Feb. 24, 1942. G. MANN 2,274,205

INSOLE FOR SHOES

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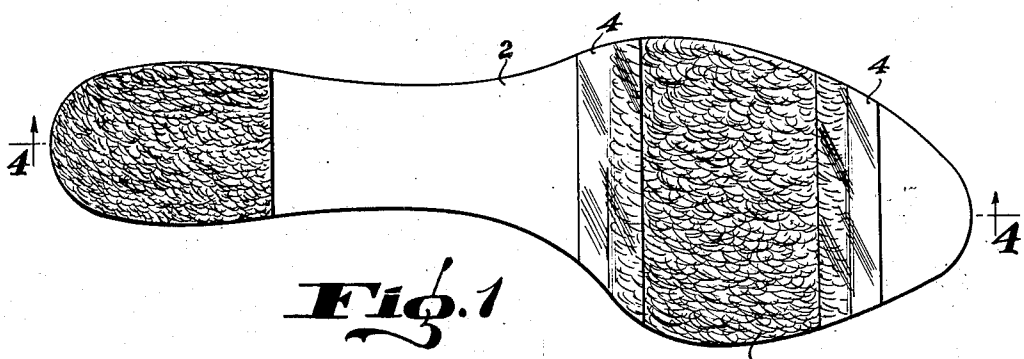


Fig. 1

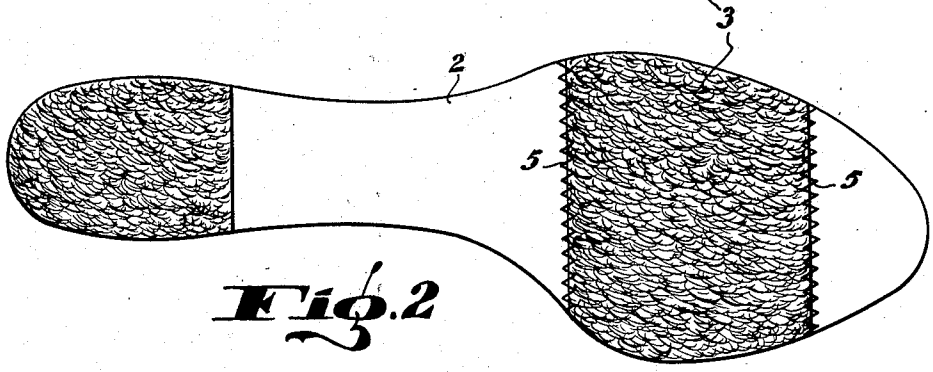


Fig. 2

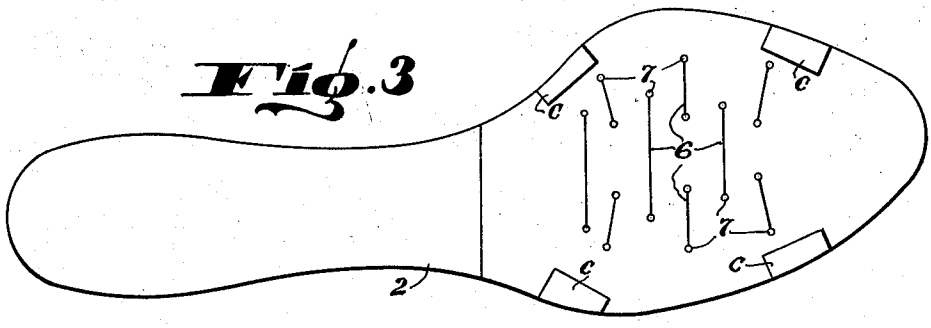


Fig. 3

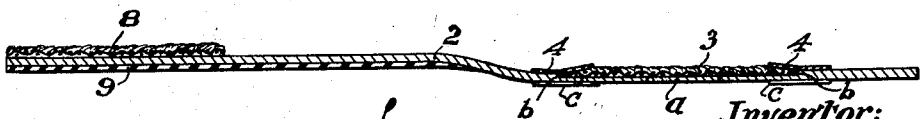


Fig. 4

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INSOLE FOR SHOES

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2 Claims. (Cl. 36—43)

This invention relates to insoles for shoes and other articles of footwear hereinafter included in the term "shoes."

It is the chief object of the invention to devise a thoroughly practical way of improving the comfort of a shoe bottom.

The nature of the invention will be readily understood from the following description when read in connection with the accompanying drawing, and the novel features will be particularly pointed out in the appended claims.

In the drawing,

Figure 1 is a plan view of an insole constructed in accordance with this invention;

Fig. 2 is a similar view of another embodiment of the invention;

Fig. 3 is a bottom view of the insole shown in Fig. 1; and

Fig. 4 is a sectional view of the latter insole taken approximately on the line 4—4, Fig. 1.

Referring first to Figs. 1, 3 and 4, the insole there shown comprises a body or base 2 of leather, leather board, or other insoling. The insoles are cut out of the base material usually by means of cutting dies, and they may be shaped to any suitable or desired outline. Later the upper surface of the ball portion of the insole is cut away, as best shown at *a*, Fig. 4, to provide a shallow groove or area of reduced thickness extending transversely across the insole from one lateral edge thereof to the other. Preferably this reduced area includes the entire ball portion of the insole, and it terminates in relatively abrupt shoulders *b*—*b*, Fig. 4, at the forward and rearward edges of said area.

Fitted into this reduced ball portion of the insole is a pad 3 of resilient or cushioning material of any suitable form such, for example, as felt, sponge rubber, or heavily napped fabrics of the general nature of blanket fabrics, Melton, and the like. The lateral edges of this pad register substantially with those of the body portion of the insole and the pad is secured permanently in this position in any convenient manner, usually by a coating of latex or other cement covering the entire surface of the reduced portion of the insole body.

For many purposes no further securing means for the pad is required than cement. There is always the danger, however, when such an insole is to be used in a McKay shoe, that the horn of the McKay stitcher will catch on one or the other of the transverse edges of the pad and thus loosen or tear it. For this reason I prefer to reinforce one or both of these transverse margins of the pad. This may be done, for example, by covering the joints at the front and rear edges of the pad with strips 4 of strong tape made, for example, of fabric, paper, leather, or any other suitable material, coated with an adhesive which preferably is waterproof and is adapted to retain its adhesive properties indefinitely. The ends of these tapes may be folded over upon the bottom of the insole, as shown at *c*, Fig. 3. Or, if desired, the margins of the pad may be even more securely anchored in place by means of seams 5—5, Fig. 2, preferably consisting of zig-zag stitches extending across the joint between the edges of the pad and the adjoining upper surfaces of the body portion 2 of the insole.

If the padded or any other portion of the insole so made does not have sufficient flexibility, either because of the characteristics of the base material or for any other reason, then such flexibility can be produced by cutting slashes in the insole. Such slashes are shown at 6 in Fig. 3.

This method of producing flexibility has long been used, but an important objection to it in many insole materials is that as wear progresses the constant flexing of the slashed area tends to increase the lengths of the slashes until they weaken the insole to an objectionable degree. I have found, however, that this tendency can be controlled by punching holes through the insole at the opposite ends of each cut or slash. Such holes are shown at 7 in Fig. 3. The slashing may be done with a special tool including two punches or tubes connected by a cutting edge so that the holes and the connecting cut will be produced simultaneously.

Such a construction produces an insole which presents an exceptionally agreeable and comfortable surface to contact with the bottom of the foot. In addition to having the necessary cushioning properties for comfort, the cushioned area also may be given the desired degree of flexibility to suit the requirements of different shoe constructions or those of the trade for which a particular shoe is intended. Preferably the material of which the pad 3 is made is so selected that the edges adjoining the shoulders *b*—*b* will be compressed under the weight of the foot to approximately the height of those shoulders so that the joint between these parts will be entirely comfortable.

In connection with the manufacture of the insole the usual heel pads 8 and shank and heel stiffener 9 may be attached to the insole, if desired, these elements forming no part of the present invention.

While I have herein shown and described a preferred embodiment of my invention, it will be evident that the invention may be embodied in somewhat different forms without departing from the spirit or scope thereof.

Having thus described my invention, what I desire to claim as new is:

1. An insole for a shoe comprising a body portion consisting of a suitably shaped sheet of insole material, a strip of resilient material extending across the entire width of the insole at the ball portion thereof and of such dimensions lengthwise of the insole as to form a cushion for the greater part of the ball portion of the foot, the material of said body portion being cut away at the side thereof next to the foot to provide a groove into which said strip is fitted snugly, the strip being cemented to the bottom surface of said groove, the part of said body portion of the insole at the bottom of said groove being slashed transversely, the slashes being relatively short and staggered with reference to each other and the opposite ends of each slash terminating in holes cut through the insole material, and staggered stitch seams securing the front and rear edges of said cushion to the body portion of the insole, the stitches of said seams extending across the joints between the said edges of the cushion and the adjoining upper surfaces of the body portion of the insole.

2. An insole for a shoe comprising a body portion consisting of a suitably shaped sheet of insole material, a strip of resilient material extending across the entire width of the insole at the ball portion thereof and of such dimensions lengthwise of the insole as to form a cushion for the greater part of the ball portion of the foot, the material of said body portion being cut away at the side thereof next to the foot to provide a groove into which said strip is fitted snugly, the strip being cemented to the bottom surface of said groove, the part of said body portion of the insole at the bottom of said groove being slashed transversely, the slashes being relatively short and staggered with reference to each other and the opposite ends of each slash terminating in holes cut through the insole material, and means securing the front and rear edges of said cushion to the body portion of the insole, said means including parts extending across the joints between the said edges of the cushion and the adjoining upper surfaces of the body portion of the insole.

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