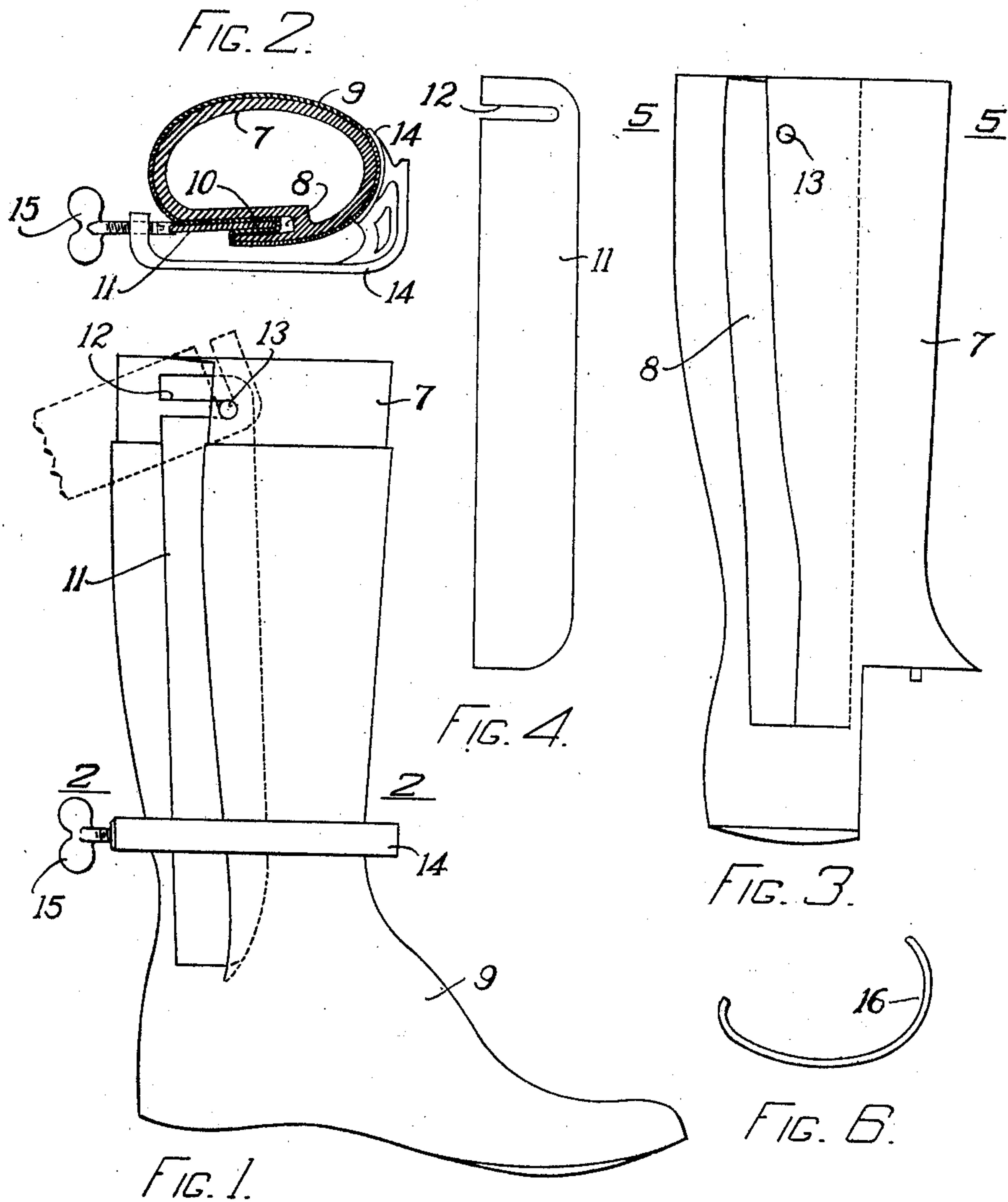


No. 829,487.

PATENTED AUG. 28, 1906.

H. C. RICHARDSON.
APPARATUS FOR MAKING FELTED BOOT BODIES.
APPLICATION FILED NOV. 25, 1904.



WITNESSES
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FIG. 5.

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BY *W. H. [Signature]*

ATTY.

UNITED STATES PATENT OFFICE.

HENRY C. RICHARDSON, OF EVERETT, MASSACHUSETTS.

APPARATUS FOR MAKING FELTED BOOT-BODIES.

No. 829,487.

Specification of Letters Patent.

Patented Aug. 28, 1906.

Application filed November 25, 1904. Serial No. 234,156.

To all whom it may concern:

Be it known that I, HENRY C. RICHARDSON, of Everett, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Apparatus for Making Felted Boot-Bodies, of which the following is a specification.

This invention relates to the manufacture of seamless felted footwear, and comprises an improved last or tree adapted to form in the leg portion of a felted boot-body or like article a tapering longitudinal fold or overlap extending from the top downwardly about to the ankle portion.

My invention also includes suitable clamps and clasps for use with said tree in producing such felted article.

The accompanying drawings, forming part of this specification, illustrates my invention, Figure 1 showing a side view of the last or tree with the felted boot-body held thereon as in the operation of forming the fold or overlap. Fig. 2 is a cross-section taken on the line 2 2 of Fig. 1 and showing an integral overlap of the felt pressed into a recess in the tree. Fig. 3 is a side view of the leg portion of the last or tree, and Fig. 4 a like view of the blade used therewith. Fig. 5 is a cross-section of the leg of the last on line 5 5 of Fig. 3, and Fig. 6 is a plan of a clasp which I substitute for the clamp shown in Figs. 1 and 2 during the drying operation.

My improved last or tree is preferably formed of iron and cast hollow, as indicated in Figs. 2 and 5. The foot portion may be of ordinary construction and is not herein illustrated. The leg portion 7 has along one of its sides a deep, narrow, elongated recess 8, shown extending forward toward the toe of the boot, into which recess a folded portion of the seamless felted foot-covering 9 is to be pressed and held by suitable means during the steaming and drying operations. This folded portion constitutes the fold or overlap 10 integral with the leg of the felted boot-body and designed, when the boot is completed, to open out for admission of the wearer's foot and leg and to fold down snugly and be held for use by buckles, lacing, or otherwise.

11 represents a thin flat metallic blade of such dimensions as to enter the recess 8 with the fold and press the same against the recess-walls while drawing the felted body snugly around the leg portion of the tree. The mov-

able blade 11 is detachably connected to the tree, preferably by means of a pivot 13 at its top, with which the hook 12 at the upper end of the blade engages, as indicated in dotted lines, Fig. 1. The free end of the blade is then pressed downwardly and forward or inwardly into the recess to the position shown in full lines, Fig. 1, to complete the fold and fit the felted leg closely to the tree.

A suitable clamp or other fastening is provided to force in and hold the blade 11 in its advanced position. A convenient device for this purpose is shown in Figs. 1 and 2, 14 being the body of the clamp having a curved bearing-surface at one end to bear against the front of the felt leg and internally threaded at its opposite end to receive the threaded part of a thumb-screw 15, arranged to press directly or by a terminal button on the rearward edge of the blade.

In Fig. 6, 16 represents a simple clasp which I substitute for the clamp above described to hold the blade during the drying operation.

It is obvious that various modifications in the clamping device may be made and in the connection of the blade to the tree. Hence I do not limit myself to the details herein shown and described.

The formation of the fold or overlap integral with the leg portion of the felt body involves certain novel steps. One side of such leg portion in the bat is made wider than the other, a rigid perforated form wider at one side being laid in the bat. Then the edges of the bat are lapped around the form, slightly steamed and hardened together. Then the boot is felted down to fit the leg and foot of the wearer and is colored and pounced, as usual. The felt body is then thoroughly steamed and the foot portion of the boot-tree inserted, over which the fore part of the foot of the boot is shaped. The leg portion of the tree is then inserted and the felt forming the straight side of the boot-leg is drawn down smoothly around it, and the whole steamed again. Then from the slack of the wider side of the felt leg I make the fold or overlap by hooking the blade on its pivot and pressing it edgewise into the recess 8 and holding it securely therein, thereby forming the fold or overlap and at the same time drawing the felt snugly around the leg portion of the last, such fold tapering from the top downwardly and terminating at the

ankle. This completes the shaping of the fold and lasting of the boot which is then sent to the dry-room.

I claim as my invention—

5 1. In boot-trees, the leg portion formed with a vertical recess along one side thereof and an external blade or filling-piece adapted to press a fold of the boot-leg into such recess, and with means for holding the parts in
10 position temporarily, for the purpose set forth.

2. A boot last or tree having the leg portion formed hollow, with a forwardly-extend-

ing vertical recess in one of its side walls, in combination with a detachable blade adapted to press a fold of the boot-leg into such recess and with means for holding the parts in position temporarily, for the purpose set forth. 15

In testimony whereof I have affixed my
signature in presence of two witnesses. 20

HENRY C. RICHARDSON.

Witnesses:

A. H. SPENCER,
A. S. PERCY.