B. EAST

ANTISLIPPING DEVICE

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Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

Fig. 6

Fig. 7

Fig. 8

Inventor

Brantley East

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To all whom it may concern:

Be it known that I, Brantley East, a citizen of the United States, residing at Omaha, in the county of Douglas and State of Nebraska, have invented certain new and useful Improvements in Antislipping Devices, of which the following is a specification.

This invention has for its principal object to provide an attachment which may be readily applied to a boot or shoe for use when walking on ice or upon smooth, slippery places and may be conveniently removed. The invention includes a toothed contact-plate of inverted U-shape and a resilient pad or block, operating as a cushion, the latter being disposed between the plate and the shank of the shoe, means being provided for maintaining these parts at the front of the heel with the cushion in engagement with the shank, the portion of parts being such that the wings of the plate will normally be disposed in a plane lower than the bottom of the heel for engaging ice or the like, to prevent slipping, the block or cushion operating automatically to permit the plate, together with its toothed wings, to move upwardly when the wearer is walking upon a floor or other indurate surface.

The invention consists of the novel construction, combination and arrangement of parts as described herein and claimed, and as illustrated in the accompanying drawing, wherein—

Fig. 1 is a side view of a shoe with the attachment applied thereto. Fig. 2 is a sectional view through the attachment on line 2—2 of Fig. 4. Fig. 3 is a side view of the device, disposed in its normal position at the front of the heel, the shank and part of a shoe being in section. Fig. 4 is a plan view of the device, a strap being shown in transverse section. Fig. 5 is an end view of the contact-plate. Fig. 6 is a sectional view on line 6—6 of Fig. 7. Fig. 7 is a plan view of the contact-plate. Fig. 8 is a view of the device in transverse section, on line 8—8 of Fig. 2.

Referring now to the drawing for a more particular description, numeral 9 indicates a resilient block or cushion, adapted to be disposed upon a plate 10 approximately of inverted U-shape, and to be secured at the front of the heel 11 in engagement with the shank 12 of a shoe 13, holder a strip 14 being employed for maintaining the parts in the positions mentioned, said strip preferably being provided with a loop 15 and a strap 16, both operating, when mounted on the shoe, to press the plate upwardly against the block and to press the block against the heel and shank of the shoe.

In order that the parts will not become detached from the shoe when worn, and to the end that manufacture may be economical and convenient, certain features are provided, and to be described. The cushion 9, preferably, is provided longitudinally, in its top, with a groove or channel 17 (Fig. 8) for receiving a part of the strip 14, and is provided with projections 18 which extend from its bottom. Numerals 19 (Fig. 7) indicate apertures formed in the contact-plate for receiving the projections 18, said plate also having slots 20 formed transversely therein, near its ends, for receiving parts of said strip 14, the opposed wings of said plate, preferably, having projections or teeth 21, as best shown in Fig. 3.

The device may be readily attached to a boot or shoe. The buckle 22 being unfastened, the loop 15 may then be placed over the instep, and the cushion may be placed below the shank of the shoe at the front of the heel, and by use of member 16 in a well known manner, the contact-plate and cushion may be secured in their normal positions.

It will be seen that the parts will not become detached during use since the strip 14 is disposed in the groove 17 in the top of the cushion, and engages the ends of said cushion, and also engages in the slots 20 of the contact-plate; and on account of the arrangement of these parts, and since the projections 18 of the cushion engage in the apertures 19 of the contact-plate, any transverse movement of this plate relative to the cushion, will be prevented. It will be noted that the width of the cushion is greater than the width of the contact-plate, the result in operation being that the wings and teeth of the contact-plate will be disposed forwardly of the heel 11 to permit the teeth to engage ice or other slippery surfaces to advantage.

It is understood, of course, that the cushions may have any required thickness, depending upon the height of the heel, so that the projections 21 will normally engage and will be pressed into the ice or other yield-
ing surface by action of the resilient block, so that slipping will be prevented.

Among some of the advantages to be derived by use of the invention, it may be stated that the attachment consists of few and simple parts, and may be manufactured economically; also it will be durable in wear and may be conveniently attached to or removed from boots or shoes. In manufacturing the cushions, ample provision is made so that they will have various degrees of thickness corresponding with the height of shoe heels, it being necessary to operation that the teeth or wings of the contact-plate shall normally project downwardly in a plane somewhat below the bottom of the heel.

The groove in the top of the resilient block, while preferred, could be omitted; and while it is preferred that the plate be provided with the projections, the device would be operative, in a measure, if the projections were omitted, and it will be understood that changes in form, size, and proportion of parts and minor details may be made, these changes being determined by the scope of the invention as claimed.

I claim as my invention—

In anti-slipping device, the combination with a holder-strip for a mounting on the shoe, of an elastic block for engaging that part of the shoe below the shank, said block having a groove opening on its top between it sides and having projections extending from its bottom, and a metallic plate provided with slots and having depending projections and provided with apertures and receiving the projections of said block, said holder-strip being movably mounted in the slots of said plate and engaging in the groove of said block.

In testimony whereof, I have affixed my signature in presence of two witnesses.

BRANTLEY EAST.

Witnesses:

Hiram A. Sturges,
Arthur H. Sturges.