE LAST.

APPLICATION FILED JULY 25, 1910.

988,769.

Patented Apr. 4, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

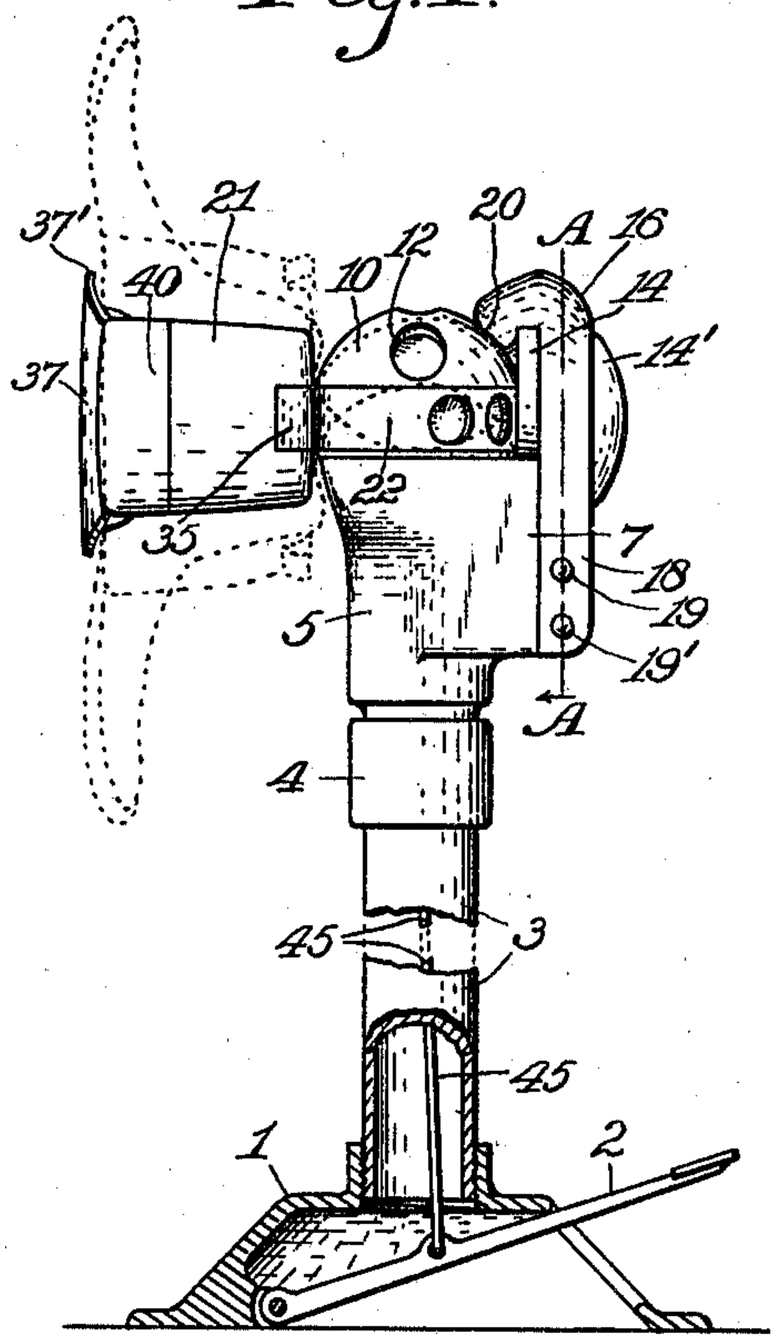


Fig. 2.

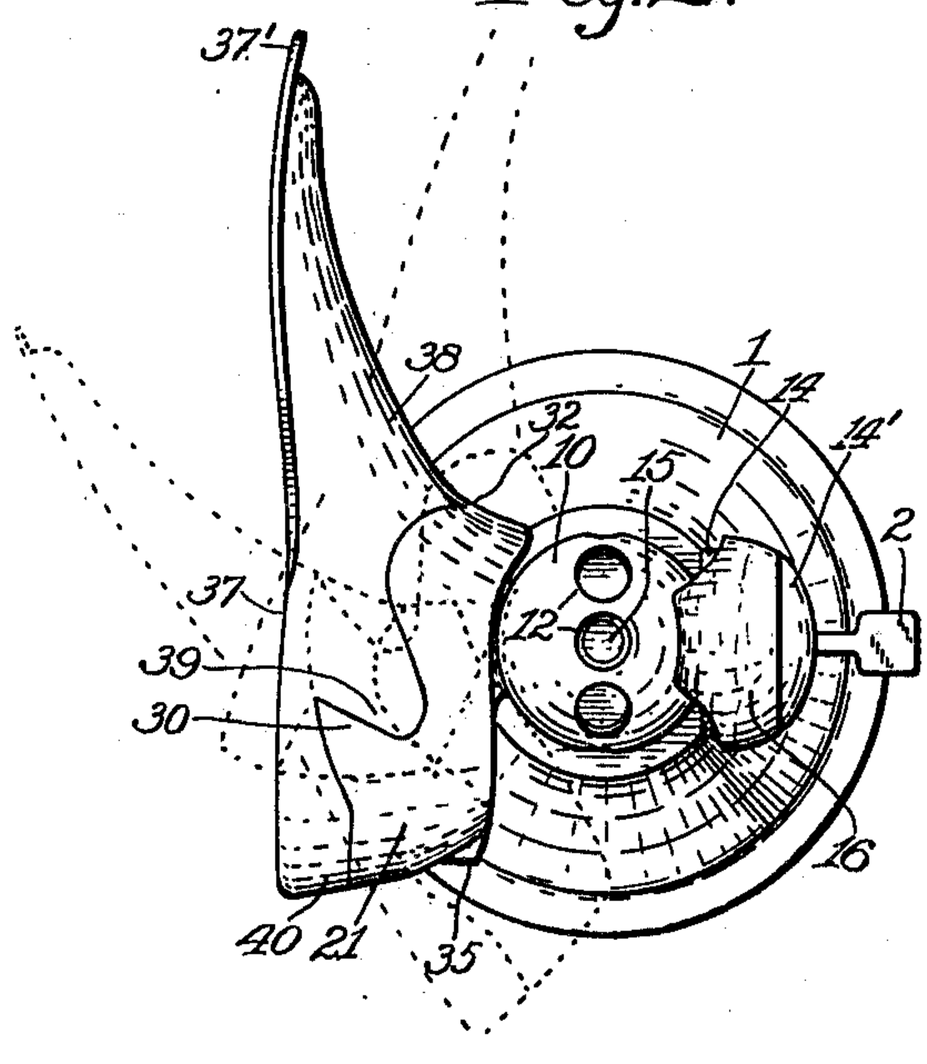


Fig. 3.

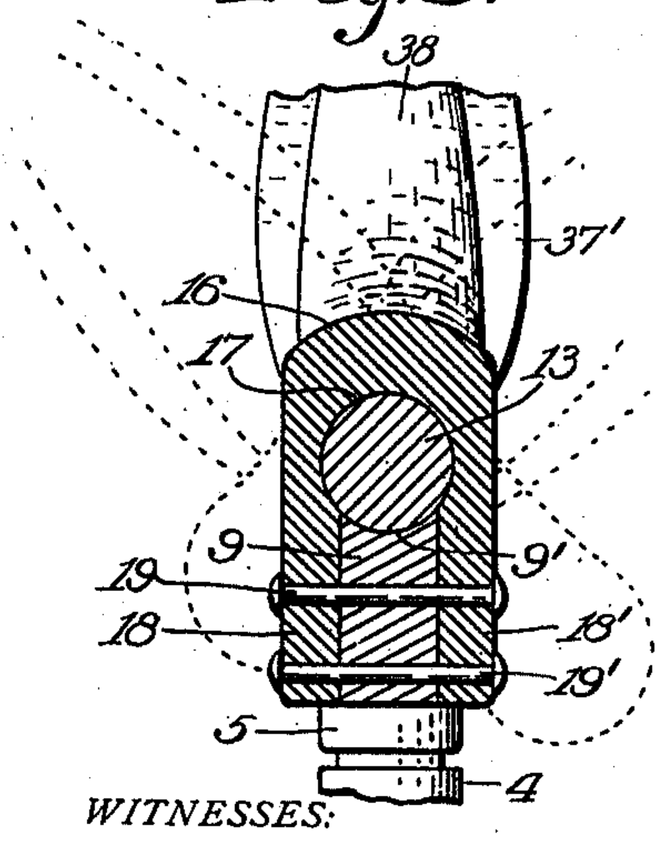
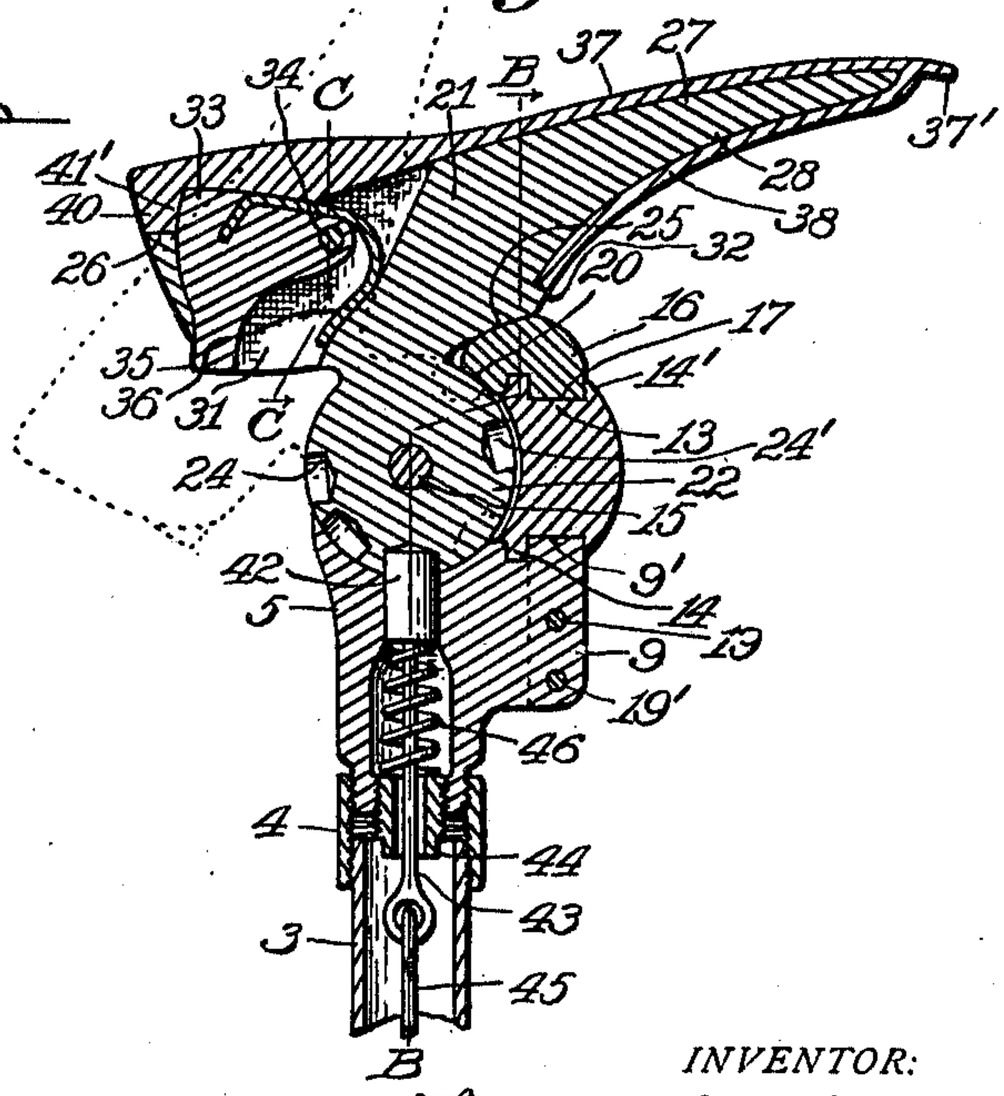


Fig. 4.



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2 SHEETS—SHEET 2.

Fig. 5.

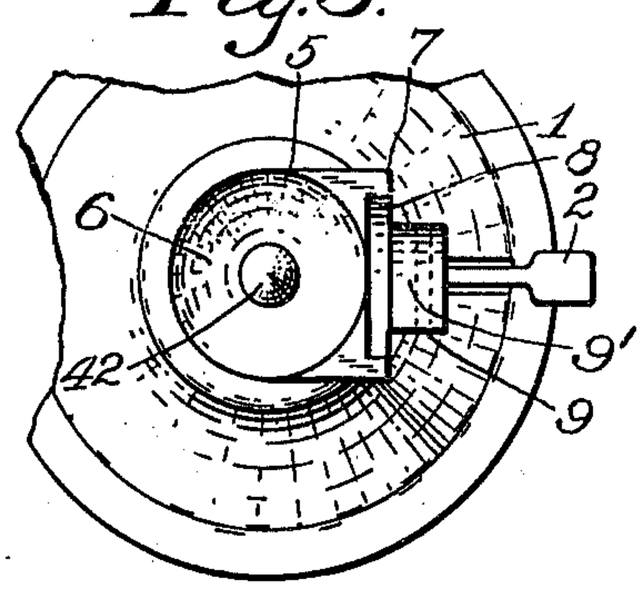


Fig. 6.

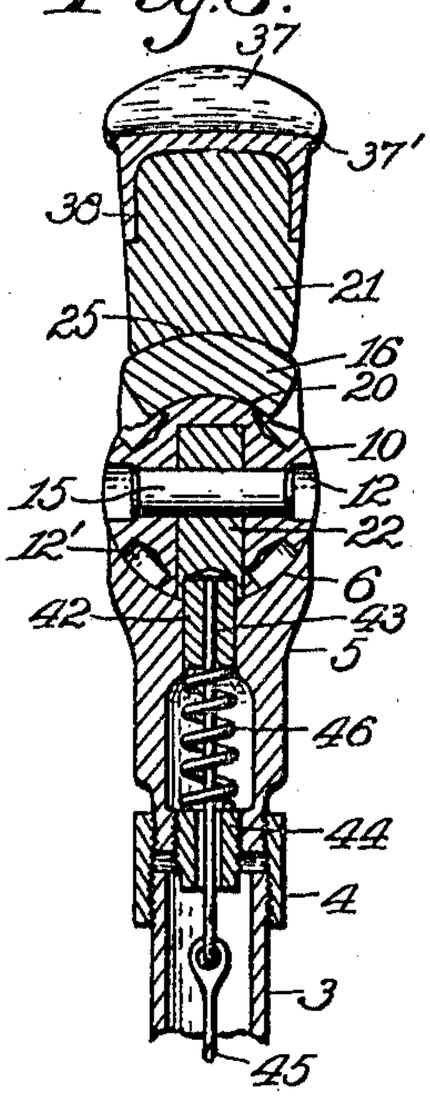


Fig. 7.

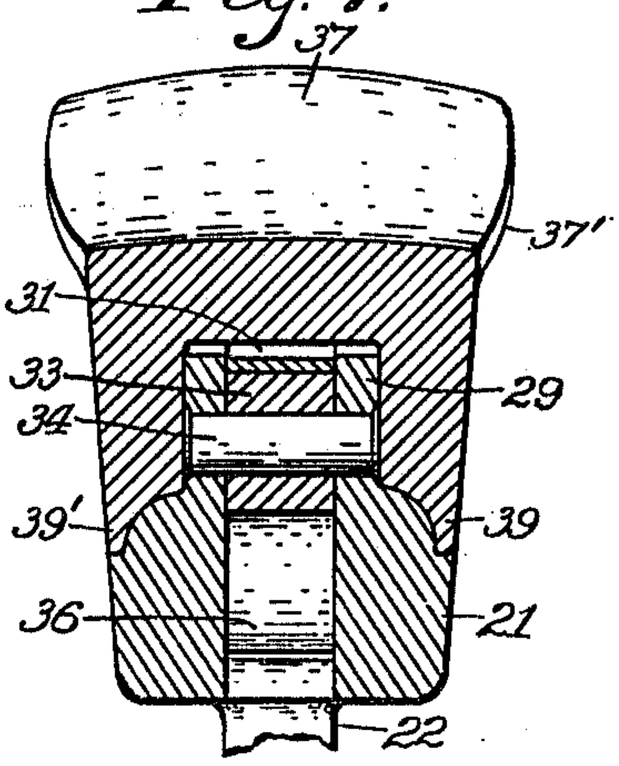


Fig. 8.

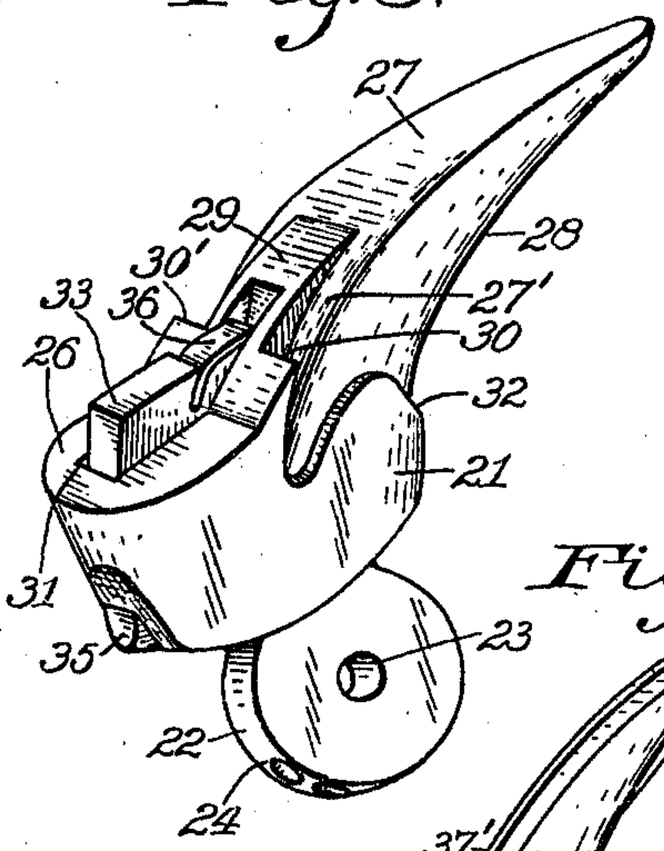


Fig. 9.

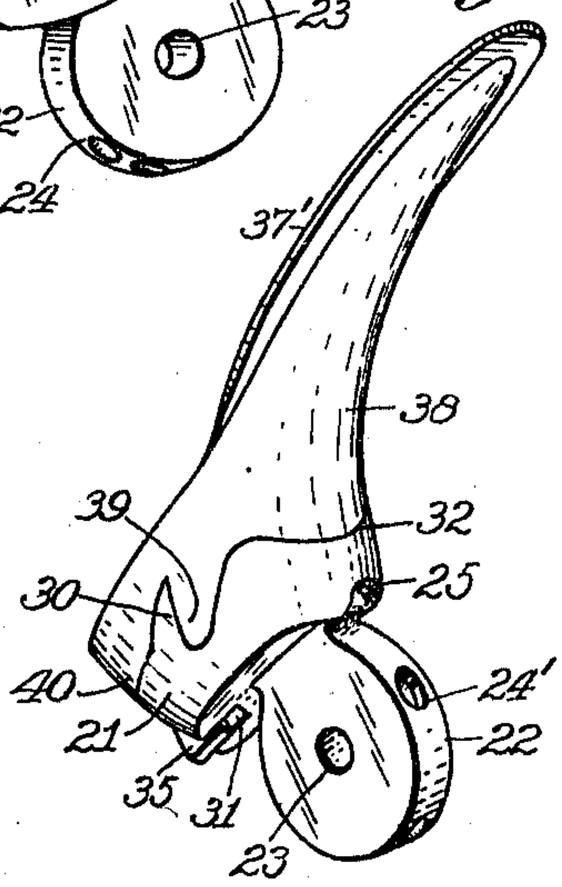


Fig. 10.

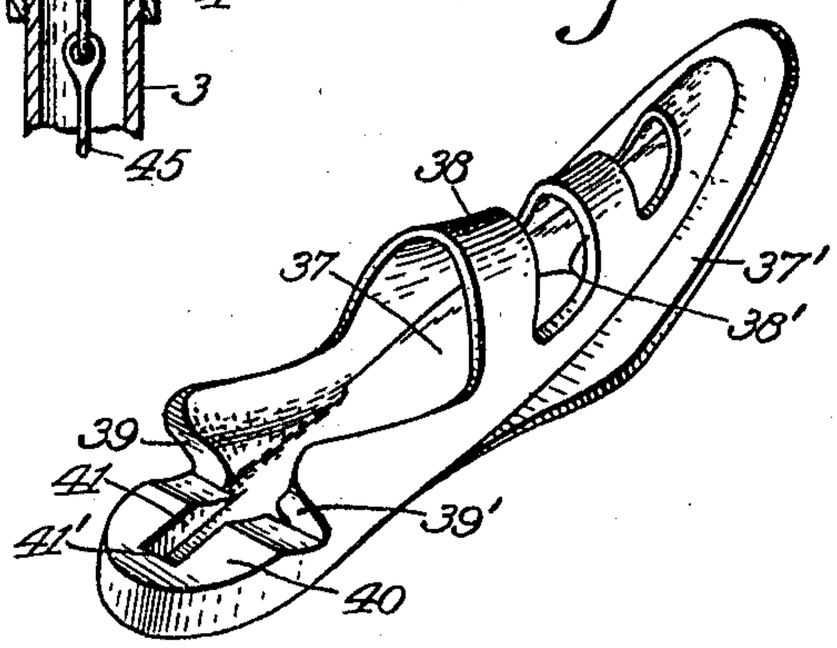


Fig. 11.

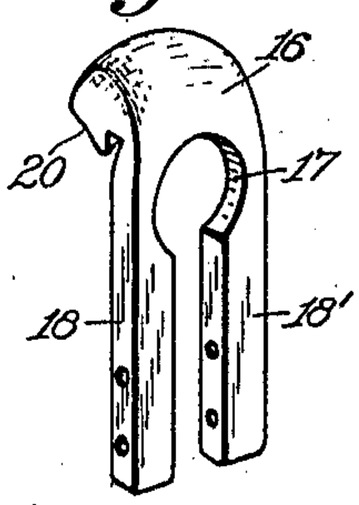
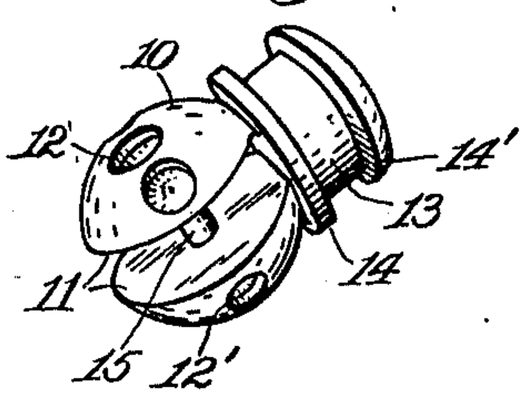


Fig. 12.



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UNITED STATES PATENT OFFICE.

THOMAS GRIFFIN, OF NOBLESVILLE, INDIANA.

INTERCHANGEABLE SHOE-LAST.

988,769. Specification of Letters Patent. Patented Apr. 4, 1911.

Application filed July 25, 1910. Serial No. 573,782.

To all whom it may concern:

Be it known that I, THOMAS GRIFFIN, a citizen of the United States, residing at Noblesville, in the county of Hamilton and State of Indiana, have invented certain new and useful Improvements in Interchangeable Shoe-Lasts; and I do declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to shoemakers' apparatus whereby lasting of different sizes of shoes or boots may be accomplished conveniently and expeditiously, the invention having reference more particularly to a last comprising a stock portion mounted adjustably on a stand, and a lasting portion secured removably to the stock portion so that lasting portions which may be of various sizes externally may be quickly interchanged to suit the requirements of different sizes of shoes or boots.

The object of the invention primarily is to provide an improved shoemaker's last of such construction as to enable the manufacturer or repairer to keep on hand a large variety of styles and sizes of lasts at relatively small cost, any of which may be quickly placed in position for use; the specific object of the invention being to provide lasting members of the apparatus which shall be adapted to be of light weight and cheap construction so that a large number may be kept on hand at the minimum expense.

Another object of the invention is to provide improved adjusting means for lasts of the above-mentioned character that will enable the lasts to be moved and adjusted to the most convenient positions for the operator.

With the above-mentioned and minor objects in view, the invention consists broadly in a shoe-support comprising a stock which is adjustably mounted on a stand and of which the main portion serves as a body part of a last, the forward portion of which is shaped similar to the forward portion of a foot but is of relatively small size, and a slipper shaped lasting member fitting removably on the stock and latched thereto, the exterior of the lasting member being of any suitable dimensions; and the invention consists further in the novel parts, and combinations and arrangements of parts, as hereinafter particularly described and claimed.

Referring to the drawings, Figure 1 is an elevation, partially in section and broken away, of a last and stand construction substantially in accordance with the invention, the last being shown in rear elevation and different inclinations indicated by broken lines; Fig. 2, a top plan of Fig. 1 in which different positions of the last are indicated by broken lines; Fig. 3, a fragmentary vertical section on the line A A in Fig. 1 in which the last is shown in a positon differing from those in the preceding figures and other positions indicated by broken lines; Fig. 4, a vertical section of the last in one of its operative positions and the upper portion of the stand; Fig. 5, a top plan of the main portion of the stand partially broken away; Fig. 6, a fragmentary section on the line B B in Fig. 4; Fig. 7, a fragmentary section on the line C C in Fig. 4; Fig. 8, a perspective view of the stock portion of the last; Fig. 9, a perspective view of the complete last separate from its stand; Fig. 10, a perspective view of the lasting or removable portion of the complete last; Fig. 11, a perspective view of the yoke comprising one of the means for connecting the stock portion to the stand; and Fig. 12, a perspective view of another part of the means for connecting and supporting the stock portion.

Similar reference characters in the different figures of the drawings indicate corresponding elements or features of construction herein referred to.

The invention comprises a suitable hollow base 1 in which is pivoted a foot lever 2, a hollow column 3 being mounted on the base and having a coupling 4 on its upper end to which is secured a head 5 in the top of which is formed a socket 6 of substantially hemispherical contour. The head has a squared side 7 in the top of which is a concave recess 8 adjacent to one side of the socket which serves as a portion of a journal bearing. The squared portion has a projection 9 at the front side thereof in the top of which is a journal bearing portion 9′. A pivot head 10 is provided which is substantially spherical externally and it has a slot 11 therein and also a suitable number of recesses 12, 12′, the pivot head being pro-

vided with a journal 13 on one side thereof, at opposite ends of which collars 14 and 14′ are formed. The pivot head is seated movably in the socket 6 and the journal is mounted in the bearing 9′, the collar 14 serving as a portion of the journal in the recess 8. The pivot head is provided with a pivot 15 which extends across the recess 11. A yoke 16 has an internal journal bearing cap 17 which coöperates with the bearing 9′ to constitute a journal box for the journal 13, the yoke having two limbs 18 and 18′ which extend along opposite sides of the projection 9 and are secured thereto by rivets 19, 19′, or similar devices. It will be clear from the foregoing that the pivot head is maintained in the socket 6 rotatively. The yoke has a projecting guide 20 that is in contact with the globular surface of the pivot head to assist in keeping the latter in its socket.

A last of novel construction comprises a main or body part 21 of a stock provided with a substantially disk shaped shank 22 having an axial hole 23 therein receiving the pivot 15, the disk being of the same diameter as the pivot head 10 and it fills the slot 11 therein. The periphery of the disk has a suitable number of recesses 24, 24′, to receive a latch bolt. The portion of the stock corresponding to the lower forward supporting end when the sole of the last is uppermost has a concave bearing face 25 adapted to rest upon the rounded top of the yoke 16, so as to afford rigid support when hammering a shoe sole. The rear portion of the stock has a heel portion 26 that has a proper contour to serve as a portion of the last, and from the body portion of the stock a forward foot portion extends that is less in diameter than the body portion of the stock, and it has a curved sole 27 and a correspondingly curved upper portion 28, the foot portion being tapering. A rib 29 extends from the heel portion 26 to the sole 27, there being undercut stop shoulders 30 and 30′ formed on the body part 21 at the junction of the relatively smaller foot portion therewith, the shoulders extending opposite inwardly curved sole portions 27′ and over to the rib 29. The heel portion has a slot 31 therein extending from rear of the sole portion thereof to the opposite side and into the rib 29. A shoulder 32 is formed at the forward and side portions of the stock 21 at the junction of the foot portion therewith. A latch 33 is arranged in the slot 31 and supported on a pivot 34 which is mounted in the body of the stock and extends across the slot, the latch normally projecting beyond the sole portion of the heel part of the body, facing rearward, and the latch has a thumb piece 35 thereon which projects from the opposite end of the slot for retracting the latch, the latter being normally projected by means of a spring 36 secured thereto and engaging the body 21 in the slot.

A suitable number of lasting members is provided which may be of various sizes and different contours to correspond to different sizes and styles of foot-wear, but they are all alike internally so that each and all of them shall accurately fit one stock. Each lasting member is hollow and comprises a main sole 37 and a top or vamp part 38 preferably formed integrally, and the latter may, if desired, have slots 38′ therein as shown in Fig. 10 to eliminate unnecessary metal, there being an extension sole 37′ of suitable width and contour extending beyond the top or vamp. The lasting part slips easily over the foot portion of the stock and the top or vamp is cut away so as to fit against the shoulder 32 on the stock and so as to form rearwardly projecting side portions 39 and 39′ adapted to fit against the shouldered portions 30 and 30′, the heel portion 40 of the sole being adapted to rest against the sole of the heel portion 26, and it has a recess 41 therein to receive the latch 33, the end 41′ of the recess being engaged by the latch for holding the lasting member removably on the stock.

A latch-bolt 42 is mounted vertically in the head 5 and it has an operating stem 43 extending through a bushing 44 inserted in the lower end of the head, and a connecting rod 45 is connected to the rod 43 and extends through the column 3 and is connected to the lever 2. A spring 46 is mounted in the head 5 in contact with the latch-bolt 42 and normally projects it. The latch bolt is adapted to enter either one of the recesses 12, 12′, or the recesses 24, 24′, for latching the last when adjusted. The body portion of the stock is of such size that the different sizes of adults' shoes may be placed thereon, and it will be understood that a smaller size is provided for the accommodation of infants' shoes. The exterior of the lasting member joins neatly with the stock, so as to present smooth external surfaces.

In practical use, with a shoe on the last the treadle 2 is pushed downward by the foot of the operator to release the pivot head 10, and then the shoe may be adjusted to a convenient position by moving the last about the axis of the pivot-head corresponding to the axis of the journal 13, or the last may be moved so as to swing about the axis of the pivot 15, and it is evident that the latch bolt may be held down while the last is freely manipulated during finishing operations, and that when the latch bolt is released it is projected into any one of the recesses provided to receive it.

Having thus described the invention, what is claimed as new, is—

1. A shoe-support including a stock hav-

ing a tapering forward portion and a shouldered rear portion, a hollow lasting member having a tapering interior and a shouldered rear portion, and a latch for securing the rear portion of the lasting member removably to the rear portion of the stock.

2. A shoe-support including a stock having a tapering forward portion and a slot in its rear or heel portion, a hollow lasting member which is open at its rear and adapted to be slipped over the forward portion of the stock, the rear or heel portion of the member having a shoulder facing forward, and a latch mounted movably in the slot and facing rearward to engage the shoulder.

3. A shoe-support including a head having a socket in the top and a horizontal journal-box at the side of the socket, a pivot-head rotative in the socket and having a journal thereon rotative in the journal-box, the pivot-head having a slot therein, and a last comprising a stock having a shank pivoted in the slot, and a lasting member mounted removably on the stock.

4. A shoe-support including a hollow lasting member comprising a sole portion and an upper or vamp portion on the sole portion, the upper or vamp portion having rearwardly-facing ends, and a stock having forwardly-facing shoulders and adapted to receive the hollow lasting member over its forward end and stop the same with the rearwardly-facing ends against the shoulders.

5. A shoe-support including a supporting head provided in its top with a hemispherical socket, the head having a journal bearing thereon at the side of the socket, a spherical pivot-head rotatively mounted in the socket and having a journal thereon rotatively mounted in the journal-bearing, the pivot-head having also a slot therein, a yoke secured to the supporting head and extending over the journal, and a last having a disk-shaped shank pivoted in the slot, the last being adapted to be partially supported upon the yoke.

6. A shoe-support including a supporting head having a hemispherical socket in the top and a horizontal journal-box at the side of the socket, a latch-bolt mounted in the head and projectable into the socket, a spherical pivot-head having a slot therein and mounted rotatively in the socket, the pivot-head having a journal thereon rotative in the journal-box and having also recesses therein to receive the latch-bolt, and a last having a disk-shaped shank pivoted in the slot, the shank having recesses in the periphery thereof to receive the latch-bolt.

In testimony whereof, I affix my signature in presence of two witnesses.

THOMAS GRIFFIN.

Witnesses:
JOEL STAFFORD,
WM. E. DUNN.