May 8, 1951 H. H. JOHNSON 2,551,885

SHOE SOLE

Filed Feb. 10, 1949 2 Sheets-Sheet 1

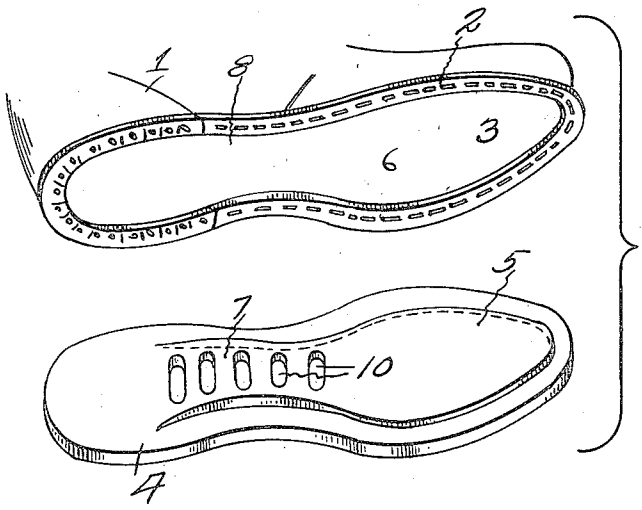


Fig. 1.

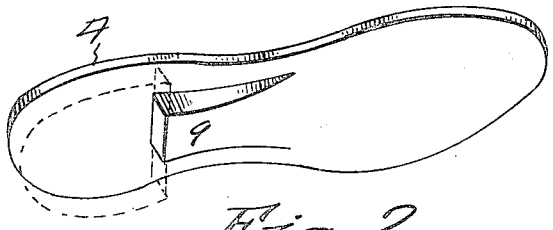
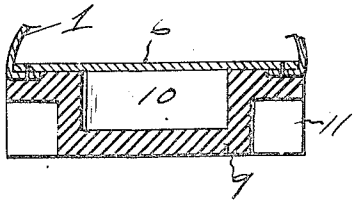


Fig. 2.

Fig. 3.



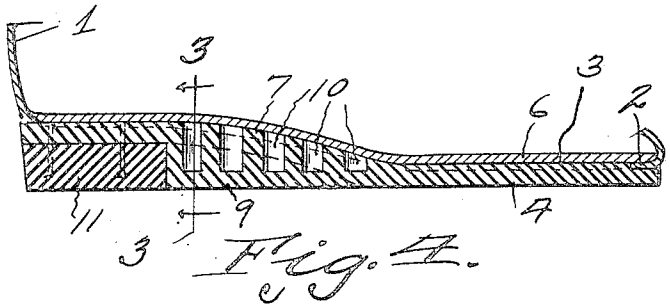


Fig. 4.

Inventor
Harry H. Johnson
By Philip A. Ferrell
Attorney

May 8, 1951 H. H. JOHNSON 2,551,885

SHOE SOLE

Filed Feb. 10, 1949 2 Sheets-Sheet 2

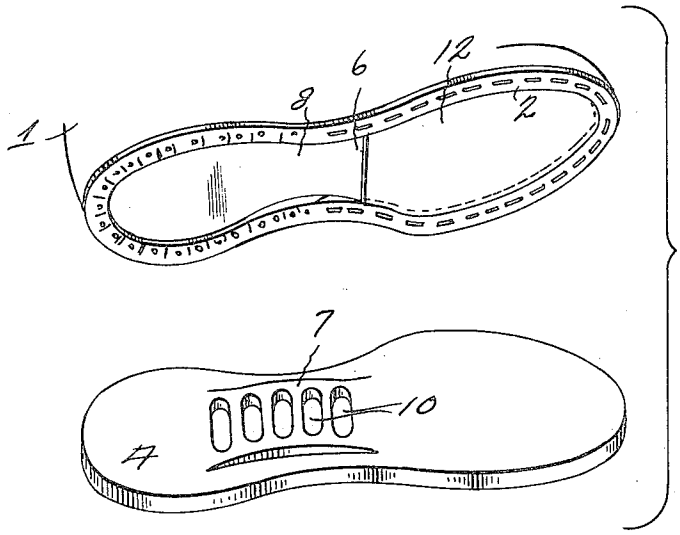
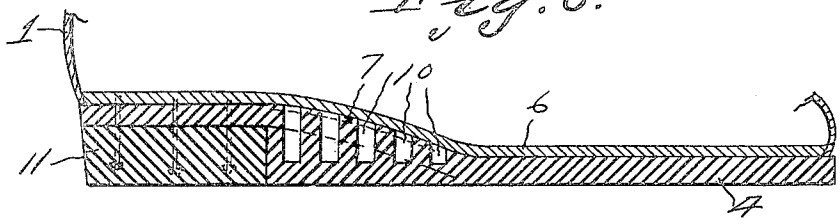


Fig. 5.

Fig. 6.



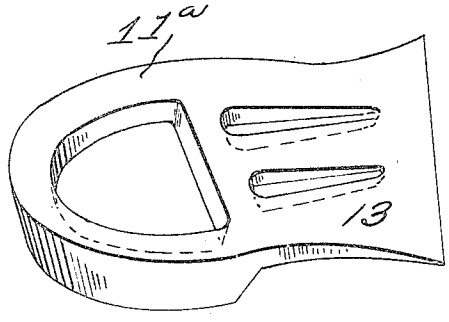


Fig. 7.

Inventor
Harry H. Johnson
By Philip A. H. Lovell
Attorney

Patented May 8, 1951

2,551,885

UNITED STATES PATENT OFFICE

2,551,885

SHOE SOLE

Harry H. Johnson, Brookline, Mass.

Application February 10, 1949, Serial No. 75,668

1 Claim. (Cl. 36—32)

1

The invention relates to shoe soles, particularly rubber soles, and has for its object to provide a device of this kind wherein the inner side of the sole is provided with an upwardly protruding portion, adapted to register with the shank of the upper and inner sole and act as a shank stiffener, thereby obviating the present shank stiffeners now in use.

A further object is to provide a shoe sole having incorporated therewith an integral shank stiffener and filler positioned to register with the shank of an upper and the ball of the upper, thereby obviating the present practice of placing a fibrous filler as a separate element in registry with the ball of the shoe.

A further object is to dispose the shank stiffener above an arch supporting integral wedge on the under side of the sole.

A further object is to provide a yieldable sole for a shoe, having as an integral portion thereof a shank stiffener and filler member which will yield and conform to the foot curvature during a walking operation.

A further object is to provide, as an integral member, a shoe sole formed from a yieldable material, and having a shank stiffener and filler and particularly adapted for repair purposes, where the filler is usually mutilated and destroyed when the old sole is stripped from the upper.

A further object is to provide a rubber sole having, as an integral portion thereof, a shank stiffener extending upwardly from the upper side thereof.

With the above and other objects in view the invention resides in the combination and arrangement of parts as hereinafter set forth, shown in the drawings, described and claimed, it being understood that changes in the precise embodiment of the invention may be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings:

Figure 1 is a collective perspective view showing the under side of the shoe upper and the inner side of the sole.

Figure 2 is a perspective view showing the under side of the sole.

Figure 3 is a vertical transverse sectional view through the shoe taken on line 3—3 of Figure 4.

Figure 4 is a vertical longitudinal sectional view through the shoe.

Figure 5 is a collective perspective view of the under side of an upper showing the conventional filler and the shank stiffener on the inner side of the sole.

2

Figure 6 is a vertical longitudinal sectional view through a shoe showing the modified form shown in Figure 5.

Figure 7 is a perspective view of a rubber heel for repair purposes, where the leather sole is retained.

Referring to the drawings, and particularly to Figures 1 to 4, the numeral 1 designates a conventional shoe upper, and 2 a welt. In shoes, as present constructed, the ball portion 3 is usually filled in with a filler, formed of various materials, and it has been found, in repair shops, where the old sole is stripped from the shoe, the filler is destroyed or mutilated. Also, upon excessive wear of the forward portion of the sole, the filler, being absorbent, admits water to the shoe. To obviate these difficulties the rubber sole 4 has its forward portion provided with an integral raised portion 5, which, when secured to the inner sole in any suitable manner, acts as a filler. The inner sole is designated by the numeral 6. Extending rearwardly from the rear end of the filler 5 and formed integral therewith is an upwardly arched integral portion 7 which registers with and engages the shank 8 of the inner sole, and acts as a shank stiffener, hence it will be seen that when the sole is placed on the shoe upper and inner sole the space between the welt is filled and a non-absorbent filler is provided, and at the same time the raised portion 7 acts as a shank stiffener, thereby obviating other stiffening means, such as steel stiffeners. The under side of the sole 4 is provided with a ground engaging wedge 9, which wedge is directly under the portion 7, and the wedge and portion 7 may be provided with lightening recesses 10. The wedge 9 terminates spaced from the rear end of the sole so a detachable heel 11 may be applied, as desired.

A welt of conventional form is shown at 12 in Figure 5.

Referring to the modified form shown in Figures 5 and 6, the filler 12, of conventional form, is retained and the shank stiffener 7 as in Figure 1, however the shank stiffener, in this form, is integral with the sole 4, and acts in the same manner as a shank stiffener, obviating the use of conventional stiffeners of metal. There are decided advantages of shank stiffeners formed of rubber and being integral with the sole, as well as the fillers, carried by the sole, as the filler and stiffener will not harden, as the fillers and stiffeners now in use. It will also be seen that they will be softer under the foot during a walking operation.

Referring to Figure 7, a rubber heel is provided, preferably of the chambered type, and designated by the numeral 11*a*. The forward end of the heel is provided with a forwardly tapered shank portion, and the heel is particularly adapted for use in repairing shoes where the old sole is retained.

From the above it will be seen that a repair rubber shoe is provided which has incorporated therein a shank stiffener and filler, and said structure has decided advantages in repair work where the old filler is mutilated or destroyed when the old sole is stripped from the shoe. It will also be seen that the shank stiffener will obviate the use of conventional stiffeners now in use.

The invention having been set forth what is claimed as new and useful is:

A plastic sole for a welt type shoe comprising a forward section, a heel section, a shank section between the forward section and the heel section, the upper side of the shank section being provided with an upwardly extending portion for disposal within the usual filler space for supporting the arch of the foot and the lower side of the shank section having a downwardly extending portion having its lower face substantially in the plane of the lower face of the sole section, said shank section having vertically disposed chambers extending downwardly through the shank section and terminating spaced from the lower face.

HARRY H. JOHNSON.

REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
1,253,639	Smith	Jan. 15, 1918
1,266,535	Jones	May 14, 1918

FOREIGN PATENTS

Number	Country	Date
234,632	Great Britain	June 4, 1925