

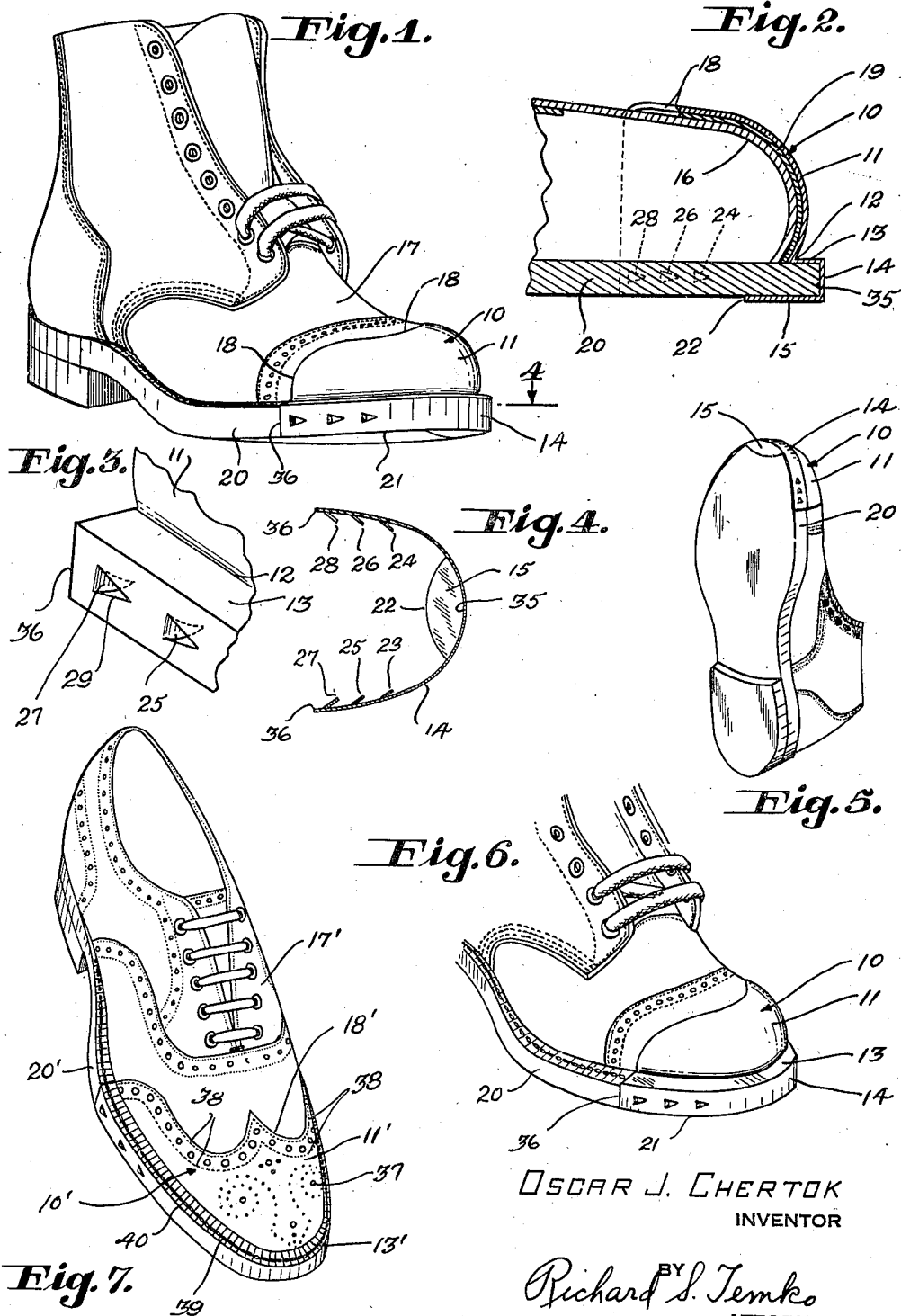
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SHOE TIP PROTECTOR

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SHOE TIP PROTECTOR

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1 Claim. (Cl. 36-72)

This invention relates generally to the footwear art, and more particularly to tip or front portion shoe protectors.

Among the objects of the present invention lies the provision of a shoe tip protector which is relatively inconspicuous when worn so that the same does not detract from the appearance and style qualities of the shoe.

Another object herein lies in the provision of shoe tip protecting structure which is light in weight, yet of high strength, so that not only does the shoe with the protector on it present a neat appearance, but the shoe is comfortable and not made clumsy by unnecessary weight, yet the protector prevents the shoe from being injured thereunder, and also acts to protect the wearer's foot should any heavy object fall upon the shoe.

Another object herein lies in the provision of shoe tip protecting structure which is readily fabricated in large quantities at low cost so that the same may have a consequent wide use and distribution.

A still further object herein lies in the provision of shoe tip protecting structure which is readily detachably engageable with the shoe, requiring no special tools or skill for this purpose. In accordance with the present novel construction, the shoe tip protector when in place does not damage the shoe in any conspicuous or vital portions thereof.

A feature of the present invention lies in the fact that when the shoe protector is in place upon the shoe, the protector is securely held thereat against movement in many directions so that accidental displacement thereof is extremely remote.

These objects and other incidental ends and advantages will more fully appear in the progress of this disclosure and be pointed out in the appended claim.

In the drawing constituting a material part hereof, similar reference characters designate corresponding parts throughout the several views in which:

Figure 1 is a front elevational view of a shoe having associated therewith a first embodiment of the invention.

Figure 2 is a fragmentary enlarged vertical sectional view, constituting a medial section of the forward portion of Figure 1.

Figure 3 is a fragmentary enlarged view in perspective showing in detail two of the sole edge engaging prongs and adjacent parts.

Figure 4 is a horizontal sectional view of the protector shown in Figure 1, as might be seen from the plane 4 thereon.

Figure 5 is a reduced view in perspective showing principally the sole portion of the shoe of Figure 1, with the tip protector in place.

Figure 6 is a fragmentary view in perspective, 60

similar to Figure 1, but taken from a higher viewpoint.

Figure 7 is a perspective view of a second embodiment of the invention, in place upon a shoe.

Turning now to the first embodiment of the invention illustrated in Figures 1 to 6 inclusive, the shoe tip protector is generally indicated by numeral 10. The protector 10 is of irregular configuration and the shape thereof is best seen in the several figures of the drawing. The protector 10 includes a shoe tip covering portion 11; a welt engaging rib 12; a sole top engaging flange 13; a sole periphery engaging vertical rim 14; and a sole bottom engaging lip 15.

The protector 10 is preferably fabricated of a stiff material having some resiliency. An example of such material is sheet steel. When made from sheet steel, the protector 10 may be manufactured in one piece by suitable blanking and forming operations.

The tip covering portion 11 is generally of convex shape, but the configuration thereof is primarily determined by the external configuration of the shoe tip 16. The upper rear edge 18 of the portion 11 may extend rearwardly on the shoe any suitable distance, and the rearward extension of said edge is determined by the amount of the front upper portion of the shoe which it is desired to protect. The inner surface of the toe or tip covering portion 11 is provided with a lining 19 which may be composed of any suitable cushion material, as for example, felt or flannel. The lining 19 may be secured to the inner surface of the portion 11 in any suitable manner, as for example, by means of an adhesive (not shown). The lower forward and outer edge of the portion 11 is disposed inwardly (rearwardly and inwardly of the shoe when placed thereon) and forms in part the welt engaging rib 12. From the welt engaging rib 12, the material of which the protector 10 is composed extends radially outwardly in a horizontal plane to form the flange 13. The convergence or juncture formed by the lower front part of the tip covering portion 11 and the rear part of the sole top engaging flange 13 form an acute angle with relation to each other.

The outer edge portion of the sole top engaging flange 13 forms a right angle with relation to the vertical rim 14 which engages the periphery of the sole. The rim 14 is preferably co-extensive with the edge 18, though where desired, said rim may extend rearwardly along the edge of the sole 20, to some point beyond the edge 18. The forward portion of the lower edge 21 has extending rearwardly therefrom, and preferably at right angles thereto, the bottom engaging lip 15. The rear edge 22 of the lip 15 is preferably rounded as best seen in Figure 4. The inner opposed surfaces of the flange 13 and the lip 15 are preferably parallel and are spaced from each

other a distance equal to or slightly greater than the thickness of the sole 20.

The rear portions of the rim 14 are provided with sole edge engaging prongs 23 to 28 inclusive. These prongs are preferably triangular in shape and have the points thereof facing forwardly of the shoe 17 and the protector 10. These prongs are formed by making a series of V-shaped incisions 29 and then forcing inwardly the prongs so that they take a position as seen in Figure 4. The rim 14 is composed of relatively stiff resilient material so that the prongs have a spring-like action.

The outer surface of the protector may be treated in such manner as to take on an appearance harmonious with the shoe with which the protector is to be used. Examples of such finishes are bright plating, colored enamel, or certain chemical finishes such as gun-metallizing. The brighter finishes are more suited to children's shoes while the more subdued finishes are more adapted for adults' shoes.

The sole top engaging flange is preferably of uniform width so that the same may properly overlay the upper portion of the exposed sole edge.

Operation

The operation of the first embodiment of the device is substantially as follows:

The protector 10 is held in a position corresponding to the one it will occupy when fully seated upon the shoe and with the lower surface of the lining 19 resting upon the outer surface of the shoe tip 16, the entire device is moved rearwardly upon the shoe. As the device is pushed to the rear, the rim 14 will be guided in position as the flange 13 slides over the upper surface of the sole edge. Since the prongs 23 to 28 inclusive are positioned inwardly of the inner surface of the rim 14, they contact the outer surface of the edge of the sole 20 and are pressed outwardly toward the rim 14. The device is then pushed into its fully seated position so that the portion 35 (see Figure 2) contacts the outer surface of the sole 20 at the front central portion thereof. In its fully seated position, the protector becomes for practical purposes an integral part of the shoe. Movement of the protector 10 downwardly of the shoe is prevented by the under surface (really the lining 19) of the tip covering portion 11 and the under surface of the flange 13 abutting the shoe and preventing such movement. Upward movement of the device is prevented by the rib 12 and the lip 15 abutting the adjacent parts. Rearward movement is prevented by the portion 35 abutting the forward central portion of the front edge of the sole 20 as well as other parts abutting the shoe. Forward movement of the protector 10 relative to the shoe is prevented by the prongs 23 to 28 inclusive penetrating into the edge of the sole 20.

The points of the prongs are urged inwardly since they are spring-like in action, and forward movement of the rim 14 causes them to dig in more deeply into the edge of the sole 20.

Where it is desired to remove the protector, it becomes a simple matter to insert a thin knife blade between the inner surface of the rim 14 and the outer surface of the edge of the sole 20. The knife blade is preferably introduced at the

points 36. By reason of the resilient nature of the prongs 23 to 28 inclusive, it is not necessary that a different size of the protector 10 be made for each shoe size, though in order to provide a proper co-relation between the parts, it is considered necessary to have "left" and "right" shapes to correspond to the right and left shoes.

Turning now to the second embodiment of the invention shown in Figure 7, parts corresponding to the first embodiment are given singly primed reference characters for the purpose of avoiding needless repetition.

The principal difference existing between the first embodiment and the second embodiment lies in the fact that the tip covering portion 11' is provided with a plurality of perforations indicated generally by numeral 37 and stitch markings indicated generally by numeral 38; and the sole top engaging flange 13' is provided with a plurality of stitch markings 39 and stich knife marks 40.

Another difference between the first and second embodiments lies in the fact that the edge 18' is irregularly shaped to conform to the shape of the shoe tip which lies directly therebelow. It is thus seen that the protector 10' may be so shaped and decorated that when in place, it is difficult to notice that the shoe 17' carries tip protecting means thereon, yet all of the usefulness and advantages of the present tip protecting construction are retained.

It may thus be seen that I have provided a novel shoe tip protector which may be made at low cost and yet which is light in weight, convenient, and useful. My shoe tip protector furnishes adequate protection for the shoe as well as the wearer's foot and yet is readily put in place or removed without the aid of special skill or tools. While the invention is especially useful in connection with children, to be worn while playing, or for adults, while engaged in hazardous occupations, or those in which the front portion of the shoe is subjected to a great deal of wear, it is obvious that any shoe in need of protection may be benefited by the use of my improved shoe tip protector.

As contrasted with certain constructions in the prior art, no interference is made with the shoe tip 16 and no pointed objects are inserted into the shoe at the welt, that is to say at the point of juncture between the upper and the sole, so that the water-proof, as well as the major foundation of the shoe is in no way interfered with.

I wish it to be understood that I do not desire to be limited to the exact details of construction shown and described for obvious modifications will occur to a person skilled in the art.

I claim:

For use with a shoe, a shoe tip protector comprising: a tip covering portion; a sole periphery engaging rim composed of resilient material and integral with the lower part of the tip covering portion, said sole periphery engaging rim being generally U-shaped; each of the lateral rear portions of said rim having a V-shaped incision forming a triangularly shaped prong, the point of which is disposed inwardly of the rim and forwardly directed with relation to the tip protector and said shoe.

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