Nov. 10, 1953 H. S. SCHRIEBER 2,658,289

FOOTWEAR CALK ASSEMBLY

Filed June 21, 1951

FIG. 1

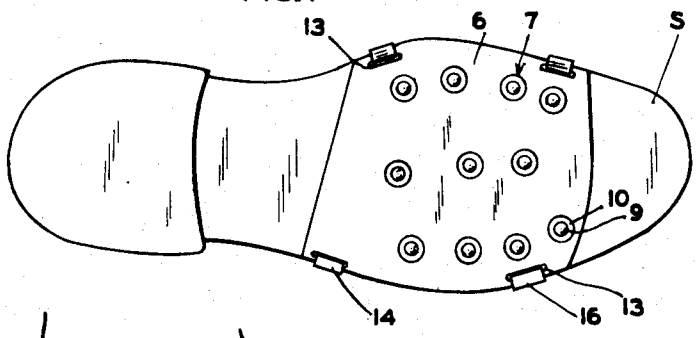



FIG. 2

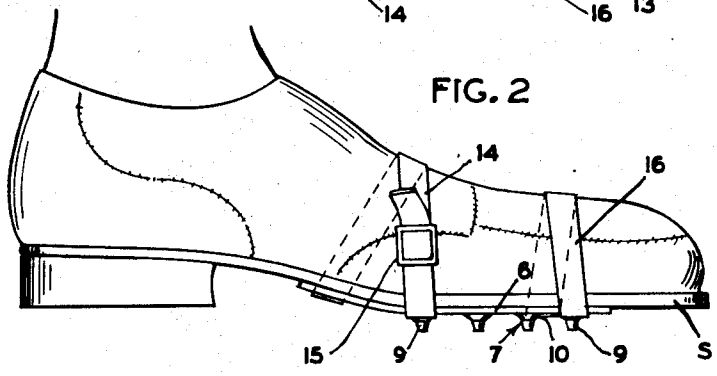



FIG. 3

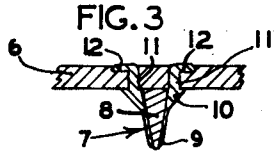



FIG. 4

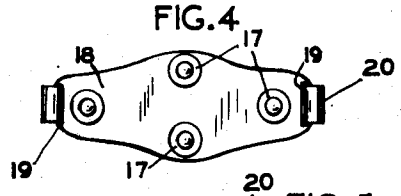
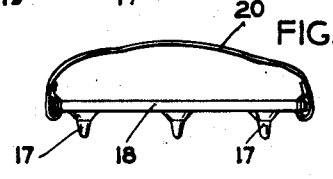



FIG. 5




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## FOOTWEAR CALK ASSEMBLY

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1 Claim. (Cl. 36—59)

1

This invention relates to anti-slip footwear-converting devices. More specifically it relates to devices for providing ordinary footwear with anti-slip features so as to effectively convert the same into footwear adapted for a purpose entirely different than that first intended.

Many devices have been designed in the past to provide anti-slip features for the ordinary footwear. Such devices, however, have been directed to meet the problems involved in only one type of walking surface and have proved extremely uncomfortable when worn for prolonged periods.

An object of my invention is to provide an anti-slip footwear-converting device which will make it possible for the wearer to quickly and easily provide his footwear with effective anti-slip features regardless of the type of surface upon which he desires to walk.

Another object is to provide an anti-slip footwear-converting device which will provide a maximum of comfort to the wearer through the uniform distribution of its support points whether the wearer is walking upon a hard, soft or slippery surface.

Another object is to provide an anti-slip footwear-converting device capable of being quickly applied to or removed from the wearer's footwear and which will positively engage the sole of the footwear when applied thereto to preclude relative movement therebetween.

A further object is to provide an anti-slip footwear-converting device constructed automatically to maintain its surface engaging members in sharpened condition.

These and other objects and advantages of my invention will more fully appear from the following description made in connection with the accompanying drawings, wherein like reference characters refer to similar parts throughout the several views and, in which:

Fig. 1 is a bottom plan view of one embodiment of my invention secured to the underside of the sole of a shoe;

Fig. 2 is a side elevational view of one of my devices attached to a shoe;

Fig. 3 is a fragmentary vertical sectional view of one of the calk-like surface engaging members secured to the underside of its carrying plate;

Fig. 4 is a bottom plan view of another embodiment of my invention;

Fig. 5 is a front elevational view of the embodiment shown in Fig. 4.

One embodiment of my invention as shown in Figs. 1–3 includes a plate 6 of flexible, durable material such as leather of dimensions to extend

2

from a point immediately behind the part of the shoe which envelopes the ball of the wearer's foot to the toe portion of the shoe. This is best shown in Fig. 1. This plate 6 is shaped to conform to the configurations or outline of the sole of the shoe to which the device is to be attached. Secured to the underside of the plate 6 are a plurality of calk-like surface engaging members 7. As best shown in Fig. 3 these calk-like members 7 have a frusto-conically shaped core portion 8 and a core enveloping portion 9. The core portion 8 is comprised of a relatively hard metal while the core enveloping portion 9 is formed of a relatively soft metal. As shown in Fig. 3 the calk-like member 7 is provided with a broadened base 10. Extending upwardly from the broadened base 10 is a pair of upstanding piercing prongs 11 which when secured to the plate 6 are clinched over in opposite directions to provide anchor portions 12 for the entire calk-like member 7. These anchor portions 12 also provide sole engaging means to preclude relative movement between the plate 6 and the shoe sole indicated generally as S. These calk-like members 7 are preferably arranged in longitudinally extending rows as shown in Fig. 1. The outermost of these rows are arranged to conform to the general configuration of the side edges of the sole S as shown in Fig. 1. Some of these calk-like members 7 are more centrally disposed and are arranged to provide a multiplicity of support points for the sole of the shoe when the wearer is walking thereupon. These centrally disposed calk-like members 7 are preferably arranged substantially equidistant from the outermost rows.

The plate 6 is provided adjacent each of its corners with a longitudinally extending slot 13. Each of the two rearmost of the slots 13 are provided with a web strap 14, one of which carries on its free end a buckle 15. The two forward slots 13 are provided with a double strip band 16 of elastic.

Figs. 4 and 5 show an additional embodiment of my invention utilizing fewer calk-like members 17 and having a much narrower plate 18. The plate 18 is provided with a pair of opposite slots 19 which are connected with a band of elastic 20. This embodiment is designed for short periods of wear and when only a limited amount of additional surface engaging capacity is required.

In operation, the wearer of the shoe need only slip the band 16 over the toe of his shoe and adjust the web strap 14 and tighten the same and secure it with the buckle 15 to insure that the

entire device will be firmly secured to the underside of the sole of the shoe. If the more narrower embodiment shown in Figs. 4 and 5 is utilized the wearer need only slip the elastic band 20 over the toe of his shoe and rearwardly to the desired wearing position. Thereafter an efficient means for engaging slippery surfaces is provided to the wearer of the shoe. The disposition of the calk-like member 7 in longitudinal rows insures that a maximum resistance will be provided to any tendency of the shoe to slip sidewise. The anchor portions 12 of the calk-like member 7 preclude any slipping of the plate 6 relative to the shoe sole S. Thus, the wearer is provided with footwear with which he can be assured that he at all times has a secure footing. The conversion can be made simply and quickly.

The disposition and arrangement of the calk-like member 7 as shown in Fig. 1 is very important in providing a maximum of comfort to the wearer while walking upon hard ground or rocky terrain. The conforming of these calk-like members 7 to the outline of the side edges of the shoe sole S and consequently to the outline of the foot of the wearer together with the substantially equidistant distribution of the centrally located calk-like members insures a multiplicity of properly distributed support points for the weight of the wearer of the shoe. This provides a comfort to the wearer previously unknown as compared to that experienced when wearing the more narrow plate type.

My device provides a means for converting ordinary footwear into footwear having anti-slip features which will meet the requirements of every type of surface upon which the wearer desires to tread. The embodiment shown in Fig. 1 is more than an adequate substitute for a golf shoe, and can be quickly applied to an ordinary shoe to serve the same purpose. The same embodiment provides the necessary surface engaging members adjacent the toe portion which have been found so necessary in climbing operations such as that involved in bluff climbing, etc.



The core portion 8 which is comprised of a very hard metal and which is surrounded by the soft metal core-enveloping portion 9 provides an automatic means for maintaining the calk-like members 7 in sharpened condition. As the device is worn the softer metal contained in the core-enveloping portion 9 wears away more rapidly than the hard metal out of which the core 8 is formed. As a result a sharpened point is at all times maintained, whereby maximum traction is obtained relative to the walking surface.

It will, of course, be understood that various changes may be made in the form, details, arrangement and proportions of the various parts without departing from the scope of my invention.

What I claim is:

A calk for an anti-slip footwear-converting device having a plate of durable flexible material for supporting such calks, said calk comprising a generally conically shaped body having a vertically extending and downwardly tapering core portion of relatively hard metal and a core enveloping portion of relatively soft metal whereby the lower end of said body will be automatically maintained in a sharpened condition, said body having a pair of upstanding piercing portions extending upwardly from its upper end adapted to pierce such a plate from below and to be clinched thereover in opposite directions to rigidly and fixedly secure said body to the underside of such plate.

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