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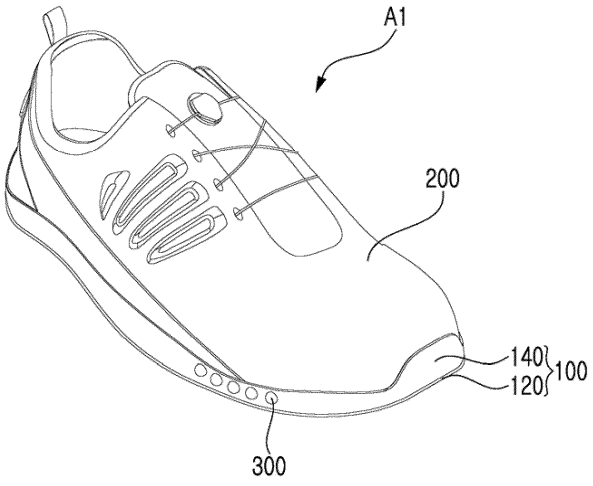
(54) GOLF SHOE AND METHOD FOR MANUFACTURING SAME

(57) Proposed are a golf shoe and a method for manufacturing same. The golf shoe, according to one embodiment, includes: a sole having an outsole and a midsole; and an upper formed on the top portion of the sole, wherein a plurality of protrusions are formed on the front- or rear-side of the outer lateral surface of the midsole. Accordingly, foreign substances may be removed by rubbing a clubface on the protrusions of the midsole, and the foreign substances may be removed by means of only a minimum action, and thus the sensation of a practice swing may be maintained without being damaged, and thus an effect may be achieved of enhancing athletic performance.

[Fig. 1]



EP 3 827 686 A1

Description

Technical Field

[0001] The present disclosure relates to a golf shoe and a method for manufacturing the golf shoe and, more particularly, to a golf shoe which is worn during a golf game to protect the foot and maintains a stable swing action, and a method for manufacturing the golf shoe.

Background Art

[0002] Unless otherwise indicated herein, contents described in this section are not the related art to claims of this application. Although contents are included in this section, they are not admitted to be the related art.

[0003] A golf club is connected to a grip which is a handle portion by a shaft, and a groove is formed in a surface of a clubface to induce the spin and back spin of a golf ball. Several transverse grooves formed in the surface of the clubface to spin or back spin the golf ball are designed to induce the spin of the golf ball at the moment of impact.

[0004] Thus, the surface and the groove formed on the golf clubface play an important role in sending the golf ball to a desired place or spinning the golf ball to send the golf ball in a desired direction.

[0005] An iron face may be designed by collectively considering the shape, position, depth of the surface or groove to induce a precise iron shot by optimally maintaining the energy transfer effect to the golf ball or the position of a hitting point depending on a swing.

[0006] However, in the golf clubface designed in this way, a large number of foreign substances are accumulated in the surface and groove due to the repeated swing actions.

[0007] As the golf ball is worn, debris therefrom may be accumulated in the groove, or particles or grains such as soil or sand may be lodged and accumulated between the surface and the groove during repeated iron-shot processes. Likewise, since the golf clubface comes into contact with the surface of grass, the grass or the like is accumulated in the surface and groove.

[0008] Meanwhile, during rounding, a golfer may make several practice swings on the grass before actually hitting the ball. The most effective result can be achieved by actually hitting the ball while maintaining such a swing sensation.

[0009] However, after several practice swings, foreign substances such as grass or soil are accumulated on the clubface. An addition action (action for wiping the foreign substances of the clubface with the hand and then wiping the hand with a golfer's clothes, or action for wiping the clubface with a separate towel or the like) for removing the foreign substances leads to damage to the swing sensation which is obtained through the practice swing.

[0010] Due to the foreign substances on the golf clubface, the ball is inevitably subjected to resistance when hitting the ball. Depending on a difference in resistance, a large deviation in hitting distance and direction and rotating force occurs, thus causing psychological atrophy and a stiff swing. An unnatural swing action leads to incomplete hitting. An additional action for removing the foreign substances leads to damage to sensation which is obtained through the practice swing.

[0011] Therefore, in order for a golfer to maintain a swing sensation which is obtained through the practice swing, a surface cleaning means capable of removing foreign substances from the clubface with the smallest movement is required.

Disclosure

Technical Problem

[0012] Therefore, the present disclosure is intended to provide a golf shoe having a surface cleaning means that can remove foreign substances from a clubface with the smallest movement so as to stably maintain the sensation of a practice swing, and a method for manufacturing the golf shoe.

Technical Solution

[0013] In order to accomplish the above objective, the present disclosure provides a method for manufacturing a golf shoe, the golf shoe including a sole composed of an outsole and a midsole; and an upper formed on a top portion of the sole, the method including a process of injection molding the midsole; and a process of forming a plurality of protrusions on a front- or rear-side of a lateral surface of the midsole.

Advantageous Effects

[0014] According to an embodiment of the present disclosure, it is possible to remove foreign substances by rubbing a clubface on a protrusion of a midsole, and it is possible to remove foreign substances from the clubface only by the smallest movement, so that the sensation of a practice swing can be maintained without being negatively affected, thus enhancing athletic performance.

Description of Drawings

[0015]

FIG. 1 is a perspective view showing a golf shoe according to a first embodiment,
FIG. 2 is a front view showing the golf shoe according to the first embodiment,
FIG. 3 is an enlarged front view showing the golf shoe according to the first embodiment,
FIG. 4 is an enlarged side view showing the golf shoe according to the first embodiment,
FIG. 5 is an enlarged front view showing various modifications of a midsole of the golf shoe according to the first embodiment,
FIG. 6 is an enlarged view showing the midsole and a protrusion of the golf shoe according to the first embodiment,
FIG. 7 is a perspective view showing a golf shoe according to a third embodiment,
FIG. 8 is a front view showing the golf shoe according to the third embodiment,
FIG. 9 is a diagram showing a golf shoe according to a fourth embodiment,
FIG. 10 is a diagram showing a modification of the fourth embodiment,
FIG. 11 is a bottom view showing a golf shoe according to a fifth embodiment, and
FIG. 12 is a bottom view showing a golf shoe according to a sixth embodiment.

Mode for Invention

[0016] Hereinafter, preferred embodiments will be described in detail with reference to the accompanying drawings.

[0017] Embodiments of the present disclosure will be described in detail such that those skilled in the art can easily practice the present disclosure. However, the present disclosure may be implemented in various ways without being limited to particular embodiments described herein.

[0018] Furthermore, the size or shape of components shown in the drawings may be exaggerated for the clarity and convenience of description. Since terms can be differently defined according to the intention of a user or an operator or customs, these terms should be interpreted as having a meaning that is consistent with the technical spirit of the present disclosure.

[0019] **FIG. 1 is a perspective view showing a golf shoe** according to a first embodiment, FIG. 2 is a front view showing the golf shoe according to the first embodiment, FIG. 3 is an enlarged front view showing the golf shoe according to the first embodiment, FIG. 4 is an enlarged side view showing the golf shoe according to the first embodiment, FIG. 5 is an enlarged front view showing various modifications of a midsole of the golf shoe according to the first embodiment, and FIG. 6 is an enlarged view showing the midsole and a protrusion of the golf shoe according to the first embodiment.

[First Embodiment]

[0020] A method for manufacturing a golf shoe according to the first embodiment includes process a of injection molding a midsole 140, and process b of forming a plurality of protrusions 300 on a front- or rear-side of a lateral surface of the midsole 140. Here, the golf shoe includes a sole 100 composed of an outsole 120 and the midsole 140, and an upper 200 formed on a top portion of the sole 100.

[0021] The midsole 140 is formed by injecting a raw material into a mold of a molding apparatus.

[0022] A plurality of grooves is formed in the mold to form the protrusions 300. Thus, by injecting the raw material into the plurality of grooves, the protrusions 300 may be formed on the outer lateral surface of the midsole 140.

[0023] As shown in FIGS. 1 to 6, the golf shoe A1 according to the first embodiment includes the sole 100 composed of the outsole 120 and the midsole 140, and the upper 200 formed on the top portion of the sole 100. The plurality of protrusions 300 is formed on the front- or rear-side of the outer lateral surface of the midsole 140.

[0024] As shown in FIG. 1, the plurality of protrusions 300 may be formed on the outside of the outer lateral surface of the midsole 140. However, without being necessarily limited thereto, the protrusions 300 may be formed on the outside of a right shoe and the outside of a left shoe.

[0025] One or multiple protrusion(s) 300 may be formed in one row or in multiple rows.

[0026] Referring to FIG. 3, the protrusions 300a, 300b, and 300c are formed to have the same protruding height or

different protruding heights.

[0027] Further, the plurality of protrusions 300 formed in the multiple rows each have a hemi-spherical shape. The protrusion 300a of an upper row and the protrusions 300b and 300c of a low row have different diameters and are formed of materials having different hardness.

[0028] The protrusion 300a of the upper row and the protrusions 300b and 300c of the low row may be formed such that large-diameter protrusions and small-diameter protrusions are mixed.

[0029] The protrusion 300a of the upper row is formed to be smaller in length than the protrusions 300b and 300c of the low row (see FIG. 3).

[0030] Meanwhile, FIG. 5 is an enlarged front view showing various modifications of the midsole 140 and the protrusion 300.

[0031] Referring to FIG. 5(a), a midsole 140a is formed such that a lateral surface thereof is vertical.

[0032] Referring to FIG. 5(b), a midsole 140b is formed such that a lateral surface thereof is inclined downwards. The midsole 140 is formed such that an area thereof is increased in a direction from top to bottom.

[0033] Referring to FIG. 5(c), a midsole 140c is formed such that a lateral surface thereof protrudes convexly in an arc shape.

[0034] The midsole 140c may be formed such that a portion having the protrusion 300 bulges further outwards.

[0035] Of course, it should be noted that the shape of the outer surface of the midsole may be changed in various ways.

[0036] Thus, in the case of a right-handed person, foreign substances may be removed by scratching a clubface (not shown) using the protrusion 300 while slightly lifting the golf shoe of the right foot.

[0037] Meanwhile, as shown in FIG. 11, according to a fifth embodiment, the protrusion 300a is formed long on the outside of the midsole 140 in an arc shape to have a predetermined length.

[0038] The protrusion 300a is formed long in a section ranging from a start portion (portion corresponding to the toe and the upper end of the drawing) to an end portion (portion corresponding to the midsection of the foot and the middle portion of the drawing).

[0039] Preferably, the protrusion 300a is formed adjacent to the midsole while a width thereof is gradually reduced at the start portion or the end portion.

[0040] When seen from the front, the protrusion 300a has on an upper portion thereof a curved surface 301a, so that the protrusion protrudes out towards an end to be pointed, a lower portion thereof being formed horizontally.

[0041] Thus, foreign substances are removed by scratching the clubface using the end of the protrusion 300a.

[0042] Meanwhile, as shown in FIG. 12, according to a sixth embodiment, a plurality of protrusions 300b is formed on the outside of the midsole 140 in a section from the toe to the foot midsection to be spaced apart from each other at a predetermined gap.

[0043] When seen from the front, the protrusion 300b has on an upper portion thereof a curved surface 301b, so that the protrusion protrudes out towards an end to be pointed, a lower portion thereof being formed horizontally.

[0044] Thus, foreign substances are removed by scratching the clubface using the end of the protrusion 300b.

[Second Embodiment]

[0045] A method for manufacturing a golf shoe according to the second embodiment includes a process of injection molding a midsole 140, and a process of forming a plurality of protrusions 300 on a front- or rear-side of a lateral surface of the midsole 140 by double injection molding. Here, the golf shoe includes a sole 100 composed of an outsole 120 and the midsole 140, and an upper 200 formed on a top portion of the sole 100.

[0046] Preferably, the plurality of protrusions 300 is made of a material different from that of the midsole 140. For example, the protrusion 300 may be formed of a material having strength higher than that of the midsole 140.

[0047] As described above, the plurality of protrusions 300 is formed in one row or in multiple rows.

[0048] The plurality of protrusions 300 is formed to have the same protruding height or different protruding heights.

[0049] A golf shoe A2 according to the second embodiment includes the sole 100 composed of the outsole 120 and the midsole 140, and the upper 200 formed on the top portion of the sole 100. The plurality of protrusions 300 formed of a material different from that of the midsole 140 is formed by double injection molding on the front- or rear-side of the outer lateral surface of the midsole 140.

[0050] The plurality of protrusions 300 formed in the multiple rows each have a hemi-spherical shape. The protrusions 300 of an upper row and the protrusions 300 of a low row have different diameters and are formed of materials having different hardness.

[0051] The protrusions 300 of the upper row and the protrusions 300 of the low row may be formed such that large-diameter protrusions and small-diameter protrusions are mixed.

[0052] The protrusion 300 of the upper row is smaller in length than the protrusion of the low row.

[0053] FIG. 5 shows various modifications of the midsole 140 and the protrusion 300.

[0054] Referring to FIG. 5(a), the midsole 140a is formed such that the lateral surface thereof is vertical.

[0055] Referring to FIG. 5(b), the midsole 140b is formed such that the lateral surface thereof is inclined downwards. The midsole 140 is formed such that the area thereof is increased in a direction from top to bottom.

[0056] Referring to FIG. 5(c), the midsole 140c is formed such that the lateral surface thereof protrudes convexly in an arc shape.

[0057] The midsole 140c may be formed such that the portion having the protrusion 300 bulges further outwards.

[0058] Thus, the surface of the clubface may be cleaned by rubbing the clubface (not shown) using the protrusion 300 while slightly lifting the foot.

[0059] Meanwhile, as shown in FIGS. 5 and 6, an arc-shaped part 310 is formed in a curved manner on a portion where an outer surface of the midsole 140 and the protrusion 300 thereof are connected.

[0060] By forming the arc-shaped part 310 as such, foreign substances may not adhere to the protrusion 300 and may be easily removed therefrom.

[0061] Furthermore, a vent hole 330 is formed in the protrusion 300, and an air passage 320 is formed to pass through the midsole 140 and an insole 150, thus allowing ventilation while walking.

[0062] Thus, when foot is set on the ground, internal air is discharged through the air passage 320 and the vent hole 330, so that foreign substances on the protrusion 300 may be removed by blowing the air.

[Third Embodiment]

[0063] A method for manufacturing a golf shoe according to a third embodiment includes a first process of injection molding a midsole 140; and a second process of planting brushes 500 into a front- or rear-side of a lateral surface of the midsole 140 before the midsole 140 is cured. Here, the golf shoe includes a sole 100 composed of an outsole 120 and the midsole 140, and an upper 200 formed on a top portion of the sole 100.

[0064] As shown in FIGS. 7 and 8, a golf shoe A3 according to the third embodiment includes the sole 100 composed of the outsole 120 and the midsole 140, and the upper 200 formed on the top portion of the sole 100.

[0065] The brushes 500 are formed on a front- or rear-side of an outer lateral surface of the midsole 140.

[0066] Preferably, the brushes 500 are formed in different thicknesses and lengths.

[0067] Thus, the surface of the clubface may be cleaned by rubbing the clubface (not shown) using the brushes 500 while slightly lifting the foot.

[Fourth Embodiment]

[0068] A method for manufacturing a golf shoe according to a fourth embodiment includes a first process of forming a hole 142 in a lateral surface of a midsole 140; and a second process of fitting a protrusion member 600 into the hole 142. Here, the golf shoe includes a sole 100 composed of an outsole 120 and the midsole 140, and an upper 200 formed on a top portion of the sole 100.

[0069] As shown in FIG. 9, a golf shoe A4 according to the fourth embodiment includes the sole 100 composed of the outsole 120 and the midsole 140, and the upper 200 formed on the top portion of the sole 100. A plurality of protrusion members 600 is detachably coupled to an outer lateral surface of the midsole 140.

[0070] Meanwhile, as shown in FIG. 9, each protrusion member 600 includes a pointed conical part 620 fitted into the hole 142, and a hemi-spherical projecting part 630 formed on another side of the conical part 620. A plurality of brushes 640 is planted into an outer surface of the hemi-spherical projecting part 630.

[0071] Thus, the surface of the clubface may be cleaned by rubbing the clubface (not shown) using the brushes 640 while slightly lifting the foot.

[0072] Meanwhile, as shown in FIG. 10, according to another embodiment, the protrusion member 600 may include a plate member 650 having on one side surface thereof a plurality of fitting tips 652 that each are fitted into the hole 142, and a plurality of brushes 640 formed on the other side surface of the plate member 650.

[0073] Therefore, the surface of the clubface may be cleaned by rubbing a clubface (not shown) held in the right hand using the brushes 640 while slightly lifting the golf shoe of the right foot.

[0074] While the present disclosure has been described with reference to preferred embodiments, it is apparent to those skilled in the art that these embodiments have been described for illustrative purposes, and various changes and modifications may be made without departing from the spirit and scope of the present disclosure as defined by the appended claims.

* Description of reference numerals of important parts

100 :	sole	120 :	outsole
140 :	midsole	200 :	upper
300 :	protrusion	300a, 300b, 300c :	protrusion

(continued)

320 :	air passage	330 :	vent hole
500 :	brush	600 :	protrusion member
620 :	conical part	630 :	projecting part
640 :	brush		

Claims

1. A method for manufacturing a golf shoe, the golf shoe comprising a sole including an outsole and a midsole; and an upper formed on a top portion of the sole, the method comprising:

   process a of injection molding the midsole; and
   process b of forming a plurality of protrusions on a front- or rear-side of a lateral surface of the midsole.

2. The method of claim 1, wherein the plurality of protrusions is formed with the midsole by double injection molding, and the plurality of protrusions is made of a material different from that of the midsole.

3. A golf shoe, comprising:

   a sole including an outsole and a midsole; and an upper formed on a top portion of the sole,
   wherein a protrusion is formed on a front- or rear-side of an outer lateral surface of the midsole.

4. The golf shoe of claim 3, wherein the protrusion comprises a plurality of protrusions, or is formed in one row or in multiple rows, and
   the plurality of protrusions is formed to have the same protruding height or different protruding heights.

5. The golf shoe of claim 3, wherein the midsole is formed in any one shape selected from a shape in which a lateral surface of the midsole is vertical, a shape in which the lateral surface of the midsole is inclined downwards, and a shape in which the lateral surface of the midsole protrudes convexly in an arc shape.

6. The golf shoe of claim 3, wherein an arc-shaped part is formed in a curved manner on a portion where an outer surface of the midsole and the protrusion thereof are connected, and
   a vent hole is formed in the protrusion, and an air passage is formed to pass through the midsole and an insole, thus allowing ventilation while walking.

7. A method for manufacturing a golf shoe, the golf shoe comprising a sole including an outsole and a midsole; and an upper formed on a top portion of the sole, the method comprising:

   a first process of injection molding the midsole; and
   a second process of planting a brush into a front- or rear-side of a lateral surface of the midsole before the midsole is cured.

8. A golf shoe, comprising:

   a sole including an outsole and a midsole; and an upper formed on a top portion of the sole,
   wherein a brush is formed on a front- or rear-side of an outer lateral surface of the midsole.

9. The golf shoe of claim 8, wherein the brush is formed in different thickness and length.

10. A method for manufacturing a golf shoe, the golf shoe comprising a sole including an outsole and a midsole; and an upper formed on a top portion of the sole, the method comprising:

    a first process of forming a hole in a lateral surface of the midsole; and
    a second process of fitting a protrusion member into the hole.

11. A golf shoe, comprising:

a sole including an outsole and a midsole; and an upper formed on a top portion of the sole,
wherein a protrusion member is detachably coupled to an outer lateral surface of the midsole.

12. The golf shoe of claim 11, wherein the protrusion member comprises a pointed conical part fitted into the hole, and a hemi-spherical projecting part formed on a second side of the conical part, and
a plurality of brushes is planted into an outer surface of the hemi-spherical projecting part.

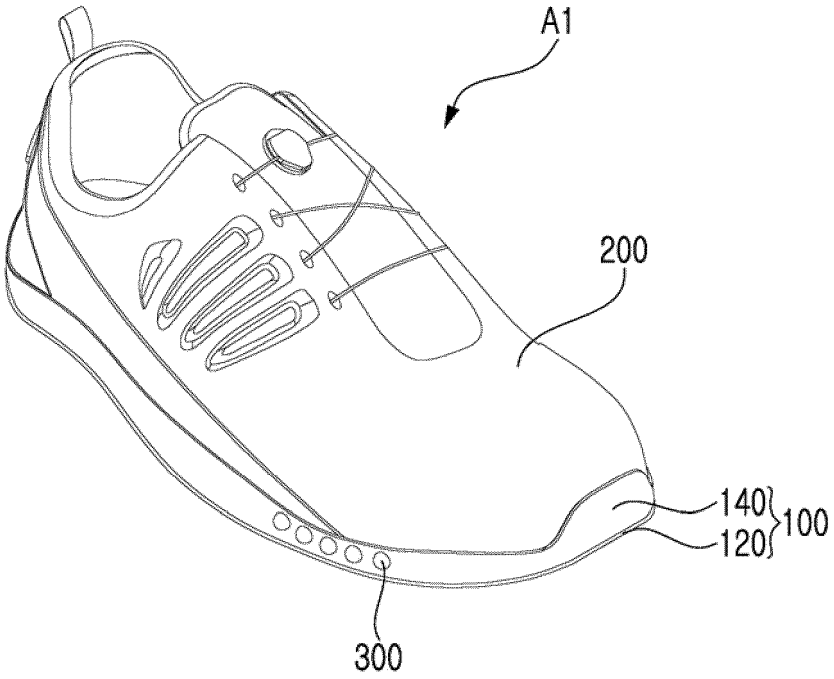
13. The golf shoe of claim 11, wherein the protrusion member comprises:

a plate member having on a first side surface thereof a plurality of fitting tips that each are fitted into the hole; and
a plurality of brushes formed on a second side surface of the plate member.

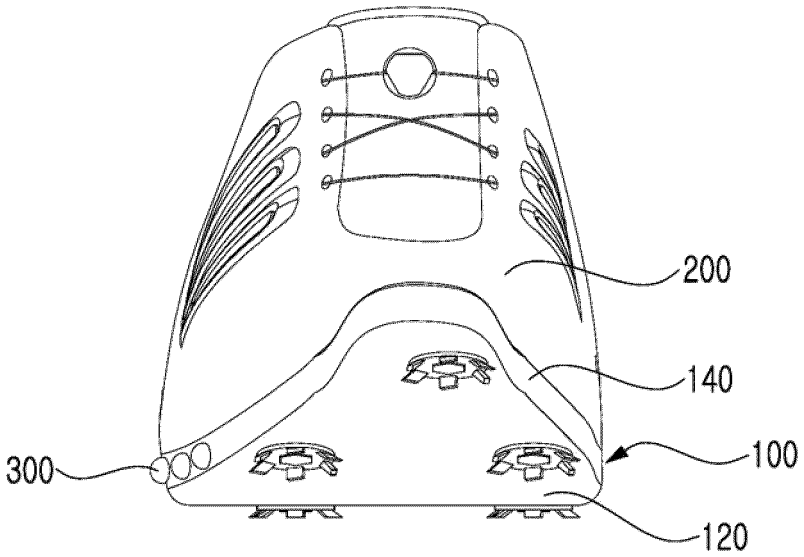
14. The golf shoe of claim 3, wherein the protrusion is formed long on an outside of the midsole in an arc shape,
the protrusion is formed in a section ranging from a start portion to an end portion,
the protrusion is formed adjacent to the midsole while a width thereof is gradually reduced at the start portion or the end portion, and
the protrusion has on an upper portion thereof a curved surface, so that the protrusion protrudes out towards an end to be pointed, a lower portion of the protrusion being formed horizontally.

15. The golf shoe of claim 3, wherein the protrusion comprises a plurality of protrusions formed on the outside of the midsole in a section from the toe to a foot midsection to be spaced apart from each other at a predetermined gap, and
the protrusion has on an upper portion thereof a curved surface, so that the protrusion protrudes out towards an end to be pointed, a lower portion thereof being formed horizontally.

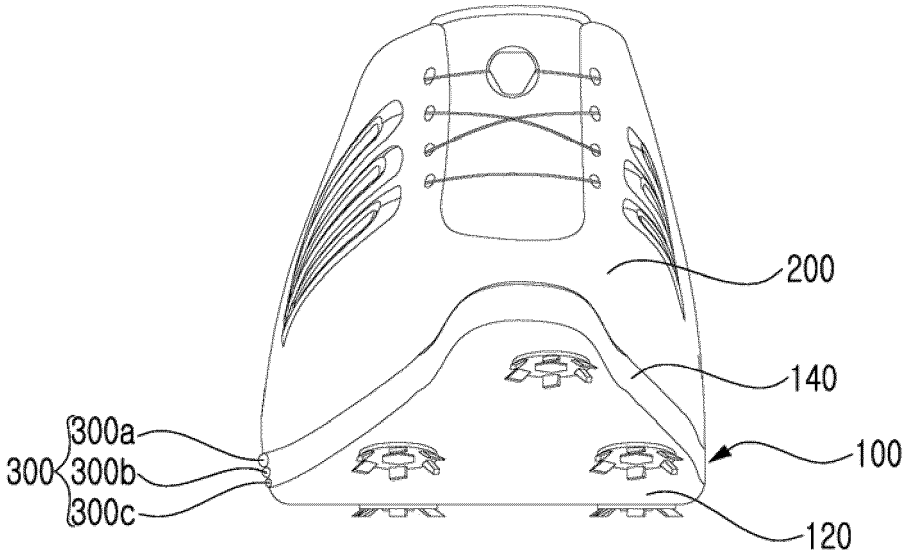
[Fig. 1]



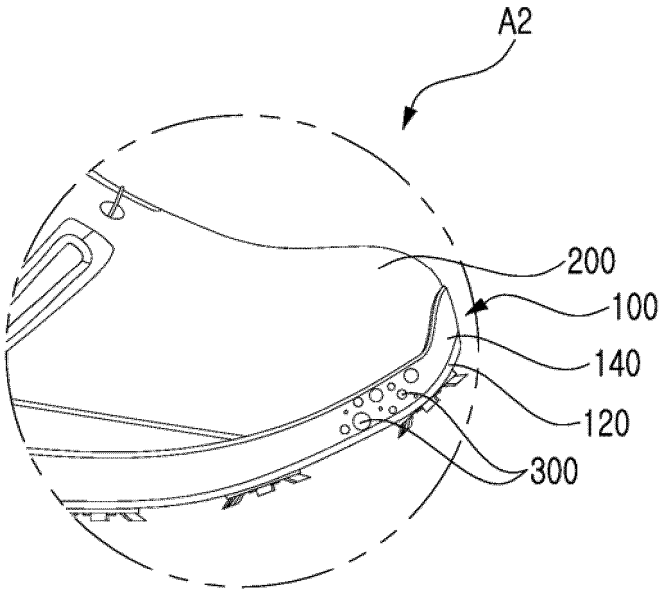
[Fig. 2]



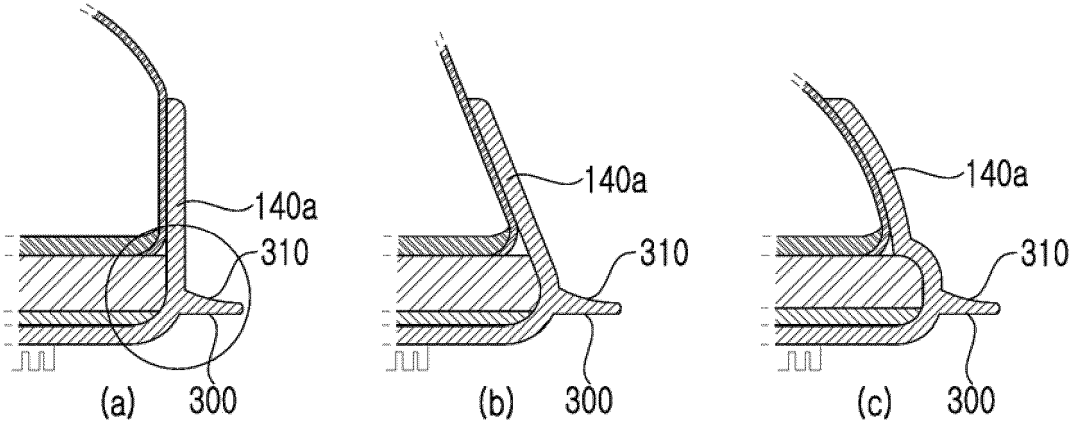
[Fig. 3]



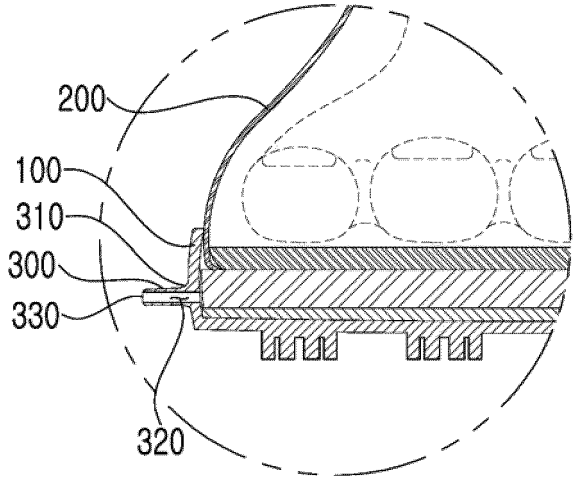
[Fig. 4]


A2
200
100
140
120
300

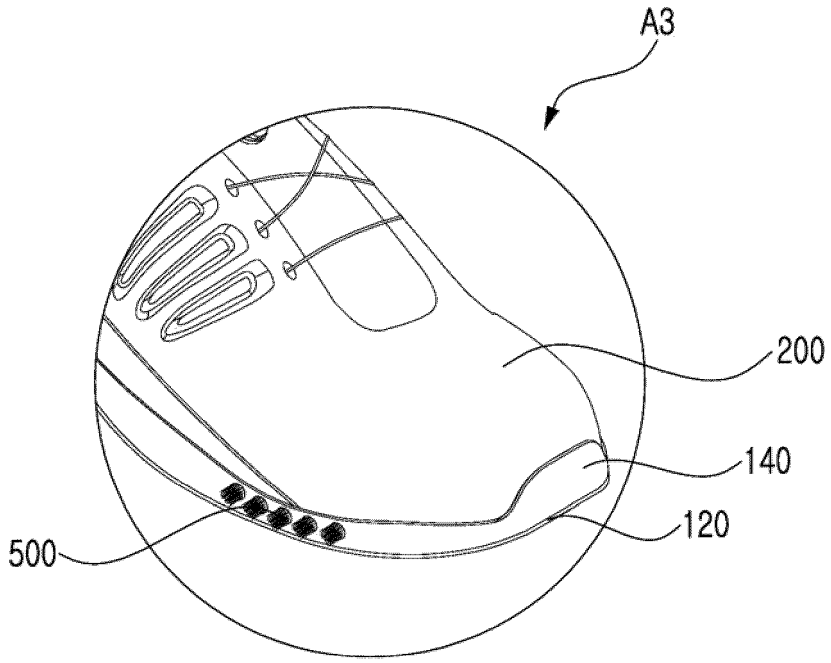
[Fig. 5]


140a
310
300
(a)
140a
310
300
(b)
140a
310
300
(c)

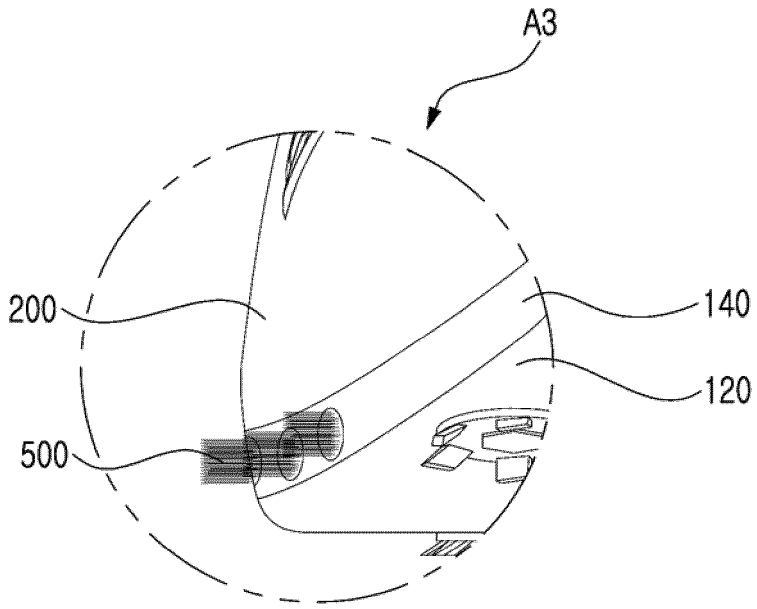
[Fig. 6]



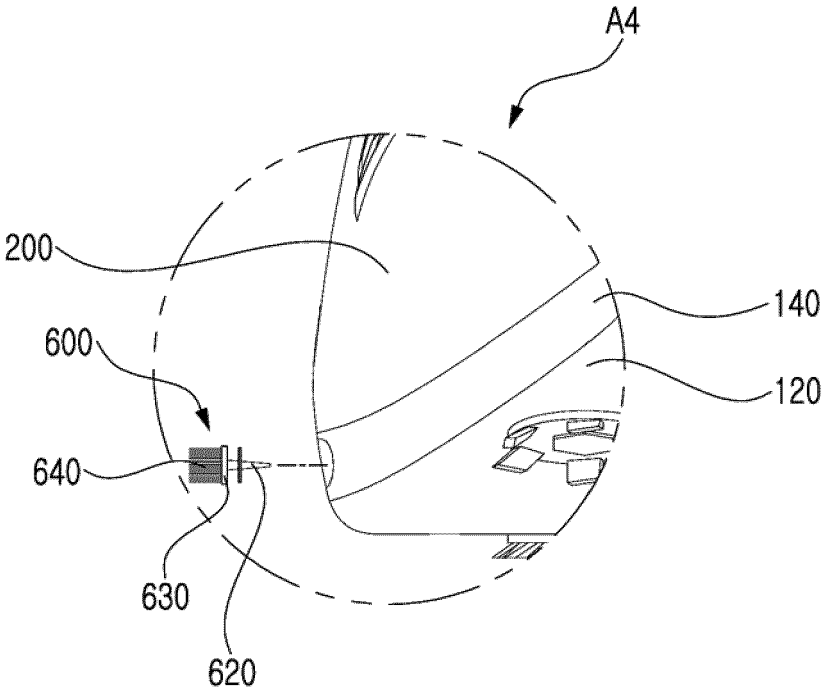
[Fig. 7]



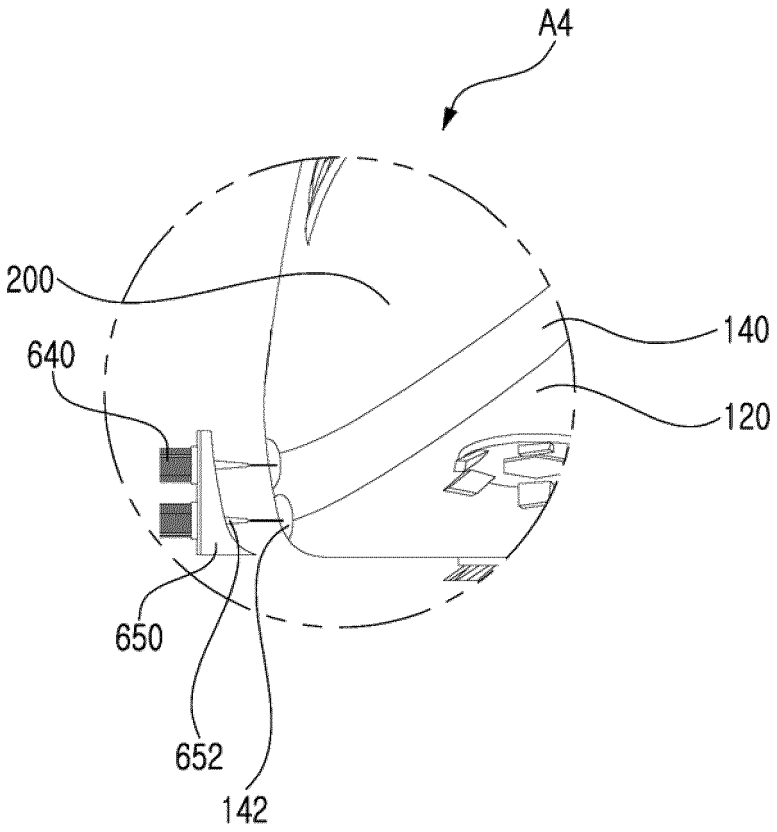
[Fig. 8]



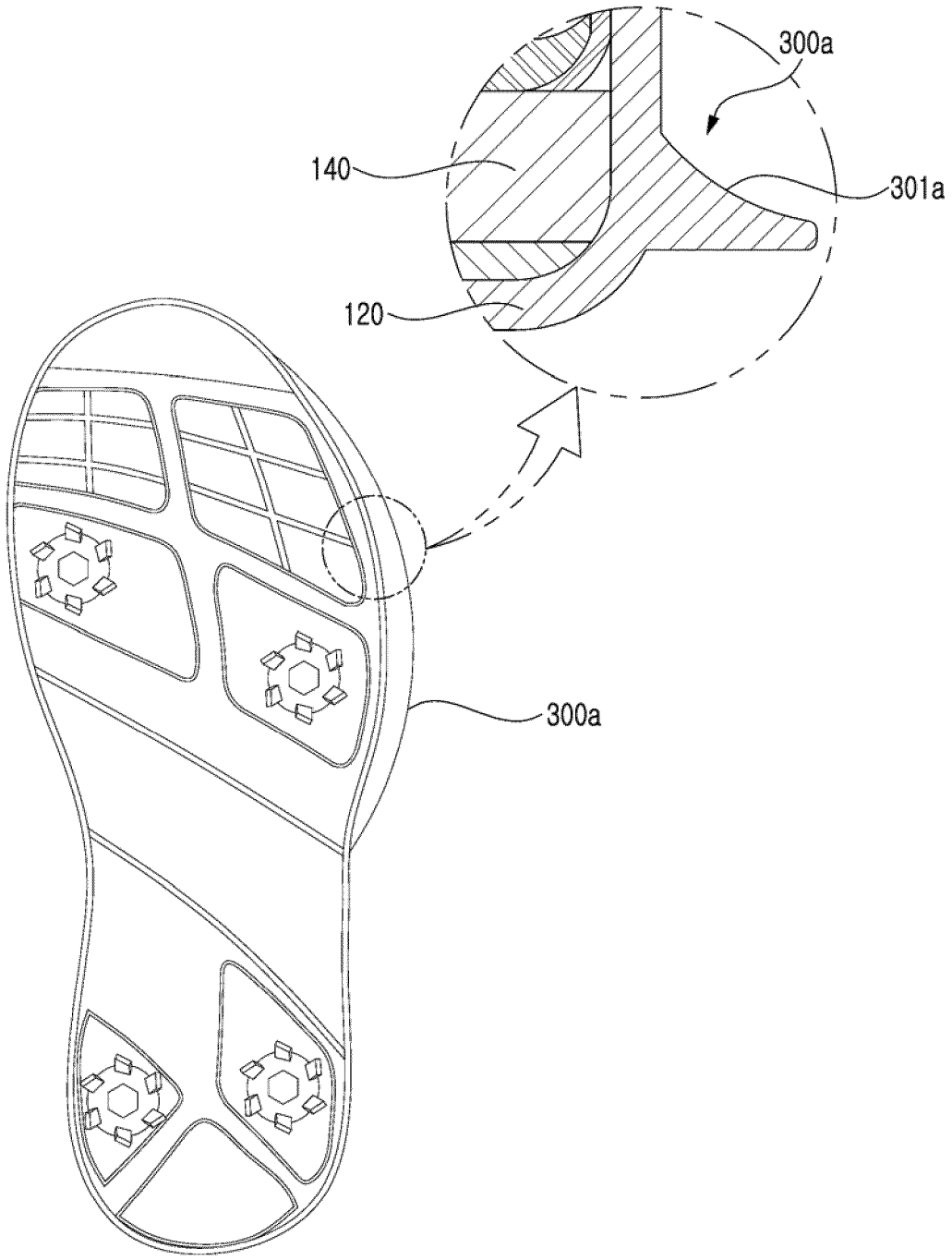
[Fig. 9]



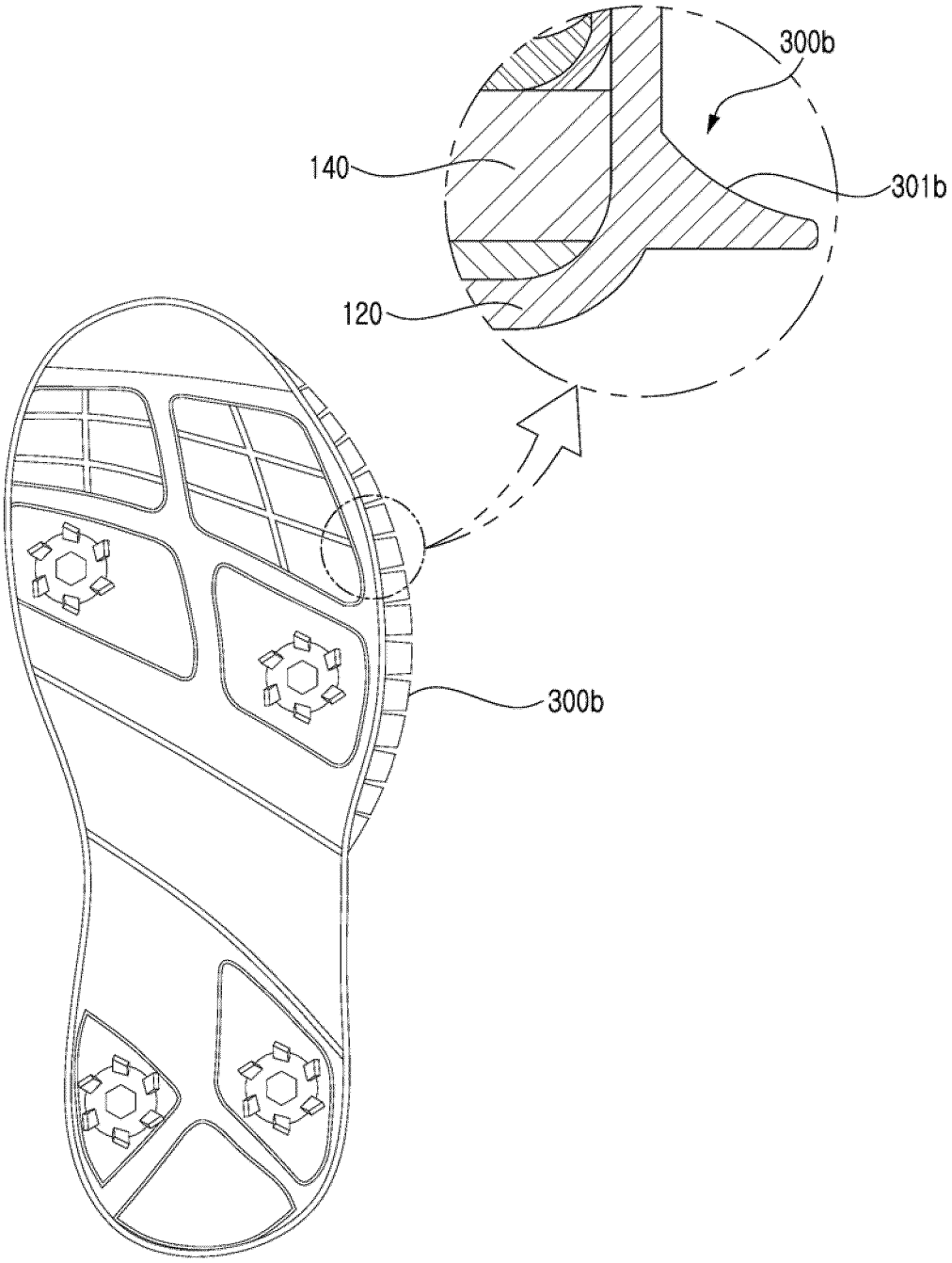
[Fig. 10]



[Fig. 11]



[Fig. 12]



INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2018/014065

A. CLASSIFICATION OF SUBJECT MATTER

A43B 5/00(2006.01)i, A43C 15/18(2006.01)i, A43C 17/00(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 5/00; A43B 13/14; A43B 13/20; A43B 7/06; A43B 7/32; A63B 69/36; A43C 15/18; A43C 17/00

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: golf shoes, protrusion, foreign object removal, cleaning

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP 2006-015092 A (ABANTEI K.K.) 19 January 2006 See abstract, claim 1 and figures 3-4.	3-5,14-15
A		6
A	KR 10-0630811 B1 (MCKENLY INTERNATIONAL CORP.) 04 October 2006 See claim 4 and figures 2-3.	3-6,14-15
A	US 2006-0283049 A1 (HUSEB, Steven Stuart) 21 December 2006 See claim 1 and figure 1.	3-6,14-15
A	US 5477626 A (KWON, Joong T.) 26 December 1995 See claim 1 and figure 1.	3-6,14-15
A	KR 10-0741628 B1 (YANG, Hee Woon) 23 July 2007 See claim 1 and figure 1.	3-6,14-15

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"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
24 MAY 2019 (24.05.2019)	**24 MAY 2019 (24.05.2019)**
Name and mailing address of the ISA/KR Korean Intellectual Property Office Government Complex Daejeon Building 4, 189, Cheongsa-ro, Seo-gu, Daejeon, 35208, Republic of Korea Facsimile No. +82-42-481-8578	Authorized officer Telephone No.

Form PCT/ISA/210 (second sheet) (January 2015)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2018/014065

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

Claims 1-2, which correspond to the invention of group 1, pertain to golf shoes manufacturing method 1,
Claims 3-6 and 14-15, which correspond to the invention of group 2, pertain to golf shoes 1,
Claim 7, which corresponds to the invention of group 3, pertains to golf shoes manufacturing method 2,
Claims 8-9, which correspond to the invention of group 4, pertain to golf shoes 2,
Claim 10, which corresponds to the invention of group 5, pertains to golf shoes manufacturing method 3,
Claims 11-13, which correspond to the invention of group 6, pertain to golf shoes 3.

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
claims 3-6, 14-15

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

Form PCT/ISA/210 (continuation of first sheet (2)) (January 2015)

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/KR2018/014065

Patent document cited in search report	Publication date	Patent family member	Publication date
JP 2006-015092 A	19/01/2006	None	
KR 10-0630811 B1	04/10/2006	KR 10-2004-0098940 A	26/11/2004
US 2006-0283049 A1	21/12/2006	None	
US 5477626 A	26/12/1995	JP 07-246104 A	26/09/1995
		KR 10-1996-0016572 B1	16/12/1996
		US 6135133 A	24/10/2000
KR 10-0741628 B1	23/07/2007	EP 1955607 A1	13/08/2008
		EP 1955607 B1	05/09/2012
		JP 2008-188409 A	21/08/2008
		US 2008-0184600 A1	07/08/2008
		US 7712229 B2	11/05/2010

Form PCT/ISA/210 (patent family annex) (January 2015)