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(54) **CONVENIENTLY FOLDABLE HIGH CHAIR**

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Description

FIELD OF THE INVENTION

[0001] The present invention relates to a conveniently foldable high chair, in particular to a high chair which can be folded and collected rapidly and has small volume after being folded and collected.

BACKGROUND OF THE INVENTION

[0002] The traditional Children's high chair has large volume after being folded and is inconvenient in carrying. Moreover, the traditional Children's high chair is inconvenient in folding and use. For instance, such a high chair is known from CN103202631 A. Therefore, a high chair which is convenient in folding and unfolding and has small volume after being folded must be provided for the majority of consumers.

SUMMARY OF THE INVENTION

[0003] The technical problem to be solved by the present invention is to provide a conveniently foldable high chair which has a simple structure, can be folded and collected rapidly, and has small volume after being folded and collected.

[0004] The conveniently foldable high chair provided by the present invention may adopt the following technical proposals:

The conveniently foldable high chair comprises a joint assembly and a front bipod, a rear bipod, a backrest assembly and a dinner plate which are connected with the joint assembly respectively and are mutually rotatable; the joint assembly is provided with a first lock unit for locking the joint assembly to prevent the joint assembly from rotating; a collection belt assembly for driving the first lock unit to be unlocked is disposed on the front bipod and driven to unlock the first lock unit; and hence the joint assembly is driven to rotate to achieve the objective of collection.

[0005] The following improvements may also be adopted to solve the problems in the present invention:

Further improvement is as follows: the joint assembly includes: a front leg joint, a rear leg joint movably mounted into the front leg joint, and a backrest joint, a rotating base and a dinner plate joint mounted on the outside of the front leg joint; the front leg joint, the rear leg joint, the backrest joint and the dinner plate joint are respectively assembled with the front bipod, the rear bipod, the backrest assembly and the dinner plate; the first lock unit is disposed in the rear leg joint; and the front leg joint, the rear leg joint, the backrest joint, the rotating base and the dinner plate joint may rotate relatively.

[0006] Further improvement is as follows: the first lock unit includes a linkage pull rod which can slide up and down and is mounted in the rear leg joint, and a first spring which is configured to provide a reset force for the linkage pull rod; the linkage pull rod is connected with the collection belt assembly and provided with a first iron pin and a second iron pin; both the first iron pin and the second iron pin run through the front leg joint, the rear leg joint, the backrest joint, the rotating base and the dinner plate joint; and the high chair further includes a third iron pin which runs through the front leg joint, the backrest joint, the rotating base and the dinner plate joint and is connected with the rear leg joint.

[0007] Further improvement is as follows: the rear bipod is also provided with a secondary button for locking the linkage pull rod.

[0008] Further improvement is as follows: the front leg joint is provided with a mounting position for the mounting of the rear leg joint; a first chute and a second chute which run through the mounting position are formed at both sides of the front leg joint; the first iron pin and the second iron pin fall into the first chute and the second chute respectively; the first chute and the second chute are curved grooves; front leg joint clamping sections which are bent towards the same direction are respectively disposed at tail ends of the first chute and the second chute; and the front leg joint is provided with a first run-through groove for the third iron pin to run through.

[0009] Further improvement is as follows: the rotating base is provided with a third chute and a fourth chute for the first iron pin and the second iron pin to run through and is also provided with a fifth chute; the third iron pin runs through the fifth chute; when the joint assembly is in the unfolded state, the positions of the third chute and the fourth chute and the positions of corresponding first chute and corresponding second chute are staggered respectively; rotating base clamping sections which are bent towards the same direction are respectively disposed at tail ends of the third chute and the fourth chute; and when the joint assembly is in the unfolded state, the positions of the rotating base clamping sections correspond to the positions of the front leg joint clamping sections.

[0010] Further improvement is as follows: the backrest joint is provided with a sixth chute for the first iron pin and the third iron pin to run through and a seventh chute for the second iron pin to run through; the dinner plate joint is provided with an eighth chute, a ninth chute and a tenth chute for the first iron pin, the second iron pin and the third iron pin to run through respectively; when the joint assembly is in the unfolded state, the shape and the position of the eighth chute and the ninth chute correspond to those of corresponding first chute and corresponding second chute respectively; and when the joint assembly is in the unfolded state, the position of the fifth chute and the position of the tenth chute are staggered.

[0011] Further improvement is as follows: the backrest assembly includes a backrest frame, a backrest adjustment mechanism mounted on the backrest frame and configured to adjust the angle of the backrest frame, and an adjustment button configured to drive the backrest adjustment mechanism to operate, in which the backrest

adjustment mechanism includes a positioning pull rod mounted in the backrest frame and a second spring configured to provide an elastic force for the positioning pull rod; and one end of the positioning pull rod is connected with the adjustment button through a first steel wire and the other end is provided with an embedding block which is embedded into one of a plurality of adjusting and positioning grooves formed on the outer edge of the rotating base.

[0012] Further improvement is as follows: the collection belt assembly includes: a mounting base mounted on the rear bipod, a rotating element pivoted into the mounting base, and a collection belt connected with one end of the rotating element, in which the other end of the rotating element is connected with the linkage pull rod in the first lock unit through a second steel wire.

[0013] Further improvement is as follows: pulleys are disposed on lower ends of the front bipod; and non-slip pads are disposed on lower ends of the rear bipod.

[0014] The technical proposal has the technical effects:

1. When the conveniently foldable high chair provided by the present invention is required to be folded and collected, the secondary button is pressed. Subsequently, the collection belt is directly pulled up to drive the rotating element to rotate, and hence the second steel wire is driven to move down and pull the linkage pull rod in the first lock unit to unlock the entire first lock unit, so that the entire joint assembly is in the rotatable state. When the collection belt is pulled up, the front bipod, the rear bipod, the backrest assembly and the dinner plate connected with the joint assembly are folded under the gravity thereof, so that the objective of folding and collection in one second can be achieved. Moreover, the operation is very convenient and swift. In addition, after the front bipod, the rear bipod, the backrest assembly and the dinner plate are folded through the joint assembly, the volume is very small, which is conducive to the carrying or collection of the conveniently foldable high chair. Therefore, the conveniently foldable high chair provided by the present invention has strong market competitiveness.

2. The pulleys are disposed on the lower ends of the front bipod and the non-slip pads are disposed on the lower ends of the rear bipod. Therefore, when the conveniently foldable high chair provided by the present invention is unfolded and used, the sliding process can be achieved by the pulleys on the lower ends of the front bipod only by raising the rear bipod, so that the conveniently foldable high chair is very convenient in use. In addition, the conveniently foldable high chair provided by the present invention also has the function of adjusting the relative angle of the backrest assembly.

BRIEF DESCRIPTION OF THE DRAWINGS

[0015]

FIG. 1 is a perspective view of the conveniently foldable high chair provided by the present invention;

FIG. 2 is a perspective view of the conveniently foldable high chair provided by the present invention seen from another angle of view;

FIG. 3 is a schematic partial enlarged view of the conveniently foldable high chair provided by the present invention;

FIG. 4 is a perspective view of a rotating base in the conveniently foldable high chair provided by the present invention;

FIG. 5 is a right view of the conveniently foldable high chair provided by the present invention;

FIG. 6 is a schematic diagram of the conveniently foldable high chair provided by the present invention obtained after folding;

FIG. 7 is a schematic exploded view of the conveniently foldable high chair provided by the present invention;

FIG. 8 is a schematic exploded view of the conveniently foldable high chair provided by the present invention seen from another angle of view;

FIG. 9 is a schematic exploded view of the conveniently foldable high chair provided by the present invention seen from another angle of view;

FIG. 10 is a schematic exploded view of the conveniently foldable high chair provided by the present invention seen from another angle of view;

FIG. 11 is a schematic structural sectional view of the conveniently foldable high chair provided by the present invention;

FIG. 12 is a schematic structural sectional partial enlarged view of FIG. 11;

FIG. 13 is another schematic structural sectional view of the conveniently foldable high chair provided by the present invention;

FIG. 14 is a schematic structural sectional partial enlarged view of FIG. 13;

FIG. 15 is a schematic diagram of a rear leg joint;

FIG. 16 is a schematic structural sectional view of FIG. 15; and

FIG. 17 is a schematic diagram of a front leg joint.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0016] Detailed description will be given below to the present invention with reference to the preferred embodiments.

[0017] Embodiment: as illustrated in FIGS. 1 to 17, the conveniently foldable high chair comprises a joint assembly 1 and a front bipod 2, a rear bipod 3, a backrest assembly 4 and a dinner plate 5 which are connected with the joint assembly 1 respectively and are mutually rotatable. In the process of folding and collection, as the front bipod 2, the rear bipod 3, the backrest assembly 4 and the dinner plate 5 are all connected with the joint assembly 1, the objective of collection in one second can be achieved. The operation is convenient and swift. Moreover, after the front bipod 2, the rear bipod 3, the backrest assembly 4 and the dinner plate 5 are folded through the joint assembly 1, the volume is very small, which is conducive to the carrying or collection of the conveniently foldable high chair.

[0018] The joint assembly 1 is provided with a first lock unit 6 for locking the joint assembly 1 to prevent the joint assembly 1 from rotating. A collection belt assembly 7 for driving the first lock unit 6 to be unlocked is disposed on the front bipod 2 and driven to unlock the first lock unit 6, and hence the joint assembly 1 is driven to rotate to achieve the objective of collection.

[0019] Pulleys 21 are disposed on lower ends of the front bipod 2 and non-slip pads 32 are disposed on lower ends of the rear bipod 3. Therefore, when the conveniently foldable high chair provided by the present invention is unfolded and used, the sliding process can be achieved by the pulleys 21 on the lower ends of the front bipod 2 only by raising the rear bipod 3, so that the conveniently foldable high chair is very convenient in use.

[0020] The joint assembly 1 includes: a front leg joint 11, a rear leg joint 12 movably mounted in the front leg joint 11, and a backrest joint 13, a rotating base 14 and a dinner plate joint 15 mounted on the outside of the front leg joint 11. The front leg joint 11, the rear leg joint 12, the backrest joint 13 and the dinner plate joint 15 are respectively assembled with the front bipod 2, the rear bipod 3, the backrest assembly 4 and the dinner plate 5. The first lock unit 6 is disposed in the rear leg joint 12. The front leg joint 11, the rear leg joint 12, the backrest joint 13 and the dinner plate joint 15 may rotate relatively and are mounted on a shaft. A cover 100 is also disposed on the other side of the front leg joint 11.

[0021] The first lock unit 6 includes a linkage pull rod 61 which can slide up and down and is mounted in the rear leg joint 12, and a first spring 62 which is configured to provide a reset force for the linkage pull rod 61. The linkage pull rod 61 is connected with the collection belt assembly 7 and provided with a first iron pin 611 and a second iron pin 612. Both the first iron pin 611 and the second iron pin 612 run through the front leg joint 11, the rear leg joint 12, the backrest joint 13, the rotating base 14 and the dinner plate joint 15. The high chair further includes a third iron pin 144 which runs through the front leg joint 11, the backrest joint 13, the rotating base 14, the dinner plate joint 15 and the front leg joint 11 (running through one portion of the front leg joint 11) and is connected with the rear leg joint 12.

[0022] The rear leg joint 3 is also provided with a secondary button 31 for locking the linkage pull rod 61.

[0023] The front leg joint 11 is provided with a mounting position for the mounting of the rear leg joint 12; a first chute 112 and a second chute 113 which run through the mounting position 111 are disposed at both sides of the front leg joint 11; and the first iron pin 611 and the second iron pin 612 fall into the first chute 112 and the second chute 113 respectively. The first chute 112 and the second chute 113 are curved grooves. Front leg joint clamping sections 1121 and 1132 which are bent towards the same direction are respectively disposed at tail ends of the first chute 112 and the second chute 113. The front leg joint 11 is provided with a first run-through groove 114 for the third iron pin 144 to run through. The rotating base 14 is provided with a third chute 141 and a fourth chute 142 for the first iron pin 611 and the second iron pin 612 to run through and is also provided with a fifth chute 143. The third iron pin 144 runs through the fifth chute 143. When the joint assembly 1 is in the unfolded state, the positions of the third chute 141 and the fourth chute 142 and the positions of corresponding first chute 112 and corresponding second chute 113 are staggered respectively. Rotating base clamping sections 1411 and 1422 which are bent towards the same direction are respectively disposed at tail ends of the third chute 141 and the fourth chute 142. The positions of the rotating base clamping sections 1411 and 1422 correspond to the positions of the front leg joint clamping sections 1121 and 1132. The backrest joint 13 is provided with a sixth chute 131 for the first iron pin 611 and the third iron pin 144 to run through and a seventh chute 132 for the second iron pin 612 to run through. The dinner plate joint 15 is provided with an eighth chute 151, a ninth chute 152 and a tenth chute 153 for the first iron pin 611, the second iron pin 612 and the third iron pin 613 to run through respectively. When the joint assembly 1 is in the unfolded state, the shape and the position of the eighth chute 151 and the ninth chute 152 correspond to those of corresponding first chute 112 and corresponding second chute 113 respectively. When the joint assembly 1 is in the unfolded state, the position of the fifth chute 143 and the position of the tenth chute 153 are staggered.

[0024] The backrest assembly 4 includes a backrest frame 41, a backrest adjustment mechanism 42 mounted on the backrest frame 41 and configured to adjust the relative angle of the backrest frame 41, and an adjust-

ment button 43 configured to drive the backrest adjustment mechanism 42 to operate, wherein the backrest adjustment mechanism 42 includes a positioning pull rod 421 mounted in the backrest frame 41 and a second spring 422 matched with the positioning pull rod 421. One end of the positioning pull rod 421 is connected with the adjustment button 43 through a first steel wire 423, and the other end of the positioning pull rod 421 is provided with an embedding block 424 which is embedded into one of a plurality of adjusting and positioning grooves 145 disposed on the outer edge of the rotating base 14. When the conveniently foldable high chair provided by the present invention is unfolded and used and the angle of the backrest frame 41 is required to be adjusted, the adjustment button 43 is directly pressed; the positioning pull rod 421 is pulled to move up by the first steel wire 423, and hence the embedding block 424 in the positioning pull rod 421 is disengaged from the adjusting and positioning groove 145; subsequently, the backrest frame 41 is driven to swing forward or backward; meanwhile, the adjustment button 43 is released; the positioning pull rod 421 is reset under the action of the second spring 422; the embedding block 424 in the positioning pull rod 421 is driven to fall into another adjusting and positioning groove 145, so that the backrest frame 41 is positioned; and hence the objective of adjusting the angle of the backrest frame 41 can be achieved.

[0025] The collection belt assembly 7 includes: a mounting base 71 mounted on the rear bipod 3, a rotating element 72 pivoted in the mounting base 71, and a collection belt 73 connected with one end of the rotating element 72, wherein another end of the rotating element 72 is connected with the linkage pull rod 61 in the first lock unit 6 through a second steel wire 721. The third iron pin 144 interacts with the first run-through groove 114, the fifth chute 143, the sixth chute 131 and the tenth chute 153 and has the function of limiting the rotation range of the backrest joint 13, the rotating base 14 and the dinner plate joint 15 relative to the rear leg joint.

[0026] When the conveniently foldable high chair provided by the present invention is required to be folded and collected, the secondary button 31 is pressed; the collection belt 73 is directly pulled up; the rotating element 72 is driven to rotate by the collection belt 73; and the second steel wire 721 is driven to move down and pull the linkage pull rod 61 in the first lock unit 6 to unlock the entire lock unit 6. That is to say, the first iron pin 611 and the second iron pin 612 are pulled away from the front leg joint clamping sections (1121, 1132) and the rotating base clamping sections (1411, 1422), so that the first iron pin 611 and the second iron pin 612 can slide in the chutes, and hence the entire joint assembly 1 is in the rotatable state. When the collection belt 73 is pulled up, the front bipod 2, the rear bipod 3, the backrest assembly 4 and the dinner plate 5 connected with the joint assembly 1 are folded under the gravity thereof, so that the objective of folding and collection in one second can be achieved. Moreover, the operation is very convenient and swift. In addition, after the front bipod 2, the rear bipod 3, the backrest assembly 4 and the dinner plate 5 are folded through the joint assembly 1, the volume is very small, which is conducive to the carrying or collection of the conveniently foldable high chair. Therefore, the conveniently foldable high chair has strong market competitiveness. When the high chair is unfolded, the first iron pin 611 and the second iron pin 612 are pushed into the front leg joint clamping sections (1121, 1132) of the front leg joint 11, the rotating base clamping sections (1411, 1422) of the rotating base 14, and clamping sections, which are the same with the front leg joint clamping sections, in the eighth chute 151 and the ninth chute 152 of the dinner plate joint 15, by the linkage pull rod 61 under the action of the first spring 62. In this way, the joint assembly 1 cannot rotate relatively, so that the objective of unfolding and positioning can be achieved.

Claims

1. A conveniently foldable high chair, comprising a joint assembly (1) and a front bipod (2), a rear bipod (3), a backrest assembly (4) and a dinner plate (5) being connected with the joint assembly (1) respectively and mutually rotatable, wherein the joint assembly (1) is provided with a first lock unit (6) for locking the joint assembly (1) to prevent the joint assembly (1) from rotating; a collection belt assembly (7) for driving the first lock unit (6) to be unlocked is disposed on the front bipod (2) and driven to unlock the first lock unit (6); and hence the joint assembly (1) is driven to rotate to achieve the objective of collection.

2. The conveniently foldable high chair according to claim 1, wherein the joint assembly (1) includes a front leg joint (11), a rear leg joint (12) movably mounted into the front leg joint (11), and a backrest joint (13), a rotating base (14) and a dinner plate joint (15) mounted on the outside of the front leg joint (11); the front leg joint (11), the rear leg joint (12), the backrest joint (13) and the dinner plate joint (15) are respectively assembled with the front bipod (2), the rear bipod (3), the backrest assembly (4) and the dinner plate (5); the first lock unit (6) is disposed in the rear leg joint (12); and the front leg joint (11), the rear leg joint (12), the backrest joint (13), the rotating base (14) and the dinner plate joint (15) may rotate relatively.

3. The conveniently foldable high chair according to claim 2, wherein the first lock unit (6) includes a linkage pull rod (61) which can slide up and down and is mounted in the rear leg joint (12), and a first spring (62) which is configured to provide a reset force for the linkage pull rod (61); the linkage pull rod (61) is connected with the collection belt assembly (7) and provided with a first iron pin (611) and a second iron

pin (612); both the first iron pin (611) and the second iron pin (612) run through the front leg joint (11), the rear leg joint (12), the backrest joint (13), the rotating base (14) and the dinner plate joint (15); and the high chair further includes a third iron pin (144) which runs through the front leg joint (11), the backrest joint (13), the rotating base (14) and the dinner plate joint (15) and is connected with the rear leg joint (12).

4. The conveniently foldable high chair according to claim 3, wherein the rear bipod (3) is also provided with a secondary button (31) for locking the linkage pull rod (61).

5. The conveniently foldable high chair according to claim 3 or 4, wherein the front leg joint (11) is provided with a mounting position (111) for the mounting of the rear leg joint (12); a first chute (112) and a second chute (113) running through the mounting position (111) are formed at both sides of the front leg joint (11); the first iron pin (611) and the second iron pin (612) fall into the first chute (112) and the second chute (113) respectively; the first chute (112) and the second chute (113) are curved grooves; front leg joint clamping sections (1121, 1132) bending towards the same direction are respectively disposed at tail ends of the first chute (112) and the second chute (113); and the front leg joint (11) is provided with a first run-through groove (114) for the third iron pin (144) to run through.

6. The conveniently foldable high chair according to one of claims 3 to 5, wherein the rotating base (14) is provided with a third chute (141) and a fourth chute (142) for the first iron pin (611) and the second iron pin (612) to run through and is also provided with a fifth chute (143); the third iron pin (144) runs through the fifth chute (143); when the joint assembly (1) is in the unfolded state, the positions of the third chute (141) and the fourth chute (142) and the positions of corresponding first chute (112) and corresponding second chute (113) are staggered respectively; rotating base clamping sections (1411, 1422) bending towards the same direction are respectively disposed at tail ends of the third chute (141) and the fourth chute (142); and when the joint assembly (1) is in the unfolded state, the positions of the rotating base clamping sections (1411, 1422) correspond to the positions of the front leg joint clamping sections (1121, 1132).

7. The conveniently foldable high chair according to claim 6, wherein the backrest joint (13) is provided with a sixth chute (131) for the first iron pin (611) and the third iron pin (144) to run through and a seventh chute (132) for the second iron pin (612) to run through; the dinner plate joint (15) is provided with an eighth chute (151), a ninth chute (152) and a tenth chute (153) for the first iron pin (611), the second iron pin (612) and the third iron pin (144) to run through respectively; when the joint assembly (1) is in the unfolded state, the shape and the position of the eighth chute (151) and the ninth chute (152) correspond to those of corresponding first chute (112) and corresponding second chute (113) respectively; and the position of the fifth chute (143) and the position of the tenth chute (153) are staggered.

8. The conveniently foldable high chair according to one of claims 2 to 7, wherein the backrest assembly (4) includes a backrest frame (41), a backrest adjustment mechanism (42) mounted on the backrest frame (41) and configured to adjust the angle of the backrest frame (41), and an adjustment button (43) configured to drive the backrest adjustment mechanism (42) to operate, in which the backrest adjustment mechanism (42) includes a positioning pull rod (421) mounted in the backrest frame (41) and a second spring (422) configured to provide an elastic force for the positioning pull rod (421); and one end of the positioning pull rod (421) is connected with the adjustment button (43) through a first steel wire (423) and the other end is provided with an embedding block (424) which is embedded into one of a plurality of adjusting and positioning grooves (145) formed on the outer edge of the rotating base (14).

9. The conveniently foldable high chair according to one of claims 3 to 7, wherein the collection belt assembly (7) includes: a mounting base (71) mounted on the rear bipod (3), a rotating element (72) pivoted into the mounting base (71), and a collection belt (73) connected with one end of the rotating element (72), in which the other end of the rotating element (72) is connected with the linkage pull rod (61) in the first lock unit (6) through a second steel wire (721).

10. The conveniently foldable high chair according to any one of claims 1 to 9, wherein pulleys (21) are disposed on lower ends of the front bipod (2); and non-slip pads (32) are disposed on lower ends of the rear bipod (3).

Patentansprüche

1. Bequem zusammenklappbarer Hochstuhl, umfassend eine Gelenkanordnung (1) und ein vorderes Zweibein (2), ein hinteres Zweibein (3), eine Rückenlehnenanordnung (4) und eine Tischplatte (5), die jeweils mit der Gelenkanordnung (1) verbunden sind und miteinander rotierbar sind, wobei die Gelenkanordnung (1) mit einer ersten Arretiereinheit (6) zum Arretieren der Gelenkanordnung (1) versehen ist, um ein Rotieren der Gelenkanordnung (1) zu verhindern; wobei eine Verstaugurtanordnung (7), die die

erste Arretiereinheit (6) dazu bringt, sich wieder zu entriegeln, am vorderen Zweibein (2) angebracht ist und dazu gebracht wird, die erste Arretiereinheit (6) zu entriegeln; und daher die Gelenkanordnung (1) zum Rotieren gebracht wird, um den Zweck des Verstauens zu erfüllen.

2. Bequem zusammenklappbarer Hochstuhl nach Anspruch 1, wobei die Gelenkanordnung (1) ein Vorderbeingelenk (11), ein Hinterbeingelenk (12), das bewegbar in das Vorderbeingelenk (11) montiert ist, und ein Rückenlehnengelenk (13), eine rotierende Basis (14) und ein Tischplattengelenk (15), die an die Außenseite des Vorderbeingelenks (11) montiert sind, aufweist; das Vorderbeingelenk (11), das Hinterbeingelenk (12), das Rückenlehnengelenk (13) und das Tischplattengelenk (15) jeweils mit dem vorderen Zweibein (2), dem hinteren Zweibein (3), der Rückenlehnenanordnung (4) und der Tischplatte (5) verbunden sind; die erste Arretiereinheit (6) am Hinterbeingelenk (12) angebracht ist; und das Vorderbeingelenk (11), das Hinterbeingelenk (12), das Rückenlehnengelenk (13), die rotierende Basis (14) und das Tischplattengelenk (15) verhältnismäßig rotieren können.

3. Bequem zusammenklappbarer Hochstuhl nach Anspruch 2, wobei die erste Arretiereinheit (6) eine Verbindungszugstange (61), die nach oben und unten gleiten kann und die in das Vorderbeingelenk (12) montiert ist, und eine erste Feder (62) aufweist, die ausgelegt ist, eine Rückstellkraft für die Verbindungszugstange (61) bereitzustellen; die Verbindungszugstange (61) mit der Verstaugurtanordnung (7) verbunden ist und mit einem ersten Eisenzapfen (611) und einem zweiten Eisenzapfen (612) versehen ist; wobei sowohl der erste Eisenzapfen (611) als auch der zweite Eisenzapfen (612) durch das Vorderbeingelenk (11), das Hinterbeingelenk (12), das Rückenlehnengelenk (13), die rotierende Basis (14) und das Tischplattengelenk (15) verlaufen; und der Hochstuhl ferner einen dritten Eisenzapfen (144) aufweist, der durch das Vorderbeingelenk (11), das Rückenlehnengelenk (13), die rotierende Basis (14) und das Tischplattengelenk (15) verläuft und mit dem Hinterbeingelenk (12) verbunden ist.

4. Bequem zusammenklappbarer Hochstuhl nach Anspruch 3, wobei das hintere Zweibein (3) auch mit einem sekundären Knopf (31) zum Arretieren der Verbindungszugstange (61) versehen ist.

5. Bequem zusammenklappbarer Hochstuhl nach Anspruch 3 oder 4, wobei das Vorderbeingelenk (11) mit einer Montageposition (111) für das Montieren des Hinterbeingelenks (12) versehen ist; eine erste Gleitbahn (112) und eine zweite Gleitbahn (113), die durch die Montageposition (111) verlaufen, an beiden Seiten des Vorderbeingelenks (11) ausgebildet werden; der erste Eisenzapfen (611) und der zweite Eisenzapfen (612) jeweils in die erste Gleitbahn (112) und die zweite Gleitbahn (113) fallen; die erste Gleitbahn (112) und die zweite Gleitbahn (113) gekrümmte Nuten sind; Klemmabschnitte des Vorderbeingelenks (1121, 1132), die sich in die gleiche Richtung biegen, jeweils an Endstücken der ersten Gleitbahn (112) und der zweiten Gleitbahn (113) angeordnet sind; und das Vorderbeingelenk (11) mit einer ersten Durchlaufnut (114) für den dritten Eisenzapfen (144) zum Durchlaufen versehen ist.

6. Bequem zusammenklappbarer Hochstuhl nach einem der Ansprüche 3 bis 5, wobei die rotierende Basis (14) mit einer dritten Gleitbahn (141) und einer vierten Gleitbahn (142) für den ersten Eisenzapfen (611) und den zweiten Eisenzapfen (612) zum Durchlaufen versehen ist und auch mit einer fünften Gleitbahn (143) versehen ist; wobei der dritte Eisenzapfen (144) durch die fünfte Gleitbahn (143) verläuft; wobei die Positionen der dritten Gleitbahn (141) und der vierten Gleitbahn (142) und die Positionen der entsprechenden ersten Gleitbahn (112) und der entsprechenden zweiten Gleitbahn (113) jeweils versetzt angeordnet sind, wenn sich die Gelenkanordnung (1) im ausgeklappten Zustand befindet; wobei Klemmabschnitte der rotierenden Basis (1411, 1422), die sich in die gleiche Richtung biegen, jeweils an Endstücken der dritten Gleitbahn (141) und der vierten Gleitbahn (142) angeordnet sind; und die Positionen der Klemmabschnitte der rotierenden Basis (1411, 1422) den Positionen der Klemmabschnitte des Vorderbeingelenks (1121, 1132) entsprechen, wenn sich die Gelenkanordnung (1) im ausgeklappten Zustand befindet.

7. Bequem zusammenklappbarer Hochstuhl nach Anspruch 6, wobei das Rückenlehnengelenk (13) mit einer sechsten Gleitbahn (131) für den ersten Eisenzapfen (611) und den dritten Eisenzapfen (144) zum Durchlaufen und einer siebten Gleitbahn (132) für den zweiten Eisenzapfen (612) zum Durchlaufen versehen ist; das Tischplattengelenk (15) mit einer achten Gleitbahn (151), einer neunten Gleitbahn (152) und einer zehnten Gleitbahn (153) für den ersten Eisenzapfen (611), den zweiten Eisenzapfen (612) und den dritten Eisenzapfen (144) jeweils zum Durchlaufen versehen ist; die Form und die Position der achten Gleitbahn (151) und der neunten Gleitbahn (152) denen der entsprechenden ersten Gleitbahn (112) und der entsprechenden zweiten Gleitbahn (113) entsprechen, wenn sich die Gelenkanordnung (1) im ausgeklappten Zustand befindet; und die Position der fünften Gleitbahn (143) und die Position der zehnten Gleitbahn (153) versetzt angeordnet sind.

8. Bequem zusammenklappbarer Hochstuhl nach einem der Ansprüche 2 bis 7, wobei die Rückenlehnenanordnung (4) einen Rückenlehnenrahmen (41), einen Rückenlehnen-Verstellmechanismus (42), der an dem Rückenlehnenrahmen (41) montiert und ausgelegt ist, den Winkel des Rückenlehnenrahmens (41) zu verstellen, und einen Verstellknopf (43) aufweist, der ausgelegt ist, den Rückenlehnen-Verstellmechanismus (42) zu betätigen, wobei der Rückenlehnen-Verstellmechanismus (42) eine Positionierungszugstange (421), die im Rückenlehnenrahmen (41) montiert ist, und eine zweite Feder (422) aufweist, die ausgelegt ist, eine Federkraft für die Positionierungszugstange (421) bereitzustellen; und ein Ende der Positionierungszugstange (421) mit dem Verstellknopf (43) durch einen ersten Stahldraht (423) verbunden ist und das andere Ende mit einem Verankerungssockel (424) versehen ist, der in eine einer Vielzahl von Verstell- und Positionierungsnuten (145), die auf dem äußeren Rand der rotierenden Basis (14) ausgebildet sind, eingebettet ist.

9. Bequem zusammenklappbarer Hochstuhl nach einem der Ansprüche 3 bis 7, wobei die Verstaugurtanordnung (7) Folgendes aufweist: einen Montagefuß (71), der an das hintere Zweibein (3) montiert ist, ein rotierendes Element (72), das in den Montagefuß (71) geschwenkt ist, und einen Verstaugurt (73), der mit einem Ende des rotierenden Elements (72) verbunden ist, wobei das andere Ende des rotierenden Elements (72) durch einen zweiten Stahldraht (721) mit der Verbindungszugstange (61) in der ersten Arretiereinheit (6) verbunden ist.

10. Bequem zusammenklappbarer Hochstuhl nach einem der Ansprüche 1 bis 9, wobei Rollen (21) an den unteren Enden des vorderen Zweibeins (2) angebracht sind; und rutschfeste Auflagen (32) an den unteren Enden des hinteren Zweibeins (3) angebracht sind.

Revendications

1. Chaise haute pliable de manière pratique, comprenant un ensemble de charnière (1) et un bipode avant (2), un bipode avant (3), un ensemble de dossier (4) et un plateau à repas (5) étant reliés à l'ensemble de charnière (1) rotatifs respectivement et mutuellement, dans lequel l'ensemble de charnière (1) est doté d'une première unité de verrouillage (6) pour verrouiller l'ensemble de charnière (1) afin d'empêcher l'ensemble de charnière (1) de tourner ; un ensemble de courroie de collecte (7) pour entraîner la première unité de verrouillage (6) en déverrouillage est disposé sur le bipode avant (2) et entraîné pour déverrouiller la première unité de verrouillage (6) ; et ainsi l'ensemble de charnière (1) est entraîné à tourner pour atteindre l'objet de la collecte.

2. Chaise haute pliable de manière pratique selon la revendication 1, dans laquelle l'ensemble de charnière (1) inclut une charnière de jambe avant (11), une charnière de jambe arrière (12) montée mobile dans la charnière de jambe avant (11) et une charnière de dossier (13), une base rotative (14) et une charnière de plateau à repas (15) montées sur l'extérieur de la charnière de jambe avant (11) ; la charnière de jambe avant (11), la charnière de jambe arrière (12), la charnière de dossier (13) et la charnière de plateau à repas (15) sont respectivement assemblées avec le bipode avant (2), le bipode arrière (3), l'ensemble de dossier (4) et le plateau à repas (5) ; la première unité de verrouillage (6) est disposée dans la charnière de jambe arrière (12) ; et la charnière de jambe avant (11), la charnière de jambe arrière (12), la charnière de dossier (13), la base rotative (14) et la charnière de plateau à repas (15) peuvent tourner relativement.

3. Chaise haute pliable de manière pratique selon la revendication 2, dans laquelle la première unité de verrouillage (6) comprend une tirette de liaison (61) qui peut coulisser de haut en bas et est montée dans la charnière de jambe arrière (12), et un premier ressort (62) qui est configuré pour fournir une force de rappel pour la tirette de liaison (6) ; la tirette de liaison (61) est reliée à l'ensemble de courroie de collecte (7) et dotée d'une première broche en fer (611) et d'une deuxième broche en fer (612) ; à la fois la première broche en fer (611) et la deuxième broche en fer (612) passent à travers la charnière de jambe avant (11), la charnière de jambe arrière (12), la charnière de dossier (13), la charnière rotative (14) et la charnière de plateau à repas (15) ; et la chaise haute comprend en outre une troisième broche en fer (144) qui passe à travers la charnière de jambe avant (11), la charnière de dossier (13), la charnière rotative (14) et la charnière de plateau à repas (15) et est connectée à la charnière de jambe arrière (12).

4. Chaise haute pliable de manière pratique selon la revendication 3, dans laquelle le bipode arrière (3) est également doté d'un bouton secondaire (31) pour verrouiller la tirette de liaison (61).

5. Chaise haute pliable de manière pratique selon la revendication 3 ou 4, dans laquelle la charnière de jambe avant (11) est dotée d'une position de montage (111) pour le montage de la charnière de jambe arrière (12) ; une première glissière (112) et une deuxième glissière (113) passant à travers la position de montage (111) sont formées sur les deux côtés de la charnière de jambe avant (11) ; la première broche en fer (611) et la deuxième broche en

fer (612) tombent dans la première glissière (112) et la deuxième glissière (113) respectivement ; la première glissière (112) et la deuxième glissière (113) sont des rainures incurvées ; des sections de serrage de charnière de jambe avant (1121, 1132) fléchissant dans la même direction sont respectivement disposées sur des extrémités en queue de la première glissière (112) et de la deuxième glissière (113) ; et la charnière de jambe avant (11) est dotée d'une première rainure traversante (114) pour que la troisième broche en fer (144) passe au travers.

6. Chaise haute pliable de manière pratique selon l'une des revendications 3 à 5, dans laquelle la base rotative (14) est dotée d'une troisième glissière (141) et d'une quatrième glissière (142) pour que la première broche en fer (611) et la deuxième broche en fer (612) passent à travers et est également dotée d'une cinquième glissière (143) ; la troisième broche en fer (144) passe à travers la cinquième glissière (143) ; lorsque l'ensemble de montage (1) est dans la position dépliée, les positions de la troisième glissière (141) et de la quatrième glissière (142) et les positions de la première glissière (112) correspondante et de la deuxième glissière (113) correspondante sont respectivement échelonnées ; des sections de serrage de la base rotative (1411, 1422) fléchissant dans la même direction sont respectivement disposées sur des extrémités en queue de la troisième glissière (141) et de la quatrième glissière (142) ; et lorsque l'ensemble de charnière (1) est dans l'état déplié, les positions des sections de serrage de la base rotative (1411, 1422) correspondent aux positions des sections de serrage de charnière de jambe avant (1121, 1132).

7. Chaise haute pliable de manière pratique selon la revendication 6, dans laquelle la charnière de dossier (13) est dotée d'une sixième glissière (131) pour que la première broche en fer (611) et la troisième broche en fer (144) passent au travers et d'une septième glissière (132) pour que la deuxième broche en fer (612) passe au travers ; la charnière de plateau à repas (15) est dotée d'une huitième glissière (151), d'une neuvième glissière (152) et d'une dixième glissière (153) pour que la première broche en fer (611), la deuxième broche en fer (612) et la troisième broche en fer (144) passent au travers respectivement ; lorsque l'ensemble de charnière (1) est dans l'état déplié, la forme et la position de la huitième glissière (151) et de la neuvième glissière (152) correspondent à celles de la première glissière (112) correspondante et de la deuxième glissière (113) correspondante ; et la position de la cinquième glissière (143) et la position de la dixième glissière (153) sont échelonnées.

8. Chaise haute pliable de manière pratique selon l'une des revendications 2 à 7, dans laquelle l'ensemble de dossier (4) inclut un cadre de dossier (41), un mécanisme d'ajustement de dossier (42) monté sur le cadre de dossier (41) et configuré pour ajuster l'angle du cadre de dossier (41), et d'un bouton d'ajustement (43) configuré pour entraîner le mécanisme d'ajustement de dossier (42) en fonctionnement, dans lequel le mécanisme d'ajustement de dossier (42) inclut une tirette de positionnement (421) montée dans le cadre de dossier (41) et un second ressort (422) configuré pour fournir une force élastique pour la tirette de positionnement (421) ; et une extrémité de la tirette de positionnement (421) est connectée au bouton d'ajustement (43) par le biais d'un premier fil d'acier (423) et l'autre extrémité est dotée d'un bloc à enchâssement (424) qui est enchâssé dans l'une d'une pluralité de rainures d'ajustement et de positionnement (145) formées sur le bord extérieur de la base rotative (14).

9. Chaise haute pliable de manière pratique selon l'une des revendications 3 à 7, dans laquelle l'ensemble de courroie de collecte (7) inclut : une base de montage (71) montée sur le bipode arrière (3), un élément rotatif (72) pivoté dans la base de montage (71), et une courroie de collecte (73) connectée à une extrémité de l'élément rotatif (72), dans laquelle l'autre extrémité de l'élément rotatif (72) est connectée avec la tirette de liaison (61) dans la première unité de verrouillage (6) par un second fil d'acier (721).

10. Chaise haute pliable de manière pratique selon l'une des revendications 1 à 9, dans laquelle des poulies (21) sont disposées sur des extrémités inférieures du bipode avant (2) ; et des patins anti-glissement (32) sont disposés sur des extrémités inférieures du bipode arrière (3).

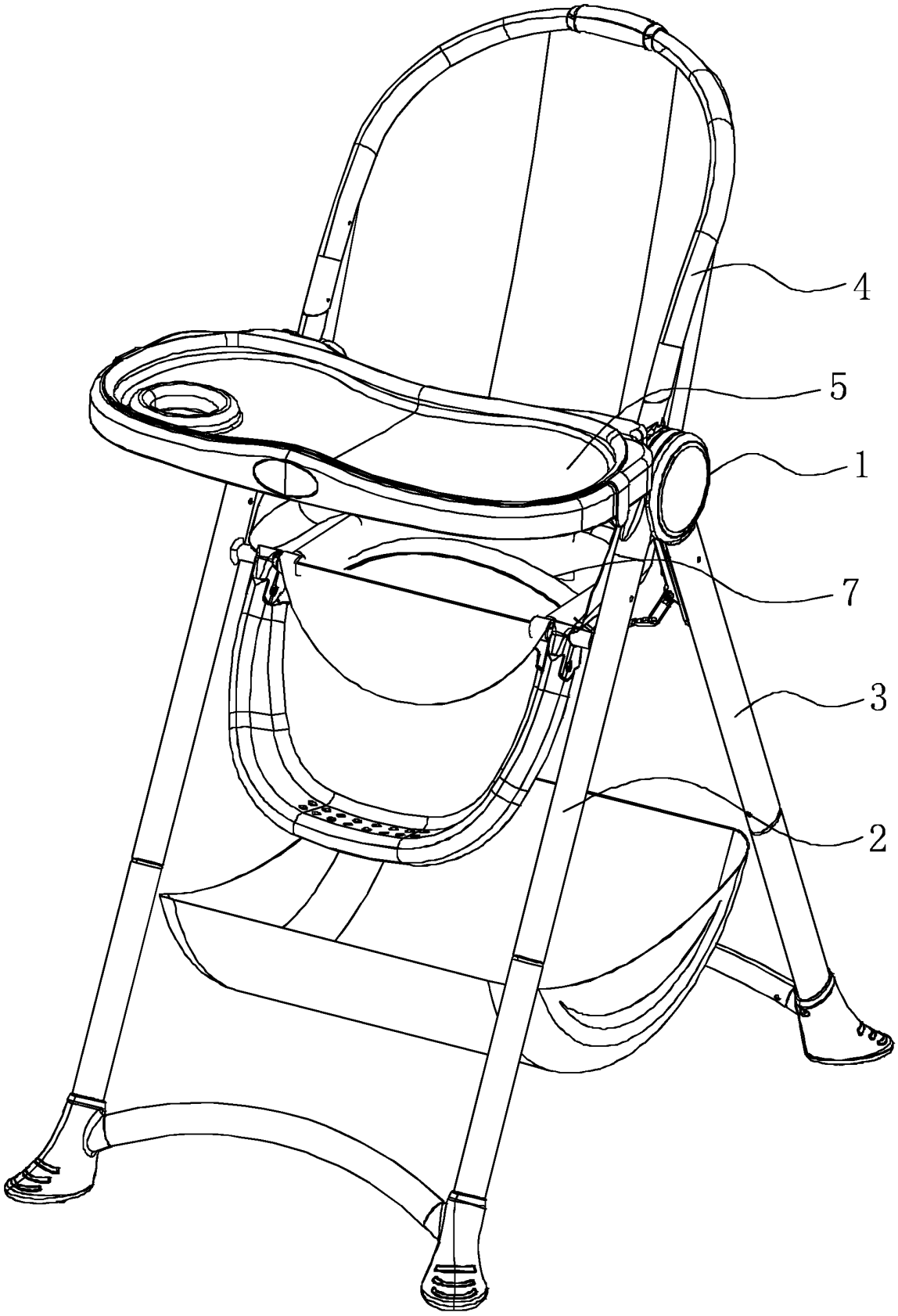

Fig. 1

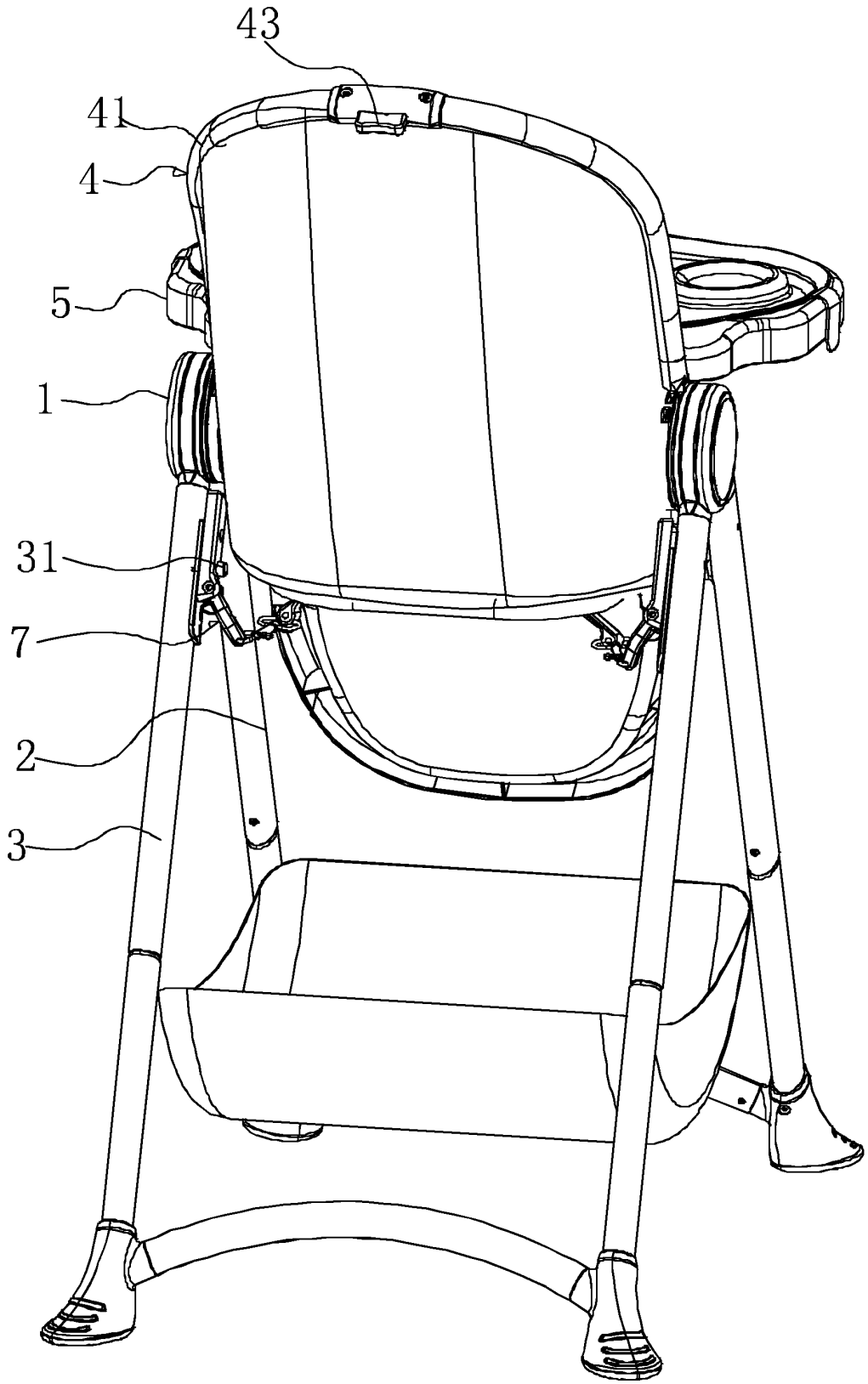

Fig. 2

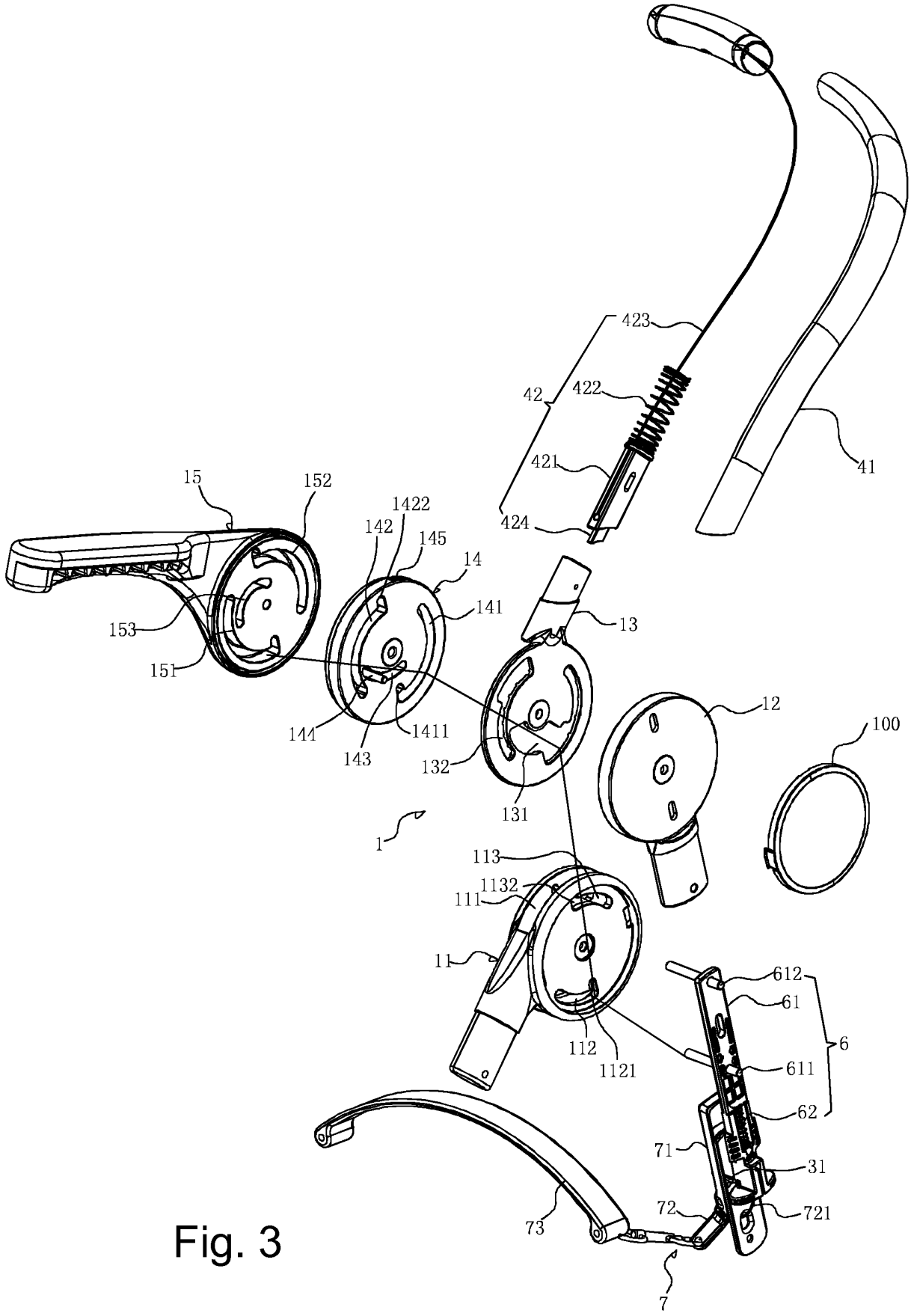
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Fig. 3

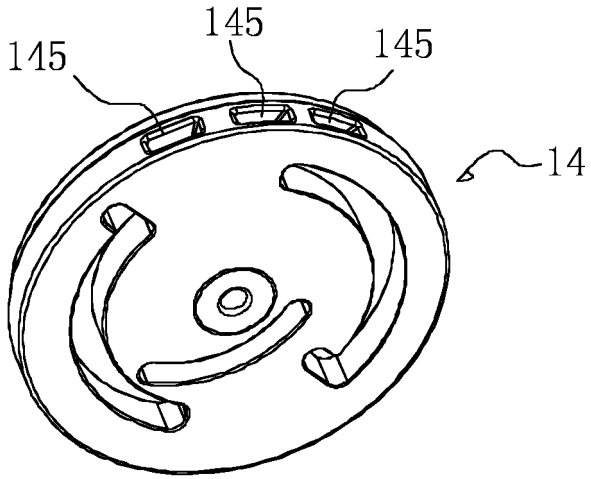

Fig. 4

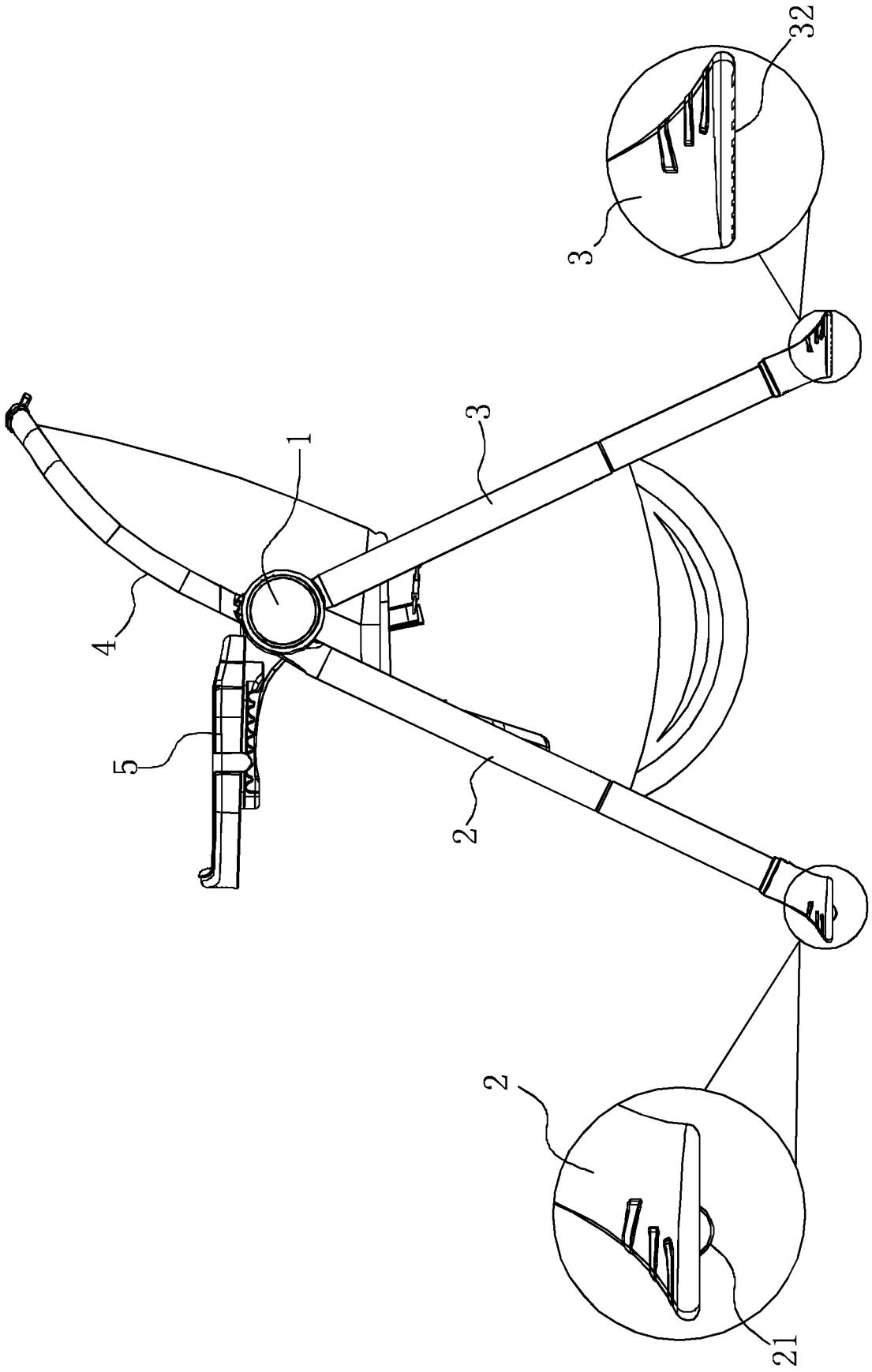

Fig. 5

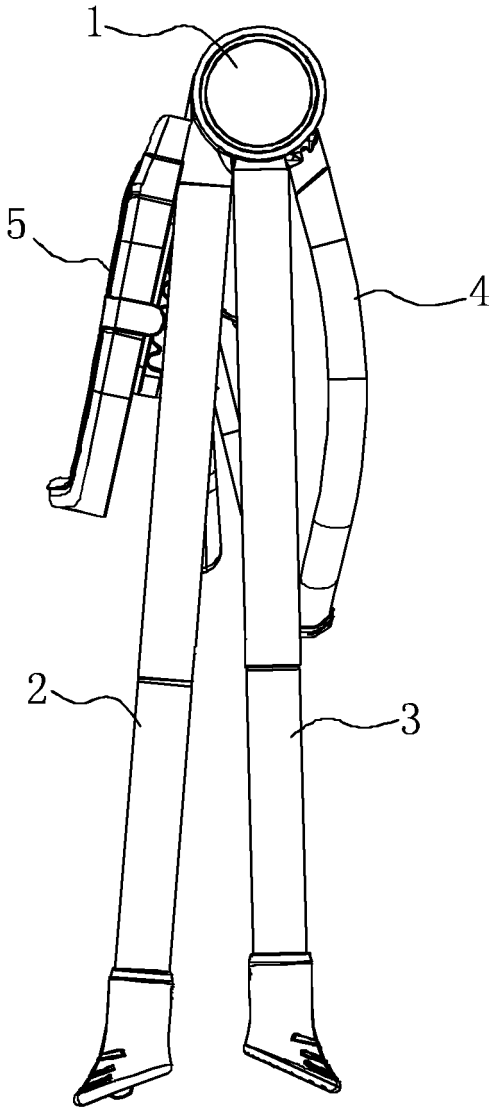

Fig. 6

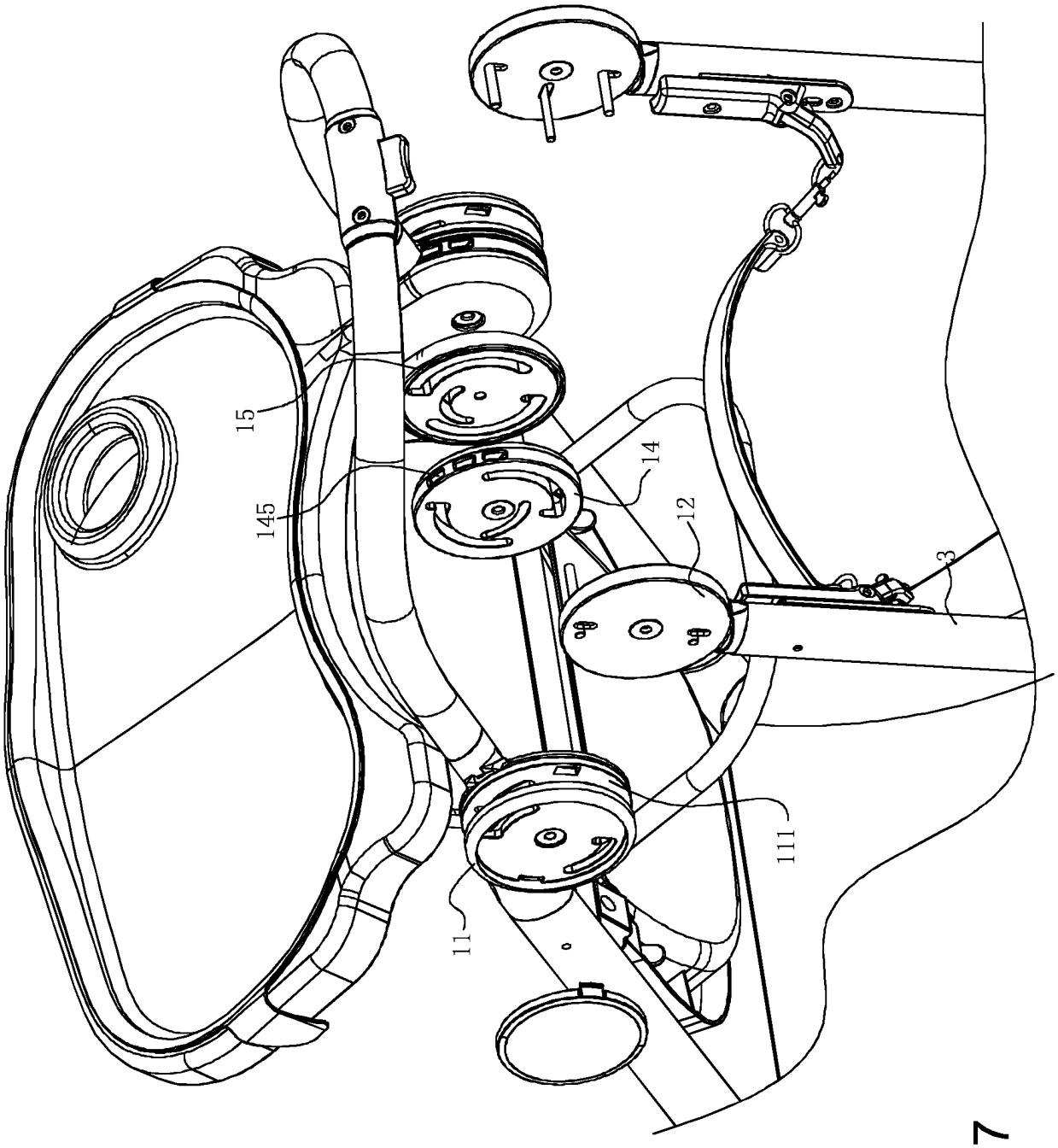

Fig. 7

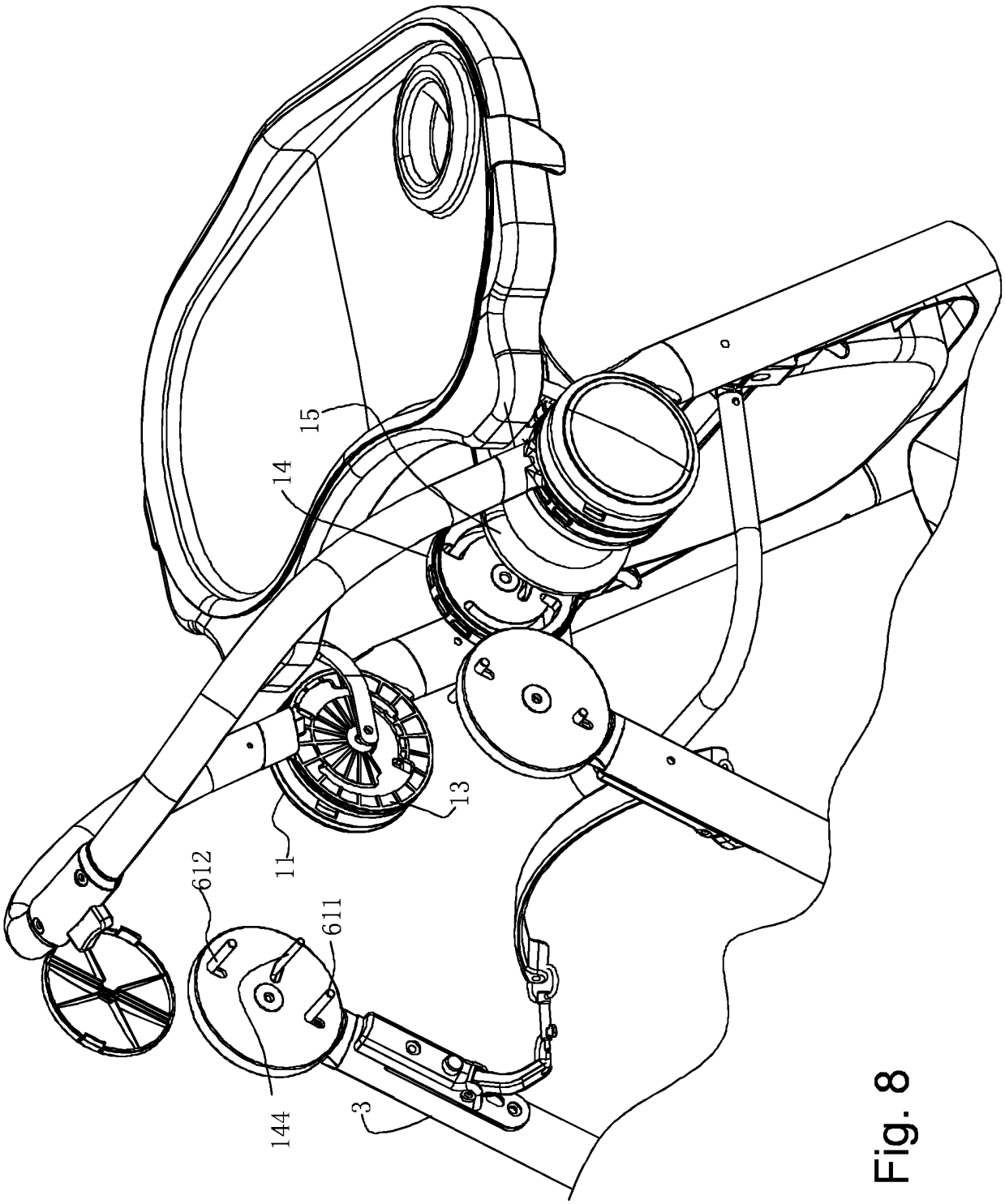

Fig. 8

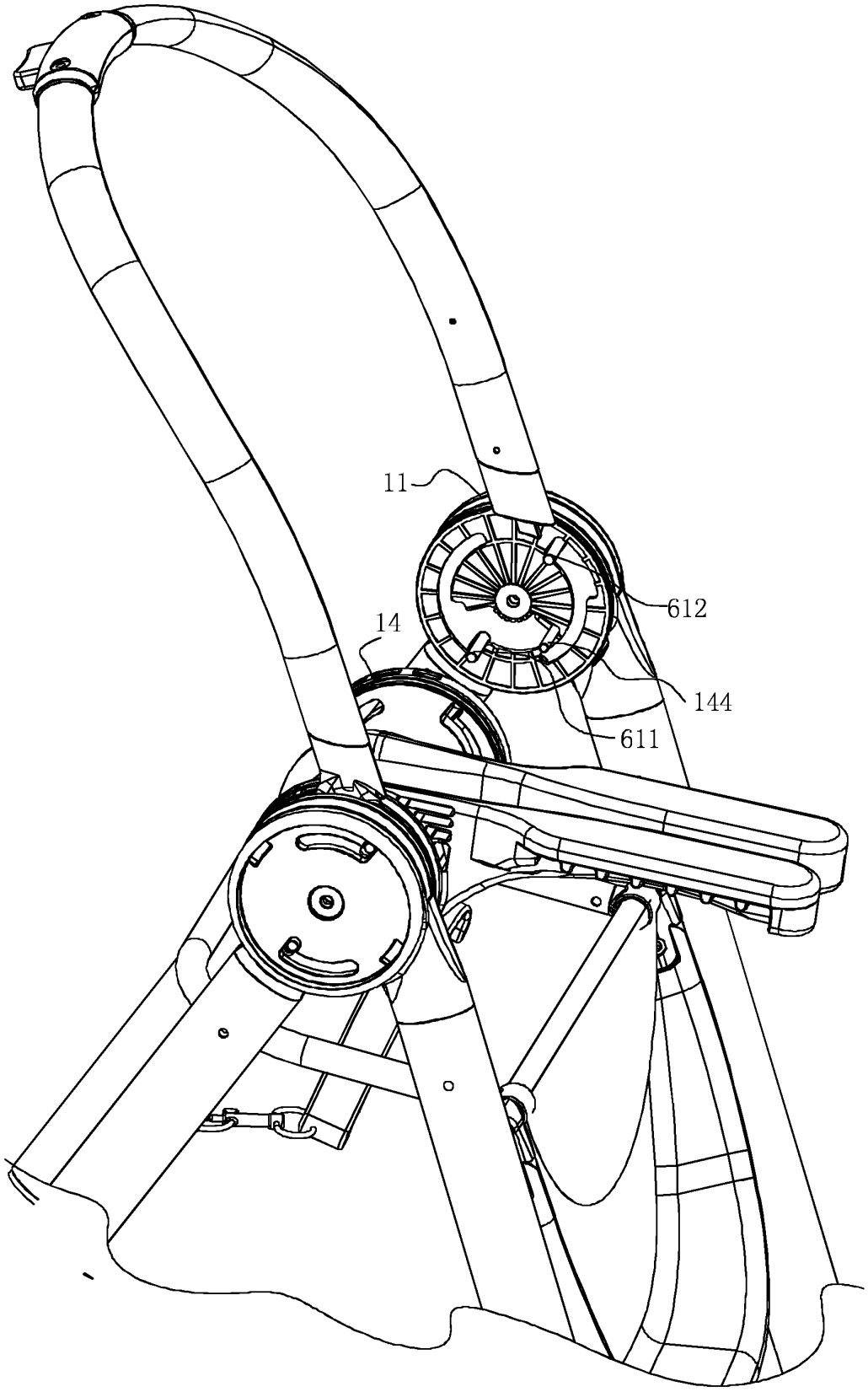

Fig. 9

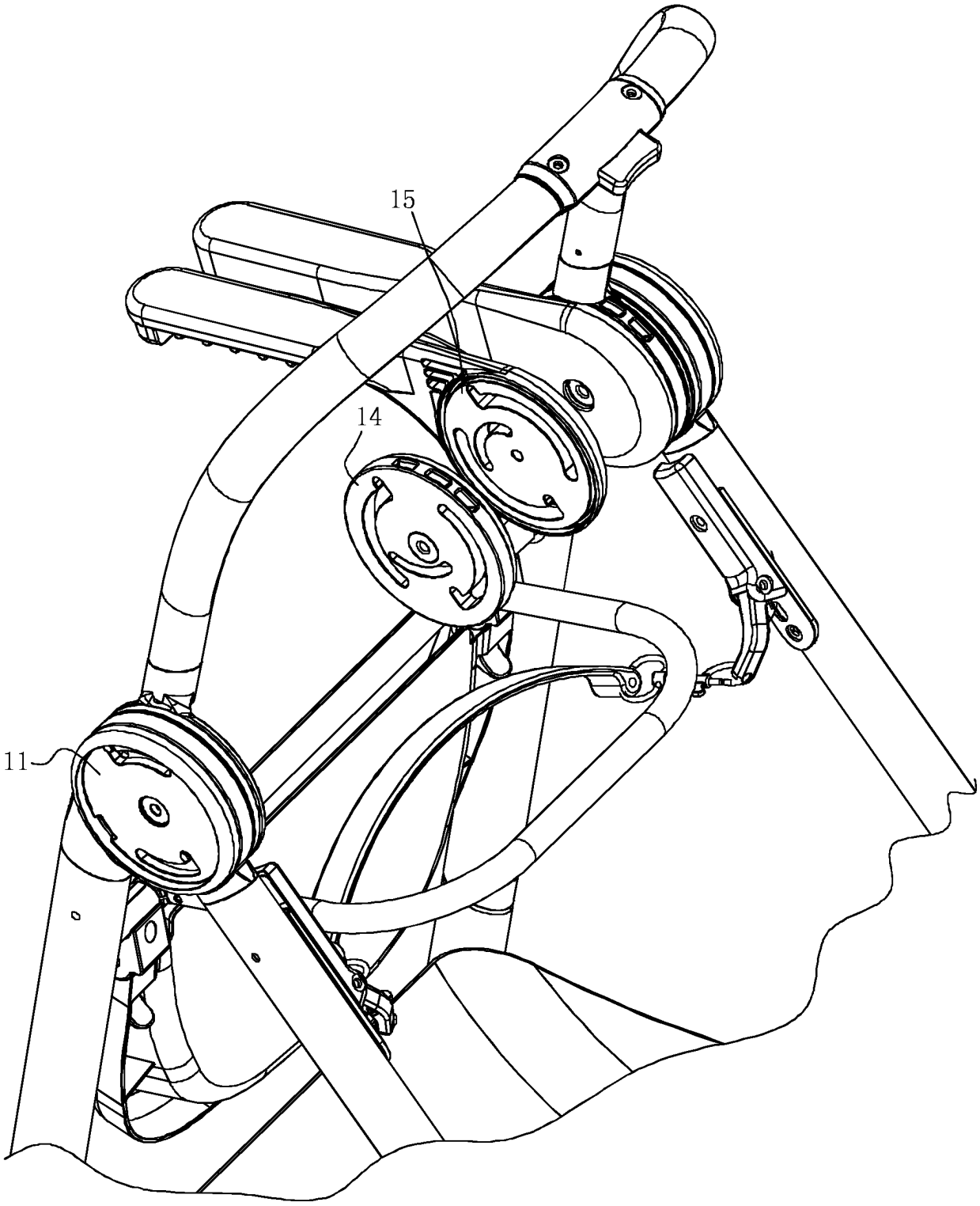

Fig. 10

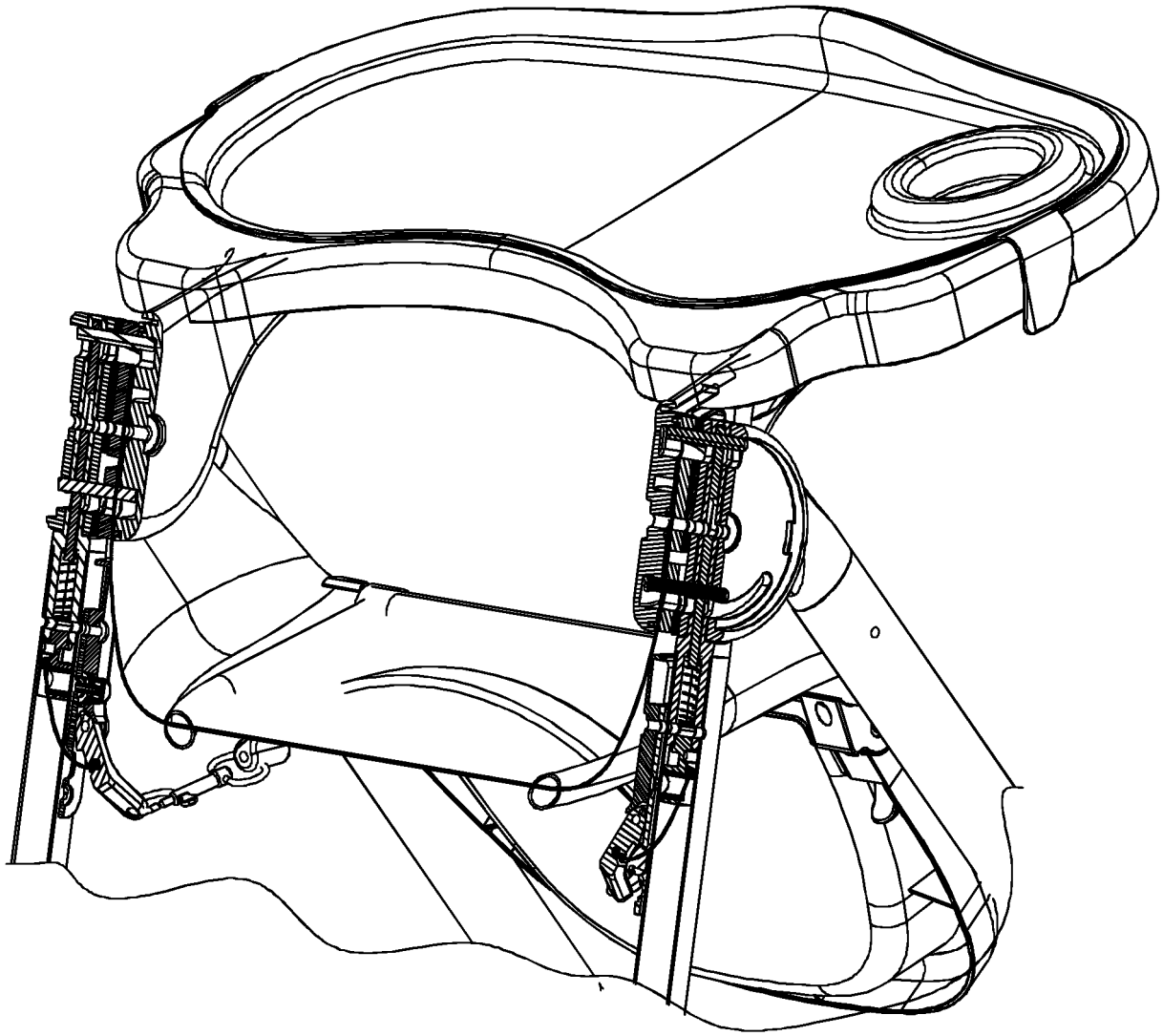

Fig. 11

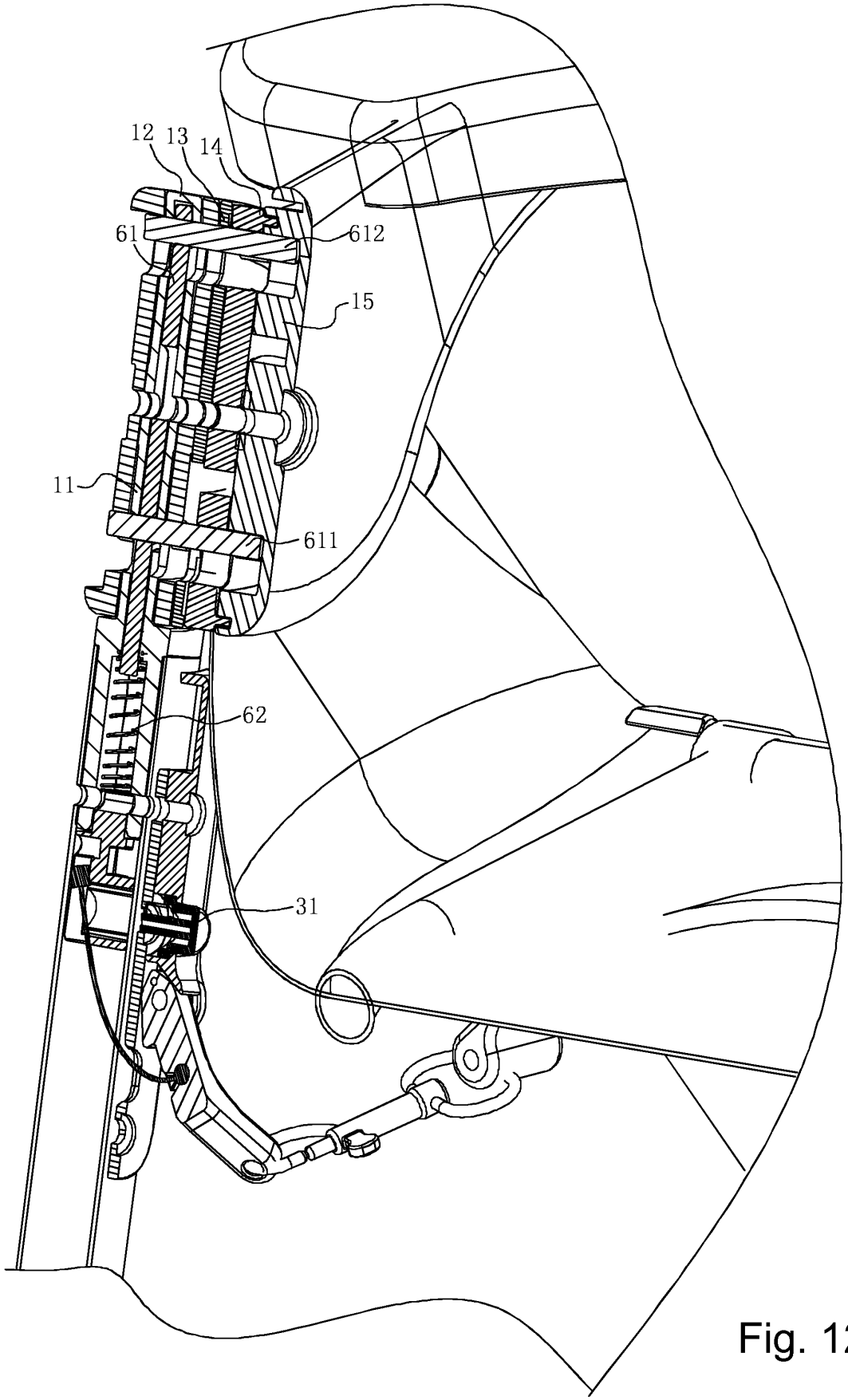

Fig. 12

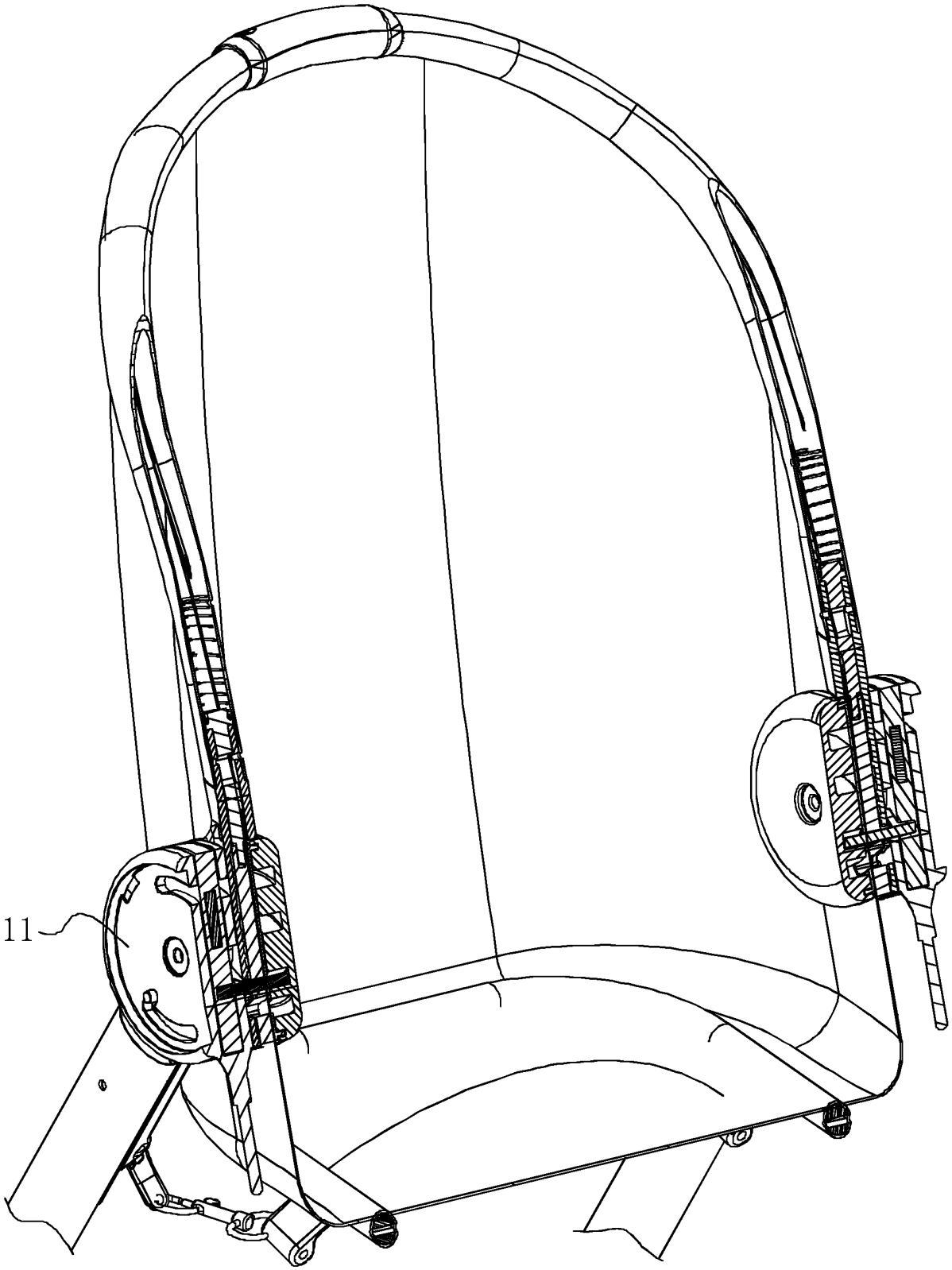

Fig. 13

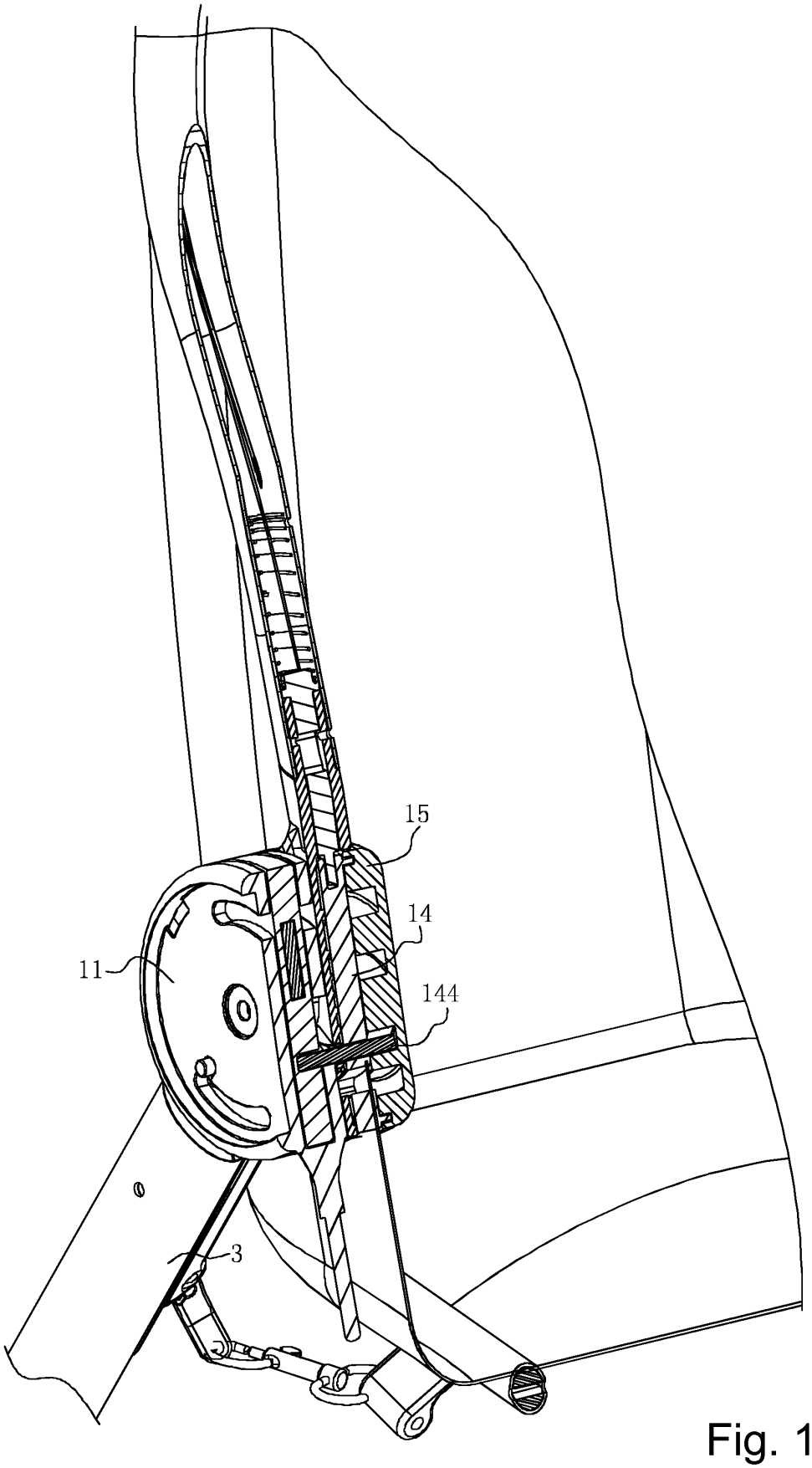

Fig. 14

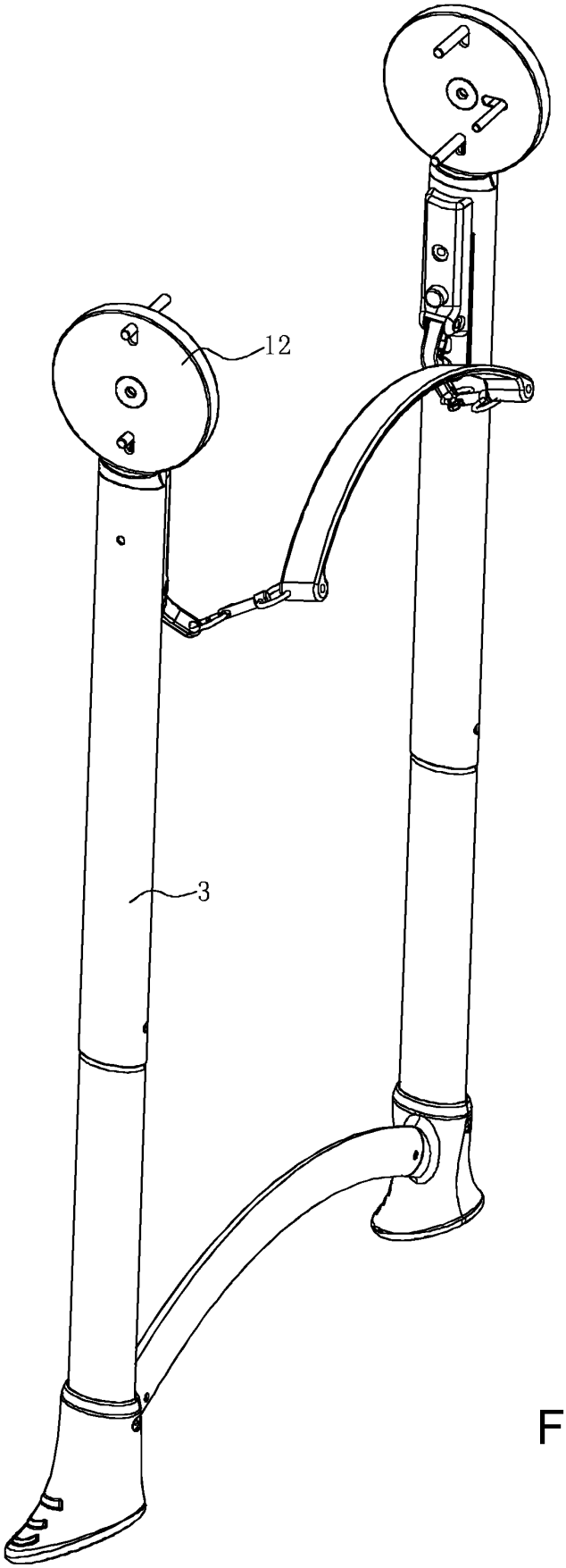

Fig. 15

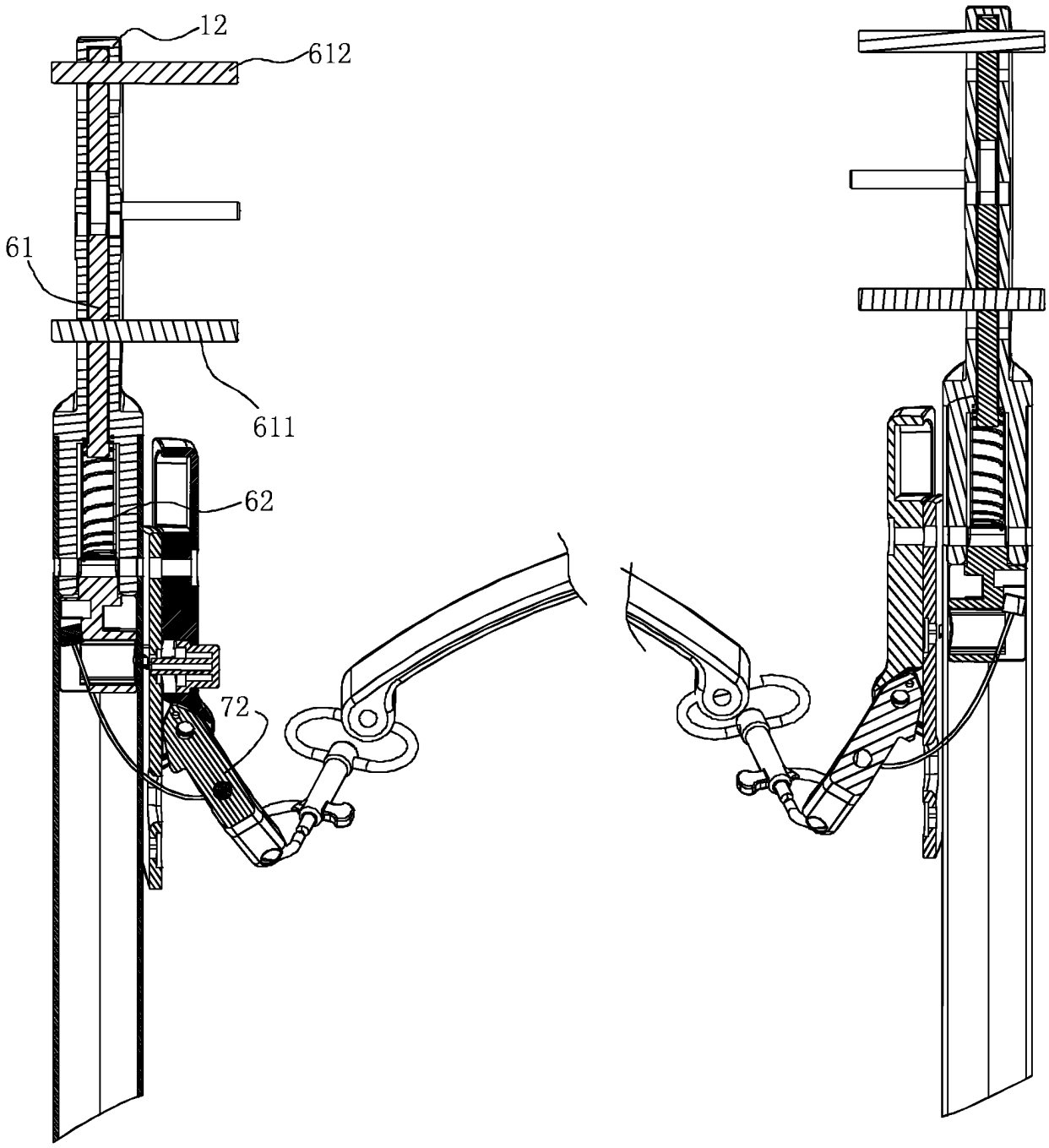

Fig. 16

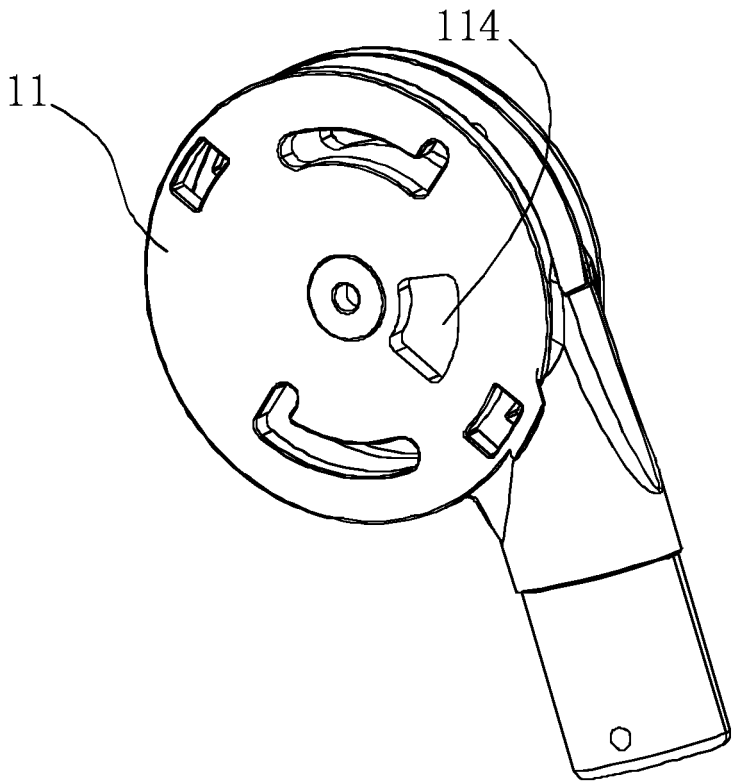

Fig. 17

REFERENCES CITED IN THE DESCRIPTION

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