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(54) **A shoe and a flipper set-up**

(57) A shoe, in particular a beach shoe, and a flipper set-up, which shoe has a sole portion, and which flipper set-up comprises a fin part and a fixing part, said sole portion comprising first connecting members and said fixing part comprising second connecting members, said first and second connecting members together forming a releasable connecting mechanism permitting said flipper set-up to be releasable secured to said shoe, characterized in that said sole portion has two side portions, said first connecting members being formed by first rails, which first rails extend along said two side portions, said fixing part comprises a pair of arm members forming a bay, said second connecting member being formed by second rails, which second rails extend along said bay, said first and second rails being slidably engageable with each other so as to enable the shoe to slide into the flipper set-up.

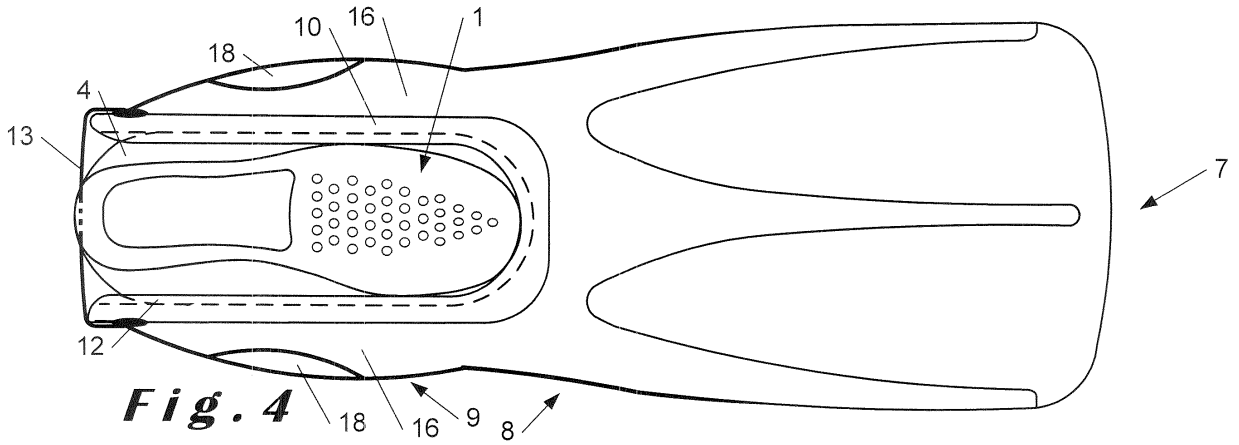

Fig. 4

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Description

[0001] The present invention relates to a shoe, in particular a beach shoe, and a flipper set-up, which shoe has a sole portion, and which flipper set-up comprises a fin part and a fixing part, said sole portion comprising first connecting members and said fixing part comprising second connecting members, said first and second connecting members together forming a releasable connecting mechanism permitting said flipper set-up to be releasable secured to said shoe.

[0002] Beach shoes are typically worn by people spending their holiday on the coast. They allow those people to comfortably walk on hot and sandy or rocky beaches while they prevent them from hurting their feet. Therefore these shoes have a sole portion and an upper portion and are made from a water-resistant material.

[0003] Flippers are typically worn by swimmers and those engaged in snorkeling and scuba diving in order to provide means to increase their rate of propulsion through the water. Most commonly flippers comprise a blade or web portion, which is the fin part, that is either fixed to a boot that may worn by the swimmer or that is otherwise attachable to a swimmer's foot. The blade of the flipper increases the amount of water displaced during a kicking movement and thereby increases the acceleration and propulsion of the swimmer through the water.

[0004] Flippers are uneasy and difficult to manipulate when walking on land. Previous attempts to design a flipper that allows a swimmer to more easily walk on land have met with only limited success. These attempts have focused upon the disadvantages of the fin part of the flipper, and therefore have focused on the mechanical structures for releasably connecting a fin part and a shoe part. This results in a flipper which is a full-fledged flipper and wherein the fin part is releasably connectable to the shoe part. However when the fin part is detached from the shoe part, that shoe part is no full-fledged shoe as it comprises connecting members which affect the use of the shoe part as a beach shoe. Therefore the shoe part is uncomfortable to wear as a beach shoe. An example of such an attempt is known from UK patent application GB 2 128 096, where a platform is to be connected to a shoe.

[0005] US 2006/0234570 describes a swim fin comprising a foot engaging portion and a blade portion. However the foot engaging portion is described as a boot, which is not a beach shoe. Moreover the connecting members are latching members which engage by clicking the foot engaging portion into the blade portion in a vertical direction. Applying a force in this vertical direction is uneasy especially on sandy beaches. By applying a vertical force on the flipper on a sandy beach, the flipper sinks into the sand, which then has the consequence that the latching members get stuck with sand. The latching members don't have a constant thickness along the length of the shoe which affects the rigidity of the shoe in a non-constant way. This results in a shoe which is uncomfortable to wear.

[0006] It is an object of the present invention to realize a shoe, in particular a beach shoe, and a flipper set-up, which shoe and flipper set-up have connecting members, which allow to easily connect one to another on a sandy beach and which shoe is still a comfortable beach shoe when used as a shoe.

[0007] For this purpose, a shoe according to the invention is characterized in that said sole portion has two side portions, said first connecting members being formed by first rails, which first rails extend along said two side portions, said fixing part comprises a pair of arm members forming a bay, said second connecting member being formed by second rails, which second rails extend along said bay, said first and second rails being slidably engageable with each other so as to enable the shoe to slide into the flipper set-up. The first and second rail allow to easily connect the shoe to the flipper set-up by a sliding movement, which requires a horizontal force instead of a vertical one. Because of the fixing part comprising a pair of arm members forming a bay in between which the shoe slides into, there are no areas between the shoe and the flipper set-up which can get clogged up with sand. The first rails extend along the two side portions of the shoe, and therefore the bottom of the shoe isn't affected by the presence of the rails. Another advantage of the rails is that, contrary to a clicking mechanism, they have a constant thickness and shape over their length and so the rigidity of the shoe is affected uniformly. This results in a shoe which is still comfortable when used as a shoe.

[0008] In a first preferred embodiment of the shoe and the flipper set-up according to the invention, said bay has an entrance, said flipper set-up comprises a strap bridging said entrance and provided for encircling at least a heel of said shoe when said shoe and said flipper set-up are engaged with each other. This strap allows a user to prevent the shoe and flipper set-up to release each other in an uncontrolled manner.

[0009] The invention will now be described in more details with respect to the drawings illustrating some preferred embodiments of a shoe and a flipper set-up according to the present invention. In the drawings:

figure 1 illustrates a side view of a shoe according to the invention;
figure 2 illustrates a top view of a shoe according to the invention;
figure 3 illustrates a flipper set-up according to the invention;
figure 4 illustrates a shoe and a flipper set-up engaged into each other;
figure 5 illustrates a cross section of the first and second rails when they are engaged.

[0010] In the drawings a same reference number has been allocated to a same or analogous element.

[0011] Figures 1 and 2 show a beach shoe 1 according

to the invention. The shoe comprises an upper portion 3 and a sole portion 2, which has two side portions. The sole portion 2 comprises first rails 4. These first rails 4 are positioned on the two side portions of the sole portion 2, in such a manner as to have a distance d between the first rails 4 and the bottom of the shoe 1. This distance d has for consequence that the rails 4 do not adversely affect the bottom of the shoe 1 when walking. Preferably the rails 4 extend further than the side portions along the front portion of the sole portion 2 so as to obtain a stronger connection between the shoe 1 and the flipper set-up 7 when they are engaged. The sole portion 2 also preferably comprises at the heel portion a recess 14 provided for receiving a strap 13. When the shoe 1 and the flipper set-up 7 are engaged, the strap 13 enables to maintain the shoe 1 engaged in the flipper set-up 7.

[0012] The bottom of the shoe 1 is preferably provided with an anti-slip layer 5. Furthermore, the sole portion 2 is more rigid then the upper portion 3 in order to allow a user to easily put the shoes on. The upper portion 3 is provided with holes 6 to allow water to enter and exit the shoe so as to make the shoe 1 water-permeable. Preferably, the shoe 1 is provided with at least one pull strap 17 so as to facilitate putting the shoe 1 on. The pull strap 17 is located on the upper portion 3 and more specific on the entrance of the shoe. In entering a foot into the shoe 1, the user can pull the pull strap 17 thereby pulling the shoe 1 onto the foot.

[0013] Figure 3 shows a flipper set-up 7 according to the invention. The flipper set-up 7 comprises a fin part 8 and a fixing part 9. The fixing part 9 comprises a pair of arm members 10 forming a bay 11 having an entrance, which is at the back of the flipper set-up 7. Second rails 12 extend along inner lateral sides of said bay 11. The flipper set-up 7 comprises the strap 13 bridging the entrance of the bay 11. The strap 13 is provided for encircling at least a heel of the shoe 1 when the shoe 1 and flipper set-up 7 are engaged. Furthermore, the fixing part 9 is preferably more rigid than the fin part 8.

[0014] In view of durability, preferably the pair of arm members 10 are to be rigidified. This can be done by providing the pair of arm members 10 with pull bars 16. These pull bars 16 allow, in addition to the advantage that they rigidify the pair of arm members 10, to more easily handle the flipper set-up when engaging the shoe into the bay 11. A pull bar 16 is preferably as a solid part together with an arm of the pair of arm members 10 which solid part has an opening 18 in it. The opening 18 is provided so as to easily allow one to put fingers in it thereby grabbing the flipper set-up 7.

[0015] The shoe 1 and the flipper set-up 7 are preferably made from a material which is heatproof to stand hot beaches and which is lightweight. This results in a much more comfortable use.

[0016] Figure 4 shows a shoe 1 and a flipper set-up 7 which are engaged in each other. To engage the shoe 1 into the flipper set-up 7, the flipper set-up 7 has to be held in front of the tip 15 of the shoe 1 with the fin part 8 and the tip 15 of the shoe 1 pointing in the same direction. The flipper set-up can then be moved towards the shoe hereby engaging the first rails 4 of the shoe 1 into the second rails 12 of the flipper set-up 7 as illustrated in figure 5. If the shoe 1 completely fills the bay 11 of the flipper set-up 7, as illustrated in figure 4, they are completely engaged. At that time, the strap 13 can be bent around the heel and engaged into the recess 14 of the shoe 1, thereby preventing the shoe 1 and flipper set-up 7 to release each other in an uncontrolled manner.

[0017] The strap 13 has another advantage in that it allows to easily carry the flipper set-up 7 when the shoe 1 and the flipper set-up 7 are not engaged into each other. Preferably, the strap 13 is made U-shaped whereby the ends of the two legs of the U-shape are hingingly connected to the ends of the pair of arm members 10. This allows the strap 13 to hinge around the heel of the shoe 1 and into the recess 14. This also allows the strap 13 to hinge out of the recess 14 of the shoe 1 toward underneath the shoe 1 so as to enable the shoe 1 to easily slide out of the flipper set-up 7 without the strap 13 hindering it.

[0018] When buying shoes, one always buys a pair of shoes, which comprises a right and a left shoe. To obtain a more easy use of the shoe 1 and flipper set-up 7 according to the invention, the right and the left flipper set-up 7 of the pair of flipper set-ups should be interchangeable. Therefore, preferably the rails 4 of the right and the left shoe 1 of the pair of shoes are made identical and the rails 12 of the left and the right flipper set-up 7 of the pair of flipper set-ups are made identical, so as to allow fitting each of the pair of flipper set-ups 7 to each of the pair of shoes 1.

[0019] In another preferred embodiment, the pair of flipper set-ups 7 comprise a projection (not shown) so as to allow clicking this pair of flipper set-ups together. This allows to more easily carry the pair of flipper set-ups 7.

[0020] To release the flipper set-up 7 from the shoe 1, first the strap 13 has to be released from the heel of the shoe 1. Then the flipper set-up 7 has to be moved in the direction of the fin part away from the shoe 1 so as to release the first rails 4 of the shoe 1 from the second rails 12 of the flipper set-up 7.

[0021] In figure 4, a cross section of the rails is shown when the shoe 1 and flipper set-up 7 are engaged into each other. The shoe 1 having first rails 4 is provided for sliding into the flipper set-up 7 having arm members 10 which have second rails 12. As the figure shows, the first rails 4 are the male part and the second rails 12 are the female part of the rail system. Of course the other way around is also possible.

Claims

1. A shoe, in particular a beach shoe, and a flipper set-up, which shoe has a sole portion, and which flipper set-up comprises a fin part and a fixing part, said

sole portion comprising first connecting members and said fixing part comprising second connecting members, said first and second connecting members together forming a releasable connecting mechanism permitting said flipper set-up to be releasable secured to said shoe, **characterized in that** said sole portion has two side portions, said first connecting members being formed by first rails, which first rails extend along said two side portions, said fixing part comprises a pair of arm members forming a bay, said second connecting member being formed by second rails, which second rails extend along said bay, said first and second rails being slidably engageable with each other so as to enable the shoe to slide into the flipper set-up.

2. The shoe and the flipper set-up as claimed in claim 1, **characterized in that** said bay has an entrance, said flipper set-up comprises a strap bridging said entrance and provided for encircling at least a heel of said shoe when said shoe and said flipper set-up are engaged with each other.

3. The shoe and the flipper set-up as claimed in claim 2, **characterized in that** said strap being formed in a U-shape having two legs whereby said legs being hingingly connected to said pair of arm members.

4. The shoe and the flipper set-up as claimed in anyone of the claims 1 to 3, **characterized in that** said shoe comprises an upper portion, said sole portion being more rigid than said upper portion.

5. The shoe and the flipper set-up as claimed in anyone of the claims 1 to 4, **characterized in that** said shoe and said flipper set-up being made from a heatproof and lightweight material.

6. The shoe and the flipper set-up as claimed in anyone of the claims 1 to 5, **characterized in that** said sole portion being provided with an anti-slip layer.

7. The shoe and the flipper set-up as claimed in claim 4, **characterized in that** said upper portion comprises holes so as to be water-permeable.

8. The shoe and the flipper set-up as claimed in anyone of the claims 1 to 7, **characterized in that** said fixing part being more rigid than said fin part.

9. The shoe and the flipper set-up as claimed in anyone of the claims 1 to 8, **characterized in that** said pair of arm members being rigidified.

10. The shoe and the flipper set-up as claimed in anyone of the claims 1 to 9, **characterized in that** said pair of arm members being provided with pull bars so as to facilitate handling of said flipper set-up.

11. The shoe and the flipper set-up as claimed in claim 10, **characterized in that** said pull bars are provided with an opening in such a manner as to enable fingers to enter said opening.

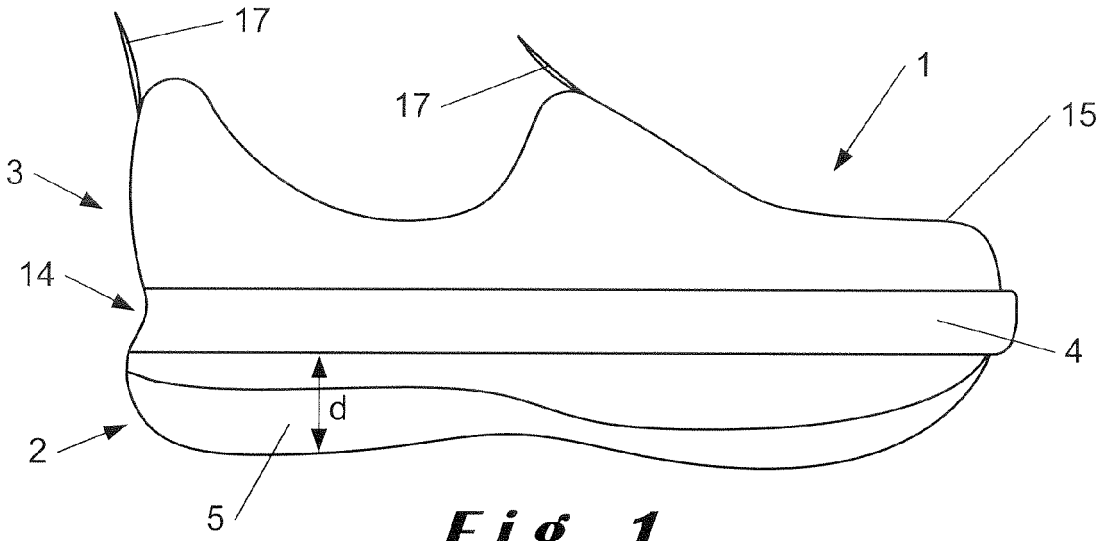

Fig. 1

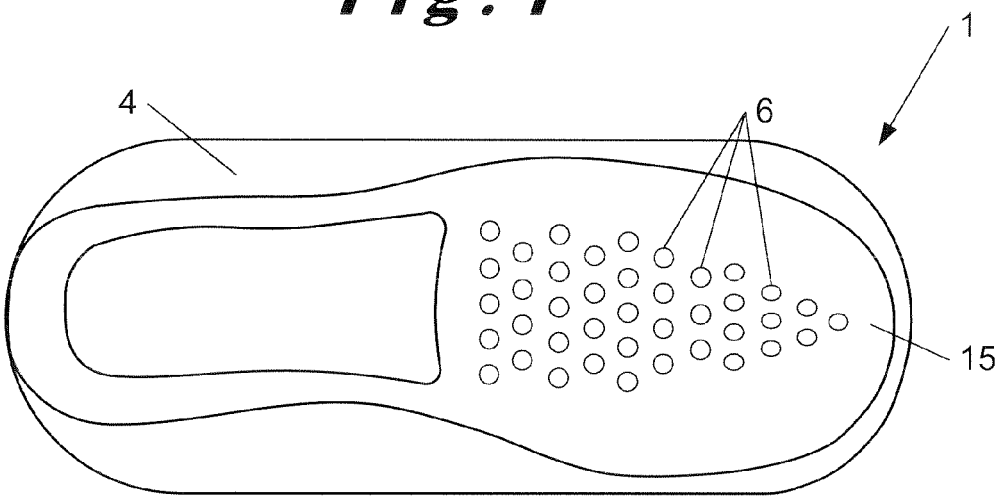

Fig. 2

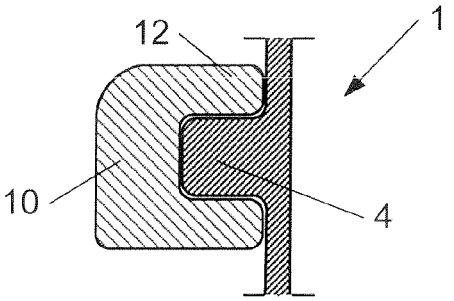

Fig. 5

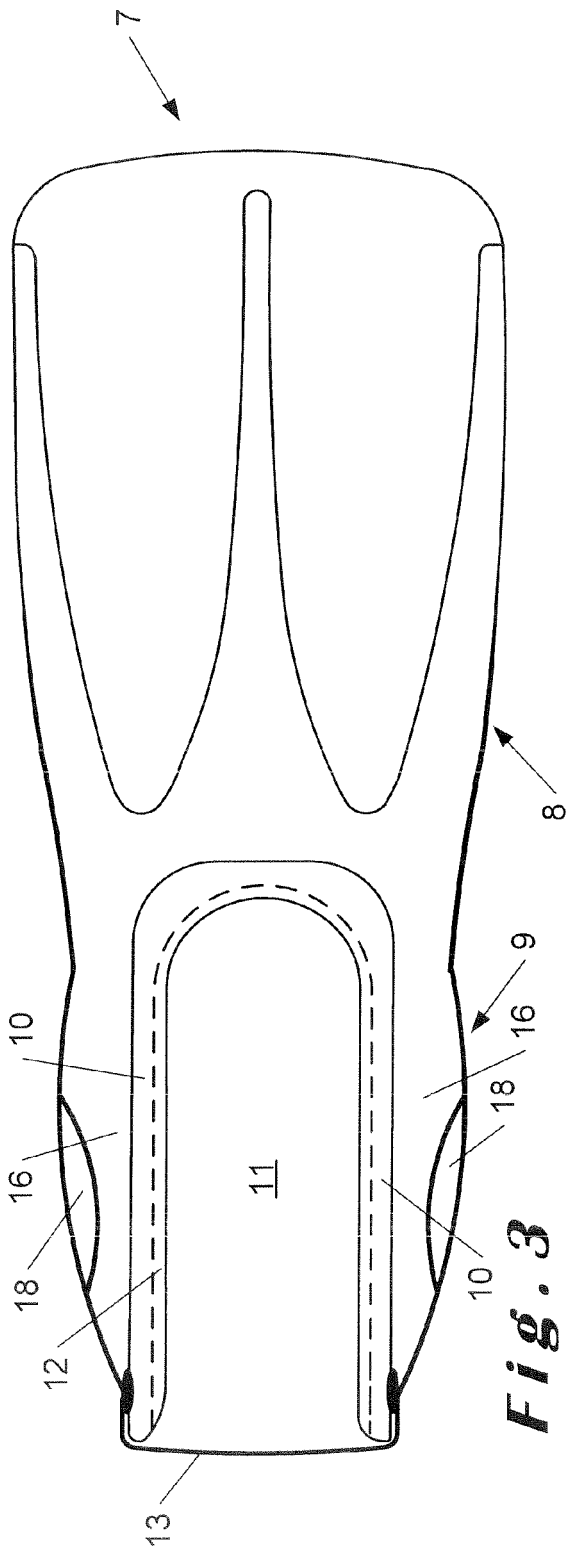

Fig. 3

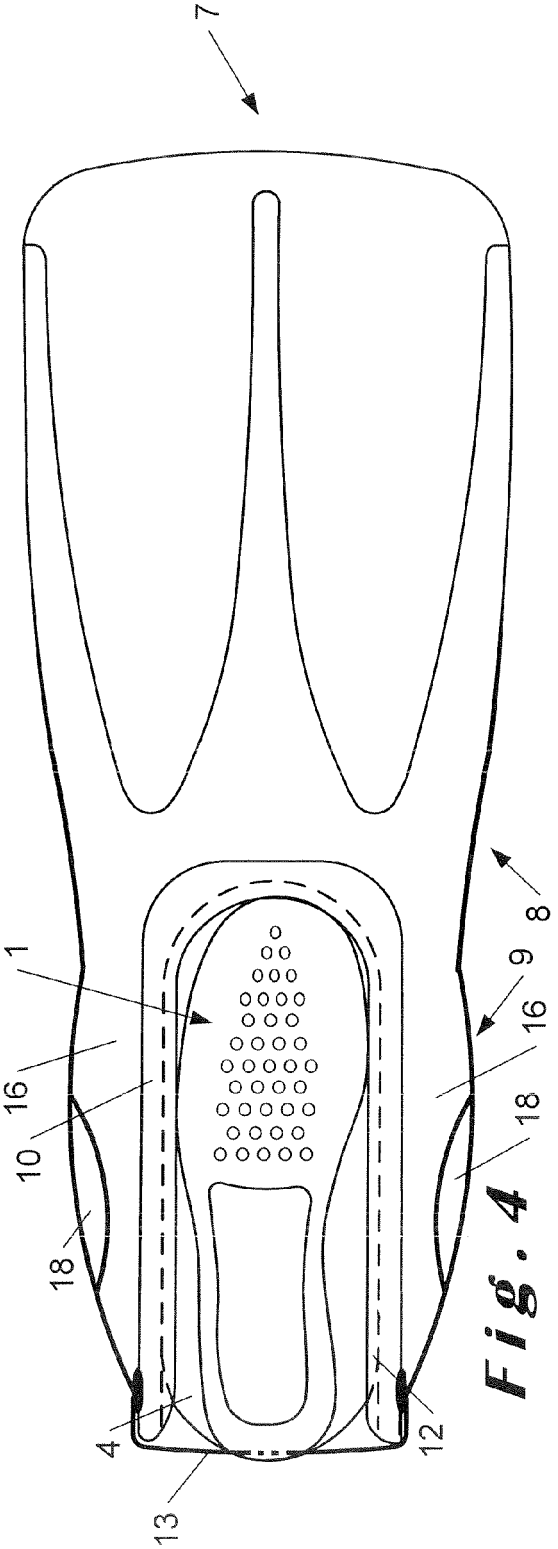

Fig. 4

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EUROPEAN SEARCH REPORT

Application Number
EP 07 12 1576

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 6 126 502 A (HULL MARTIN PHILIP [US]) 3 October 2000 (2000-10-03) * column 5, line 59 - column 11, line 20; claims; figures * -----	1-11	INV. A43B5/08 A63B31/11
D,X	US 2006/234570 A1 (CADORETTE RON [CA]) 19 October 2006 (2006-10-19) * claims; figures * -----	1-11	
A	FR 1 361 409 A (PIERRE AUZOLS) 22 May 1964 (1964-05-22) * claims; figure 1 * -----	1-11	

TECHNICAL FIELDS SEARCHED (IPC)

A43B
A63B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	27 May 2008	Claudel, Benoît

CATEGORY OF CITED DOCUMENTS

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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 07 12 1576

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27-05-2008

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

REFERENCES CITED IN THE DESCRIPTION

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