May 6, 1952 F. H. OGDEN 2,595,694

DETACHABLE SHOE SOLE

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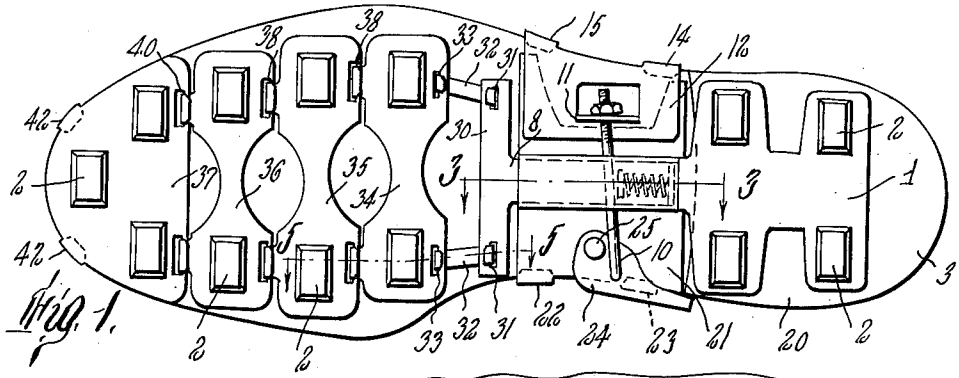


Fig. 1.

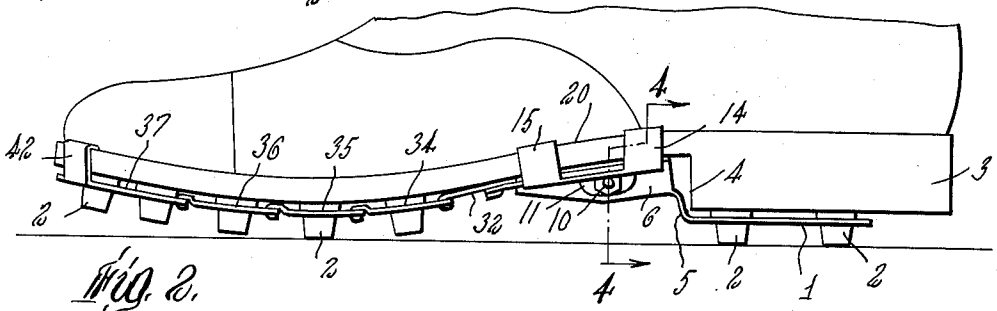


Fig. 2.

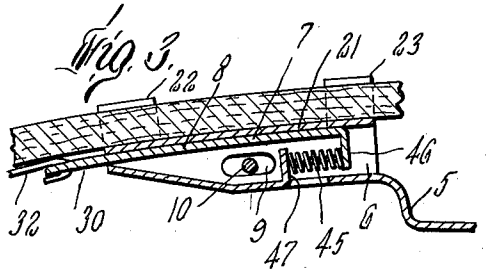


Fig. 3.

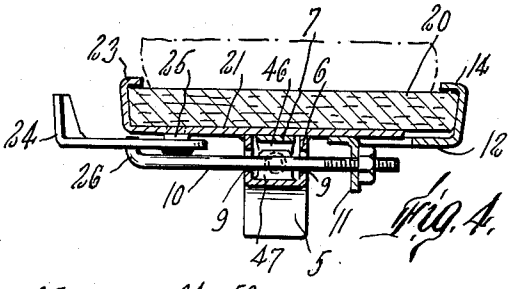


Fig. 4.

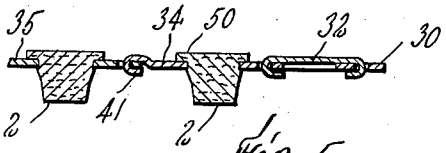


Fig. 5.

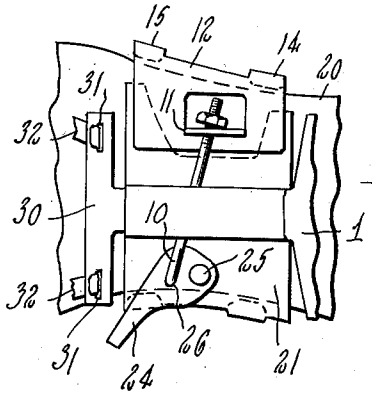


Fig. 6.

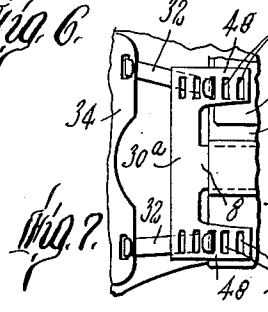


Fig. 7.

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DETACHABLE SHOE SOLE

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Application May 4, 1951, Serial No. 224,599

3 Claims. (Cl. 36—7.1)

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This invention relates to shoe soles particularly suitable for sport's use, or to prevent slipping, and which are readily attached to or detached from ordinary shoes. Thus two pairs of shoes need not be carried by the wearer, the one for sports or anti-slipping purposes, and the other for street or house wear.

One of the important objects of the invention is to provide a detachable sole which is provided with both heel and forepart anti-slipping portions.

A further object is to provide for flexibility between the heel and forepart with means for maintaining the heel and forepart portions in close engagement with the permanent sole regardless of length changes therein due to flexing of the shoe.

Still another object is to provide a construction where by choice of links of different lengths or of the same lengths but secured at different end positions the detachable sole may be adapted to shoes of different sizes.

Still another object is to provide improved caulks which may be replaced readily when worn.

For a complete understanding of this invention, reference may be had to the accompanying drawings in which

Figure 1 is an inverted plan view of a shoe showing the detachable sole applied thereto.

Figure 2 is a side elevation of the same.

Figures 3 and 5 are detail sectional views on lines 3—3 and 5—5, respectively, of Figure 1.

Figure 4 is a detail sectional view on line 4—4 of Figure 2.

Figure 6 is a view similar to a portion of Figure 1, but showing the shoe clamp released.

Figure 7 is a fragmentary view similar to a portion of Figure 1 but showing a modified construction.

Referring to the drawings, at 1 is indicated a plate which may be of metal and provided with suitable caulks 2, this plate 1 being adapted to underlie the heel 3 of a shoe and provide through the caulks an anti-slipping attachment thereto. This plate 1, forwardly of the heel breast 4, is upwardly and then forwardly turned at 5 and the forwardly turned portion has upstanding side walls 6 which define therewith a passage for slidably receiving the shank 7 of a T-shaped element 8. The upstanding walls 6 extend beneath the shank portion of the sole of the shoe and provision is made by which the detachable sole is clamped to the shoe at the shank portion. As shown the side walls 6 are slotted as at 9 for the passage of a clamping bar 10. One end of

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this clamping bar extends through an ear 11 struck downwardly from a clamping element 12 shown as provided with a pair of longitudinally spaced hook elements 14 and 15 which may engage about the edge of the sole 20 of the shoe at the shank.

The opposite side portion of a shank plate 21 to which the edges of the side walls 6 are attached is provided with a pair of similarly spaced hooks 22 and 23 which may engage over the edge of the sole of the shoe substantially opposite to the portions 15 and 14, respectively.

A finger lever at 24 is pivoted at 25 on the shank member 21 and the free end of the clamping bar 10 is hooked as at 26 and engages in the clamping lever 24. In the angular position of the clamping member 24 shown in Figure 6, the member 12 is pushed away from the plate 21, separating these parts so that the heel member 1 may be placed in position on the shoe. By then swinging the lever 24 from the position shown in Figure 6 to the position shown in Figure 1, the parts 12 and 21 may be clamped against opposite sides of the shank portion of the shoe sole which clamps the detachable sole member to the shoe.

The laterally extending head 30 of the element 7 projects laterally from the shank portion and is provided near each end with perforations 31. Within each of these perforations is engaged the rear end of a link 32, the forward end of which passes through a slot 33 in the rear element 34 of a series of elements 34, 35, 36, and 37 which together form the forepart portion or cage of the detachable sole. These elements 34, 35, 36 and 37 are joined together in series by hinge portions 38, and are arranged with their axes laterally of the shoe. Each hinge portion may comprise a slot 40 inwardly of the rear edge of one of the sections and through which may be engaged a looped tongue 41 extending from the forward edge of the next rearwardly positioned section. Thus the forepart section is flexible longitudinally of the shoe, but is substantially rigid laterally. The forward section 37 may be provided with a pair of spaced hooks 42 which may be engaged about the sides of the shoe sole toward its toe end.

A spring 45 reacts between a down-turned rear end 46 of the T-shaped element 30 and an upwardly struck lug 47 of the forward extension 5. The hinged arrangement of the sections 34, 35, 36, and 37 allows for flexing of the shoe sole, while the spring 45 draws the entire rear forward part rearwardly, holding the hooks 42 in engagement with the shoe sole and allowing the fore-

part portion to draw rearwardly as the shoe sole straightens out after a flexing motion. Thus the forepart portion, while flexible, is pulled backwardly and thus follows the flexing of the shoe sole during use.

A single set of forepart sections can be employed in connection with shoes which vary considerably in size, and to allow for application of the forepart portion on shoes of different size, links 32 of the proper lengths may be chosen. The proper length links having been chosen, it is only necessary to insert their ends through the slots 31 and 33 and head over the links 32 to hold the forepart of the detachable sole in the proper lengthwise position to fit a shoe of the desired size. It is therefore not necessary to employ many sizes of forepart or heel portions but merely to select the proper length of links 32 and to attach the links of such length in position. Instead of selecting links 32 of suitable lengths, the construction shown in Figure 7 may be employed. In this figure the T head of the element 30*a* has laterally spaced rearward extensions 48 provided with lengthwise spaced slots 49 through selected ones of which the rear ends of the links 32 may be engaged and secured.

As shown, each of the forepart sections is provided with at least two perforations for the reception of caulks which may be similar to the caulks 2 employed in the heel portion. While various types of caulks may be used, depending upon the choice of the wearer, one which has been found highly efficient, particularly for use in connection with sports is illustrated herein, particularly in Figure 5. Each caulk as there shown comprises a tapered plug of rectangular cross section, this plug being formed of alternate layers of fabric and a rubber or rubber-like product which holds the fabric laminations together. At the large end of each of these caulks there may be formed a head 50 which may bear against the top face of the corresponding portion of the detachable sole and as shown in this figure the holes for receiving the plugs may be slightly smaller than the cross sectional area just beneath the head of the plug so that by pressing the plugs into position the plug material flows out somewhat beneath its holder plate, thus providing a secure interlock between the parts as shown in Figure 5. However, by applying pressure against the small end of each caulk it may be forced out as when replacements are found desirable.

From the foregoing description of an embodiment of this invention, it should be clear to those skilled in the art that various changes and modifications may be made without departing from its spirit or scope.

I claim:

1. A detachable sole having a heel portion provided with a forward shank extension, means for clamping said extension to the sides of a shoe sole at the shank thereof, an element carried by said extension and slidable lengthwise thereof, a spring interposed between said extension and said element and pressing said element rearwardly, said detachable sole having a forepart portion secured to said element, and elements at the forward part of said forepart portion engageable with the sole edge of a shoe and pulled back into clamping contact therewith by said spring.

2. A detachable sole having a heel portion and a forepart portion, means for securing said heel portion to a shoe underlying the heel thereof, said forepart portion comprising a series of laterally arranged sections pivotally secured to each other on lateral axes and arranged to underlie the forepart of said shoe, hook elements at the forward part of said forepart portion engageable about the edge of the sole of said shoe, a T-shaped element having a shank slidably carried by said heel portion, laterally spaced links connecting the cross bar of said T-shaped element to the rear section of said forepart portion, and a spring reacting between said element, shank and said heel portion and pulling said forepart portion rearwardly with said hook elements engaging said shoe sole member.

3. A detachable sole having a heel portion and a forepart portion, means for securing said heel portion to a shoe underlying the heel thereof, said forepart portion comprising a series of laterally arranged sections pivotally secured to each other on lateral axes and arranged to underlie the forepart of said shoe, hook elements at the forward part of said forepart portion engageable about the edge of the sole of said shoe, a T-shaped element having a shank slidably carried by said heel portion, laterally spaced links connecting the cross bar of said T-shaped element to the rear section of said forepart portion, a spring reacting between said element, shank and said heel portion and pulling said forepart portion rearwardly with said hook elements engaging said shoe sole member, and caulks carried by said forepart sections and said heel portion for engagement with the ground.

FLOYD H. OGDEN.

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