(19) Europäisches Patentamt
European Patent Office
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(11) **EP 4 190 412 A1**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
07.06.2023 Bulletin 2023/23

(21) Application number: **22020596.7**

(22) Date of filing: **06.12.2022**

(51) International Patent Classification (IPC):
A63B 26/00 *(2006.01)* ***A63B 21/00*** *(2006.01)*
A63B 22/18 *(2006.01)*

(52) Cooperative Patent Classification (CPC):
A63B 26/003; A63B 21/00043; A63B 22/18

(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 ME MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA
Designated Validation States:
KH MA MD TN

(30) Priority: **06.12.2021 IT 202100030800**
05.01.2022 IT 202200000128

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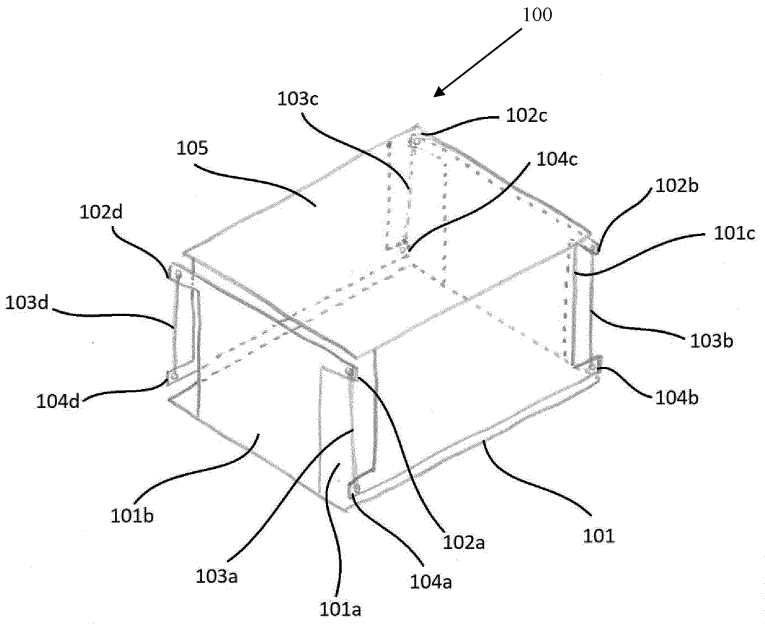
(54) **ADJUSTABLE BALANCE PLATFORM**

(57) An adjustable balance platform, comprising a first structure (1), with two walls (101b, 101c) facing each other, each provided with two lateral protrusions (102a, 102b; 102c, 102d) onto which is hung, through four flexible elements (103a, 103b, 103c, 103d), a second structure (105), which is analogous in form but arranged upside down and rotated 90° relative to the first structure (101). The second structure (105) is further connected to the first structure (101) by a further cable (106) connected to tensioning means (110) in such a way as to vary the oscillation between the two structures (101, 105).

FIG. 1



EP 4 190 412 A1

Description

[0001] The growing interest in fitness has accelerated the study of and research into training, contributing to the development of new training equipment and instruments to improve sporting performance.

[0002] One of those particularly in use is proprioceptive platforms - that is, unstable surfaces that require the user to continuously reset his or her centre of gravity by processing somatosensory information to preserve optimal motor control and balance.

[0003] The most common proprioceptive platforms include BOSU, which are tools that mimic an unstable surface by using a soft hemispherical cushion attached to a rigid base or platform, as well as proprioceptive boards, which are rigid surfaces resting on half-spheres or half-cylinders.

[0004] One limitation of these proprioceptive platforms is that the degree of difficulty of the exercise is not easily adjustable, and therefore they may be too easy to use for athletic, healthy people or may be too difficult to use for people with limited motor control.

[0005] The present invention aims to resolve this drawback by allowing the user adjust the degree of "instability" when training proprioceptively. This aim is achieved by creating a specific device wherein a surface becomes unstable due to being hung by flexible elements from a stable surface, wherein the oscillation of the former relative to the latter is determined by the tension applied to an additional cable that further connects the two surfaces, and which is adjustable by specific tensioning means.

[0006] The present invention will now be described in some of its non-limiting embodiments while making reference to the figures wherein:

- Figure 1 shows the invention from an isometric view;
- Figure 2 shows the invention from a front view, with some parts removed to better highlight others;
- Figure 3 shows an alternative version of the invention from a view analogous to that shown in Figure 2;

As can be seen in Figure 1, the present invention relates to an adjustable balance platform. This comprises a first structure (1) composed of a base (101a) and two walls (101b, 101c) opposite to each other, both having two lateral protrusions (102a, 102b; 102c, 102d) on which are attached cables (103a, 103b, 103c, 103c), connected also to protrusions (104a, 104b, 104c, 104d) of a second structure (105), which is analogous in form but arranged upside down and rotated 90 degrees relative to the first structure (101). As shown in Figures 2 and 3, in the platform (100), inside the two structures (101, 105) there is a further cable (106), which is attached at one end (107) to one wall (101b) of the first structure (101), passes through an idler system (108), such as a loop (108b) or a pulley (108b), positioned on the second structure (105) diametrically opposite the base (101a) of the first structure (101), and is connected at its second end (109) to tensioning means (110), such as a tie-rod (110a) with a threaded screw, which is screwable and unscrewable in the opposite wall (101c) of the first structure (101), such to enable the adjustment of the cable (106) connecting the two structures (101, 105) and consequently the variation of the degree of oscillation.

Claims

1. Adjustable balance platform, comprising a first structure (1), provided with a base (101a) and two walls (101b, 101c) opposite to each other, wherein both walls (101b, 101c) have two lateral protrusions (102a, 102b; 102c, 102d) to one end of which four flexible elements (103a, 103b, 103c, 103d) are attached, and a second structure (105) bound to the first structure (101) by means of the at least four flexible elements (103a, 103b, 103c, 103d) and at least one further cable (106), passing over an idler system (108), said platform (100) being **characterised in that** the second structure (105) is analogous in form to the first structure (101), but arranged upside down and rotated 90° relative to the first structure (101), with relative protrusions (104a, 104b, 104c, 104d) to which the flexible elements (103a, 103b, 103c, 103d) are bound, and the further cable (106) is attached at one end (107) to the wall (101b) of the first structure (101), passes from the idler system (108) attached to the second structure (105) in a position opposite the base (101a) of the first structure (101), and is connected at a second end (109) to tensioning means (110) situated on the wall (101c) of the first structure (101), such to modify the tension of the cable.

2. Platform according to Claim 1, **characterised in that** the flexible elements (103a, 103b, 103c, 103d) are cables.

3. Platform according to Claim 1, **characterised in that** the flexible elements (103a, 103b, 103c, 103d) are chains.

4. Platform according to Claim 1, **characterised in that** the idler system (108) comprises a pulley (108a).

5. Platform according to Claim 1, **characterised in that** the idler system (108) comprises a loop (108b).

6. Platform according to Claim 1, **characterised in that** the tensioning means (110) comprise a screwable and unscrewable tie-rod (110a).

FIG. 1

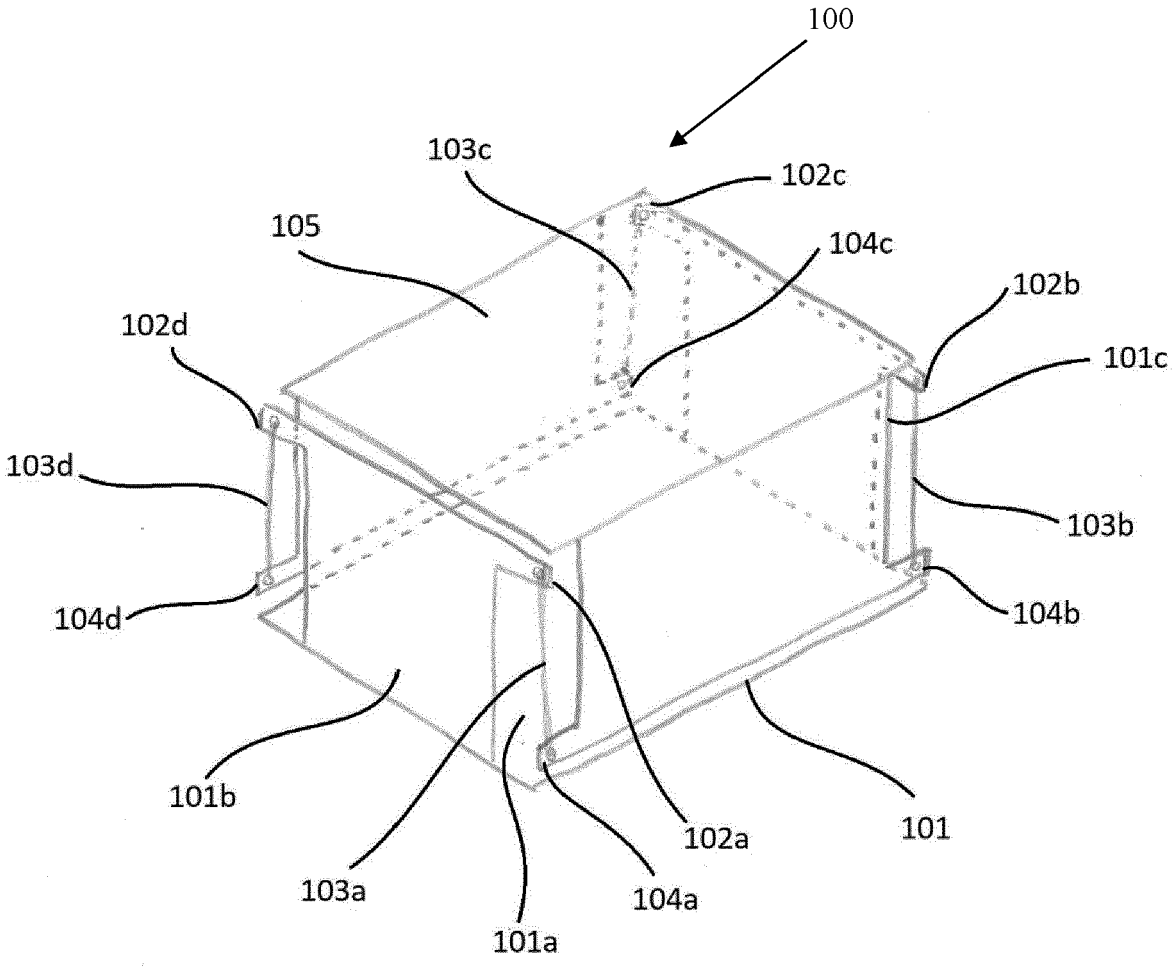

100
103c
102c
105
104c
102b
102d
101c
103d
103b
104d
104b
101b
102a
101
103a
104a
101a

FIG.2

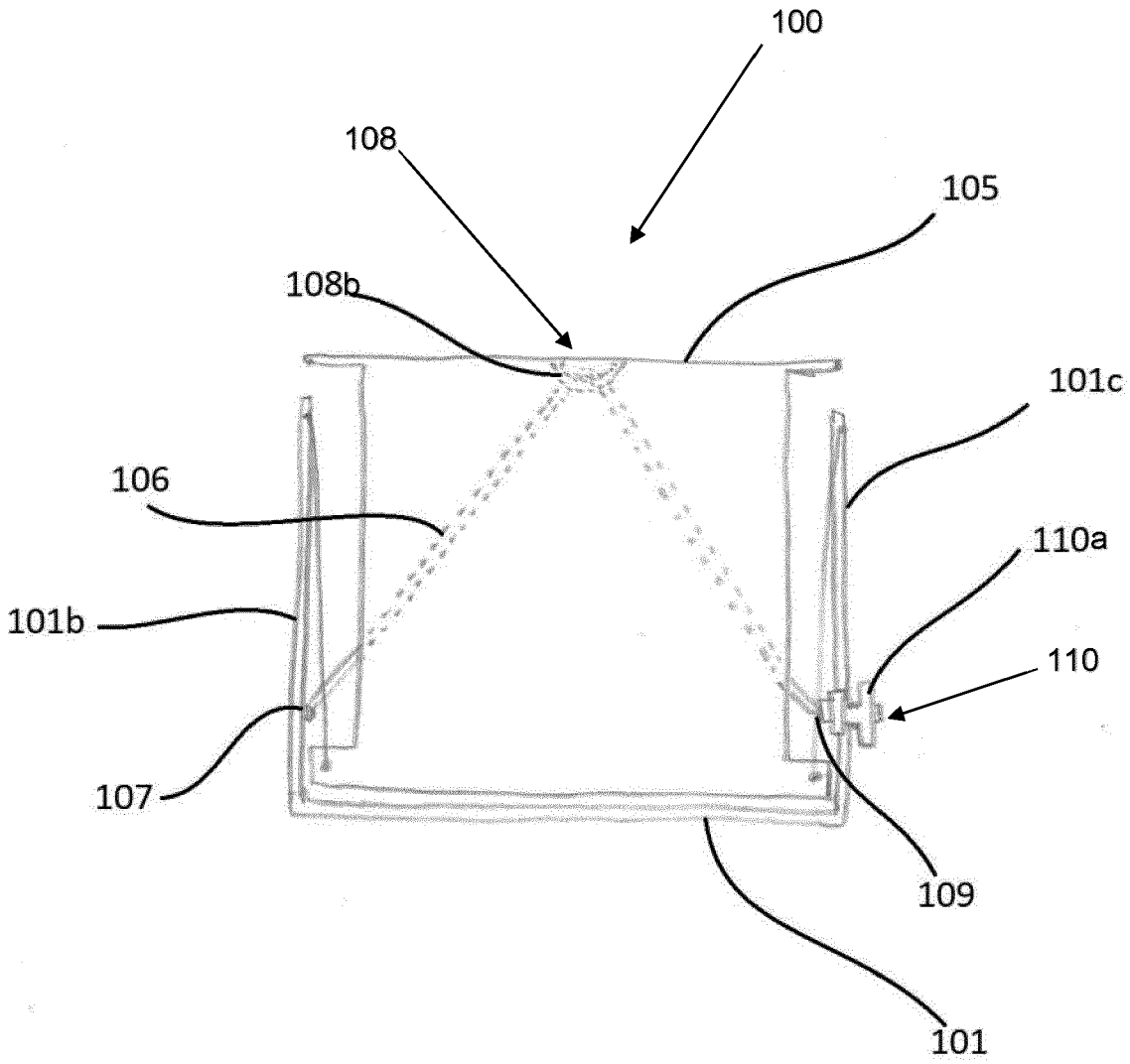
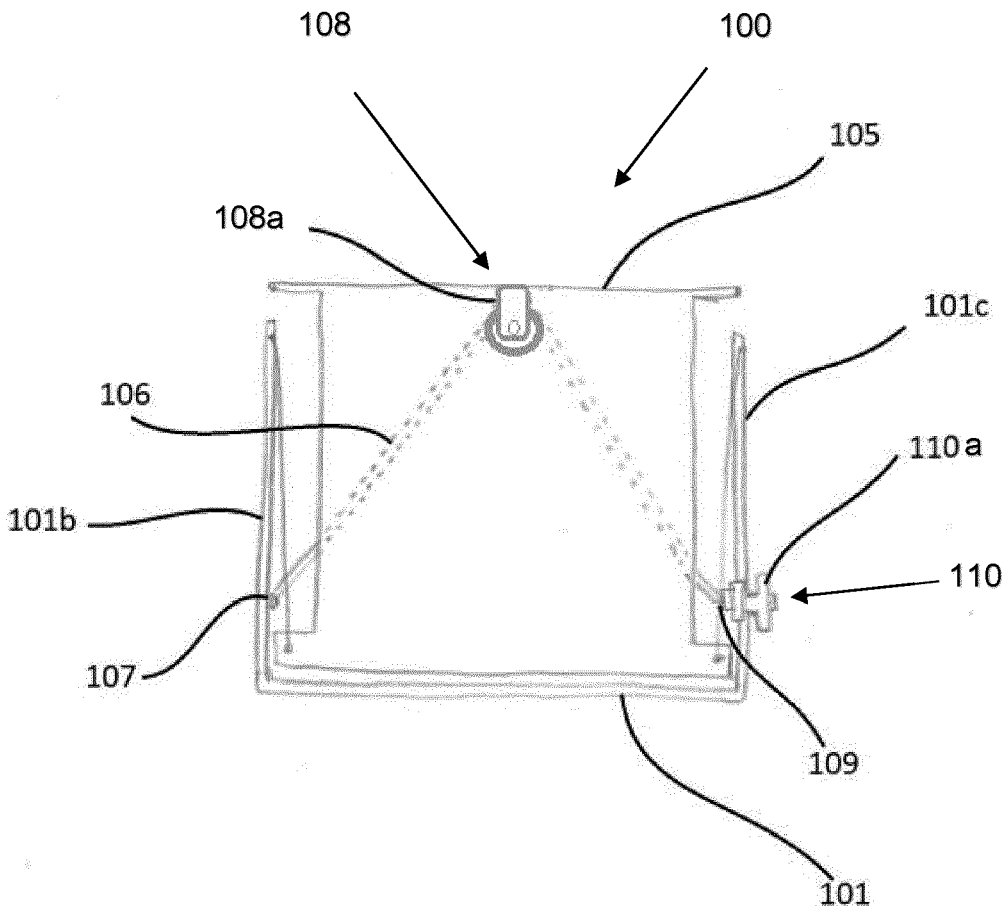


FIG.3



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EUROPEAN SEARCH REPORT

Application Number
EP 22 02 0596

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	GB 1 338 832 A (BRANDT W E; CLARK A L) 28 November 1973 (1973-11-28) * page 1, line 80 - line 94; figure 1 * -----	1-6	INV. A63B26/00 A63B21/00 A63B22/18
A	US 5 820 096 A (LYNCH JAMES M [US] ET AL) 13 October 1998 (1998-10-13) * column 4, line 14 - line 40; figures 1-4 * -----	1-6	
A	US 2021/197027 A1 (D'ALESIO GIONATA [IT]) 1 July 2021 (2021-07-01) * paragraphs [0001], [0110]; figures 1, 4e * -----	1-6	

TECHNICAL FIELDS SEARCHED (IPC)

A63B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	1 April 2023	Lundblad, Hampus

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 22 02 0596

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
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01-04-2023

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