

1,020,085.

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UNITED STATES PATENT OFFICE.

FRANK H. ELLIS, OF CHICAGO, ILLINOIS.

ANTISLIPPING DEVICE OR HEEL-PROTECTOR FOR SHOES.

1,020,085.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANK H. ELLIS, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Antislipping Devices or Heel-Protectors for Shoes; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in antislipping devices or heel protectors adapted to be detachably connected to the heel of a boot or shoe and consists of the matters hereinafter described and more particularly pointed out in the appended claims.

In the accompanying drawings illustrating my invention: Figure 1 is a side view of the heel of a shoe showing my heel protector attached thereto. Fig. 2 is a longitudinal view taken through the heel of the shoe and the attached heel protector. Fig. 3 is a front view of the heel looking in the direction of the arrows 3—3 in Fig. 1, when the heel protector is detached from the heel, and showing a holding plate permanently secured to said heel. Fig. 4 is a rear end view of the heel looking in the direction of the arrows 4—4 in Fig. 1 when the heel protector is detached from the heel and showing a rear holding plate permanently attached to said heel. Fig. 5 is a perspective view of the heel protector.

Referring now to that embodiment of my invention shown in Figs. 1 to 5, inclusive, 10 indicates the heel of a shoe, in this case a man's shoe, and 11 my improved heel protector as a whole. 12 indicates the front face of the heel and 13 a sheet metal holding plate secured to the said front face of the heel. As shown, the holding plate 13 entirely covers the front face of the heel. A sheet metal strip 14 is secured to the rear curved face of the heel in a position substantially in line with the middle part of the front holding plate 13. Said strip 14 is preferably of a vertical length equal to the height of the heel and constitutes a rear holding plate for the heel protector. Each of said plates 13 and 14 is permanently secured to the heel by any suitable fastening

means, and as shown, said plates are secured by brads or nails 15, so that they may be pried off and removed from the heel when the protector 11 is not to be used. Apertures 16 are provided in said front holding plate 13, one at each side and near the upper edge thereof, and an aperture 17 is provided in said rear plate 14 near its upper edge. It is obvious, however, that any number of said apertures may be provided in said plates, as deemed necessary, and the purpose thereof will presently appear.

The heel protector 11 comprises a body member or base-plate 18 made of thin sheet metal, such as spring-steel, and is adapted to engage against and entirely cover the bottom or tread surface of the heel when the protector is applied to the same. At the front and rear ends of said base-plate 18 are provided upwardly extending flanges 19 and 20. Said flanges 19 and 20 are adapted to engage against the said front and rear plates 13 and 14 respectively.

The front flange 19 of the protector is provided with rearwardly projecting tongues 21 adapted to engage within the apertures 16 in the front holding plate 13 and the rear flange 20 is provided with a forwardly projecting tongue 22 adapted to engage within the aperture 17 of the rear holding plate 14. Said tongues 21 and 22 afford a means whereby the said protector may be detachably connected to the heel. The tongues 21, 21 and 22 are formed by cutting strips of metal from the body of said flanges near the upper edges and bending the same at right angles thereto. The parts of said flanges 21^a, 21^a of the front flange and 23, 23 of the rear flange, located at the outer sides of said tongues and projecting above the same, form braces for the lateral edges of said tongues at the point of bend, thus preventing said tongues from being easily torn from the flanges. The rear flange 20 is made resilient so that its tongue 22 may be snapped into its associated aperture 17 when attaching the protector to the heel and may be sprung out of the same when the protector is detached from the heel. The holding plates 13, 14, have their lower edges flush with the bottom of the heel and each is substantially equal in height to the height of its associated flange 19, 20. Said flanges 19, 20 then have continuous bearing engagement against the holding plates, so that there will be no space

or opening left between them, for the accumulation of mud, sand and the like, which would tend to force them apart.

The parts 23, 23 of the rear flange constitute finger pieces for grasping the rear flange when disengaging its tongue 22 in order to remove the protector. Moreover, upright flanges 24 are provided on each lateral edge of the said base-plate of the protector to act as guides when applying the protector to the heel, and also to prevent any lateral movement of the protector when the same is attached to said heel.

The protector 11 is made of sheet metal preferably of sheet or spring steel, so that there is enough of resiliency in the base-plate and in the flanges so that the said protector will tightly hug or grip the heel when the same is attached. The said base-plate 18, however, is at the same time made of such a thickness as to insure the necessary rigidity without unduly adding to the weight of the heel. Secured to said protector is a cushion tread member 25, preferably made of rubber, and designed to prevent slipping of the person when walking on ice and snow and also to form a cushion. The said rubber member is permanently secured to said base-plate 18 by any suitable means, and as herein shown, said base-plate is provided with a plurality of apertures 26 into which the rubber is adapted to run when the same is molded upon said protector. These apertures 26, may be disposed at suitable points over the entire surface of the base-plate and the front flange, or said apertures 26 may be merely formed around the margins of the base-plate and across the front flange as indicated in Fig. 5. When stamping out the apertures 26 the same may be made of the same diameter throughout, or the diameter may be made to increase from the lower to the upper surface of the protector, so that when the rubber is molded upon the said protector, tapered studs 27 will be formed in the like apertures 26 to rigidly connect the cushion member to the protector. If the cushion member 25 terminated at the front edge of the said base-plate 18, the front edge of the cushion member would be subjected to jars and scuffing during walking, which would tend to detach its front edge from the said base-plate. In order to prevent this, the said cushion member has an extension 25^a which is extended up over the front flange 19, and is secured thereto in the same way that the main body of the cushion member 25 is secured to the base-plate 18. The said front and rear plates 13 and 14 in Figs. 1 to 4, inclusive, may be made of burnished steel of the same color as the heel of the

shoe so that said plates when secured to the heel will not be noticeable.

My antislipping attachment for heels of shoes with the fastening means shown, make it possible to readily and easily attach or detach the same to or from the heel of the shoe. The front and rear holding members may be left secured to the heel of the shoe, and when it is desired to walk without slipping, the antislipping attachment or heel protector, which is capable of being carried in the pocket or other convenient place, may be readily and quickly attached to the heel whenever occasion for its use arises. The device when attached to the heel may also be used in place of the usual cushion heel.

I claim as my invention:

1. A protector for the heels of shoes, comprising a base-plate of metal, said base-plate adapted to have bearing engagement against the bottom or tread surface of the heel, front and rear apertured holding members secured to said heel, front and rear upright resilient flanges formed integral with said base-plate and adapted for yielding engagement against said holding members, said flanges having inwardly projecting tongues adapted to engage within the apertures in the holding members, and said holding members having their lower edges flush with the bottom of the heel and each being substantially equal in height to the height of its associated flange.

2. A protector for the heels of shoes, comprising a base-plate of metal, said base-plate adapted to have bearing engagement against the bottom or tread surface of the heel, front and rear apertured holding members secured to said heel, front and rear upright resilient flanges formed integral with said base-plate and adapted for yielding engagement against said holding members, said flanges having inwardly projecting integral tongues adapted to engage within the apertures in the holding members, said tongues being cut from the body of the flanges and spaced inwardly from the lateral margins thereof, said holding members having their lower edges flush with the bottom of the heel and each being substantially equal in height to the height of its associated flange, and a cushion member permanently secured to said base-plate and to the front flange.

In testimony that I, claim the foregoing as my invention I affix my signature in the presence of two witnesses, this 27th day of September, A. D. 1911.

FRANK H. ELLIS.

Witnesses:

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