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B. JAYNE.

2,374,487

OUTER SOLE FOR SHOES

Original Filed July 15, 1939

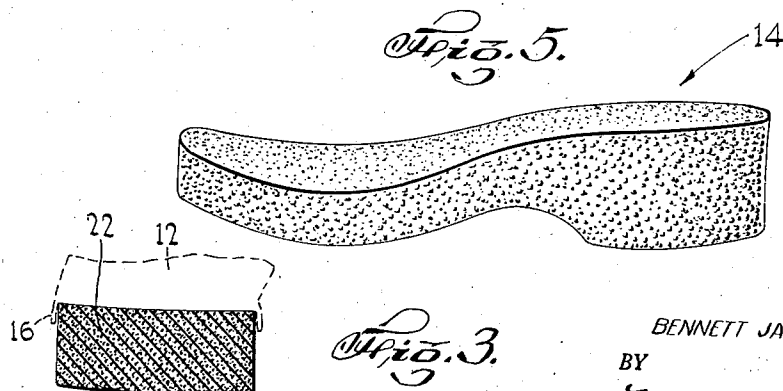
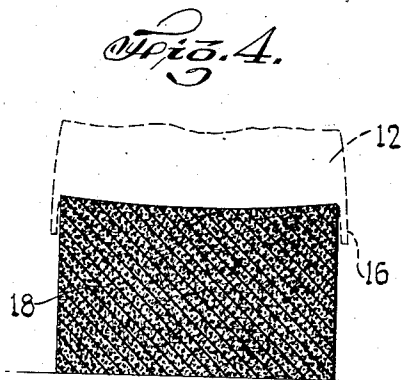
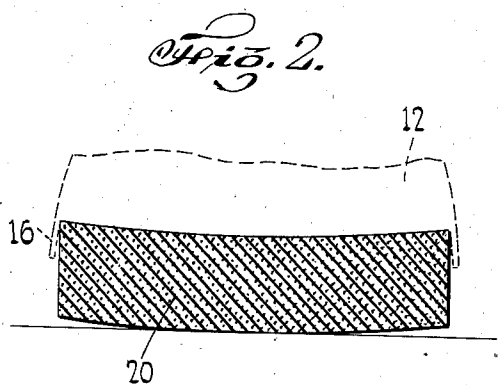
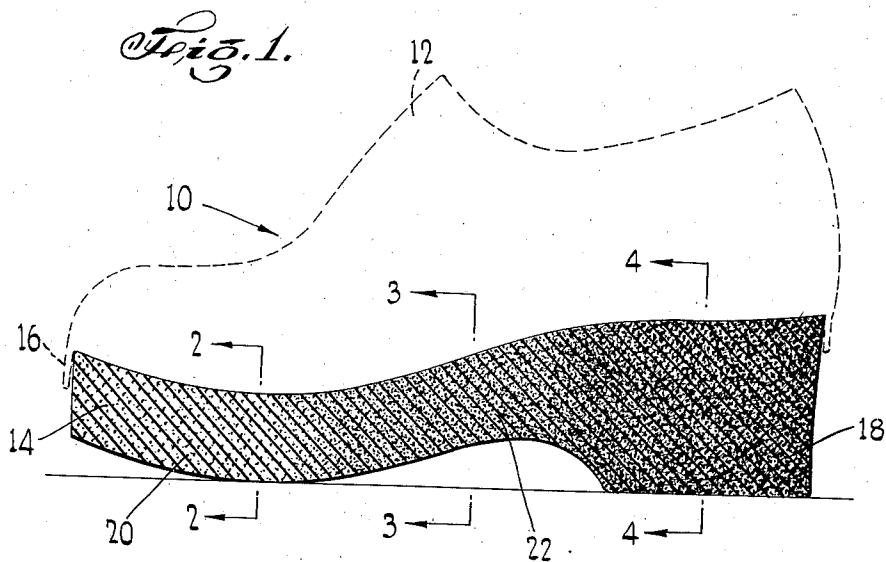


Fig. 3.

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OUTER SOLE FOR SHOES

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Original application July 15, 1939, Serial No.
284,571. Divided and this application March 6,
1942, Serial No. 433,553

1 Claim. (Cl. 36—32)

This invention relates to footwear. More particularly the invention is concerned with outer soles for shoes.

One of the objects of my invention is to provide an improved resilient outer sole which increases walking comfort, which is of a thickness greatly exceeding thicknesses heretofore used, which is of highly resilient material and is preformed to the shape of the last with which it is to be employed, and which affords the proper varying degrees of resilient support for the heel, instep and ball of the foot.

Other objects of this invention will in part be obvious and in part hereinafter pointed out.

The invention accordingly consists in the features of construction, combinations of elements, and arrangement of parts which will be exemplified in the construction hereinafter described, and of which the scope of application will be indicated in the claim.

Certain features of my invention shown and/or described but not claimed in this application are shown, described and claimed in my co-pending application for Shoes, Ser. No. 284,571 filed July 15, 1939, now Patent Number 2,284,620, granted June 2, 1942, from which the present application is divided, and my co-pending application for Shoes, Ser. No. 433,554, filed March 6, 1942.

In the accompanying drawing, in which is shown one of the various possible embodiments of this invention,

Fig. 1 is a side elevational view in section of an outer sole embodying my invention, with the shoe upper schematically shown;

Figs. 2, 3, and 4 are sectional views taken substantially along the lines 2—2, 3—3, and 4—4 of Fig. 1, and illustrating respectively the contour and density of the outer sole in the region of the fore portion, shank portion, and heel portion; and

Fig. 5 is a perspective view of the outer sole.

Referring now in detail to the drawing, 10 indicates a shoe comprising an upper 12 and an outer sole 14 constructed in accordance with my invention. The upper may be of any suitable design and is preferably constructed in a manner similar to that shown and described in my said co-pending applications, being provided with a skirt portion 16 which freely overhangs and conceals a substantial portion of the rim of the outer sole 14.

The outer sole 14 is made from a highly resilient material, for example, sponge rubber and has a minimum thickness in the fore portion

thereof which thickness exceeds that presently employed in outer soles for shoes. This special thickness ranges upward from three-quarters of an inch, and provides a highly improved cushioning effect which affords great comfort to the foot while walking. Said sole 14 comprises a unitary piece of molded sponge rubber which is fabricated in such a manner that the density of the rubber in the heel portion 18 is greater than the density of the rubber in the fore portion 20. The density of the rubber in the shank portion 22 is different from the density of the rubber in the heel and fore portions and is preferably of an intermediate density. In this manner, I provide the different degrees of resilient support which are most desirable for the heel, instep, and fore portion of the foot.

The upper surface of the sponge rubber outsole 14 is specially shaped to negatively conform to the lower surface of the last on which the upper 12 is supported. In this manner, during attachment of the sole 14 to the upper 12, no portion of the sole which is of highly flexible and easily deformable sponge rubber will be placed under a strain sufficient to distort its shape and impair its efficiency.

It will thus be seen that there is provided a device in which the several objects of this invention are achieved and which is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention, and as various changes might be made in the embodiments above set forth, it is to be understood that matter herein set forth or shown in the accompanying drawing is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

For use with a shoe upper constructed on a last of a predetermined shape, a one-piece preformed outer sole of sponge rubber whose upper surface is negatively contoured to the shape of the last, the density of the shank portion of said sole being greater than the density of the fore portion thereof and the density of the heel portion being greater than the density of the shank portion, the fore portion of said sole having a minimum thickness of three quarters of an inch, the shank portion being clear of the ground, and the heel portion being thicker than the fore portion.

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