C. H. HILL.

RUBBER SOLE FOR BOOTS AND SHOES.

APPLICATION FILED SEPT. 28, 1912.

1,175,866.

Patented Mar. 14, 1916.

Fig. 1.

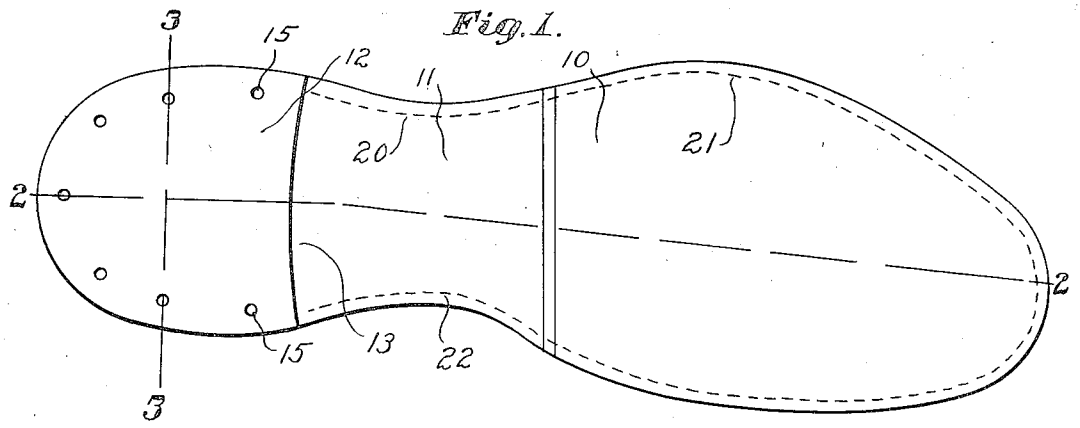


Fig. 2.

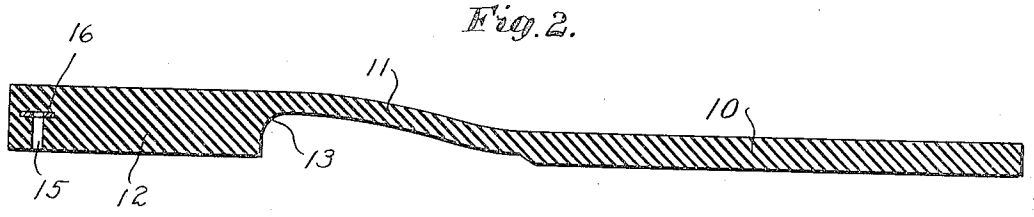
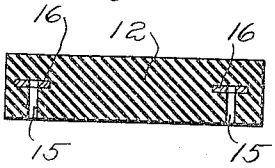


Fig. 3.



Witnesses:
Maud E. Organ.
Arthur C. Randall.

Inventor:
Charles H. Hill,
by Edwin T. Lee
Atty.

UNITED STATES PATENT OFFICE.

CHARLES H. HILL, OF LYNN, MASSACHUSETTS.

RUBBER SOLE FOR BOOTS AND SHOES.

1,175,866. Specification of Letters Patent. Patented Mar. 14, 1916.

Application filed September 28, 1912. Serial No. 722,963.

To all whom it may concern:

Be it known that I, CHARLES H. HILL, a citizen of the United States, and a resident of Lynn, county of Essex, State of Massachusetts, have invented an Improvement in Rubber Soles for Boots and Shoes, of which the following description, in connection with the accompanying drawing, is a specification, like characters on the drawing representing like parts.

This invention relates to rubber soles for boots and shoes and pertains more particularly to a rubber sole to be attached to a boot or shoe as distinguished from rubber soles that are vulcanized to or integral with the shoe and attached thereto during the process of the manufacturing of the boot or shoe.

I have shown in the accompanying drawing one embodiment thereof in which:

Figure 1 is an inverted plan of a rubber sole embodying my invention. Fig. 2 is a vertical longitudinal section on line 2—2 of Fig. 1. Fig. 3 is a vertical cross section on line 3—3 of Fig. 1.

The terms employed herein are used in the generic and descriptive sense, and, are not because of such use, limitations of my invention. The limitations as such, of the invention, will be pointed out in the appended claims.

In the drawing 10 represents the tread of the sole which is adapted to extend beneath the ball of the shoe, and which is the proper thickness to give resiliency on the wearing surface and strength of material in order that it may be secured to the shoe.

11 is the shank which is narrowed down and is thinner than the tread 10.

12 is the thick heel portion which is integral with the said shank and tread. The heel portion 12 is the proper height or thickness to give the arch of the shoe the same support that a leather heel will and to raise the arch and the shank to the proper degree. To describe such heel the words "thicker heel portion" or the like are used to differentiate such type of heel from the so called spring heels etc.

At the point where the heel portion 12 joins the shank 11 I provide a rounded portion 13 which reinforces the said heel and said shank strengthening the same so that the rubber will not break or stretch at the junction thereof.

The thinning of the shank enables it to more thoroughly fit the arch and permit of the flexion of the said shank without "drawing" against the fastening means or the arch as would be the case if the said shank were as thick as the tread 10.

The heel 12 is provided with fastener holes 15 and in alinement therewith and embedded in the rubber are metal washers 16.

When it is desired to provide a boot or shoe with rubber soles my invention can be applied thereto in the following manner. The leather heel is removed from the boot or shoe and the rubber sole is laid on the shoe and stitched along the shank at 20 from a point near the heel. The said stitching continues about the tread at 21 and along the other side of the shank at 22 stopping at the heel. Nails or like fasteners are then driven through the fastener holes 15 into the heel seat of the shoe. The heads of the nails or fasteners are driven beneath the tread surface of the heel until the heads thereof engage with the independent metal washers 16 and said nails are clenched into the heel seat in any suitable manner.

By means of my invention I provide a rubber sole that extends throughout the bottom of the shoe and has no joints or the like to spread open so that the moisture can obtain access to the bottom of the shoe. To prevent weakening the shoe structure and sole, the tread, shank, and heel are integral and the fastening means for the heel is of a different type than the fastening means employed at the shank and tread portions of the sole. The same fastening would be impracticable throughout the sole and heel.

Heretofore rubber soles have consisted of a shank and tread surface and if it was desired that a rubber heel should also be employed, a separate heel had to be abutted against the shank portion after it was attached and the heel was then nailed to the heel seat. This enables the shank to draw away from the heel and the moisture immediately commences to destroy the fastenings of both the sole and the heel.

If a rubber sole consisted merely of the tread, the shank, and rubber heel seat and it was desired that a rubber heel be secured to the shoe over the rubber heel seat, the said rubber heel having no solid foundation, would creep about on a rubber heel seat and

loosen the heel fasteners and the said rubber heel would become detached within a very short time.

It will be observed that the perforated nail washers 16 are positioned substantially in alinement with the under-surface of the shank-portion and a distance above the bottom of the heel substantially equal to the thickness of the tread or sole portion proper. This arrangement of the washers, in reality, forms of the upper portion of the heel portion, an extension of the shank portion, and thus when applied to a shoe, the rear extension of the shank will be clamped to the bottom of the shoe by the relatively wide flat washers, thereby forming a connection which will not tear loose by lateral movement, and leaving the heel proper free for elastic movements.

I have described herein one embodiment of my invention; but it is to be understood that the latter is not essentially limited to the specific details of construction and organization of said embodiment, since the same may be varied without departing from the proper scope of the claims.

Claims.

1. An integral rubber sole comprising a forepart, a thicker heel portion and a shank portion connecting and of less thickness than either said forepart or heel portion, said heel portion having continuous vertical sides depending below said shank portion, and fastening means completely embedded in said heel portion and constructed and arranged to coöperate with other fastening means for clamping to a shoe only that part of said heel portion lying above the plane of the underside of said shank portion.

2. An integral rubber sole comprising a forepart, a thicker heel portion and a shank portion connecting and of less thickness than either said forepart or heel portion, said heel portion having continuous vertical sides depending below said shank portion, and washers completely embedded in said heel portion and constructed and arranged to coöperate with other fastening means for clamping to a shoe only that part of said heel portion lying above the plane of the underside of said shank portion.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

CHARLES H. HILL.

Witnesses:

WILLIAM E. SALOMONS,

ADELBERT S. WILDER.