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(54) **INSOLE FOR SHOES**

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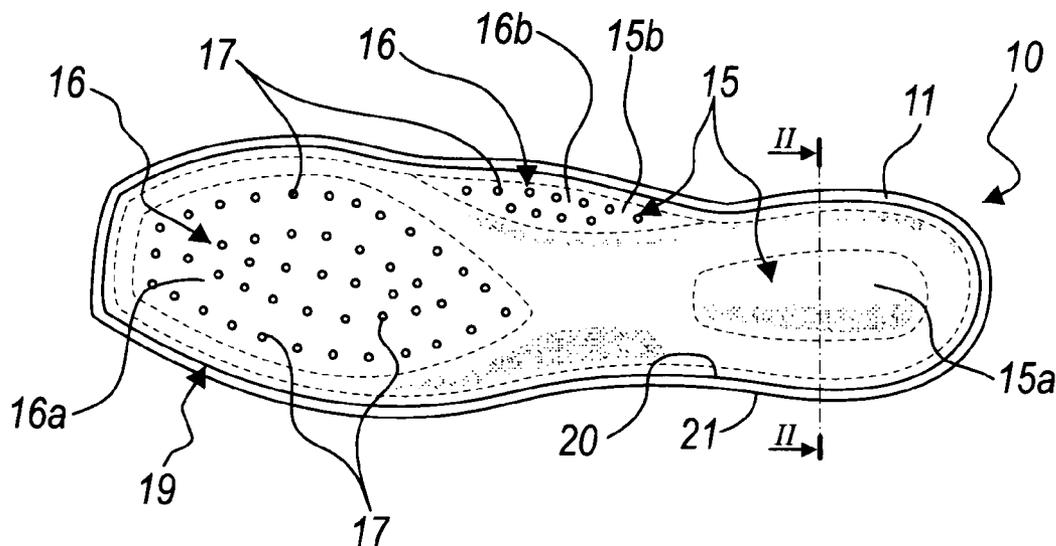
(57) **ABSTRACT**

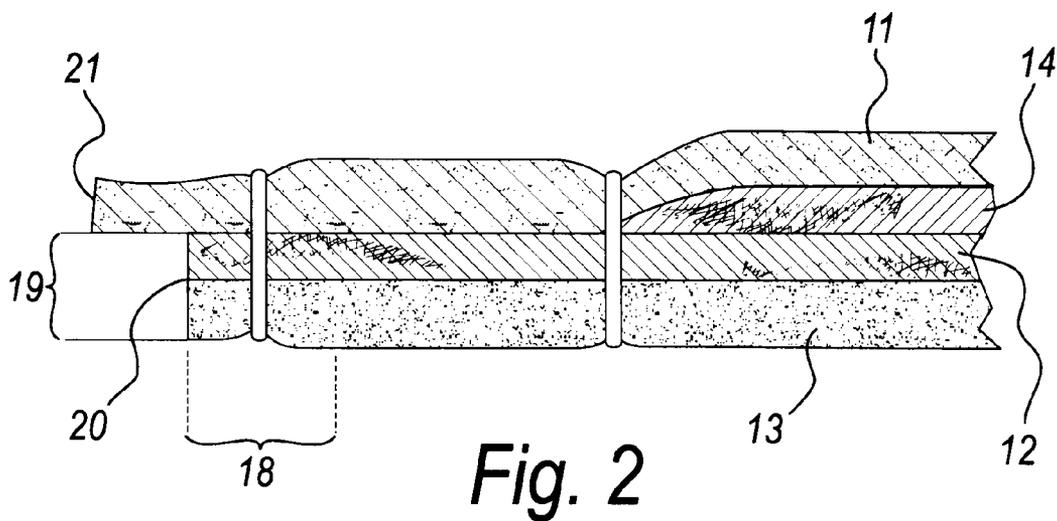
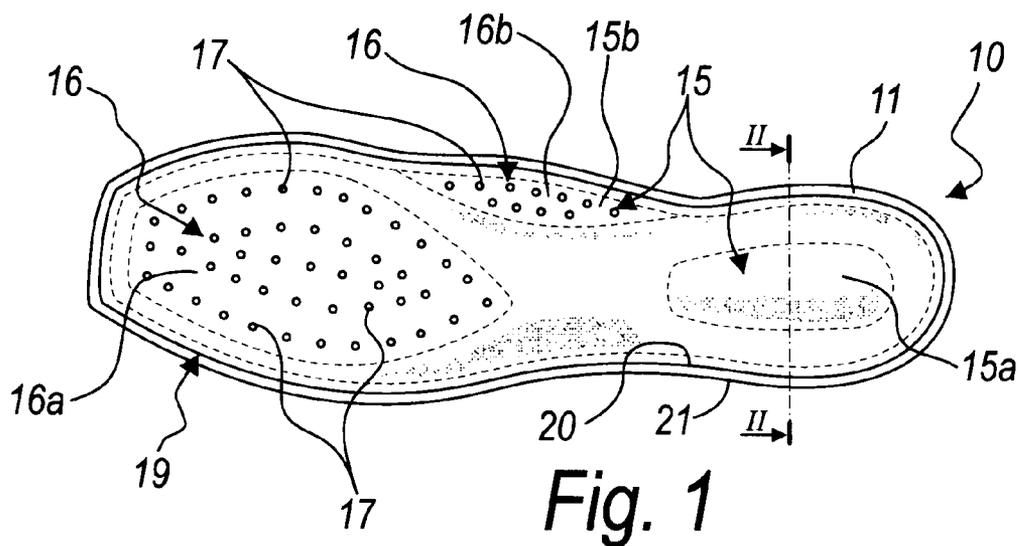
An insole for shoes comprising, associated one another, a resting layer for a sole of a user's foot, made of soft and breathable material, a padding layer, made of soft and breathable material that can adapt to the shape of the sole of the user's foot, a layer for absorbing impacts and vibrations, made of soft and elastically yielding material suitable to adapt to the shape of the sole of the user's foot while walking.

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INSOLE FOR SHOES

[0001] The present invention relates to an insole for shoes.

BACKGROUND OF THE INVENTION

[0002] Several types of insoles for shoes are currently known: a first type comprises a layer of cork, felt, leather or other soft material.

[0003] This type of insoles is used generally to allow the user to wear a shoe more comfortably and has the drawback of becoming rigid due to packing, by adapting to the shape of the sole of the user's foot due to the pressure that such sole applies to the insole while walking.

[0004] Another type of currently known insoles that is particularly used in the field of sports activity provides for layers of soft and elastic plastics, generally adapted to absorb impacts, such as ethyl vinyl acetate.

[0005] This second type of insoles is generally made of plastics and is not breathable, to the full detriment of the well-being of the user during its use.

SUMMARY OF THE INVENTION

[0006] The aim of the present invention is to provide an insole for shoes that allows to adapt to the shape of the sole of the user's foot though being elastic and without becoming rigid.

[0007] Within this aim, an object of the invention is to propose an insole that allows transpiration of the sole of the user's foot.

[0008] Another object of the invention is to provide an insole that is simple and easy to use and can be manufactured with low costs.

[0009] This aim, as well as these and other objects that will become better apparent hereinafter, are achieved by an insole for shoes comprising, associated one another,

[0010] a resting layer for the sole of the user's foot, made of soft and breathable material,

[0011] a padding layer, made of soft and breathable material that can adapt to the shape of the sole of the foot of the user,

[0012] a layer for absorbing impacts and vibrations, made of soft and elastically yielding material suitable to adapt to the shape of the sole of the user's foot while walking.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] Further characteristics and advantages of the present invention will become better apparent from the description of a preferred but not exclusive embodiment of the insole according to the invention, illustrated by way of non-limiting example in the accompanying drawings, wherein:

[0014] FIG. 1 is a bottom plan view of an insole according to the invention;

[0015] FIG. 2 is an enlarged-scale sectional view, taken along the line II-II of FIG. 1, of a detail of the insole according to the invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0016] With reference to the figures, the reference numeral 10 generally designates an insole for shoes that comprises, in mutual association,

[0017] a resting layer 11 for the sole of the user's foot, made of soft and breathable material,

[0018] a padding layer 12, made of breathable soft material that can adapt to the shape of the sole of the user's foot,

[0019] a layer 13 for absorbing impacts and vibrations, made of soft and elastically yielding material suitable to adapt to the shape of the sole of the user's foot while walking.

[0020] Advantageously, the insole 10 according to the present invention comprises padding inserts 14, at least in a padded region 15 selected between the region that corresponds to the heel 15a and the region that corresponds to the plantar arch 15b.

[0021] Preferably, both in the region that corresponds to the heel 15a and in the region that corresponds to the plantar arch 15b, there are the padding inserts 14, which conveniently are arranged between the padding layer 12 and the resting layer 11.

[0022] Moreover, the insole 10 has, in at least one predefined portion 16 thereof, through holes 17 to assist the passage of air and moisture at the sole of the user's foot.

[0023] The predefined portion 16 advantageously comprises a first region 16a, which corresponds to the metatarsal region of the user's foot, and a second region 16b, which corresponds to the plantar arch of the user's foot.

[0024] Preferably, the resting layer 11 comprises leather, the padding layer 12 conveniently comprises a three-dimensional fabric, conveniently with a double jersey made of polyester, polyamide or polypropylene, and advantageously the absorption layer 13 is made of breathable polymeric material, conveniently open-cell expanded polyurethane, for example the material known by the trade-name Poron®.

[0025] More particularly, the padding layer 12 and the absorption layer 13 are advantageously associated to each other at a perimetric band 18 thereof that is sprayed with glue, so as to not compromise the breathability of the insole 10.

[0026] The padding layer 12 and the absorption layer 13, when associated, constitute a semifinished component 19, which is conveniently associated with the resting layer 11 by perimetric gluing, conveniently by glue spots, so as to not compromise the breathability of the insole 10.

[0027] Advantageously, the insole 10 is arched in the region that corresponds to the plantar arch 15b by pretensioning the resting layer 11 upon its association with the semifinished component 19, so as to have an anatomically contoured profile.

[0028] The perimetric edges 20 of the semifinished component 19 preferably are substantially internal to the edges of the perimeter 21 of the resting layer 11.

[0029] Thus, the resting layer 11 covers and conceals the semifinished component 19 when the insole 10 is in use.

[0030] Moreover, conveniently the resting layer 11, the padding layer 12 and the absorption layer 13 are associated one another by sewing, at least proximate to their perimeter.

[0031] In practice it has been found that the invention achieves the intended aim and objects, by providing an insole for shoes that allows to adapt to the shape of the sole of the user's foot while being elastic and without becoming rigid.

[0032] Moreover, an insole according to the invention allows the transpiration of the sole of the user's foot thanks to the natural breathability of the leather, of the three-dimensional fabric and of the open-cell expanded polyurethane, and

to the perforation that affects the portions of the insole that correspond to the regions of the user's foot that are most affected by perspiration.

[0033] Moreover, the absorption layer, by being made of open-cell expanded polyurethane or other breathable polymeric material, is also permeable to moisture and air and therefore cooperates in the activity of removing moisture from the region of contact between the user's foot and the insole.

[0034] Moreover, the interposition between the layer made of leather and the layer made of open-cell expanded polyurethane allows to separate the latter from the sole of the user's foot, allowing a greater passage of air and limiting the feeling of heating that the user would otherwise tend to perceive, due to the thermal insulation provided by the expanded polyurethane.

[0035] It is noted that anything found to be already known during the patenting process is understood not to be claimed and to be the subject of a disclaimer.

[0036] The disclosures in Italian Utility Model Application no. PD2008U000008, from which this application claims priority, are incorporated herein by reference.

What is claimed is:

- 1. An insole for shoes comprising, associated one another, a resting layer for a sole of a user's foot, made of soft and breathable material, a padding layer, made of soft and breathable material that can adapt to the shape of the sole of the user's foot, a layer for absorbing impacts and vibrations, made of soft and elastically yielding material suitable to adapt to the shape of the sole of the user's foot while walking.
- 2. The insole for shoes according to claim 1, comprising padding inserts at least in a padded region that is selected between the region that corresponds to a heel and a region that corresponds to the plantar arch.
- 3. The insole for shoes according to claim 1, wherein at least one predefined portion thereof is provided with through

holes for the passage of air and moisture at the sole of the user's foot.

- 4. The insole for shoes according to claim 3, wherein said at least one predefined portion thereof comprises a first region, which corresponds to the metatarsal region of the user's foot, a second region, which corresponds to the plantar arch of the user's foot.

5. The insole for shoes according to claim 1, wherein said resting layer comprises leather.

6. The insole for shoes according to claim 1, wherein said padding layer is made of three-dimensional fabric.

7. The insole for shoes according to claim 1, wherein said absorption layer is made of breathable polymeric material.

8. The insole for shoes according to claim 7, wherein said absorption layer is made of open-cell expanded polyurethane.

9. The insole for shoes according to claim 1, wherein said padding layer and said absorption layer are associated one another by perimetric adhesive bonding, by spraying adhesive.

10. The insole for shoes according to claim 1, wherein said resting layer and a semifinished component, which comprises said padding layer and said absorption layer, are associated by perimetric adhesive bonding by means of spots of glue.

11. The insole for shoes according to claim 10, wherein perimetric edges of said semifinished component are substantially internal to the edges of the perimeter of said resting layer.

12. The insole for shoes according to claim 1, wherein said resting layer, said padding layer and said absorption layer are associated one another by sewing.

13. The insole for shoes according to claim 2, wherein said region that corresponds to the plantar arch is arched, by pre-tensioning said resting layer upon its association with said semifinished component, so as to have an anatomically contoured profile.

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