March 3, 1970 M. A. RIVERA 3,497,875

BOOTEE FOR HARD CASTS

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Fig. 1

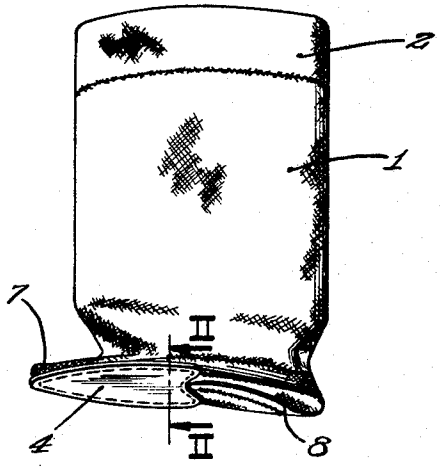


Fig. 3

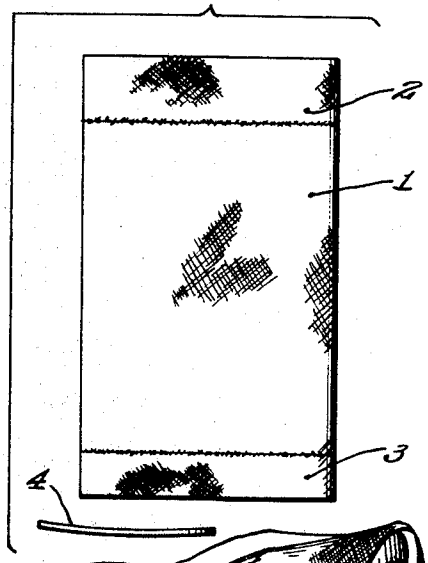


Fig. 2

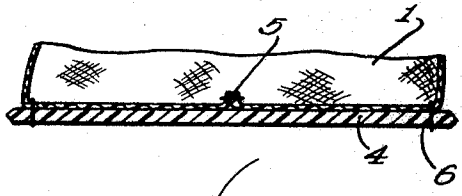
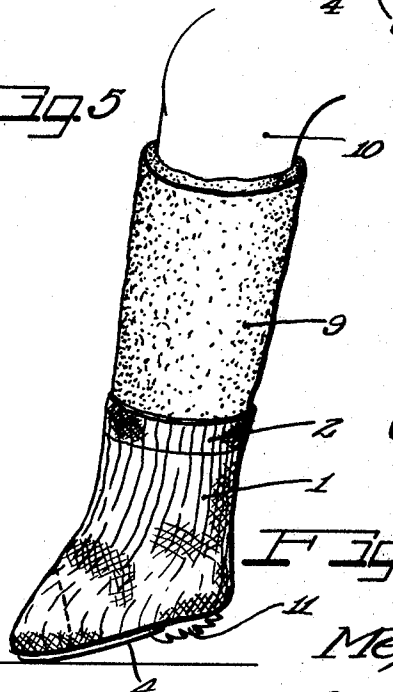


Fig. 5



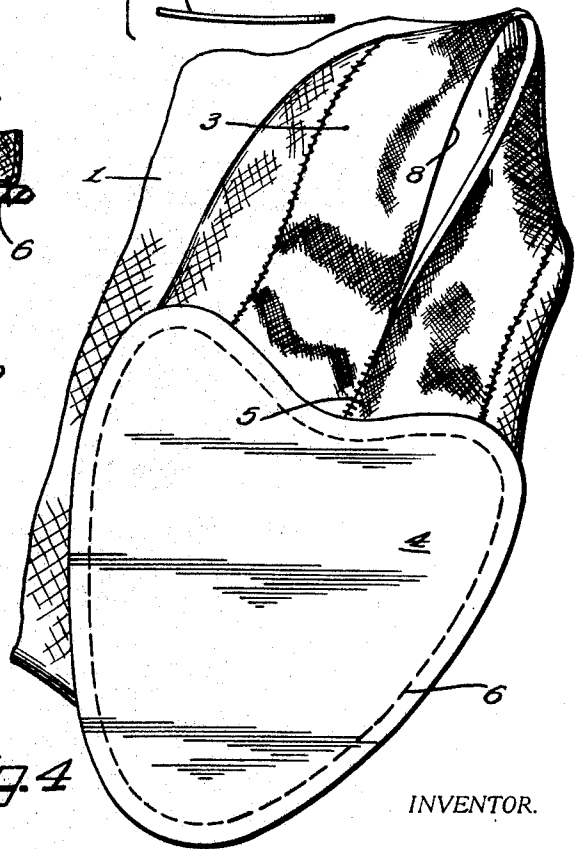


Fig. 4

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Fig. 6

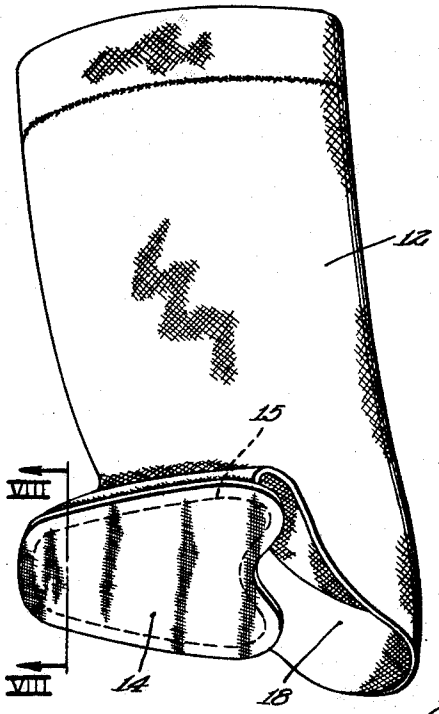


Fig. 8

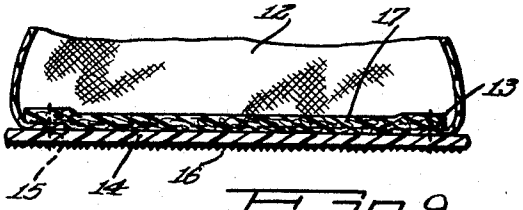


Fig. 9

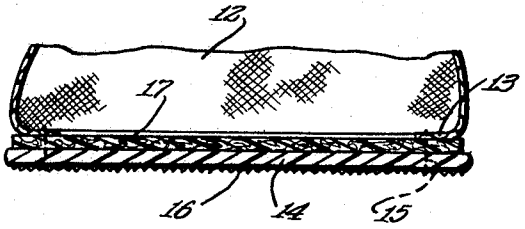
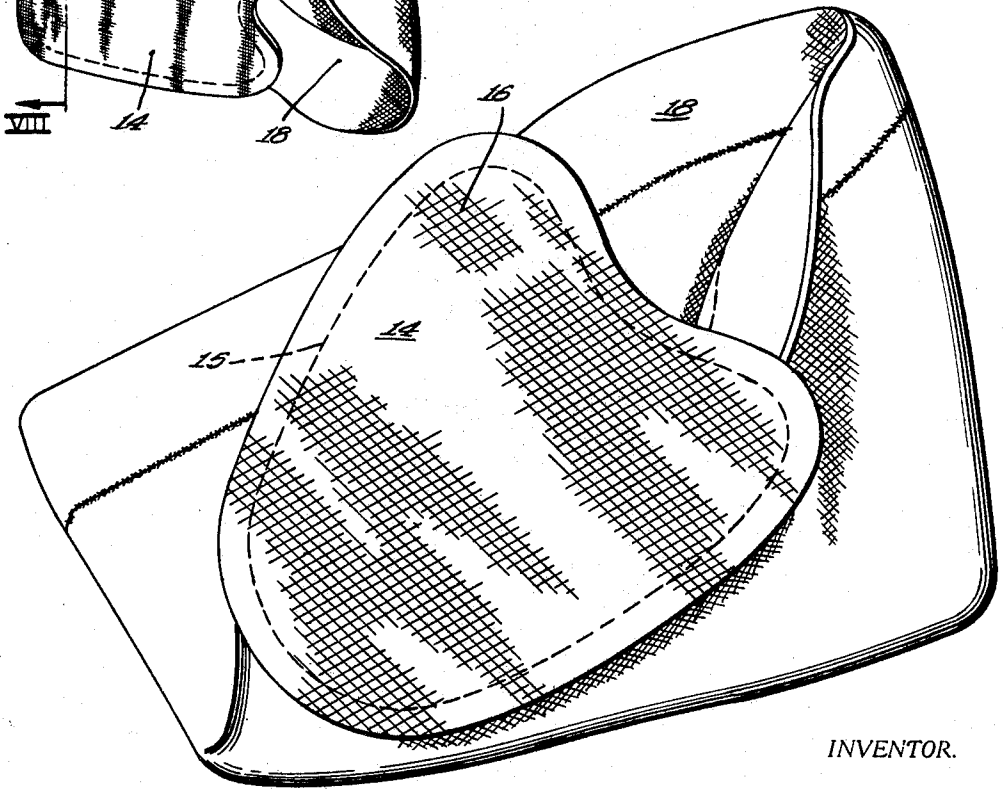


Fig. 7



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United States Patent Office

3,497,875

Patented Mar. 3, 1970

3,497,875

BOOTEE FOR HARD CASTS

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Filed June 24, 1968, Ser. No. 739,428
Int. Cl. A41b *11/00;* A43b *3/18, 1/02*
U.S. Cl. 2—239 5 Claims

ABSTRACT OF THE DISCLOSURE

A bootee to cover a hard cast, such as a plaster of Paris cast applied to the limb of a wearer to remain in place for a period of time, the bootee keeping warm any digits that may project from the cast, and being particularly desirable for a walking cast.

BACKGROUND OF THE INVENTION

Field of the invention

This invention or discovery relates to a garment in the form of a bootee designed to be drawn over an immobilizing cast or rigid bandage in the manner a stocking is put on and keep warm any digits that may project from the end of the cast while maintaining the cast and the digits in a reasonably sanitary condition, the bootee being easily removed and applied at will.

Description of the prior art

Heretofore where an immobilizing cast from which digits projected was applied to the limb of a patient, attempts have been made to keep the digits warm and the cast and digits in a relatively clean condition by covering the same with a knit bootee, oversize sock, or the like. However, such appliances provided no wearing surface such as a sole and were not particularly adapted to accommodate walking casts from the heel portion of which a spike or plug projects to take the body weight, and were therefore susceptible to quick and unsightly wear. In certain instances foldable bootees or garments which possibly could be used to protect a cast and projecting digits were made but were objectionably complicated to put on, take off, and usually embodied a contour rendering them objectionably costly and unattractive. In many instances also, extreme difficulty has been endured heretofore by patients endeavoring to find some satisfactory and pleasantly appearing garment or bootee highly desirable for use over a walking cast.

SUMMARY OF THE INVENTION

The instant invention overcomes the objections and solves the problems that were heretofore involved in the prior art, as mentioned above, by providing a simple form of bootee highly economical to manufacture, which is pleasing in appearance and long lasting and which provides a wearing surface in the form of a partial sole. The bootee is easily slipped on and off, and affords excellent accommodation for the projection of a cast heel spike or plug. The bootee is highly durable, long lasting, may be laundered at will, and may be made of various colors.

BRIEF DESCRIPTION OF THE DRAWINGS

FIGURE 1 is a side elevational view of a bootee embodying principles of the instant invention, showing the sole portion slightly turned up for illustrative purposes;

FIGURE 2 is a greatly enlarged transverse vertical sectional view through the sole portion taken substantially as indicated by the lines II—II of FIGURE 1 looking in the direction of the arrows;

FIGURE 3 discloses the two pieces of material comprising the bootee before assemblage;

FIGURE 4 is an enlarged bottom view of the bootee;

FIGURE 5 is a fragmentary reduced showing of the bootee in operative position over a cast on the leg and foot of the patient;

FIGURE 6 is a side elevational view with the sole turned up of a bootee of somewhat different construction but also embodying principles of the instant invention;

FIGURE 7 is an enlarged bottom view of the bootee of FIG. 6;

FIGURE 8 is an enlarged transverse vertical sectional view taken substantially as indicated by the line VIII—VIII of FIG. 6; and

FIGURE 9 is a view similar in character and location to FIG. 8 but illustrating a different arrangement between the sole and body of the bootee.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

For purposes of example, the instant invention is disclosed and described for association with a lower leg and foot cast, although the invention may have other uses and purposes as will be apparent to one skilled in the art. The bootee can be made in various sizes and lengths depending upon the size of the patient and the size of the cast used.

The instant bootee may satisfactorily be fabricated from only two original pieces of material. One of these pieces is a tubular body **1** which may be tubularly knitted in substantially a right tube, using fibers or yarns of wool, cotton, synthetic fibers, man-made fibers, or any other suitable material and which preferably incorporates spaced stretchable fibers or yarns such as "Helanca" yarn, rubber strands, stretchable plastic strands such as are used in spandex or the equivalent, to provide high stretchability and contractability of the body **1**. Preferably the tube is provided with a hem **2** at the top of double thickness to provide a stronger grip of the device around a cast at that point; and a hem **3** at the bottom end of the tube also of double thickness to provide better wearing qualities in that region.

The other piece of material is a partial sole **4**, preferably heart shaped as seen best in FIG. 4, which may be leather, "Neolite," rubber, or any other satisfactory sole material providing good wearability when walking on a surface such as asphalt, cement, or other hard surfaces.

When the two pieces are assembled, the tubular body **1** is closed a little over half-way by means of a line of stitching **5** joining the lower edges of the hem **3** as seen in FIGS. 2 and 4. The closed portion of the body **1** is then stretched laterally to fit over the sole piece **4** and the under-surface of this portion is preferably first cemented to the sole piece, and then joined to it by a line of stitching **6**. The sole piece is disposed with the smaller end thereof forward and the stretched portion of the body **1** simulates the toe portion of a shoe as indicated at **7** in FIG. 1, whereby it comfortably and intimately receives the toes of a foot projecting from a cast. The remainder of the lower end of the body **1** to the rear of the seam **5** is unsecured to leave an opening **8** through which the heel spike or plug of a walking cast may project.

In FIG. 5 I have illustrated a walking cast **9** upon the leg **10** of a patient with the bootee in operative position on the foot of the patient extending upwardly over the cast. The heel spike or plug **11** of the cast projects through the opening **8** and the sole piece **4** forms a relatively rigid and long lived sole in front of the plug **11** whereby the life of the bootee is preserved and it retains its pleasing appearance. The upper hem **2** of the bootee body **1** firmly grips the cast and the bootee remains nicely in position during use. The bootee may be removed and laundered at any time desired, or a pair of such bootees

may be purchased and one worn while the other is being laundered.

It will readily be appreciated that my novel method of making the bootee and the economical material used results in a low cost product that protects both the cast and projecting digits, also keeping the latter snug and warm. The patient may therefore be as ambulatory as he may desire without fear of injuring or soiling either the cast or his projecting digits. It will further be noted that owing to the stretchability of the bootee the bootees need only be made in small, medium and large sizes for men, women, and children, since one size of bootee will nicely fit a range of sizes of casts and body members. Accordingly, a dealer need only carry a modest inventory of bootees to satisfy the demands.

In FIGS. 6, 7 and 8 I have shown a somewhat different form of the instant invention embodying a tubular body **12** which may be of the same construction and material as the tubular body **1** seen best in FIG. 3 and previously described. In this instance, the lower end of the body portion is not partially closed by stitching as in the previous embodiment, but the forward portion of the body is merely stretched and turned under as indicated at **13**, FIG. 8, and this turned under margin may be cemented to a heart shaped sole piece **14**. The cementing enables easy handling of the bootee while a line of stitching **15** is applied around the edge of the sole piece to insure the parts remaining positively connected.

The sole piece **14** is preferably provided with a non-skid tread surface **16** which may satisfactorily be in the form of a myriad of small pyramids although other satisfactory tread surfaces may be utilized. The sole piece is preferably made of a rubber or synthetic composition, crepe rubber, or other satisfactory material. The sole piece is of the same general size and shape as the previously described sole piece **4** and simulates the toe of the shoe.

For use in warm weather, the only parts needed for the bootee is the tubular body **12** and the sole piece **14**, but for cold weather wear for warmth and better protection of the patient's projecting toes it is preferable to cover the inner face of the sole piece with a partial insole **17** of substantially the same size as the sole piece. This partial insole **17** is preferably of a warm material, such as wool cloth, or a cushioning insulating material such as felt, vinyl or polyurethane foam.

As seen in FIG. 8 the partial insole **17** may be disposed on top of the underturned margin **13** of the body portion and held in place by the stitching **15**. Alternatively, as shown in FIG. 9, the partial insole may be disposed fully upon the sole piece with the turned in margin **13** of the upper overlying the margin of the partial insole. The respective parts in either instance may be cementiously secured together to facilitate handling of the bootee while the seam **15** is established, if desired, or the respective pieces may be held while the stitching is established without utilizing a cement.

When the bootee is completed, with or without the partial insole **17**, the rear portion of the body **12** remains open as indicated at **18** to provide an opening through which a heel spike or plug may project, as above discussed in connection with FIG. 5. This second form of bootee functions in the same manner as the first described embodiment and both forms of the invention operate and provide the advantageous results in like manner.

It will be understood that modifications and variations may be effected without departing from the scope of the novel concepts of the present invention.

I claim as my invention:

1. A bootee for a hard cast, comprising

a tubular body portion of stretchable material substantially in the form of a right cylinder, and

a sole piece attached to the forward lower end portion at the bottom end of said cylinder leaving the rear part of the lower end of the cylinder remaining open.

2. The bootee of claim **1**, wherein

the portion of said body attached to said sole piece is laterally stretched simulating a shoe toe to better accommodate digits projecting from a cast.

3. The bootee of claim **1**, wherein

the body portion joined to said sole piece is closed so as to completely overlie the sole piece.

4. The bootee of claim **1**, wherein

said body portion is attached to said sole piece only along a turned in marginal portion of the body portion.

5. The bootee of claim **4**, wherein

a partial insole is disposed over the inner face of said sole piece.

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PATRICK D. LAWSON, Primary Examiner

U.S. Cl. X.R.

36—7.2, 9; 128—82