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(54) **Improved shoe**

(57) The present invention relates to a shoe (1) of the type comprising at least one upper (2) and one sole

(4) that are mutually coupled, in which the sole (4) and the upper (2) are mutually coupled by means of removable coupling means.

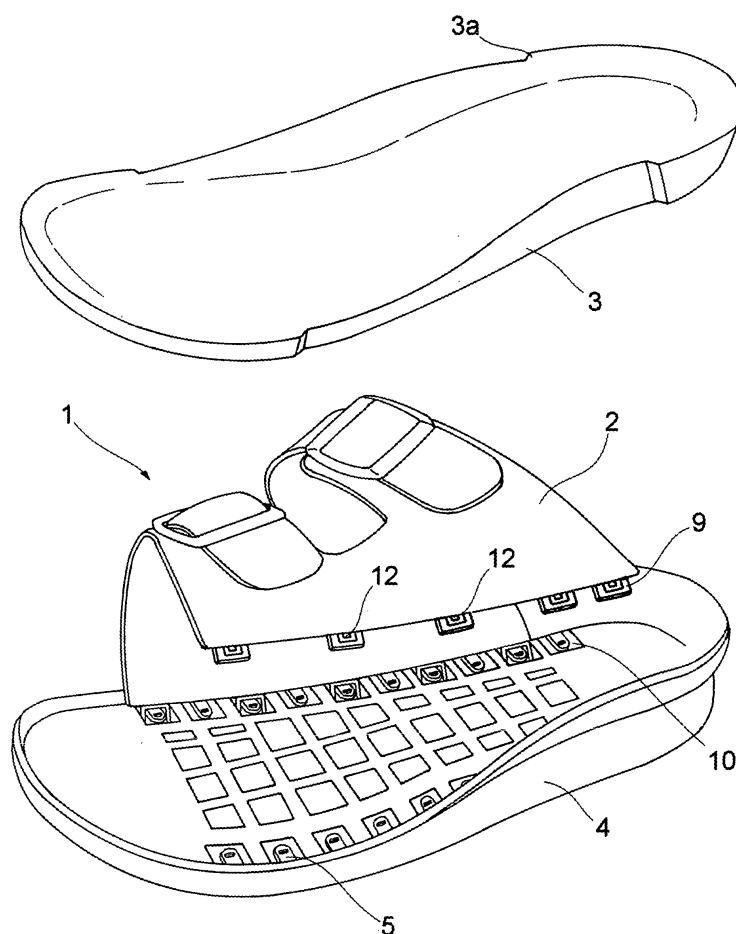


FIG. 1

Description

[0001] The present invention relates to an improved shoe.

[0002] Ordinary shoes normally comprise a sole, that is to say the portion of the shoe that rests on the ground, and an upper, that is to say the upper portion of the shoe that covers the foot.

[0003] In order to guarantee mutual coupling, the sole and the upper are normally sewn and/or glued, forming a single piece.

[0004] Normally, when the user wants to wear shoes of a different type (for example, to follow fashion trends), the user is forced to buy a new pair, often discontinuing the use of the older pair when the same has still an acceptable level of wear.

[0005] Moreover, in order to replace the sole or upper in case of damage, an expert shoemaker must carry out a complex operation, with a cost that is sometimes higher than the purchase cost of a new pair of shoes.

[0006] The purpose of the present invention is to solve the aforementioned inconvenience by providing an improved model of shoe.

[0007] This purpose is achieved by a shoe according to the present invention.

[0008] The object of the present invention is an improved shoe according to claim 1.

[0009] The inventive idea of the present invention is to provide the sole and upper with coupling means for removable coupling.

[0010] Further advantageous characteristics are the object of the enclosed claims, which are an integral part of this document.

[0011] Said characteristics are described for an illustrative, not limiting purpose, in the enclosed drawings, wherein:

fig. 1 is an exploded axonometric view of the shoe of the invention;

fig. 2 is an axonometric view of the shoe of the invention in assembled configuration;

fig. 3 is a cross-sectional view of a portion of the shoe of the invention with two transversal planes, one affecting the insole only and one affecting the upper and sole.

[0012] With reference to fig. 1, the shoe (1) of the invention comprises an upper (2), a sole (4) and an optional insole (3).

[0013] According to the precepts herein contained, the sole (4) and the upper (2) are mutually coupled by means of removable coupling means that advantageously allow for separating the two parts without a complex operation, and on the contrary allow for simply uncoupling the sole and upper rapidly, in order to replace either one according to the specific needs.

[0014] The removable coupling means consist in a series of hooks (5) and in a corresponding series of eyelets

(9).

[0015] Although the position of hooks (5) or eyelets (9) respectively on sole (4) or upper (2) is totally insignificant for the present precept, in the example given hooks (5) are applied on sole (4) and eyelets (9) are applied on upper (2).

[0016] In order to separate upper (2) and sole (4), the user must simply uncouple the hooks (5) from the eyelets (9).

[0017] As shown in the detailed view of fig. 1, the eyelets (9) protrude from the lateral border of the upper (2), so that they are easier to position than the hooks (5) that, as shown in the detailed view of fig. 3, are housed in a concave seat (10) provided on the internal side of the sole (4).

[0018] In view of the above, the user does not feel the presence of the coupling means under the foot, making the shoe (1) extremely comfortable.

[0019] In order to ensure improved coupling, the hooks (5) are provided with a fixing projection (11) adapted to interfere when assembled with a fixing tooth (12) provided in each eyelet (9), thus ensuring stable coupling by mechanical interference.

[0020] Moreover, the thickness of the hook (5) is approximately the same as the width of the empty space of the eyelet (9), in such a way that a sort of snap-in coupling is generated during the insertion of the hook (5) into the eyelet (9).

[0021] As it is shown, hooks (5) and eyelets (9) are numerous and positioned on the lateral borders of sole (4) and upper (2), respectively.

[0022] In particular, in the example, the hook (5)-eyelet (9) pairs are positioned on the sides of the shoe (1).

[0023] It must be appreciated that the insole (3) acts as safety fixing means during walking; in fact, the hooks (5) are housed inside corresponding cavities that are opened on top and are closed by the insole (3), which transmits the weight of the user in compression direction, forcing the hooks (5) inside the eyelets (9) and ensuring stable coupling.

[0024] In order to fix the insole (3) to the sole (4), the sole (4) is provided with fitting projections (8) that surmount the border (3a) of the insole (3).

[0025] More precisely, the sole (4) is provided with a perimeter border (4a) that exactly houses the insole (3), the border (3a) interfering with the fitting projections (8) obtained in the internal wall of the perimeter border (4a).

[0026] The fitting projections (8) are basically horizontal so that during the assembly of the shoe (1) - after coupling the hooks (5) with the eyelets (9) - it will be simply necessary to place the insole (3) inside the perimeter border (4a), making it slide towards the heel so that the fitting projections (8) surmount the border (3a) of the insole (3) that is consequently prevented from accidentally coming out of the seat defined by the perimeter border (4a).

[0027] According to the preferred embodiment of the invention the hooks (5) are obtained in one moulded

piece with a semi-rigid plastic grid (G) that is drowned in the sole (4), which is also moulded from plastic materials.

[0028] More precisely, each hook (5) is contained inside a corresponding mesh of the said grid (G), which practically coincides with the concave seat (10).

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Claims

1. Shoe (1) of the type comprising at least one upper (2) and one sole (4) that are mutually coupled **characterised in that** the sole (4) and the upper (2) are mutually coupled by means of removable coupling means, which comprise a series of hooks (5) and a corresponding series of eyelets (9) designed to be coupled with the hooks (5). 10 15
2. Shoe (1) as claimed in claim 1, **characterised in that** each eyelet (9) is provided with a fixing tooth (12) and each hook (5) is provided with a fixing projection (11) designed to interfere mutually in assembled position, thus stabilising the coupling by mechanical interference. 20 25
3. Shoe (1) as claimed in claim 1 or 2, **characterised in that** it comprises a plurality of the hooks (5) associated with the sole (4) and a plurality of corresponding eyelets (9) applied along the border of the upper (2). 30
4. Shoe (1) as claimed in claim 1, 2 or 3, **characterised in that** the sole (4) is provided on the internal side, with a perimeter series of concave seats (10) that contain at least one of the said hooks (5). 35
5. Shoe (1) as claimed in one of the above claims, **characterised in that** it also comprises an insole (3) positioned above the sole (4) and designed to act as fixing means to secure the said removable coupling means (5 and 9). 40
6. Shoe (1) as claimed in claim 5, **characterised in that** the sole (4) comprises a perimeter border (4a) internally provided with fitting projections (8) designed to surmount the border (3a) of the said insole (3). 45
7. Shoe (1) as claimed in one of the above claims, **characterised in that** the said hooks (5) are obtained in one moulded piece with a semi-rigid plastic grid (G) drowned in the sole (4), which is also moulded from plastic materials; it being provided that each hook (5) is contained inside a corresponding mesh of the said grid (G), which coincides with the concave seat (10). 50 55

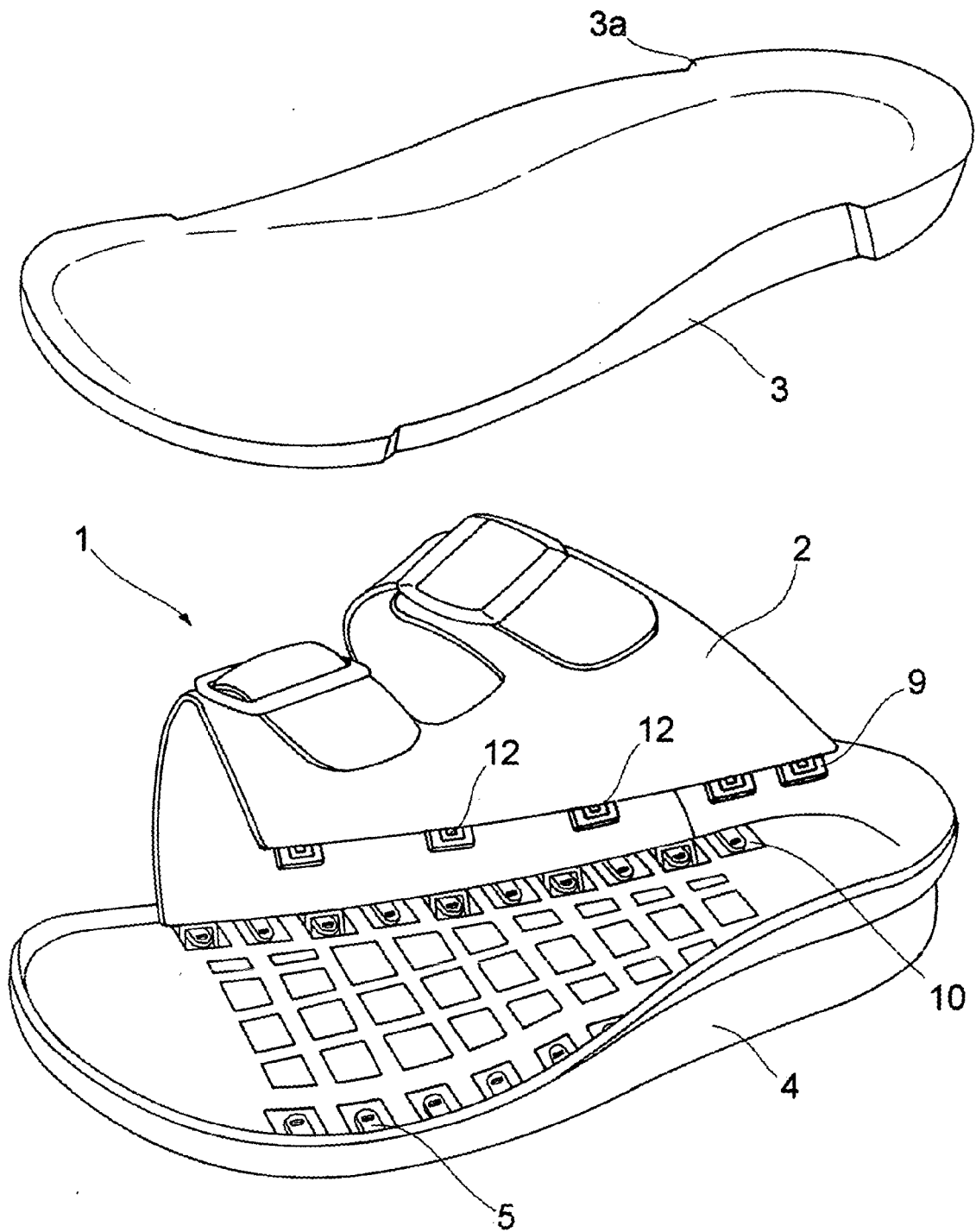


FIG. 1

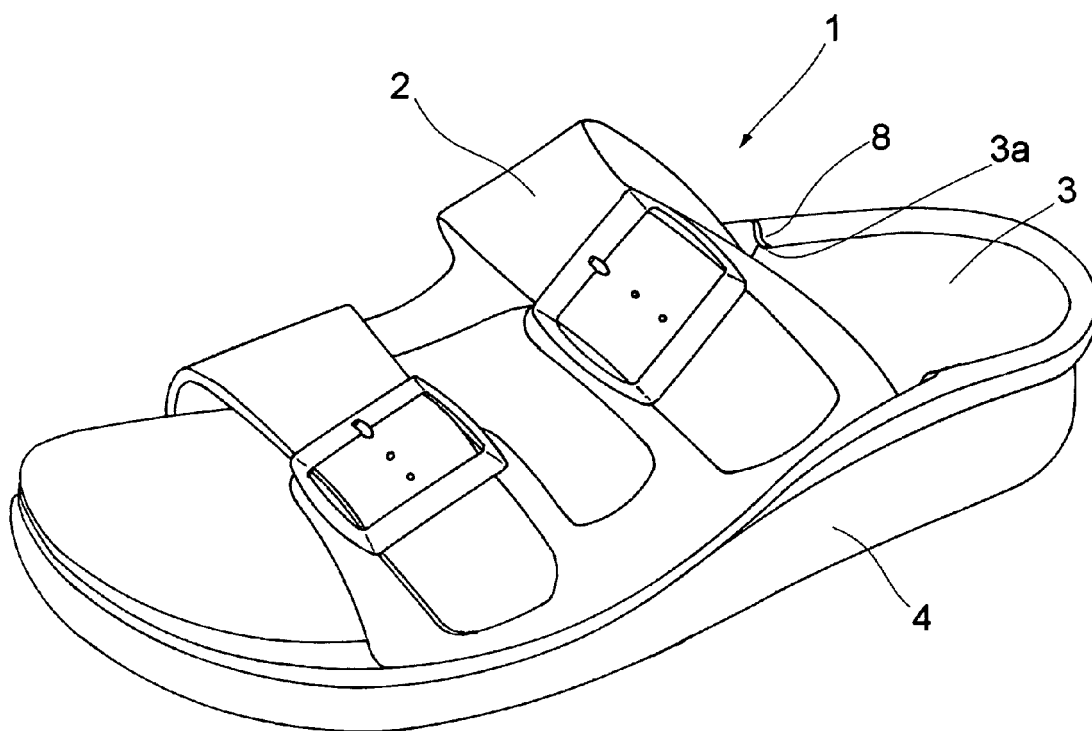


FIG. 2

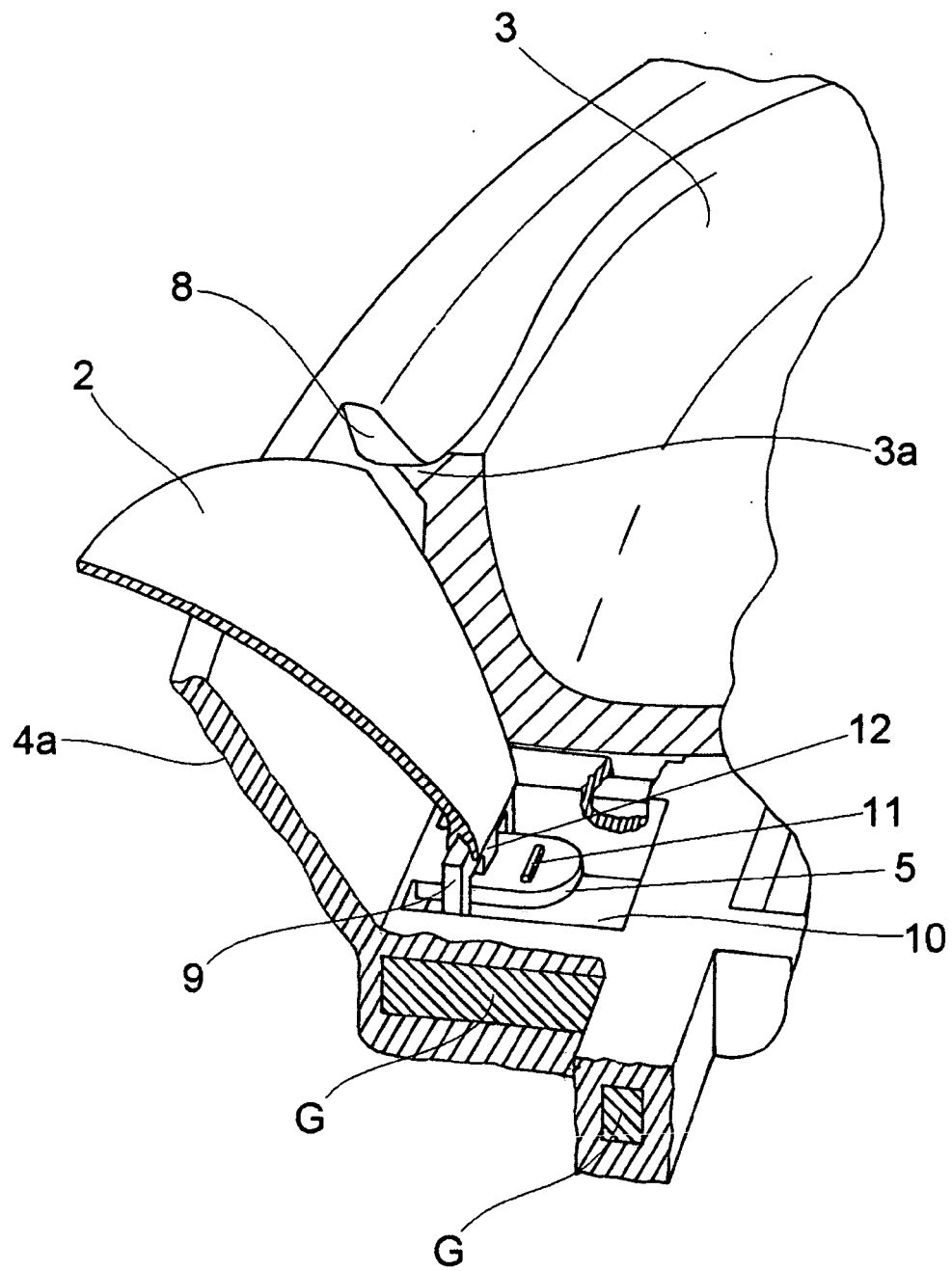


FIG. 3



EUROPEAN SEARCH REPORT

Application Number
EP 09 42 5236

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2004/143998 A1 (YANG CHEN YI [TW]) 29 July 2004 (2004-07-29) * paragraphs [0007], [0015]; claims; figures *	1-7	INV. A43B3/10 A43B13/36
A	DE 201 15 740 U1 (TSAI MAO CHENG [TW]) 13 December 2001 (2001-12-13) * claims; figures *	1-7	
			TECHNICAL FIELDS SEARCHED (IPC)
			A43B
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 19 November 2009	Examiner Claudel, Benoît
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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EPO FORM 1503 03/82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 09 42 5236

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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19-11-2009

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