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(54) **EXERCISE DEVICE**

(57) An exercise device is provided. A frame body has two first stand columns each having a plurality of adjustment holes, and two counterweight mechanisms. Two first slidable seats, each having an adjustment pin which is inserted into one of the plurality of adjustment holes, are respectively and slidably arranged on the two first stand columns. Each of two pulling assemblies includes a pulling member which are respectively and swingably arranged on the two first slidable seats and a swinging member, a first pulling rope is slidably disposed through the swinging member and is connected between the counterweight mechanism and the pulling member. Two carrying members are respectively and fixedly disposed on an end of each of the two first slidable seats opposite to the pulling assembly, and each said first stand column is located between one said carrying member and one said swinging member.

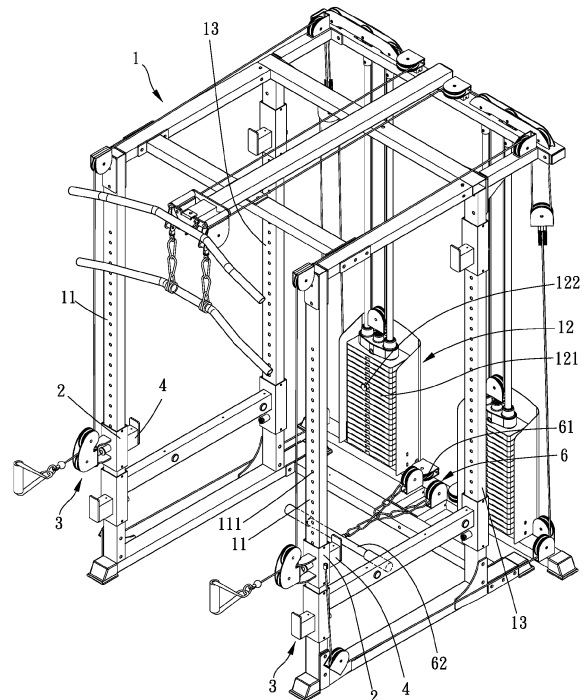


FIG. 1

Description

BACKGROUND OF THE INVENTION

Field of the Invention

[0001] The present invention relates to an exercise device.

Description of the Prior Art

[0002] As the living standard rises day by day, and people start to put more and more emphasis on physical health, exercise has become a very important entertainment for modern people. However, due to the crowded environment and poor air quality of the urban area, people tend to exercise indoors, for example, using exercise devices in a gym to conduct weight training, to maintain physical health and fitness. A conventional exercise device includes a frame body, a pulling mechanism and a counterweight mechanism, the pulling mechanism and the counterweight mechanism are connected through the cooperation of a rope and a roller set. When a user grasps a pulling member of the pulling mechanism, s/he needs to overcome the weight set on the counterweight mechanism to pull the pulling member and to train. The conventional exercise device has just a single function, so the exercise device can only be used to train a specific muscle group. When the user wants to train other muscle groups, s/he needs to use other types of exercise devices, so it is inconvenient and costly.

[0003] The present invention has arisen to mitigate and/or obviate the afore-described disadvantages.

SUMMARY OF THE INVENTION

[0004] The major object of the present invention is to provide an exercise device, which serves various training functions, and a user can use the exercise device to train different muscle groups without purchasing other exercise equipment, so it saves money and space by using the exercise device.

[0005] To achieve the above and other objects, an exercise device is provided, including a frame body, two first slidable seats, two pulling assemblies and two carrying members. The frame body has two first stand columns and two counterweight mechanisms, and each of the two first stand columns has a plurality of adjustment holes in a length direction. The two first slidable seats are respectively and slidably arranged on the two first stand columns, each of the two first slidable seats has an adjustment pin, and the adjustment pin is inserted into one of the plurality of adjustment holes. Each of the two pulling assemblies includes a pulling member and a swinging member, the two swinging members are respectively and swingably arranged on the two first slidable seats, a first pulling rope is slidably disposed through the swinging member, and two ends of the first pulling

rope are respectively connected between the counterweight mechanism and the pulling member. The two carrying members are respectively and fixedly disposed on an end of each of the two first slidable seats opposite to the pulling assembly, and each said first stand column is located between one said carrying member and one said swinging member.

[0006] The present invention will become more obvious from the following description when taken in connection with the accompanying drawings, which show, for purpose of illustrations only, the preferred embodiment(s) in accordance with the present invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007]

Figs. 1 and 2 are stereograms of a preferred embodiment of the present invention;

Fig. 3 is a partially breakdown view of the preferred embodiment of the present invention; and

Figs. 4 to 7 are drawings showing the preferred embodiment of the present invention in operation.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0008] The present invention will be clearer from the following description when viewed together with the accompanying drawings, which show, for purpose of illustrations only, the preferred embodiment in accordance with the present invention.

[0009] Please refer to Figs. 1 to 7 for a preferred embodiment of the present invention. An exercise device includes a frame body 1, two first slidable seats 2, two pulling assemblies 3 and two carrying members 4.

[0010] The frame body 1 has two first stand columns 11 and two counterweight mechanisms 12, and each of the two first stand columns 11 has a plurality of adjustment holes 111 in a length direction. Each of the two counterweight mechanisms 12 includes a plurality of counterweight blocks 121 and a counterweight pin 122, and a number of the plurality of counterweight blocks 121 driven can be changed by adjusting the counterweight pin 122.

[0011] The two first slidable seats 2 are respectively and slidably arranged on the two first stand columns 11, each of the two first slidable seats 2 has an adjustment pin 21, and the adjustment pin 21 is inserted into one of the plurality of adjustment holes 111 to prevent the first slidable seat 2 from sliding relative to the first stand column 11. Through controlling the adjustment pin 21, relative positions of the first slidable seat 2 and the first stand column 11 can be adjusted to adjust a height of the first slidable seat 2 according to actual requirements. In this embodiment, the adjustment pin 21 further has an elastic member 24, the elastic member 24 abuts against and between the first slidable seat 2 and the adjustment

pin 21 to allow the adjustment pin 21 to have a tendency to bounce toward the first stand column 11 to prevent the adjustment pin 21 from being disengaged from the adjustment hole 111.

[0012] Each of the two pulling assemblies 3 includes a pulling member 31 and a swinging member 32, the two swinging members 32 are respectively and swingably arranged on the two first slidable seats 2, a first pulling rope 33 is slidably disposed through the swinging member 32, and two ends of the first pulling rope 32 are respectively connected between the counterweight mechanism 12 and the pulling member 31 for a user to practice a pulling action. Specifically, in this embodiment, the first slidable seat 2 is sleeved on the first stand column 11, the first slidable seat 2 has two ear pieces 22, the swinging member 32 has a sleeve 321, and a shaft 23 is disposed between the sleeve 321 and the two ear pieces 22 so that the swinging member 32 can swing relative to the first slidable seat 2. Since the swinging member 32 can swing relative to the first slidable seat 2, it is convenient for the user to conduct training along a swinging direction of the swinging member 32.

[0013] Two carrying members 4 are respectively and fixedly disposed on an end of each of the two first slidable seats 2 opposite to the pulling assembly 3, the first stand column 11 is located between the carrying member 4 and the swinging member 32, and the two carrying members 4 can be used to carry a barbell (as shown in Fig. 4) for training pectoral muscle, triceps and other muscle groups, so the exercise device is multi-functional. Preferably, the carrying body 4 is integrally disposed on the first slidable seat 2 to have a stronger structural strength to carry the barbell, and an end of the carrying member 4 remote from the first slidable seat 2 has a blocking portion 41 to prevent the barbell from falling off from the carrying member 4.

[0014] Specifically, the frame body 1 includes two second stand columns 13, the two first stand columns 11 and the two second stand columns 13 are respectively located on four corners of the frame body 1, and the two counterweight mechanisms 12 are near the two second stand columns 13.

[0015] In addition, the frame body 1 further includes a top frame 14, the top frame 14 is connected to the two first stand columns 11 and the two second stand columns 13, a side of the top frame 14 near the two first stand columns 11 has a connecting portion 15, at least one second pulling rope 51 is disposed through the connecting portion 15, two ends of the at least one second pulling rope 51 are respectively connected to a first pull rod 52 and at least one of the two counterweight mechanisms 12, and the first pull rod 52 is for the user to train his/her back muscle groups (as shown in Fig. 6). In this embodiment, two of the at least one pulling ropes 51 are respectively connected to the two counterweight mechanisms 12 to prevent the first pull rod 52 from deviating. Preferably, the connecting portion 15 further has a second pull rod 53 for the user to do pull-ups (as shown in Fig. 7).

[0016] Preferably, the frame body 1 further includes two safety rods 16, two ends of one of the two safety rods 16 are respectively and slidably arranged on one of the two first stand columns 11 and one of the two second stand columns 13 neighboring to each other in an adjustable manner, two ends of the other of the two safety rods 16 are respectively and slidably arranged on the other of the two first stand columns 11 and the other of the two second stand columns 13 neighboring to each other in an adjustable manner, and the user can adjust a safe height of the two safety rods 16 to prevent from being accidentally hit during training when s/he does not have enough strength to lift the barbell.

[0017] In this embodiment, an end of one of the two first stand columns 11 and an end of one of the two second stand columns 13 near a bottom have a first connecting rod 17 therebetween, two ends of the two second stand columns 13 near the bottom have a second connecting rod 18 therebetween, and the two first connecting rods 17 and the second connecting rod 18 enable the two first stand columns 11 and the two second stand columns 13 to tilt relatively so that the frame body 1 can be stably placed on a datum plane. Preferably, the second connecting rod 18 further has a guide roller set 6, at least one third pulling rope 61 is slidably arranged on the guide roller set 6, and two ends of the at least one third pulling rope 61 are respectively connected to a third pull rod 62 and at least one of the two counterweight mechanisms 12 (as shown in Fig. 1). In this embodiment, two of the at least one third pulling rod 61 are respectively connected to the two counterweight mechanisms 12, and the third pull rod can be used to train the action of rowing.

[0018] Given the above, the exercise device serves various training functions, and a user can use the exercise device to train different muscle groups without purchasing other exercise equipment, so it saves money and space by using the exercise device.

[0019] While we have shown and described various embodiments in accordance with the present invention, it should be clear to those skilled in the art that further embodiments may be made without departing from the scope of the present invention.

Claims

1. An exercise device, including:

a frame body (1), having two first stand columns (11) and two counterweight mechanisms (12), each of the two first stand columns (11) having a plurality of adjustment holes (111) in a length direction;
two first slidable seats (2), respectively and slidably arranged on the two first stand columns (11), each of the two first slidable seats (2) having an adjustment pin (21), the adjustment pin (21) being inserted into one of the plurality of

- adjustment holes (111);
two pulling assemblies (3), each of the two pulling assemblies (3) including a pulling member (31) and a swinging member (32), the two swinging members (32) being respectively and swingably arranged on the two first slidable seats (2), a first pulling rope (33) being slidably disposed through the swinging member (32), two ends of the first pulling rope (33) being respectively connected between the counterweight mechanism (12) and the pulling member (31);
two carrying members (4), respectively and fixedly disposed on an end of each of the two first slidable seats (2) opposite to the pulling assembly (3), each said first stand column (11) being located between one said carrying member (4) and one said swinging member (32).
2. The exercise device of claim 1, wherein the frame body (1) further includes two second stand columns (13), the two first stand columns (11) and the two second stand columns (13) are respectively located on four corners of the frame body (1), and the two counterweight mechanisms (12) are near the two second stand columns (13).
 3. The exercise device of claim 2, wherein the frame body (1) further includes a top frame (14), the top frame (14) is connected to the two first stand columns (11) and the two second stand columns (13), a side of the top frame (14) near the two first stand columns (11) has a connecting portion (15), at least one second pulling rope (51) is disposed through the connecting portion (15), and two ends of the at least one second pulling rope (51) are respectively connected to a first pull rod (52) and at least one of the two counterweight mechanisms (12).
 4. The exercise device of claim 3, wherein the connecting portion (15) further has a second pull rod (53).
 5. The exercise device of claim 2, wherein the frame body (1) further includes two safety rods (16), two ends of one of the two safety rods (16) are respectively and slidably arranged on one of the two first stand columns (11) and one of the two second stand columns (13) neighboring to each other in an adjustable manner, and two ends of the other of the two safety rods (16) are respectively and slidably arranged on the other of the two first stand columns (11) and the other of the two second stand columns (13) neighboring to each other in an adjustable manner.
 6. The exercise device of claim 2, wherein an end of one of the two first stand columns (11) and an end of one of the two second stand columns (13) near a bottom have a first connecting rod (17) therebetween, and two ends of the two second stand columns (13) near the bottom have a second connecting rod (18) therebetween.
 7. The exercise device of claim 6, wherein the second connecting rod (18) further has a guide roller set (6), at least one third pulling rope (61) is slidably arranged on the guide roller set (6), and two ends of the at least one third pulling rope (61) are respectively connected to a third pull rod (62) and at least one of the two counterweight mechanisms (12).
 8. The exercise device of claim 1, wherein each of the two counterweight mechanisms (12) includes a plurality of counterweight blocks (121) and a counterweight pin (122).
 9. The exercise device of claim 1, wherein the first slidable seat (2) is sleeved on the first stand column (11), the first slidable seat (2) has two ear pieces (22), the swinging member (32) has a sleeve (321), and a shaft (23) is disposed between the sleeve (321) and the two ear pieces (22).
 10. The exercise device of claim 1, wherein the adjustment pin (21) further has an elastic member (24), the elastic member (24) abuts against and between the first slidable seat (2) and the adjustment pin (21) to allow the adjustment pin (21) to have a tendency to bounce toward the first stand column (11).
 11. The exercise device of claim 1, wherein the carrying member (4) is integrally disposed on the first slidable seat (2), and an end of the carrying member (4) remote from the first slidable seat (2) has a blocking portion (41).

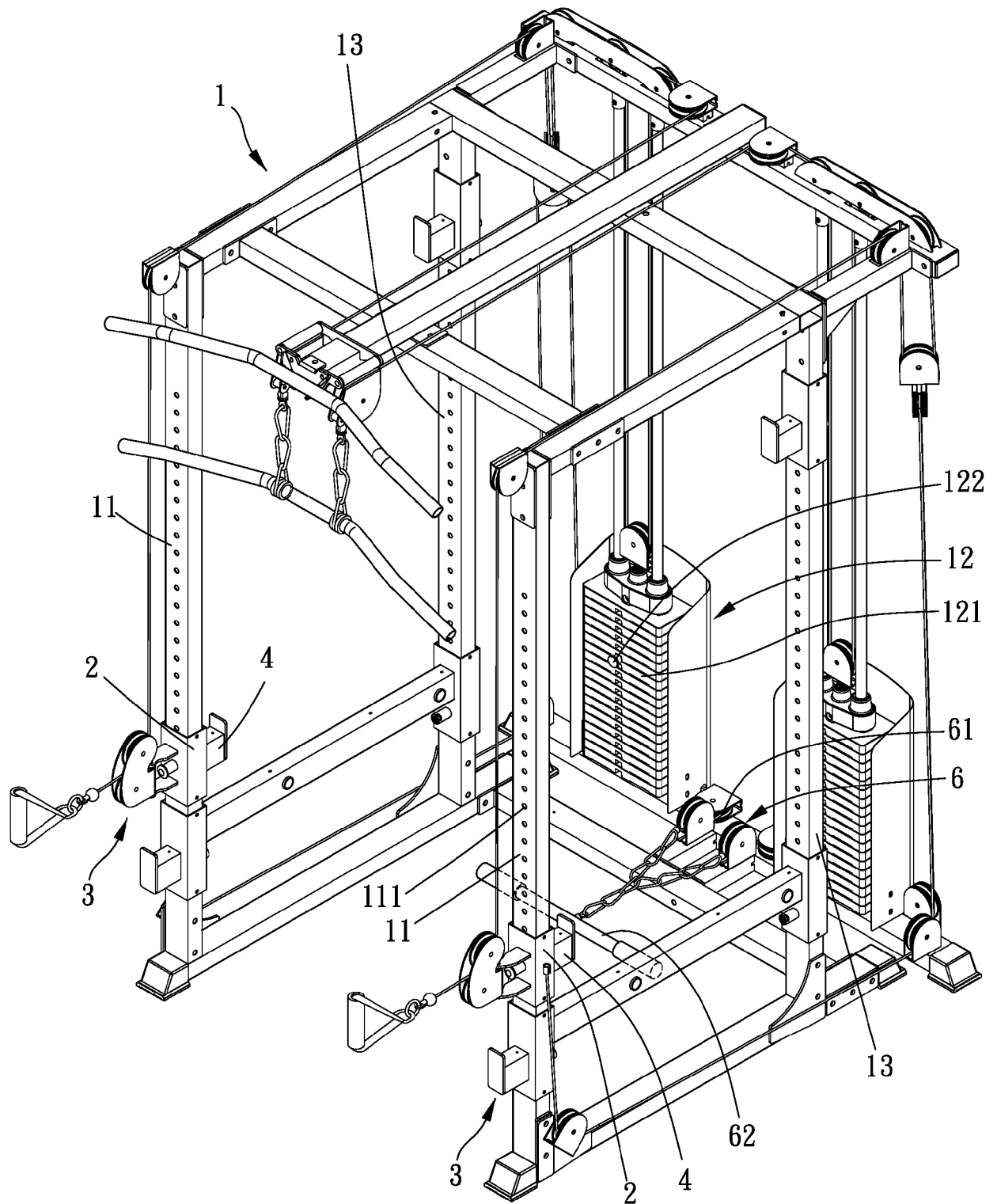


FIG. 1

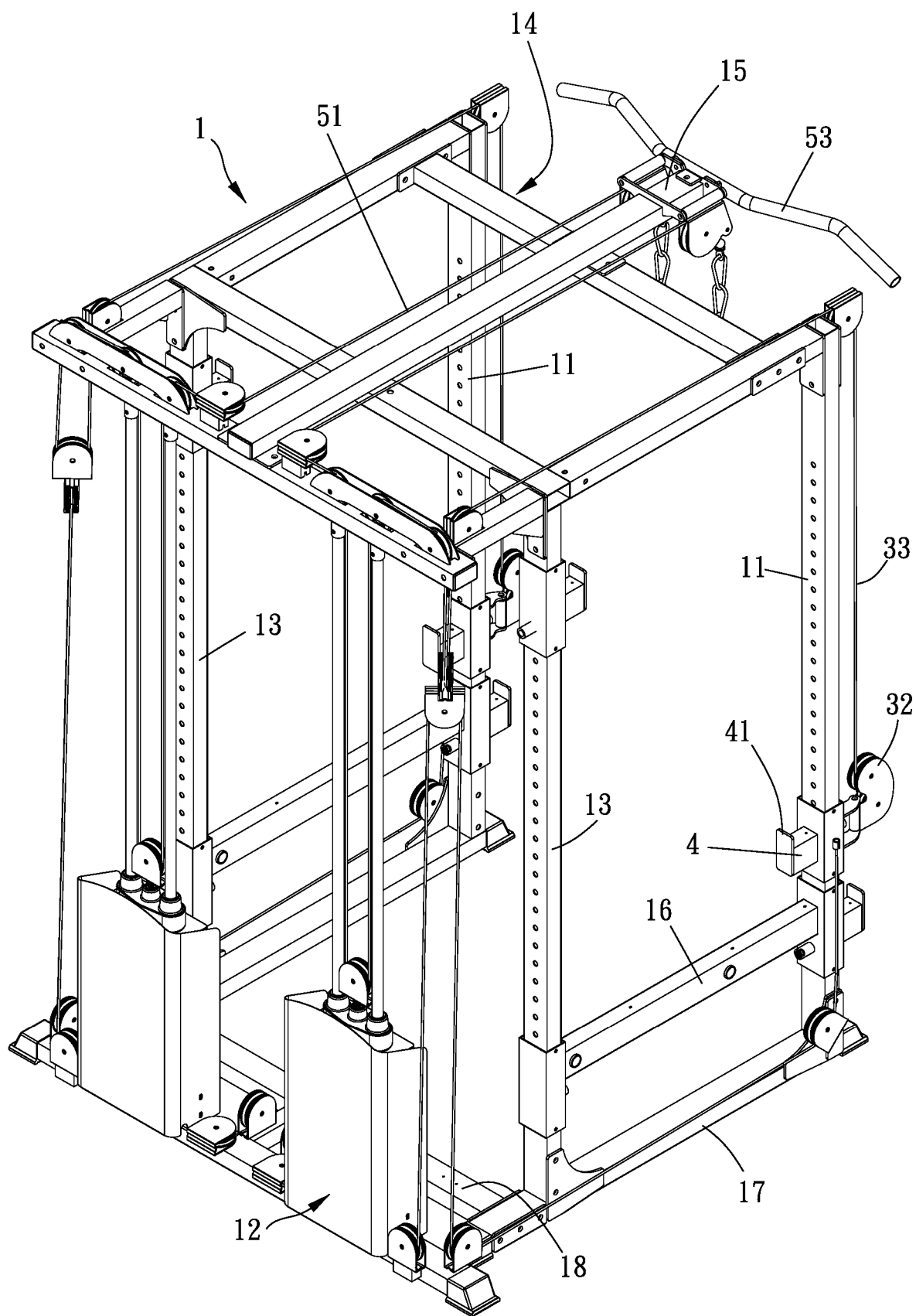


FIG. 2

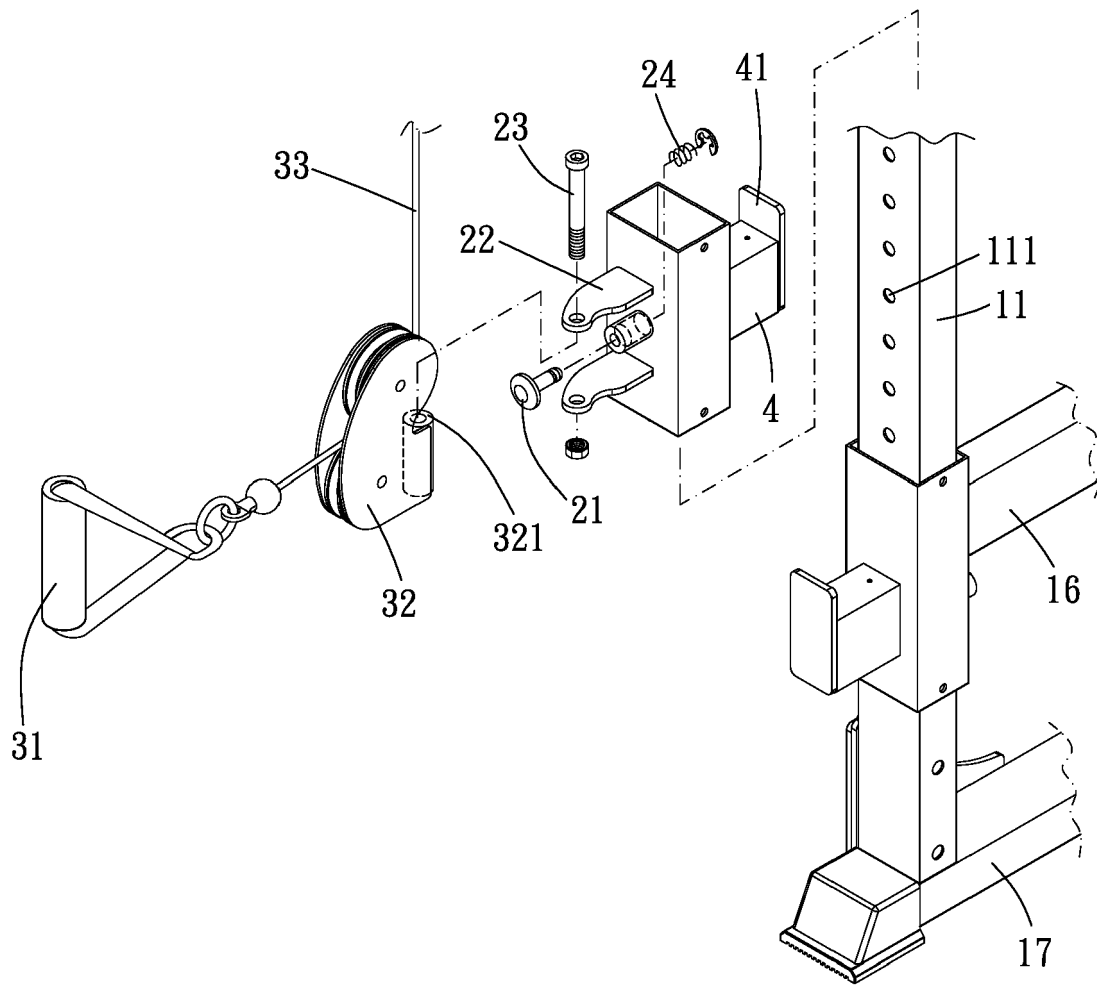


FIG. 3

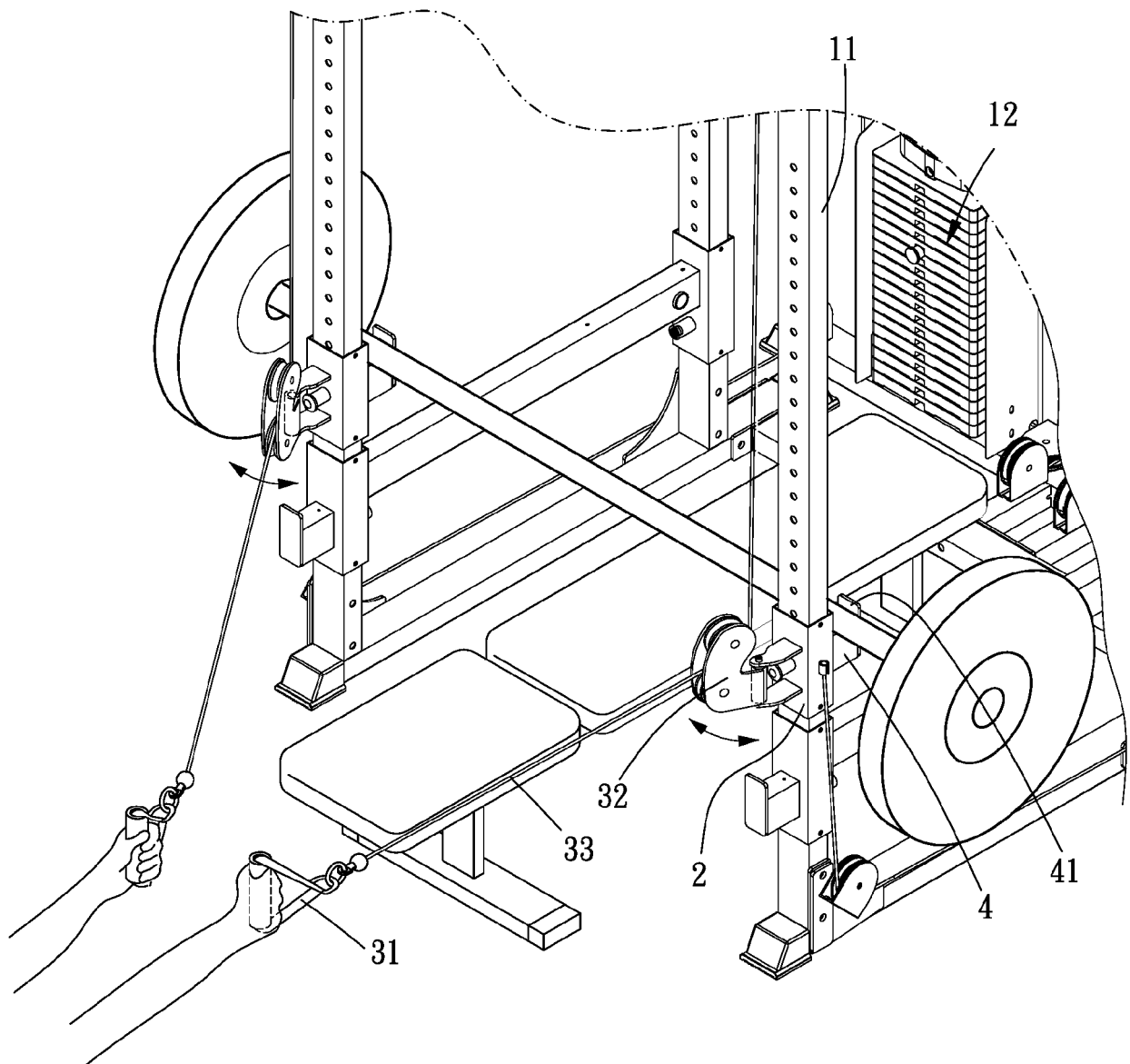


FIG. 4

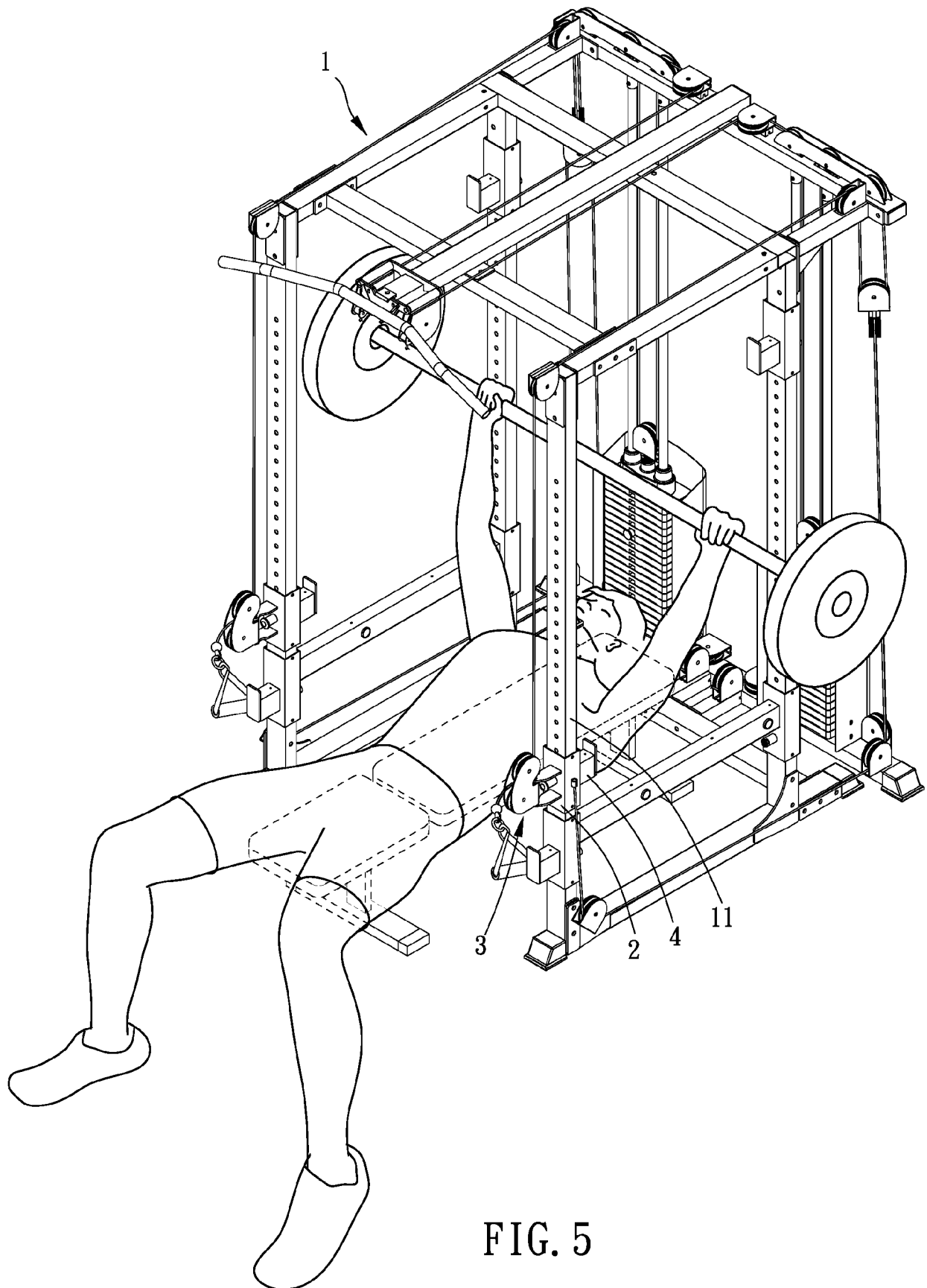


FIG. 5

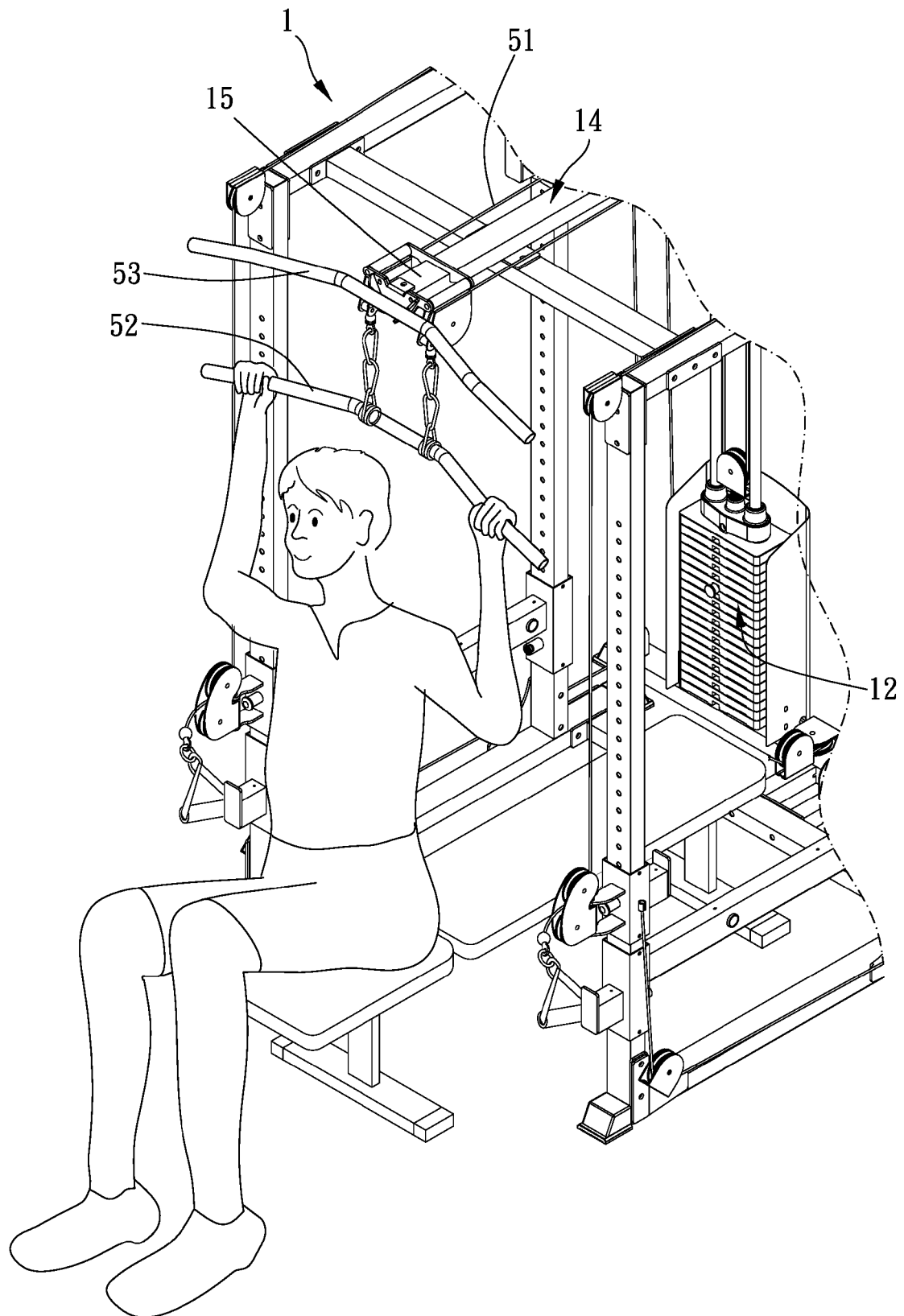


FIG. 6

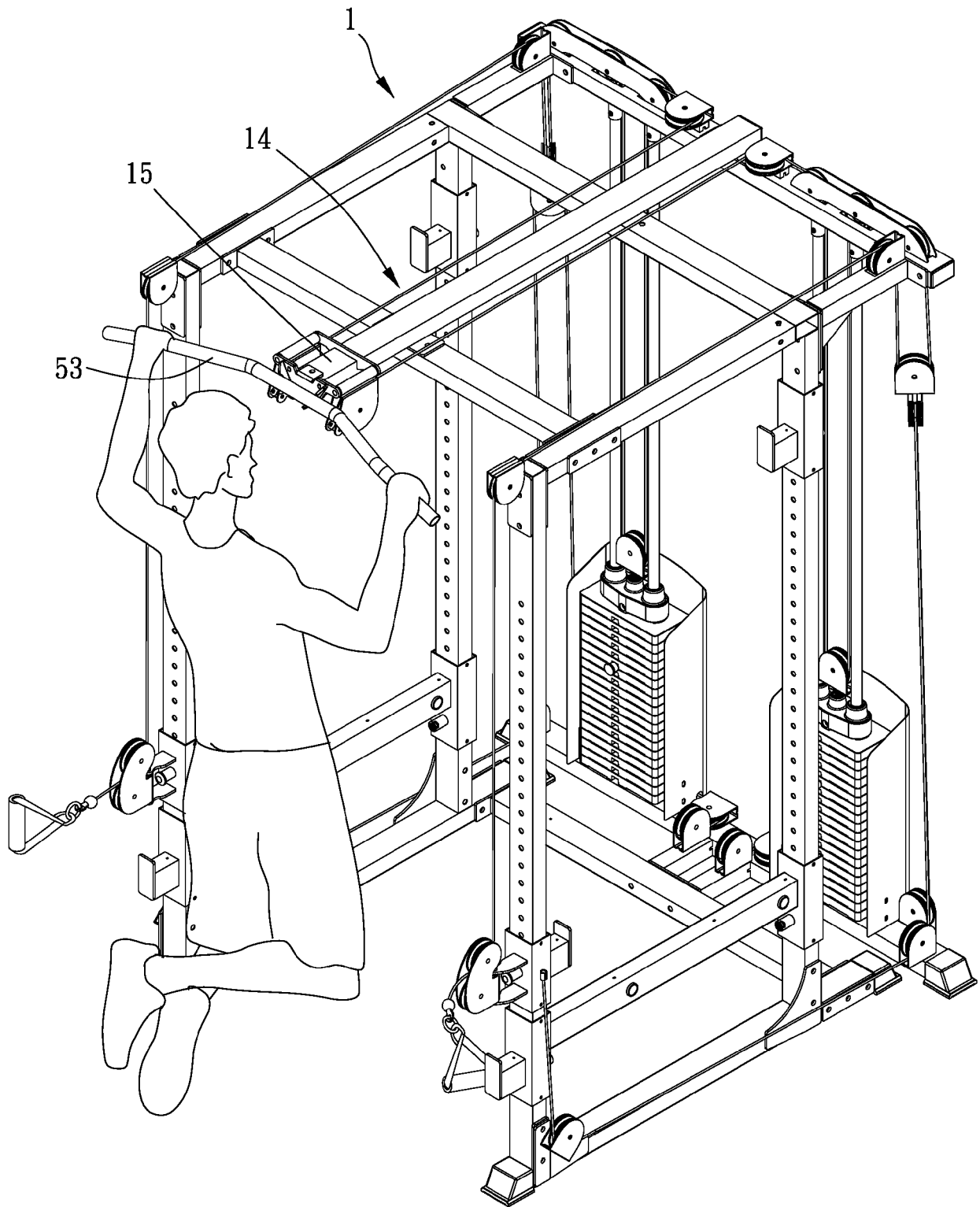


FIG. 7



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Place of search Munich		Date of completion of the search 30 March 2020	Examiner Lundblad, Hampus
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**ANNEX TO THE EUROPEAN SEARCH REPORT
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