May 5, 1936. F. BILODEAU 2,039,767

INSOLE

Filed Dec. 6, 1934

Fig. 1

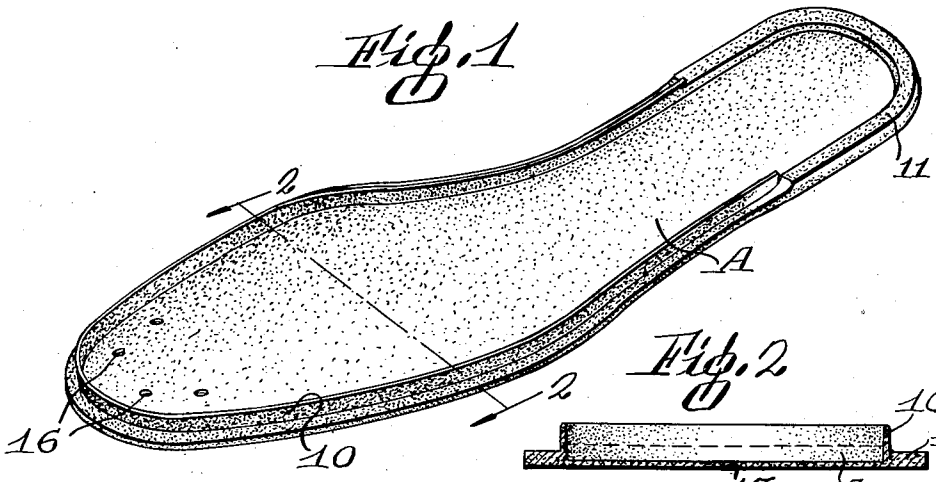


Fig. 2

Fig. 3

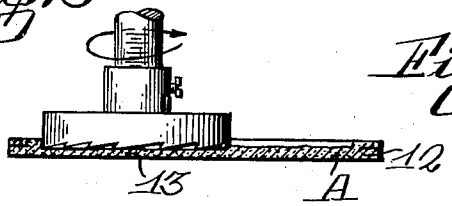


Fig. 4

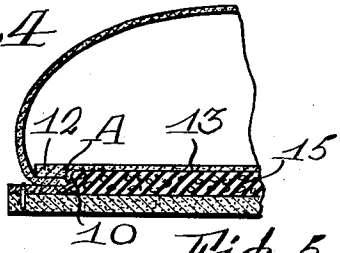


Fig. 6

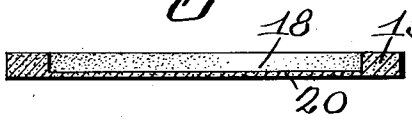


Fig. 5

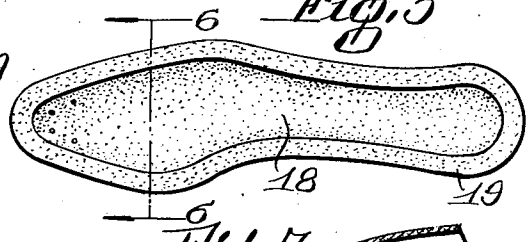


Fig. 8

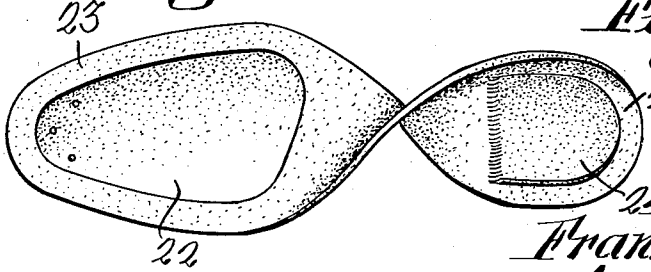
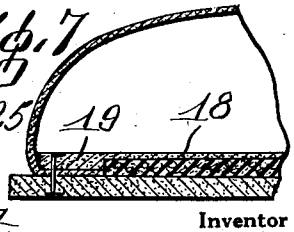


Fig. 7



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UNITED STATES PATENT OFFICE

2,039,767

INSOLE

Frank Bilodeau, Montreal, Quebec, Canada

Application December 6, 1934, Serial No. 756,273

3 Claims. (Cl. 36—22)

The present invention relates to improvements in the manufacture of insoles for shoes.

An object of the invention is the provision of an insole for shoes having a yielding, impressible body.

A further object of the invention is the provision of an insole which is flexible to a high degree.

Another object of the invention is the provision of an insole having a margin of normal thickness and a relatively thin flexible body.

A still further object of the invention is the provision of an improved insole which may be used in the manufacture of various well known methods of shoe construction.

Other objects and advantages of the invention will become apparent as the description progresses.

In the accompanying drawing forming a part of this specification and in which like reference characters are employed to designate corresponding parts throughout the same:

Figure 1 is a bottom perspective view of the preferred form of the insole, as used in Goodyear welt shoes,

Figure 2 is a transverse section taken on the line 2—2 of Figure 1,

Figure 3 is a view similar to Figure 2 illustrating the formation of a hollow in the body,

Figure 4 is a fragmentary section showing the insole applied to a welt shoe,

Figure 5 is a bottom plan view of a modified form of the insole,

Figure 6 is an enlarged section taken on the line 6—6 of Figure 5.

Figure 7 is a fragmentary transverse section showing the said insole applied to a McKay shoe, and

Figure 8 is a twisted plan view of still another modified form of the insole.

Referring to Figures 1 to 4 inclusive, wherein is shown a preferred embodiment of the invention, the letter A generally designates the insole formed from good quality hide leather of the type customarily used for insole construction. The leather strip from which the insole is usually formed is cut from the butt of a hide and is, consequently, fairly thick, strong and somewhat rigid. In forming my improved insole the body is cut in the desired shape from the butt leather and the lip 10 formed on the bottom face at the margin, that is, at a position set inwardly from the side edge of the leather and projecting at a right angle to the body. The lip formation may be eliminated from the heel part of the leather and may constitute a flat marginal portion, indicated at 11. Prior to or subsequent to the formation of the lip 10 on the insole the bottom face of the body is scraped or ground, as shown at Figure 3, within the margin defined by the lip so that the main central body portion is reduced in thickness relative to the normal thickness of the leather and the thickness maintained at the margin or border. Thus, the insole embodies a relatively thick marginal portion 12 and a relatively thin body portion 13.

By thus treating and shaping the insole leather, the body is rendered quite thin and flexible so that a padding or cushioning material 15, shown at Figure 4, may be disposed between the body of the insole and the outsole. Inasmuch as the main body portion of the insole is quite thin, the leather will be quite yielding and impressible upon the soft yielding cushion 15 to greatly enhance the comfort of the shoe. Furthermore, the cutting or scraping away of the body leather, forming a hollow in the bottom face, renders the insole flexible to a much greater degree so that the completed shoe will also be of greater flexibility.

In order to further enhance the comfort of the insole and cushioning construction, I contemplate providing a plurality of apertures 16 in the body at the toe, so that compression of the assembled laminated sole will enable the air to escape between the insole body and the outsole through the vent openings and obviate the formation of air pockets or wrinkles.

A modified form of the insole, shown at Figures 5, 6 and 7, embodies an insole having a main body portion hollowed out by a scraping tool or the like forming a hollow 18 in the top face so that the insole comprises a relatively thick flat marginal portion 19 and a body portion 20 of decreased thickness providing a yielding, flexible body construction. This form of insole is particularly adaptable for the construction of McKay shoes, as shown at Figure 7, or other shoes, such as Compo, nailed or wherein the securing means extend through the sole, upper and insole.

Another modification of the insole, shown at Figure 8, comprises an insole leather formed of normal or conventional thickness having the bottom face hollowed out at the front, as indicated at 22, providing a relatively thin flexible front body portion having a thicker marginal portion 23 of normal thickness. At the rear or heel portion the insole is scraped or otherwise treated to form a hollow 24 in the top face, providing a thin rear body portion surrounded by a relatively thick marginal portion 25. This insole construction enables the assembly of a cushion be-

tween the front body portion and the outsole and also enables the positioning of padding or cushioning material directly on the top face of the heel.

It is to be understood that the forms of my invention herein shown and described are to be taken as preferred examples of the same and that various changes as to the shape, size and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

Having thus described my invention, I claim:

1. An inlaid insole having a central body portion entirely hollowed down to a uniform thickness a fraction only of the margin which is solid material of usual thickness and of a width sufficient to permit performing necessary operations thereon, ventilating apertures at the extreme toe end of the body portion and a pad of resilient porous material inlaid and retained within the hollowed out portion.

2. A leather insole having a lip formed on one face adjacent the edge, the body portion defined within said lip being uniformly hollowed out to practically the top grain of the leather to form a thin flexible body portion, ventilating means provided at the extreme toe end of the insole, and a flat padding of resilient porous material inlaid in the hollowed out portion to restore the same to its original thickness.

3. A ventilated impressible insole, said insole having a solid margin of a thickness and width such as are considered necessary and normal in shoes for which the insole is intended, the central body portion comprised within the margin being uniformly hollowed out to practically a fraction only of the margin thickness, the sides of said hollowed out portion being well defined and vertical, the hollowed body portion further having ventilating apertures at the extreme toe end, and a porous resilient pad inlaid closely within the hollowed area and flush with the margin upper surface.

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