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G. E. SLOAN

2,208,200

ICE WALKER

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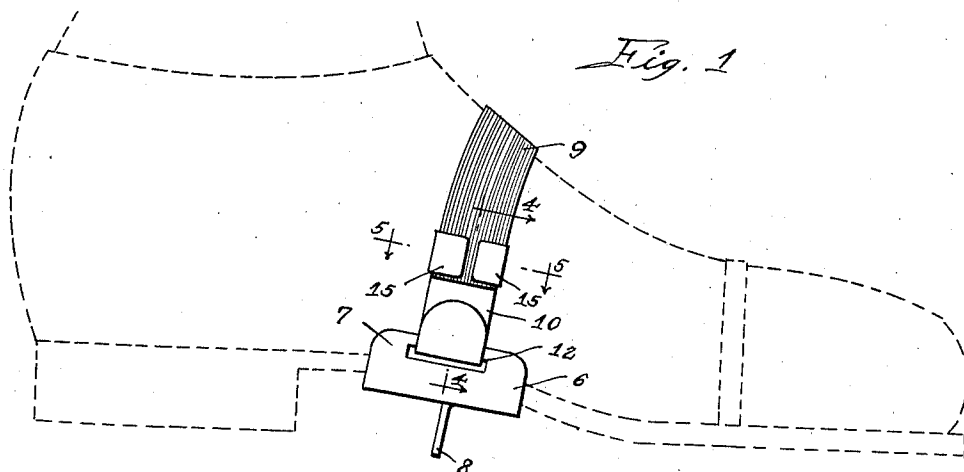


Fig. 1

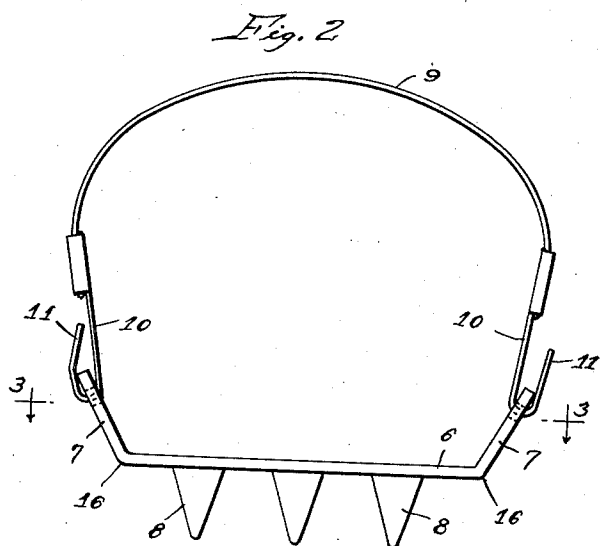


Fig. 2

Fig. 4

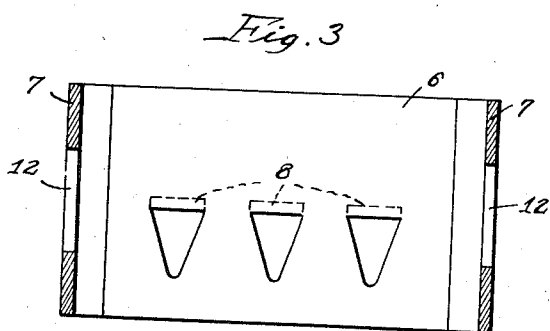
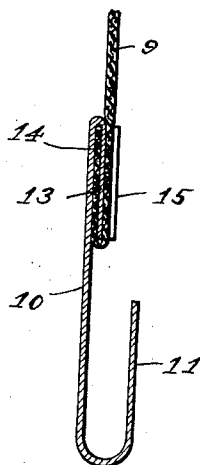
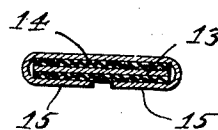


Fig. 3

Fig. 5



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ICE WALKER

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Application February 11, 1938, Serial No. 190,023

2 Claims. (Cl. 36—62)

This invention relates to an ice walker, this being a device adapted to be attached to a shoe or boot to prevent slipping when walking on ice.

One of the objects of my invention is to provide an improved anti-slipping device in the form of an attachment adapted to be quickly applied and removed at the pleasure of the wearer.

Another object of my invention is to provide a device of the character described characterized by the provision of a body member preferably formed from a strip of sheet steel having spurs or spikes punched through a central portion and having the ends turned up for the attachment of a band which is adapted to encircle the arch of the shoe or boot for holding the body in working position, the spurs being arranged in a particularly advantageous manner to serve the desired purpose.

Another object is to provide an improved anti-slipping device of the character described having an elastic band for holding the device in the working position and permitting quick and easy application and removal of the device.

Another object is to provide an anti-slipping device in which the metallic body member having the spurs or spikes is held in position by a band including largely flat hooks which serve to connect a flexible or elastic part of the band to the body member.

A further object is to provide an anti-slipping device of improved construction which will permit of manufacture at a comparatively low cost and which is particularly advantageous in providing for different sizes, such as large, small, and medium, to accommodate shoes or boots of different sizes.

Other objects and attendant advantages will be appreciated as the invention becomes better understood by reference to the following description when considered in connection with the accompanying drawing, in which—

Figure 1 is a side elevation of an anti-slipping device embodying my invention, showing its application to a shoe;

Fig. 2 is an end view of the device on an enlarged scale;

Fig. 3 is a section taken on the section line 3—3 of Fig. 2; and

Figs. 4 and 5 are enlarged detail sections taken on the section lines 4—4 and 5—5, respectively, of Figure 1.

In the preferred embodiment of my invention, the body member designated generally by 6 is formed of a strip of sheet steel of a width suitable for location in the arched portion of the

sole of a shoe or boot, as shown in Figure 1, and of a length sufficient to span the width of the sole and having upturned ends 7 which conform generally to the sides of the shoe and prevent lateral displacement of the body. These upturned ends also serve as a means for attachment to a band which serves to hold the body in the working position. A series of spurs or spikes 8, preferably of V-shape, are punched downwardly from the body 6 so that the wide base of each spur is integral with the body and is arranged in a plane extending lengthwise of the body. These spurs may be arranged in a single row lengthwise of the body as shown in Fig. 3, or in plural rows. Spurs of the shape and arrangement shown are economical to produce and the arrangement is desirable because it gives an effective row of contacts with the ice centrally disposed with respect to the broad base of the body member. This arrangement also makes for easy walking and does not set up forces tending to unnecessarily work or displace the body member from its position on the shoe. These spurs punched from the steel body possess ample strength and they have sufficient body for giving long life and usefulness.

My invention provides preferably an elastic band 9 for holding the spur body member in position on a shoe, together with the use of suitable means for attaching the ends of the elastic band to the upturned ends 7 of the spur body. The use of a comparatively heavy elastic band permits of quick and easy application of the anti-slipping device or ice walker as I term it, and greatly facilitates the use of devices of this kind. It should be understood, however, that in the broader aspect of my invention this part of the band may be of any suitable flexible material.

Another feature of my invention in its preferred form is the provision of hooks formed from flat metal sheets designated generally by 10 which serve to connect the band 9 to the ends 7 of the spur body. Each hook is in the form of a sheet metal strip having its lower end 11 bent into hooked form and looped through an elongated slot or opening 12 in one of the upturned ends 7, the slot extending crosswise of the length of the body strip so that the hook strip will have a flat seat from side to side against the slot edge of the spur body. The upper end 13 of each hook or connector strip is bent downwardly, as shown in Fig. 9, and clamped against the interposed end 14 of the elastic band 9. The upper portion of each member 10 is further provided in the preferred form with side portions or tabs 15, which

are folded over against the main body of the fabric band and clamped against the same, the folded portions being pressed tightly together so as to effect a very secure connection between the elastic band 9 and the metal strip 10. The hooked ends 11 may be pressed to form a closed connection as shown in the left hand connection, Fig. 2, so that the band is permanently but flexibly connected to the spur body. With this construction the device may be easily slipped over the toe of the shoe or boot and pushed back into an operative position substantially as shown in Fig. 1, the elastic band serving to hold the spur body tightly against the arch of the sole and thus maintain the spur body in the operative position. If desired, one of the hooked ends 11 may be left open as shown at the right hand side of Fig. 2, thus allowing for connecting and disconnecting this end of the band to the spur body when the latter is in the operative position or in the course of being so positioned. The metal strips 10 present comparatively broad flat surfaces at the inner side of the band which serve to take the chafing and wear incidental to binding against the sides of the shoe and thereby prolong the life of the device. This is particularly advantageous in that the elastic fabric is protected from excessive wear.

It should be observed that the metal parts are formed from sheet metal entirely by punching and forming operations and that no machining is required. The construction is also desirable because the spur body may be used for wide, medium, and narrow sizes according to the spacing of the bends 16, the particular embodiment shown being intended for the medium size. In view of the simplicity of construction and the absence of extraneous fastening or connecting devices the cost of manufacturing anti-slipping devices according to my invention is comparatively low.

My improved anti-slipping device is particularly well adapted for use in walking on ice and icy surfaces. While it is intended for general use under these conditions, it is particularly well

suited for outdoor sports use in the winter and also for uses of a commercial nature as, for example, by mailmen, policemen, electric linemen and those working out-of-doors where ice is encountered.

It will be understood that changes may be made in details of construction without departing from the spirit and scope of the invention as expressed in the appended claims, in which I claim:

1. A wear plate for an anti-slipping device of the type described comprising a U-shaped sheet metal member having its end sections turned up at such junctures as to adapt said member to fit on the general shank section of the shoe and adapted to receive fastening means, and downwardly disposed spurs punched from the body of the said member and having their base portions integral therewith arranged in a single series centrally along the length of the web of said U-shaped member.

2. An anti-slip device for attachment transversely to the shank portion of a shoe on a human foot next to the ball portion, comprising an elongated plate having upwardly projecting end portions adapted to engage the edge portions of the sole of the shoe so as to hold the plate against lateral displacement when applied to the shoe, said upwardly projecting end portions being adapted for connection with means for attaching the device to the shoe, and anti-slip means on said plate comprising downwardly projecting prongs all disposed in one plane parallel to the front edge of the heel of the shoe and spaced forwardly therefrom so as to be nearer the ball portion of the foot, the prongs all terminating in a horizontal plane below the plane of the bottom of the heel and sole of the shoe, the prongs collectively being strong enough to permit the wearer to teeter thereon without bending the same, and the same projecting below the plane of the shoe bottom only sufficiently for anti-slip purposes and so as not to interfere noticeably with normal walking.

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