

(No Model.)

2 Sheets—Sheet 1.

A. M. MOORE.  
BOOT TREE.

No. 420,308.

Patented Jan. 28, 1890.

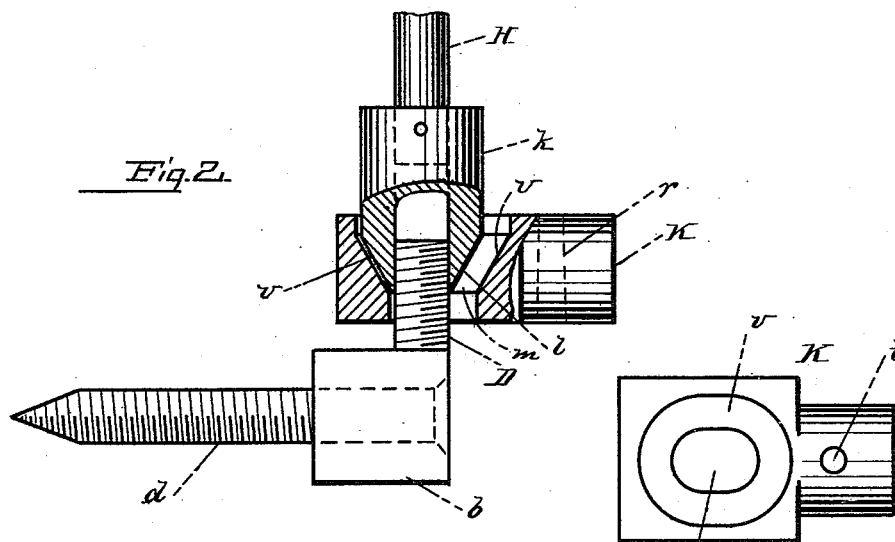
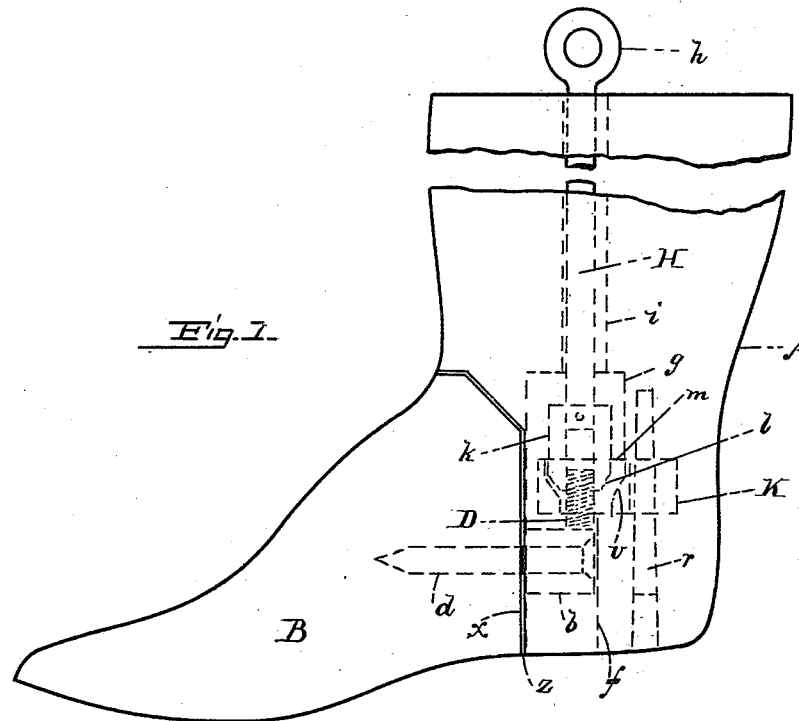
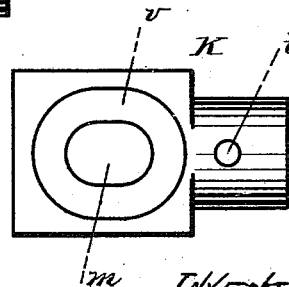


Fig. 3.



WITNESSES:  
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PER C. A. Shawler  
ATTY'S.

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2 Sheets—Sheet 2.

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Fig. 4.

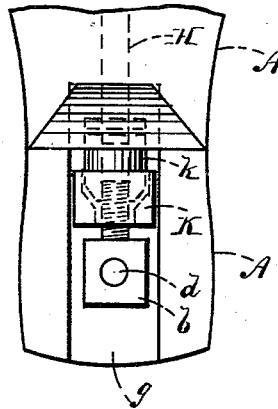
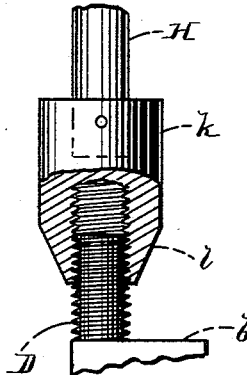


Fig. 5.



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# UNITED STATES PATENT OFFICE.

ALFRED M. MOORE, OF MALDEN, MASSACHUSETTS.

## BOOT-TREE.

SPECIFICATION forming part of Letters Patent No. 420,308, dated January 28, 1890.

Application filed May 1, 1889. Serial No. 309,192. (No model.)

*To all whom it may concern:*

Be it known that I, ALFRED M. MOORE, of Malden, in the county of Middlesex, State of Massachusetts, have invented certain new and useful Improvements in Boot-Trees, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of my improved boot-tree; Fig. 2, an enlarged view of the locking device removed; Fig. 3, a plan view of the clamping-loop; Fig. 4, a face view of a portion of the leg; and Fig. 5, a sectional view of the nut and screw-bolt, the body of the nut being broken away.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to that class of boot-trees which are especially adapted for use in the manufacture of rubber boots; and it consists in certain novel features, as hereinafter fully set forth and claimed, the object being to produce a simpler, cheaper, and more effective device of this character than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the leg, and B the foot portion, of the tree, said foot being fitted to enter a socket in the leg in the usual manner. A screw-bolt D, having a laterally-extended cubical head *b*, is secured centrally to the rear or inner end of the foot B by a screw *d*, which passes horizontally through said head into said foot.

The leg A is provided with a vertical groove *f*, rectangular in cross-section to adapt it to receive the screw-head *b*, said groove being extended at its upper end to form a chamber *g*. A rod H, provided with a loop or handle *h* at its upper end, is fitted to rotate in a centrally-arranged vertical opening *i* in the leg A, the lower end of which opens into the chamber *g*. To the lower end of the rod H

there is secured a nut *k*, adapted to receive the screw D, the lower edges of said nut being beveled at *l*. The clamping-loop K is secured horizontally in the leg A, its eye *m* being disposed in the chamber *g* in position to receive the nut *k*. The loop is fastened by a pin *r*, passing vertically through the heel of the leg portion A and a hole *t* in the inner end of said loop. The loop-eye *m* is oval in shape and its walls converge inwardly, as shown at *v*, being inclined at the same angle as the beveled end of the nut *k*.

In the use of my improvement when it is desired to attach the foot B to the leg the head *b* of the screw D is inserted in the rectangular groove *f*, which serves to center said foot, the stem of said screw projecting into the eye *m* of the loop K. By rotating the rod H its nut *k* is turned onto the stem of the screw D and securely clamps the foot to the leg. As the tree is subjected to intense heat during the process of manufacturing rubber boots, the wood from which it is constructed frequently warps or shrinks at the edges *x* of the foot and leg. This enlarges the opening *z* and often causes imperfect work. By turning the nut *k* still farther onto the screw D its beveled edge *l* is forced into engagement with the outer end wall *v* (see Fig. 2) of the loop-eye *m* and draws the foot portion B tightly against the leg.

The screw *d* may be constructed integral with the head *b*, if desired, forming a screw with two stems at right angles to each other.

Having thus explained my invention, what I claim is—

1. In a boot-tree, the combination of a foot, a vertically-arranged screw-bolt secured to the inner end of said foot, a leg provided with a vertical groove for said bolt and a clamping-loop projecting into said groove, a rod fitted to rotate in said leg, and a threaded nut on said rod for receiving said bolt, substantially as described.

2. In a boot-tree, a leg provided with a vertical groove in its foot-socket and a chamber at the upper end of said groove, in combination with a horizontal clamping-loop projecting into said groove, a foot provided with a vertical screw-bolt adapted to project into said loop, and a vertical rod rotating in said

leg and provided with a threaded nut for receiving said screw, substantially as described, and having beveled sides for engaging said loop.

- 5 3. In a boot-tree, a leg having a vertically-arranged chambered groove, a clamping-loop having an oval-shaped beveled eye registering with said groove, a vertical rod fitted to rotate in said leg and provided with a nut  
10 having beveled edges for engaging the walls of said eye, and a foot provided with a vertical screw-bolt having a head fitted to slide in said groove, said bolt being arranged to en-

ter said eye and nut when the foot is in position, substantially as described.

- 15 4. In a boot-tree, the foot B and the screw-bolt D, secured to said foot by the screw *d* and provided with the head *b*, in combination with the leg A, provided with the groove *f* for said head, and the rod H, fitted to rotate 20 in said leg and bearing the nut *k*, substantially as and for the purpose set forth.

ALFRED M. MOORE.

Witnesses:

K. DURFEE,

O. M. SHAW.