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(54) Innerboot particularly for sports shoes

(57) An innerboot, particularly usable for sports shoes such as for example ski boots or skates, the innerboot comprising a first region (6) provided with a plurality of first through holes (7). A covering element (8), provided with second holes (9) which are offset with respect to the first holes, is superimposed on the first region. The innerboot allows to achieve optimum aeration of the foot.

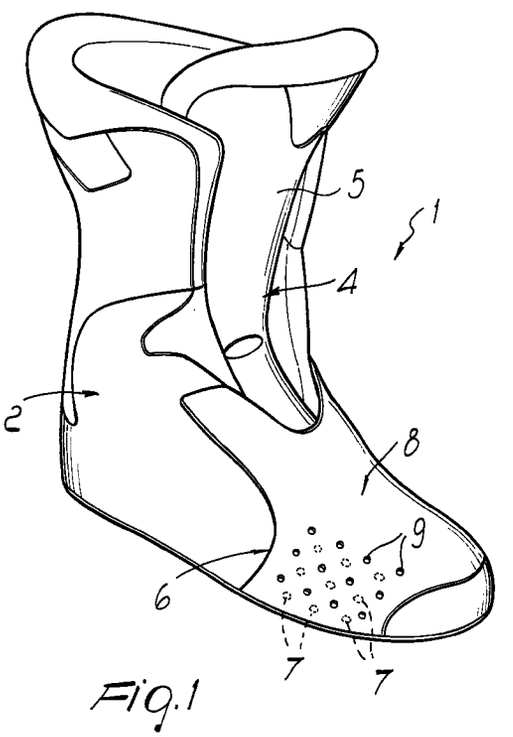

Fig.1

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Description

The present invention relates to an innerboot which is particularly usable for sports shoes, such as for example ski boots, roller skates or ice skates, or climbing boots.

Conventional sports shoes, such as for example ski boots or roller skates or ice skates, are substantially constituted by a shell and by at least one quarter, both of which are rigid because they are produced by injection-molding thermoplastic material. A soft innerboot, suitable to improve user comfort, is arranged inside the shell and quarter.

Many kinds of innerboot to be applied inside sports shoes are known: some are conventionally stitched and fitted on a last by means of an assembly operation which entails, in sequence, perimetrically stitching an insole, inserting the last, spreading an adhesive, reactivating said adhesive by heating, gluing an inner sole by pressing, and finally extracting the resulting product from the last.

It is also known to manufacture innerboots which have a plurality of Strobel stitches on the perimetric edge of the sole for fixing the upper.

Innerboots are also known which have, at the foot instep region, a tongue or a pair of overlapping flaps. These innerboots are used exclusively for shoes, such as ski boots, of the front-entry type and are used therefore to facilitate foot insertion.

Ski boots of the rear-entry type are instead provided with innerboots having a rear opening, over which a tongue can be partially superimposed, again with the purpose of facilitating foot insertion.

All these conventional innerboots entail drawbacks which are mainly caused by the fact that they are manufactured by using materials which are soft, in order to increase comfort, but do not allow optimum aeration of the foot.

The use of vapor-permeable materials entails in any case the use of other insulating materials as well, in order to keep the foot at an acceptable temperature during sports practice, especially if performed with very low external temperatures.

Moreover, the problem of keeping the foot at an optimum temperature while allowing to expel perspiration clashes with an additional problem, caused by the fact that the innerboot is usually tightly packed inside the shell.

Any forced aeration of the foot would therefore require suitable mechanisms for injecting or aspirating air; such mechanisms, in addition to being bulky and in any case to be arranged outside the shoe, would also require a power source, which would increase costs, weights and bulk.

The aim of the present invention is to solve the above-described problems, eliminating the drawbacks of the cited prior art, by providing an innerboot for sports shoes which allows to achieve good aeration of the foot inside it although using materials which have good thermal insulation properties and despite tight packing inside a shoe.

An important object of the present invention is to provide an innerboot which is structurally very simple and whose costs and bulk are not very different from those of conventional innerboots.

A further important object of the present invention is to provide an innerboot which has very low manufacturing costs and is manufactured with conventional machines and equipment.

This aim, these objects and others which will become apparent hereinafter are achieved by an innerboot, particularly for sports shoes, characterized in that it comprises at least one first region provided with a plurality of first through holes, on which at least one covering element, provided with second holes which are offset with respect to said first holes, is superimposed.

Further characteristics and advantages of the present invention will become apparent from the following detailed description of a particular but not exclusive embodiment thereof, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

Fig. 1 is a lateral perspective view of the innerboot;
Fig. 2 is a view, similar to Fig. 1, of the covering element associated with the innerboot.

With reference to the above figures, the reference numeral 1 designates an innerboot, particularly for sports shoes such as ski boots, roller skates, ice skates or ice boots, which is substantially constituted by an upper 2 which surrounds the foot and from which a quarter 3 protrudes. The quarter is frontally provided with an opening 4 which can be closed by using a suitable flap or tongue 5.

The upper 2 and the quarter 3, as well as the tongue 5, are manufactured by using conventional materials which are assembled by means of conventional technologies.

A plurality of first through holes 7 is formed at at least one first region 6 of the upper 2 which is adjacent to the outer lateral edge of the foot.

Advantageously, said first holes are also formed in other regions of the upper in order to ensure optimum transpiration of the foot.

Thus, for example, the first holes 7 can also be formed at the metatarsal or malleolar region or at the inner lateral region of the foot.

The innerboot 1 is also constituted by at least one covering element 8, which is preferably made of soft material and is superimposed on the upper 2 at least at the first region 6.

Said covering element 8 can be connected to the upper 2 by perimetric stitching, so as to allow to superimpose said covering element on the upper 2 while allowing play between the facing surfaces of said covering element 8 and of said upper 2.

A plurality of second holes 9 is formed at the covering element 8 which are kept offset with respect to the first holes 7.

The movement of the foot during sports practice therefore allows to force the outflow of air through the first holes 7 and imparts a relative motion to the covering element 8, so as to generate a "pumping" effect and therefore draw air into the upper, subsequently expelling the air through the second holes 9.

Moreover, the mutual offset of the first holes 7 and the second holes 9 allows to nonetheless maintain inside the upper enough heat to ensure comfort of the foot, thus avoiding excessive heat loss.

Movement of the covering element 8 with respect to the upper 2 can also be facilitated by the presence of one or more spacers interposed therebetween and arranged so as to avoid blocking the first and/or second holes.

The mutual offset of the first and second holes also facilitates the air flow, allowing optimum suction into the upper and expulsion outside the covering element 8, while maintaining a suitable temperature for the foot inside the upper and thus avoiding excessive heat loss.

It has thus been shown that the present invention has achieved the intended aim and objects, an innerboot having been provided which has a very simple structure, is easy to manufacture and entails very low costs in relation to the optimum aeration that can be achieved for the foot.

Said aeration is very effective, since it can be achieved during the movement of the foot that can be produced for the sport being practiced, and is enhanced because the above-described "pumping" effect is generated in order to draw fresh air into the upper and expel humid air outside.

The materials and the dimensions that constitute the individual components of the innerboot, as well as the number of first and/or second holes and their arrangement and dimensions, may of course be the most pertinent according to the specific requirements, such as, for example, the diversity of the sport shoe whereto it has to be applied.

Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly, such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

Claims

1. An innerboot, particularly for sports shoes, characterized in that it comprises at least one first region (6) provided with a plurality of first through holes (7), at least one covering element (8), provided with second holes (9) which are offset with respect to said first holes (7), said at least one covering element (8) being superimposed on said first region (6).

2. An innerboot according to claim 1, characterized in that a first region (6) is formed on an upper (2) of said innerboot at the lateral region of the foot.

3. An innerboot according to claim 1, characterized in that said at least one first region (6) is formed at the metatarsal and/or toe region.

4. An innerboot according to claim 1, characterized in that said at least one first region (6) is formed at the inner lateral part of the foot.

5. An innerboot according to claim 1, characterized in that said at least one first region (6) is formed at the malleolar and/or heel region of the foot.

6. An innerboot according to one or more of the preceding claims, characterized in that said at least one covering element (8) is associated, in an upward region, with said at least one first region (6) provided with said first holes (7).

7. An innerboot according to claim 6, characterized in that said at least one covering element (8) is perimetrically associated with said upper (2) and affects at least said first region (6).

8. An innerboot according to claim 7, characterized in that said at least one covering element (8) is made of soft material which is allowed to move with respect to the underlying and facing surface of said innerboot.

9. An innerboot according to claim 8, characterized in that one or more spacers are interposed between said covering element and said at least one first region provided with said first through holes.

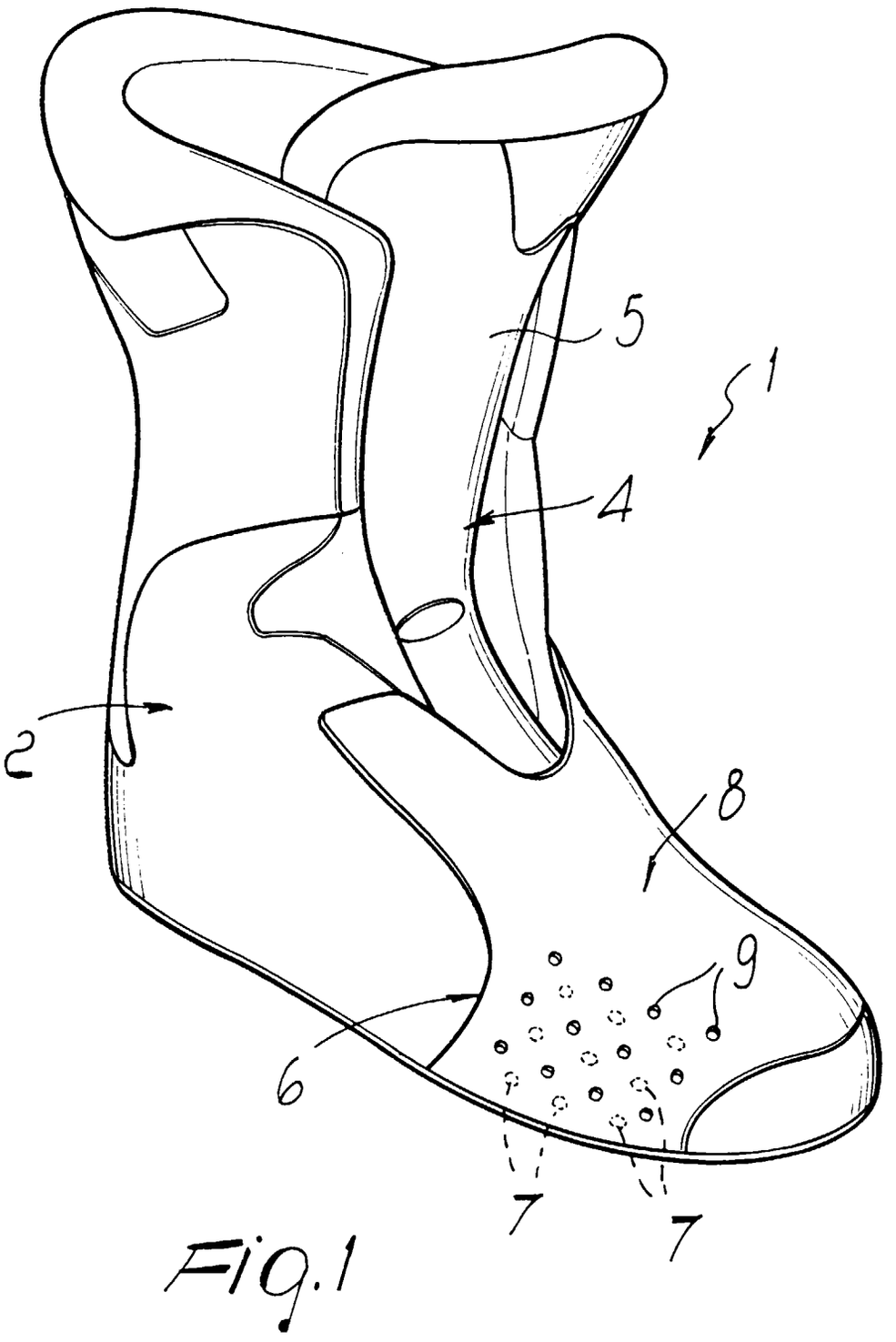

Fig.1

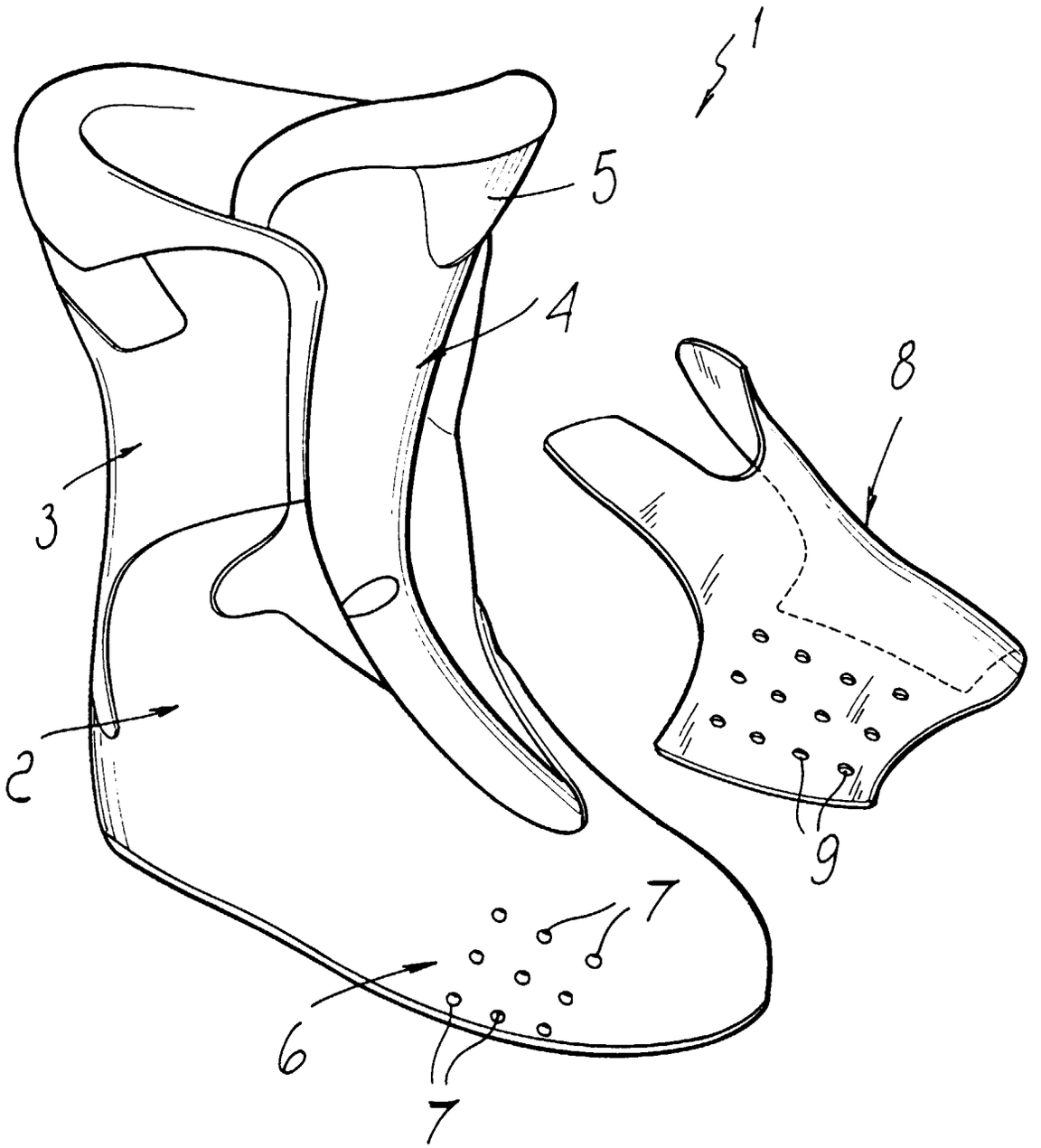

Fig. 2