

Aug. 10, 1937.

J. J. WHITE

2,089,459

CALK FOR SHOES

Filed March 18, 1936

Fig. 1.

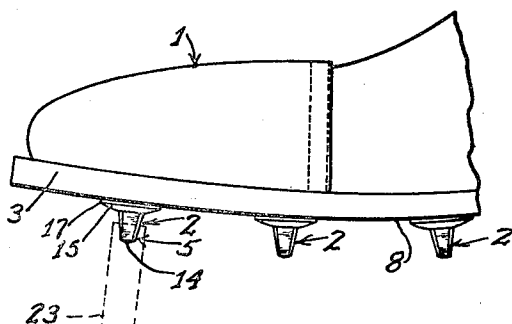


Fig. 2.

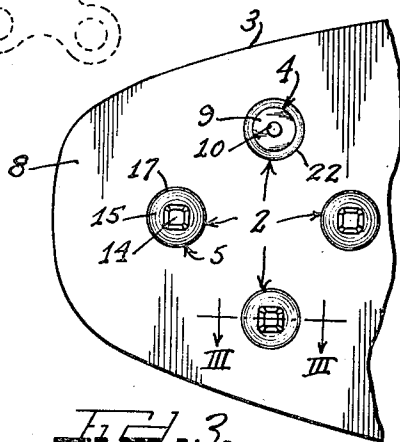
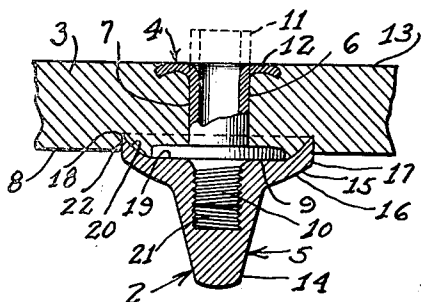


Fig. 3.



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UNITED STATES PATENT OFFICE

2,089,459

CALK FOR SHOES

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Application March 18, 1936, Serial No. 69,473

3 Claims. (Cl. 36—59)

This invention relates to shoe construction and particularly to calks for sport and other shoes.

Among the objects of the invention are to provide: a calk of substantially increased ruggedness; means in a calk construction for substantially preventing accidental loss of the peg thereof; and a calk construction which, when applied, defies access of pebbles, moisture and other undesirable matter to the inner part of the calk.

In accordance with the general features of the invention, the calk preferably comprises two parts, one of which is preferably permanently anchored to the outsole and is threaded to receive a complementally threaded relatively removable ground-engaging peg. The peg has a sharp-edged flange which, as the peg is threaded home, bites or cuts a groove into the outsole so as to form a weather- and dirt-proof seal and a friction hold affording substantial resistance to loosening of the peg. Thus the outsole is protected by the peg against entry of moisture to the interior of the shoe and entry of pebbles or the like which, in prior calk constructions, have had a prying effect resulting in loosening and oftentimes breaking and loss of the peg. This seal also simplifies cleaning of the bottom of the sole and the exterior of the peg and obviates the use of expensive non-rusting calk material.

The anchor part may form the male member of the connection and thus, should the peg be broken off or for any reason separated from the anchor part, the latter, forming as it does a seal with the outsole of the shoe, prevents moisture from gaining access to the inner part of the shoe, such as the filler between the outsole and the insole, or directly to the insole in the absence of a filler. The anchor part may project down beyond the outer surface of the outsole to serve as a temporary ground-gripping means until it receives another peg, but will be protected by adjacent pegs against injury.

Further objects and advantages of the invention will appear as the description proceeds.

This invention (in a preferred form) is illustrated in the drawing and hereinafter more fully described.

Figure 1 is a fragmentary elevational view of the forepart of a shoe equipped with calks embodying the invention, and shown in dotted lines a key for applying and removing the pegs of the calks.

Figure 2 is a fragmentary bottom view of the forepart of a shoe embodying the invention, the peg of one of the calks being removed to show details of construction.

Figure 3 is an enlarged fragmentary sectional view taken substantially in the plane designated by the line III—III in Figure 2.

As shown on the drawing:

Referring now more particularly to the drawing, a fragmentary part of a shoe 1 is illustrated, equipped with calks 2 constructed and attached to the outsole 3 in accordance with the invention. In accordance with one form of the invention, the calk structure may comprise essentially two pieces, namely, an anchor piece 4 and a preferably removable peg 5. The anchor piece may take the form of a plug preferably tightly fitted in a hole 6 formed in the outsole 3. The plug 4 is preferably formed with a tubular portion 7 adapted to project upwardly through the hole 6 and to be closed adjacent the lower surface 8 of the outsole, a plate-like flange 9 at the closed end of the tubular portion 7, and an externally threaded stem 10 projecting below the flange.

The anchor element 4, after the formation of the hole 6, is inserted through said hole from the outer side 8 of the outsole and then, when the flange 9 is seated against said outer side, the free end 11 of the tubular portion 7 is expanded in the manner of a hollow rivet and embedded as shown at 12 under pressure in the outsole 2 adjacent its inner side 13 so as to permanently anchor the anchor element to the outsole. The surface 13 of the outsole 3 is adapted to be engaged with the filler usually secured under the insole, or, in the absence of a filler, directly with the bottom of the insole. The riveting, as stated, is done under pressure so that the plug 4 will be tightly held against any loosening, and due to the relative compressibility of the outsole material, which may be of leather or other suitable outsole material, the flange 9 will be embedded in the outer or lower face 8 of the outsole as shown. The flange 9 assists in preventing canting of the plug relatively to the outsole. Also, the pressure between the outsole material and the flange 9 forms a seal substantially preventing entry of moisture to the hole 6.

The peg of the calk as shown at 5 comprises a truncated substantially pyramidal stem 14 and a base flange 15 which may have a substantially flat bottom surface but preferably is tapered upwardly, slightly, from the stem as shown at 16. The flange has a peripheral substantially cylindrical wall 17 which terminates upwardly in a knife edge 18. The flange 15 is recessed on its upper side, providing a substantially flat recessed

bottom 19 and an upwardly tapered wall 20 terminating in said edge 18. The peg 5 is in the form of a cap and is centrally tapped at 21 downwardly from said cavity in substantial coaxial relation to the cap for receiving the threaded stem 10 of the plug 4.

In applying the peg 5, the same is shoved upwardly to receive the threaded stem 10 and thereupon rotated upwardly. As the rotation continues, the knife edge 18 comes into engagement with the outer side 8 of the outsole 3 and cuts its way thereinto, forming a groove 22. Said side 8 of the outsole may be moistened adjacent the plug flange 9 prior to screwing home the peg 5, to facilitate the movement of the knife edge 18 into the outsole. The tapered wall 20 has an inward camming effect on the portion of the outsole engaged thereby, said portion yielding inwardly under considerable pressure and being compressed by said pressure to such an extent as to engage the outer periphery of the flange 9 of the plug. The friction between the outsole material and the engaged surfaces of the flange of the peg 5 is such as to prevent accidental retrograde movement of the peg, such as would otherwise occur when striking obstacles and due to the continuous pounding on the peg during wear of the shoe. In the event the outsole material were moistened, the drying thereof enhances the friction on the peg 5. When the peg is thus driven home, it is securely attached to the plug 4 and at the same time the portion of the outsole intimately surrounding the flange 15 serves as a protective wall therefor, preventing the entry of pebbles, dirt and the like which ultimately would have the effect of prying the cap or breaking the same or otherwise interfering with proper operation of the calk structure. This seal also obviates the need of making the plug of rust-proof material.

The parts are so constructed as to be rugged in service, and should for any reason the cap become separated from the plug, the stem 10 of the plug will have some gripping effect to assist the remaining pegs, and at the same time will be protected by such remaining pegs in the event a hard surface is encountered.

The stem 14 of the peg is given a substantially pyramidal shape for strength and also to accommodate a key 23 both for applying and for removing the peg. The stem 14 of the peg is sufficiently elongated to have the proper calking effect in the ground and yet is not sufficiently slender to be likely to be broken off when striking an obstacle.

If desired, different shaped pegs may be used, according to the character of wear to which the golf or other shoe equipped with the calks is to encounter. Such differently shaped pegs will preferably be formed with the same flange construction as that of the illustrated peg, including the base 15, edge 18, etc., and may be internally threaded for engagement with the stem 10. Thus the key 23 may be employed for applying and removing any peg adapted for cooperation with the stem 10.

It will be appreciated that while the stem 10

is externally threaded and the peg 5 internally threaded, the threading could be reversed as to the parts without departing from the principles of the invention. Moreover while a threaded connection is illustrated, a bayonet or other suitable type of preferably releasable connection may be employed.

I am aware that many changes may be made and numerous details of construction may be varied through a wide range without departing from the principles of this invention, and I, therefore, do not purpose limiting the patent granted hereon otherwise than necessitated by the prior art.

I claim as my invention:

1. Shoe construction including an outsole having a hole, a plug having a portion of the character of a hollow rivet anchored in and filling said hole, the extremity of the hollow portion being flared and pressed into the inner surface of said outsole, said plug having an integral flange which bears against the outer surface of the outsole when the plug is secured in place in said hole and also having an integral externally threaded stud portion projecting outwardly from the outsole, and a peg having an interiorly threaded part receiving the threaded stud of the plug, said peg having an integral flange with a sharpened margin encompassing the plug flange and embedded in the outsole.

2. Shoe construction including an outsole having a hole, a plug having a portion of the character of a hollow rivet anchored in and filling said hole, the extremity of the hollow portion being flared and pressed into the inner surface of said outsole, said plug having an integral flange which bears against the outer surface of the outsole when the plug is secured in place in said hole and also having an integral externally threaded stud portion projecting outwardly from the outsole, and a peg having an interiorly threaded part receiving the threaded stud of the plug, said peg having an integral flange with a sharpened margin encompassing the plug flange and embedded in the outsole, and the inner surface of the peg flange adjacent its sharpened margin being inclined to compress the material of the sole within the peg flange against the plug flange to prevent entry of moisture and to prevent retrograde movement of said peg.

3. Shoe construction including an outsole having a hole, a plug having a portion of the character of a hollow rivet anchored in and filling said hole, the extremity of the hollow portion being flared and pressed into the inner surface of said outsole, said plug having an integral flange which bears against the outer surface of the outsole when the plug is secured in place in said hole and also having an integral stud portion projecting outwardly from the outsole, and a peg having a part receiving the stud of the plug, said stud and peg having interengageable means for connecting them together, and said peg having an integral flange with a sharpened margin encompassing the plug flange and embedded in the outsole.

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