

(19)



(11)

EP 3 563 912 B1

(12)

EUROPEAN PATENT SPECIFICATION

(45) Date of publication and mention of the grant of the patent:
19.04.2023 Bulletin 2023/16

(51) International Patent Classification (IPC):
A63B 69/06 ^(2006.01) **A63B 21/00** ^(2006.01)
A63B 22/00 ^(2006.01)

(21) Application number: **17885840.3**

(52) Cooperative Patent Classification (CPC):
A63B 21/154; A63B 22/0076; A63B 21/4035;
A63B 2022/0079; A63B 2210/50

(22) Date of filing: **11.10.2017**

(86) International application number:
PCT/CN2017/105620

(87) International publication number:
WO 2018/120981 (05.07.2018 Gazette 2018/27)

(54) **ROWING MACHINE**

RUDERMASCHINE

MACHINE À RAMER

(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

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(30) Priority: **29.12.2016 CN 201611250200**

(43) Date of publication of application:
06.11.2019 Bulletin 2019/45

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Description

FIELD

5 [0001] The present application relates to the technical field of fitness equipment, and in particular to a rowing machine.

BACKGROUND

10 [0002] The rowing machine is a machine for simulating rowing action, and has a good effect on building muscles throughout the body of an exerciser, like the waist, legs and chest.

[0003] A conventional rowing machine includes a slide rail, a frame, a seat cushion, a pull handle, a pedal frame, and a resistance mechanism connected to the pull handle. The seat cushion is slidably arranged on the slide rail, the slide rail is fixedly connected to the frame, and the pedal frame and the resistance mechanism are fixedly connected to the frame. The exerciser can exercise with the rowing machine by pulling the pull handle by both hands while stepping both feet on the pedal frame and sitting on the seat cushion. Document US 6 926 647 B1 relates to a folding collapsible rowing machine including a base frame, a rocker, a foot frame, a sliding seat, a plurality of elastic cord members, and a friction wheel block unit. The base frame includes a main shaft, a front support, and a rear support. Document US 1 577 809 A1 relates to an exercising apparatus, which includes a seat slidable to allow the user to perform exercises similar to those of rowing, and means for locking the seat against movement on the apparatus and in any adjusted position to allow the execution of other forms of exercises. Document CN 205145493U relates to a rowing machine including a frame, a seat cushion, a swing arm provided with a handle bar, and a hydraulic cylinder. The seat slides over the frame, while the end of the swing arm is hinged to the frame and the piston cylinder is hinged at a middle portion of the swing arm. Document WO 2005/034605 A2 relates to an exercise device that includes a frame pivotally connected with a platform, and having at least one resistance system releasably connected to the either the frame or the platform. The resistance system utilizes an elastic member that can be configured with a handle or a belt to allow a user to focus on different muscles.

[0004] However, when exercising, the exerciser can only perform the above fitness motion by using the rowing machine, and the form of exercise is single.

20 [0005] Therefore, a technical issue to be addressed urgently by the person skilled in the art is to increase the form of exercise of the rowing machine.

SUMMARY

[0006] An object of the present application is to provide a rowing machine having various forms of exercise.

35 [0007] In order to achieve the above object, a rowing machine is provided according to the present application, which includes a slide rail, a seat cushion, a frame, a pedal frame, a first pull handle, and a resistance mechanism connected to the first pull handle. One end of the slide rail is connected to the frame, and the seat cushion is slidably connected to the slide rail. The rowing machine further includes a second pull handle. Another end of the slide rail opposite to the frame is provided with a support base, and the second pull handle is arranged on the support base, the resistance mechanism includes a first flexible guiding cable and a flexible winding mechanism connected to one end of the first flexible guiding cable, and another end of the first flexible guiding cable is connected to the first pull handle; and the resistance mechanism further includes a movable pulley block, a second flexible guiding cable, a first fixed pulley, a second fixed pulley and a third fixed pulley, and the first fixed pulley, the second fixed pulley and the third fixed pulley are sequentially mounted on the support base along the direction perpendicular to the slide rail, the movable pulley block includes a first movable pulley, a second movable pulley and a third movable pulley, and the first movable pulley, the second movable pulley and the third movable pulley are fixedly connected to each other, the first flexible guiding cable passes around the third movable pulley, one end of the second flexible guiding cable is connected to one second pull handle, and another end of the second flexible guiding cable sequentially passes around the first fixed pulley, the first movable pulley, the second fixed pulley, the second movable pulley and the third fixed pulley, and then is connected to another second pull handle; the first movable pulley and the second movable pulley are coaxially arranged, the third movable pulley is arranged between the first movable pulley and the second movable pulley, and a central axis of the third movable pulley is isolated from a central axis of the first movable pulley.

[0008] Two second pull handles are provided, and the two second pull handles are arranged along a direction perpendicular to the slide rail.

55 [0009] Preferably, the frame includes a base and a bracket mounted on the base, the resistance mechanism is mounted on the base, side portions of the resistance mechanism are fixed by the bracket, a frame-rotating plate is fixedly connected to an end portion of the slide rail; the frame-rotating plate is articulated to the bracket, the frame-rotating plate is provided with a vertical positioning hole for the slide rail and a horizontal positioning hole for the slide rail, the bracket is provided

with a position-limiting hole corresponding to the vertical positioning hole and the horizontal positioning hole for the slide rail, and the position-limiting hole is detachably connected to the vertical positioning hole or the horizontal positioning hole for the slide rail through a position-limiting member.

[0010] Preferably, the slide rail is provided with a guiding cable receiving cavity, and the second flexible guiding cable and the movable pulley block are received in the guiding cable receiving cavity.

[0011] Preferably, the slide rail includes a slide rail guiding portion and a mounting portion at a lower side of the slide rail guiding portion, the mounting portion is detachably connected to the slide rail guiding portion, and the guiding cable receiving cavity is formed between the slide rail guiding portion and the mounting portion.

[0012] Preferably, two pedal frames are provided, and the two pedal frames are fixedly connected to the base.

[0013] Preferably, the second pull handle includes a fixed end and a holding end having two ends connected to the fixed end, and the holding end is rotatably connected to the fixed end.

[0014] Preferably, the holding end is provided with a knurl.

[0015] In the above technical solution, the rowing machine provided by the present application includes the slide rail, the seat cushion, the frame, the pedal frame, the first pull handle, the second pull handle and the resistance mechanism connected to the first pull handle. One end of the slide rail is connected to the frame, and the seat cushion is slidably connected to the slide rail, another end of the slide rail opposite to the frame is provided with a support base, and the second pull handle is arranged on the support base. When the exerciser performs rowing action training with the rowing machine, the exerciser can exercise by pulling the first pull handle by both hands, while stepping both feet on the pedal frame and sitting on the seat cushion, and the exerciser can also exercise by pulling the second pull handle.

[0016] According to the above description, in the rowing machine provided by the present application, by providing the support base at the end portion of the slide rail and the second pull handle on the support base, the exerciser can pull the second pull handle for comprehensive exercises in addition to pulling the first pull handle for exercises, so the forms of exercise of the rowing machine provided by the present application is increased.

BRIEF DESCRIPTION OF DRAWINGS

[0017]

Figure 1 is a schematic view showing the structure of a rowing machine during a rowing exercise according to an embodiment of the present application;

Figure 2 is a schematic view showing the structure of the rowing machine during a horizontal comprehensive exercise according to the embodiment of the present application;

Figure 3 is a partially enlarged view of a portion A of the rowing machine in Figure 2; and

Figure 4 is a schematic view showing the structure of the rowing machine during a vertical comprehensive exercise according to the embodiment of the present application.

[0018] Reference numerals in Figures 1 to 4:

1	frame,	2	resistance mechanism,
3	first pull handle,	4	seat cushion,
5	slide rail,	6	movable pulley block,
6-1	third movable pulley,	6-2	first movable pulley,
6-3	second movable pulley,	7	first flexible guiding cable,
8	position-limiting member,	9	frame-rotating plate,
10	pedal frame,	11	rotating shaft,
12	second pull handle,	13	flexible winding mechanism,
13-1	torsion spring,	14	high magnetic resistance system,
15	wind resistance system,	16	second flexible guiding cable,
17	fixed pulley,	18	first fixed pulley,
19	horizontal moving device,	20	second fixed pulley.

DETAILED DESCRIPTION OF EMBODIMENTS

[0019] The core of the present application is to provide a rowing machine which has various forms of exercise.

[0020] In order to enable the person skilled in the art to better understand the technical solution of the present application, the present application is further described in detail with reference to drawings and specific embodiments.

5 [0021] Referring to Figures 1 to 4, in a specific embodiment of the present application, the rowing machine includes a slide rail 5, a seat cushion 4, a frame 1, a pedal frame 10, a first pull handle 3, a second pull handle 12 and a resistance mechanism 2 connected to the first pull handle 3. In order to facilitate isokinetic training for the exerciser, the resistance mechanism 2 is preferably an isokinetic resistance device. The resistance always corresponds to the force applied by the exerciser when exercising, and the isokinetic resistance device can provide corresponding resistances to muscles within a full range of joint activities, to allow the muscles to meet actual requirements of the exercise. Two first pull handles 3 are provided, one end of the slide rail 5 is connected to the frame 1, and the seat cushion 4 is slidably connected with the slide rail 5, another end of the slide rail 5 opposite to the frame 1 is provided with a support base, and the second pull handle 12 is arranged on the support base. In order to improve comfort, the seat cushion 4 is preferably an elastic seat cushion, and in order to prevent the seat cushion 4 from being contaminated by impurities, the seat cushion 4 is preferably provided with a waterproof layer. One second pull handle 12 may be provided. For better exercise, two second pull handles 12 are preferably provided, the two second pull handles 12 are arranged perpendicular to the slide rail 5, and the second pull handles 12 can be fixedly connected to the support base through an elastic rope. Obviously, multiple second pull handles 12 may be provided according to actual needs, and the multiple second pull handles 12 are preferably arranged at equal intervals perpendicular to the slide rail 5.

10 [0022] When the exerciser performs rowing action training with the rowing machine, the exerciser can exercise by pulling the first pull handles 3 by both hands, while stepping both feet on the pedal frame 10 and sitting on the seat cushion 4. The exerciser can also exercise by pulling the second pull handle 12. The exerciser can pull the second pull handle 12 backward to perform chest expansion exercises, and the exerciser can also put the second pull handle 12 on the ankle to perform various lower limb exercises.

15 [0023] According to the above description, in the rowing machine provided by the specific embodiment of the present application, by providing the support base at an end portion of the slide rail 5 and providing the second pull handle 12 on the support base, the exerciser can pull the second pull handle 12 to do comprehensive exercises in addition to pulling the first pull handle 3 for exercises, so the forms of exercise of the rowing machine provided by the present application is increased.

20 [0024] The frame 1 includes a base and a bracket mounted on the base, the resistance mechanism 2 is mounted on the base, side portions of the resistance mechanism 2 are fixed by the bracket, a frame-rotating plate 9 is fixedly connected to the end portion of the slide rail 5, and the frame-rotating plate 9 is articulated to the bracket. Specifically, the frame-rotating plate 9 may be articulated to the bracket through a rotating shaft 11. The frame-rotating plate 9 is provided with a vertical positioning hole for the slide rail and a horizontal positioning hole for the slide rail, the bracket is provided with a position-limiting hole corresponding to the vertical positioning hole and the horizontal positioning hole for the slide rail, and the position-limiting hole is detachably connected with the vertical positioning hole or the horizontal positioning hole for the slide rail through a position-limiting member 8. In a case that the slide rail 5 is horizontally arranged, the position-limiting hole is fixed to the horizontal positioning hole for the slide rail by the position-limiting member 8, so that the slide rail 5 is horizontally fixed, and the exerciser can move horizontally along the slide rail 5. In a case that the slide rail 5 is vertically arranged, the position-limiting hole is fixed to the vertical positioning hole for the slide rail by the position-limiting member 8. The slide rail 5 is vertically arranged as shown in Figure 4, the exerciser performs comprehensive exercises by pulling the second pull handle, for example, a variety of pull-down exercises to train the entire upper body and muscle groups of the upper limbs, thus functions of an integrated training machine and a conventional rowing machine are combined, which enhances the functions of the integrated training machine and further increases the forms of exercise.

25 [0025] More preferably, the resistance mechanism 2 includes a high magnetic resistance system 14, a wind resistance system 15, a first flexible guiding cable 7, and a flexible winding mechanism 13 connected to one end of the first flexible guiding cable 7, and another end of the first flexible guiding cable 7 is connected to the first pull handle 3.

30 [0026] The rowing machine further includes a movable pulley block 6, a second flexible guiding cable 16, a first fixed pulley 18, a second fixed pulley 20 and a third fixed pulley. The first fixed pulley 18, the second fixed pulley 20 and the third pulley are sequentially mounted on the support base in a direction perpendicular to the slide rail 5, and the movable pulley block 6 and the first flexible guiding cable 7 form a horizontal moving device 19. Specifically, the movable pulley block 6 includes a first movable pulley 6-2, a second movable pulley 6-3, and a third movable pulley 6-1, and the first movable pulley 6-2, the second movable pulley 6-3, and the third movable pulley 6-1 are fixedly connected to each other. The first flexible guiding cable 7 passes around the third movable pulley 6-1, one end of the second flexible guiding cable 16 is connected to one of the second pull handles 12, and another end of the second flexible guiding cable 16 sequentially passes around the first fixed pulley 18, the first movable pulley 6-2, the second fixed pulley 20, the second movable pulley 6-3 and the third fixed pulley, and then is connected to the other one of the second pull handles 12.

35 [0027] By providing the movable pulley block 6, the three fixed pulleys, and the second flexible guiding cable 16 and the first flexible guiding cable connecting the movable pulley block with the three fixed pulleys, the second pull handles 12 move as the exerciser puts forth his strength, when the exerciser is pulling the second pull handles 12, which further allows the exerciser to get exercise. The first pull handle 3 is connected to the first flexible guiding cable 7, and the first flexible guiding cable 7 is redirected by the fixed pulley 17 on the main frame and the third movable pulley 6-1 on the

horizontal moving device 19, and finally winds around the flexible winding mechanism 13. The flexible winding mechanism 13 rotates when the exerciser pulls the first pull handles 3, and the flexible winding mechanism 13 drives a fan of the wind resistance system 15 and an aluminum disk of the high magnetic resistance system 14 to rotate through a belt pulley and a belt, thereby generating resistances. A one-way overrunning clutch is arranged at the belt pulley, and the one-way overrunning clutch detaches the flexible winding mechanism 13 from the belt pulley when the exerciser is not pulling or is in a return stroke, thereby avoiding the flexible winding mechanism 13 rotating with the fan and the aluminum disk. The returning of the flexible winding mechanism 13 is realized by using a torsion spring 13-1 or an elastic drawstring, and the torsion spring 13-1 or the elastic drawstring drives the flexible winding mechanism to roll the flexible guiding cable, when the exerciser releases the first pull handle 3.

[0028] In the case that the slide rail 5 is vertically arranged, the exerciser pulls the second pull handles 12 for comprehensive exercises, and the two second pull handles 12 are connected to each other by the second flexible guiding cable 16, the three fixed pulleys and the movable pulley block 6. When the exerciser pulls out one or two second pull handles 12, the horizontal moving device 19 moves, such that the first flexible guiding cable 7 is pulled out from the winding mechanism, and when the exerciser returns the second pull handle 12, the first flexible guiding cable 7 is re-rolled into the flexible winding mechanism 13 by the torsion spring 13-1 of the flexible winding mechanism 13, such that the exerciser can perform the isokinetic exercises.

[0029] Since the transmission fan of the rowing machine has a large moment of inertia, the exerciser needs to apply a very large pulling force when starting the exercise, and thus the fan is preferably made of plastic and aluminum to reduce the starting force.

[0030] Specifically, the first movable pulley 6-2 and the second movable pulley 6-3 are coaxially arranged, the third movable pulley 6-1 is arranged between the first movable pulley 6-2 and the second movable pulley 6-3, and a central axis of the third movable pulley 6-1 is isolated from a central axis of the first movable pulley 6-2. The first movable pulley 6-2 and the third movable pulley 6-1 are non-coaxial, which avoids interference between the second flexible guiding cable 16 and the first flexible guiding cable in the using process and improves the using safety of the rowing machine.

[0031] In order to prevent external substances from damaging the internal structure of the rowing machine, the guide rail 5 is preferably provided with a guiding cable receiving cavity, and the second flexible guiding cable 16 and the movable pulley block 6 are received in the guiding cable receiving cavity. Specifically, the slide rail 5 preferably includes a slide rail guiding portion and a mounting portion at a lower side of the slide rail guiding portion, the mounting portion is detachably connected to the slide rail guiding portion, and the guiding cable receiving cavity is formed between the slide rail guiding portion and the mounting portion. The mounting portion may be connected to the slide rail guiding portion by a buckle or a threaded fastener.

[0032] In order to optimize the structure, two pedal frames 10 are preferably provided, and the two pedal frames 10 are fixedly connected to the base.

[0033] The support base is provided with a position-limiting fastener for fixing the second pull handle 12, and specifically, the position-limiting fastener may be an arc-shaped ring with a notch. By providing the position-limiting fastener, the second pull handle 12 can be hidden when it is not needed, to avoid the external substances from colliding with the second pull handle 12, and to prevent the second pull handle 12 from interfering with the exercise of the exerciser.

[0034] Based on the above various solutions, preferably, the second pull handle 12 includes a fixed end and a holding end having two ends connected to the fixed end. The holding end is rotatably connected to the fixed end. In order to facilitate processing the holding end for the worker, the holding end is preferably a cylindrical pin. Since the holding end is rotatably connected to the fixed end, the holding end can rotate with the position change of the exerciser when the exerciser is training, which is helpful for workouts of the exerciser.

[0035] Further, the holding end of the second pull handle 12 is provided with a knurl. By providing the knurl, the second pull handle is prevented from slipping off the hands of the exerciser during exercise, which improves the usage safety.

[0036] The above embodiments are described in a progressive manner. Each of the embodiments is mainly focused on describing its differences from other embodiments, and references may be made among these embodiments with respect to the same or similar parts.

[0037] The description of the embodiments herein enables the person skilled in the art to implement or use the present application.

Claims

1. A rowing machine, comprising a slide rail (5), a seat cushion (4), a frame (1), a pedal frame (10), a first pull handle (3), and a resistance mechanism (2) connected to the first pull handle (3), the slide rail (5) having one end connected to the frame (1), and the seat cushion (4) being slidably connected to the slide rail (5), wherein the rowing machine further comprises a second pull handle (12), another end of the slide rail (5) opposite to the frame (1) is provided with a support base, and the second pull handle (12) is arranged on the support base,

wherein the resistance mechanism (2) comprises a first flexible guiding cable (7) and a flexible winding mechanism (13) connected to one end of the first flexible guiding cable (7), and another end of the first flexible guiding cable (7) is connected to the first pull handle (3); and

wherein the resistance mechanism further comprises a second flexible guiding cable (16), a first fixed pulley (18), a second fixed pulley (20) and a third fixed pulley,

characterized by the fact that the first fixed pulley (18), the second fixed pulley (20) and the third fixed pulley are sequentially mounted on the support base along a direction perpendicular to the slide rail (5);

the resistance mechanism further comprises a movable pulley block (6) comprising a first movable pulley (6-2), a second movable pulley (6-3) and a third movable pulley (6-1); the first movable pulley (6-2), the second movable pulley (6-3) and the third movable pulley (6-1) are fixedly connected to each other, the first flexible guiding cable (7) passes around the third movable pulley (6-1), one end of the second flexible guiding cable (16) is connected to one second pull handle (12), and another end of the second flexible guiding cable (16) sequentially passes around the first fixed pulley (18), the first movable pulley (6-2), the second fixed pulley (20), the second movable pulley (6-3) and the third fixed pulley, and then is connected to another second pull handle (12),

wherein the first movable pulley (6-2) and the second movable pulley (6-3) are coaxially arranged, the third movable pulley (6-1) is arranged between the first movable pulley (6-2) and the second movable pulley (6-3), and a central axis of the third movable pulley (6-1) is isolated from a central axis of the first movable pulley (6-2).

2. The rowing machine according to claim 1, wherein the slide rail (5) is rotatable relative to the frame (1).
3. The rowing machine according to claim 2, wherein the slide rail (5) is capable of being selectively fixed at an approximately horizontal position or an approximately vertical position relative to the frame (1).
4. The rowing machine according to claim 3, wherein the frame (1) comprises a base and a bracket mounted on the base, the resistance mechanism (2) is mounted on the base, side portions of the resistance mechanism (2) are fixed by the bracket, and a frame-rotating plate (9) is fixedly connected to an end portion of the slide rail (5); the frame-rotating plate (9) is articulated to the bracket, the frame-rotating plate (9) is provided with a vertical positioning hole for the slide rail and a horizontal positioning hole for the slide rail, the bracket is provided with a position-limiting hole corresponding to the vertical positioning hole and the horizontal positioning hole for the slide rail, and the position-limiting hole is detachably connected to the vertical positioning hole or the horizontal positioning hole for the slide rail through a position-limiting member (8).
5. The rowing machine according to claim 1, wherein the slide rail (5) is provided with a guiding cable receiving cavity, and the second flexible guiding cable (16) and the movable pulley block (6) are received in the guiding cable receiving cavity.
6. The rowing machine according to claim 5, wherein the slide rail (5) comprises a slide rail guiding portion and a mounting portion at a lower side of the slide rail guiding portion, the mounting portion is detachably connected to the slide rail guiding portion, and the guiding cable receiving cavity is formed between the slide rail guiding portion and the mounting portion.
7. The rowing machine according to claim 4, wherein two pedal frames (10) are provided, and the two pedal frames (10) are fixedly connected to the base.
8. The rowing machine according to any one of claims 1 to 7, wherein the second pull handle (12) comprises a fixed end and a holding end having two ends connected to the fixed end, and the holding end is rotatably connected to the fixed end.
9. The rowing machine according to claim 8, wherein the holding end is provided with a knurl.

Patentansprüche

1. Rudermaschine, umfassend eine Gleitschiene (5), ein Sitzkissen (4), einen Rahmen (1), einen Pedalrahmen (10), einen ersten Zuggriff (3) und einen Widerstandsmechanismus (2), welcher mit dem ersten Zuggriff (3) verbunden ist, wobei die Gleitschiene (5) ein Ende aufweist, welches mit dem Rahmen (1) verbunden ist, und das Sitzkissen (4) gleitbar mit der Gleitschiene (5) verbunden ist, wobei die Rudermaschine ferner einen zweiten Zuggriff (12)

umfasst, wobei ein dem Rahmen (1) entgegengesetztes anderes Ende der Gleitschiene (5) mit einer Stützbasis bereitgestellt ist und der zweite Zuggriff (12) an der Stützbasis angeordnet ist,

wobei der Widerstandsmechanismus (2) ein erstes flexibles Führungskabel (7) und einen flexiblen Wickelmechanismus (13) umfasst, welcher mit einem Ende des ersten flexiblen Führungskabels (7) verbunden ist, und ein anderes Ende des ersten flexiblen Führungskabels (7) mit dem ersten Zuggriff (3) verbunden ist, und wobei der Widerstandsmechanismus ferner ein zweites flexibles Führungskabel (16), eine erste fixierte Rolle (18), eine zweite fixierte Rolle (20) und eine dritte fixierte Rolle umfasst,

dadurch gekennzeichnet, dass die erste fixierte Rolle (18), die zweite fixierte Rolle (20) und die dritte fixierte Rolle der Reihe nach an der Stützbasis entlang einer Richtung montiert sind, welche senkrecht zu der Gleitschiene (5) ist;

wobei der Widerstandsmechanismus ferner einen beweglichen Rollenblock (6) umfasst, welcher eine erste bewegliche Rolle (6-2), eine zweite bewegliche Rolle (6-3) und eine dritte bewegliche Rolle (6-1) umfasst, wobei die erste bewegliche Rolle (6-2), die zweite bewegliche Rolle (6-3) und die dritte bewegliche Rolle (6-1) fest miteinander verbunden sind, das erste flexible Führungskabel (7) um die dritte bewegliche Rolle (6-1) herumreicht, ein Ende des zweiten flexiblen Führungskabels (16) mit einem zweiten Zuggriff (12) verbunden ist und ein anderes Ende des zweiten flexiblen Führungskabels (16) der Reihe nach um die erste fixierte Rolle (18), die erste bewegliche Rolle (6-2), die zweite fixierte Rolle (20), die zweite bewegliche Rolle (6-3) und die dritte fixierte Rolle herumreicht und dann mit einem anderen zweiten Zuggriff (12) verbunden ist,

wobei die erste bewegliche Rolle (6-2) und die zweite bewegliche Rolle (6-3) koaxial angeordnet sind, die dritte bewegliche Rolle (6-1) zwischen der ersten beweglichen Rolle (6-2) und der zweiten beweglichen Rolle (6-3) angeordnet ist und eine zentrale Achse der dritten beweglichen Rolle (6-1) von einer zentralen Achse der ersten beweglichen Rolle (6-2) isoliert ist.

2. Rudermaschine nach Anspruch 1, wobei die Gleitschiene (5) relativ zu dem Rahmen (1) drehbar ist.
3. Rudermaschine nach Anspruch 2, wobei die Gleitschiene (5) dazu in der Lage ist, selektiv an einer ungefähr horizontalen Position oder einer ungefähr vertikalen Position relativ zu dem Rahmen (1) fixiert zu sein.
4. Rudermaschine nach Anspruch 3, wobei der Rahmen (1) eine Basis und eine Halterung umfasst, welche an der Basis montiert ist, wobei der Widerstandsmechanismus (2) an der Basis montiert ist, Seitenabschnitte des Widerstandsmechanismus durch die Halterung fixiert sind und eine Rahmen-Drehplatte (9) fest mit einem Endabschnitt der Gleitschiene (5) verbunden ist; wobei die Rahmen-Drehplatte (9) gelenkig mit der Halterung ist, die Rahmen-Drehplatte (9) mit einem vertikalen Positionierloch für die Gleitschiene und einem horizontalen Positionierloch für die Gleitschiene bereitgestellt ist, die Halterung mit einem positionslimitierenden Loch bereitgestellt ist, welches dem vertikalen Positionierloch und dem horizontalen Positionierloch für die Gleitschiene entspricht, und das positionslimitierende Loch durch ein positionslimitierendes Element (8) lösbar mit dem vertikalen Positionierloch oder dem horizontalen Positionierloch für die Gleitschiene verbunden ist.
5. Rudermaschine nach Anspruch 1, wobei die Gleitschiene (5) mit einem Führungskabel-Aufnahmehohlraum bereitgestellt ist und das zweite flexible Führungskabel (16) und der bewegliche Rollenblock (6) in dem Führungskabel-Aufnahmehohlraum aufgenommen sind.
6. Rudermaschine nach Anspruch 5, wobei die Gleitschiene (5) einen Gleitschienen-Führungsabschnitt und an einer unteren Seite des Gleitschienen-Führungsabschnitts einen Montageabschnitt umfasst, wobei der Montageabschnitt lösbar mit dem Gleitschienen-Führungsabschnitt verbunden ist und der Führungskabel-Aufnahmehohlraum zwischen dem Gleitschienen-Führungsabschnitt und dem Montageabschnitt gebildet ist.
7. Rudermaschine nach Anspruch 4, wobei zwei Pedalrahmen (10) bereitgestellt sind und die zwei Pedalrahmen (10) fest mit der Basis verbunden sind.
8. Rudermaschine nach einem der Ansprüche 1 bis 7, wobei der zweite Zuggriff (12) ein fixiertes Ende und ein Halteende umfasst, welches zwei mit dem fixierten Ende verbundene Enden aufweist, und das Halteende drehbar mit dem fixierten Ende verbunden ist.
9. Rudermaschine nach Anspruch 8, wobei das Halteende mit einer Rändelung bereitgestellt ist.

Revendications

1. Rameur, comprenant un rail coulissant (5), un coussin d'assise (4), un châssis (1), un cadre de pédale (10), une première poignée de traction (3), et un mécanisme de résistance (2) raccordé à la première poignée de traction (3), le rail coulissant (5) ayant une extrémité raccordée au châssis (1), et le coussin d'assise (4) étant raccordé de manière à pouvoir coulisser au rail coulissant (5), le rameur comprenant en outre une seconde poignée de traction (12), une autre extrémité du rail coulissant (5) opposée au châssis (1) étant pourvue d'une base de support, et la seconde poignée de traction (12) étant disposée sur la base de support,

le mécanisme de résistance (2) comprenant un premier câble de guidage flexible (7) et un mécanisme d'enroulement flexible (13) raccordé à une extrémité du premier câble de guidage flexible (7), et une autre extrémité du premier câble de guidage flexible (7) étant raccordée à la première poignée de traction (3) ; et le mécanisme de résistance comprenant en outre un second câble de guidage flexible (16), une première poulie fixe (18), une seconde poulie fixe (20) et une troisième poulie fixe,

caractérisé par le fait que la première poulie fixe (18), la seconde poulie fixe (20) et la troisième poulie fixe sont montées en séquence sur la base de support le long d'un sens perpendiculaire au rail coulissant (5) ; le mécanisme de résistance comprend en outre un bloc de poulies mobiles (6) comprenant une première poulie mobile (6-2), une seconde poulie mobile (6-3) et une troisième poulie mobile (6-1) ; la première poulie mobile (6-2), la seconde poulie mobile (6-3) et la troisième poulie mobile (6-1) étant raccordées de manière fixe l'une à l'autre, le premier câble de guidage flexible (7) passant autour de la troisième poulie mobile (6-1), une extrémité du second câble de guidage flexible (16) étant raccordée à une seconde poignée de traction (12), et une autre extrémité du second câble de guidage flexible (16) passant séquentiellement autour de la première poulie fixe (18), la première poulie mobile (6-2), la seconde poulie fixe (20), la seconde poulie mobile (6-3) et la troisième poulie fixe, et ensuite étant raccordée à une autre seconde poignée de traction (12), la première poulie mobile (6-2) et la seconde poulie mobile (6-3) étant disposées de manière coaxiale, la troisième poulie mobile (6-1) étant disposée entre la première poulie mobile (6-2) et la seconde poulie mobile (6-3), et un axe central de la troisième poulie mobile (6-1) étant isolé d'un axe central de la première poulie mobile (6-2).
2. Rameur selon la revendication 1, le rail coulissant (5) pouvant tourner par rapport au châssis (1).
3. Rameur selon la revendication 2, le rail coulissant (5) étant capable d'être fixé sélectivement à une position approximativement horizontale ou à une position approximativement verticale par rapport au châssis (1).
4. Rameur selon la revendication 3, le châssis (1) comprenant une base et un étrier monté sur la base, le mécanisme de résistance (2) étant monté sur la base, des portions latérales du mécanisme de résistance (2) étant fixées par l'étrier, et une plaque de rotation du châssis (9) étant raccordée de manière fixe à une portion d'extrémité du rail coulissant (5) ; la plaque de rotation du châssis (9) étant articulée à l'étrier, la plaque de rotation du châssis (9) étant pourvue d'un trou de positionnement vertical pour le rail coulissant et d'un trou de positionnement horizontal pour le rail coulissant, l'étrier étant pourvu d'un trou de limitation de position correspondant au trou de positionnement vertical et au trou de positionnement horizontal pour le rail coulissant, et le trou de limitation de position étant raccordé de manière détachable au trou de positionnement vertical ou au trou de positionnement horizontal pour le rail coulissant à travers un élément de limitation de position (8).
5. Rameur selon la revendication 1, le rail coulissant (5) étant pourvu d'une cavité de réception de câble de guidage, et le second câble de guidage flexible (16) et le bloc de poulies mobiles (6) étant reçus dans la cavité de réception de câble de guidage.
6. Rameur selon la revendication 5, le rail coulissant (5) comprenant une portion de guidage de rail coulissant et une portion de montage au niveau d'un côté inférieur de la portion de guidage de rail coulissant, la portion de montage étant raccordée de manière à pouvoir être détachée à la portion de guidage de rail coulissant, et la cavité de réception de câble de guidage étant formée entre la portion de guidage de rail coulissant et la portion de montage.
7. Rameur selon la revendication 4, deux cadres de pédale (10) étant fournis, et les deux cadres de pédale (10) étant raccordés de manière fixe à la base.
8. Rameur selon l'une quelconque des revendications 1 à 7, la seconde poignée de traction (12) comprenant une extrémité fixe et une extrémité de retenue ayant deux extrémités raccordées à l'extrémité fixe, et l'extrémité de

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retenue étant raccordée de manière à pouvoir tourner à l'extrémité fixe.

9. Rameur selon la revendication 8, l'extrémité de retenue étant pourvue d'une mollette.

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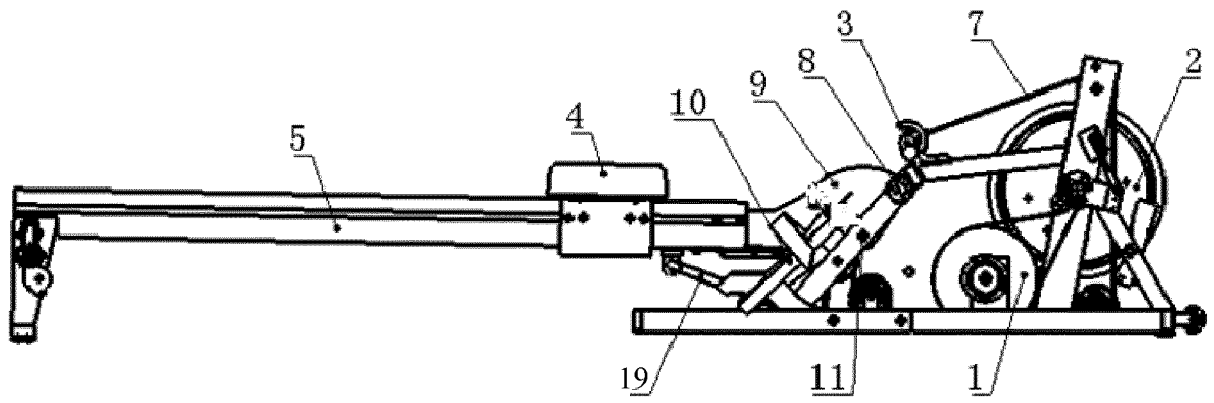


Figure 1

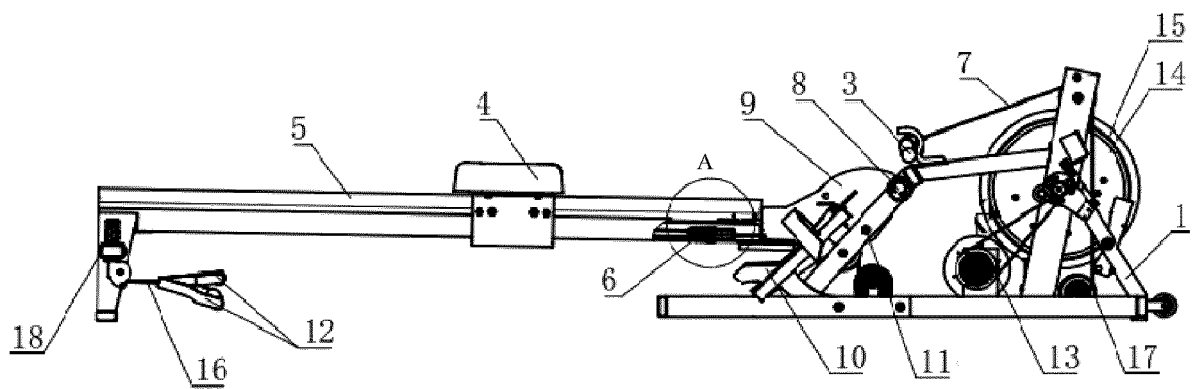


Figure 2

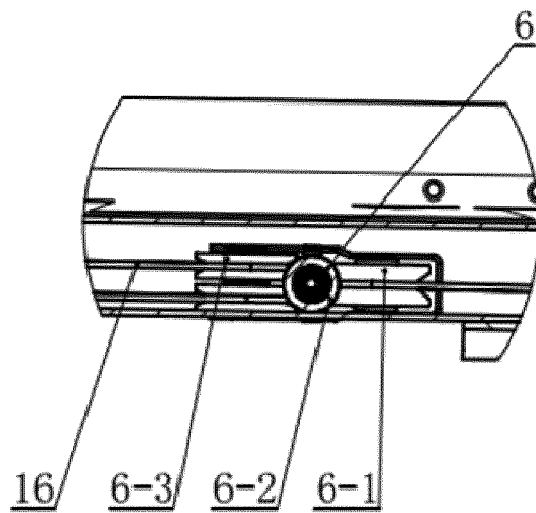


Figure 3

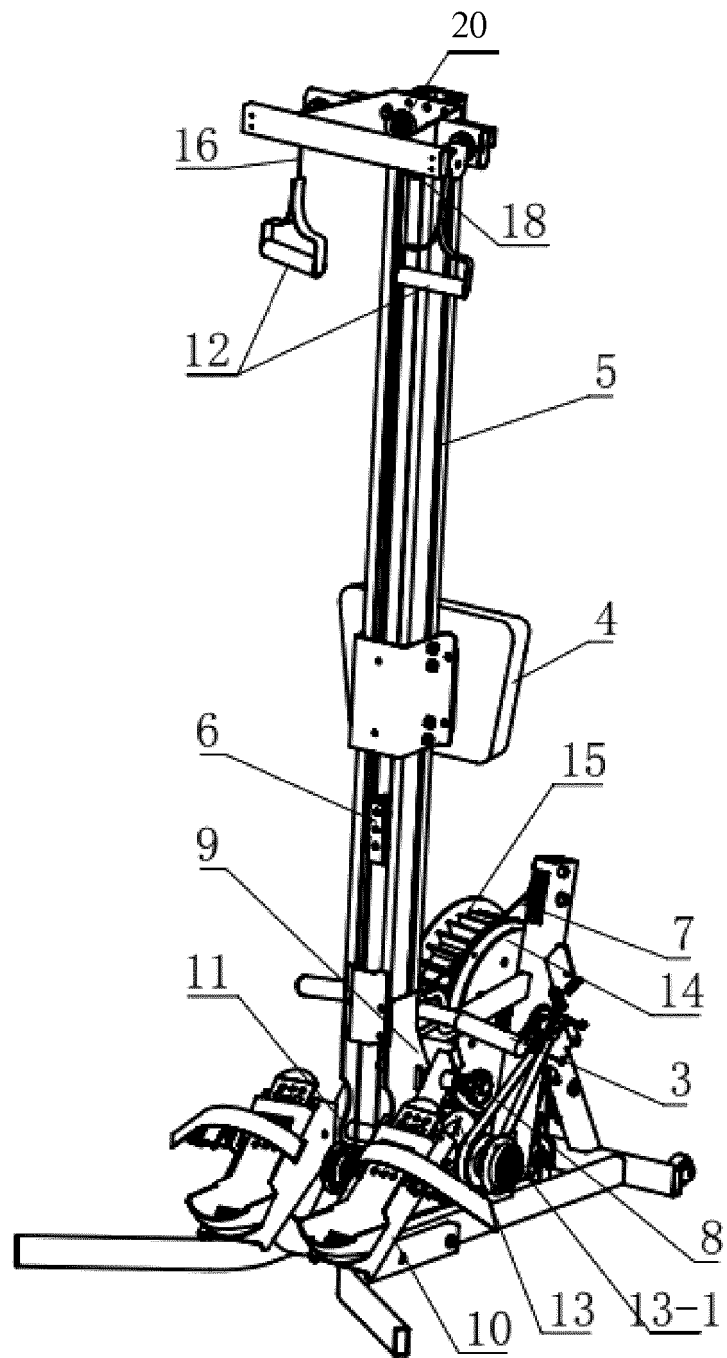


Figure 4

REFERENCES CITED IN THE DESCRIPTION

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