March 1, 1938. G. E. MUSEBECK 2,109,706

CORRECTIVE INSOLE FOR SHOES

Filed Dec. 14, 1935

FIG. 1

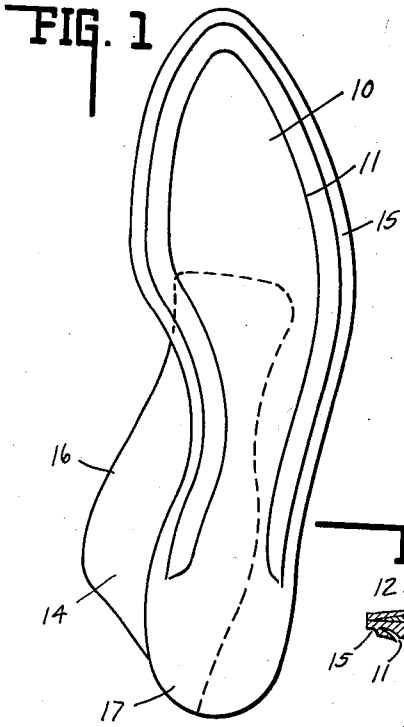


FIG. 2

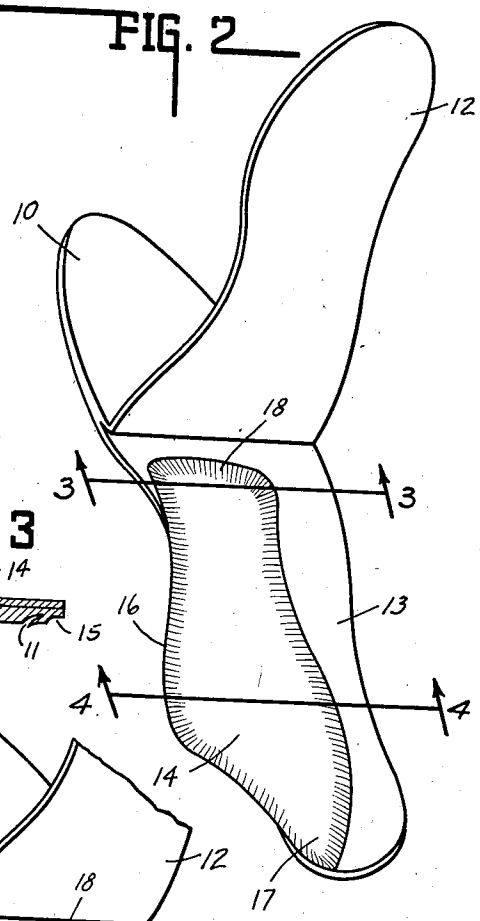


FIG. 3

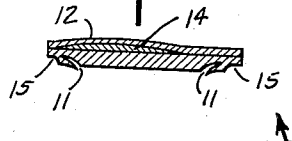


FIG. 5

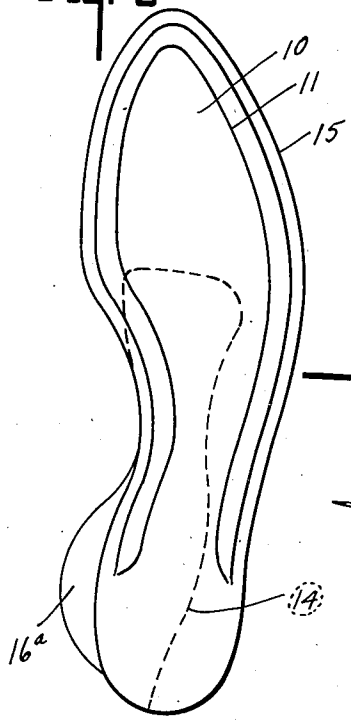


FIG. 6

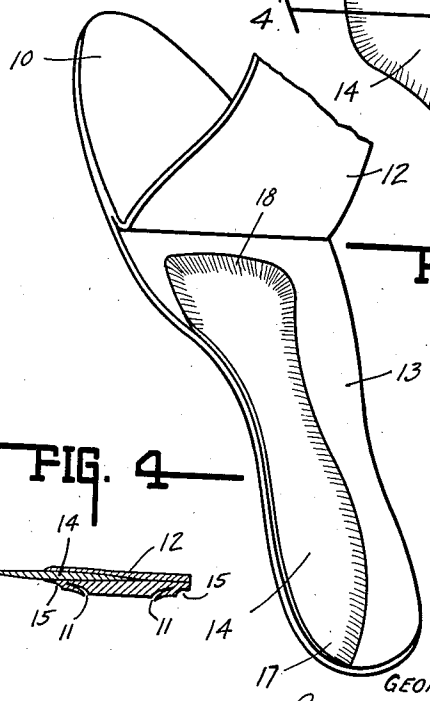


FIG. 4

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CORRECTIVE INSOLE FOR SHOES

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8 Claims. (Cl. 36—71)

This invention relates to a corrective insole for shoes.

The invention relates primarily to an insole having a supporting extension on its inner edge but certain features are applicable as well to insoles without such extensions. In the prior art, it has been common practice to form the extension integrally with the insole proper. Such practice requires the formation of the stitching channel by hand since channelling machines cannot be used. It also introduces a point of weakness at the stitching channel along the base of the extension at the point where the construction should be the stiffest. In my prior Patent No. 1,916,198, issued July 4, 1933, I have shown an insole having an extension integral with the insole proper and having a wedge piece placed beneath the inner side of the insole proper, the channelling being formed in the wedge piece. This construction makes it possible to use a channelling machine but introduces an undesirable bulge in the side of the shoe in lasting. It does not permit the use of a standard form of insole which can be purchased in the open market since extension insoles must be made to order.

In the present construction, the extension is formed on a wedge piece inset in the insole proper, the insole preferably being split to accommodate the wedge. The wedge piece itself is formed to give a corrective pressure along the inner side of the foot, which aids the extension in correcting inrolling or pronation of the foot. Preferably, the wedge piece extends well back into the heel and the extension has its greatest width adjacent the breast of the heel, thus applying the maximum corrective pressure at the forward inner corner of the heel where interference with the nerves and blood supply is a minimum. In one form of the invention, the extension is carried completely through the shank portion of the insole to give corrective pressure over that part of the foot when pressure at the heel is not sufficient to correct the inrolling. In certain cases also, the wedge portion is carried forward of the shank to provide an additional support for the metatarsal arch of the foot.

In other cases where an extension is not necessary, the wedge piece itself is inset in the insole and is carried back to the heel for straightening the foot, and forwardly of the shank portion to give metatarsal arch support.

The insole formed according to this invention has the advantages that the insole proper is of a standard block shape which may be purchased on the open market and the channelling cut and welt receiving recess are standard in every way and can be cut by machinery. At the same time, the extension being in a separate piece can be made as weak or as strong as desired since its thickness does not depend upon the thickness of the insole proper. The thickness of the extension is preferably less than that of the insole proper and therefore can be turned up within the upper without producing an unsightly bulge in the side of the shoe.

The full nature of the invention will be understood from the accompanying drawing and the following description and claims:

Fig. 1 is a bottom view of one form of an insole for the left foot having the extension through both the heel and shank portions. Fig. 2 is a perspective view of a similar insole for the right foot showing the manner of assembling the outsole proper and the wedge piece. Fig. 3 is a sectional view taken substantially on the line 3—3 of Fig. 2, the insole being completely assembled. Fig. 4 is a similar view taken on the line 4—4 of Fig. 2. Fig. 5 is a view similar to Fig. 1 showing an insole for the left foot having the heel type of extension only. Fig. 6 is a view similar to Fig. 2 showing the assembly of an insole without the extension.

In the formation of the insole in the preferred forms herein illustrated, a piece of relatively thick leather 10 having the outline of a normal insole without the arch support extension is first prepared and is supplied with the usual stitching channels 11 and welt-receiving recess 15. For this purpose a standard outline of insole may be used and the channelling may be done by the usual channelling machinery. The insole 10 is then split as shown in Fig. 2 to form an upper lamination 12 and a lower lamination 13. The split is carried through the heel and shank portion of the insole and, in the case of those illustrated, is carried forward of the shank approximately to the region of the ball of the foot. The portion of the insole beneath the forward part of the foot remains in one piece. A wedge piece 14 is then cemented or otherwise attached to the lower lamination 13 and the upper lamination 12 is cemented or otherwise secured to the wedge piece and to the lower lamination. Preferably, the upper lamination is considerably thinner than the lower, thus leaving sufficient material for the channelling cuts 11 and the welt-receiving recess 15 in the lower lamination. Instead of a single piece split through a part of its area the insole proper may be made from

two thinner pieces of the same outline forming the upper and lower laminations and cemented or otherwise secured together with the wedge piece between.

In the form of the invention shown in Figs. 1 and 2, the wedge piece **14** is provided with an extension **16** having its greatest width at the line 4—4, which is in the region of the breast of the heel of the shoe. The extension is carried forward through the shank portion of the shoe to provide further support in that region. The wedge piece extends well back into the heel, as shown at **17**, to provide the necessary corrective pressure in the zone of the heel and also extends forward at **18** beneath the metatarsal arch of the foot. At this point the wedge piece is well to the center of the insole and since it is skived about all of its edges, it provides suitable metatarsal arch support as shown particularly in Fig. 3. The fact that the greatest width of the extension is at the breast of the heel provides the maximum corrective pressure at the forward inner part of the heel. At this point there are no large blood vessels or nerves beneath the bones of the foot so that pressure may be applied there without danger of interference with blood and nerve supply. The auxiliary support by means of the extension at the shank portion is not always necessary and in any case is so designed as to present much less pressure than that of the wider portion at the breast of the heel.

The insole shown in Fig. 5 is similar to that of Fig. 1 except that the extension **16a** is not carried forward through the shank. This form is preferable where auxiliary corrective support of the instep in addition to that at the breast of the heel is not necessary.

Fig. 6 illustrates an insole of this type in which no extension is used, the corrective support being given entirely by the wedge piece itself which is inset between the upper and lower laminations in the same manner as previously described.

While the invention has been described as applied to an insole for a Goodyear welt shoe, it is equally applicable to many other types of shoe construction.

The invention claimed is:

1. A corrective insole for shoes comprising an insole proper of relatively thick material having the outline of a normal insole without a supporting extension, the shank and heel portion thereof being split into upper and lower laminations, and a corrective wedge piece inset between said laminations along the inner side and having an extension beyond the outline of the insole proper, said extension having its greatest width adjacent the breast of the heel and having a portion of less width extending along the shank portion of the insole and merging with the outline of the insole.

2. A corrective insole for shoes comprising an insole proper of relatively thick material having the outline of a normal insole without a supporting extension, the shank and heel portion thereof being split into upper and lower laminations, and a corrective wedge piece inset between said laminations along the inner side and having an extension beyond the outline of the insole proper, said extension having its greatest width adjacent the breast of the heel and having a portion of gradually diminishing width extending along the shank portion of the insole.

3. A corrective insole for shoes comprising an insole proper of relatively thick material having the outline of a normal insole without a supporting extension, and a corrective wedge piece inset therein along the inner side, said wedge piece having an extension beyond the outline of the insole proper, and said wedge piece extending forwardly of the shank substantially to the region of the ball of the foot and said forward extension being spaced from both edges of the insole proper to form a metatarsal arch support.

4. A corrective insole for shoes comprising an insole proper of relatively thick material having the outline of a normal insole without a supporting extension, and a corrective wedge piece inset therein, said wedge piece extending along the inner edge of the shank and heel portion and extending forwardly of the shank substantially to the region of the ball of the foot and said forward extension being spaced from both edges of the insole proper to provide a metatarsal arch support.

5. A corrective insole for shoes comprising a piece of relatively thick material having the outline of an insole, and a corrective wedge piece inset therein, said wedge piece extending along the inner edge of the shank and heel portion and extending forwardly of the shank substantially to the region of the ball of the foot and said forward extension being spaced from both edges of the insole proper to provide a metatarsal arch support.

6. A corrective insole for shoes comprising an insole proper having the outline of a normal insole without a supporting extension and being formed of an upper and a lower lamination, and a corrective wedge piece inset between said laminations along the inner side and having an extension beyond the outline of the insole proper, said extension having its greatest width adjacent the breast of the heel and having a portion of less width extending along the shank portion of the insole and merging with the outline of the insole.

7. A corrective insole for shoes comprising an insole proper having the outline of a normal insole without a supporting extension and being formed of an upper and a lower lamination, and a corrective wedge piece inset between said laminations along the inner side and having an extension beyond the outline of the insole proper, said extension having its greatest width adjacent the breast of the heel and having a portion of gradually diminishing width extending along the shank portion of the insole.

8. A corrective insole for shoes comprising an insole proper having the outline of a normal insole without a supporting extension and being formed of an upper and a lower lamination, and a corrective wedge piece inset between said laminations along the inner side and having an extension beyond the outline of the insole proper, said wedge piece extending forwardly of the shank substantially to the region of the ball of the foot and said forward extension being spaced from both edges of the insole proper to form a metatarsal arch support.

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