Sept. 10, 1929. J. L. G. DYKES 1,727,587

DETACHABLE AUXILIARY SOLE FOR FOOTWEAR

Filed Oct. 13, 1927

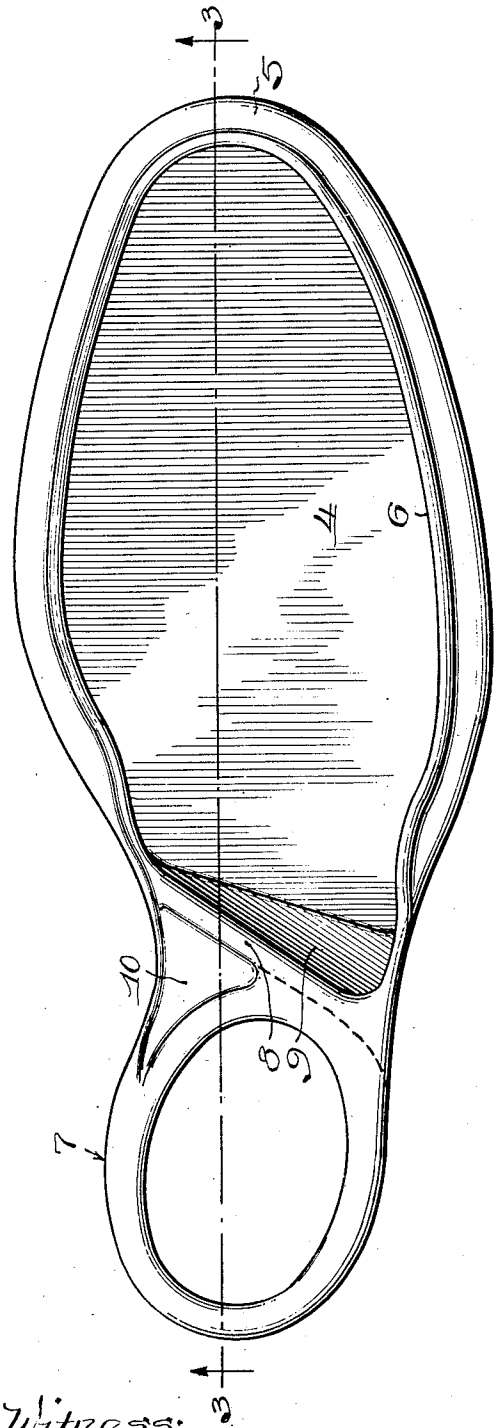


Fig. 1

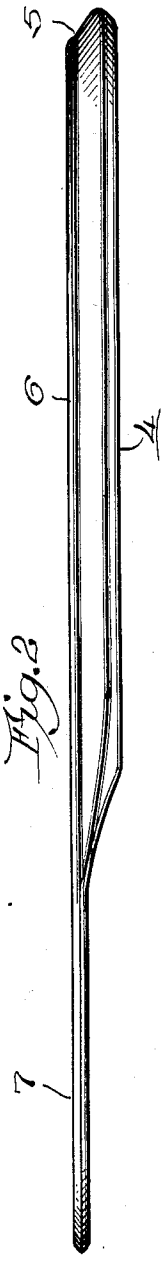


Fig. 2

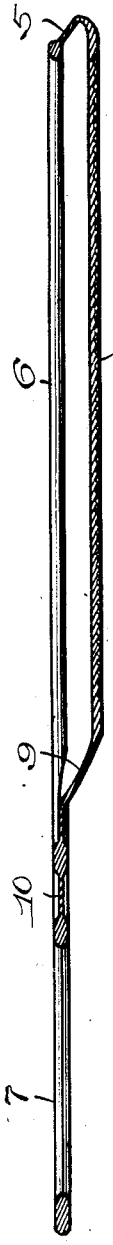


Fig. 3

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UNITED STATES PATENT OFFICE.

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DETACHABLE AUXILIARY SOLE FOR FOOTWEAR.

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My present invention relates to the provision of a protective and detachable auxiliary sole for footwear.

As is well known, the many shapes of the soles of footwear and the number of sizes in each shape constitutes no little problem in supplying protective soles to the demand which a dealer has for such articles.

My object has been to provide a sole which will fit both a reasonable diversity of shapes and sizes so that the diversity of articles constituting the stock which a merchant will have to carry may be considerably reduced.

It will also be noted that a common characteristic of all styles and shapes of soles is that the outer line from heel to toe, and especially past the shank or arch, is easy and flowing, whereas, the inner line curves sharply inwardly at the arch. If, therefore, the pull of the holding on or constrictive means for holding the auxiliary sole to the shoe is applied equally to both sides of the sole, it will tend to roll over off and out of engagement with the outer sole edge of the footwear. To overcome this tendency I have provided a constrictive means which will not only secure the soles to different sizes and shapes of footwear, but will also secure a desired differentiation of pull or grip between the outer and inner sides of the sole, thereby securing a much more dependable attachment of the sole to the footwear.

I accomplish the foregoing objects and secure the above mentioned results by means of the structure illustrated in the accompanying drawing, in which—

Fig. 1 is a plan of a detachable sole embodying my invention,

Fig. 2 is a side elevation of the structure shown in Fig. 1,

Fig. 3 is a section on line 3—3 of Fig. 1.

I form my soles of vulcanized rubber, preferably molded integrally in a single piece. The sole portion 4, proper, extends from the toe to the beginning of the arch or shank and is made of sufficiently heavy material and with suitable reinforcement, if desired, to meet the wear of its anticipated service. By reason of its thickness and weight the sole 4 has flexibility but little stretch and elasticity.

Extending around the periphery of the sole and inwardly therefrom on the upper side is produced a relatively thin elastic extension 5 which in ordinary sizes of footwear is about a centimeter in width. This relatively thin elastic extension lies practically upon the upper face of the sole until it is assembled with the footwear and terminates on its inner edge in a substantial bead 6, which bead is carried rearwardly of the sole 4 and extension 5 and produced into a heel engaging loop or annulus 7 with which the bead upon the outer side of the sole is substantially tangential, while the bead from the extension upon the inner edge of the sole is carried just rearwardly of the sole and extension across under the arch or shank to join and merge with the heel loop 7 at about the longitudinal center of the structure, as shown clearly at 8. The bead 6, and loop 7 are made of a rubber composition to secure considerable elasticity, but by reason of its great relative length and relative short thick section the elasticity develops almost entirely longitudinally and little if any transversely of the bead.

It will be noted that the width of the extension 5 is substantially greater than the distance which soles usually extend beyond the welt or line of attachment with the vamp or upper, but it will be realized that when the bead 6 is stretched in positioning it in the groove between the sole and upper, it will also stretch the contiguous portion of the extension 5 and create a pull directly across the extension, thereby drawing across the extension 5 to cause it to hug closely the edge and top of the sole.

The action above described would be similar in fabric or non-elastic material to that of a puckering string except that the material is stretched where the folds or pucker would occur, and this construction permits of a single size and shape of sole to be applied to a relatively large number of shapes and sizes of footwear.

It will be further noted that I fill the spaces between the end of the sole and the bead at 8 and the bead at 8 and the upper inner edge of the ring, which spaces I designate with the reference characters 9 and 10, with a thin

elastic sheet of rubber similar in all respects to the extension 5 for the purpose of excluding water from between the sole of the footwear and the detachable sole.

With this construction, it should be noted, there is substantially straight pull along the outer edge of the sole from heel to toe, whereas the inward inclination of the bead 6 at the relatively sharp inner rear edge of the sole causes the bead to hug this portion of the shoe while it in no way tends to pull or roll off the engagement of the bead on the outer opposite side with the sole of the footwear.

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

1. A detachable auxiliary sole for footwear consisting of a sole portion of relatively little elasticity extending from the toe to the arch of the sole of the footwear, a thin elastic extension produced from the front and sides and inwardly toward the center of said sole portion, a bead of relatively great longitudinal elasticity at the unattached edge of said extension, the bead upon the outer side being longitudinally produced to provide a heel engaging loop and the bead upon the inner side being produced to join and merge with said loop at about the longitudinal axis of said structure, and thin elastic areas between the rear of said sole portion and said loop.

2. A detachable auxiliary sole for footwear consisting of a sole portion of relatively little elasticity extending from the toe to the arch of the sole of the footwear, a thin elastic extension produced from the front and sides and inwardly toward the center of and parallel with the margin of said sole portion, a bead of relatively great longitudinal elasticity incorporated in said extension, said bead being longitudinally produced from each side to join and then extended to provide a heel engaging loop, and thin elastic areas between the rear of said sole portion and said loop.

JOHN L. G. DYKES.