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(54) **Spoiler for a snowboard binding**

(57) A spoiler (1) for a snowboard binding, comprising a shell (2) adapted to be pivoted, at a lower region (3) thereof, to a base plate (10) of a snowboard binding, the shell (2) having a plurality of cuts (6) which extend from lateral edges of the shell to an internal region of the shell (2), in order to give flexibility to the shell.

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Description

[0001] The present invention relates to a spoiler for a snowboard binding. More particularly, the invention relates to a spoiler for a snowboard binding of the soft type.

[0002] As is known, in the snowboard field, bindings of the "soft" type are by now widespread and have become substantially a sort of standard for the boards used for non-technical disciplines, i.e., other than slalom and downhill racing.

[0003] Snowboard bindings of the soft type have a base plate, adapted to be connected to the board, on which the boot of the user must rest, and a spoiler, connected to the base plate, which usually can be adjusted in the inclination position, in order to allow the user to rest the calf part when performing backside maneuvers.

[0004] Basically, the general function of a spoiler for a snowboard binding is to ensure adequate support during exercise, mainly when pressure is applied with the rear part of the legs in a direction at right angles to the board itself, adapted to make the board turn or in order to keep one's balance after landing from a jump or a maneuver.

[0005] In order to allow attachment of the support to the user, spoilers are currently designed by taking into account the repeated loads and stresses to which they are subjected, and therefore most currently commercially available spoilers do act as a support but also often have an excessively rigid structure and in many cases contrast the natural movement of the legs of the person using the board, becoming therefore an element of inconvenience for more natural surfing.

[0006] Spoilers are currently commercially available which are made of soft materials, so as to be more flexible than spoilers made of rigid materials, but this has the drawback of not providing adequate support when loaded with the weight of the user.

[0007] The aim of the present invention is to provide a spoiler for a snowboard binding that solves the drawbacks cited above, providing a suitable support to the user on the one hand and on the other hand being suitably flexible according to the requirements of the user.

[0008] Within this aim, an object of the present invention is to provide a spoiler for a snowboard binding that can be deformed to an extent needed to follow the rotational and natural movements of the legs, while not creating constraints or small resistances.

[0009] Another object of the present invention is to provide a spoiler for a snowboard binding that takes into account the differences in force applied with the legs in the inner part and in the outer part.

[0010] Another object of the present invention is to provide a spoiler for a snowboard binding that is highly reliable, relatively simple to provide and has competitive costs.

[0011] This aim and these and other objects that will become more apparent hereinafter are achieved by a spoiler for a snowboard binding, comprising a shell adapted to be pivoted, at a lower region thereof, to a base plate of a snowboard binding, **characterized in that** said shell has a plurality of cuts which extend from lateral edges of the shell to an internal region of the shell, in order to give flexibility to the shell.

[0012] Further characteristics and advantages of the invention will become more apparent from the description of a preferred but not exclusive embodiment of the spoiler according to the present invention, illustrated by way of non-limiting example in the accompanying drawings, wherein:

Figure 1 is a perspective view of the spoiler according to the present invention applied to a snowboard binding;

Figure 2 is a rear elevation view of the spoiler according to the invention applied to a snowboard binding; and

Figure 3 is a lateral elevation view of the spoiler according to the invention applied to a snowboard binding.

[0013] With reference to the figures, the spoiler according to the invention, generally designated by the reference numeral 1, comprises a shell portion 2 with a lower region 3 shaped so as to adapt to a base plate 10 of a snowboard binding and be therefore pivoted to the base plate, by means of holes 4.

[0014] The spoiler extends upward from the lower region 3 and has a shell 2 shaped so as to adapt to the calf of the user.

[0015] The spoiler is provided monolithically.

[0016] Conveniently, the spoiler 1 is provided so as to have a greater thickness at the lower region 3, i.e., a rigid region, and the thickness decreases as one progresses upward with the lower thickness provided at the upper end 5 of the spoiler.

[0017] The particularity of the invention resides in the fact that it provides, at the part of the spoiler that is designed to make contact with the calf of the user, a plurality of cuts formed preferably radially, starting from a region arranged proximate to the lower region 3 to a region arranged proximate to the upper end 5 of the spoiler.

[0018] Conveniently, the radial cuts, designated by the reference numeral 6, increase in size as one moves away from the lower region 3 of the spoiler 1.

[0019] The cut 6 that lies closest to the lower region 3 is the shortest cut and the cut 6 arranged proximate to the upper end 5 of the spoiler is the longest.

[0020] The cuts 6 enter the structure of the spoiler, stopping proximate to a region that is adjacent to the axis of symmetry of the spoiler, so that the supporting structure remains intact and can ensure correct support of the rear thrust.

[0021] The cuts 6 free the outer parts of the spoiler and therefore allow it to be deformed. The different lengths of the cuts 6 allow moving the spoiler more gradually starting from the lower region 3, which must remain as integral as possible with the base of the binding, while it

is important that as one moves toward the upper part of the spoiler said part becomes softer and follows the rotational movement of the legs, without however losing the support of the rear thrust.

[0022] Essentially, the spoiler according to the invention allows adequate support for the rear part of the legs when one is leaning to curve or to keep one's balance, but at the same time it leaves greater freedom of movement and/or does not create pressure points on the legs when one wishes to perform other maneuvers that involve the rotation of the legs.

[0023] The size of the cuts affects this last characteristic of flexibility.

[0024] Conveniently, the cuts 6 can be arranged so as to be inclined toward the internal part of the foot. Thus, for example, the spoiler designated by way of example in the figures is a spoiler for the right foot and the cuts are provided with an inclination from the right toward the left so as to be angled toward the internal part of the foot.

[0025] In practice it has been found that the spoiler according to the present invention fully achieves the intended aim and objects, because it can be rigid at the base region, which is adapted to be connected to the base portion of the binding, but at the same time it is suitably flexible to adapt to rotations of the legs.

[0026] The spoiler thus conceived is susceptible of numerous modifications and variations, all of which are within the scope of the accompanying claims; all the details may further be replaced with other technically equivalent elements.

[0027] In practice, the materials used, as well as the contingent shapes and dimensions, may be any according to the requirements and the state of the art.

[0028] The disclosures in Italian Patent Application No. MI2012A000068 from which this application claims priority are incorporated herein by reference.

[0029] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

Claims

1. A spoiler (1) for a snowboard binding, comprising a shell (2) adapted to be pivoted, at a lower region (3) thereof, to a base plate (10) of a snowboard binding, **characterized in that** said shell (2) has a plurality of cuts (6) which extend from lateral edges of the shell to an internal region of the shell (2), in order to give flexibility to the shell.

2. The spoiler according to claim 1, **characterized in that** said cuts (6) are arranged radially.

3. The spoiler according to claim 1, **characterized in that** said cuts (6) increase in size as one moves away from the lower region (3) of the spoiler and approaches the upper end (5) of the spoiler.

4. The spoiler according to claim 1, **characterized in that** said cuts (6) are arranged radially and are inclined so as to be angled toward the internal region of the user's foot when said user puts on the binding provided with said spoiler (1).

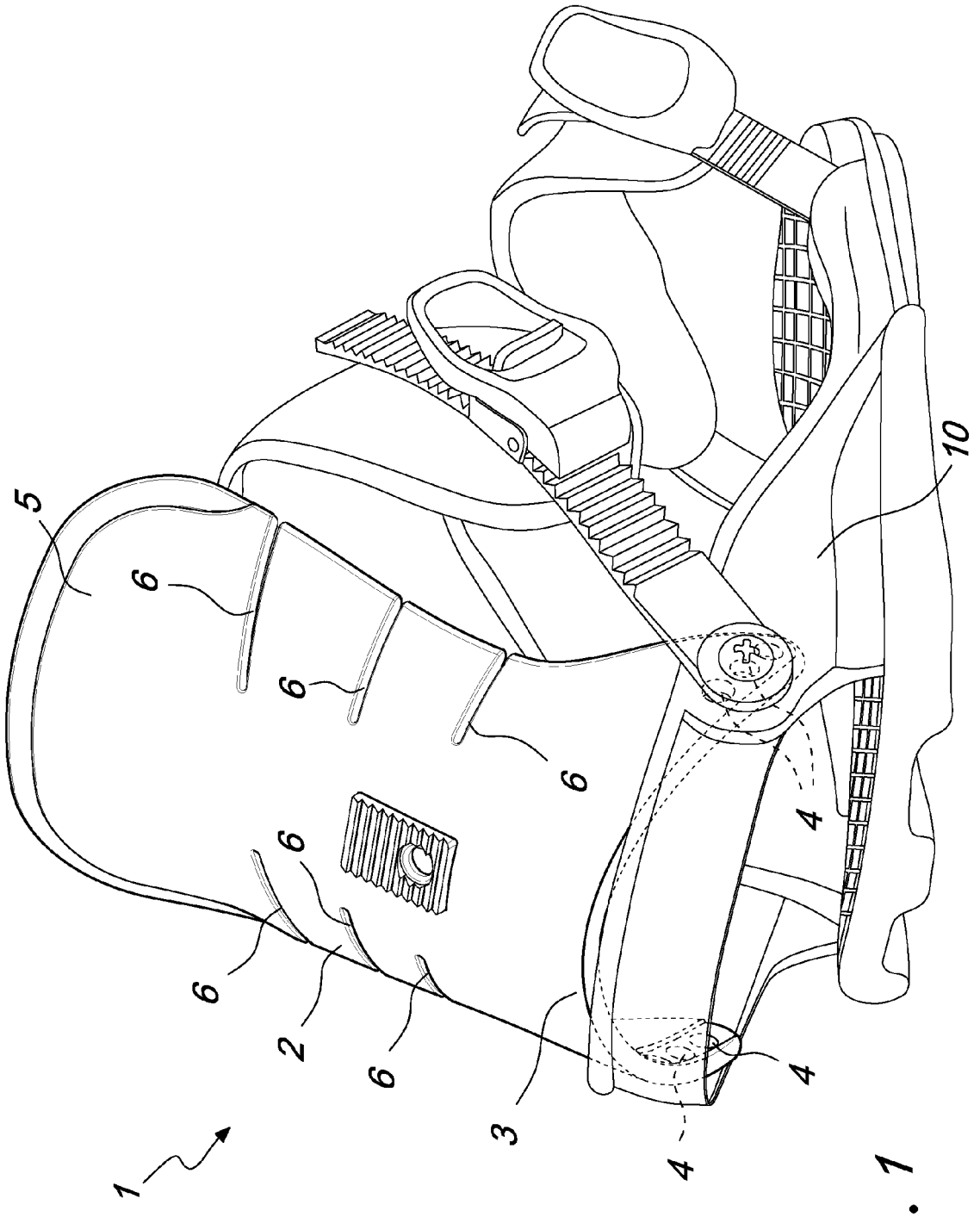


Fig. 1

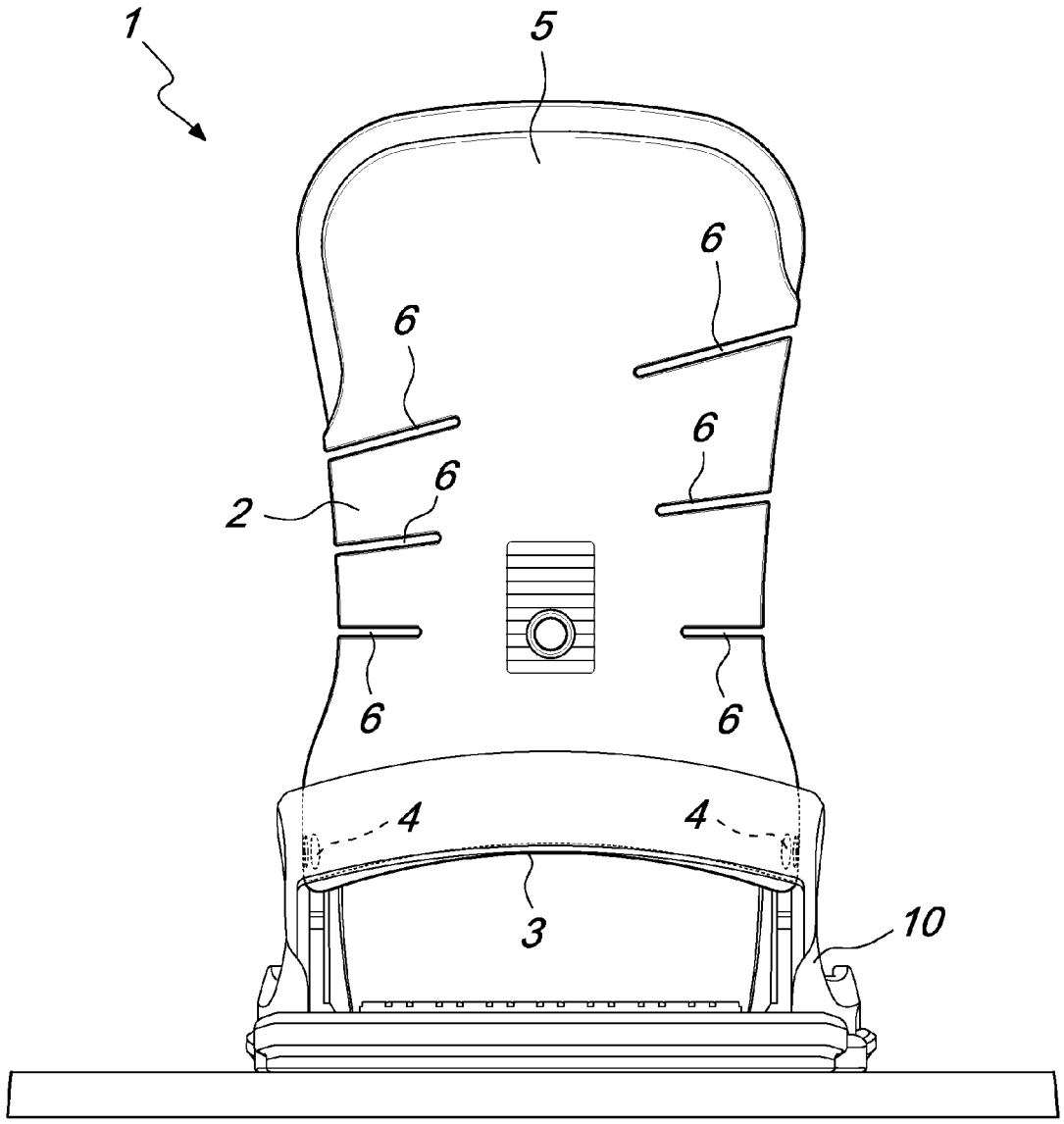
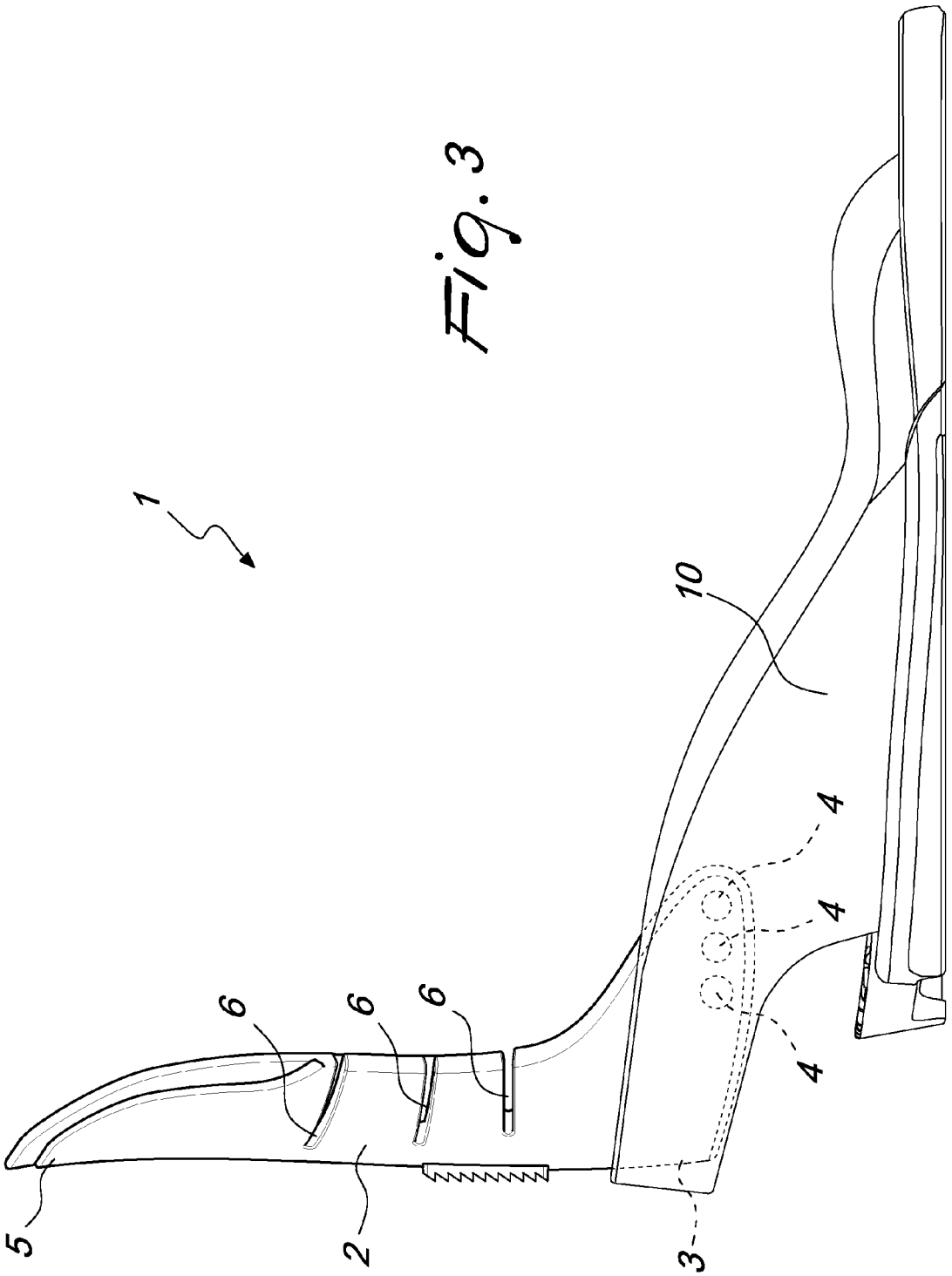


Fig. 2

Fig. 3



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EUROPEAN SEARCH REPORT

Application Number
EP 13 15 1943

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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X	US 5 901 469 A (SAILLET BENOIT [FR]) 11 May 1999 (1999-05-11) * column 3, line 52 - column 4, line 28; figures 2,3,4,5 *	1,2	
A	EP 1 356 746 A1 (BURTON CORP [US]) 29 October 2003 (2003-10-29) * paragraph [0032]; figure 2 *	1,3	
A	US 5 819 440 A (OKAJIMA SHINPEI [JP]) 13 October 1998 (1998-10-13) * column 3, line 44 - column 3, line 57; figure 2 *	1-4	
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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	17 May 2013	Murer, Michael

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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A : technological background
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L : document cited for other reasons

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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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