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3,406,683

THERAPEUTIC BOOT

Filed July 12, 1966

FIG. 1

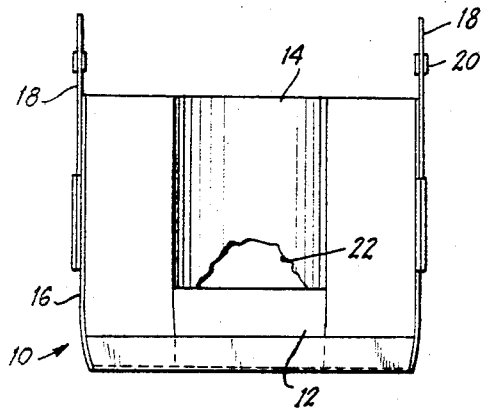


FIG. 2

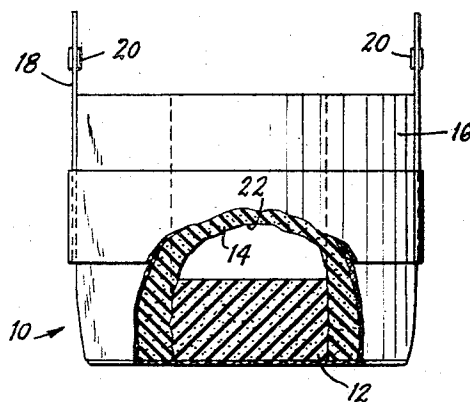
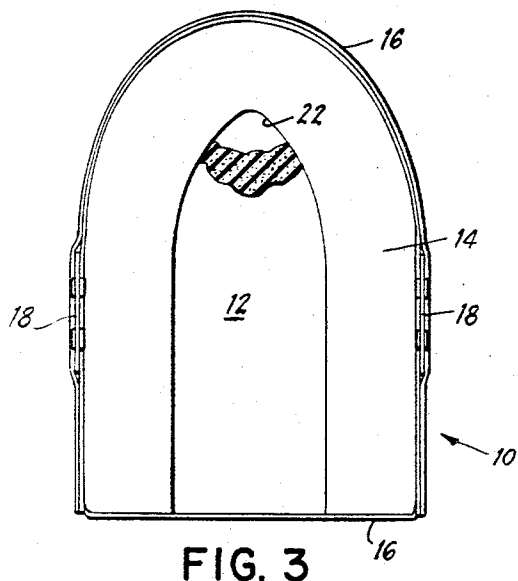
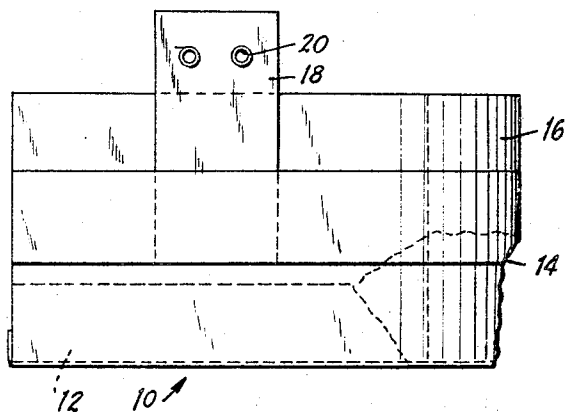


FIG. 4

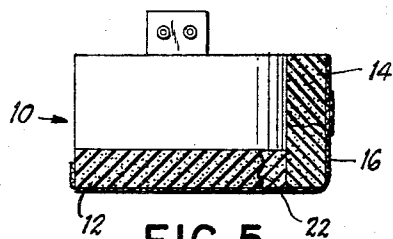


FIG. 5

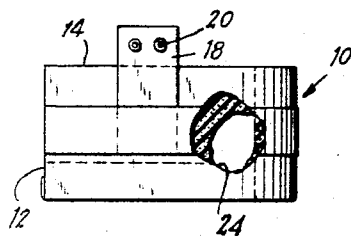


FIG. 6

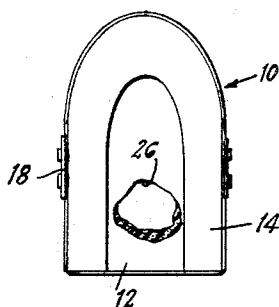


FIG. 7

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3,406,683

THERAPEUTIC BOOT

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6 Claims. (Cl. 128-166)

The present invention relates to a therapeutic shoe and, more particularly, to a therapeutic boot for use in the treatment of foot ulcers.

Foot ulcers are difficult to heal for the reason of paucity of blood circulation through the foot. This is particularly true in the instances of older persons, who most frequently suffer from foot ulcers that may be caused by the impaired blood circulation through their feet, due to old age.

In treatment of foot ulcers, stimulation of blood circulation is desirable, in addition to whatever medication may be indicated. To that end, it is highly desirable that the patient exercise the infected foot by walking as much as possible. However, it is also necessary to avoid pressure on the ulcerated area; such pressure being itself sometimes a cause of ulceration and also highly painful. Since walking on the ulcerated foot tends to create pressure and bring about great pain, such exercise is generally avoided by the ulcer sufferer, and he is deprived of its benefits.

It is an object of the present invention to provide a therapeutic boot for use in the treatment of foot ulcers that will not apply any pressure on the ulcerated foot area of the wearer at any time, either while walking or at rest.

It is also an object of the present invention to provide a therapeutic boot, of the character described, which will permit the wearer to walk on the affected foot with a minimum of pain to thereby encourage walking by the wearer and afford him the benefits of such exercise.

It is another object of the present invention to provide a therapeutic boot, of the character described, which not only will promote the stimulation of blood circulation through the affected foot by allowing substantially painless walking, but will positively stimulate blood circulation through the foot while walking.

It is still another object of the present invention to provide a therapeutic boot, of the character described, which is of relatively simple construction and relatively economical to produce and use.

It is a further object of the present invention to provide a therapeutic boot, of the character described, which may be accommodated for wear on ulcerated feet with differently located ulcers.

It is a still further object of the present invention to provide a therapeutic boot, of the character described, which may be simply and easily and painlessly put on and taken off the foot.

The foregoing and other objects and advantages of the therapeutic boot of the present invention will become more readily apparent to those skilled in the art from the embodiment thereof shown in the accompanying drawing, and from the description following. It is to be understood, however, that such embodiment is shown by way of illustration only, to make the principles and practice of the invention more readily comprehensible and without any intent of limiting the invention to the specific details therein shown.

In the drawing:

FIG. 1 is a front elevation of a therapeutic boot of the present invention, shown as adapted for use on a foot having an ulcer in the heel;

FIG. 2 is a side elevation of the same;

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FIG. 3 is a top plan view of the same;

FIG. 4 is a rear elevation of the same;

FIG. 5 is a sectional view, on a reduced scale, taken on line 5-5 of FIG. 3;

FIG. 6 is a view similar to that of FIG. 2, but on a reduced scale, showing the boot as adapted for use on a foot having an ulcer in a side thereof; and

FIG. 7 is a top plan view, on a reduced scale, of a boot adapted for use on a foot having an ulcer in the sole thereof.

Referring now, in greater detail, to the embodiment of the invention illustrated in the drawing, and with particular reference to FIGS. 1 through 5, inclusive, the therapeutic boot, generally designated as 10, is shown to comprise a sole section 12 and an upper section 14, of U-shape, to form a boot that is open at top and front. Both the sole 12 and the upper 14 are formed of a relatively softly-resilient material, such as natural or synthetic rubber or plastic sponge material, preferably of a type that may be easily cut.

Both sole 12 and upper 14 may preferably be relatively thick, as about two inches in thickness; the latter thickness having been found highly effective for the purpose. However, lesser or greater thickness may be utilized where indicated.

The sole 12 and upper 14 may, if desired, be molded in one piece or they may be formed in separate sections, with the upper overlying the marginal edge portions of the sole or disposed against its peripheral edge, as may be desired. Where the boot 10 is formed of separate sole and upper sections, the two may be cemented in any desired manner. One way of securing the upper and sole may be by the application on the exterior of an adhesively secured fabric liner 16, which may, if desired, comprise adhesively coated tape, which will not only hold the two parts together, but will also provide a better wearing outer surface for the boot. For the latter reason, such outer liner will also be advantageous for a one-piece boot.

For securing the boot 10 over a foot, there are secured on the outer surface of each side of the upper, as by adhesive, at approximately their midpoint, a strip 18 which projects above the upper edge of the upper 14. The projecting portions of the strips 18 are provided with means for releasably securing them to one another in order to secure the boot over a foot. Such means, as illustrated, may comprise grommets 20 for receiving a conventional shoelace by which the two projecting portions of the strips 18 may be adjustably connected to one another over a wearer's foot.

For use on an ulcerated foot, an opening may be cut in the boot either in the sole section 12 or in the upper 14, or partly in each of them, opposite the area of the ulcer on the foot. Preferably, the opening may be larger than the ulcerated area on the foot, so as to provide approximately a half inch open margin around such ulcerated area. By this means the boot may be tied over the ulcerated foot without touching the ulcerated area and exerting pressure thereon, the latter of which may be treated by a physician in any manner that he may find indicated. The wearer of a boot of the present invention, because of the high resilience of the boot, may walk on the ulcerated foot without undue pain and without experiencing painful pressure or discomfort on the ulcerated area, to thereby derive the benefit of increased blood circulation due to the walking exercise. Further, the boot provides additional stimulation to the circulation of the blood through the foot by the massaging action that results from the resilience of the boot walls that contract against and relax from the foot each

time the shoe is stepped on and released from the walking surface.

In the embodiment of FIGS. 1 to 5, inclusive, the boot 10 is shown as cut away, at 22, partly through the sole 12 and partly through the upper 14, at the rear of the boot, for wearing upon a foot having an ulcerated heel. FIG. 6 illustrates a boot 10 in which the opening 24 is formed of a side of the upper directly above the sole 12 and extending partly therein for use upon a foot having an ulcer in the side edge thereof. FIG. 7 illustrates a boot 10 having an opening 26 formed in the sole 12 of the boot, for a wearer having an ulcer in the sole of the foot.

While the cutaway openings 22, 24 and 26, have been shown as being formed and extending through the outer liner 16, it may here be stated that such cutaways may, in most instances, with great advantage, extend only through the resilient wall sections 12 and 14, as the case may be, and leaving the outer liner intact, as a protection for the ulcerated area.

This completes the description of the therapeutic boot of the present invention. It will be readily apparent that such boot is of simple construction; economical to produce; easy and convenient to use; and highly effective to stimulate circulation of the blood in the foot for maximum therapeutic effect by eliminating the pain that discourages use of the foot in walking, and by, additionally, exerting a massaging effect on the foot while walking.

It will also be apparent that numerous variations and modifications may be made in the therapeutic boot of the present invention by anyone skilled in the art, in accordance with the principles of the invention hereinabove set forth, without the exercise of any inventive ingenuity. I desire, therefore, to be protected for any and all such variations and modifications that may be

made within the spirits of the invention and scope of the claims hereto appended.

What I claim is:

1. A therapeutic boot, of the character described, comprising a substantially flat sole section and a U-shaped upper section extending upwardly from the peripheral portion of said sole section, and configured to surround and embrace the heel and upper portion of the wearer's foot to form a boot open at the top and front, said sole section and said upper section formed of resilient sponge material, and means provided on said upper section for releasably securing said boot on a foot.
2. The therapeutic boot of claim 1, wherein said resilient sponge material comprises a latex sponge.
3. The therapeutic boot of claim 1, wherein said sponge material is of a thickness of approximately two inches.
4. The therapeutic boot of claim 1, wherein said sponge material is of a character that may be readily cut.
5. The therapeutic boot of claim 1, wherein said means for releasably securing said boot on a foot comprises a fabric strip secured to said upper section on the exterior of each of its two sides, said strips having portions projecting above said upper section and having means on said projecting portions whereby they may be inter-engaged with one another over the top of the foot.
6. The therapeutic boot of claim 1, wherein a fabric layer is secured on the outer surface thereof.

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