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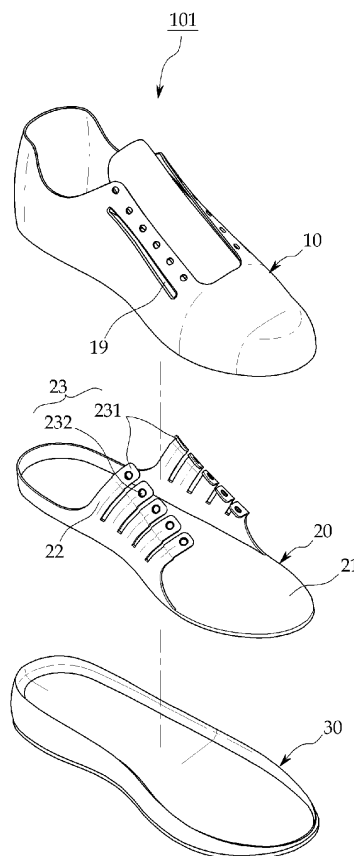
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(54) **SHOE**

(57) An exemplary embodiment of the present disclosure relates to a shoe including: an upper which surrounds the whole or one part of a foot of a user; a sole which is coupled to a lower portion of the upper; and a liner which is disposed on the sole, and the liner of the shoe according to the exemplary embodiment of the present disclosure includes: a bottom part which is disposed on the sole; one or more pairs of side surface supporting parts which are extended from a side edge of the bottom part, and partially surround a side surface of the foot of the user; and one or more pairs of tightening parts which are formed at end portions of the one or more pairs of side surface supporting parts, respectively, and tighten the bottom part and the side surface supporting part to be in close contact with the foot of the user.

[Fig. 2]



Description

[Technical Field]

[0001] An exemplary embodiment of the present disclosure relates to a shoe, and more particularly, to a shoe provided with a liner having an improved function.

[Background Art]

[0002] A shoe serves to protect a foot of a human, and the shoe protects the foot from an exterior environment when the human walks or runs.

[0003] In general, the shoe includes an upper, a sole, and a liner. The upper surrounds a top of a foot of a user, and the sole is attached to a lower portion of the upper, comes into contact with the ground, and absorbs impact. The liner is disposed on the sole so as to be in contact with a bottom of the foot of the user, and protects the bottom of the foot of the user.

[0004] However, because a size and a shape of the foot differ from user to user, there is still a space between the liner of the shoe and the foot of the user even though the liner of the shoe is ergonomically designed.

[0005] This space not only adversely affects wearing comfort of the shoe, but also causes deterioration in exercise capacity of the user.

[0006] In particular, when the user wears the shoe, and repeatedly changes a direction while walking or running, or repeatedly and rapidly stops, friction occurs in the space between the foot of the user and the liner of the shoe, and as a result, there is a problem in that the user is injured such as having a blister on the foot of the user.

[Disclosure]

[Technical Problem]

[0007] An exemplary embodiment of the present disclosure provides a shoe which prevents an injury, and improves wearing comfort and an exercise capacity.

[Technical Solution]

[0008] According to an exemplary embodiment of the present disclosure, a shoe includes: an upper which surrounds the whole or one part of a foot of a user; a sole which is coupled to a lower portion of the upper; and a liner which is disposed on the sole. Further, the liner includes: a bottom part which is disposed on the sole; one or more pairs of side surface supporting parts which are extended from a side edge of the bottom part, and partially surround a side surface of the foot of the user; and one or more pairs of tightening parts which are formed at end portions of the one or more pairs of side surface supporting parts, respectively, and tighten the bottom part and the side surface supporting part to be in close contact with the foot of the user.

[0009] The one or more pairs of side surface supporting parts may be disposed inside the upper, and the one or more pairs of tightening parts may protrude to the outside of the upper.

[0010] The upper may have an opening portion through which the tightening part protrudes.

[0011] The one or more pairs of side surface supporting parts may surround one or more side surfaces of a front portion, a middle portion, and a rear portion of the foot of the user.

[0012] The one or more pairs of tightening parts may tighten a top of the foot of the user.

[0013] The one or more pairs of tightening parts may tighten an ankle of the user.

[0014] The liner may be made using one or more materials of synthetic resin, natural rubber, leather, and fabric.

[0015] In the aforementioned shoe, the one or more pairs of tightening parts may include tightening main bodies which protrude to the outside of the upper, respectively, coupling holes which are formed in the tightening main bodies, and a shoe strap which is fitted into the coupling hole.

[0016] In addition, in the aforementioned shoe, the one or more pairs of tightening parts may include tightening main bodies which protrude to the outside of the upper, respectively, and Velcro coupling portions which are formed on one surface of the tightening main bodies.

[0017] In addition, in the aforementioned shoe, any one tightening part of the one or more pairs of tightening parts may include a first tightening main body, and a fitting ring formed at an end portion of the first tightening main body. Further, the other tightening part of the one or more pairs of tightening parts may include a second tightening main body which has a length relatively longer than a length of the first tightening main body, and is fitted into the fitting ring.

[Advantageous Effects]

[0018] According to the exemplary embodiment of the present disclosure, the shoe may prevent an injury, and may improve wearing comfort and an exercise capacity.

[Description of Drawings]

[0019]

FIG. 1 is a perspective view of a shoe according to a first exemplary embodiment of the present disclosure.

FIG. 2 is an exploded perspective view of the shoe of FIG. 1.

FIG. 3 is a perspective view of a liner that is used in a shoe according to a second exemplary embodiment of the present disclosure.

FIG. 4 is a perspective view of a liner that is used in a shoe according to a third exemplary embodiment

of the present disclosure.

FIG. 5 is a perspective view of a liner that is used in a shoe according to a fourth exemplary embodiment of the present disclosure.

FIG. 6 is a perspective view of a liner that is used in a shoe according to a fifth exemplary embodiment of the present disclosure.

FIGS. 7 and 8 are cross-sectional views for comparing an Experimental Example according to the first exemplary embodiment of the present disclosure with a Comparative Example.

[Description of Main Reference Numerals of Drawings]

[0020]

10: Upper
19: Opening portion
20: Liner
21: Bottom part
22: Side surface supporting part
23: Tightening part
30: Sole
101: Shoe
231: Tightening main body
232: Coupling hole
233: Shoe strap
234: Velcro coupling portion
235: Fitting ring

[Best Mode]

[0021] Hereinafter, exemplary embodiments of the present disclosure will be described in detail with reference to the accompanying drawings so that those skilled in the technical field to which the present disclosure pertains may easily carry out the exemplary embodiments. The present disclosure may be implemented in various different forms, and is not limited to the exemplary embodiments described herein.

[0022] In addition, in several exemplary embodiments, constituent elements having the same configuration will be representatively described using the same reference numerals in a first exemplary embodiment, and in the other exemplary embodiments, only configurations, which are different from the configuration described in the first exemplary embodiment, will be described.

[0023] The drawings are schematically illustrated, and the scales of the drawings may be different from the actual scales. Relative dimensions and ratios of the parts illustrated in the drawings are exaggerated or reduced in terms of sizes thereof for clarification of the drawings and convenience, and any dimension is only illustrative, and is not limited thereto. Further, the same structures, elements or components illustrated in two or more drawings are designated by the same reference numerals so as to illustrate similar features.

[0024] The exemplary embodiment of the present disclosure is specifically presented as ideal exemplary embodiments of the present disclosure. As a result, various modifications of the drawings are expected. Therefore, the exemplary embodiment is not limited to specific forms in regions illustrated in the drawings, and for example, includes modifications of forms by the manufacture.

[0025] Hereinafter, a shoe 101 according to a first exemplary embodiment of the present disclosure will be described with reference to FIGS. 1 and 2.

[0026] As illustrated in FIGS. 1 and 2, the shoe 101 includes an upper 10, a liner 20, and a sole 30.

[0027] The upper 10 surrounds and protects the whole or one part of a foot of a user. In the first exemplary embodiment of the present disclosure, the upper 10 may have various shapes, and may surround and protect the ankle of the user as well as the foot.

[0028] In addition, in the first exemplary embodiment of the present disclosure, the upper 10 includes opening portions 19 that are formed at a portion of a top of the foot or at a portion of the ankle.

[0029] The sole 30 is coupled to a lower portion of the upper 10, and comes into contact with the ground. The sole 30 absorbs impact applied from the ground when the user walks or runs. For example, the sole 30 may include a middle sole which includes an elastic body for absorbing impact, and an outer sole which protects the middle sole and comes into direct contact with the ground.

[0030] The liner 20 is disposed on the sole 30. Specifically, in the first exemplary embodiment of the present disclosure, the liner 20 includes a bottom part 21, side surface supporting parts 22, and tightening parts 23.

[0031] The bottom part 21 is disposed on the sole 30, and comes into contact with a bottom of the foot of the user.

[0032] The side surface supporting parts 22 are extended from a side edge of the bottom part 21, and partially surround a side surface of the foot of the user. The side surface supporting parts 22 are formed at both sides of the foot of the user, respectively, and one or more pairs of side surface supporting parts may be provided. Further, the side surface supporting parts 22 are disposed inside the upper 10.

[0033] In FIG. 2, the side surface supporting parts 22 surround a middle portion of the foot of the user, but the first exemplary embodiment of the present disclosure is not limited thereto. That is, one or more pairs of side surface supporting parts 22 may surround one or more side surfaces of a front portion, a middle portion, and a rear portion of the foot of the user.

[0034] Specifically, in the first exemplary embodiment of the present disclosure, a portion where the side surface supporting part 22 is formed may vary according to the main purpose of use of the shoe 101. For example, the side surface supporting part 22 may be formed at a position that corresponds to a front portion of the foot in the case of a tennis shoe with which the user changes a

direction mainly using the front portion of the foot, the side surface supporting part 22 may be formed at a position that corresponds to a middle portion of the foot in the case of a running shoe, and the side surface supporting part 22 may be formed at a rear portion of the foot in the case of a basketball shoe.

[0035] The tightening parts 23 are formed at end portions of the one or more pairs of side surface supporting parts 22, respectively. That is, one or more pairs of tightening parts 23 are provided. Further, the tightening parts 23 protrude to the outside of the upper 10 through the opening portions 19 of the upper 10. The tightening parts 23 serve to tighten the bottom part 21 and the side surface supporting part 22 to be in close contact with the foot of the user.

[0036] In the first exemplary embodiment of the present disclosure, the tightening part 23 includes tightening main bodies 231 which protrude to the outside of the upper 10, and coupling holes 232 which are formed in the tightening main bodies 231, and a shoe strap 233 which is fitted into the coupling holes 232. That is, when the shoe strap 233 included in the one or more pairs of tightening parts 23, which are positioned at both sides of the foot of the user, respectively, is tied, the side surface supporting parts 22 and the bottom part 21 are tightened so as to be in close contact with the foot of the user.

[0037] In addition, in the first exemplary embodiment of the present disclosure, one or more pairs of tightening parts 23 may tighten the top of the foot of the user.

[0038] In addition, in the first exemplary embodiment of the present disclosure, the liner 20 may be made using one or more materials of synthetic resin, natural rubber, leather, and fabric. That is, the liner 20 may be made of one of synthetic resin, natural rubber, leather, and fabric, or a combination thereof.

[0039] For example, a portion of the bottom part 21 of the liner 20 which faces the sole 30 may be made of synthetic resin, and a portion of the bottom part 21 of the liner 20 which faces the foot of the user may be made of fabric or leather. In addition, the side surface supporting part 22 and the tightening main body 231 of the tightening part 23 may be made of synthetic resin or fabric, and the shoe strap 233 of the tightening part 23 may be made of fabric. In addition, the liner 20 may be made of various combinations of materials in addition to the aforementioned combination.

[0040] By the aforementioned configuration, the shoe 101 according to the first exemplary embodiment of the present disclosure may prevent an injury, and may improve wearing comfort and an exercise capacity.

[0041] Specifically, when the user wears the shoe 101 according to the first exemplary embodiment of the present disclosure and tightens the tightening part 20 in accordance with a size of the foot, the bottom part 21 and the side surface supporting part 22 of the liner 20 come into close contact with the foot of the user, and a vacant space between the foot of the user and the liner 20 is minimized. That is, even though the shape of the

foot slightly varies from user to user, the shoe 101 according to the first exemplary embodiment of the present disclosure may minimize the vacant space between the foot and the liner 20 regardless of the shape of the foot.

[0042] As described above, in the first exemplary embodiment of the present disclosure, when the shoe strap 233 is tightened, the liner 20 supports the foot while having a shape closest to the shape of the foot of the user, thereby improving wearing comfort and unity of the shoe 101.

[0043] In addition, in the first exemplary embodiment of the present disclosure, the liner 20 supports the foot while surrounding and coming into close contact with the side surface of the foot and the top of the foot as well as the bottom of the foot of the user, thereby dispersing the load and reducing a degree of fatigue of the foot when the user performs comparatively strenuous exercise such as a rapid change in direction, a sudden stop, and rapid acceleration.

[0044] In addition, according to the first exemplary embodiment of the present disclosure, sliding of the foot of the user on the liner 20 may be minimized, thereby preventing an injury such as a blister on the foot from occurring due to friction between the foot of the user and the liner 20.

[0045] Hereinafter, a second exemplary embodiment of the present disclosure will be described with reference to FIG. 3.

[0046] As illustrated in FIG. 3, a tightening part 23 of a liner 20, which is used in a shoe according to the second exemplary embodiment of the present disclosure, includes tightening main bodies 231 which protrude to the outside of an upper 10, and Velcro coupling portions 234 which are formed on one surface of the tightening main bodies 231.

[0047] That is, one pair of tightening parts 23, which is formed at end portions of one pair of side surface supporting parts 22, respectively, is coupled to each other by the Velcro coupling portions 234 formed on the tightening main bodies 231 so as to tighten the side surface supporting parts 22 and the bottom part 21 of the liner 20.

[0048] In addition, the Velcro coupling portion 234 may include various types of Velcro materials that are publicly known to those skilled in the art.

[0049] By the aforementioned configuration, the shoe according to the second exemplary embodiment of the present disclosure prevents an injury, improves wearing comfort and an exercise capacity, and allows the user to easily tighten the liner and wear and take off the shoe.

[0050] Hereinafter, a third exemplary embodiment of the present disclosure will be described with reference to FIG. 4.

[0051] As illustrated in FIG. 4, any one tightening part 23 of one or more pairs of tightening parts 23 of a liner 20, which is used in a shoe according to the third exemplary embodiment of the present disclosure, includes a first tightening main body 2311, and a fitting ring 235 formed at an end portion of the first tightening main body

2311. Further, the other tightening part 23 of one or more pairs of tightening parts 23 includes a second tightening main body 2312 which has a length relatively longer than a length of the first tightening main body 2311, and is fitted into the fitting ring 235.

[0052] That is, the second tightening main body 2312 is fitted into the fitting ring 235 installed at the end portion of the first tightening main body 2311 so as to tighten the side surface supporting part 22 and the bottom part 21 of the liner 20.

[0053] By the aforementioned configuration, the shoe according to the third exemplary embodiment of the present disclosure prevents an injury, improves wearing comfort and an exercise capacity, and allows the user to easily tighten the liner and wear and take off the shoe.

[0054] Hereinafter, a fourth exemplary embodiment of the present disclosure will be described with reference to FIG. 5.

[0055] As illustrated in FIG. 5, a side surface supporting part 22, which is used in a shoe according to the fourth exemplary embodiment of the present disclosure, is formed at a portion that corresponds to a rear portion of the foot of the user, and a tightening part 23 surrounds and tightens the ankle of the user.

[0056] In this case, like the first exemplary embodiment of the present disclosure, the tightening part 23 includes tightening main bodies 231, and coupling holes 232 which are formed in the tightening main bodies 231, and a shoe strap 233 which is fitted into the coupling holes 232.

[0057] By the aforementioned configuration, the shoe according to the fourth exemplary embodiment of the present disclosure prevents an injury, improves wearing comfort and an exercise capacity, and particularly, may be effectively applied to the shoe that is suitable for an exercise such as a basketball game.

[0058] Hereinafter, a fifth exemplary embodiment of the present disclosure will be described with reference to FIG. 6.

[0059] As illustrated in FIG. 6, a side surface supporting part 22, which is used in a shoe according to the fifth exemplary embodiment of the present disclosure, is also formed at a portion that corresponds to a rear portion of the foot of the user, and a tightening part 23 surrounds and tightens the ankle of the user.

[0060] In this case, like the second exemplary embodiment, the tightening part 23 includes tightening main bodies 231, and Velcro coupling portions 234 which are formed on one surface of the tightening main bodies 231.

[0061] By the aforementioned configuration, the shoe according to the fourth exemplary embodiment of the present disclosure prevents an injury, improves wearing comfort and an exercise capacity, particularly, may be effectively applied to the shoe that is suitable for an exercise such as a basketball game, and may allow the user to easily wear and take off the shoe.

[0062] Hereinafter, an operational effect of the present disclosure will be specifically described while comparing

an Experimental Example according to the first exemplary embodiment of the present disclosure with a Comparative Example with reference to FIGS. 7 and 8.

[0063] FIG. 7 illustrates the Comparative Example according to a general shoe, and FIG. 8 illustrates the Experimental Example according to the first exemplary embodiment of the present disclosure.

[0064] As illustrated in FIG. 7, in the case of the Comparative Example, when the user rapidly changes a direction, the user's foot inside the shoe slides and leans to one side in the vacant space, and as a result, friction occurs between the foot and a liner 200. This friction not only degrades an exercise capacity of the user, but also causes an injury such as a blister on the foot.

[0065] In FIG. 7, reference numeral 100 indicates the upper, and reference numeral 300 indicates the sole.

[0066] In contrast, as illustrated in FIG. 8, in the case of the Experimental Example, since the bottom part 21 and the side surface supporting part 22 of the liner 20 are in close contact with the foot of the user while having unity by the tightening part (not illustrated), friction between the liner 20 and the foot is minimized. Instead, friction occurs between the liner 20 and the sole 30 of the shoe, but the liner 20 protects the foot of the user, and prevents the foot from being injured due to the friction.

[0067] The exemplary embodiments of the present disclosure have been described with reference to the accompanying drawings, but those skilled in the art will understand that the present disclosure may be implemented in any other specific form without changing the technical spirit or an essential feature thereof.

[0068] Accordingly, it will be understood that the aforementioned exemplary embodiments are described for illustration in all aspects and are not limited, and the scope of the present disclosure is represented by the claims to be described below, and it should be construed that all of the changes or modified forms induced from the meaning and the scope of the claims, and an equivalent concept thereof are included in the scope of the present disclosure.

Claims

1. A shoe comprising: an upper (10) which surrounds the whole or one part of a foot of a user; a sole (30) which is coupled to a lower portion of the upper; and a liner (20) which is disposed on the sole (30), wherein the liner (20) includes:

a bottom part (21) which is disposed on the sole (30);

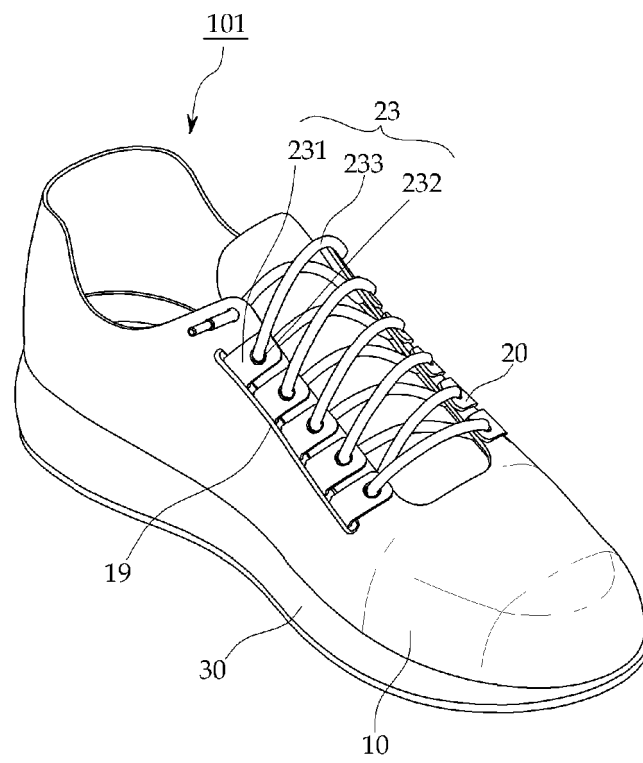
one or more pairs of side surface supporting parts (22) which are extended from a side edge of the bottom part (21), and partially surround a side surface of the foot of the user; and one or more pairs of tightening parts (23) which

are formed at end portions of the one or more pairs of side surface supporting parts (22), respectively, and tighten the bottom part (21) and the side surface supporting part (22) to be in close contact with the foot of the user.

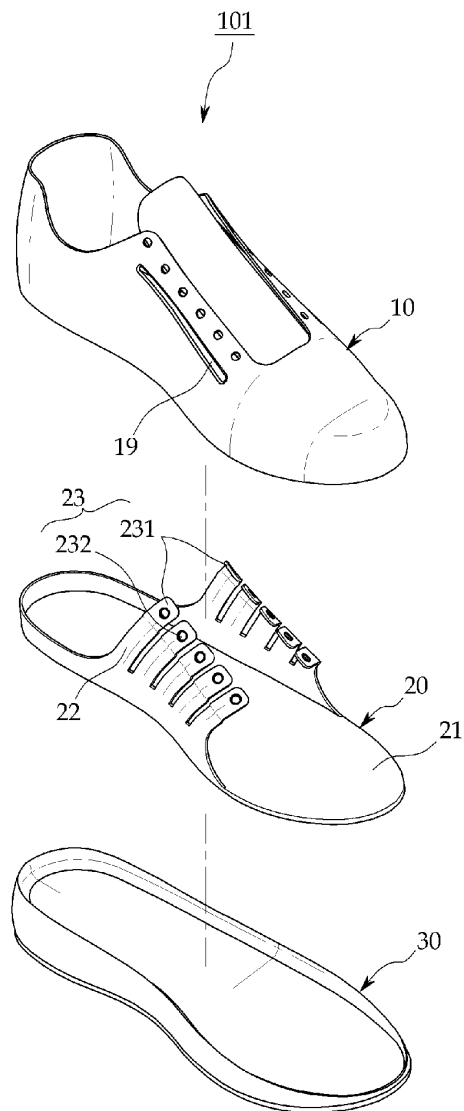
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2. The shoe of claim 1, wherein the one or more pairs of side surface supporting parts (22) are disposed inside the upper (10), and the one or more pairs of tightening parts (23) protrude to the outside of the upper (10). 10
3. The shoe of claim 2, wherein the upper (10) has an opening portion (19) through which the tightening part (23) protrudes. 15
4. The shoe of claim 2, wherein the one or more pairs of side surface supporting parts (22) surround one or more side surfaces of a front portion, a middle portion, and a rear portion of the foot of the user. 20
5. The shoe of claim 2, wherein the one or more pairs of tightening parts (23) tighten a top of the foot of the user. 25
6. The shoe of claim 2, wherein the one or more pairs of tightening parts (23) tighten an ankle of the user.
7. The shoe of claim 1, wherein the liner (20) is made using one or more materials of synthetic resin, natural rubber, leather, and fabric. 30
8. The shoe of any one of claims 1 to 7, wherein the one or more pairs of tightening parts (23) include tightening main bodies (231) which protrude to the outside of the upper (10), respectively, coupling holes (232) which are formed in the tightening main bodies (231), and a shoe strap (233) which is fitted into the coupling hole (232). 35
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9. The shoe of any one of claims 1 to 7, wherein the one or more pairs of tightening parts (23) include tightening main bodies (231) which protrude to the outside of the upper (10), respectively, and Velcro coupling portions (234) which are formed on one surface of the tightening main bodies (231). 45
10. The shoe of any one of claims 1 to 7, wherein any one tightening part (23) of the one or more pairs of tightening parts (23) includes a first tightening main body (2311), and a fitting ring (235) formed at an end portion of the first tightening main body (2311), and the other tightening part (23) of the one or more pairs of tightening parts (23) includes a second tightening main body (2312) which has a length relatively longer than a length of the first tightening main body (2311), and is fitted into the fitting ring (235). 50
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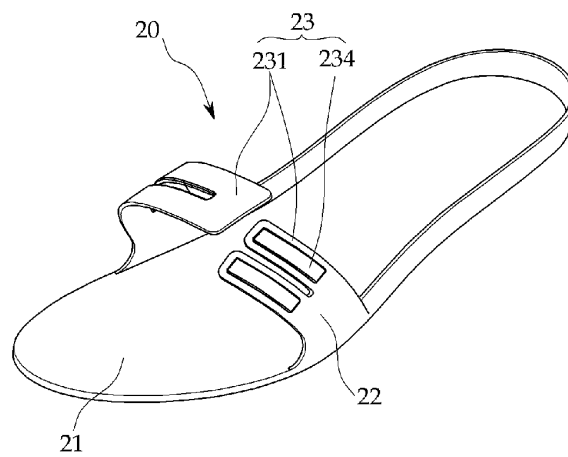
[Fig. 1]



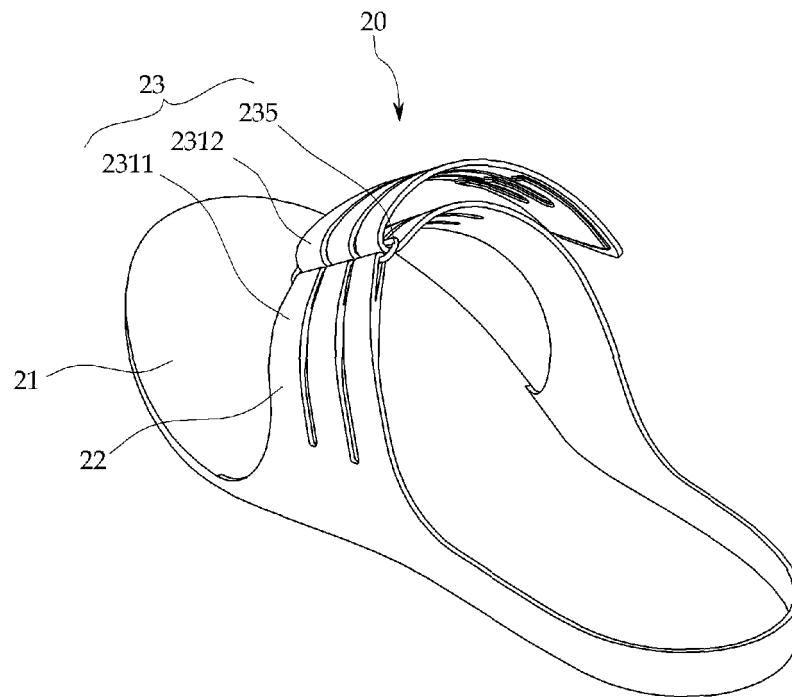
[Fig. 2]



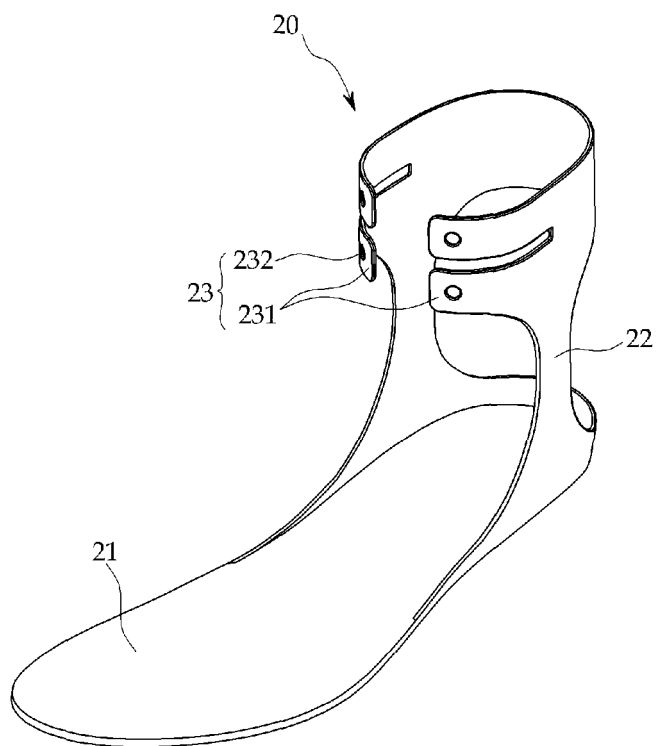
[Fig. 3]



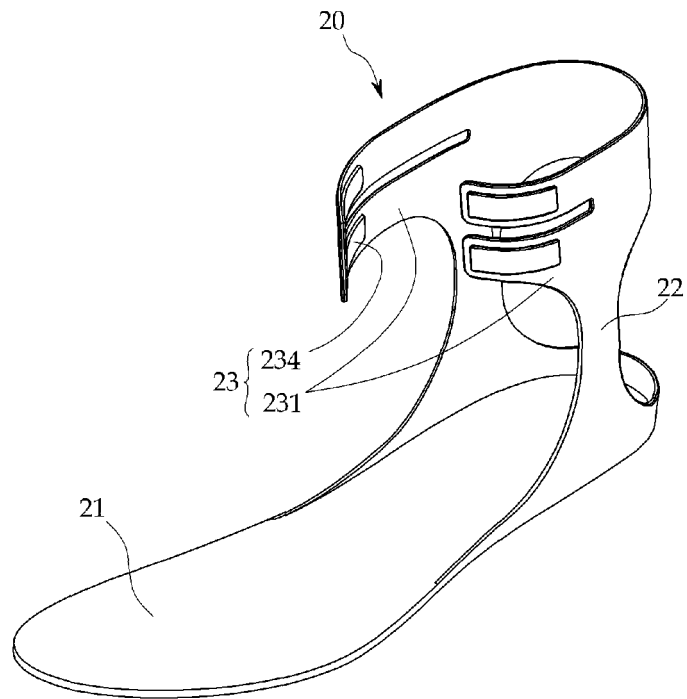
[Fig. 4]



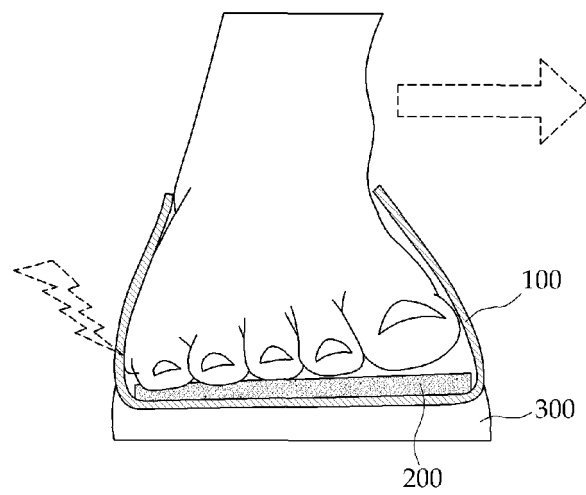
[Fig. 5]



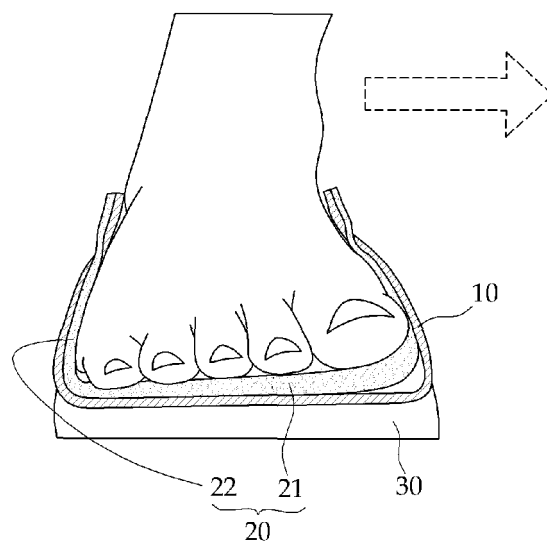
[Fig. 6]



[Fig. 7]



[Fig. 8]



INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR2013/006294

A. CLASSIFICATION OF SUBJECT MATTER

A43B 3/00(2006.01)i, A43B 17/00(2006.01)i, A43C 11/00(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 3; A43C 11; A43B 17; A43B 7

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

Korean Utility models and applications for Utility models: IPC as above

Japanese Utility models and applications for Utility models: IPC as above

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

eKOMPASS (KIPO internal) & Keywords: foot, close adhesion, shoes

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KR 10-2009-0053257 A (LEE, Ho Jin) 27 May 2009 See pages 1-4 and figures 1-4.	1-10
A	KR 20-0393869 Y1 (KWON, Yong Chul) 25 August 2005 See pages 1-4 and figures 1-7.	1-10
A	KR 10-2005-0103175 A (LEE, Bong Ju) 27 October 2005 See pages 1-5 and figures 1-4.	1-10
A	KR 10-2011-0088843 A (LEE, Sang-Ok) 04 August 2011 See pages 1-4 and figures 1-7.	1-10

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

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Date of the actual completion of the international search

29 OCTOBER 2013 (29.10.2013)

Date of mailing of the international search report

30 OCTOBER 2013 (30.10.2013)

Name and mailing address of the ISA/KR


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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/KR2013/006294

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KR 20-0393869 Y1	25/08/2005	NONE	
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