J. MILLER.

BOOT-TREE.

No. 191,247. Patented May 29, 1877.

Fig 2.

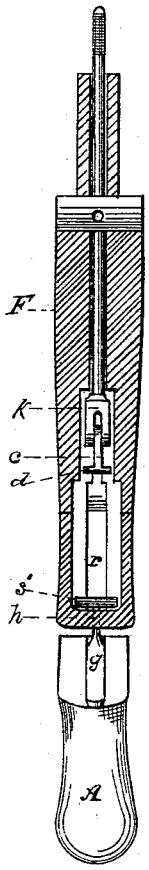


Fig 1.

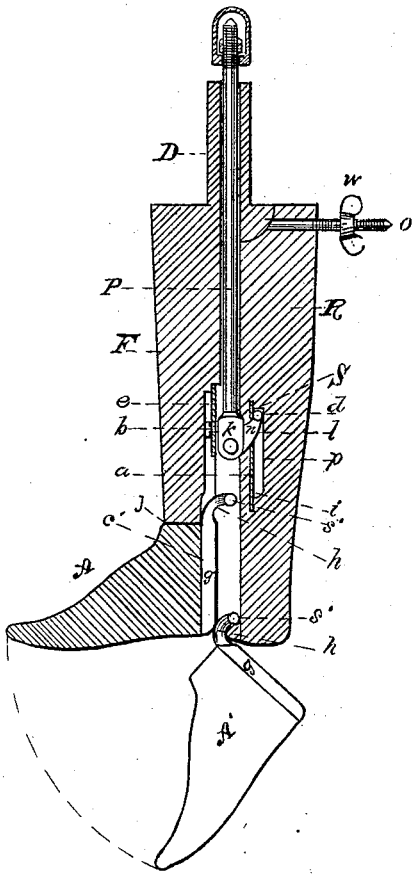
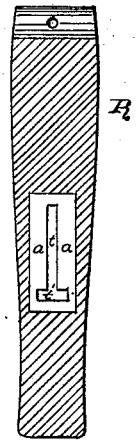


Fig 3.



WITNESSES

John Dufner

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UNITED STATES PATENT OFFICE

JOHN MILLER, OF ROCHESTER, NEW YORK, ASSIGNOR TO JOHN DUFNER, OF SAME PLACE.

IMPROVEMENT IN BOOT-TREES.

Specification forming part of Letters Patent No. **191,247**, dated May 29, 1877; application filed March 1, 1877.

To all whom it may concern:

Be it known that I, JOHN MILLER, of the city of Rochester, in the county of Monroe and State of New York, have invented a new and useful Improvement in Boot-Trees, which improvement is fully set forth in the following specification and accompanying illustrations, which are as follows:

Figure 1 is a sectional side view through the center. Fig. 2 is the interior of the front half. Fig. 3 is the corresponding back half of the leg part.

My invention relates to an improvement in boot-trees; and its object is, in addition to regulating the distention and contraction of the leg of the tree, to place the foot part of the same in or out of position without wholly detaching the same. Its novelty consists, first, in a curved lever, one end of which is connected by a knuckle-joint to the inner end of a lever-rod, while its opposite end is shaped into a cross, which, by means of a slot, acts in a keep, and against a shoulder at the upper end of the same; second, in a flanged lug, which, while being guided by a slot, is attached to said knuckle-joint, and operates in a pocket or keep; third, in a curved shank having one end shaped into a cross, while the other is a dovetailed tongue and attached to the foot of the tree, and connecting the foot to the leg; fourth, in a keep, in which said cross, while being guided by a slot, moves back and forth, and by which the foot is retained in connection with the leg, now to be described.

In the illustration, P is the lever-rod, which, for the purpose of forming the knuckle-joint *k*, is enlarged at its inner end. *l* is the curved lever, one end of which, in connecting with the said enlarged end of the lever-rod, forms the joint *k*, while its opposite end is formed into a T-head, *d*. Said T acts in the keep P, and rotates against the shoulder S at the upper end of the keep, which keep and shoulder are both formed by sinking a cavity in the inner face of the calf of the tree, which cavity is covered over with a metal plate, which is provided with a slot, *t'*, for inserting the T-head, while the shank *n* is operated in the slot *t*. In addition to the screw-bolt *o* at its top, there is provided, for further securing the connection of the front and back parts of the tree, a flanged lug, *b*, acting in a cavity, *e*, which cavity is sunk in the inner face of the front of the tree, the lug being guided in its movements by the slot *c*. This cavity and slot are formed in the same manner as before described for the construction of the keep *p*. A is the foot part of the tree. It is joined to the leg part by a tongue, *g*, and a corresponding groove or slot, *r*. For retaining the foot in connection with the leg after it is moved out of position, said tongue is extended about two inches above the joint *j*, and then shaped into a curved shank, *h*, with its outward end formed into a cross, S'. To provide space for this shank and cross to work in, there is formed at the back of the groove a cavity, *c'*, in which, during the operation of putting the boot on and off the tree, said cross moves forward and back in this cavity. In removing the boot from the tree, by which movement the foot is thrown out of position, as at Fig. 1, it still, by means of said cross, has a loose connection with the leg, and, by turning the cross into line with the groove, the parts are easily separated.

In distending the tree, the screw-bolt *o* resists the endwise movement of the calf, occurring in actuating the internal lever *l*. In the meantime the thumb-screw *w* controls the extent of such distention.

The operation of the invention is as follows: All parts of the tree being in position, the cylinder-stem D is inserted in a tubular orifice, (not shown,) which brings the tree to lie horizontally, with its front upward and its foot hanging loose, as at Fig. 1. Now, in the act, by an easy movement of putting the boot on the tree, the foot-tree is carried into position, both in the boot and on the leg-tree; then the plunger is withdrawn by foot-levers, thereby forcing the curved lever *l* from its triangular into a right-angular position with the lever-rod, by which action the tree is distended, as desired. By reversing the said action, the tree is contracted and the boot released. In removing the boot from the tree, the tree-foot is thrown out of position, and hangs loose by the said cross, as already described.

Having now described the construction and

operation of my improvement, what I claim as my invention, and for which I solicit Letters Patent, is—

1. In a boot-tree, the leg portions F and R, in combination with the swinging foot A, provided with a tongue, *g*, having a cross-shaped shank cast therewith, and adapted to slide vertically in the groove or recess *c'*, all substantially as and for the purpose set forth.

2. The lever-rod P, provided upon its lower end with the cross-headed lever *l*, in combination with the leg portions F and R, provided with grooves or recesses in which the cross may slide vertically, all substantially as shown, and for the purposes set forth.

3. The combination of the rod P, with the knuckle-jointed lever attached thereto, and adapted to slide vertically in grooves or recesses, as shown, with the leg portions F and R and swinging foot A, all substantially as shown, and for the purposes set forth.

In testimony whereof I have hereunto, in presence of two witnesses, subscribed my name.

JOHN MILLER.

Witnesses:
JOHN DUFNER,
BENJ. F. PARSONS.