July 25, 1939. F. O. LAWSON 2,166,958

ANTISLIPPING DEVICE

Filed Nov. 2, 1937

FIG. 1.

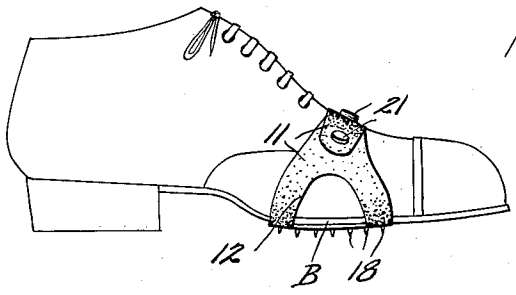


FIG. 3.

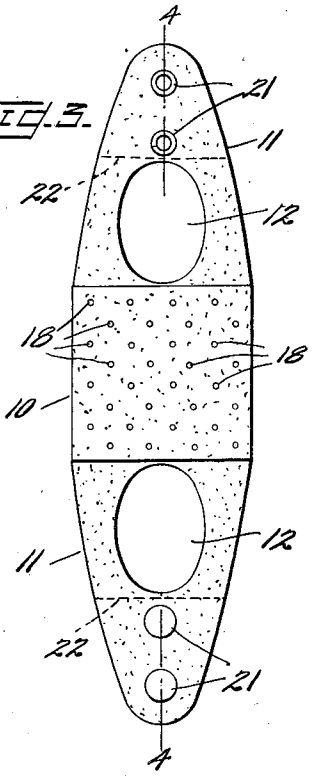


FIG. 2.

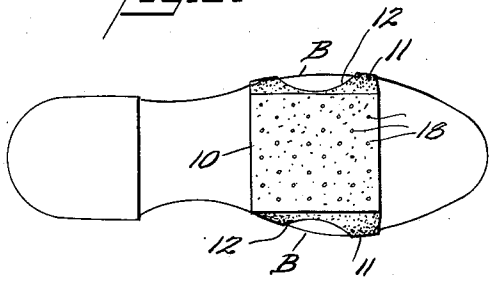


FIG. 4.

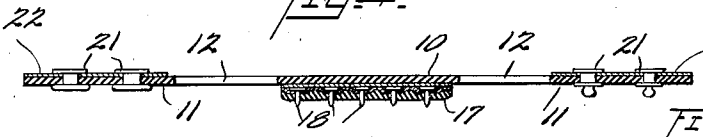


FIG. 5.

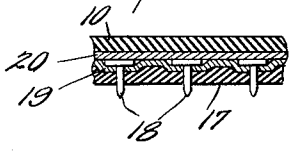


FIG. 6.

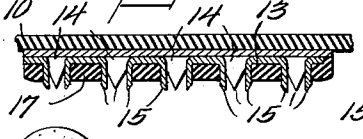


FIG. 7.

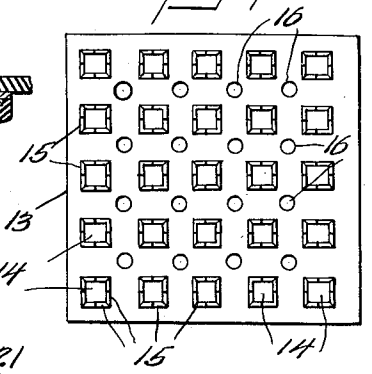
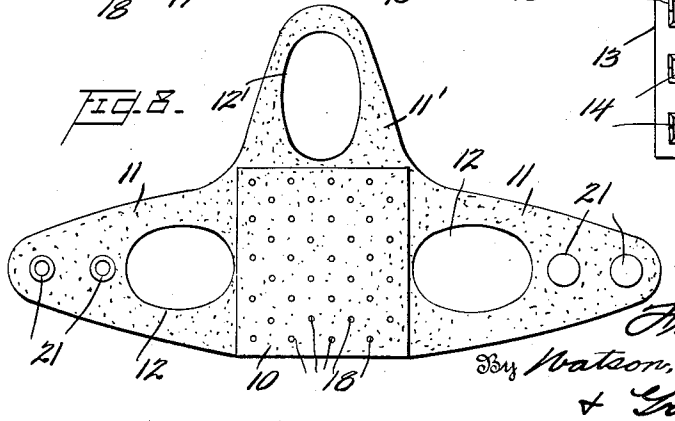


FIG. 8.



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2,166,958

ANTISLIPPING DEVICE

Frans O. Lawson, Greensboro, N. C.

Application November 2, 1937, Serial No. 172,472

1 Claim. (Cl. 36—62)

This invention relates to anti-slipping devices and has for its object the provision of a novel, simple and convenient device preferably to be worn on a shoe, boot or overshoe to prevent the wearer from slipping on ice or other slippery surface. The invention aims to provide a device of this kind which can be easily and quickly attached to or detached from shoes or other footwear of men, women or children and which can be easily folded up and carried in a pocket or handbag when not in use.

In general, the invention embodies a single unit having a section provided with sharp spurs adapted to be positioned beneath the foot of the wearer and also having resilient portions or flaps which can be drawn up over the foot of the wearer and secured together to firmly hold the device in position.

The invention is illustrated in certain forms in the accompanying drawing forming a part hereof and in which:

Figure 1 is a side elevation showing the device applied to a shoe;

Figure 2 is a bottom view of a shoe having the device attached thereto;

Figure 3 is a bottom plan view of the device showing the general shape and arrangement of the same and also showing one form of spur construction;

Figure 4 is a longitudinal section on the line 4—4 of Figure 3;

Figure 5 is a fragmentary section on an enlarged scale showing the arrangement for forming the spur construction;

Figure 6 is a longitudinal section similar to Figure 5 showing a somewhat different form of spur construction;

Figure 7 is a plan view of a perforated metal plate used to produce the spur construction shown in Figure 6; and

Figure 8 is a plan view of a slightly modified form of the device.

Referring to the drawing in detail, the device is preferably made up of an integral strip of material having a central portion or area 10 which carries the spurs, and resilient fastening portions or flaps 11 by which the device is secured to the foot of the wearer. The device is preferably made of elastic material and in producing the same I prefer to cut or stamp the portions 10 and 11 from an integral piece of raw or unvulcanized rubber and in substantially the shape shown, each flap 11 having therein an opening 12, preferably elongated as shown, for purposes later pointed out. In the form shown in Figures 6 and 7, a metal plate 13 is applied to the central portion 10 of the device, this plate having a number of openings 14 punched therein so as to form sharp spurs 15 on the plate adjacent each opening. Other openings 16 may also be formed in the plate to facilitate securing the same in position. After the plate 13 is applied to the portion 10 of the device a thin sheet of unvulcanized rubber, indicated at 17, is placed over the same and the entire device is then vulcanized with the result that the plate 13 is firmly embedded in the device and the sharp points 15 extend beyond one surface of the same. Such vulcanization also gives the desired strength and elasticity to the flaps 11.

As shown in Figures 4 and 5, the spurs may be formed by using a series of sharp tacks 18 or the like which are inserted in a piece of canvas 19 and the heads of which are covered by a second piece of canvas 20, a thin layer of raw rubber or rubber material being placed between the canvas pieces, and this assemblage is then applied to the central portion 10 of the device and covered with a section of unvulcanized rubber 17 and all the parts then vulcanized together as before described so that the projecting points of the tacks form the spurs.

When vulcanized, the entire device is more or less resilient so that the central portion 10 can be placed beneath the foot and the flaps 11 can be drawn or stretched up over the top of the foot and the ends thereof secured together by any suitable form of fastener. Preferably a pair of ordinary snap fasteners 21 is attached to the straps, being inserted through the straps and through patches of canvas 22 vulcanized to the straps.

The openings 12 in the flaps 11 serve to divide the flaps into two strap portions and when the flaps are drawn up over the foot as described, these strap portions on each side of the shoe will be separated and one of said portions will be positioned in front of and the other in the rear of the usual outward curve or bulge B, Figure 2, on the edge of the ordinary shoe sole and such strap portions will also tend to be located and adjusted on opposite sides of the natural enlargements or joints on each side of the foot. This arrangement thus serves to securely hold the device against forward or rearward movement relative to the shoe and foot of the wearer.

The arrangement shown in Figure 8 is generally the same as that above described, but in this form of device an additional flap 11′ is provided having therein an opening 12′ which is adapted to be slipped over the toe of the shoe and thus

provide an additional means for securing this form of device in position.

As will be seen from the foregoing, when the device is applied to the foot the spurs will effectively prevent slipping on ice or other smooth or slippery surface, and the construction is such that the device can be easily and quickly attached to and detached from the foot of the wearer. Being formed of a strip of material the device can be readily folded up when not in use and easily carried. The construction is efficient for the purpose intended since it provides a relatively large area covered with sharp spurs, some of which are always in position to engage a smooth surface and prevent slipping and the shape of the device is such that when attached to a shoe it will be firmly held in position with little tendency to slide back and forth or sidewise on the shoe.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

An anti-slipping device for shoes comprising an elongated integral strip of elastic flexible material having a relatively wide area thereof intermediate its ends, a metal plate mounted on and vulcanized to said wide area of the strip, said plate having a plurality of sharp spurs formed thereon and extending outwardly beyond the surface of said strip, and an elastic flap extending laterally on each side of said wide area, each of said flaps adjacent said wide area having an opening therein whereby each flap is divided into two separate strap portions, and cooperating fastening means on the outer ends of said straps for securing the same together.

FRANS O. LAWSON.