(No Model.)

E. E. THRESHER.

BOOT TREE.

No. 245,240. Patented Aug. 2, 1881.

Fig. 1,

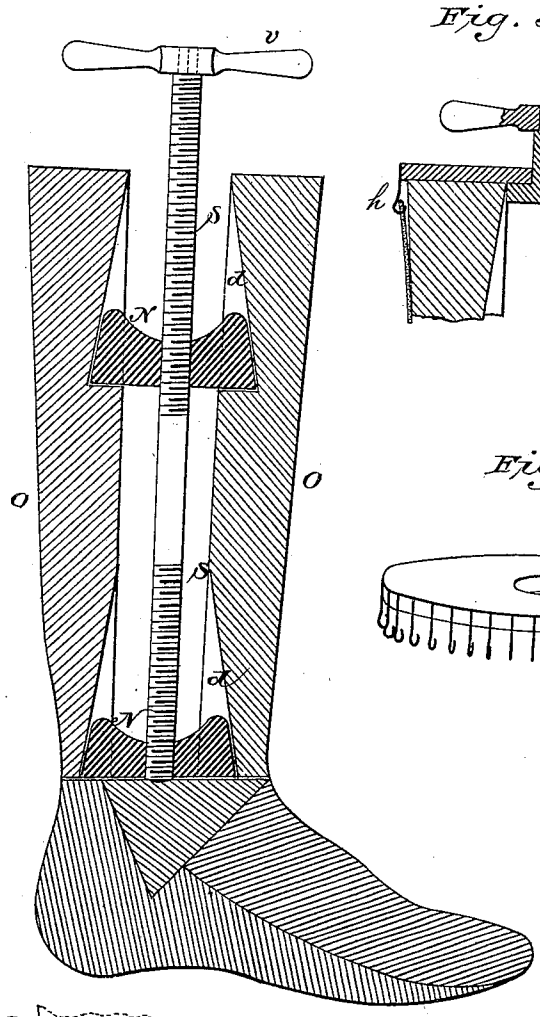


Fig. 3,

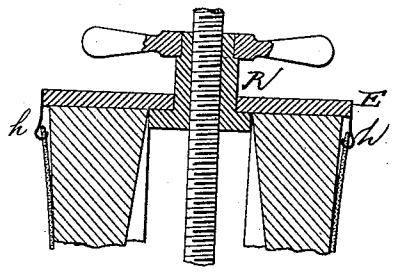


Fig. 4,

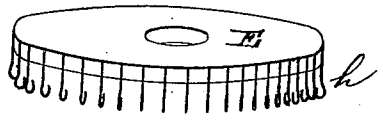


Fig. 2,



WITNESSES

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UNITED STATES PATENT OFFICE.

EDWARD E. THRESHER, OF REED CITY, MICHIGAN, ASSIGNOR OF ONE-THIRD TO WILLIAM McNAMARA.

BOOT-TREE.

SPECIFICATION forming part of Letters Patent No. 245,240, dated August 2, 1881.

Application filed February 12, 1881. (No model.)

To all whom it may concern:

Be it known that I, EDWARD E. THRESHER, of Reed City, in the county of Osceola and State of Michigan, have invented certain new and useful Improvements in Boot-Trees; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention consists in an improved boot-tree designed for stretching felt boots in the process of manufacturing the same, all of which will be understood by the following description and claims.

In the accompanying drawings, Figure 1 is a vertical section of my improved boot-tree with instep-piece pushed home. Fig. 2 is also a section, showing the instep-piece just entering the foot of the boot. Fig. 3 shows the cap for stretching the top of the leg. Fig. 4 is a detached view of cap and hooks thereon for stretching the leg.

In the ordinary process of manufacturing felt boots the rough pulled wool, as it comes from the tannery, is first run through a machine called a "picker," which cleans and loosens up the wool preparatory to carding the latter into batting, which is afterward spread out and formed into the shape of a boot, over a pattern three or four times the size desired for the finished boot, said pattern being made of several thicknesses of cloth well stitched together through and through. The large boot, thus formed of batting with the flexible pattern inside to keep the two sides from being felted together, is put into a hardening-machine, which gives an oscillating or rubbing motion, and is supplied with a jet of steam to soften the wool and facilitate the process of felting, by which the fibers of wool are welded or knit together. When the felt is sufficiently compact or hardened it is introduced into a fulling-machine and fulled down to a smaller size than the finished boot, and then stretched by means of a stretcher, like a scissors or common glove-stretcher—two rods pivoted together—and the process of steaming and stretching is repeated, after which the unfinished boot is wrung nearly dry. After all this work the boot is ready for my stretching-machine or boot-tree.

By the above-described treatment the felt becomes firm, and the stretch so taken out that the finished boot will set to my boot-tree and keep its shape in wearing.

My improved boot-tree is made with three pieces in the foot, as seen at A, B, and C. The piece B is several sizes shorter than the foot or sole of the complete last, and is inserted first into the foot of the boot to be stretched. The instep-piece C is inserted, as shown in Fig. 2, and afterward the wedge-piece A is inserted into the V-shaped opening. Then the two leg-pieces O O are inserted, the bottom end of one resting on the piece B and the lower end of the other on piece A, with the screw S and nuts N N in place between the leg-pieces O, the nuts being slackened off by turning the screw by means of wrench V. These nuts have inclined bearing *d d* in the leg-pieces O, and as they are raised therein by turning the screw S the leg of the boot is stretched. At the same time the top of the leg is also stretched by means of the cap E and collar R, said cap being provided with hooks *h* to seize and hold the top of the leg, as shown in Fig. 3; and the lower end of the screw-shank resting on piece A first drives forward the instep-piece C and then comes home in the ankle, filling the wedge-shaped space, as seen in Fig. 1.

Having thus described my invention, what I claim is—

1. The sole-piece B, shorter than the finished boot, in combination with the instep-piece C, having the full thickness of the toe, and arranged to be projected forward into the toe of the boot by means of the wedge-shaped piece A, driven down by the screw S, substantially as and for the purpose set forth.

2. In a boot-tree, the cap E, provided with hooks *h*, as described, in combination with collar R, screw S, and nuts N N, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

EDWARD E. THRESHER.

Witnesses:

WALLIE E. THRESHER,

WILLIAM McNAMARA.