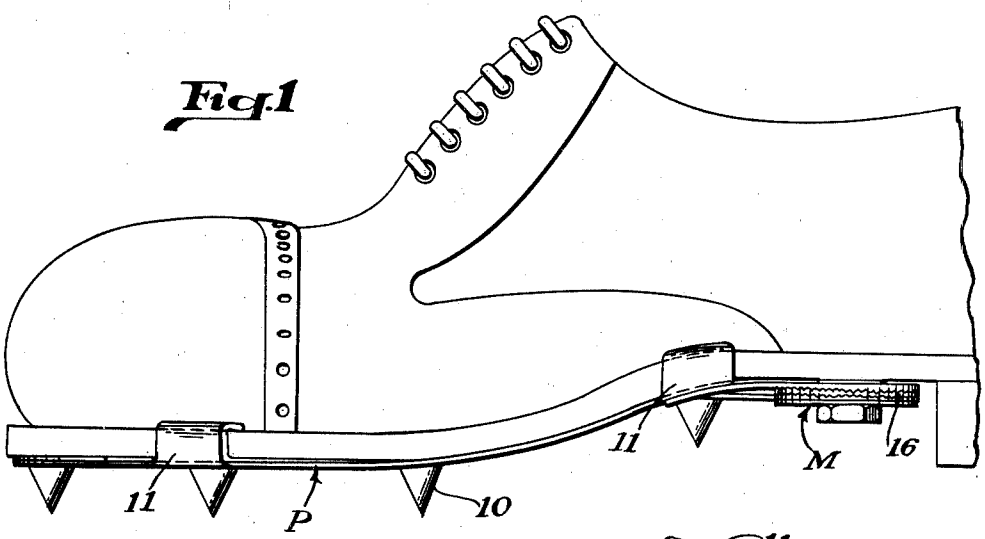
Nov. 29, 1949 O. P. HASERODT 2,489,289

ADJUSTABLE SHOE ATTACHMENT

Filed April 26, 1947

Fig. 1



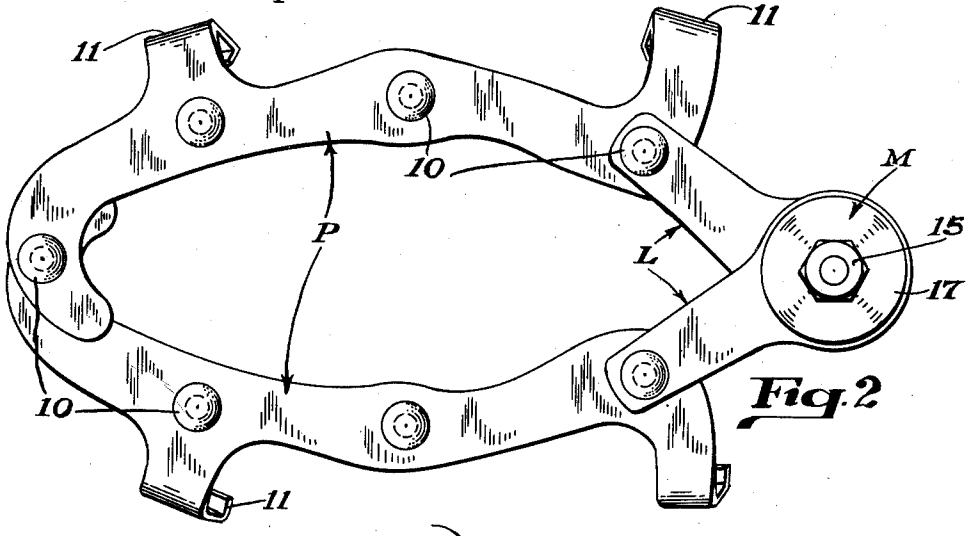


Fig. 2

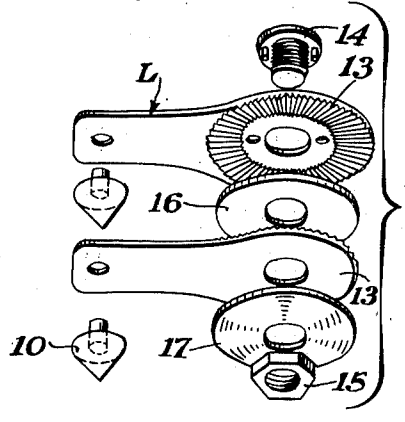


Fig. 3

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ADJUSTABLE SHOE ATTACHMENT

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4 Claims. (Cl. 36—7.7)

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The present invention relates generally to fittings for shoes and boots and is particularly concerned with a novel and very useful adjustable attachment for adapting street shoes to golfing or hiking use, or for use on slippery or icy surfaces.

Hitherto for many years there has been considerable interest and activity directed toward the development of an antislip attachment for shoes which could be quickly and easily applied to and removed from shoes, and could be economically manufactured and used repeatedly without mechanical failure or damage to the shoes. It has been a further object of prior investigators to develop a device which would be collapsible to a relatively small size so that it might be readily carried in pockets in clothing. A certain amount of success has been achieved along these lines but the prior art devices still lack adaptability to use with shoes of various sizes. Another shortcoming of many of these devices is their tendency quickly to work loose from the shoes, due to warpage or deformation, and corrosion of spring elements commonly used to maintain the devices in assembled relation with shoes. Devices not employing springs have been objectionable because of the complexity of their fastening means, which in rudimentary form comprise long straps or thongs which are wound around the wearer's shoe or ankle and secured by knots, and in any case are difficult to use and often undependable.

The devices of my present invention meet all the foregoing demands, and in addition may be produced economically compared to prior devices of this type. They may be worn for protracted periods under the most difficult circumstances of use without requiring any adjustment to maintain them in tight fitting engagement with shoes. Furthermore they are adaptable to use with shoes of a variety of sizes, which enables production of devices suitable for use with shoes of any size from one or two basic sets of tools, and makes possible further manufacturing cost reductions.

Those skilled in the art will gain a further understanding of the present invention, the manner of its application and use and the advance which it constitutes over the art by referring to the drawings accompanying and forming a part of this specification, in which

Figure 1 is an elevational fragmentary view of a shoe equipped with an adjustable attachment of one form of this invention;

Figure 2 is a view of the bottom or ground engaging portion of the attachment of Figure 1; and

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Figure 3 is an exploded perspective view of the locking means of said attachment.

In its broader aspect, a typical device of my invention comprises a pair of elongated plates P pivotally secured together for engaging a shoe sole, a pair of links L pivotally attached to the plates and defining therewithin a closed figure of variable shape, and a locking mechanism M for securing the links L together and preventing a relative movement of the links and plates.

More specifically, the illustrated device comprises in addition to the said plates, links and locking mechanism, a plurality of spikes 10 riveted to the plates for gripping the ground (or icy surface) and four flanged arms 11 formed integrally with the plates for engaging the edge of a shoe sole and retaining the attachment in position on the shoe. Plates P are pivoted together at one end and are so shaped that in engagement with a shoe sole they bear against the bottom surface of the sole and extend around the sole adjacent to the edge thereof. The plates are wider in the portions where the spikes are attached than elsewhere and therefore are of generally uniform strength and not subject to breakage in use.

Arms 11 extend upwardly from the tops of the plates at spaced intervals so that the device has two arms to engage the fore portion of a sole and two arms to engage the rear portion thereof. These arms are so formed that regardless of the size of the shoe, within certain limits, they may be securely engaged with the edge of the sole. As will be observed from the drawings, this necessitates an arm extending an unusual distance from one of the plates to engage the outside rear portion of the sole, and a shorter arm extending from a corresponding point of the other plate at a slightly different angle to engage the sole where the sole is cut back to define the instep portion of the shoe.

Links L are relatively short plates of about the same thickness and width as the plates P and having enlarged and serrated end portions 13. These links are secured pivotally to the plates so that said serrated portions are free for engagement with each other to define a closed figure with the plates P when the device is assembled. One link L is provided with a bolt 14 which extends at substantially right angles to the serrated surface of the end 13 from about the center of said end, while the other plate is provided with an aperture in a corresponding location to receive the bolt. These serrated ends, together with bolt 14, a nut 15 to engage it and force the

portions together, a leather washer 16 disposed between the serrated surface portions, and a metal lock washer 17, comprise the lock mechanism M.

In making the device of this invention, the various parts are formed in any suitable way, preferably on a mass production scale, and as the first assembling step spikes 10 are secured to plates P as by rivets and the plates are secured pivotally together at one end by the rivet of one of the spikes, as shown in the drawings. Links L are similarly attached pivotally to the free ends of the plates by means of rivets employed in securing spikes thereto. Bolt 14 is riveted to one of the links and washer 16 is placed between the enlarged end surfaces of the links which are secured together by means of nut 15 cooperating with bolt 14, lock washer 17 being disposed under the nut. When the device is to be attached to a shoe, a "right" or a "left" is selected with regard to the shoe to be used, and arms 11 are disposed in secure engagement with the edge of the sole, with plates P bearing against the bottom of the sole. The lock M is tightened by adjustment of nut 15 to assure permanent attachment of the device to the shoe for as long as the wearer desires. To tighten the lock sufficiently a small socket wrench or equivalent means may be applied to the nut.

Although I have shown and described herein one form of the device of my invention, I do not intend to be in any way limited to that form, and I contemplate certain modifications of it, as will be clear from the appended claims. I have in mind, for instance, employing a substantially larger nut than shown, to eliminate any possible necessity for a wrench to enable secure locking of the device in assembly with a shoe. I also contemplate elimination of the washer 16 and the formation of regular but rather deep cut teeth in the surfaces of the links to be engaged, thereby to assure secure locking of the device. Furthermore, I have in mind enlarging the head of bolt 14 and providing threads thereon so that a wrench for tightening nut 15 could be screwed onto the bolt head and thereby carried with the attachment when the latter is not in use.

Having thus described the present invention so that those skilled in the art may be able to understand and practice the same, I state that what I desire to secure by Letters Patent is defined in what is claimed.

What is claimed is:

1. An adjustable attachment for shoes comprising a pair of elongated plates pivoted together at one end and shaped to underlie a shoe sole, and extend substantially around said sole adjacent to the edge thereof, means including a plurality of spikes carried by said plates for engaging the ground, means carried by the plates and engageable with the shoe sole to secure the attachment to the shoe, a pair of links pivotally attached to the plates, and locking means for securing said links together and preventing relative movement of the plates and links, said links having end portions of roughened surface, and said locking means comprising a bolt carried by one of said links, an aperture in the other link to receive the bolt, and a nut to engage the bolt and force the roughened end surfaces of the links toward engagement with each other.

2. An adjustable attachment for shoes comprising a pair of elongated plates pivoted together at one end and shaped to engage the bottom of a shoe sole and extend substantially around said sole adjacent to the edge thereof, means including a plurality of spikes carried by said plates for engaging the ground, means carried by the plates and engageable with the shoe sole to secure the attachment to the shoe, a pair of links pivotally attached at one end to an unsecured end of each of the plates, and locking means for securing said links together and preventing relative movement of the plates and links, said links having end portions of enlarged and roughened surface, said locking means comprising a bolt carried in the enlarged end portion of one of said links, an aperture in the enlarged portion of the other link to receive the bolt, a washer disposed between said enlarged end portions, and a nut to engage the bolt and force the links toward engagement with each other.

3. An adjustable attachment for shoes comprising a pair of elongated plates pivoted to each other at one end and engageable with a shoe sole, means including a plurality of spaced apart arms carried by the plates for engaging the sole including the instep portion of said sole and securing the attachment to the shoe, a pair of relatively short links pivoted to the other ends of the plates to underlie the said instep portion of the sole, and locking means for securing the links pivotally to each other and preventing relative movement of the plates and links, said locking means comprising a bolt carried by one of said links, an aperture in the other link to receive the bolt, and a nut to engage the bolt and force the links toward engagement with each other.

4. An adjustable attachment for shoes comprising a pair of elongated plates pivoted to each other at one end and engageable with a shoe sole, means including a plurality of spaced apart arms carried by the plates for engaging the sole including the instep portion of said sole and securing the attachment to the shoe, a pair of relatively short links pivoted to the other ends of the plates and having transversely apertured free end portions to underlie the said instep portion of the sole, and locking means for securing the links pivotally to each other and preventing relative movement of the plates and links, said locking means comprising a washer disposed between opposing surfaces of said free end portions, a bolt disposed through registered apertures in said end portions, and a nut engaging the bolt for maintaining the links and washer in predetermined position relative to each other.

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