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

(11) **EP 1 810 718 A2**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
25.07.2007 Bulletin 2007/30

(51) Int Cl.:
A63B 23/02 *(2006.01)*

(21) Application number: **06020591.1**

(22) Date of filing: **29.09.2006**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR
Designated Extension States:
AL BA HR MK YU

(30) Priority: **20.01.2006 CN 200620002924 U**

(71) Applicant: **Quin Form Industrial Co., Ltd.**
Taichung (TW)

(72) Inventor: **Chang, Chang-Hsin**
Taichung (TW)

(74) Representative: **Casalonga, Axel et al**
Bureau Casalonga & Josse
Bayerstrasse 71/73
80335 München (DE)

(54) **Exercising machine**

(57) An exercising machine has a support device (10), a pivot device (20), a swinging device (30) and a handle assembly (40). The support device (10) has a base (11) with a frame (111) protruded on the bottom and having a through hole, a pivot hole (112) formed in the top and an inserting hole (116) formed on the top near the rear end. The pivot device (20) is mounted with the base (11) and has a pivot post (21) inserted into the pivot hole (112). The swinging device (30) is connected to the base (11) by the pivot post (21) and has two holders (36) connected to the swinging device (30). The handle assembly (40) is connected to the swinging device (30) by the pivot post (21).

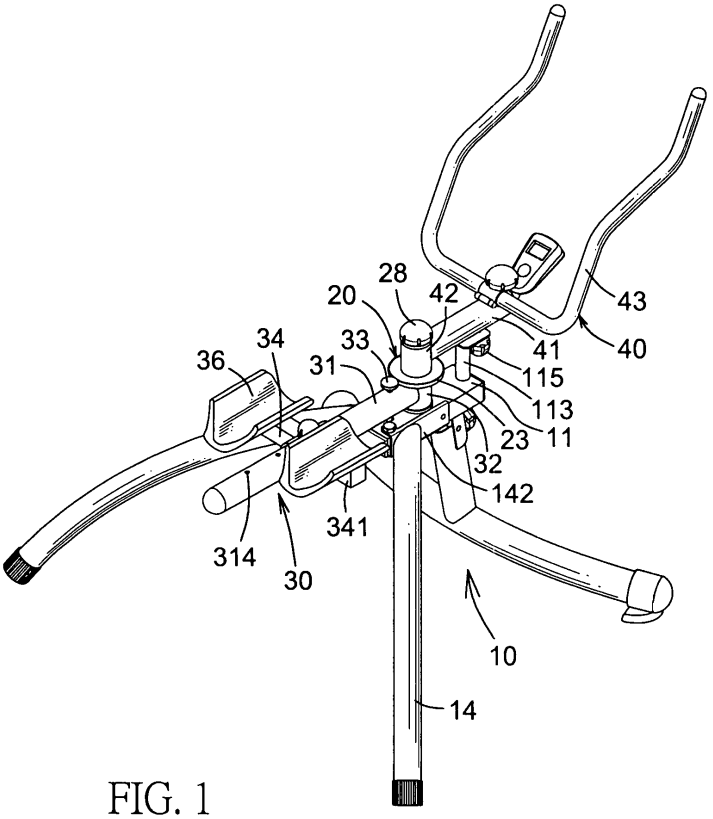


FIG. 1

EP 1 810 718 A2

Description

1. Field of the Invention

[0001] The present invention relates to an exercising machine, and more particularly to an exercising machine that can provide an oscillated function and train whole the body of a user.

2. Description of Related Art

[0002] Exercising machines have been marketed, such as an exercising bike, a treadmill, a boat-rowing machine and a surfing machine. The conventional exercising machines are used to simulate exercising circumstances and users can exercise and train their muscle by the conventional exercising machines.

[0003] The conventional exercising machines have some shortcomings.

1. Each conventional exercising machine only has a single operation function, and only part of muscle of users can be trained and is not versatile in use.
2. The operation of the conventional exercised machine is usually a single movement to cause users feeling unexciting and boring.

IN THE DRAWINGS:

[0004]

Fig. 1 is a perspective view of an exercising machine in accordance with the present invention;
Fig. 2 is an exploded perspective view of the exercising machine in Fig. 1;
Fig. 3 is an operational perspective side view of the exercising machine in Fig. 1;
Fig. 4 is an enlarged side view in partial section of the exercising machine in Fig. 1;
Fig. 5 is an operational perspective view of the exercising machine in Fig. 1;
Fig. 6 is an operational top view of the exercising machine in Fig. 1; and
Fig. 7 is a perspective view of another embodiment of an exercising machine in accordance with the present invention.

[0005] With reference to Figs. 1 to 4, an exercising machine comprises a support device (10), a pivot device (20), a swinging device (30) and a handle assembly (40).

[0006] The support device (10) comprises a base (11), a collar (12), a transverse leg (13) and two supporting legs (14).

[0007] The base (11) has a top, a bottom, a front end, a rear end, a frame (111), a pivot hole (112), a pillar (113), a panel (114), a fastener (115) and an inserting hole (116). The frame (111) is protruded on the bottom and has a through hole. The pivot hole (112) is formed in the top. The pillar (113) is protruded up from the top near the front end and has a proximal end and a distal end. The proximal end of the pillar (113) is mounted on the top of the base (11). The panel (114) is mounted on the distal end of the pillar (113) and has a hole. The fastener (115) is extended through the hole and mounted with the panel (114). The inserting hole (116) is formed in the top of the base (11) near the rear end. The transverse leg (13) is connected with the collar (12) and has a middle. The collar (12) is mounted on the middle and connected to the frame (111) on the base (11). Each supporting leg (14) is attached to the base (11) near the rear end and has a proximal end, a distal end and a connecting bracket (142). The connecting bracket (142) is attached to the proximal end of the supporting leg (14) and mounted onto the base (11).

[0008] The pivot device (20) is mounted with the base (11) and has a pivot post (21), a first washer (22), a board (23), a damping disk (24), a second washer (25), an adjusting disk (26), a spacer (27) and a fixing element (28). The pivot post (21) is inserted into the pivot hole (112) in the base (11) and has a proximal end, a distal end and a threaded hole. The proximal end is inserted into the pivot hole (112), and the threaded hole is formed in the distal end. The first washer (22) is mounted on the pivot post (21) near the proximal end. The board (23) is mounted on the pivot post (21) near the distal end. The damping disk (24) is mounted around the pivot post (21), is held on the board (23) and provides a resistance effect to the pivot post (21). The second washer (25) is mounted around the pivot post (21) and abuts with the damping disk (24). The adjusting disk (26) and the spacer (27) are mounted around the pivot post (21) over the second washer (25). The adjusting disk (26) has multiple positioning holes (262) formed through the adjusting disk (26). The fixing element (28) is connected to the threaded hole in the pivot post (21), presses against the spacer (27) and has a bottom, a hole, a spring (281) and a positioning stub (282). The hole is formed in the bottom. The spring (281) is held inside the hole and abuts against the positioning stub (282). The positioning stub (282) is partially extends out from the hole and engages with one of the positioning holes (262).

[0009] With reference to Figs. 2, 4 and 5, the swinging device (30) is connected to the base (11) by the pivot post (21) and has a swinging beam (31), a pillar seat (32), an inserting pillar (33), a holding frame (34), a fastener (35) and two holders (36). The swinging beam (31) has a front end, a rear end, a pillar hole (312) and at least one adjusting hole (314). The pillar hole (312) is formed through the swinging beam (31) near the front end and corresponds to the inserting hole (116). Each adjusting hole (314) is formed through the swinging beam (31). The pillar seat (32) is attached to the front end of the swinging beam (31) and has a top, a bottom and a pillar hole (321). The pillar hole (321) is formed through the pillar seat (32) and mounted around the pivot post (21). The inserting pillar (33) is extended through the pillar hole

(312) and selectively into the inserting hole (116), and has a distal end and a proximal end. If the proximal end of the inserting pillar (33) is detached from the inserting hole (116), the swinging beam (31) can be swung relative to the pivot device (20). The holding frame (34) is mounted on the swing beam (31) and has a jacket (342), two holding blocks (341) and a positioning hole (344). The jacket (342) is mounted around the swinging beam (31). The holding blocks (341) are mounted on the jacket (342). The positioning hole (344) is formed through the jacket (342) and corresponds to one of the adjusting holes (314). The fastener (35) is extended through the positioning hole (344) and the corresponding adjusting hole (314). The holders (36) are attached respectively to the holding blocks (341).

[0010] The handle assembly (40) is connected to the swinging device (30) by the pivot post (21) and has a mounting tube (42), a handle (43) and a lateral arm (41). The mounting tube (42) is mounted around the pivot post (21) and located between the second washer (25) and the adjusting disk (26). The handle (43) has two handlebars (432). The lateral arm (41) has a rear end, a front end, a bottom and a fixed hole (412). The rear end is mounted with the mounting tube (42) and the front end is connected to the handle (43). The fixed hole (412) is formed on the bottom, and the fastener (115) is inserted into the fixed hole (412).

[0011] When the lateral arm (41) is fixed with the panel (114) by the fastener (115), the user can twist his waist and swing legs to make the swinging beam (31) to pivot relative to the base (11). When escaping the fastener (115) from the fixed hole (412) in the lateral arm (41), with further reference to Fig. 6, the handle assembly (40) can be swung relative to the base (11) opposite to the swinging device (30).

[0012] With reference to Fig. 5, the distance between the holders (36) and the base (11) can be adjusted by inserting the fastener (35) extending through the positioning hole (344) of the holding frame (34) into one of the adjusting holes (314).

[0013] With reference to Fig. 7, another embodiment of the exercising machine also comprises a support device (10), a pivot device (20), a swinging device (30) and a handle assembly (40). The structure of the another embodiment is mostly the same as the exercising machine above-mention except the follows.

[0014] The support device (10) comprises a base (11), a collar (12), a transverse leg (13) and two supporting legs (14).

[0015] The transverse leg (13) has a mounting shaft forming on the middle of the transverse shaft (13). The collar (12) is mounted around the mounting shaft (132) and connected to the frame (111) and has a fastener (122).

[0016] The swinging device (30) is connected to the base (11) by the pivot post (21) and has a first swinging beam (31 A), a frame (37), a second swinging beam (31B), a holding pin (33) and two holders (36). The first swinging beam (31A) has a curved front end and a rear end and the frame (37) is attached to the curved front end. The second swinging beam (31B) is mounted with the frame (37) and has a curved front end and a rear end. The holding pin (33) is mounted with the frame (37). The holders (36) are attached respectively to the swinging beams (31A, 31B) to hold user's feet.

[0017] With reference to Fig. 7, the distance between the two swinging beams (31A, 31B) can be adjusted by the holding pin (33). The gradient of the support device (10) can be adjusted by changing the distance between the mounting shaft (132) and the collar (12).

[0018] The exercising machine as described has the following advantages:

1. The exercising machine has a swinging device (30), so users can exercise and train whole bodies at the same time and versatile in use.
2. In addition, the operation of the exercised machine is various, and user will feel exciting and interesting in use.

Claims

1. An exercising machine having

a support device (10) having

a base (11) having

a top;
a bottom;
a front end;
a rear end;
a frame (111) protruded on the bottom and having a through hole;
a pivot hole (112) formed in the top; and
an inserting hole (116) formed on the top near the rear end;

a pivot device (20) mounted with the base (11) and having

a pivot post (21) inserted into the pivot hole (112) and having

a proximal end inserted into the pivot hole (112);
a distal end; and
a threaded hole formed in the distal end;

a swinging device (30) connected to the base (11) by the pivot post (21) and having two holders (36) connected to the swinging device (30); and
a handle assembly (40) connected to the swing-

ing device (30) by the pivot post (21).

2. The exercising machine as claimed in claim 1, wherein the swinging device (30) having

a swinging beam (31) having

a front end;
a rear end; and
a pillar hole (312) formed through the swinging beam (31) near the front end and corresponding to the inserting hole (116);

a pillar seat (32) attached to the front end of the swinging beam (31) and having

a top;
a bottom; and
a pillar hole (321) formed through the pillar seat (32) and mounted around the pivot post (21);

an inserting pillar (33) extended through the pillar hole (312) and selectively into the inserting hole (116), and having

a distal end; and
a proximal end; and

a holding frame (34) mounted on the swing beam (31).

3. The exercising machine as claimed in claim 2, wherein

the swinging beam (31) has at least one adjusting hole (314) forming in the swinging beam (31);
the holding frame (34) having

a jacket (342) mounted around the swinging beam (31);
two holding blocks (341) mounted on the jacket (342); and
a positioning hole (344) formed through the jacket (342) and corresponding to one of the adjusting holes (314); and

a fastener (35) extended through the positioning hole (344) and the corresponding adjusting hole (314);
the holders (36) are mounted respectively to the holding blocks (341).

4. The exercising machine as claimed in claim 3, wherein the pivot device (20) having

a first washer (22) mounted on the pivot post (21) near the proximal end;
a board (23) mounted on the pivot post (21) near the distal end;
a damping disk (24) mounted around the pivot post (21) and held on the board (23);
a second washer (25) mounted around the pivot post (21) and abutting with the damping disk (24);
an adjusting disk (26) mounted around the pivot post (21) over the second washer (25);
a spacer (27) mounted around the pivot post (21) over the adjusting disk (26); and
a fixing element (28) connected to the threaded hole in the pivot post (21) and presses against the spacer (27).

5. The exercising machine as claimed in claim 4, wherein

the adjusting disk (26) has multiple positioning holes (262) forming through the adjusting disk (26); and
the fixing element (28) has

a bottom;
a hole formed in the bottom;
a spring (281) held inside the hole and abutting against the positioning stub (282); and
a positioning stub (282) partially extending out from the hole and engaging with one of the positioning holes (262).

6. The exercising machine as claimed in claim 1, wherein the swinging device (30) has

a first swinging beam (31A) having

a curved front end; and
a rear end;

a frame (37) attached to the curved front end of the first swinging beam (31A) ;
a second swinging beam (31B) mounted with the frame (37) and having

a curved front end; and
a rear end;

a holding pin (33) mounted with the frame (37).

7. The exercising machine as claimed in claim 1 to 6, wherein the handle assembly (40) having

a mounting tube (42) mounted around the pivot post (21);
a handle (43) has two handlebars (432); and
a lateral arm (41) having

a rear end mounted with the mounting tube

(42);
a front end connected to the handle (43);
a bottom; and
a fixed hole (412) formed on the bottom.

8. The exercised machine as claimed in claim 7, wherein the base (11) having

a pillar (113) protruded up from the base (11) near the front end and having

a proximal end mounted on the top of the base (11); and
a distal end;

a panel (114) mounted on the distal end of the pillar (113) and having a hole; and
a fastener (115) extended through the hole and mounted with the panel (114) and inserted into the fixed hole (412).

9. The exercising machine as claimed in claim 8, wherein the support device (10) having

a collar (12) connected to the frame (111);
a transverse leg (13) connected with the collar (12) and has a middle; and
two supporting legs (14) separately attached to the base (11) near the rear end and each having

a proximal end;
a distal end; and
a connecting bracket (142) attached to the proximal end and mounted onto the base (11).

10. The exercising machine as claimed in claim 9, wherein

the transverse leg (13) has a mounting shaft (132) forming on the middle; and
the collar (12) mounted around the mounting shaft (132) and connected to the frame (111) and has a fastener (122).

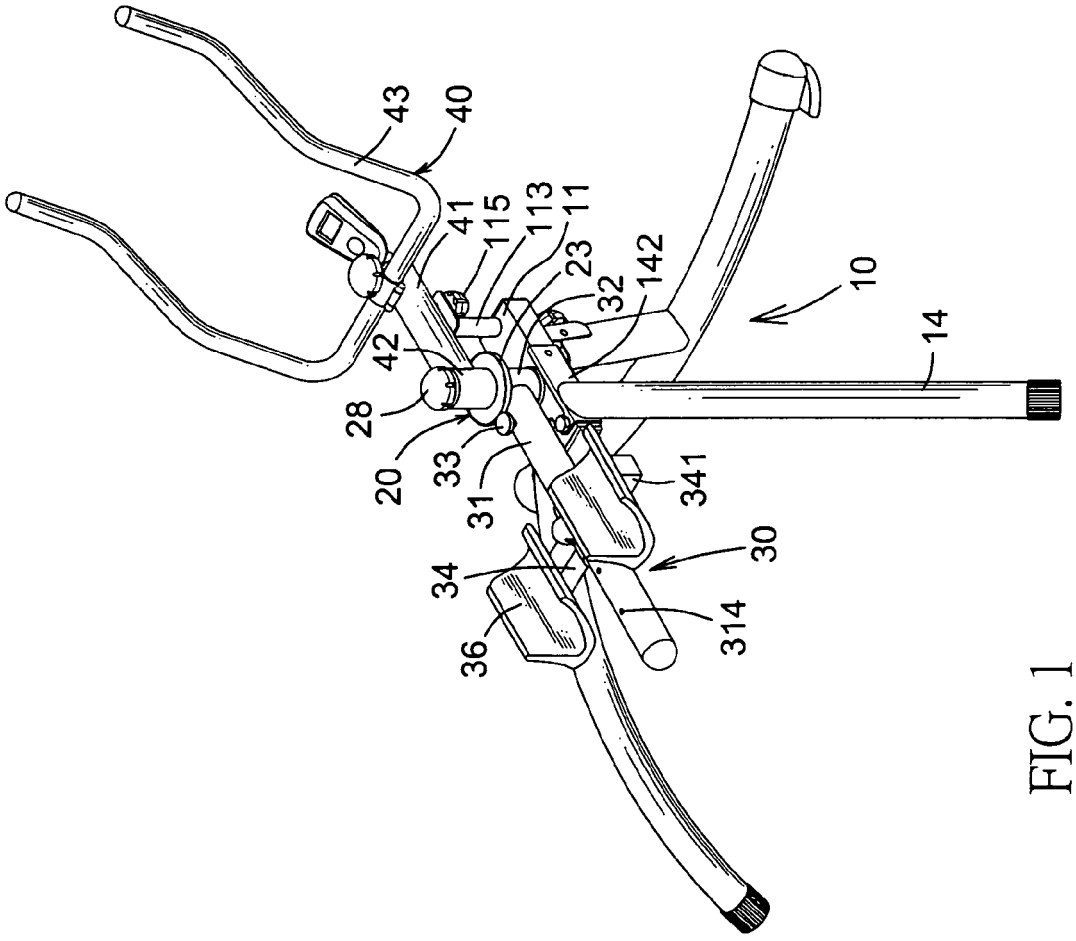


FIG. 1

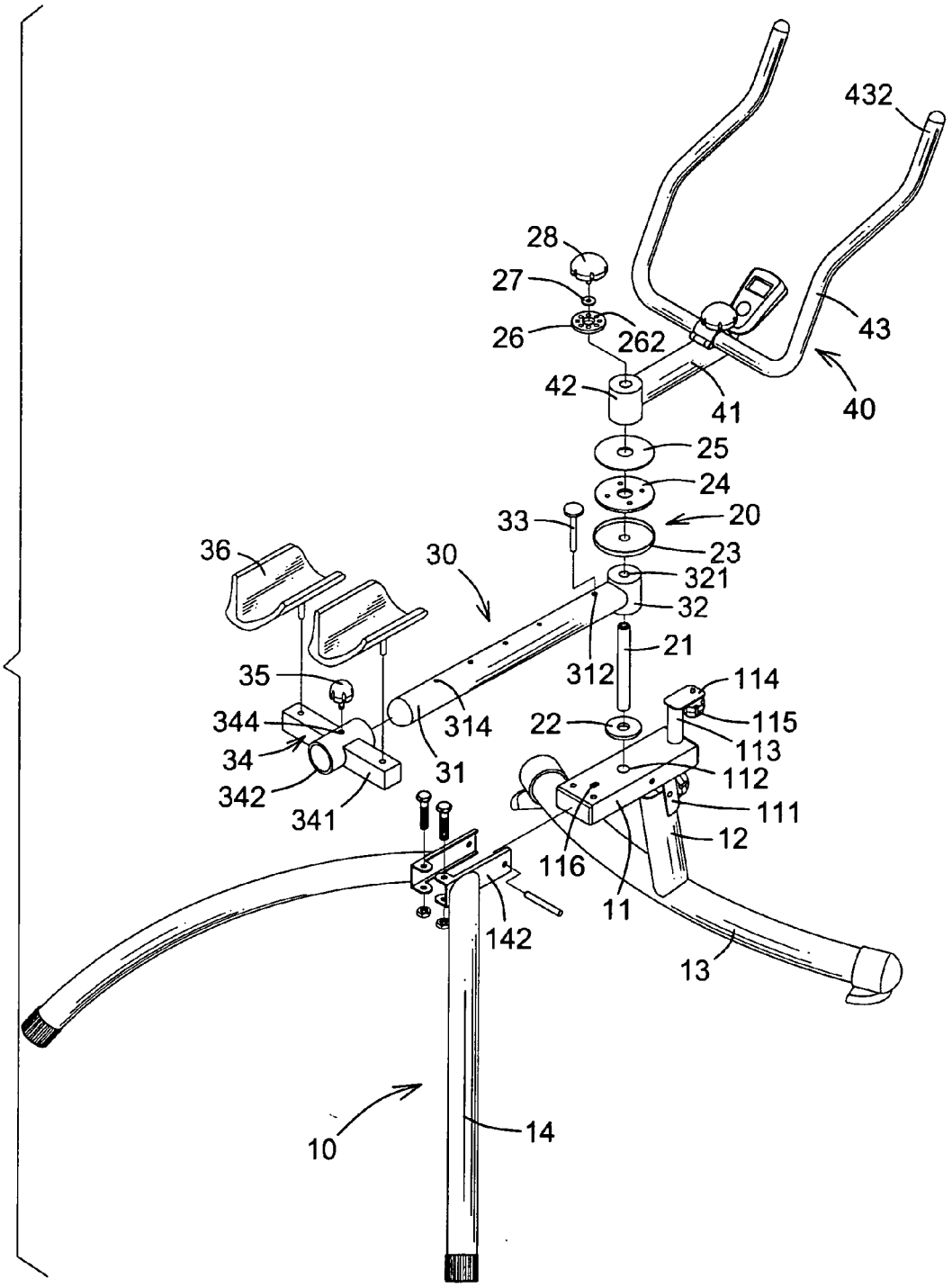

432
28
27
26
262
43
42
41
40
25
24
33
20
23
36
30
321
32
21
35
312
114
344
314
22
115
34
113
31
112
342
341
111
12
116
11
142
13
10
14

FIG. 2

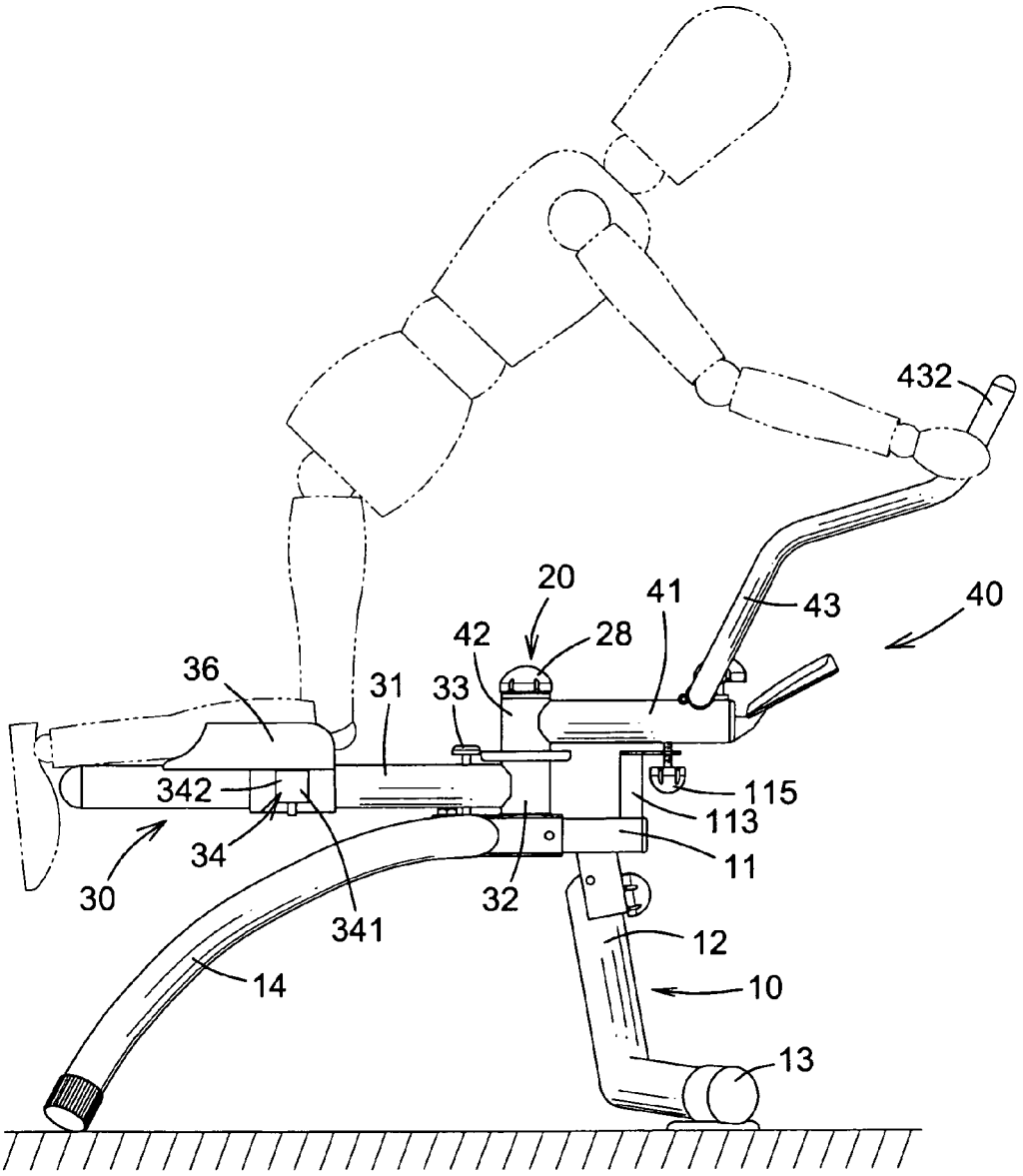


FIG. 3

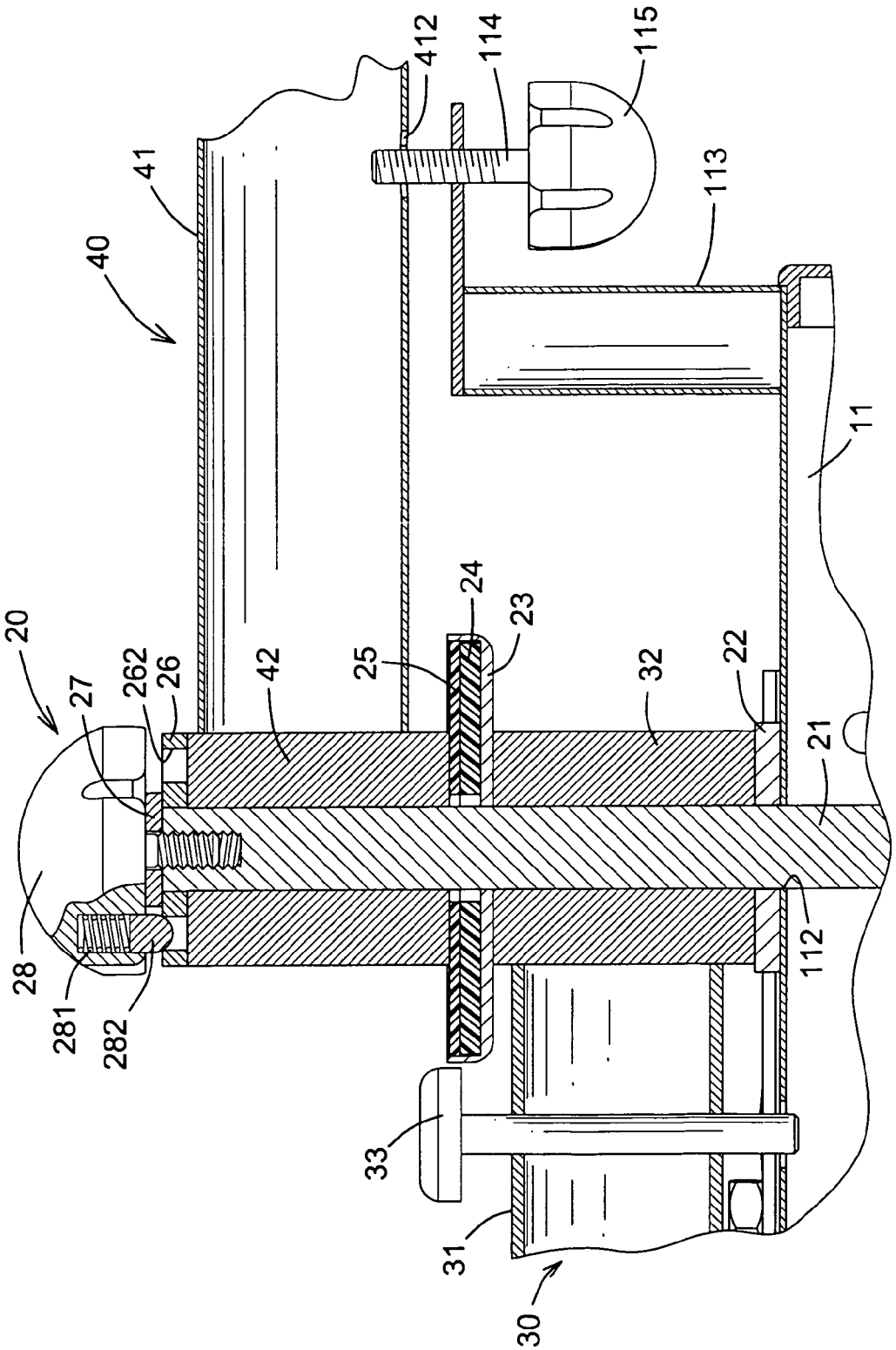

412
114
115
41
113
40
11
24
23
20
262
26
42
25
32
22
27
21
28
112
281
282
33
31
30

FIG. 4

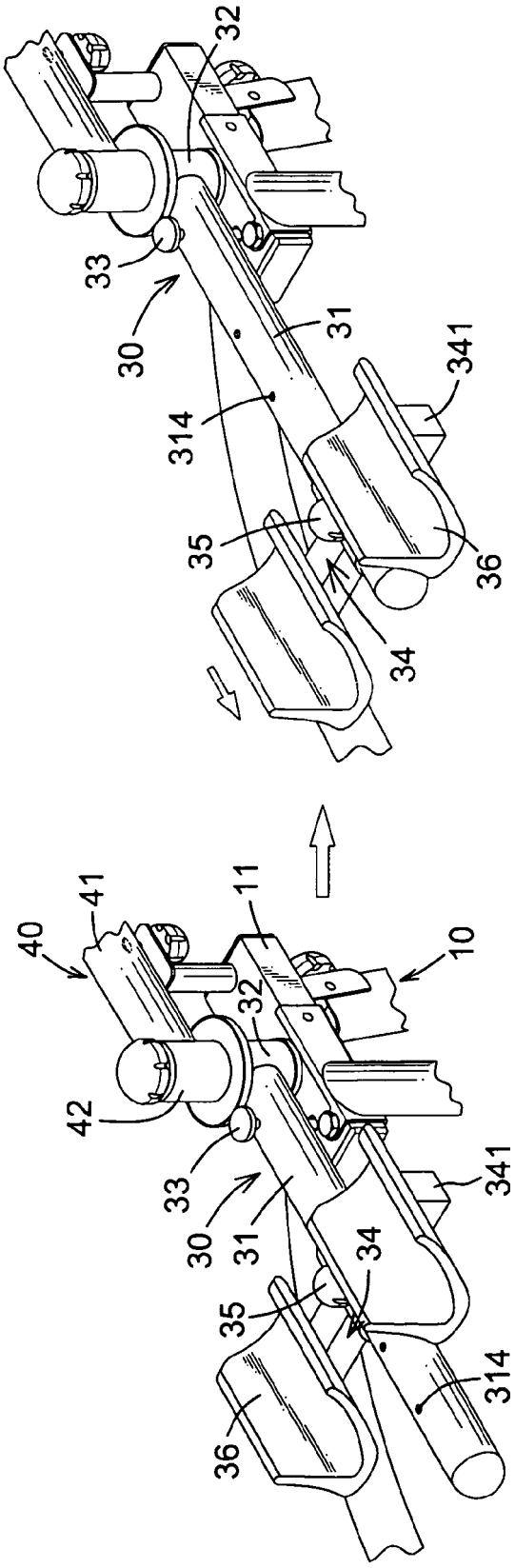


FIG. 5

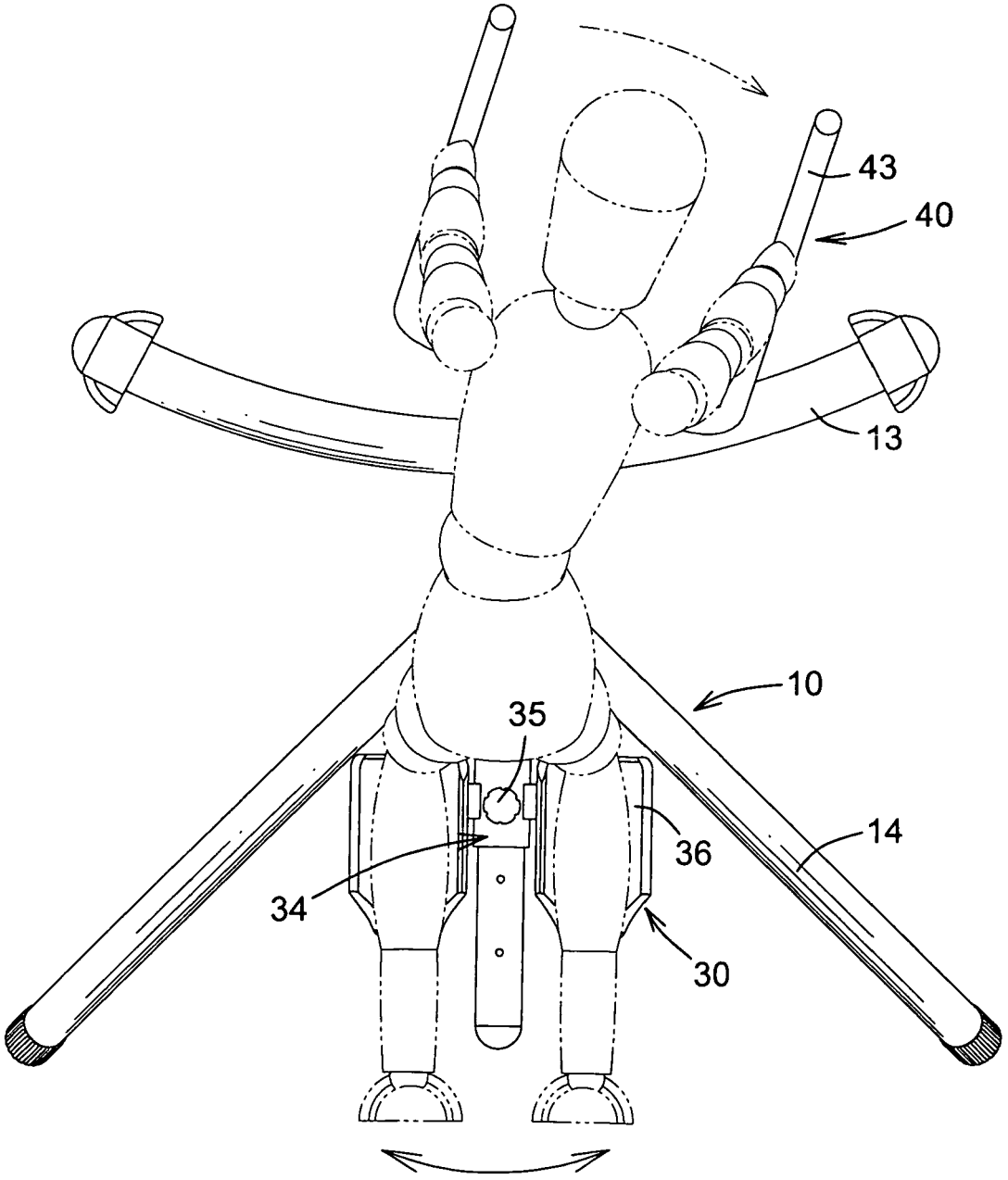


FIG. 6

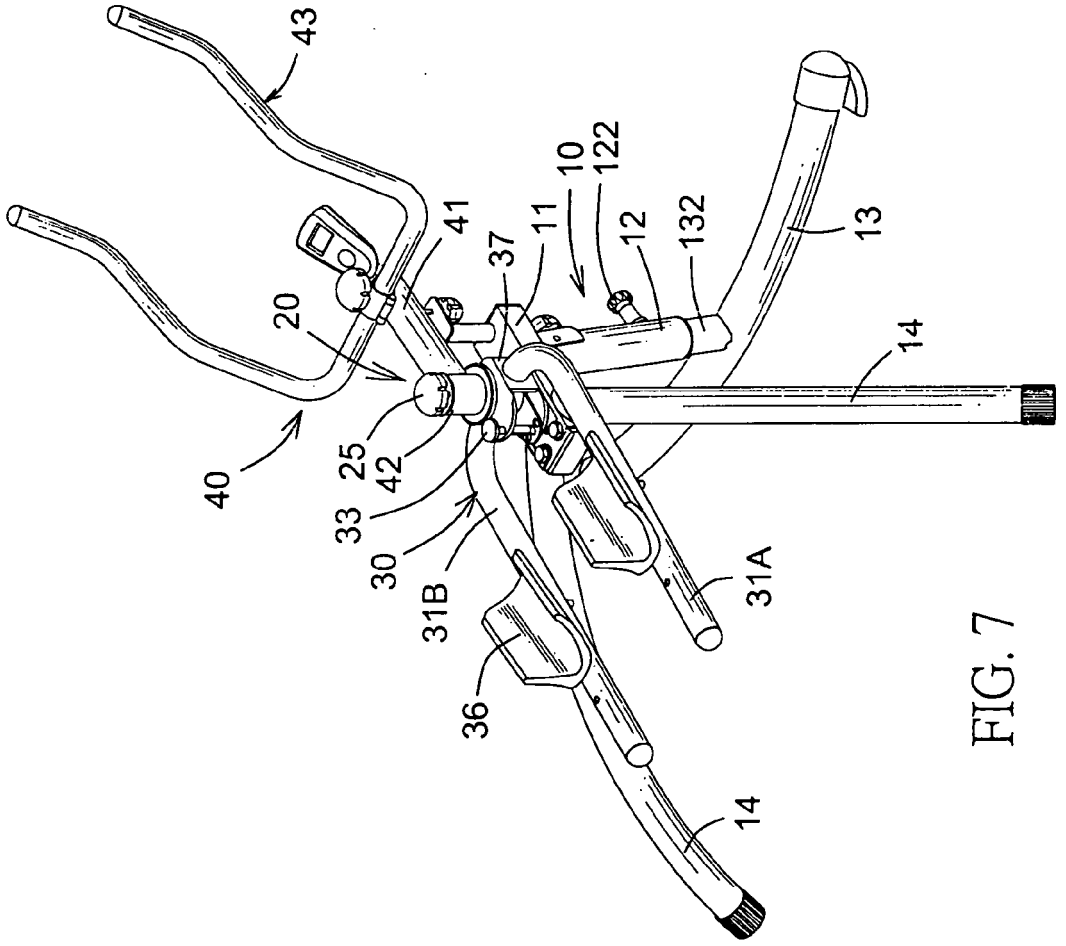


FIG. 7