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(71) Applicant: **Qingyuan Global Technology Services Ltd.**
Qingyuan City, Guangdong 511800 (CN)

(72) Inventor: **LUH, Yih-Ping**
Taipei City 104 (TW)

(74) Representative: **dompatent von Kreisler Selting Werner -**
Partnerschaft von Patent- und Rechtsanwälten mbB
Deichmannhaus am Dom
Bahnhofsvorplatz 1
50667 Köln (DE)

(54) **SHOES WITH BREATHABLE DESIGN**

(57) A shoe having breathable design is provided. The shoe comprises a sole and an upper which is arranged on the sole and has an inner surface. An upright cotton layer is arranged on the inner surface. The upright cotton increases breathability and provides comfort.

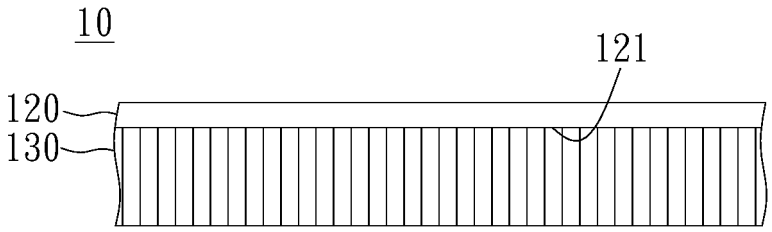

FIG. 2

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Description

BACKGROUND

Technical Field

[0001] The present invention relates to a shoe, and in particular, the present invention relates to a shoe having breathable design.

Related Art

[0002] Shoes provide protection for the user's feet, allowing them to move safely and stay healthy in different situations. In addition, wearing comfort also affects foot health. For example, excessive friction may cause excessive keratinization of the skin and affect walking. Therefore, it is an important issue to provide users with shoes that are safe and comfortable for activities in different situations and weather.

SUMMARY

[0003] An object of the present invention is to provide a shoe with a breathable design which can improve breathability.

[0004] The shoe having breathable design of the present invention comprises a sole and an upper which is arranged on the sole and has an inner surface.

[0005] In an embodiment, the shoe having breathable design further comprises an inner layer which is arranged on one side of the upright cotton layer opposite to the upper.

[0006] In an embodiment, the shoe having breathable design further comprises a waterproof film which is arranged between the upper and the upright cotton layer.

[0007] In an embodiment, the upper is a woven upper.

[0008] In an embodiment, the upright cotton layer comprises a plurality of upright cotton units.

[0009] In an embodiment, the shoe having breathable design further comprises a waterproof sock which is arranged around the side of the upper close to the sole and covers the bottom of the upper.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] In order to make the above and other objects, features, advantages, and embodiments of the present invention more clearly and easily understood, the illustration of the attached figures are as follows.

FIG. 1 is a side view of a shoe having breathable design according to one embodiment of the present invention.

FIG. 2 is an enlarged partial sectional view of an upper according to one embodiment.

FIG. 3 is an enlarged partial sectional view of an upper according to another embodiment.

FIG. 4 is an enlarged partial sectional view of an upper according to another embodiment.

FIG. 5 is an enlarged partial sectional view of an upper according to another embodiment.

FIG. 6 is a side sectional view of the shoe having breathable design according to one embodiment of the present invention.

DETAILED DESCRIPTION

[0011] The present invention provides a shoe having a breathable design. The shoe having breathable design of the present invention can be applied to a sports shoe and a casual shoe, but are not limited thereto. FIG. 1 is a side view of a shoe 10 according to one embodiment of the present invention. As shown in FIG. 1, the shoe 10 comprises a sole 110 and an upper 120 arranged on the shoe sole 110. FIG. 2 is an enlarged cross-sectional view corresponding to a range indicated by the dotted line A in FIG. 1 of the upper 120. As shown in FIG. 2, the upper 120 has several layers inside and has an inner surface 120. An upright cotton layer 130 is arranged on the inner surface 121 of the upper 120. The upright cotton in the upright cotton layer 130 may use a one-piece design. Compared with the foam-filled material in existing shoe designs, the use of upright cotton can provide lighter weight and better air permeability. In addition, the upright cotton can provide a comfortable touch, so the upright cotton layer 130 can also serve as a contact layer with the skin of the feet.

[0012] FIG. 3 is an enlarged partial sectional view of another embodiment of the shoe upper 120. As shown in FIG. 3, the upright cotton layer 130 is arranged on the inner surface 121 of the upper 120. In addition, the shoe 10 further comprises an inner layer 140. The inner layer 140 is arranged on the side of the upright cotton layer 130 opposite to the upper 120, so as to form a three-layer structure made up of the upper 120, the upright cotton layer 130, and the inner layer 140. In the embodiment, the inner layer 140 serves as a contact layer with the skin of the feet to provide breathability through the upright cotton layer 130, and the use of the inner layer further improves heat retention. In one embodiment, the upper 120 may be a woven upper, thereby reducing the weight of the shoe 10 and further increasing the overall breathability.

[0013] FIG. 4 is an enlarged partial sectional view of another embodiment of the shoe upper 120. As shown in FIG. 4, the shoe 10 further comprises a waterproof film 150. The waterproof film 150 is arranged between the upper 120 and the upright cotton layer 130 to form a four-layer structure made up of the upper 120, the waterproof film 150, the upright cotton layer 130, and the inner layer

140. Through such design, a waterproof effect is provided on the side close to the upper 120, making the shoe safe and comfortable for activities in rainy or changing weather.

[0014] FIG. 5 is an enlarged partial sectional view of another embodiment of the upper 120. As shown in FIG. 5, the upright cotton layer 130 comprises a plurality of upright cotton units 131. The upright cotton unit 131 is a piece of upright cotton. For example, upright cotton scraps generated from the making of the shoe body may be used as the upright cotton unit 131. In other words, in addition to using one-piece upright cotton, the upright cotton layer 130 may also be composed of upright cotton in the form of fragments. Hence, the upright cotton layer provides breathability and the utilization of the material is improved.

[0015] FIG. 6 is a side sectional view of the shoe 10 according to one embodiment of the present invention. As shown in FIG. 6, the shoe 10 further comprises a waterproof sock 160. The waterproof sock 160 is arranged around the side of the upper 120 near the sole 110 and covers the bottom of the upper 120. A three-layer structure made up of the upper 120, the waterproof film 150, and the upright cotton layer 130 is formed inside the upper 120. The aforementioned three-layer structure which includes the upper 120 is connected to the waterproof sock 160 on the side close to the shoe sole 110, and the range of the bottom of the upper 120 that the waterproof sock 160 covers is from the toe to the heel. Through such design, the waterproof effect can be provided by the waterproof film 150 above the junction between the upper 120 of the shoe 10 and the waterproof sock 160, and the waterproof effect can be provided by the waterproof sock 160 above the junction to provide more comprehensive waterproof protection. In other embodiments, the waterproof sock cover 160 may be added to the upper according to requirements, such as arranging it on the side of the upright cotton layer opposite to the waterproof film, and extending it from the side of the shoe mouth 12 toward the ankle to the side close to the sole 110. This provides a waterproof effect inside the shoe and prevents the moisture infused into the shoe from damaging the inner structure of the shoe such as upright cotton.

Industrial applicability

[0016] The shoe of the present invention includes a sole and an upper provided on the sole. The upper has an inner surface. An upright cotton layer is provided on the inner surface of the upper. A shoe with breathable design is provided to improve the breathability of the shoe body.

[0017] Although the present invention has been disclosed in the above embodiments, it is not intended to limit the present invention. Any person who is skilled in the art can be regarded as various modifications and retouching without departing from the spirit and scope of the present invention. Therefore, the scope of protection of the present invention shall be determined by the scope of the patent application attached hereto.

Claims

1. A shoe having breathable design, comprising:

   a sole;
   an upper, arranged on the sole, having an inner surface; and
   an upright cotton layer, arranged on the inner surface.

2. The shoe according to claim 1, further comprising:
   an inner layer, arranged on one side of the upright cotton layer opposite to the upper.

3. The shoe according to claim 1, further comprising:
   a waterproof film, arranged between the upper and the upright cotton layer.

4. The shoe according to claim 1, wherein the upper is a woven upper.

5. The shoe according to claim 1, wherein the upright cotton layer comprises a plurality of upright cotton units.

6. The shoe according to claim 1, further comprising:
   a waterproof sock, arranged around a side of the upper close to the sole and covers a bottom of the upper.

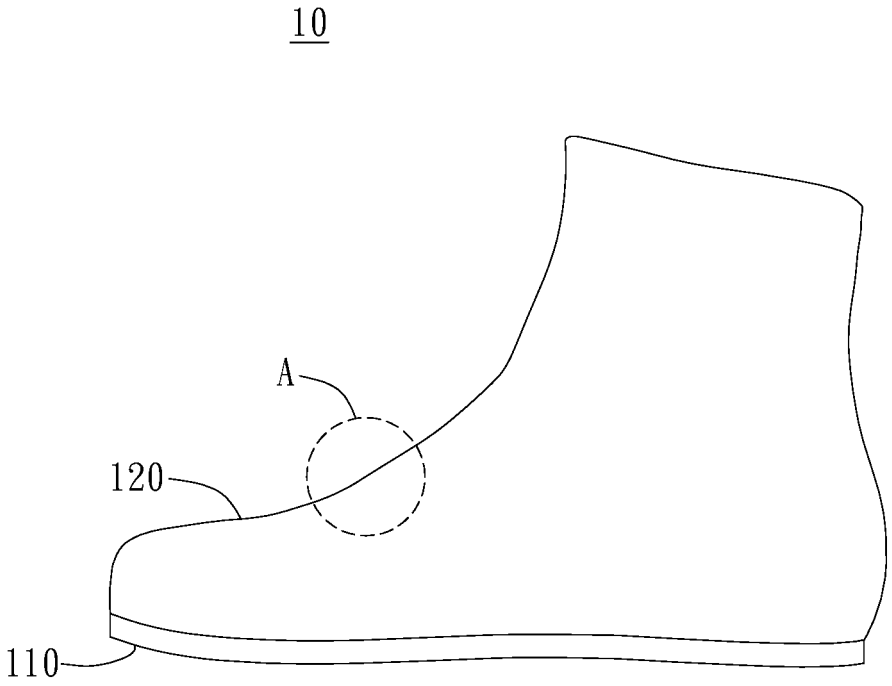

FIG. 1

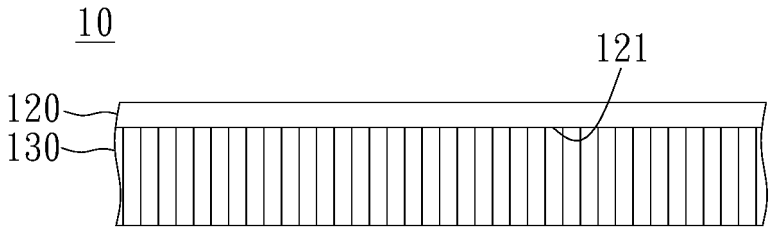

FIG. 2

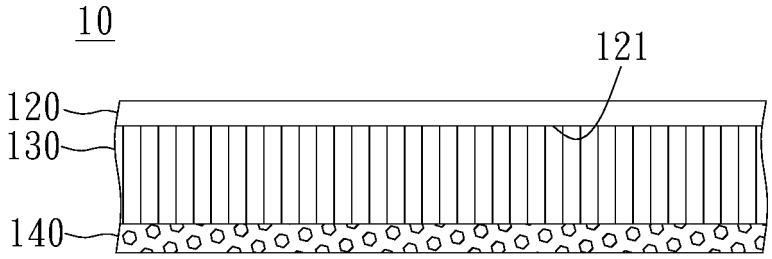

FIG. 3

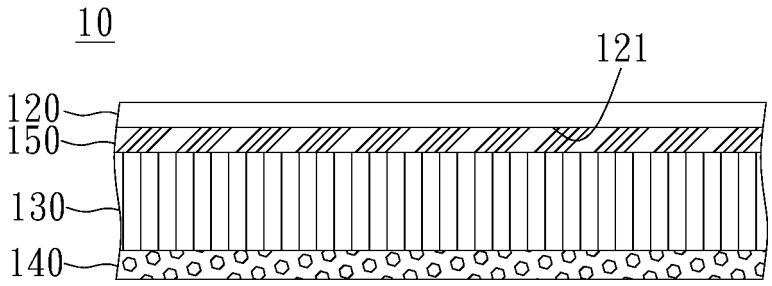

FIG. 4

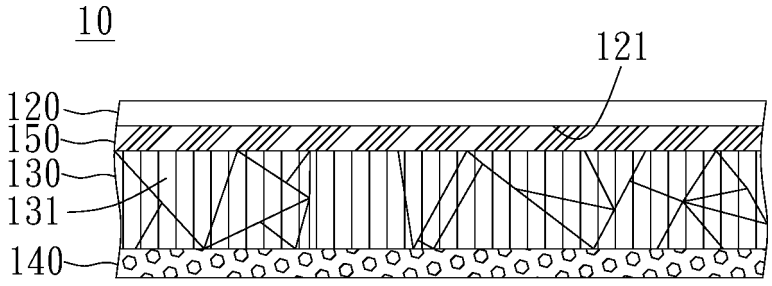

FIG. 5

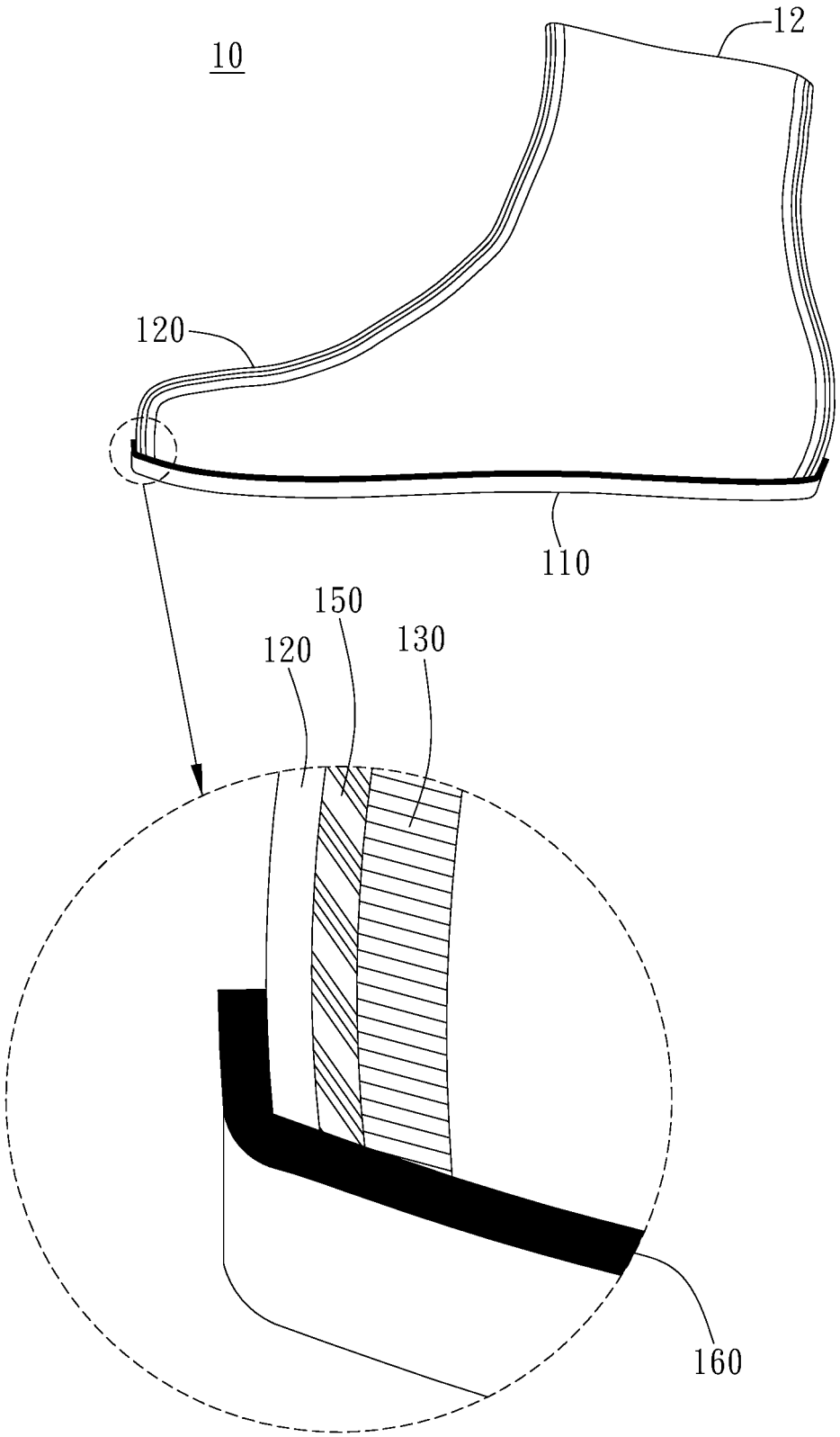

FIG. 6

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CN2018/097839

A. CLASSIFICATION OF SUBJECT MATTER

A43B 7/06(2006.01)i; A43B 3/00(2006.01)i; A43B 23/02(2006.01)i

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A43B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

CNABS, CNTXT, CNKI: 透气, 通气, 防水, 直立棉, "3d" s 棉, 编织, 气, 水 SIPOABS, VEN, EPTXT, footwear, Ventilat+, water+

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
PX	CN 207167907 U (GTS PTE LTD.) 03 April 2018 (2018-04-03) description, paragraphs 28-32, and figures 1-6	1-6
X	CN 202603759 U (QUANZHOU SENYU SPORTS PRODUCTS CO., LTD.) 19 December 2012 (2012-12-19) description, paragraphs 8-9, and figures 1-2	1-2, 5
X	CN 201782096 U (LIANG, XIAOPING) 06 April 2011 (2011-04-06) entire document	1-2, 5
Y	CN 202603759 U (QUANZHOU SENYU SPORTS PRODUCTS CO., LTD.) 19 December 2012 (2012-12-19) description, paragraphs 8-9, and figures 1-2	3-4, 6
Y	CN 205456492 U (ZHANG, XIAOJUN) 17 August 2016 (2016-08-17) description, paragraphs 20-25, and figures 1-2	3-4
Y	CN 201067127 Y (DONGGUAN YUCUN SHOES CO., LTD.) 04 June 2008 (2008-06-04) description, page 2, last paragraph, and figure 1	6
A	CN 103338669 A (W. L. GORE & ASSOCIATES, INC. ET AL.) 02 October 2013 (2013-10-02) entire document	1-6

☑ Further documents are listed in the continuation of Box C. ☑ See patent family annex.

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
27 August 2018	**22 October 2018**
Name and mailing address of the ISA/CN **State Intellectual Property Office of the P. R. China** **No. 6, Xitucheng Road, Jimenqiao Haidian District, Beijing 100088** **China** Facsimile No. **(86-10)62019451**	Authorized officer Telephone No.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/CN2018/097839

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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A	US 2008053556 A1 (LIN, YONGJIANN) 06 March 2008 (2008-03-06) entire document	1-6

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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/CN2018/097839

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