Nov. 27, 1956 M. G. LUCHS 2,771,691

CUSHIONED FOOT PROTECTOR

Filed Sept. 22, 1954

FIG. 1.

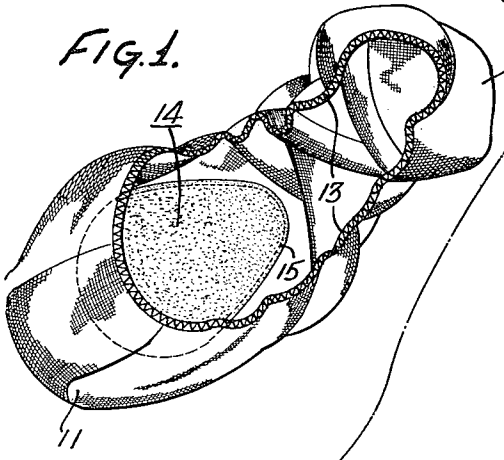


FIG. 2.

FIG. 3.

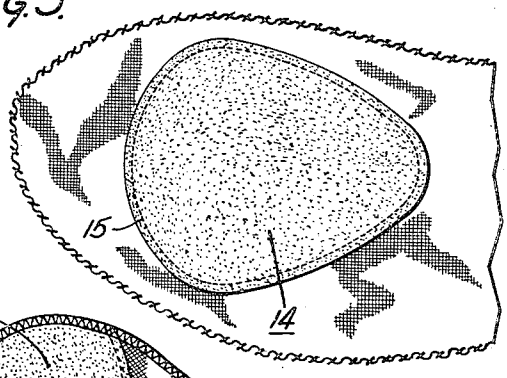
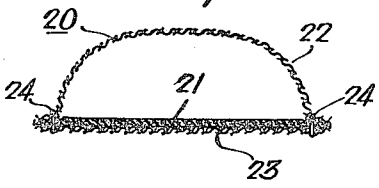


FIG. 5.



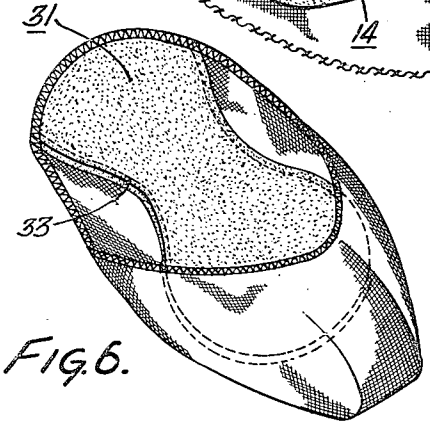
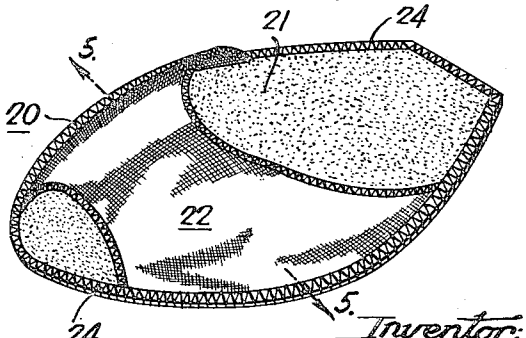


FIG. 6.

FIG. 4.



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CUSHIONED FOOT PROTECTOR

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1 Claim. (Cl. 36—10)

The present invention relates to hosiery and more particularly to foot protectors which are adapted to be worn inside of shoes in lieu of stockings.

Conventional hosiery of this character is formed of a knitted blank which is stitched together to provide a pocket for receiving the toes. The foot protector may cover the complete foot or may expose the heel or the toes, or both.

The present invention constitutes an improvement over the conventional foot protector by providing a cushion or pad underlying the ball of the foot. In this manner, the wearer is furnished a resilient supporting member to absorb the shocks occasioned by normal walking and standing. The present invention provides greater comfort than the conventional foot sock and thereby greatly reduces the fatigue experienced by persons who are on their feet a great deal of the time.

With the foregoing in mind a primary object of the present invention is to provide footwear of improved design which affords greater comfort to the wearer.

More specifically, an object of the present invention is to provide a foot sock or foot protector of simplified design which includes a cushion or pad underlying the ball of the foot to guard against fatigue.

These and other objects of the invention and the various features and details of construction thereof, are more fully set forth hereinafter with reference to the accompanying drawing, in which:

Fig. 1 is a perspective view of a foot sock or foot protector made in accordance with the present invention in relaxed position;

Fig. 2 is a side elevational view of a foot sock as it appears on the foot with a portion broken away to more clearly illustrate the construction thereof;

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 2;

Fig. 4 is a perspective view of a modified form of foot sock;

Fig. 5 is a sectional view taken on the line 5—5 of Fig. 4; and

Fig. 6 is a perspective view of a further modification of a foot sock made in accordance with the present invention.

Referring now to the drawing, Figs. 1 to 3 illustrate a knitted foot sock of the so-called "canoe" type wherein the sock is formed to provide at its forward end a toe pocket **11**, and at its back end a heel pocket **12**. A binding seam **13** is formed around the opening in the sock which, if desired, may be provided with an elastic thread to insure a snug fit on the foot. It is noted that the hosiery is seamless in the portion which underlies the sole of the foot.

In accordance with the invention, a cushion or pad **14** of foam rubber or other suitable resilient material is secured in the lower portion of the toe pocket **11**, for example by stitches **15**. The cushion or pad **14** is positioned in the toe pocket to underlie the ball of the foot. As shown in Fig. 2 the pad **14** supports the major part

of the weight of the person and thereby provides a resilient support which greatly reduces fatigue and weariness normally experienced by persons who must remain on their feet for long periods of time.

It should be noted that in a preferred form of the invention, the pad **14** is a one-piece self-sustaining composition which is easily sewed to the toe pocket by the line of stitches **15** extending about its periphery. The central part of the pad is thereby smooth and uninterrupted to provide a supporting surface which is free of discomforting stitches and the like. Preferably the pad is composed of molded foam rubber of uniform thickness which is waterproof, so that the foot sock may be laundered in the usual manner without fear of damaging the article. As shown in Figs. 1 and 3, the pad **14** comprises a separate, resilient pad of uniform thickness and of generally pear-shape outline symmetric about its longitudinal axis. This pad **14** is placed and secured interiorly of the hosiery in the forward portion thereof with the longitudinal axis of the pad longitudinally disposed within said hosiery and with the greatest transverse axis of said pad disposed to underlie the ball region of the foot. Pad **14** is of sufficient width and area to support the pressure points of the bottom of the foot in the ball region thereof over a substantial range of widths of feet and, by virtue of this construction, the same pad is adapted for use with feet of various widths, for example, triple A to D. This pad **14** is so positioned within, and secured within, the hosiery that it terminates at its forward edge substantially at a line defined by the forward edge of the ball region of the foot, terminates at its rearward edge in the forward region of the arch of the foot, and terminates along its side edges short of the sides of the foot. I thus provide a pad of the generally pear-shaped configuration above specified, positioned as above described, and having an exposed, flat, uninterrupted surface providing a smooth cushioning member for directly supporting the ball region of the foot. It is an important feature of my present invention that the generally pear-shaped outline of the pad, its symmetry about its longitudinal axis, and the mounting of the pad interiorly of the hosiery with its longitudinal axis longitudinally disposed within the hosiery, adapts the hosiery for use on right or left feet without reversal of the hosiery.

Figs. 1 to 3 illustrate the attachment of a pad to the most common type of foot sock, but the invention is not limited to this particular form of sock. For example, Figs. 4 and 5 illustrate a modification wherein a foot sock **20** is formed by a pad **21** and a knitted cover member **22**. The cover member **22** forms with the pad **21**, a toe pocket to receive the toes of the wearer. To provide greater structural support for the pad it is lined on one side with a fabric base **23** and is provided with a suitable binding seam **24** extending about its periphery. As shown in Fig. 5, the cover member **22** bridges the central portion of the pad **21** to expose both the toes and the heel of the wearer. In this form of the invention, the pad **21** underlies the complete forward portion of the foot and performs the same function as the pad **14** described above to reduce fatigue. The surface of the pad which contacts the foot is smooth and uninterrupted so as to insure against irritation from stitches and the like.

A further modification is shown in Fig. 6 wherein a pad **31** is shaped to conform to the outline of the foot. A knitted sock member is secured to the pad as indicated at **33** to provide a toe pocket to receive the toe and the forward part of the foot. The pad **31** underlies the ball and the arch of the foot and provides a cushioned supporting member in the same manner as described above in connection with Figs. 1 to 3 inclusive.

I have not exhausted the modifications contemplated

within the scope of the present invention, and other changes and combinations may be made thereto within the scope of the following claim.

I claim:

Knitted hosiery for both right or left feet, comprising a forward portion formed to envelop the toes and ball of the foot, and a shank portion disposed rearwardly of said forward portion to underlie the arch of the foot, said hosiery including a separate, resilient pad of uniform thickness and of generally pear-shaped outline symmetric about its longitudinal axis, said pad being placed and secured interiorly of said hosiery in said forward portion with said longitudinal axis of said pad longitudinally disposed therein, and with its greatest transverse axis disposed to underlie the ball region of the foot, said pad being of sufficient width and area to support the pressure points of the bottom of the foot in the ball region thereof over a substantial range of widths of feet and terminating at its forward edge substantially at a line defined by the forward edge of said ball region, at its rearward edge in the forward region of the arch, and along its side edges short of the sides of the foot, said pad having an exposed, flat, uninterrupted surface to provide a smooth

cushioning member for directly supporting the ball region of the foot, the generally pear-shaped outline of said pad, its symmetry about its longitudinal axis, and the mounting of said pad interiorly of the hosiery with its longitudinal axis longitudinally disposed within said hosiery adapting the hosiery for use on right or left feet without reversal of the hosiery.

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