(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) **EP 3 192 572 A1**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
19.07.2017 Bulletin 2017/29

(21) Application number: **17151413.6**

(22) Date of filing: **13.01.2017**

(51) Int Cl.:
A63B 22/20 *(2006.01)* ***A63B 26/00*** *(2006.01)*
A63C 17/01 *(2006.01)*

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME
Designated Validation States:
MA MD

(30) Priority: **15.01.2016 DK 201670022**

(71) Applicant: **Gonge Creative Learning ApS**
8653 Them (DK)

(72) Inventors:
- **SØRENSEN, Nicolai**
  3150 Hellebæk (DK)
- **HARRIT, Thomas**
  3460 Birkerød (DK)

(74) Representative: **Tellefsen, Jens J. et al**
Patrade A/S
Fredens Torv 3A
8000 Aarhus C (DK)

(54) **TRAINING DEVICE**

(57) The invention relates to a learning device for enhancing motoric sensation, the device comprising a board and at least two turning devices connected to the board, where the turning devices are adapted to allow the board to turn around the turning device when only one turning device is in contact with a substrate and where the turning devices are adapted to block movement of the board when two turning devices are in contact with a substrate. Hereby a turning device may comprise at least three wheels, each having a rotational axis and the wheels being arranged with the rotational axes of the three wheels crossing each other essentially at the centre of the turning device.

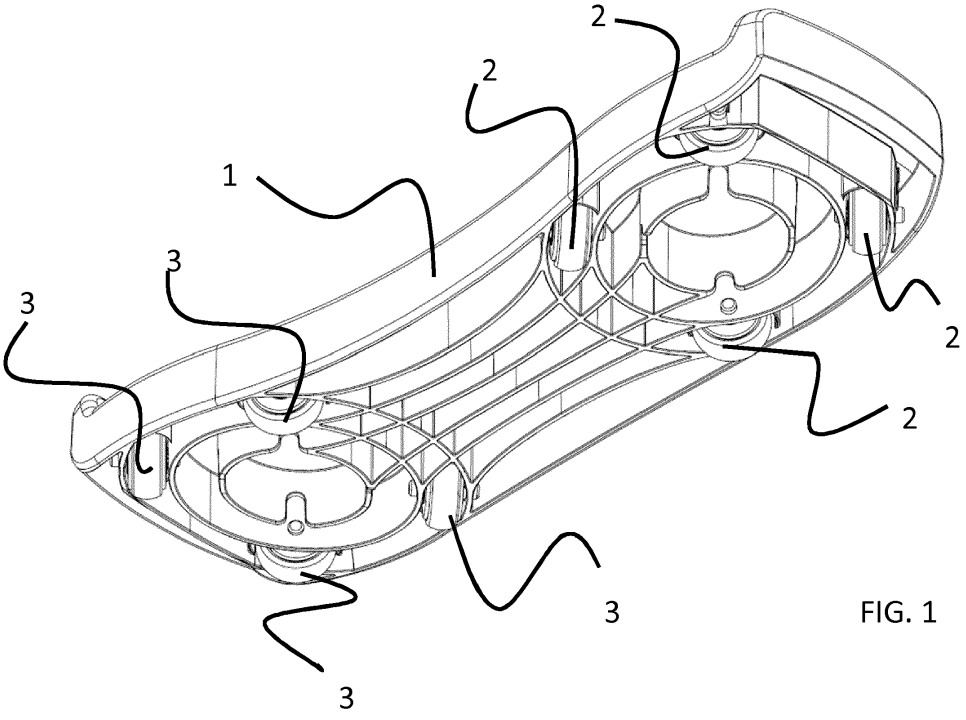


FIG. 1

EP 3 192 572 A1

Description

Field of the Invention

[0001] The present invention relates to the area of training and learning tools. More specifically to the area of training and play tools intended for training of certain motoric skills.

Background of the Invention

[0002] It is well known that many individuals, in particular children, are in need of training of the motoric system.
[0003] In order to improve the balance and the motoric ability of individuals a number of training devices are known.
[0004] One such example is disclosed in JP200334066 from which a balancing board comprising two tuning devices is known. The turning devices are mounted under the board and configured for being in contact with a substrate. When both turning devices rest on the substrate, rotation of the board is prevented. When one turning device is lifted from the substrate, rotation is made possible. When however both turning devices are in contact with the substrate the board can still be tilted.
[0005] Despite the existing offerings in the area of improving motoric ability there is still a lack of suitable training devices.

Object of the Invention

[0006] The objective of the present invention is to provide an improved training device for enhancing the motoric skills and balance of users, in particular children.

Description of the Invention

[0007] According to the invention this objective is achieved through a learning device for enhancing motoric sensation, the device comprising a board and at least two turning devices connected to the board, where the turning devices are adapted to allow the board to turn around the turning construction when only one turning device is in contact with a substrate and where the turning devices are adapted to block movement of the board when two turning devices are in contact with a substrate.
[0008] By enabling the movement of the board through turning in one position of the board and immobilizing the board in another position, the objective of the invention is achieved through an improved ability of the users to make one movement at a time and at the same time to have a stability of the device for improved safety.
[0009] In an embodiment a turning device comprises at least three wheels, each having a rotational axis and the wheels being arranged with the rotational axes of the three wheels crossing each other essentially at the centre of the turning device.
[0010] In a further embodiment a turning device comprises at least four wheels, each having a rotational axis and the wheels being arranged with the rotational axes of the four wheels crossing each other at essentially the same location.
[0011] Further where the turning devices comprising a number of wheels, it is foreseen that the wheels of each turning device are arranged such that when a limited number of wheels of two turning device are in contact with a substrate, the rotational axis of the wheels are crossing each other outside the center of a turning device.
[0012] In order to improve stability and ease of use, the board comprises upward extending side supports at, at least two mutually opposed locations.
[0013] To even further improve stability and ease of use the board may comprise friction enhancing surface elements, e.g. a surface profiling or a rough surface, for improving grip of a user's feet or shoes.
[0014] In an embodiment the wheels comprise a nylon bearing adapted to endure outdoor use.
[0015] The board may be moulded from a plastics material and the shafts of the wheels are supported directly in the moulded plastics board.
[0016] The invention is described in more detail in the following description, with reference to the drawing, where:

Description of the Drawing

[0017]

FIG. 1 shows an embodiment of the invention seen in perspective from below;
FIG. 2 shows an embodiment of the invention seen in perspective from above;
FIG. 3 shows an embodiment of the invention seen in a top view;
FIG. 4 shows an embodiment of the invention seen in bottom view;
FIG. 5 shows an embodiment of the invention seen in an end view;
FIG. 6 shows an embodiment of the invention seen in a side view; and
FIG. 7A and 7B shows an embodiment of the invention seen in side views in two different positions of use.

Detailed Description of the Invention

[0018] From FIG. 1 a training device according to the invention appears. The training device comprises a board 1 and two groups of wheels 2,3 at respective ends of the board 1.
[0019] From FIG. 2 the training device appears seen from above and at further appears that the board comprises upwards extending support elements 4 at each end of the board 1.
[0020] From FIG. 3 the training device appears in a top view and the board together with the support elements

4 appears clearly. It is further clear that in the top surface of the board a pattern has been provided, which may improve the grip of a user's feet or shoes in relation to the board.

[0021] From FIG. 4 the training device appear in a bottom view and the two groups of wheels 2,3 appears. Each wheel has a rotational axis and the wheels of each wheel group are arranged such that the rotational axis of the wheels will cross the rotational axis of the other wheel of the same group, essentially at the centre of the turning device for that particular group of wheels. In FIG. 4 this is shown with the two rotational axes A,B, each comprising the rotational axis of two wheels and the two axes A,B crossing each other at the centre of rotation for the turning device 2.

[0022] From FIG. 5 the training device is seen from one end and the support element 4 appears.

[0023] From FIG. 6 the training device appears in a side view and the wheels 2,3 of the two turning devices appear as well as the support elements 4 of the board 1. It appears that each set of wheels is arranged in a plane D,E allowing only one full set of wheels 2,3 to be in contact with a substrate at a time. This is described in more detail in connection with FIG 7A and 7B. The plane D indicates the plane of the wheel set 2 and the plane E indicates the plane of the wheels set 3.

[0024] In FIG. 7A and 7B the use of the training device is illustrated. In FIG. 7A the board is resting on a substrate S, e.g. a floor, with two wheels of each turning device 2,3, resting on the substrate S. In this position the wheels of the turning devices are blocking the movement of the board. In FIG. 7B the user has forced the board to tilt into a position where the wheel of only one turning device are resting on the substrate S. As the wheels of a single turning device are arranged as shown and explained in connection with FIG. 4, the board may be turned around the centre of the turning device 3.

[0025] As a consequence of the arrangement of the two turning devices 2,3 the board may be moved forward by alternating turning of the board on the two turning devices 2,3, which may happen when the user shifts the weight from one side to the other and hence brings alternating sets of wheels in contact with the substrate.

Claims

1. A learning device for enhancing motoric sensation, the device comprising a board and at least two turning devices connected to the board, where the turning devices are adapted to allow the board to turn around the turning device when only one turning device is in contact with a substrate and where the turning devices are adapted to block movement of the board when two turning devices are in contact with a substrate.

2. A learning device according to claim 1, where a turning device comprises at least three wheels, each having a rotational axis and the wheels being arranged with the rotational axes of the three wheels crossing each other essentially at the centre of the turning device.

3. A learning device according to claim 1, where a turning device comprises at least four wheels, each having a rotational axis and the wheels being arranged with the rotational axes of the four wheels crossing each other at essentially the same location.

4. A learning device according to any of the preceding claims, where the turning devices comprising a number of wheels, and where the wheels of each turning device are arranged such that when a limited number of wheels of two turning device are in contact with a substrate, the rotational axis of the wheels in contact with said substrate are crossing each other at least at two different locations.

5. A learning device according to any of the preceding claims, where the board comprises upward extending side supports at least two mutually opposed locations.

6. A learning device according to any of the preceding claims, where the board comprises friction enhancing surface elements, e.g. a surface profiling or a rough surface, for improving grip of a user's feet or shoes.

7. A learning device according to any of the preceding claims, where the wheels comprise a nylon bearing adapted to endure outdoor use.

8. A learning device according to any of the preceding claims, where the board is moulded from a plastics material and the shafts of the wheels are supported directly in the moulded plastics board.

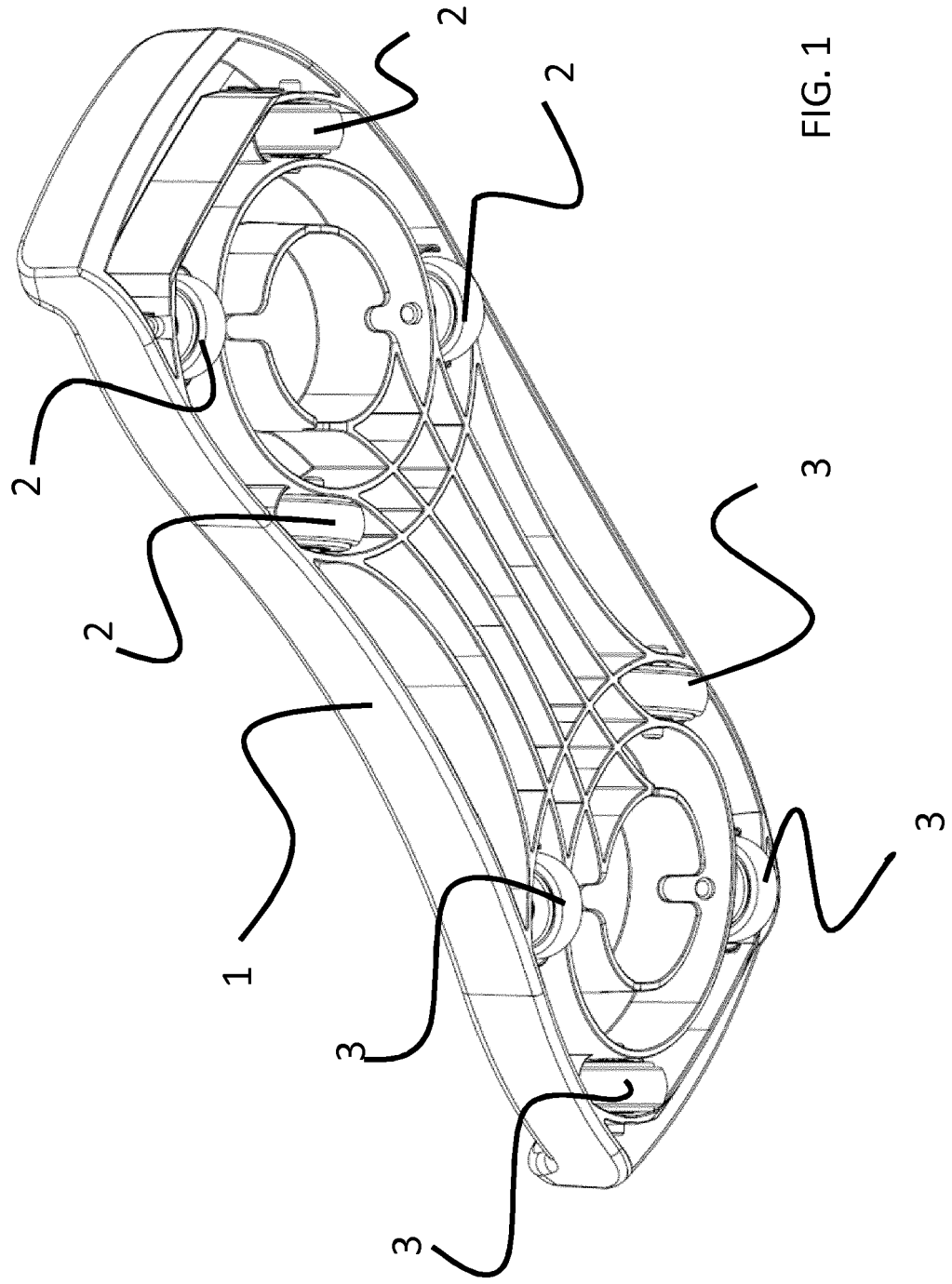


FIG. 1

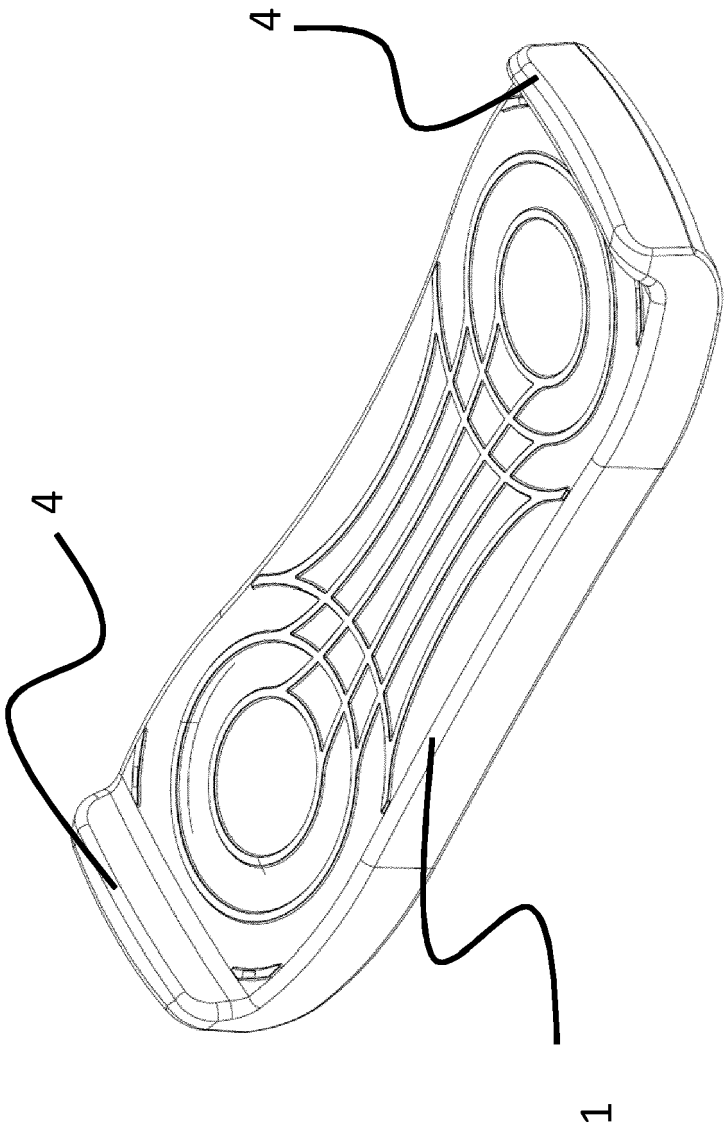


FIG. 2

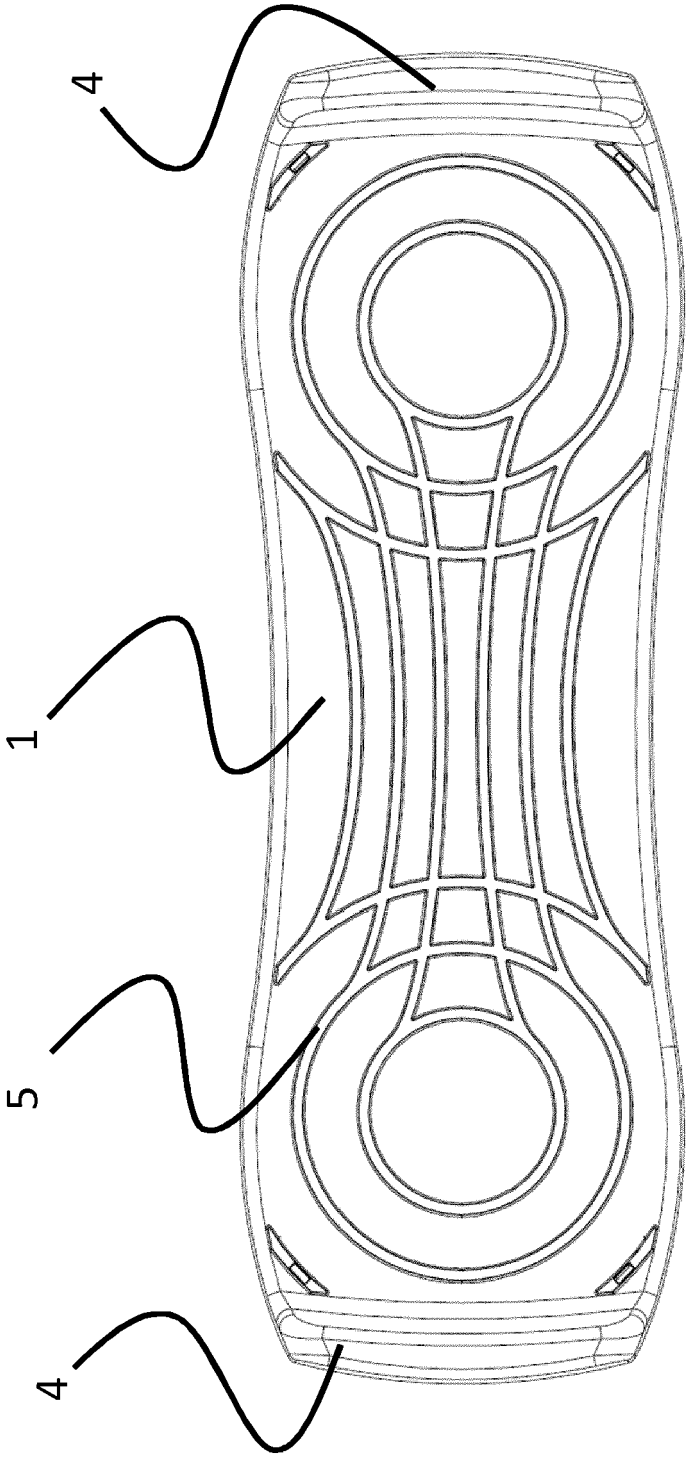


FIG. 3

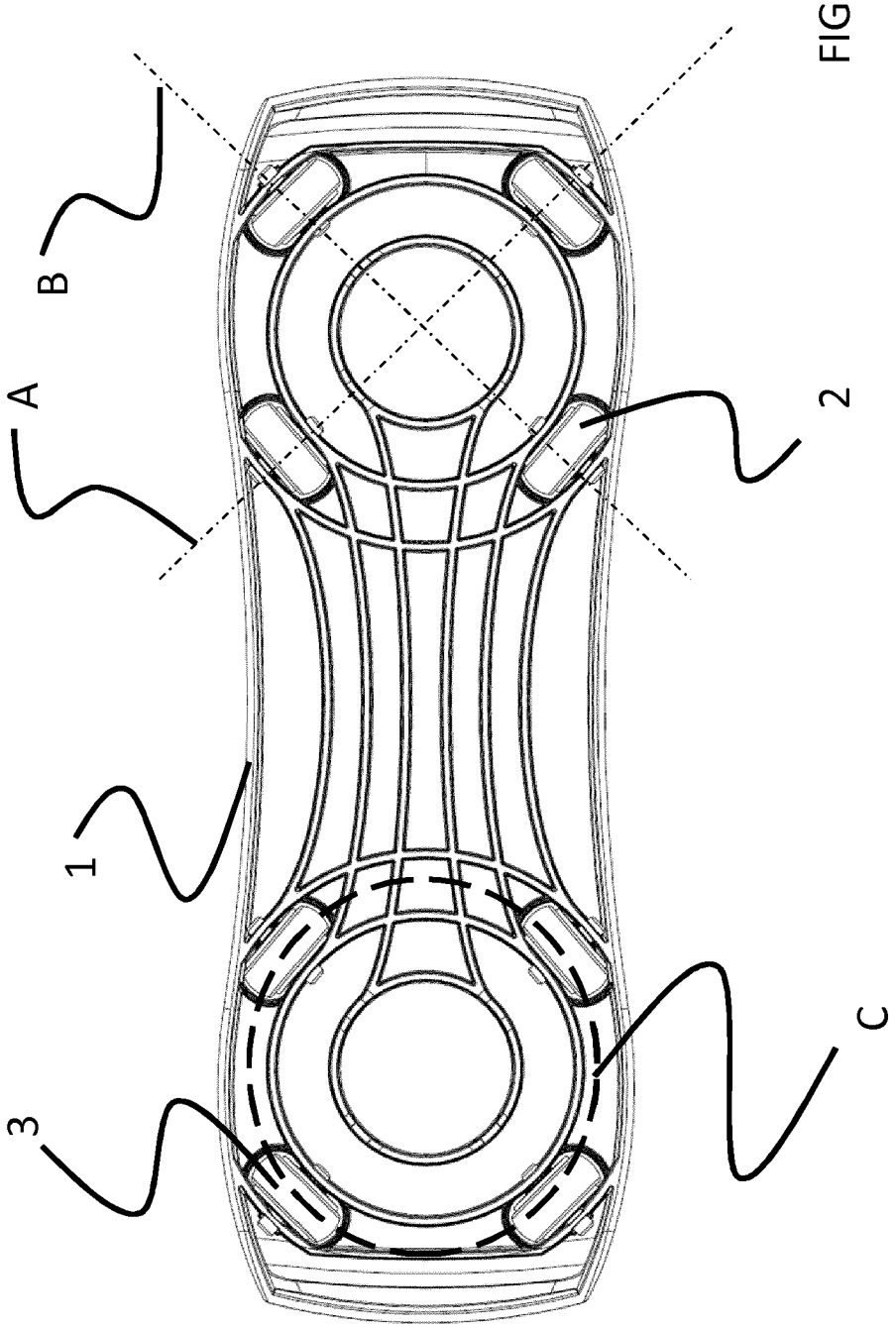
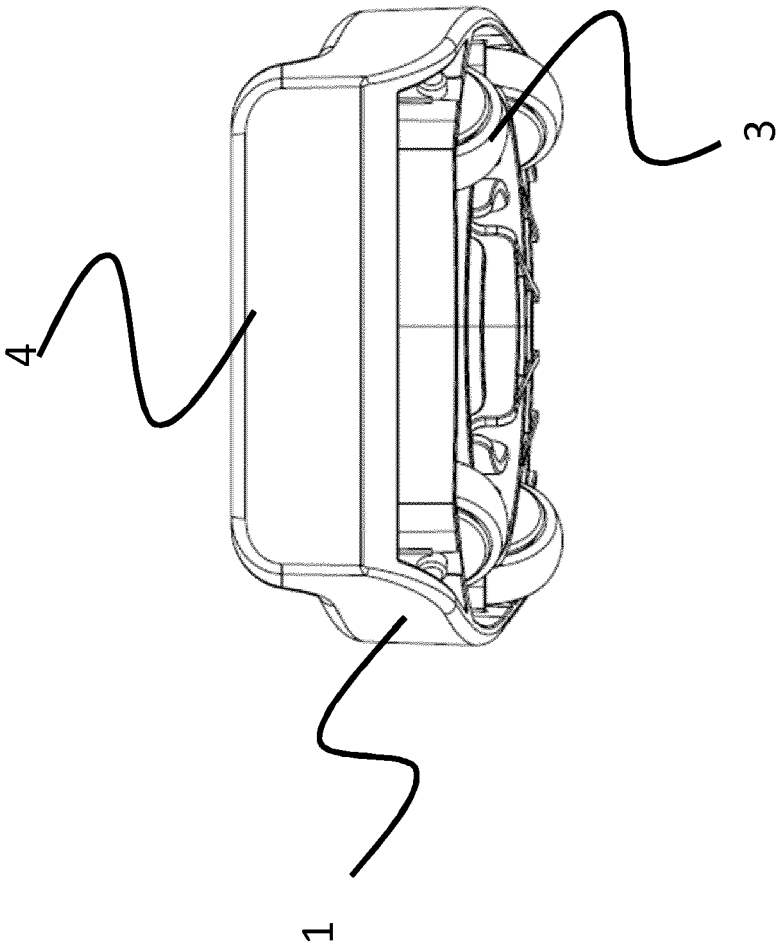


FIG. 4

FIG. 5



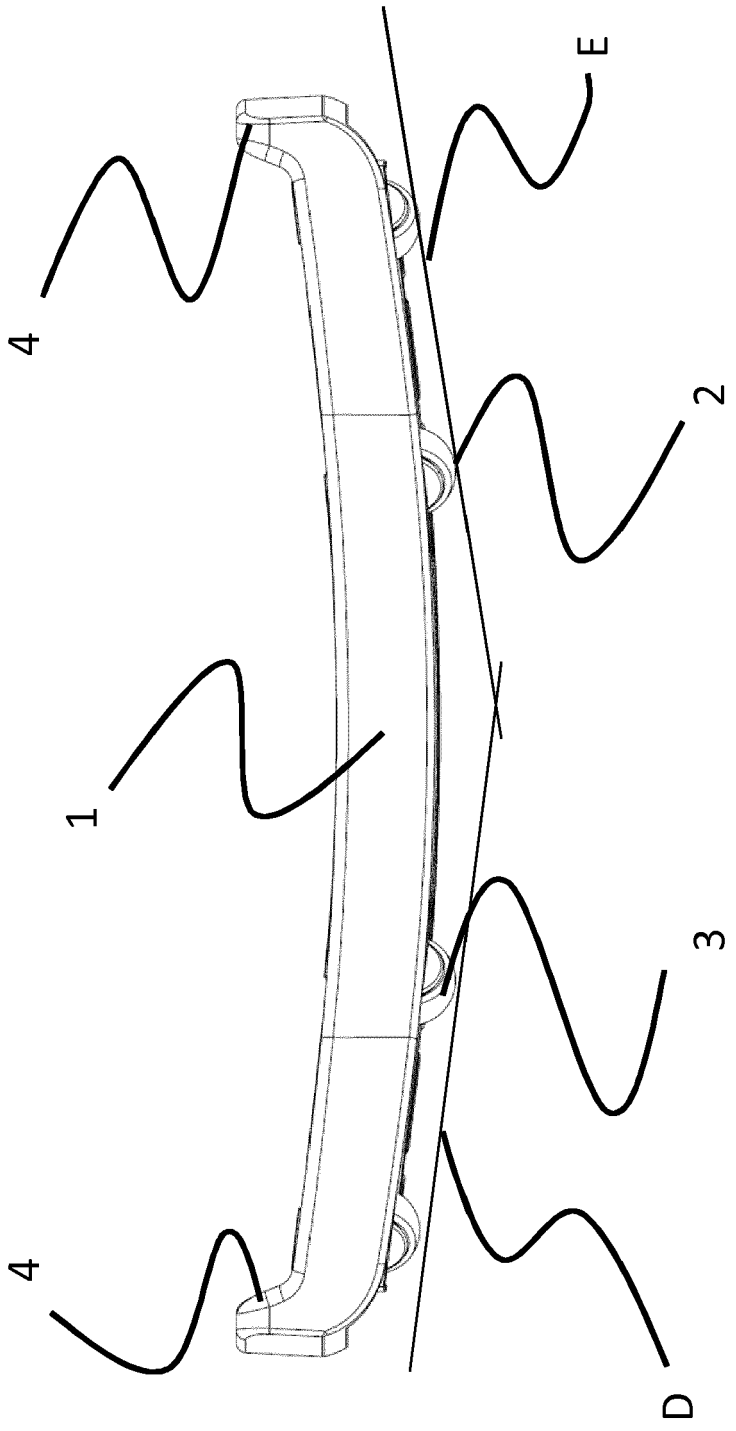


FIG. 6

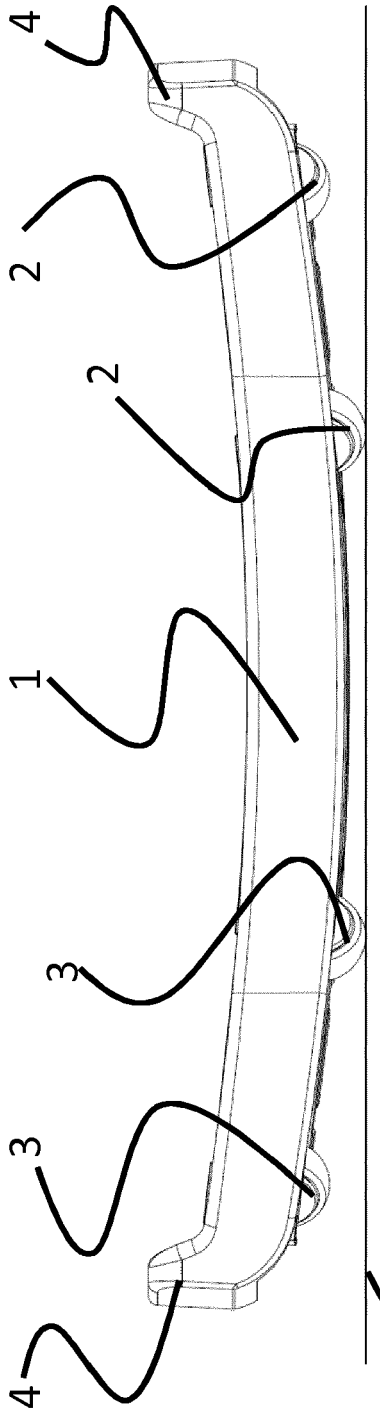


FIG. 7A

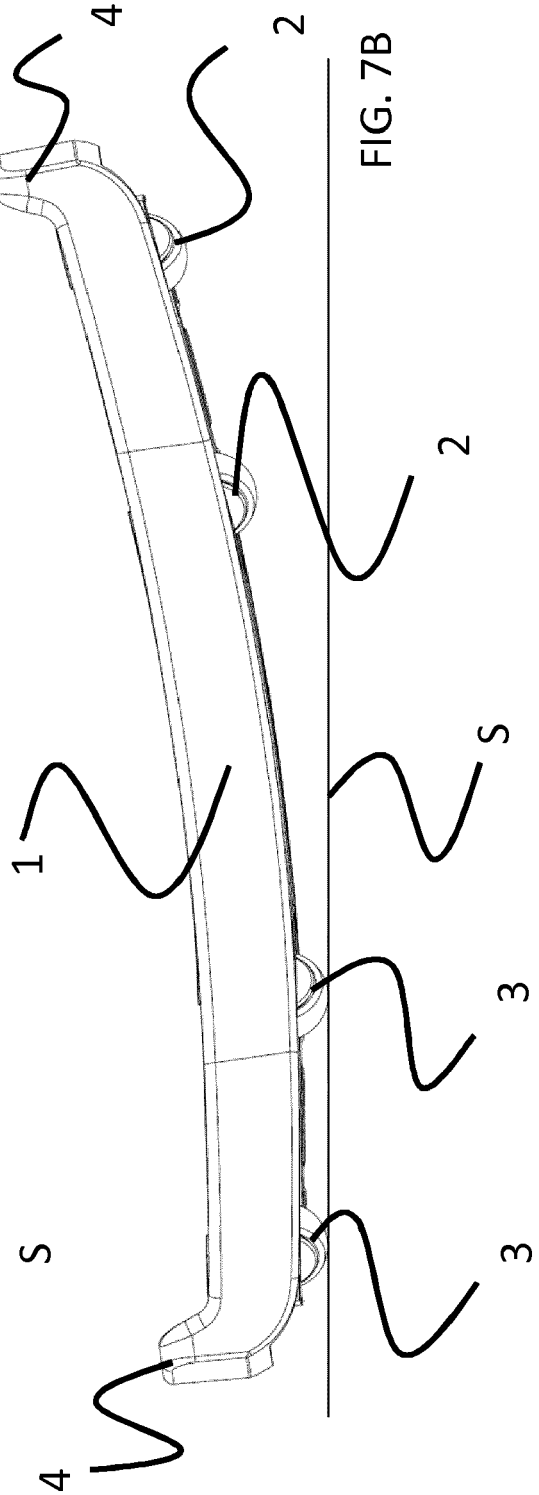


FIG. 7B

Europäisches Patentamt
European Patent Office
Office européen des brevets

EUROPEAN SEARCH REPORT

Application Number
EP 17 15 1413

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 5 795 277 A (BRUNTMYER JOSEPH A [US]) 18 August 1998 (1998-08-18) * column 4, line 63 - column 5, line 10; figures 16,17 *	1,5-8	INV. A63B22/20 A63B26/00 A63C17/01
X	US 2013/296147 A1 (CRUZ FREDERICK [US]) 7 November 2013 (2013-11-07) * paragraph [0030] - paragraph [0032]; figures 1-16 *	1,5	
X	DE 20 2011 108718 U1 (REUTERMANN JENS [DE]) 24 January 2012 (2012-01-24) * paragraph [0002] - paragraph [0008]; figures 1-6 *	1,5	
X	DE 20 2007 006990 U1 (OTTE CHRISTOF [DE]) 16 August 2007 (2007-08-16) * paragraph [0006] - paragraph [0026]; figures 1-2 *	1	
A	US 2011/105288 A1 (SUSNJARA TONY [AU]) 5 May 2011 (2011-05-05) * paragraph [0059] - paragraph [0089]; figures 1-23 *	1-8	TECHNICAL FIELDS SEARCHED (IPC) A63B A63C

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	27 April 2017	Jekabsons, Armands

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 17 15 1413

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

27-04-2017

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5795277 A	18-08-1998	NONE	
US 2013296147 A1	07-11-2013	NONE	
DE 202011108718 U1	24-01-2012	NONE	
DE 202007006990 U1	16-08-2007	NONE	
US 2011105288 A1	05-05-2011	US 2011105288 A1	05-05-2011
		US 2013281273 A1	24-10-2013
		US 2015182801 A1	02-07-2015

EPO FORM P0459

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

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- JP 200334066 B **[0004]**