July 20, 1948. C. T. HARVEY 2,445,353

NONSLIP DEVICE FOR FOOTWEAR

Filed Aug. 26, 1946

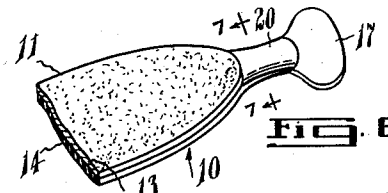


Fig. 6.

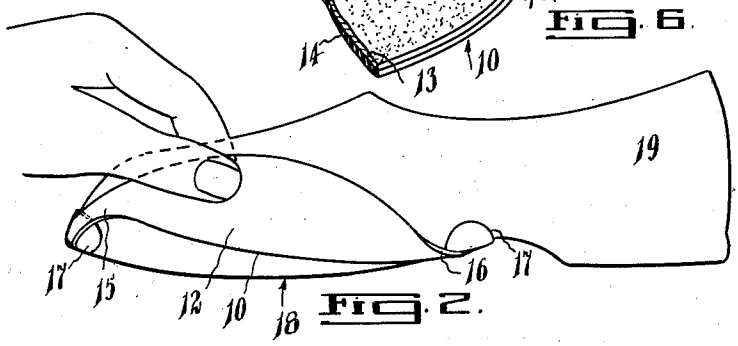


Fig. 2.



Fig. 7.

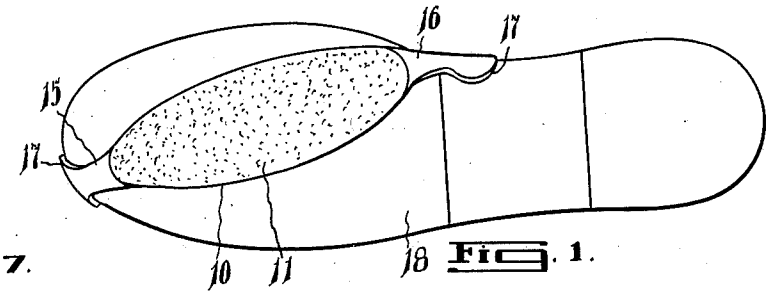


Fig. 1.



Fig. 5.

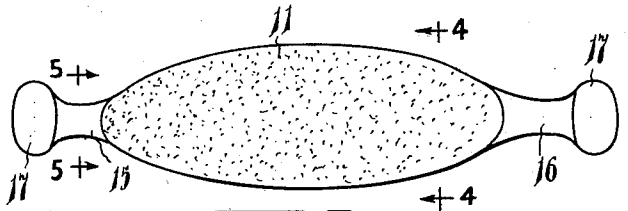


Fig. 3.

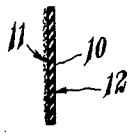


Fig. 4.

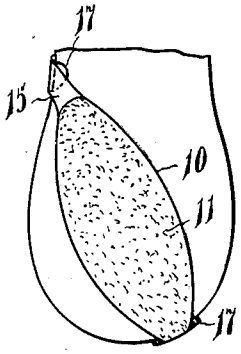


Fig. 8.

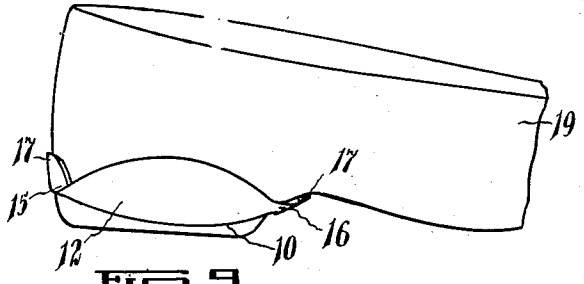


Fig. 9.

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NONSLIP DEVICE FOR FOOTWEAR

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2 Claims. (Cl. 36—61)

1

My invention appertains to anti-slip devices for attachment to footwear and has for its general object to provide a highly efficient non-slip device which can be manufactured at low cost, and one which will neither detract from the appearance of the footwear to which it is applied nor deface the same.

More particularly the invention has as an object the provision of a non-slip device comprising an anti-slip pad obliquely disposed across the bottom surface of an article of footwear, such as an overshoe for instance, and provided with stretchable end sections adjacent to tabs by which the pad is attached to lower edge portions of the shoe. The pad is provided with a suitable abrasive surface for securing traction, and its oblique or diagonal arrangement is well suited to take stresses imposed upon it when in use. The non-slip device is adapted to be got up to harmonize with the footwear on which it is used.

A salient feature of the construction is that the stretchable end sections operate to enable the pad to be shifted between effective and ineffective positions. When not required it can be readily shifted from its effective or operative position beneath the shoe to its ineffective position overlying the upper.

The invention provides a non-slip device which is permanently attached to a shoe and which inconspicuously is carried at a side thereof when not in use. It can be readily swung into an operative position. The utility and advantages of its construction will be more clearly appreciated from the ensuing specification of which the accompanying drawing forms a part.

In the drawing,

Fig. 1 is a view showing the bottom of a shoe with the non-slip device in its effective position across the sole portion thereof.

Fig. 2 is a side view of the shoe showing the traction pad turned to its ineffective position in which it overlies the toe portion of the shoe.

Fig. 3 is a plan view of the non-slip device depicting the abrasive surface on the outer side of the traction pad.

Fig. 4 is a cross section taken on line 4—4 of Fig. 3.

Fig. 5 is a cross section on line 5—5 of Fig. 3.

Fig. 6 is a fragment of the non-slip device in perspective showing the traction pad formed of two thicknesses of material.

Fig. 7 is a cross section on line 7—7 of Fig. 6 in which the stretchable end section is illustrated as round in cross section.

Figs. 8 and 9 illustrate the non-slip device applied to the heel of a shoe. In Fig. 8 the pad is disposed in its effective position in which it overlies the lift face of the heel, and in Fig. 9 the pad is disposed in its ineffective position alongside of a side wall of the heel.

2

In carrying out my invention I propose to provide a traction securing pad 10 for application to an overshoe or the like in order to present a non-slip surface 11 adapted for walking with safety in the winter time. Preferably the pad will be of the oval shape, as shown, and essentially will be flexible to conform to the contour of the surface of a shoe to which it is applied in order to be flat against the same.

The pad 10 may be made up of a strip of rubber of a fairly stiff character with a smooth inner face 12 and a rough outer face suitable to present the non-slip surface 11. The pad could be mouldably formed of a rubber compound that would have the quality of elasticity to a small degree but not to any appreciable extent since the pad is not required to stretch, but only to flex freely. There are various known ways of forming the non-slip surface 11. Any of such known ways could be adopted according to the dictates of manufacture. In making the pad of a rubber material an abrasive material could be applied in the moulding operation, or the outer face could be coated with an abrasive in granular form.

As an alternative, the pad may be made up of a laminated construction as disclosed in Fig. 6; in which event it may have an upper layer of canvas, denoted at 13, applied to a layer or ply of rubber 14. In this case the outer face of the canvas layer may be coated with an abrasive substance, or a non-slip may be otherwise formed thereon.

In the application of the non-slip device to the sole of a shoe as shown in Figs. 1 and 2, the pad is of a length to extend obliquely or diagonally between the toe portion and the shank portion so as to overlie the sole in effective position to preclude slipping.

Novel means extend from the ends of the pad for permanently attaching it to the shoe so that it can be shifted to an ineffective position when not required. Said means comprises relatively narrow elastic sections 15 and 16 and tabs 17. Said elastic sections form constricted parts between the ends of the pad and said tabs, and are composed of an elastic rubber that will stretch readily. These elastic sections are integrated with the pad and the tabs to form a unitary non-slip appliance. Said tabs are preferably made of rubber and are preferably formed as an integral

continuation of said sections 15 and 16. They are arranged transversely of the longitudinal axis of said pad and are permanently secured to the shoe in approved manner, as by being cemented thereto or by being vulcanized to the rubber of the shoe. In applying the tabs they are spaced apart sufficiently to tension the elastic sections 15 and 16 to hold the pad tautly in contact with the subjacent tread face of the sole 18. The tab 17 at the frontal end of the pad is attached to the frontal toe portion of the upper 19 in close proximity to the tread face of the sole and toward the far side of said toe portion. The tab 17 at the rear of the pad is attached to the side edge portion of the sole at the arch or shank region of the shoe.

From the preceding description it will be manifest that the construction and arrangement of the non-slip device is adapted to effectively preclude slipping in the operative position of the pad as depicted in Fig. 1 and that when the device is not required to be used it can be readily grasped by hand and shifted with an attendant reversing motion to an ineffective position alongside of the shoe as depicted in Fig. 2, in which the abrasive face 11 is inturned. The elastic sections 15 and 16 function to enable the shifting and reversing action to take place and also to tension the pad in its ineffective position for retaining it against displacement. Said sections 15 and 16 may be of a flat cross section, as shown in Fig. 5, or on the other hand they may be of a round cross section as shown at 20 in Figs. 6 and 7.

Figs. 8 and 9 illustrate the non-slip device applied to the heel of a shoe. The construction of the device itself remains the same and it is obliquely arranged in effective position with the traction pad held taut against the lift face of the heel, as shown in Fig. 8. In Fig. 9 the pad is shown in its ineffective position to which it has been shifted with a reversing action. It will be noted that the rear tab is attached to the rear wall portion of the heel adjacent to the bottom face and slightly to one side, while the foremost tab is attached to the shank portion of the shoe. The arrangement is such as to obtain a diagonal disposition of the pad for taking stresses incidental to its use and for enabling it to be shifted to its inoperative position.

While the invention has been described in a practical form, it will be manifest that such changes and modifications may be resorted to as come within the scope of the subjoined claims.

What I claim is:

1. A non-slip attachment for a shoe provided with an upper having a side wall, said attachment comprising an elongated pad having an anti-slip face, and elastic connecting members at the ends of said pad, said pad being disposed obliquely across the bottom of the shoe adjacent to an end thereof, the connecting member which is thus located at this end of the shoe being positioned to one side of the longitudinal centre of the shoe with its extremity secured to said side wall, the connecting member at the other end of said pad being positioned at the other side of the longitudinal centre of the shoe and having its extremity secured to the adjacent portion of said side wall, whereby said pad may be shifted to an ineffective position against said adjacent portion of said side wall.

2. A non-slip attachment as claimed in claim 1, in which the elastic connecting members are permanently secured to the shoe under tension and have parts which are free to stretch, and in which said parts are of a rounded cross section to enable the pad to be turned easily in a reversing movement when it is being shifted.

CLARENCE T. HARVEY.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,796,399	Roodhouse	Mar. 17, 1931
1,978,301	Fisher	Oct. 23, 1934
2,372,828	Harvey	Apr. 3, 1945

FOREIGN PATENTS

Number	Country	Date
197,849	Switzerland	Aug. 1, 1938
754,150	France	Aug. 21, 1933