United States Patent

Stohr et al.

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[54] FOOTWEAR AND INSERT THEREFOR

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[58] **Field of Search** ..... 36/54, 71, 2.5 AL

[56] **References Cited**

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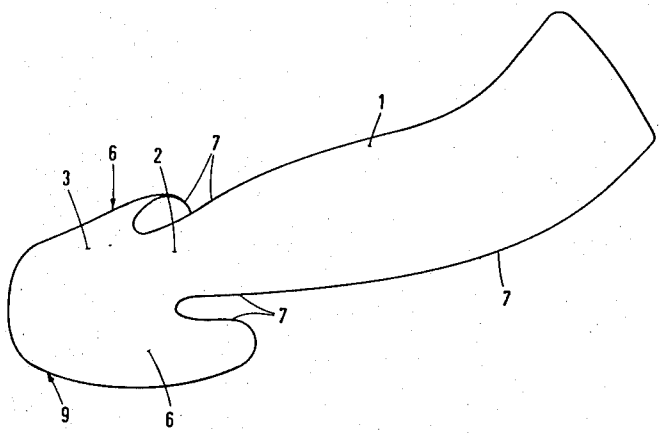
[57] **ABSTRACT**

An insert member for fitting within footwear, having a toe cap portion, a flexible connecting portion and a tongue portion supported in an elevated position with respect to the sole of the footwear. The insert member is a synthetic plastics material molding, and can have a cover of leather.

9 Claims, 2 Drawing Figures



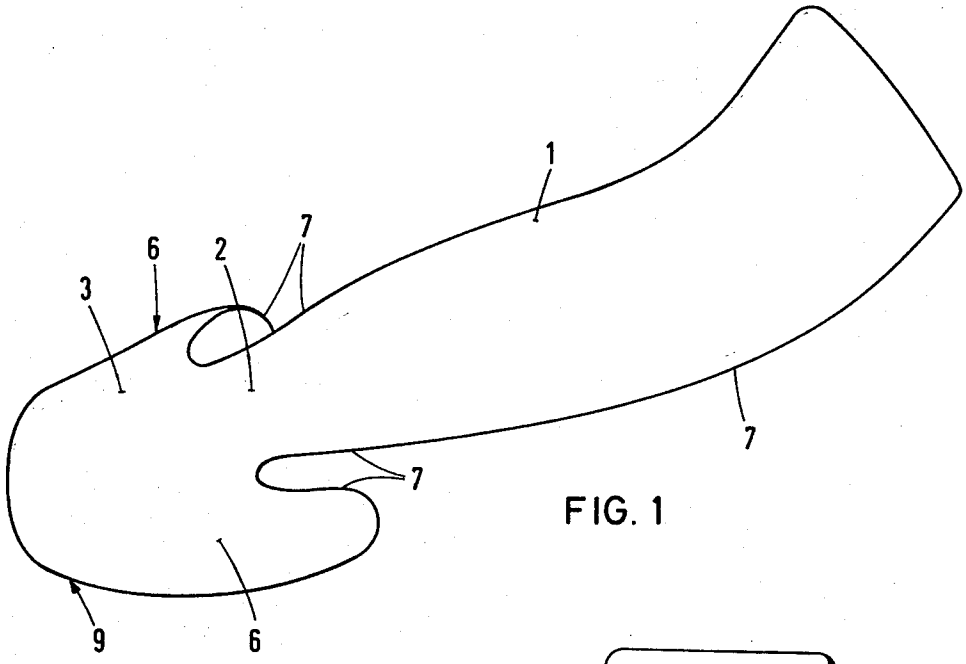


FIG. 1

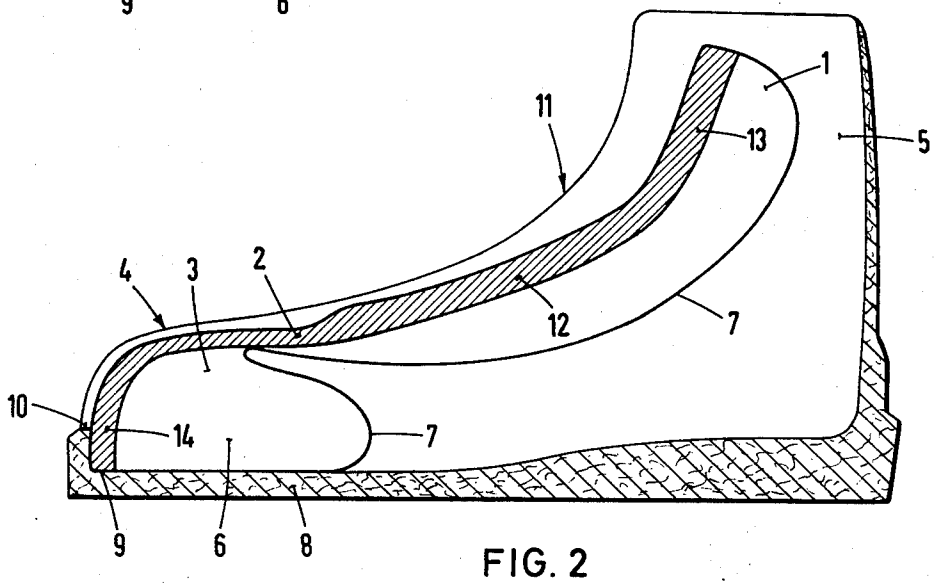


FIG. 2

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FOOTWEAR AND INSERT THEREFOR

The present invention relates to an insert for a boot or shoe, such as a ski boot, and to a boot fitted with such an insert.

Hitherto it has been the practice to sew the toe-end of a boot or shoe tongue to the interior of the leg of the boot or shoe. This made it necessary for the tongue to be oriented with precision relatively to the leg opening, prior to securing of the tongue by sewing. This is an involved and time-consuming procedure, especially where boots with a long leg portion, such as ski boots, are concerned.

According to the present invention there is provided an insert member for fitting within a boot or shoe, said insert member comprising a cap portion for insertion into the toe region of the boot or shoe and a tongue portion connected to said cap portion and extending in a direction rearwardly thereof to be supported thereby to maintain said tongue portion in an elevated position with respect to the sole of the boot or shoe.

According to a further aspect the invention provides a boot or shoe fitted with such an insert.

In order that the invention may be more readily understood, the following description is given, by way of example, reference being made to the accompanying drawing, in which:

FIG. 1 shows a perspective view of one embodiment of insert member of the invention; and

FIG. 2 shows a longitudinal section through the insert member of FIG. 1, the insert member being fitted in a boot which is shown in dot-dashed outline.

Referring to the drawing, the insert member shown has a tongue portion designated by the numeral 1 and a spacer or cap portion designated by the numeral 3, and is formed as a unitary molding preferably of plastics material. A flexible connecting portion 2 is located between the tongue portion and the cap portion, and permits the tongue portion to flex relatively to the cap portion, which is shown in FIG. 2 inserted in a boot 5, substantially perpendicularly to the sole 8 of the boot 5 and in a plane which is substantially that of the longitudinal axis of the sole 8. The cap portion matches the interior shape of toe region 4 of the boot 5, and its shape is thus comparable to that of the front cap of the boot. Sidewalls 6 of the cap portion 3 extend beyond the connecting portion 2 between the tongue portion 1 and the cap portion 3, towards the rear end of the boot. The thickness of the sidewalls 6 of the cap portion tapers towards the rear end of the boot, so that in that region of rear edge 7 a substantially even transition is formed between the cap portion and the foot of a wearer, in use. The underside of the cap portion has a bottom surface 9 by which the cap portion is supported by the sole 8 of the boot and which rests on the sole 8. The position of the insert member in the shoe or boot 5 may be gathered from FIG. 2. Because the cap portion matches the interior shape of the boot, the cap portion contacts the toe region 4, the frontal region 10 of the leg of the boot, and the sole 8. The cap portion, and thus also the whole of the insert member, are thus immovably fixed in the boot, and the tongue portion is maintained in the correct position, which is an elevated position with respect to the sole 8. The edge of one of the two closing flaps of the boot leg is designated by the numeral 11, and the flaps lie over the tongue portion.

The insert, which is preferably formed of a foamed and relatively readily compressible material such as polyurethane foam or foam rubber, has regions of varying thickness. In the instep region 12 and the tibial region 13, for example, the tongue portion is of relatively thick construction so as to give rise to a good cushioning effect. These regions taper downwardly, so that here too an even transition from tongue portion to foot is achieved. It is, however, possible to compensate for differences in foot widths by appropriately dimensioning the thickness of the tongue portion. This contributes to a major degree to improving the fit of the boot. For this reason it is advantageous to produce boots without tongues, and to have available for sale a plurality of insert members made in accordance with the invention but differing as to their dimensions, including the wall thickness of the cap portion 3. By means of varying dimensioning of the wall thickness of the cap portion 3, particularly in the region designated by the numeral 14 in FIG. 2, it is possible to compensate for differing sizes of feet. Thus the insert member makes it possible for a single size of boot to be used for several lengths or widths of feet.

The cap portion 3 can be constructed so that the insert member as a whole is held in the boot 5 by a clamping engagement. The outer dimensions of the cap portion are in this case advantageously made somewhat larger than the inner dimensions of the toe region of the boot. The insert member may, of course, be firmly joined to the boot during manufacture of the latter, for example by means of an adhesive.

When producing an insert member of foam material it is advantageous to provide the exterior of the insert member with a cover which prevents ingress of moisture into the foam material, or at least makes it difficult for moisture to enter. The insert member may be foamed onto the cover, which may for example be a leather cover, during manufacture.

The invention is not limited to the embodiment represented by the drawing. For instance, the cap portion 3 need not necessarily be a closed one. All that is necessary is that the cap portion be of such shape that it can be immovably supported by the boot. For this reason the cap portion preferably has a U-shaped cross section.

We claim:

1. An insert member for fitting within footwear having an upper and a sole, said upper having a toe region and said insert member comprising, in combination:
   a. a cap portion for insertion into said toe region substantially matching in its shape the interior shape of said toe region and having lower edges resting on said sole;
   b. a tongue portion connected to said cap portion and extending in a direction rearwardly thereof to be supported thereby so as to maintain said tongue portion in an elevated position with respect to said sole.

2. An insert member as specified in claim 1, further comprising a flexible connecting portion, having lateral sides and extending between said cap portion and said tongue portion, whereby said tongue portion is permitted to flex with respect to said cap portion perpendicularly to said sole.

3. An insert member as specified in claim 2, wherein said cap portion has side walls extending rearwardly below and to each lateral side of said connecting portion, said side walls having rear edges.

4. An insert member as specified in claim 3, wherein the thickness of said rear edges tapers in the rearward direction.

5. An insert member as specified in claim 1 comprising a unitary molded article of foamed synthetic plastics material.

6. An insert member as specified in claim 1, further comprising an exterior surface to said member and a cover over said exterior surface.

7. An insert member as specified in claim 6, wherein said cover is formed of leather.

8. A boot having an upper, a sole and fitted with an insert member, said upper having a toe region, said insert member, comprising, in combination:
   a. a cap portion for insertion into said toe region substantially matching in its shape the interior shape of said toe region and having lower edges resting on said sole;
   b. a tongue portion connected to said cap portion and extending in a direction rearwardly thereof to be supported thereby so as to maintain said tongue portion in an elevated position with respect to said sole.

9. A boot as specified in claim 8, wherein said cap portion has a bottom surface resting on said sole.

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