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(54) **DEVICE FOR USING DUMB-BELLS**

(57) The invention relates to a device for using dumb-bells on a workbench with a bar including two supports suspended on the bar, wherein each support has a curved surface for placing the dumb-bells, and means for sliding and attaching the support along the bar. The device allows the position of the supports to be adjusted horizontally and vertically to fit to the user's dimensions. The device also has anti-rotation means to prevent the supports suspended on the bar from spinning. This configuration provides a more versatile assembly since it allows the slope of the device on the frame of the workbench to be changed according to the angle defined between the bar and the profile.

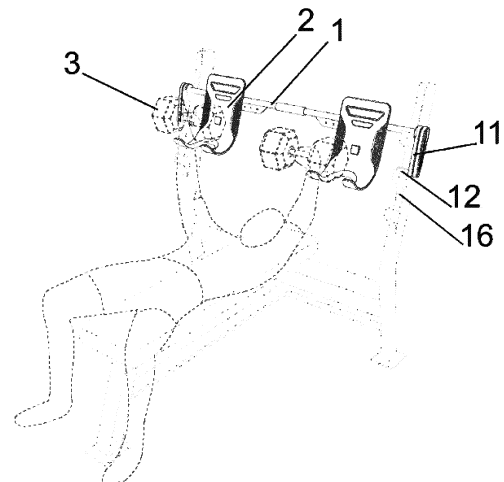


FIG. 6

Description

OBJECT OF THE INVENTION

[0001] The present invention relates to a device for using dumb-bells which is coupled on the bar used in known workbenches found in gyms and training rooms for personal training.

[0002] Specifically, the device of the invention is formed by supports with a curved surface on which dumb-bells are placed. The advantage of the device lies in its versatility for adjusting the height of the supports and the horizontal position thereof along the bar on which they are coupled, providing an assembly which can be readily arranged close to the user, being adapted to the user's dimensions and build in no time.

BACKGROUND OF THE INVENTION

[0003] Auxiliary devices for practicing sports, the purpose of which is to make it easier for the user to perform exercise properly, are known. In fact, many of the machines commonly found in training rooms favor the correct position of the user so as to prevent him or her from performing incorrect movements that may strain muscles and joints.

[0004] In this sense, the user who exercises by means of using dumb-bells on a workbench must perform certain movements, in addition to those actually required, until the dumb-bells are placed in the desired position.

[0005] Specifically, the user who is going to perform exercise on a workbench must first lean back against the surface of the bench provided for such purpose and perform a prior movement until the dumb-bells are moved from the floor to the position for starting the exercise. Likewise, in order to take breaks, it will be necessary for the user, once having completed the desired set, to perform an additional final movement until the dumb-bells are placed on the rest surface, usually on the floor.

[0006] The prior and final additional movements of dumb-bells involve an unnatural movement of the muscles and joints, generating certain stress which can then result in injuries to users.

[0007] At times and for the purpose of preventing these deleterious movements, the presence of a second person who monitors his or her partner and performs the prior and final movements from a safe and comfortable position, is required.

[0008] It is for this reason that the applicant of the present utility model finds the need to provide a complementary device that can be readily coupled to known workbenches and solves the problems described above by means of an invention contributing to the state of the art a device that can be readily adapted to user needs and enables providing a support surface close to the user while he or she is training with dumb-bells, getting around the presence of a support partner.

DESCRIPTION OF THE INVENTION

[0009] The proposed device for using dumb-bells on a workbench with a bar solves the problems set forth above in a fully satisfactory manner based on a simple but effective solution, wherein the supports forming the device of the invention are rapidly handled by means of a mechanism developed for adjusting the height of the supports and the position thereof along the bar.

[0010] The development to be protected therefore makes it easier for the users to use dumb-bells when they are training in order to prevent straining those muscles not targeted for strengthening.

[0011] More specifically, the device for using dumb-bells of the invention is a device necessarily coupled to a bar arranged on the frame of a workbench.

[0012] The afforded solution therefore provides a device for placement thereof on the bars of fixed or mobile workbenches for the purpose of providing supports having a configuration such that they provide support surfaces for dumb-bells.

[0013] In that sense, the device of the invention is coupled in a workbench with a bar and is formed by at least two supports suspended on the bar and anti-rotation means to prevent the supports suspended on the bar from spinning, creating situations in which the assembly is stabilized.

[0014] Each support therefore has a curved surface for placing the dumb-bells while the user is practicing sports.

[0015] The anti-rotation means of the device are formed by two different embodiments that will be described in detail in the following section.

[0016] In addition, the device of the invention is readily arranged at different heights by means of being supported on the different steps forming the frame of the workbench.

[0017] Advantageously, the device of the invention allows fitting the arrangement of the supports horizontally and vertically with respect to the bar, striving to place them as close as possible to the user while he or she practices sports. The user is therefore prevented from having to perform unnecessary movements of the dumb-bells, limiting their movement only to the desired set for exercising the target muscles.

[0018] To that end, each support has means for sliding and attaching each support along the bar and, optionally adjustment means for adjusting the height thereof with respect to the bar.

[0019] Based on the foregoing, the device of the invention provides supports that can be readily adjusted until reaching the desired position according to the user needs.

DESCRIPTION OF THE DRAWINGS

[0020] To complement the description that will be made below and for the purpose of helping to better un-

derstand the features of the invention according to a preferred practical embodiment thereof, a set of drawings is attached as an integral part of said description in which the following is depicted in an illustrative and non-limiting manner:

Figure 1 shows an exploded view of the elements forming the device for using dumb-bells materialized according to the first preferred embodiment object of the present invention coupled on a bar.

Figure 2 shows a partial rear view of the device of the invention of Figure 1 in which the horizontal adjustment of the support on the bar can be seen in detail, with the element for attaching the device also being depicted.

Figure 3 shows a side view of the support according to the first embodiment of the invention, with the support being one of the elements forming the device for using dumb-bells.

Figure 4 shows a partial front view of the device of the invention of Figure 1 in which the vertical adjustment of the support and the complementary part can be seen in detail, with the element for attaching the device and the workbench on which the assembly is supported also being depicted.

Figure 5 shows a perspective view of a detail of the anti-rotation means according to the first embodiment of the invention, element for attaching the device associated with a bar and with the workbench on which it is supported.

Figure 6 shows a depiction of the device according to the first embodiment of the invention during the use thereof, with said device being supported on a workbench with a bar.

Figure 7 shows a depiction of the device according to the second embodiment of the invention, with said device being supported on a workbench with a bar.

Figure 8 shows a rear view of the device depicted in Figure 7 according to the second embodiment of the invention, with said device being supported on a workbench with a bar.

Figure 9 shows a support used in the second embodiment of the invention.

Figure 10 shows a depiction of the device according to the third embodiment of the invention, in which the device is supported on a workbench with a bar.

Figure 11 shows a rear view of the device depicted in Figure 10 according to the third embodiment of

the invention.

PREFERRED EMBODIMENT OF THE INVENTION

5 [0021] In view of Figure 1, it can be seen that the device of the present invention is formed by the following elements:

- 10 - at least two supports (2) suspended on the bar (1) by means of hook-like elements (8') located on the back of each support. Additionally, each support (2) has a curved surface (2') for placing the dumb-bells (3) while practicing sports,
- 15 - anti-rotation means to prevent the supports (2) suspended on the bar (1) from spinning.

[0022] The device of the invention is therefore assembled on a bar (1) associated with a workbench of the commonly known types.

20 [0023] In this manner, the means for sliding and attaching the support (2) along the bar (1) are formed by a pin (7) which is attached to the bar (1) and allows the support (2) to be positioned with respect to the bar (1) in the desired horizontal position.

25 [0024] In the preferred, but non-limiting, embodiment of the invention, the bar (1) of the types commonly known and used in gyms, has perforations along its length.

30 [0025] The pin (7) is therefore attached to the bar (1) through one of the perforations (6) provided in the bar (1) itself.

35 [0026] It is optional, but highly recommended, for the bar (1) to be provided with flanges (5) having a plurality of perforations (6) to allow attaching the supports (2) in a more flexible manner in different positions along the bar (1), as can be seen in Figure 1.

[0027] The adjustment of the support (2) along the bar (1) is clearly depicted in Figure 2, where the manner in which the user readily handles the pin (7) can be seen.

40 [0028] Likewise, the adjustment means for adjusting the height of the support (2) with respect to the bar (1) are formed by a complementary part (8) arranged by way of a plate on the rear face of the support (2), the complementary part (8) being provided with a plurality of vertically arranged perforations (9).

45 [0029] As depicted in Figure 3, there is defined in the complementary part (8) a hook (8') associated with a pin (7), such that the support (2) slides on the bar (1) by means of the hook (8').

50 [0030] Likewise, the device is provided with a pin (10) which is preferably arranged on the front face of the support (2) and goes through the support (2) and one of the perforations (9) of the complementary part (8) for fixing the support (2) in the desired vertical position. Adjusting the height of the support (2) is clearly depicted in Figure 4, where the manner in which the user readily handles the pin (10) can be seen.

[0031] In a first embodiment, the anti-rotation means to prevent the supports (2) suspended on the bar (1) from

spinning are preferably formed by a coupling element (4) for coupling the device on the frame (16) of the workbench on which it is supported, the coupling element (4) being formed by a profile (11) which is inserted into an end of the bar (1), whereas the opposite end of the profile (11) has at the termination thereof a lug (12) supported by way of a stop on the frame (16) of the workbench.

[0032] Optionally, the coupling element (4) on the bar and the frame of the workbench has adjustment means for adjusting the angle defined between the bar (1) and the profile (11), such that it allows the slope of the device on the frame (16) of the workbench to be adjusted.

[0033] As seen in Figure 5, in a preferred embodiment of the invention the coupling element (4) has adjustment means for adjusting the angle defined between the profile (11) and the bar (11), these means being formed by a through bolt (13).

[0034] Advantageously, the presence of the adjustment means provides a more versatile assembly since it allows the slope of the device on the frame (16) of the workbench to be changed according to the angle defined between the bar (1) and the profile (11).

[0035] Figure 3 shows a side view of a detail of the support (2) which is provided with a spongy material (14) on the curved surface (2') to cushion the fall of the dumb-bell (3).

[0036] In addition, the support (2) forming the device of the invention has a U shape, with the edges of the support (2) being raised by way of a stop to enable retaining the dumb-bells (3) when the user is in the rest position.

[0037] Moreover, there is a need to highlight that in order to make the complete handling of the device easier, the supports are preferably provided with grips (15), as can be seen in Figures 1, 2, and 4.

[0038] Figure 6 depicts the device of the invention arranged on the bar (1) associated with the frame (16) of a workbench which has a known configuration and in which the user leans back against the surface provided for such purpose, training exercises with dumb-bells (3). The user therefore holds the dumb-bells (3) which he or she will place on the supports (2) of the device of the invention.

[0039] In a second embodiment, the anti-rotation means to prevent the supports (2) suspended on the bar (1) from spinning are formed by grooves (17) located on the back of the supports (2) for receiving a second bar (1') to be supported on the frame (16) of the workbench, as depicted in Figures 7 and 8.

[0040] Advantageously, the supports (2) of the second embodiment contemplate optional height adjustment as depicted in Figure 9.

[0041] This second embodiment of the invention provides a device which is rapidly coupled to the bars and workbench commonly found in gyms, so it is a very versatile device.

[0042] In a third embodiment of the invention, the anti-rotation means to prevent the supports (2) suspended

on the bar (1) from spinning are formed by at least one element (18) coupled to the end of the bar (1) which is associated with a secondary bar (1') to impart robustness to the assembly, this secondary bar (1) being arranged parallel to the mentioned bar (1).

[0043] As depicted in Figures 10 and 11, in the third embodiment of the invention the second bar or secondary bar (1') enables holding the supports (2) to prevent them from spinning, and this constitutes an extremely robust solution which allows withstanding continuous repetitions with high weights.

Claims

1. A device for using dumb-bells on a workbench with a bar (1), **characterized in that** it comprises:

- at least two supports (2) suspended on the bar (1) by means of hook-like elements (8'), wherein each support (2) has a curved surface (2') for placing the dumb-bells (3),
- anti-rotation means to prevent the supports (2) suspended on the bar (1) from spinning,

and wherein each support (2) has means for sliding and attaching the support (2) along the bar (1).

2. The device for supporting dumb-bells according to claim 1, **characterized in that** the anti-rotation means are formed by at least one coupling element (4) for coupling the device on the frame (16) of the workbench on which it is supported, the coupling element (4) being formed by a profile (11) which is inserted into an end of the bar (1), whereas the opposite end of the profile (11) has at the termination thereof a lug (12) supported by way of a stop on the frame (16) of the workbench.

3. The device for supporting dumb-bells according to claim 1, **characterized in that** the anti-rotation means are formed by grooves (17) located on the back of the supports (2) for receiving a second bar (1') to be supported on the frame (16) of the workbench.

4. The device for supporting dumb-bells according to claim 1, **characterized in that** the anti-rotation means are formed by at least one element (18) coupled to the end of the bar (1), said element (18) being associated with a secondary bar (1') arranged parallel to the bar (1).

5. The device for supporting dumb-bells according to claim 1, **characterized in that** the means for sliding and attaching the support (2) along the bar (1) are formed by a pin (7) which is attached to the bar (1) for positioning the support (2) in the desired horizon-

tal position.

6. The device for using dumb-bells according to claim 1, **characterized in that** each support (2) has adjustment means for adjusting the height with respect to the bar (1) are formed by a complementary part (8) arranged by way of a plate on the rear face of the support (2), wherein the complementary part (8) is provided with a plurality of vertically arranged perforations (9), such that a pin (10) goes through the support (2) and one of the perforations (9) of the complementary part (8) for attaching the support (2) in the desired vertical position. 5 10
7. The device for using dumb-bells according to claim 2, **characterized in that** the coupling element (4) has adjustment means for adjusting the angle defined between the bar (1) and the profile (11), such that it allows the slope of the device on the frame (16) of the workbench to be adjusted. 15 20
8. The device for using dumb-bells according to claim 7, **characterized in that** the adjustment means for adjusting the angle defined between the profile (11) and the bar (11) are formed by a through bolt (13). 25
9. The device for using dumb-bells according to claim 1, **characterized in that** the support (2) is provided with a spongy material (14) on the curved surface (2') to cushion the fall of the dumb-bell (3). 30
10. The device for using dumb-bells according to claim 1, **characterized in that** the support (2) has a U shape, with the edges of the support (2) being raised by way of a stop to enable retaining the dumb-bells (3). 35
11. The device for using dumb-bells according to claim 1, **characterized in that** the support (2) has grips (15) to make handling of the device easier. 40

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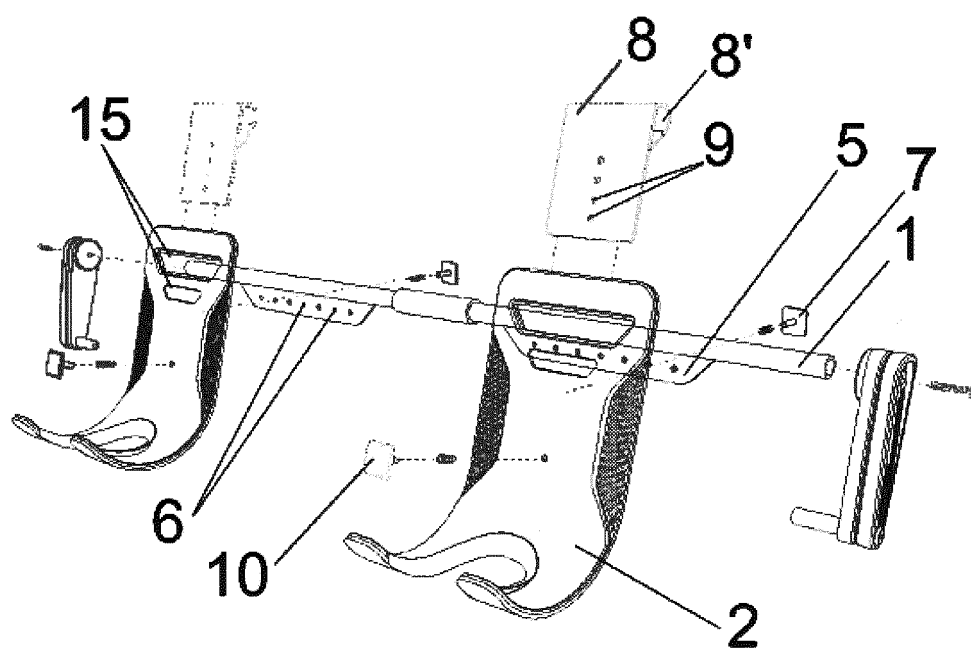


FIG. 1

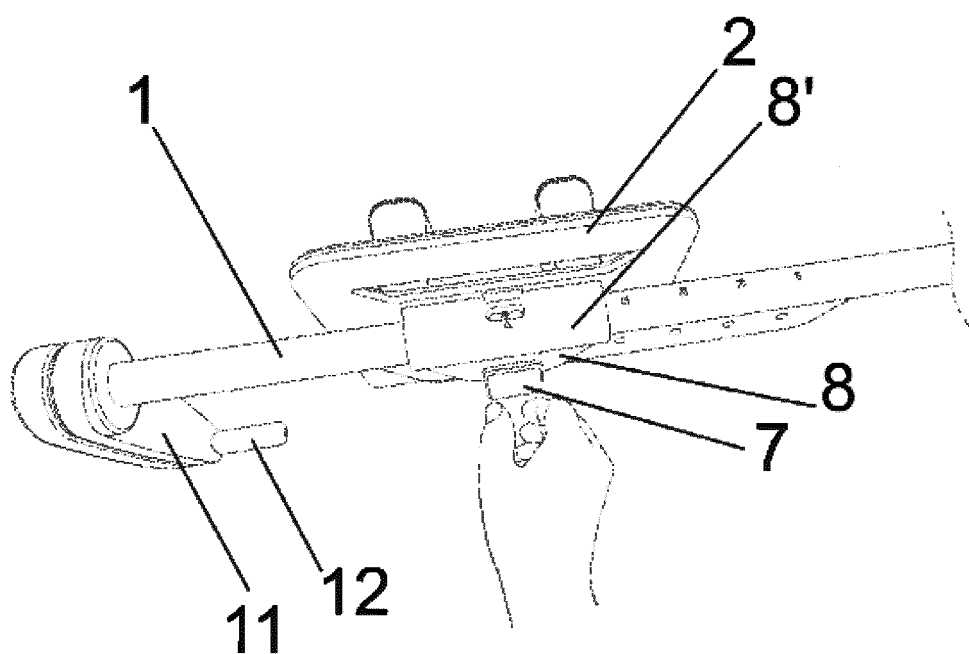


FIG. 2

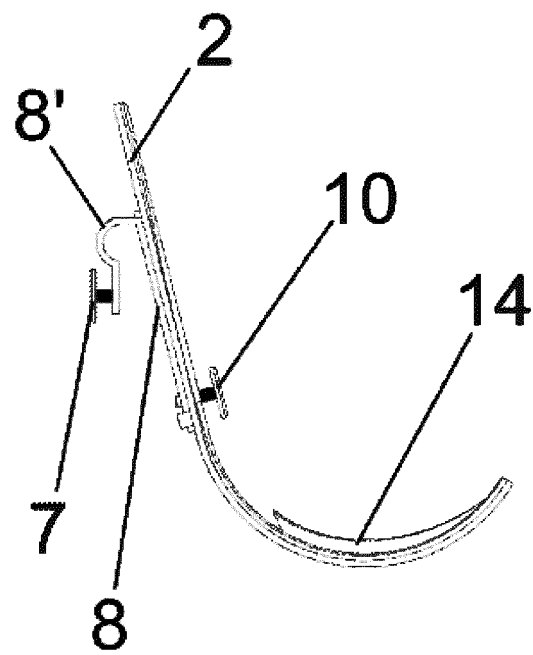


FIG. 3

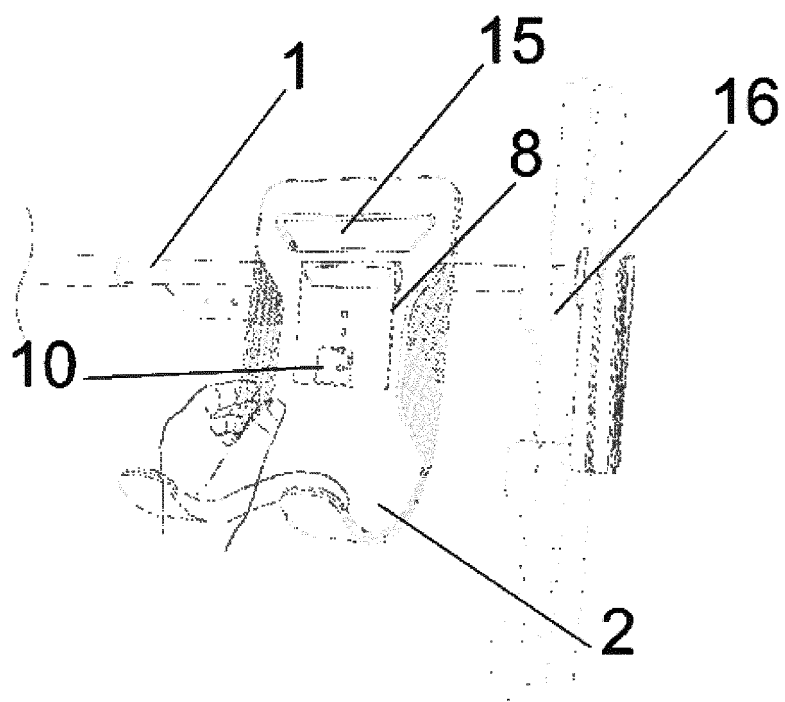


FIG. 4

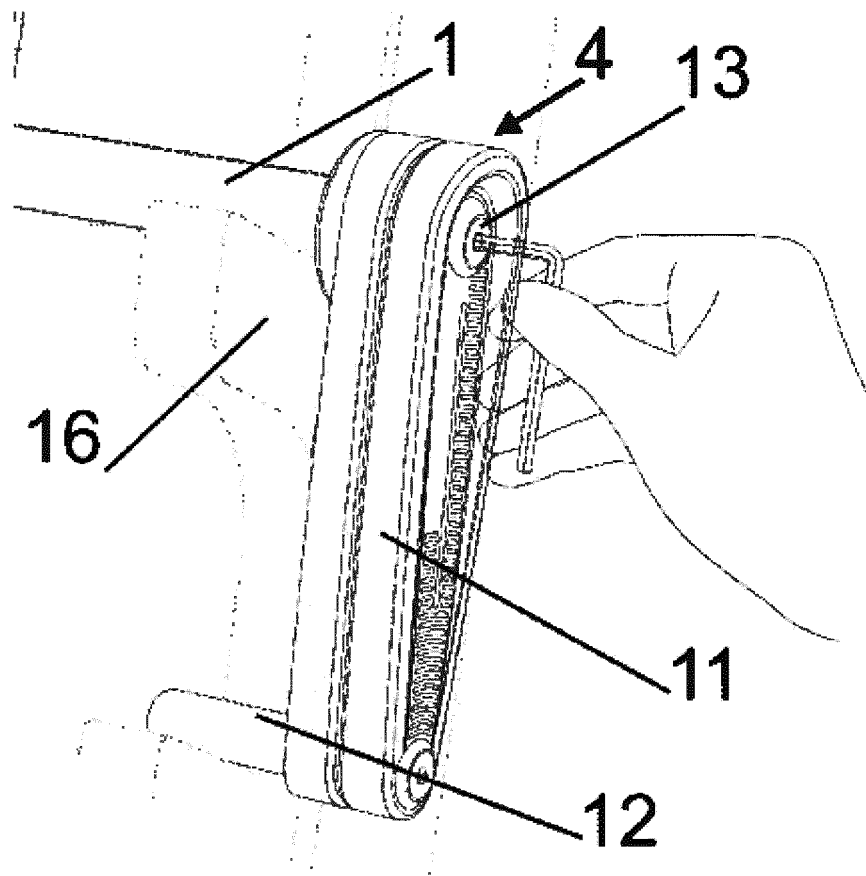


FIG. 5

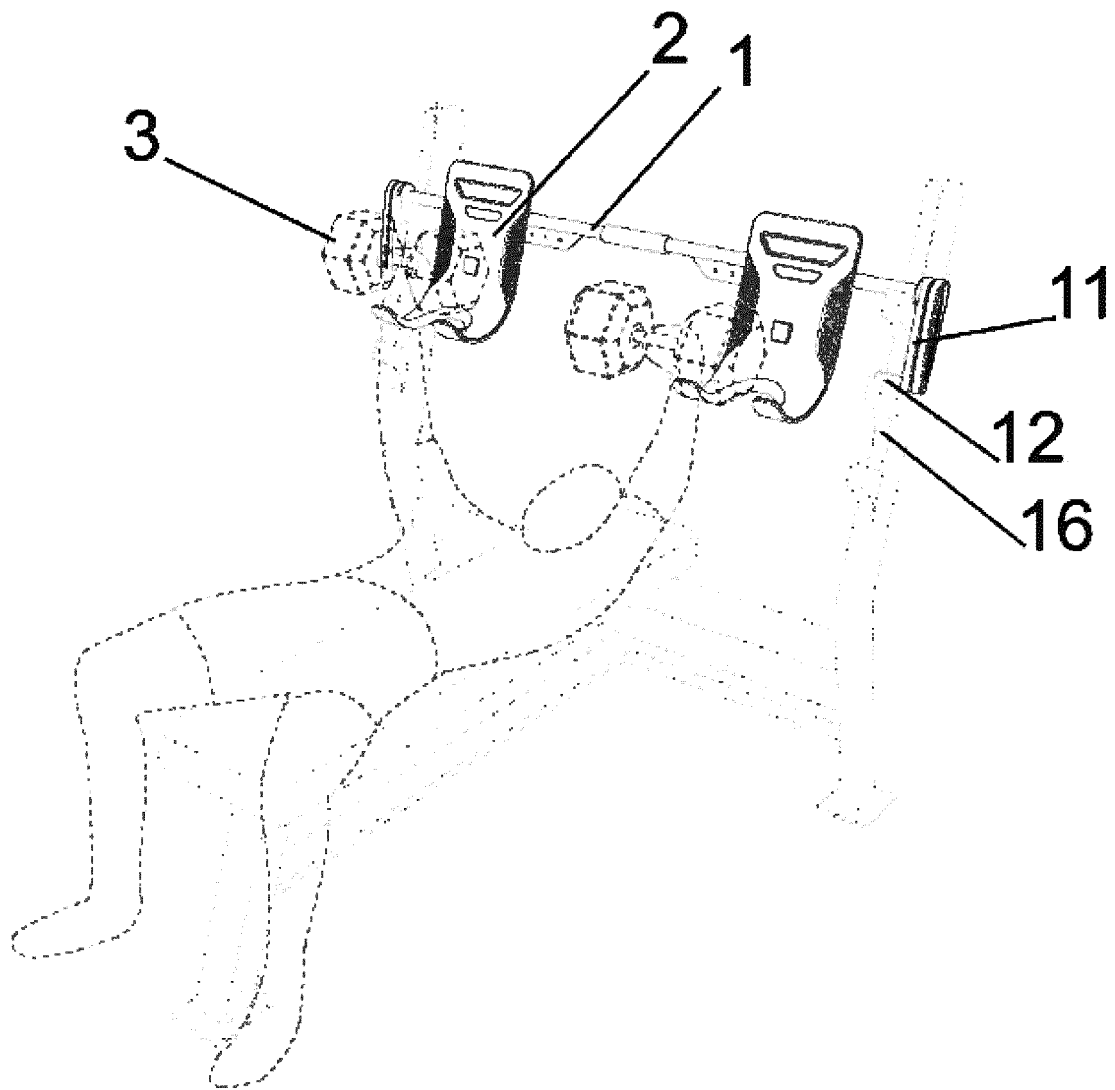


FIG. 6

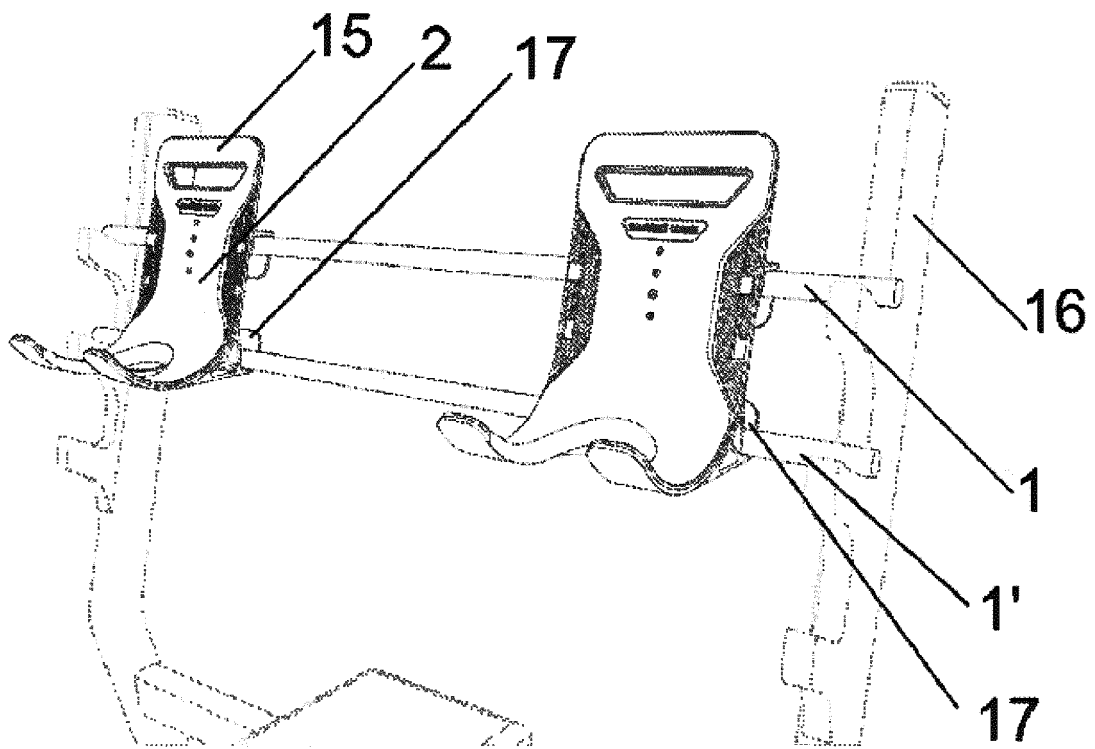


FIG. 7

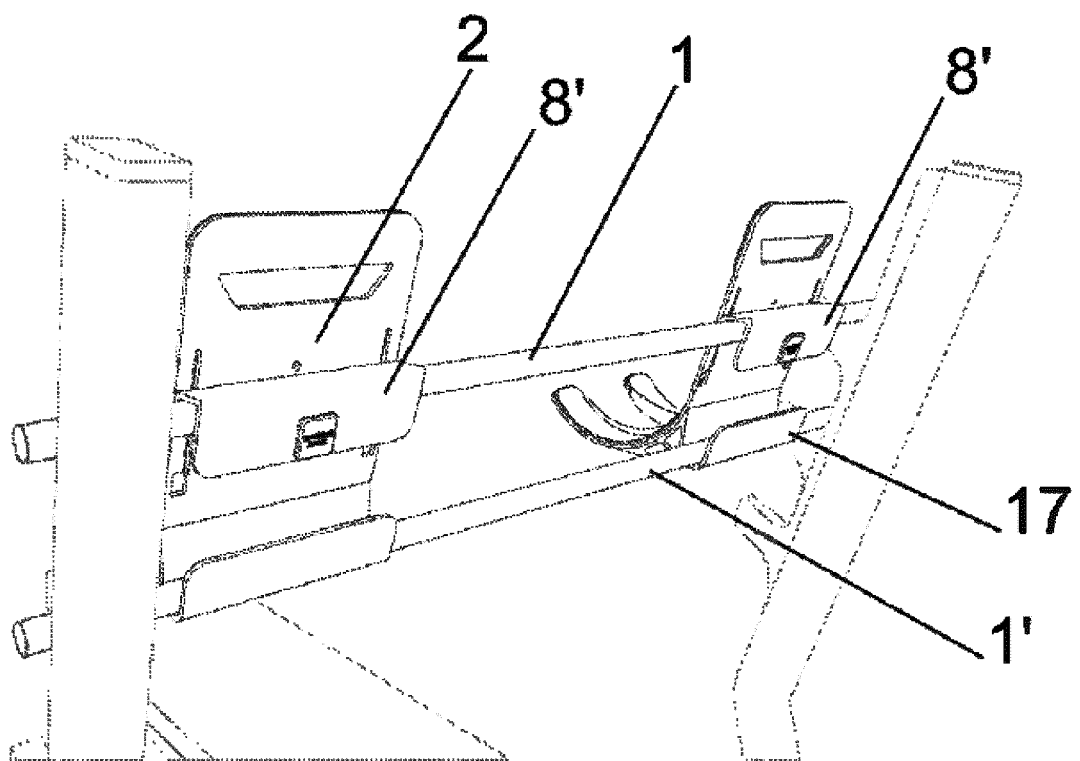


FIG. 8

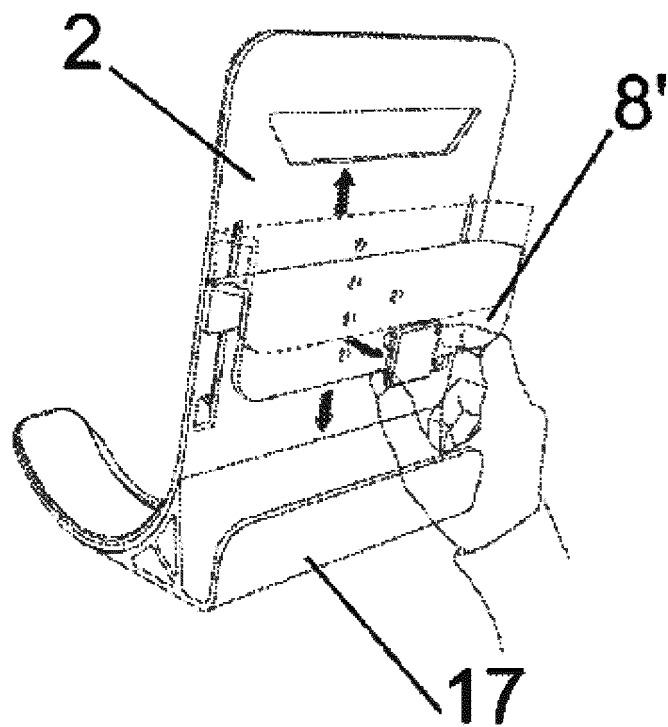


FIG. 9

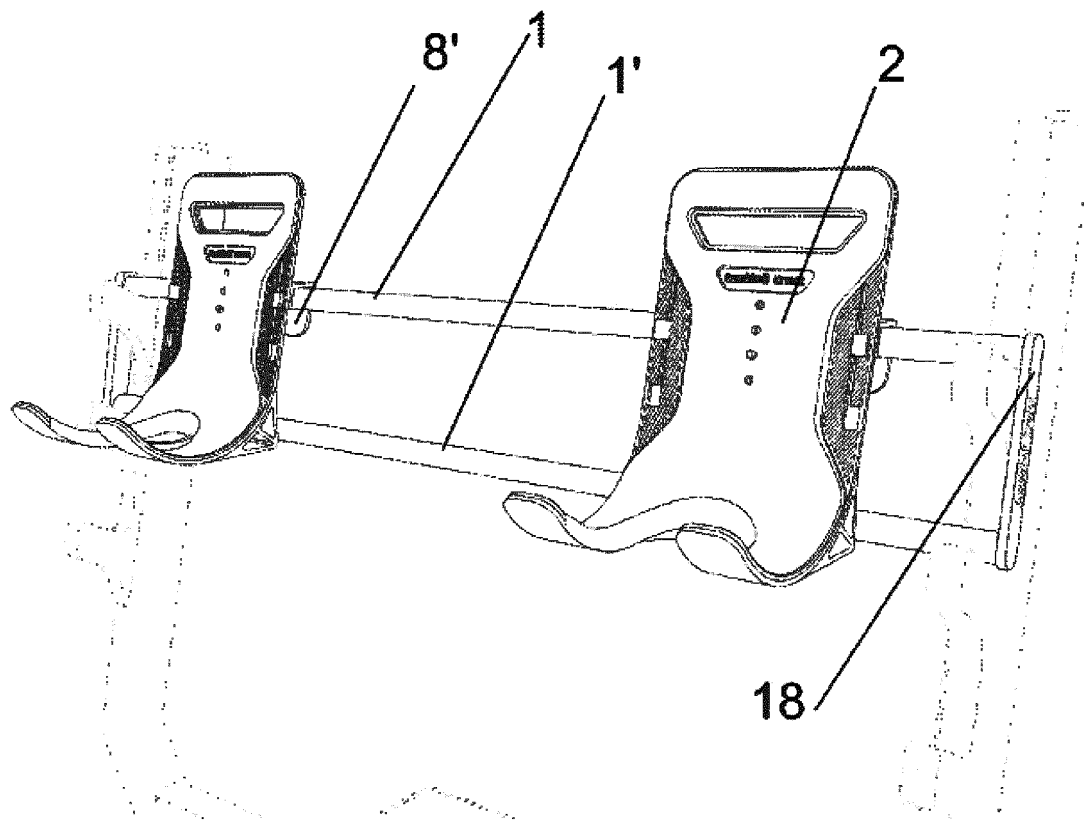


FIG. 10

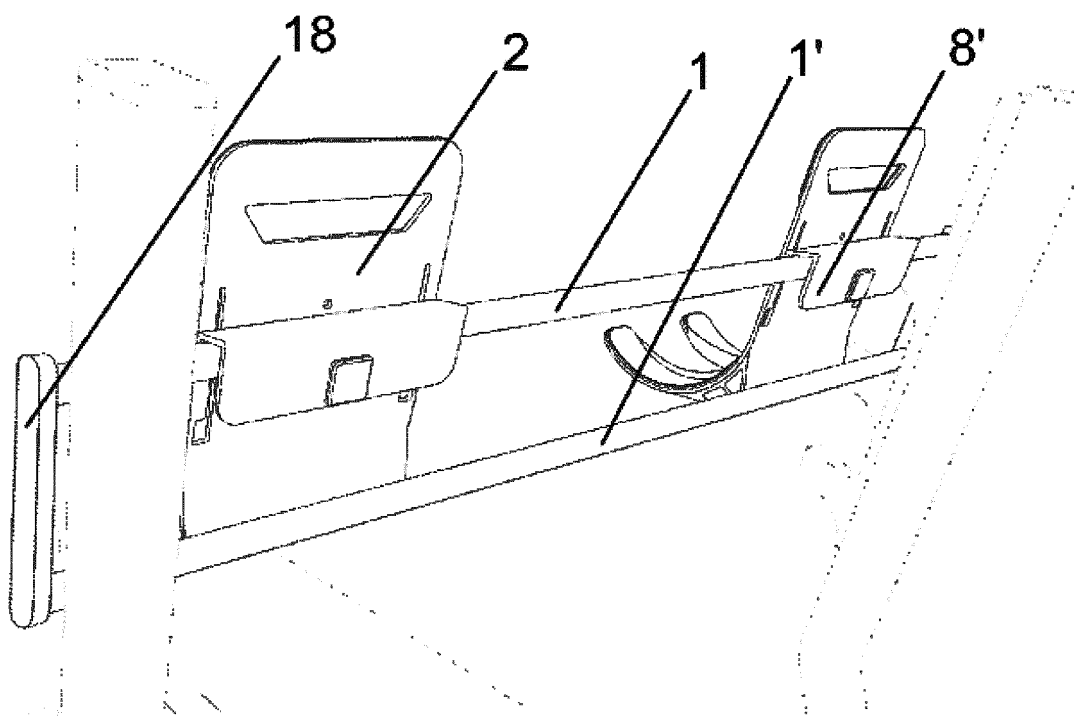


FIG. 11

INTERNATIONAL SEARCH REPORT

International application No.

PCT/ES2020/070152

A. CLASSIFICATION OF SUBJECT MATTER

See extra sheet

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)

A63B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPODOC, INVENES, WPI, TXTE, INTERNET

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5924964 A (HAYDEN RICHARD C) 20/07/1999, the whole document; in particular, figures.	1-11
A	US 5411459 A (HAYDEN RICHARD C) 02/05/1995, the whole document; in particular, figures.	1-11
A	ES 1153384U U (LOPEZ TORRE I) 23/03/2016, the whole document; in particular, figures.	1-11
A	GB 2478769 A (BUCKLER ROBERT) 21/09/2011, the whole document; in particular, figures.	1-11

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

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"&" document member of the same patent family

Date of the actual completion of the international search
11/06/2020Date of mailing of the international search report
(12/06/2020)

Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/ES2020/070152

Information on patent family members

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ES1153384U U	23.03.2016	ES1153384Y Y	08.07.2016
GB2478769 A	21.09.2011	NONE	

INTERNATIONAL SEARCH REPORT

International application No.

PCT/ES2020/070152

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CLASSIFICATION OF SUBJECT MATTER

A63B21/072 (2006.01)

A63B21/16 (2006.01)

A63B21/078 (2006.01)

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