No. 693,848. Patented Feb. 25, 1902.

G. F. DUNN.

SHOE TREE.

(Application filed July 25, 1901.)

(No Model.)

Fig. 1

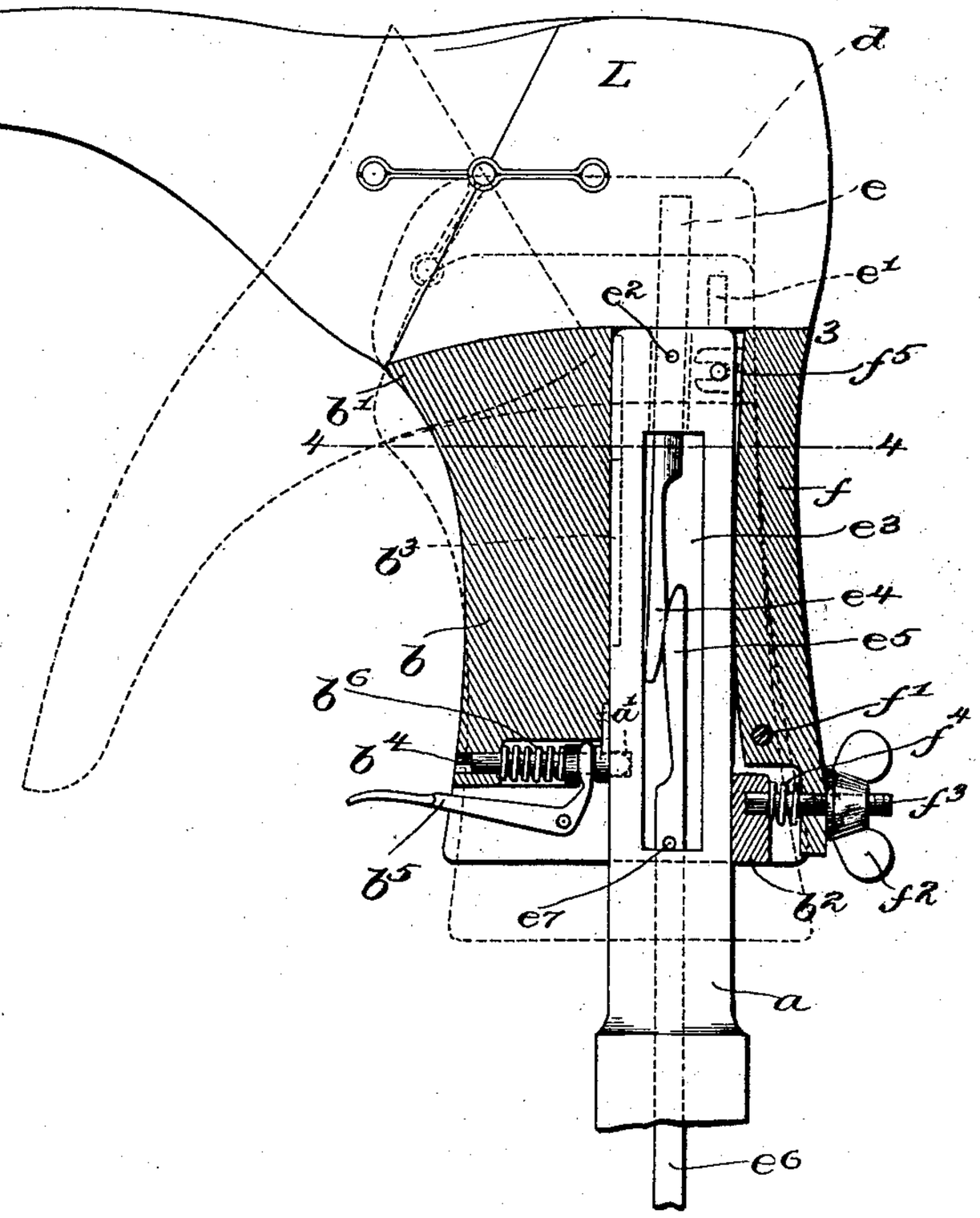


Fig. 2.

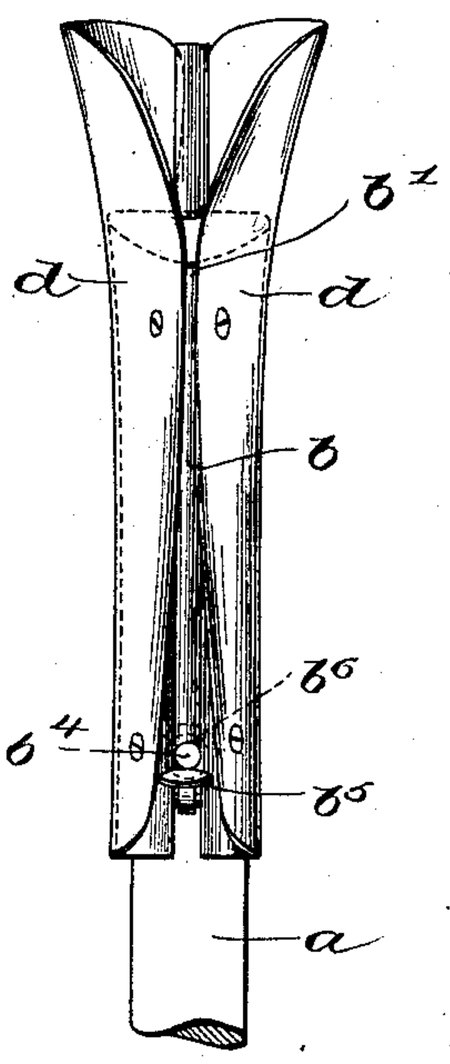


Fig. 4

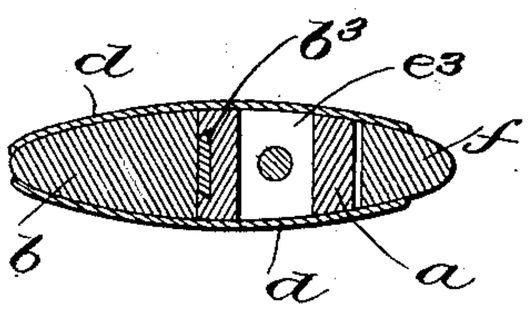
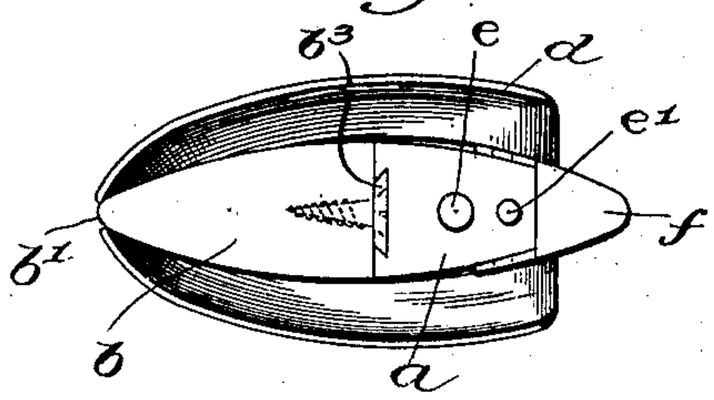


Fig. 3



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UNITED STATES PATENT OFFICE.

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SHOE-TREE.

SPECIFICATION forming part of Letters Patent No. 693,848, dated February 25, 1902.

Application filed July 25, 1901. Serial No. 69,625. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. DUNN, a citizen of the United States, residing at Brockton, county of Plymouth, and State of Massachusetts, have invented an Improvement in Shoe-Trees, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

My invention is an improvement in shoe-trees, and relates more particularly to special provisions for enabling the treeing to be performed conveniently and expeditiously in connection with hinged lasts or divided lasts. In this class of devices it is usual to provide on the opposite sides of the leg metal parts called "brasses," which extend beneath the vamp over the last for protecting the joint of the last and permitting the ironing to be accomplished.

My present invention provides means whereby these brasses and, in fact, the body part of the tree-leg to which they are secured may be instantly dropped down out of engagement with the last, so as to permit the ready collapsing thereof for the removal of the shoe after the latter is treed, this sliding movement taking place over the rod part or supporting portion of the tree, which preferably carries a pivoted last-spindle coöperating with a fixed lug or pin in holding the last in locked position during the treeing operation. Also the back part of the leg is made adjustable to different sizes of shoe-ankles.

Further features of invention and details of construction will be pointed out in the course of the following description, reference being had to the accompanying drawings, in which one embodiment of my invention is shown.

In the drawings, Figure 1 is a central vertical sectional view showing my improved tree in operative position with a last thereon shown in side elevation, said figure also, in dotted lines, showing the parts in collapsed position. Fig. 2 is a front elevation thereof. Fig. 3 is a top plan view thereof, and Fig. 4 is a transverse horizontal section on the line 4 4, Fig. 1.

It will be understood that my tree may be carried on any suitable stand and operated by a treadle or any other convenient means, and accordingly I have omitted these common details of construction and confined the drawings to the upper part or leg portion of the tree which contains my invention.

On a usual iron spindle-support *a* is mounted a special leg piece or block *b*, containing opposite brass wings or plates *d*, commonly known as "brasses," these brasses extending above the end of the block *b* to embrace the opposite sides of a last L.

I have herein indicated a hinged last having a V-shaped opening at its top side to permit it to collapse from the whole-line position, Fig. 1, to the dotted-line position, and one feature of my invention resides in making the brasses *d d* of a size and length to fit within the shoe and terminate just below the vamp-stitching, coming about even with the hinge in the kind of last shown in Fig. 1. The advantage of this construction is that it makes it impossible in ironing the shoe to leave a crease in the leather, as has been liable heretofore. By having the brasses extend to the point mentioned the ironing over the edge thereof takes place at said seam, and hence does not tend to injure or disfigure the shoe. Also by having the brasses extend over a substantial surface and adjacent the hinge of the last they offer material support to the last.

The body portion *b* of the leg part of the tree extends forwardly at *b'* in line with the top of the fore part of the last L and abuts against the end thereof, so as to afford a rigid support for holding the last in extended position, as shown in full lines.

The leg portion of the tree is mounted slidingly on the iron support *a*, the part *b* thereof being herein shown for this purpose as having a strap part b^2 at its lower end embracing the support *a* and provided at the front side of said support *a* with a dovetail joint b^3, retaining the two together, but permitting longitudinal movement, and is locked in position by any suitable means, as by a bolt b^4, engaging a recess a' and operated by a thumb-lever b^5 against the action of a spring b^6, as clearly shown in Fig. 1. At its upper end the leg is provided with a spindle *e*, adjacent a usual stud *e'*. The spindle *e* is pivoted in the support *a* at e^2 and extends downwardly within the same in a pocket or recess e^3,

formed therein, being provided at its lower end with an enlarged or wedge-shaped part e^4, coöperating with a similarly-enlarged or wedge-shaped part e^5 of a rod e^6, extending to the treadle or other actuating means of the tree, said rod e^6 being shown as provided with a stop e^7, limiting its downward movement. The result of this construction is that when the rod e^6 is moved downwardly into the position shown in Fig. 1 it wedges the spindle e obliquely to the fixed stud e', thereby binding or pinching the material of the last in such a manner as to hold the last rigidly locked on the tree, and upon moving the rod e^6 upwardly the two wedged portions e^4 e^5 become disengaged, permitting the spindle e to swing back into parallelism with the stud e' for the removal of the last. At its rear part the leg of the tree has a back block f, pivoted at f' to the tree and held in adjustment by a thumb-nut f^2, operating on a fixed screw f^3 against the action of a spring f^4, said back block being guided at its upper end by a slotted plate f^5. This permits the leg to be enlarged or decreased in size to fit different sizes of ankles, this matter being of special importance in a tree of this construction, in which the tree is used directly with the original last still in the shoe, and as the heel end of the last and the back side of the tree-leg must coincide at the point 3 for the best results the back of the leg is required to be adjustable, as explained.

In operation the shoe and its contained last are placed on the tree in the position shown in Fig. 1, the wing-like brasses being carefully inserted between the vamp and the last as the latter is placed in position on the spindle e. When in proper position and the parts adjusted as shown in full lines in Fig. 1, the rod e^6 is depressed, thereby locking the last and shoe in fixed position by means of the pivoted spindle e coöperating with the fixed stud e'. The ironing of the shoe now takes place, and because of the extended brasses which extend beneath the vamp-stitching at the counter no creases are possible. Having completed the treeing operation, the latch b^5 is depressed, thereby withdrawing the bolt b^4 from engagement with the support a, and the entire leg portion of the tree is permitted to drop down away from the last, thereby automatically withdrawing the brasses from their previous position and permitting the last to be collapsed into its dotted-line position for the removal of the shoe. If the last contained in the next shoe should be slightly larger or smaller at its heel end than the previous last the back block f is correspondingly adjusted by means of the wing-nut f^2, so as to bring the tree-leg and last into alinement at point 3, and then the treeing operation is performed as before.

It will be understood that I am not limited to the precise details of construction herein shown, as many modifications and changes in form and arrangement of parts may be resorted to within the spirit and scope of my invention.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A shoe-tree, comprising a spindle-support to receive a last, and a body portion or leg part surrounding and movable on said support, means for locking said leg part in operative position, said leg part being movable upwardly into position for supporting said last and downwardly into position permitting the collapsing of the last.

2. A shoe-tree, comprising a spindle-support, a body portion or leg part movable thereon and carrying brasses extending beyond the end of said leg part for embracing a divided last and extending over the hinge-gap of the divided last and beneath the vamp-stitching of the shoe on said last, and means to lock said leg part in operative position.

3. A shoe-tree for use with a separate last, said tree having a spindle-support, provided with a spindle for receiving and retaining the last and its shoe, a separate back block adjustable toward and from said spindle-support, and means for moving said back block independently of said spindle and the last carried thereby into fixed alinement with the heel end of the last.

4. A shoe-tree for use with usual hinged lasts, said tree comprising a spindle-support, a body portion or leg part slidingly mounted on said support and movable into position for abutting against the last, and out of said position for permitting the collapsing of the last, brasses carried by and movable with said leg part for covering the joint of the hinged last and affording a smooth ironing surface beneath the vamp of the shoe, said body part extending forwardly into supporting engagement with the fore part of the last when the latter is in extended position, the tree-leg being provided with means at its rear part adjustable into alinement with the rear end of the heel part of the last, means for locking said movable leg part in operative position, and means carried by the spindle-support for locking the last thereon, said latter means comprising a stud extending from the end of the spindle-support, a pivoted spindle adjacent said stud, and means for swinging said spindle into and out of parallelism with said stud.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE F. DUNN.

Witnesses:
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W. F. PACKARD.