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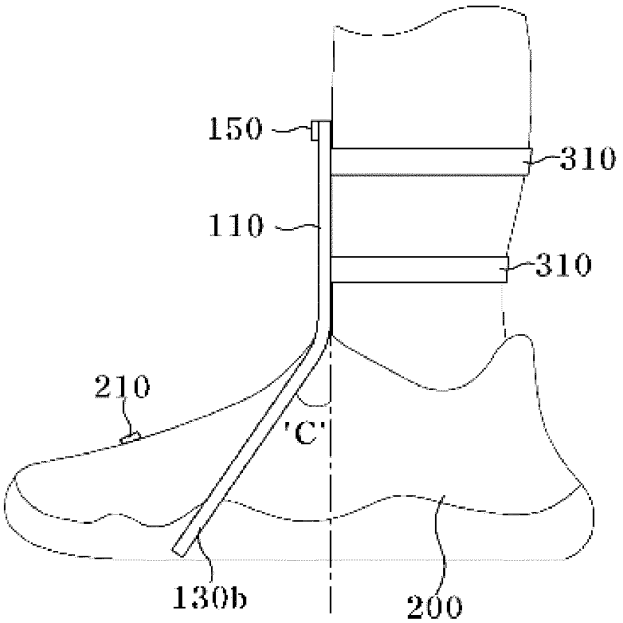
(54) **FLIPPERS WORN WITH SHOES**

(57) The present invention provides flippers worn with shoes including: a fin portion including a body worn on the front of a shin of a user and formed in a plate shape, and an instep seating portion formed to be cut upward from a center of a lower side of the body, one or more bands coupled to a side of the body in a direction perpendicular to a longitudinal direction of the body, and a pair of first fastening devices each coupled to both ends of the band to be fastened with each other.

【FIG 2】



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Description

[Technical Field]

[0001] The present disclosure relates to flippers worn with shoes during swimming.

[Background Art]

[0002] Flippers are equipment worn on feet during swimming or marine leisure activities such as skin scuba diving, and users use their legs and feet to stir their flippers to gain propulsion in the water.

[0003] As illustrated in Fig. 1, a flipper includers a shoe portion 2 which is formed in a form of a shoe so that a user can insert the flipper into a foot of the user and fix the flipper to a body, and a fin portion 1 which is integrally formed with the shoe portion 2 and has a flat plate shape extending in a direction of a toe.

[0004] When the user stirs the flippers in the water using legs and feet of the user, the fin portion 1 having a flat plate shape receives drag and lift by the water, and thus gains propulsion, the user can move forward in the water.

[0005] In order to obtain the propulsion, there should be the flat plate-shaped fin portion larger than a set area that can receive drag by water, and the flat plate-shaped fin portion 1 is located widely on a floor when the user wears the flipper. Accordingly, it is inconvenient for the user walks with wearing the flippers. In particular, it is difficult to the user walks with wearing flippers when playing in the water in a valley or on a seashore, and there are problems such as a risk of slipping.

[Disclosure]

[Technical Problem]

[0006] Accordingly, an object of the present disclosure is to provide flippers that can be easily walked on a beach or valley and can act as fins in water.

[Technical Solution]

[0007] According to an aspect of the present disclosure, there is provided flippers worn with shoes including: a fin portion including a body worn on the front of a shin of a user and formed in a plate shape, and an instep seating portion formed to be cut upward from a center of a lower side of the body;

[0008] one or more bands coupled to a side of the body in a direction perpendicular to a longitudinal direction of the body; and a pair of first fastening devices each coupled to both ends of the band to be fastened with each other.

[0009] The flippers worn with shoes may further include a shoe portion seated on the instep seating portion and coupled thereto, in which second fastening devices disposed on both side surfaces of the shoe portion and configured to be fastened with the pair of first fastening device may be coupled.

[0010] A plurality of protrusions may be provided to form a groove on a front surface of the body of the fin portion in the longitudinal direction.

[0011] The shoe portion may be any one of aqua shoes or sandals.

[0012] The entire outline of the fin portion may be formed in a trapezoidal shape having a short upper side, and the instep seating portion may be formed in a corresponding shape so that the shoe portion is inserted into the instep seating portion.

[0013] The fin portion may include a fold line perpendicular to the longitudinal direction of the body.

[0014] When the fin portion is folded along the fold line, the pair of first fastening devices may be coupled to the pair of second fastening devices.

[Advantageous Effects]

[0015] The present invention is to solve the above problems. That is, according to the present invention, the fin portion is detachably fastened to a shoe, and thus there is no hassle of wearing and taking off before and after entering water. In addition, there is no inconvenience of walking and acting by wearing the flippers for a purpose of protecting a foot or working before entering water. Moreover, there is an effect of serving a double purpose such as acceleration of underwater work and underwater movement, and underwater action, as well as protection of feet after entering water. In particular, the flipper is easy to walk in a valley or on a seashore, the flipper has an area that can receive sufficient resistance to water from the fin portion in the water, and thus, it is possible to obtain a propulsion force. Moreover, the flipper can be used according to the function by changing the shape into a shoe shape or flippers shape with a simple operation as needed when working underwater or walking underwater.

[Description of Drawings]

[0016]

FIG. 1 is a view illustrating general flippers.

FIG. 2 is a side view illustrating a state of wearing flippers worn with shoes according to one embodiment of the present disclosure.

FIG. 3 is a front view illustrating a fin portion of the flippers worn with shoes according to one embodiment of the present disclosure.

FIG. 4 is a cross-sectional view illustrating a cross section taken along line A-A of FIG. 3.

FIG. 5 is a side view illustrating a folded state of the fin portion of the flippers worn with the shoe according to one embodiment of the present disclosure.

FIG. 6 is a view illustrating a state when swimming

with flippers worn with shoes according to one embodiment of the present disclosure.

[Mode for Disclosure]

[0017] Hereinafter, Flippers worn with shoes according to the present disclosure for achieving such an object can be used as a flipper function by wearing a plate-shaped fin portion on the front of a shin, or can accommodate the flipper by folding a portion of the fin portion on a foot of a shoe. Accordingly, the flippers can be easily used both in and out of water.

[0018] Hereinafter, a preferred embodiment of the present disclosure will be described in detail with reference to the accompanying drawings.

[0019] FIG. 2 is a side view illustrating a state of wearing flippers worn with shoes according to one embodiment of the present disclosure, FIG. 3 is a front view illustrating a fin portion of the flippers worn with shoes according to one embodiment of the present disclosure, and FIG. 4 is a cross-sectional view illustrating a cross section taken along line a-a of FIG. 3.

[0020] Each of the flippers worn with the shoe according to the embodiment of the present disclosure includes a fin portion 100, a shoe portion 200, and a fastening portion 300.

[0021] The fin portion 100 is worn on the front of a shin of a user, and the entire outline of a body 110 is formed in a trapezoidal plate shape having a short upper side. A height of the trapezoidal body 110 should be formed smaller than a height of a knee bone when wearing a shoe. If the height of the body 110 is higher than the height of the knee bone, it may cause discomfort to walk when folded. The height of the body 100 is similar to a height of the shoe, but may be set to a height that does not interfere with walking. It is confirmed that lift is generated even with a width of the fin placed on the left and right sides of the shoe. The body 110 is cut upward from a center of the lower side of the trapezoidal shape to a size corresponding to the width of the shoe portion 200 to form the instep seating part 120. The instep seating portion 120 has a width corresponding to the width of the shoe portion 200, and a height thereof is set to correspond to a height of an instep of the shoe portion 200, and thus the shoe portion 200 is coupled with the fin portion 100 in a state in which a position corresponding to the instep is inserted into the instep seating portion 120. An end portion of the instep seating portion 120 is coupled to the shoe portion 200 using an adhesive or sewing. Side portions 130a and 130b are formed on both sides of the instep seating portion 120 so as to generate a propulsive force using the resistance of water together with the shoe portion 200 by being positioned on both sides of the shoe portion 200. The fin portion body 110 includes a plurality of protrusions 140 to form a groove along a longitudinal direction. The protrusion 140 may guide a flow of water to reduce on a drag applied to the fin pin portion 110 when the user paddles with feet in water with wearing the flippers. This reduces burden on the ankles and legs of the user and reduces risk of fatigue and injury. Meanwhile, a fold line 111 is formed to be perpendicular to a longitudinal direction of the body 110 of the fin portion 110. The fold line 111 has a thickness smaller than that of other portions of the body 110. Accordingly, the fin portion body 110 is folded to be perpendicular to the longitudinal direction and can be attached and folded to the shoe portion 200. A first adhesive member 150 is formed at a center of a front upper end of the fin portion body 110, and preferably, a second adhesive member 210 is formed, which is adhered to the first adhesive member 150 at a position meeting an upper end when the body 110 of the shoe portion 200 is folded.

[0022] Meanwhile, referring to FIG. 4 which is a cross-sectional view taken along line A-A of FIG. 3, in the fin portion 100, a center portion of the body 110 in the longitudinal direction is recessed, that is, a portion where the body 110 meets the shin when wearing the flipper is recessed. Accordingly, it is possible to prevent the fin portion body 110 from turning after wearing the flipper, and provide a good fit.

[0023] Preferably, the fin portion of the flipper according to the embodiment of the present disclosure uses a medium material rather than hard or soft material. It should be light when worn, and it is desirable to be made of a material that can minimize water resistance while creating propulsion.

[0024] The shoe portion 200 may be sandals, aqua shoes, and sports shoes. A scope of the present disclosure is not limited by shapes of the drawings. Since the flipper function is used in water, it is preferable to apply sandals or aqua shoes as the shoe portion 200. It is preferable that the shoe portion 200 includes a second fastening device 330 described later on both sides.

[0025] The fastening portion 300 includes a band 310, first fastening devices 320 which are coupled to both ends of the band 310, and second fastening devices 30 which are formed in a shape corresponding to each of the first fastening devices 320 and fastened. Each of the first fastening device 320 and the second fastening device 330 may use a buckle, but the scope of the right is not limited thereto. As illustrated in FIG. 2, the band 310 is coupled to at least one position where the body 110 of the fin portion 100 meets the shin when wearing. The band 310 may be coupled to a front or rear surface of the body 110, or may be coupled to a side end thereof. A plurality of bands 310 may be coupled to be firmly coupled a calf of the user. The first fastening devices 320 are respectively coupled to both ends of the band 310, and the first fastening devices 320 may be arranged corresponding to male and female so that they can be coupled to each other. The second fastening devices 330 are disposed on both sides of the shoe portion 200 and are arranged by male and female settings so as to be coupled to the first fastening device 320, respectively.

[0026] FIG. 5 illustrates a state in which the body 110 of the fin portion 100 of the flipper according to one em-

bodiment of the present disclosure is folded. The body 110 is folded along the folding wire 111 to reach the instep of the shoe portion 200. The first adhesive member 150 of the body 110 and the second adhesive member 210 of the shoe portion 200 corresponding to each other are coupled to prevent the fin portion body 110 from moving when walking. In addition, the first fastening device 320 coupled to an end portion of the band 310 coupled to the body 110 is combined with the second fastening device 330 formed on the shoe portion 200, and thus, discomfort is avoided when walking with wearing the flipper. Meanwhile, when the flippers are worn for use, the first fastening devices 320 at both ends of the band 310 may be coupled to each other to wrap around the calf of the user as illustrated in FIG. 2.

[0027] According to another embodiment of the present disclosure, when a length of the body 110 is set to correspond to the height of the shoe, and when the body 110 is used as the flipper, the body 110 can be used without fastening the body 110 to the calf with a separate fastening device.

[0028] FIG. 6 is a view illustrating a state when swimming with the flippers worn with shoes according to one embodiment of the present disclosure. When performing a kick during swimming, the fin portion 100 is disposed as illustrated, and thus the fin portion receives the lift of water according to the movement of the foot and generates a propulsive force.

[0029] According to the flipper configured as described above, the fin portion is detachably fastened to a shoe, and thus there is no hassle of wearing and taking off before and after entering water. In addition, there is no inconvenience of walking and acting by wearing the flippers for a purpose of protecting a foot or working before entering water. Moreover, there is an effect of serving a double purpose such as acceleration of underwater work and underwater movement, and underwater action, as well as protection of feet after entering water. In particular, the flipper is easy to walk in a valley or on a seashore, the flipper has an area that can receive sufficient resistance to water from the fin portion in the water, and thus, it is possible to obtain a propulsion force. Moreover, the flipper can be used according to the function by changing the shape into a shoe shape or flippers shape with a simple operation as needed when working underwater or walking underwater.

Claims

1. Flippers worn with shoes comprising:

   a fin portion including a body worn on the front of a shin of a user and formed in a plate shape, and an instep seating portion formed to be cut upward from a center of a lower side of the body;
   one or more bands coupled to a side of the body in a direction perpendicular to a longitudinal direction of the body; and
   a pair of first fastening devices each coupled to both ends of the band to be fastened with each other.

2. The flippers worn with shoes of claim 1, further comprising:

   a shoe portion seated on the instep seating portion and coupled thereto,
   wherein second fastening devices disposed on both side surfaces of the shoe portion and configured to be fastened with the pair of first fastening device are coupled.

3. The flippers worn with shoes of claim 1, wherein a plurality of protrusions are provided to form a groove on a front surface of the body of the fin portion in the longitudinal direction.

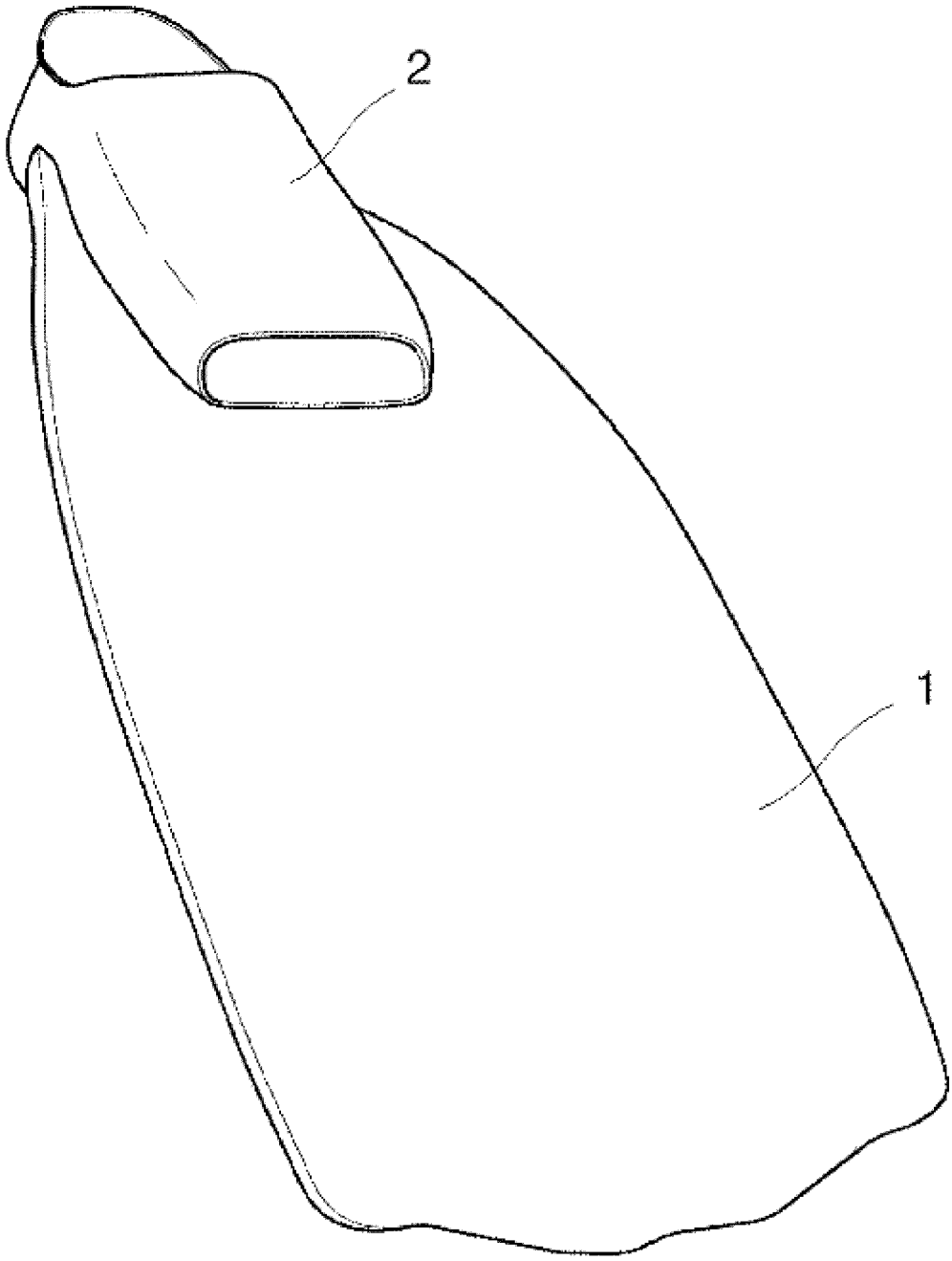
4. The flippers worn with shoes of claim 2, wherein the shoe portion is any one of aqua shoes or sandals.

5. The flippers worn with shoes of claim 2, wherein the entire outline of the fin portion is formed in a trapezoidal shape having a short upper side, and the instep seating portion is formed in a corresponding shape so that the shoe portion is inserted into the instep seating portion.

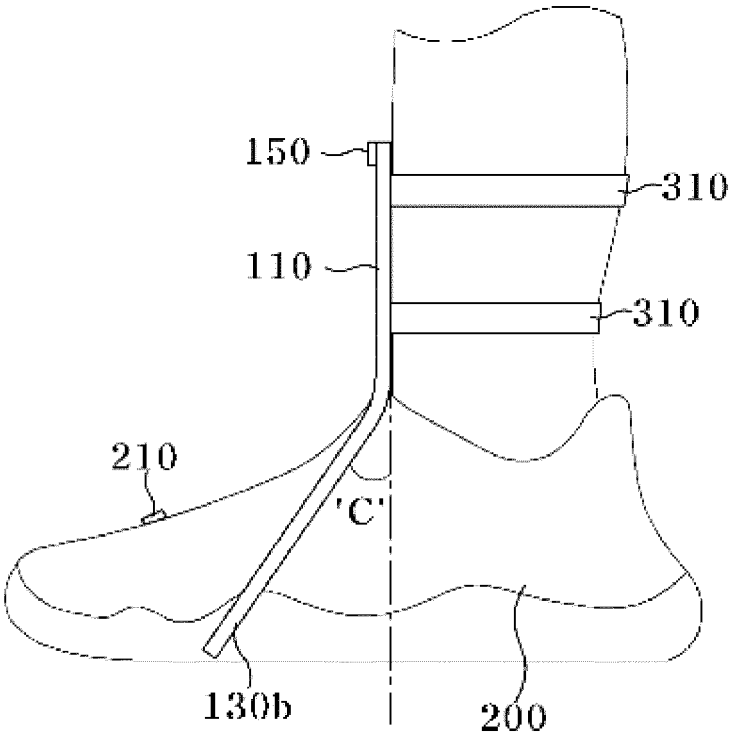
6. The flippers worn with shoes of claim 2, wherein the fin portion includes a fold line perpendicular to the longitudinal direction of the body.

7. The flippers worn with shoes of claim 6, wherein when the fin portion is folded along the fold line, the pair of first fastening devices is coupled to the pair of second fastening devices.

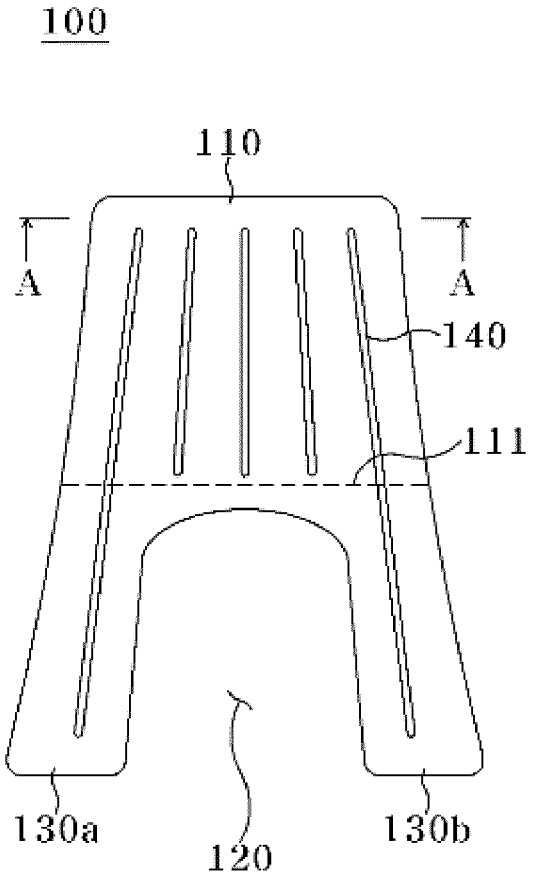
【FIG 1】



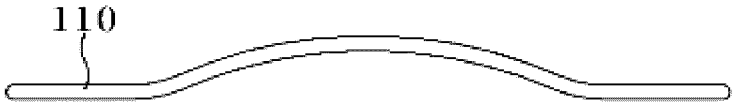
【FIG 2】



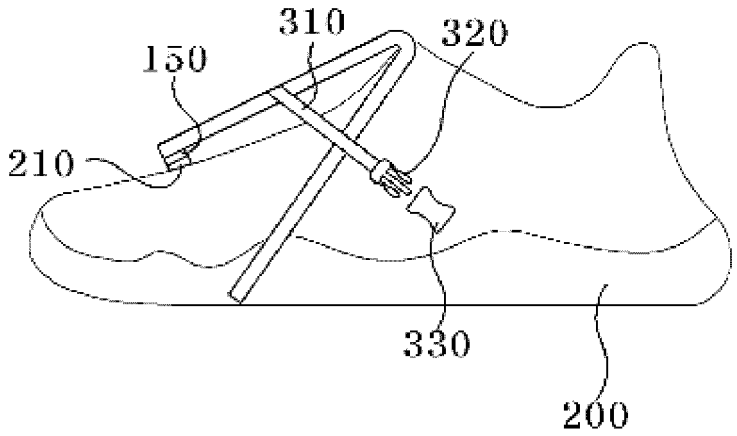
【FIG 3】



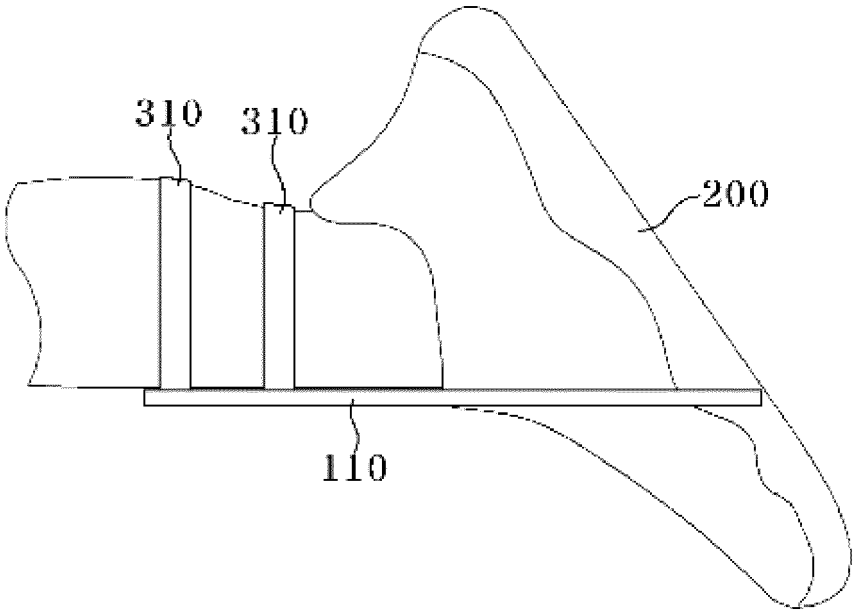
【FIG 4】



【FIG 5】



【FIG 6】



INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2019/010599

A. CLASSIFICATION OF SUBJECT MATTER

A43B 3/24(2006.01)i, A43B 5/08(2006.01)i, A63B 31/08(2006.01)i, A43B 3/12(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 3/24; A43B 3/12; A43B 5/08; A63B 31/00; A63B 31/08; A63B 31/11; A63B 31/12

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: flipper, shoes, assemble, plate, band

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 7285030 B1 (HOUCK, Michael) 23 October 2007 See claims 1-3 and figures 1-4.	1-7
A	KR 10-2007-0021354 A (KC MOLD CO., LTD.) 23 February 2007 See claims 1-4 and figure 2.	1-7
A	JP 2002-514484 A (HOPPER, William J.) 21 May 2002 See claims 1-22 and figures 1-7.	1-7
A	KR 20-1999-0037092 U (PARK, Keun Sung) 05 October 1999 See claims 1-8 and figures 1-4.	1-7
A	KR 10-2013-0088340 A (CHO, Sung Hyun) 08 August 2013 See claims 1-2 and figure 6.	1-7
PX	KR 10-2007892 B1 (CHO, Guk) 06 August 2019 See claims 1-5. *The above document is the registered document for the priority of the present PCT application(KR).	1-7

☐ 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
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"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 NOVEMBER 2019 (27.11.2019)	**02 DECEMBER 2019 (02.12.2019)**
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
Information on patent family members

International application No.
PCT/KR2019/010599

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KR 10-2013-0088340 A	08/08/2013	None	
KR 10-2007892 B1	06/08/2019	None	

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