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(54) **FOOTBED FOR A SHOE AND SHOE WITH SUCH FOOTBED**

(57) A footbed (4) for a shoe (1), in particular for a slipper, sandal, half-shoe, or boot, said footbed (4) extending along a longitudinal direction and comprising a number of wooden blocks (10) and a connection structure (12) of resilient material connecting neighboring wooden blocks (10) with each other should provide enhanced and improved wearing comfort. According to the invention, this is achieved with a connection structure (12) which, with respect to the longitudinal direction, comprises a number of transversal strips (20) connecting neighboring wooden blocks (10) in longitudinal direction and a number of longitudinal strips (22) connecting neighboring wooden blocks (10) in transversal direction, wherein one or more of the longitudinal strips (22) in longitudinal direction extend beyond the transversal strips (20).

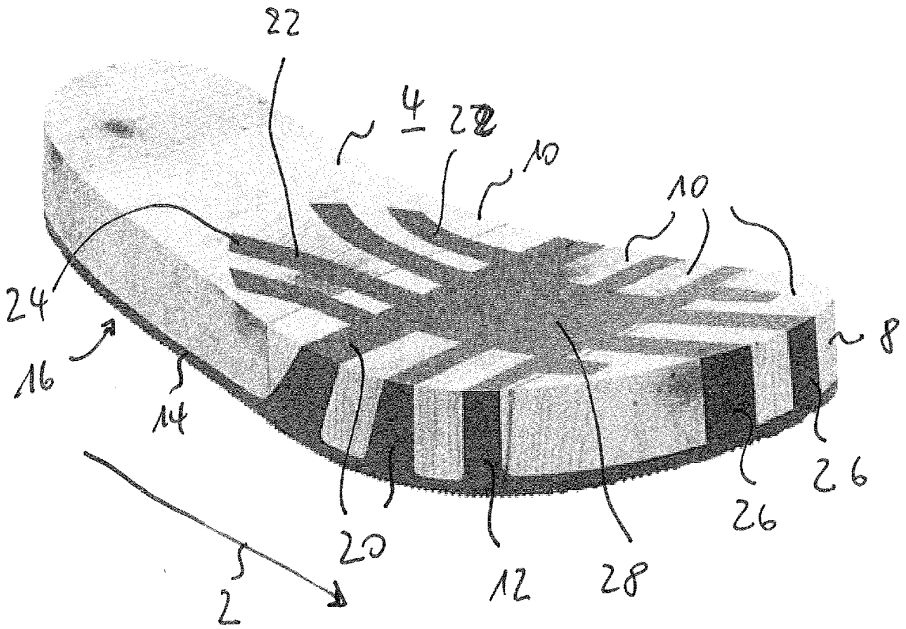

Fig. 2

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Description

[0001] The invention relates to a footbed for a shoe, in particular for a slipper, sandal, half-shoe, or boot, said footbed extending along a longitudinal direction and comprising a number of wooden blocks and a connection structure of resilient material connecting neighboring wooden blocks with each other. It further relates to a shoe with such a footbed.

[0002] A shoe with a segmented wooden footbed of this type is known from EP 0 398 869 B1. The combination of segmented wooden blocks with intermediate connector sections made of resilient material in principle allows for enhanced comfort of the shoe. However, these benefits are only limited in the structure known from EP 0 398 869 B1.

[0003] Therefore, the object of the present invention is now to provide a structure of this type with even higher and improved wearing comfort.

[0004] According to the present invention, this object is achieved with a connection structure which, with respect to the longitudinal direction, comprises a number of transversal strips connecting neighboring wooden blocks in longitudinal direction, and further comprises a number of longitudinal strips connecting neighboring wooden blocks in transversal direction, wherein one or more of the longitudinal strips in longitudinal direction extend beyond the transversal strips.

[0005] The invention is based on the consideration that for particularly high wearing comfort, the footbed should made on the basis of natural material - wood - and further should include elastic elements for enhancing flexibility, in particular in the ball region, to a particularly high degree. Accordingly, the elastic elements should be designed specifically in order to enable the foot to move (stretch) in every possible direction (lengthwise and width wise) in order to make the foot particularly comfortable since it can move in its natural way. Therefore, flexibility should be provided in at least to dimensions.

[0006] Preferred embodiments of the invention are listed in the dependent claims.

[0007] In a preferred embodiment of the invention, at least one of the longitudinal strips extends to the front end of the footbed. This provides particular flexibility also for bending around the longitudinal axis.

[0008] In a further or alternative preferred embodiment, the connection structure comprises a block of resilient material positioned in the ball region of the footbed. The combination of the block structure (in the ball region of the footbed) with the strips or extensions is particularly beneficial since it allows to absorb and support the entire body weight of the wearer (in the block structure) and distribute or divide it laterally into the extensions, thereby using enhanced flexibility for particularly high wearing comfort. The combination of the block structure with extensions both in longitudinal and in transversal direction is particularly preferred.

[0009] The resilient material for connection structure preferably is selected under the consideration of high durability in combination with particular flexibility and in view of these considerations preferably is made of polyurethane (PU).

[0010] An embodiment of the invention is described in greater detail with reference to the drawings, in which:

FIG. 1 shows a shoe with a footbed, and

FIG. 2 shows the footbed of the shoe according to FIG. 1.

[0011] Like parts are provided with like reference numerals throughout the drawings.

[0012] The wooden shoe 1 as shown in FIG. 1 is designed as a slipper and principally extends along a longitudinal direction as indicated by arrow 2. The shoe 1 comprises a footbed 4 and an upper portion 6 attached to the footbed 4. The upper portion 6 is made of leather or any other appropriate material and in the embodiment shown surrounds the forward region next to the front end 8 of the footbed 4 in the manner of a slipper, yet leaves the heel region free. In alternative embodiments, the upper portion 6 or even the entire shoe 1 may have other forms or shapes, for example the form of a continuous or divided strap, or it may be designed as a boot.

[0013] The footbed 2 as shown in FIG. 2 is designed as a multi-piece system and comprises a number of wooden blocks 10. Neighboring wooden blocks 10 are connected with each other by elements of a connection structure 12 of resilient material. The elements of the connection structure 12 of resilient material are connected to the respective wooden blocks 10 by adhesion or foaming. The connection structure 12 is integrally joined to a sole 14, in the embodiment shown also made of resilient material, disposed on the underside of the footbed 4 and basically covering the entire underneath surface of the footbed 4. Such connection of neighboring blocks 10 by resilient material allows for an overall flexible structure on the basis of individual wooden elements. This flexibility allows individual adaptation of the footbed 4 to the shape of the foot, thereby providing enhanced comfort and wearability for the wearer, in combination with the pleasant feeling of wood as basic carrier material. Preferably, the connection structure 12 is made of polyurethane (PU).

[0014] In the embodiment shown, the connection structure 12 is specifically designed in order to allow for enhanced flexibility of the footbed structure, in support of particularly high wearing comfort. For this purpose, the connection structure 12, with respect to the longitudinal direction, comprises a number of transversal strips 20 connecting neighboring wooden blocks 10 in longitudinal direction, and a number of longitudinal strips 22 connecting neighboring wooden blocks 10 in transversal direction. The transversal strips 20 in the preferred embodiment shown extend over the entire width of the footbed 4, thereby allowing for bending of the front part of the

footbed 4 relative to its rear part.

[0015] One or more of the longitudinal strips 22, in the embodiment shown all longitudinal strips 22, in longitudinal direction extend beyond the transversal strips 20, thereby providing a number of backwards extensions 24 of the connection structure 12 and a number of forward extensions 26 of the connection structure 12. By providing the extensions 24, 26, which are considered inventive independently of each other, enhanced flexibility is made available since bending of various parts of the footbed 4 around the longitudinal axis is made possible. In the preferred embodiment shown, at least one or as shown two of the longitudinal strips 22 forming the forward extensions 26 extend all the way to the front end 8 of the footbed 4.

[0016] As an additional, separately inventive feature, the connection structure 12 comprises a central block 28 of resilient material positioned in the ball region of the footbed 4. Accordingly, the preferred embodiment as shown features a combination of the block structure 28 in the ball region of the footbed with the strips or extensions 24, 26. This structure is particularly beneficial since it allows to absorb and support the entire body weight of the wearer in the block 28 and distribute or divide it laterally into the extensions 24, 26 thereby using enhanced flexibility for particularly high wearing comfort. The block 28 is the point where the whole body weight of the wearer is concentrated and then divided into different canals/extensions in the connection structure 12.

[0017] By the design as shown, the footbed 4 is made on the basis of natural material - wood - which also includes elastic elements for enhanced flexibility, in particular in the ball region. The elastic elements enable the foot to move (stretch) in every possible direction (lengthwise and width wise) in order to make the foot particularly comfortable since it can move in its natural way.

List of reference numerals

[0018]

1	shoe
2	arrow
4	footbed
6	upper portion
8	front end
10	wooden blocks
12	connection structure
14	sole
20	transversal strips
22	longitudinal strips
24	backwards extensions
26	forward extensions
28	central block

Claims

1. Footbed (4) for a shoe (1), in particular for a slipper, sandal, half-shoe, or boot, said footbed (4) extending along a longitudinal direction and comprising a number of wooden blocks (10) and a connection structure (12) of resilient material connecting neighboring wooden blocks (10) with each other, wherein the connection structure (12), with respect to the longitudinal direction, comprises a number of transversal strips (20) connecting neighboring wooden blocks (10) in longitudinal direction, wherein the connection structure (12) comprises a number of longitudinal strips (22) connecting neighboring wooden blocks (10) in transversal direction, and wherein one or more of the longitudinal strips (22) in longitudinal direction extend beyond the transversal strips (20).

2. Footbed (4) according to claim 1, wherein at least one of the longitudinal strips (22) extends to the front end (8) of the footbed (4).

3. Footbed (4) according to claim 1 or 2, wherein the connection structure (12) comprises a block (28) of resilient material positioned in the ball region of the footbed (4).

4. Footbed (4) according to any one of claims 1 through 3, wherein the connection structure (12) is made of Polyurethane.

5. Shoe (1) having a footbed (4) according to any one of claims 1 through 4.

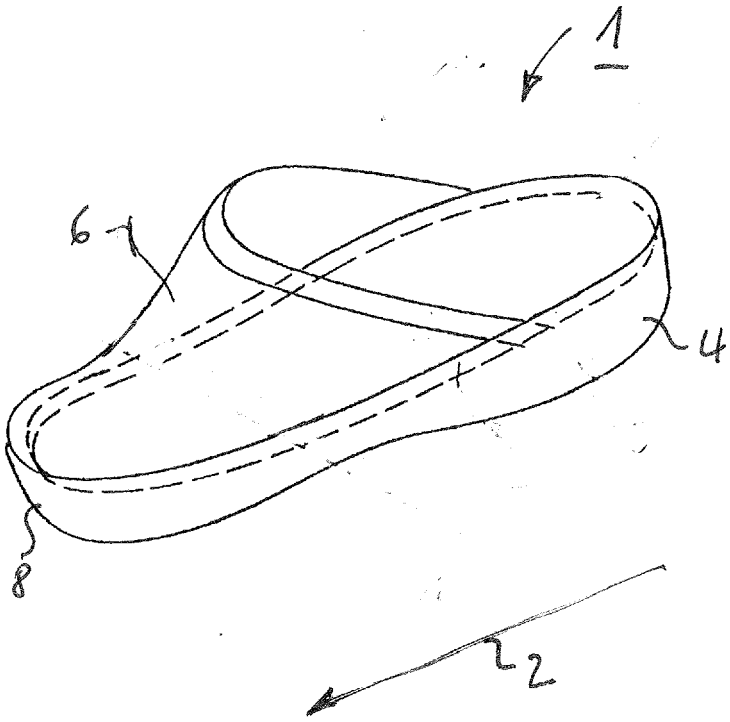

Fig. 1

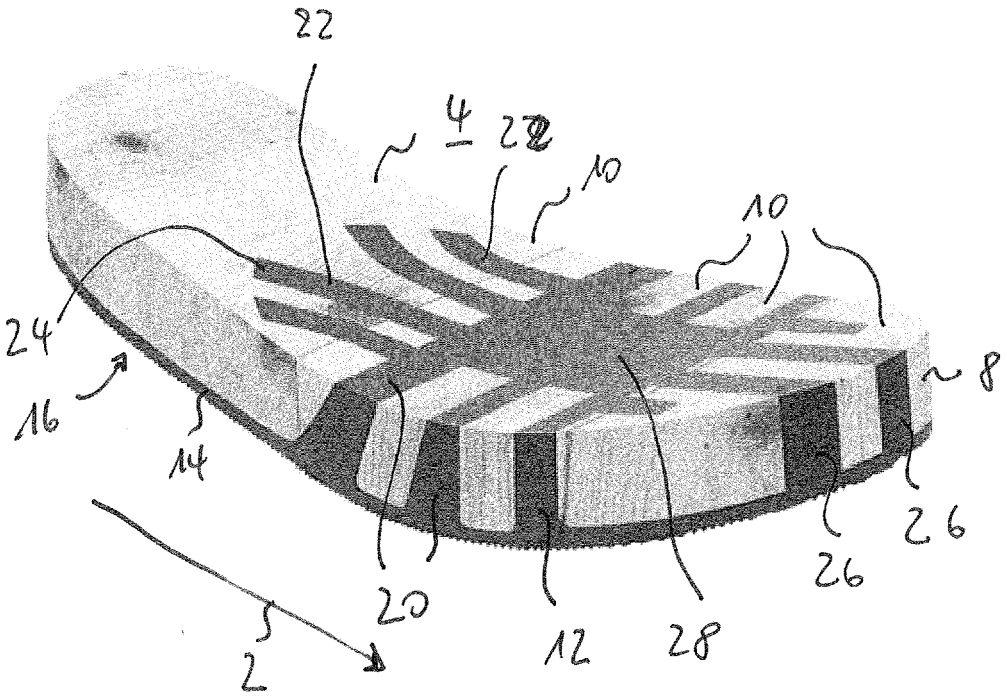

Fig. 2

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EUROPEAN SEARCH REPORT

Application Number
EP 17 20 2403

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 Y	AT 403 113 B (HUEMER HERMANN [AT]) 25 November 1997 (1997-11-25) * figure 1 * * page 2, line 1 * * page 2, line 33 - line 34 * * page 2, line 50 - line 52 * * page 3, line 18 - line 19 * -----	1,2,5 3	INV. A43B13/08 A43B13/14 A43B13/16
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Y	US 1 964 364 A (ERNEST PELLKOFER) 26 June 1934 (1934-06-26) * figures 1-3 * * page 1, line 99 - line 100 * -----	3	
			TECHNICAL FIELDS SEARCHED (IPC) A43B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	5 April 2018	Ariza De Miguel, Jon

CATEGORY OF CITED DOCUMENTS

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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 17 20 2403

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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05-04-2018

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

REFERENCES CITED IN THE DESCRIPTION

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