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(54) **PRESS MOVABLE BRACKET**

(57) A press movable bracket comprises a body, the body comprises a mounting hole, an inner wall of the mounting hole comprises a notch, the press movable bracket further comprises a button, a transmission assembly, and an elastic member; the transmission assembly is rotatably connected to the body and comprises a pressing block; the elastic member is mounted between the transmission assembly and the body to enable the pressing block to be clamped to the notch; the button is connected to the transmission assembly and is configured to be pressed to enable the pressing block to be separated from the notch. With respect to the structure of the present disclosure, the operation is labour-saving, the motion is smooth, and the experience is good.

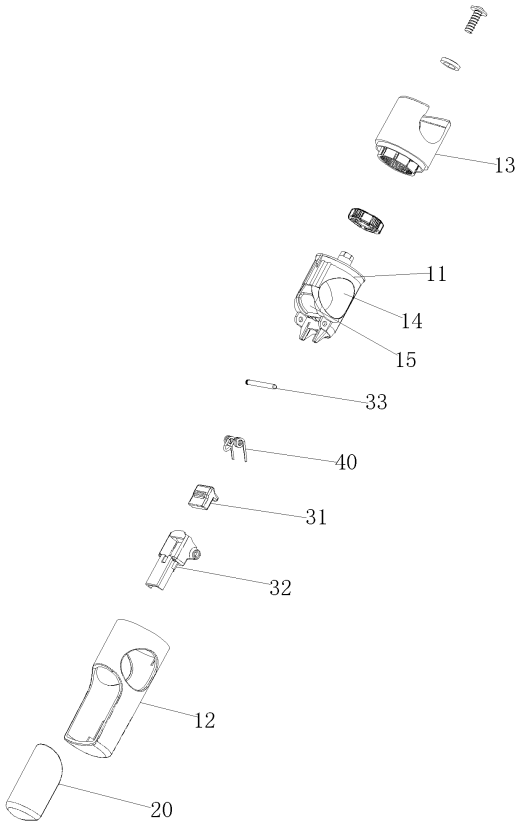


FIG. 2

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## Description

### FIELD OF THE DISCLOSURE

**[0001]** The present disclosure relates to a field of sanitary accessories, and in particular relates to a press movable bracket.

### BACKGROUND OF THE DISCLOSURE

**[0002]** In showers, a slide seat for fixing a shower is usually disposed on a lifting rod, the slide seat can slide along the lifting rod to adjust a height of the shower head and clasp the lifting rod by a pressing mechanism of the slide seat. At present, the pressing mechanism is generally a rotary type or a pressing type. With respect to the rotary type, the pressing mechanism rotates in a forward direction to be separated from the lifting rod, and the the pressing mechanism rotates in a backward direction to tightly press the the lifting rod, which is inconvenient. With respect to the pressing type, when a pressing button is pressed, a contact method between the press button and the pressing mechanism is surface-surface contact method, the hand feeling is heavier, the operation is laborious, and an abnormal sound is easily generated after long-time use.

### BRIEF SUMMARY OF THE DISCLOSURE

**[0003]** An objective of the present disclosure is to overcome deficiencies of a press slide seat having a laborious operation in existing techniques and to provide a press movable bracket having a labour-saving and smooth operation.

**[0004]** The present disclosure provides a following technical solution.

**[0005]** A press movable bracket comprises a body, the body comprises a mounting hole, an inner wall of the mounting hole comprises a notch, the press movable bracket further comprises a button, a transmission assembly, and an elastic member; the transmission assembly is rotatably connected to the body and comprises a pressing block; the elastic member is mounted between the transmission assembly and the body to enable the pressing block to be clamped to the notch; the button is connected to the transmission assembly and is configured to be pressed to enable the pressing block to be separated from the notch.

**[0006]** Preferably, the press moveable bracket is a moveable element or a slideable element or sliding element. Preferably, the press moveable bracket is pressure-actuated or released by exertion of pressure to become moveable or slideable. Therefore, preferably, the press moveable bracket is pressure-actuatable, i.e. it can be actuated by pressure or pressing, e.g. to become moveable or slideable. Preferably, the press moveable bracket is a bracket moveable by applying pressure. Preferably, the pressure is applied to the button of the press moveable bracket. Preferably, the press movable bracket is a sliding bracket which is configured to slide by pressing the button. Preferably, the press moveable bracket is in operation attached to, for instance, a rod to attach an element to the rod, wherein the element is attached to the press moveable bracket, and wherein the position of the element along the rod shall be adjustable. Preferably, the rod is a shower rail or rod and the element is a shower head of a hand-held shower, wherein the shower head shall be located or attached at different positions or heights on the shower rail or (lifting) rod.

**[0007]** In a preferred embodiment, the transmission assembly comprises a bracket, and the bracket is rotatably connected to the body through a pin; the elastic member is sleeved on the pin and is uncompressed to abut against a bottom of the bracket and the body.

**[0008]** In a preferred embodiment, the bracket comprises a mounting groove, an inner wall of the mounting groove comprises a through hole configured to be matched with the notch, and the pressing block is clamped to the mounting groove.

**[0009]** In a preferred embodiment, the bracket comprises a pressing portion, and the button is fixedly connected to the pressing portion.

**[0010]** In a preferred embodiment, the pressing block comprises a protrusion, and the bracket correspondingly comprises a block edge or a first groove.

**[0011]** In a preferred embodiment, a side of the pressing block facing the notch comprises an arc-shaped surface.

**[0012]** In a preferred embodiment, the button comprises a protruding block or a snap groove, and the transmission assembly correspondingly comprises a snap groove or a protruding block.

**[0013]** In a preferred embodiment, the button is connected to the transmission assembly through a snap buckle.

**[0014]** In a preferred embodiment, the body comprises an inner frame, a housing and a seat body; one end of the housing comprises an opening; the inner frame is fixedly mounted in the housing; the seat body is located at the one end of the housing comprising the opening and is fixedly connected to the inner frame, and the seat body comprises a second groove have openings.

**[0015]** In a preferred embodiment, a surface of the housing comprises a hole configured to be matched with the mounting hole and a third groove configured to be matched with the button.

**[0016]** Compared with the existing techniques, the technical solution has the following advantages.

1. The press movable bracket of the present disclosure adopts a cooperation of the button, the transmission assembly, and the elastic member. The elastic member drives the pressing block disposed on the transmission assembly to tightly press the rod body, the pressing block is separated from the rod body due to pressing the button, the operation is la-

bour-saving, the motion is smooth, and the experience is good.

2. The press movable bracket of the present disclosure in which the transmission assembly is rotatably connected to the body through the bracket and the pin, so that the button is disposed on the bracket, a transmission is performed using a lever principle, and the structure is simple and is easily achieved.

3. The press movable bracket of the present disclosure in which the mounting groove and the pressing portion are disposed on the bracket, so that the pressing block is clamped to the mounting groove, and the button is mounted on the pressing portion. The structure is compact, and the volume is small.

4. The press movable bracket of the present disclosure in which the button is connected to the pressing portion by the snap buckle, the protruding block and the snap groove are disposed for position limit, the assembly is convenient. The contact area disposed between the button and pressing portion is small to avoid generating an abnormal sound.

5. The press movable bracket of the present disclosure in which the body is disposed with the housing and comprises the groove for receiving the button, so that the button and the housing integrate to define a hidden button structure, the whole appearance is more beautiful.

## BRIEF DESCRIPTION OF THE DRAWINGS

**[0017]**

FIG. 1 illustrates a structural view of the present disclosure.

FIG. 2 illustrates an exploded view of the present disclosure.

FIG. 3 illustrates a view of compositions of a transmission assembly.

FIG. 4 illustrates a view of a cooperation between a button and a bracket.

FIG. 5 illustrates an internal structural view of the present disclosure.

FIG. 6 illustrates a view of an assembly of the bracket.

FIG. 7 illustrates a cross-sectional view of the present disclosure.

FIG. 8 illustrates a cross-sectional view of the present disclosure (when the button is downwardly pressed).

**[0018]** Wherein: the body 10, inner frame 11, connecting lug 11a, housing 12, seat body 13, mounting hole 14, notch 15, second groove 16 with openings, connecting column 17, button 20, snap buckle 21, protruding block 22, transmission assembly 30, pressing block 31, arc-shaped surface 31a, bracket 32, pin 33, mounting groove 34, pressing portion 35, protrusion 36, block edge 37, snap groove 38, elastic member 40, rod body 50.

## DETAILED DESCRIPTION OF THE EMBODIMENTS

**[0019]** The present disclosure will be further described below according to the detailed description of the embodiments.

**[0020]** Referring to FIGS. 1 to 8, a press movable bracket comprises a body 10 (e.g., a main body 10), a button 20, a transmission assembly 30 and an elastic member 40. The body 10 comprises a mounting hole 14, the mounting hole 14 is used to enable a rod body 50 to pass through, and an inner wall of the mounting hole 14 comprises a notch 15.

**[0021]** In detail, the body 10 comprises an inner frame 11, a housing 12, and a seat body 13. The housing 12 is a hollow structure with one end of which having an opening, a surface of the housing 12 comprises a hole configured to be matched with the mounting hole 14, the hole radially penetrates the housing 12, the housing 12 further comprises a third groove configured to be matched with the button 20, and the third groove is located at the other end of the housing 12.

**[0022]** The inner frame 11 is fixedly mounted in the housing 12, and one end of the inner frame 11 defines the mounting hole 14 and the notch 15 of the body 10. The other end of the inner frame 11 further comprises a connecting column 17, and the connecting column 17 is located at the one end of the housing 12 having the opening and is configured to be connected to the seat body 13. The seat body 13 can be fixedly connected to the connecting column 17 of the inner frame 11 through a screw, the seat body 13 further comprises a second groove 16 having openings, and the second groove 16 having the openings is used to enable a handle of a shower head to be clamped to.

**[0023]** The transmission assembly 30 is rotatably connected to the body 10 and comprises a pressing block 31, and the elastic member 40 is mounted between the transmission assembly 30 and the body 10 to enable the pressing block 31 to be clamped to the notch 15. The clamping is partial clamping so as to at least enable a surface of the pressing block 31 to be tightly attached to the rod body 50. In detail, the transmission assembly 30 further comprises a bracket 32, and the bracket 32 is rotatably connected to the inner frame 11 of the body 10 by a pin 33, wherein two sides of the notch 15 of the inner frame 11 are disposed with two connecting lugs 11a, a bottom of the bracket 32 comprises a through hole, and the pin 33 passes through the through hole and is fixedly connected between the two connecting lugs 11a.

**[0024]** One end of the bracket 32 comprises a mounting groove 34, and the other end of the bracket 32 comprises a pressing portion 35. An inner wall of a side of the mounting groove 34 adjacent to the mounting hole 14 comprises a through hole configured to be matched with the notch 15, and the pressing block 31 is clamped to the mounting groove 34. The housing 12 comprises a space used for a movement of the pressing portion 35. The elastic member 40 is sleeved on the pin 33 and is

uncompressed to abut against the bottom of the bracket 32 and the inner frame 11, and the elastic member 40 drives the pressing portion 35 of the bracket 32 to be in a tilted state and drives the pressing block 31 to be clamped to the notch 15. The elastic member 40 of the present disclosure can be a torsion spring or other suitable elastic member.

**[0025]** Further, in order to achieve position limit of the pressing block 31, a protrusion 36 protrudes from a top portion or a side portion of the pressing block 31, a side wall of the mounting groove 34 of the bracket 32 correspondingly comprises a block edge 37, and the protrusion 36 can abut against the block edge 37 to achieve the position limit. In practical application, an inner wall of the mounting groove 34 can comprises a first groove, and the protrusion 36 can be clamped to the first groove.

**[0026]** In addition, in order to better press the rod body 50, a side of the pressing block 31 facing the notch 15 can define an arc-shaped surface 31a to increase a contact area relative to the rod body 50 and to increase a resistance force.

**[0027]** The button 20 and the pressing portion 35 are fixedly connected together, the button 20 is pressed to enable the bracket 32 to rotate to drive the pressing block 31 to be separated from the notch 15. In detail, the button 20 and the bracket 32 are connected each other by a snap buckle 21, the snap buckle 21 can be disposed on an inner wall of the button 20, and the button 20 is clamped to a bottom edge of the pressing portion 35 through the snap buckle 21 to be fixed. In addition, a bottom surface of the button 20 can contact a top surface of the pressing block 31 to further fix the pressing block 31.

**[0028]** Furthermore, the button 20 can further comprises a protruding block 22, an inner side of the mounting groove 34 correspondingly comprises a snap groove 38, and the protruding block 22 is clamped to the snap groove 38 to achieve further position limit. In addition, the snap groove 38 can be in communication with the mounting groove 34 such that the protruding block 22 is located between the pressing block 31 and the inner wall of the mounting groove 34. If desired, the snap groove 38 can be disposed on the button 20, and the protruding block 22 can be disposed on the bracket 32.

**[0029]** When the present disclosure is assembled, the pressing block 31 is firstly assembled into the bracket 32, the elastic piece 40 is placed in the two connecting lugs 11a of the inner frame 11, and the bracket 32 is then assembled in to perform a connection through the pin 33; thereafter, the assembled components are assembled into the housing 12, and the button 20 is finally clamped to the pressing portion 35 of the bracket 32.

**[0030]** When the present disclosure is in use, referring to FIG. 8, the button 20 is firstly pressed, the pressing portion 35 is pressed downward, the bracket 32 rotates about the pin 33, the pressing block 31 is separated from the notch 15, so that the rod body 50 can be inserted into the mounting hole 14. Referring to FIG. 7, after the body 10 slides to be adjusted to a suitable position, the button 20 is released, the pressing block 31 resets and is clamped to the notch 15 to tightly press the rod body 50.

**[0031]** The invention may be summarized as follows: A press movable bracket comprises a body, the body comprises a mounting hole, an inner wall of the mounting hole comprises a notch, the press movable bracket further comprises a button, a transmission assembly, and an elastic member; the transmission assembly is rotatably connected to the body and comprises a pressing block; the elastic member is mounted between the transmission assembly and the body to enable the pressing block to be clamped to the notch; the button is connected to the transmission assembly and is configured to be pressed to enable the pressing block to be separated from the notch. With respect to the structure of the present disclosure, the operation is labour-saving, the motion is smooth, and the experience is good.

**[0032]** The aforementioned embodiments are merely some embodiments of the present disclosure, and the inventive concept of the present disclosure is not limited thereto. Thus, it is intended that the scope of the present disclosure will be infringed by substantive variations of the presently presented embodiments provided they are made without departing from the intensive concept of the present disclosure.

## Claims

1. A press movable bracket comprises a body, the body comprises a mounting hole, an inner wall of the mounting hole comprises a notch, **characterized in that**: the press movable bracket further comprises a button, a transmission assembly, and an elastic member; the transmission assembly is rotatably connected to the body and comprises a pressing block; the elastic member is mounted between the transmission assembly and the body to enable the pressing block to be clamped to the notch; the button is connected to the transmission assembly and is configured to be pressed to enable the pressing block to be separated from the notch.

2. The press movable bracket according to claim 1, **characterized in that**: the transmission assembly comprises a bracket, and the bracket is rotatably connected to the body through a pin; the elastic member is sleeved on the pin and is uncompressed to abut against a bottom of the bracket and the body.

3. The press movable bracket according to claim 2, **characterized in that**: the bracket comprises a mounting groove, an inner wall of the mounting groove comprises a through hole configured to be matched with the notch, and the pressing block is clamped to the mounting groove.

4. The press movable bracket according to claim 2 and/or 3, **characterized in that**: the bracket comprises a pressing portion, and the button is fixedly connected to the pressing portion.

5. The press movable bracket according to any one or more of claims 2 to 4, **characterized in that**: the pressing block comprises a protrusion, and the bracket correspondingly comprises a block edge or a first groove.

6. The press movable bracket according to any one or more of claims 1 to 5, **characterized in that**: a side of the pressing block facing the notch comprises an arc-shaped surface.

7. The press movable bracket according to any one or more of claims 1 to 6, **characterized in that**: the button comprises a protruding block or a snap groove, and the transmission assembly correspondingly comprises a snap groove or a protruding block.

8. The press movable bracket according to any one or more of claims 1 to 7, **characterized in that**: the button is connected to the transmission assembly through a snap buckle.

9. The press movable bracket according to any one or more of claims 1 to 8, **characterized in that**: the body comprises an inner frame, a housing and a seat body; one end of the housing comprises an opening; the inner frame is fixedly mounted in the housing; the seat body is located at the one end of the housing comprising the opening and is fixedly connected to the inner frame, and the seat body comprises a second groove have openings.

10. The press movable bracket according to claim 9, **characterized in that**: a surface of the housing comprises a hole configured to be matched with the mounting hole and a third groove configured to be matched with the button.

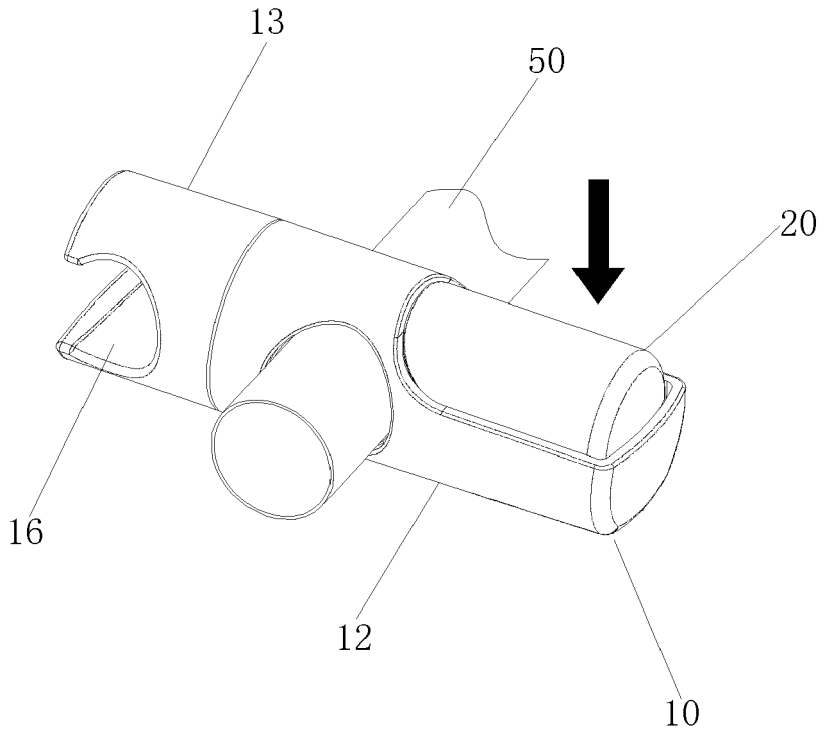


FIG. 1

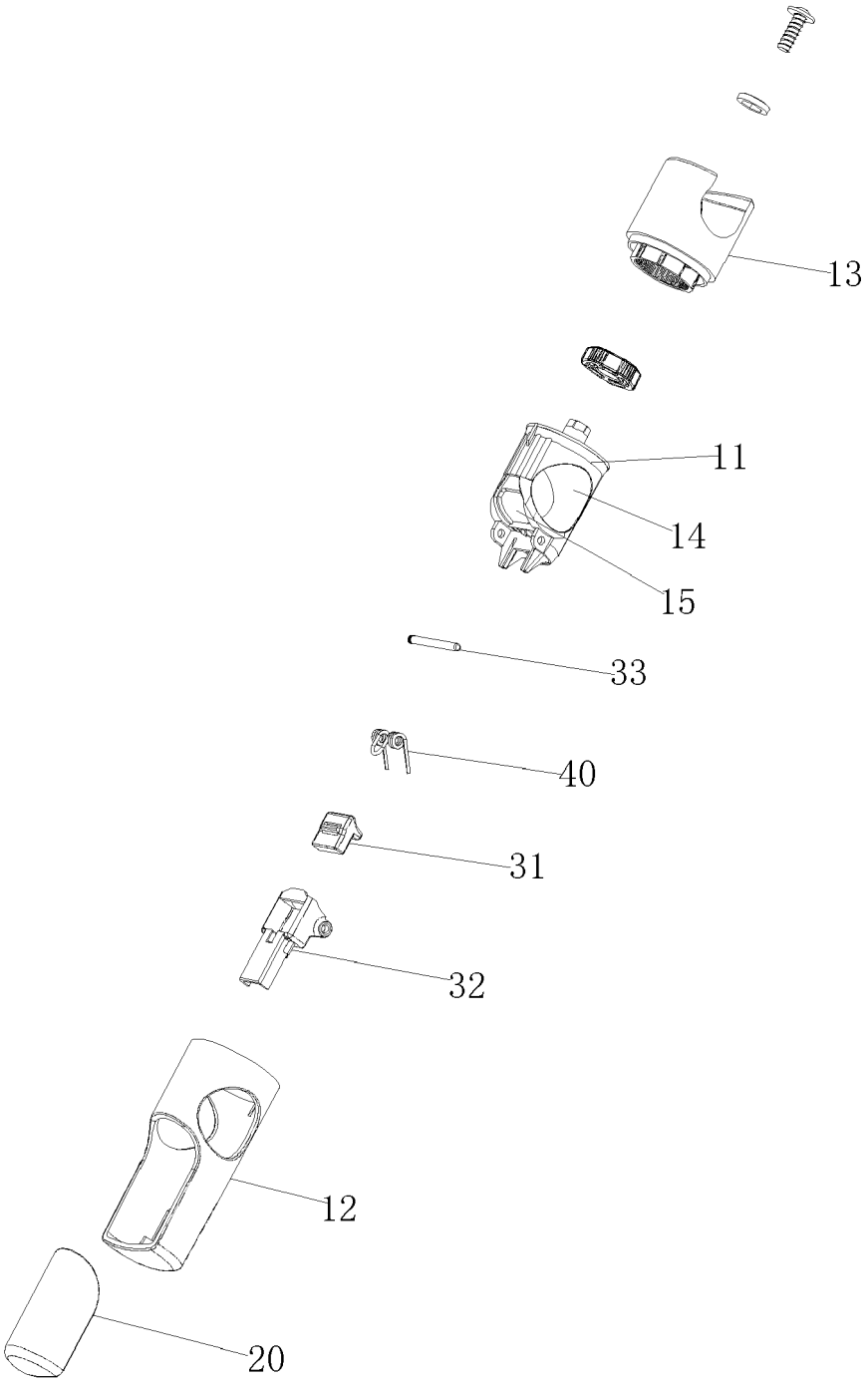


FIG. 2

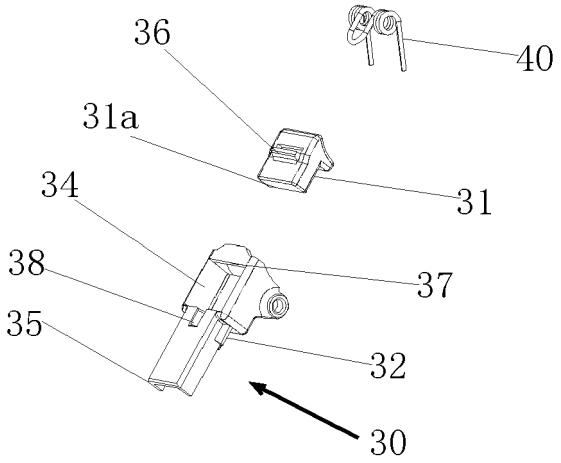


FIG. 3

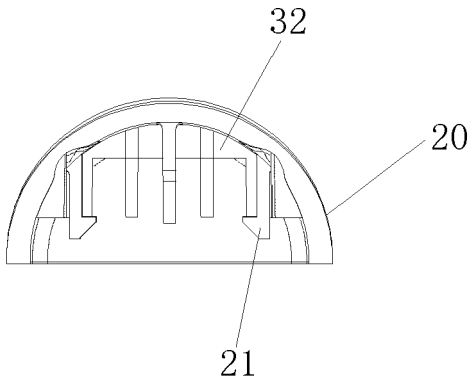


FIG. 4

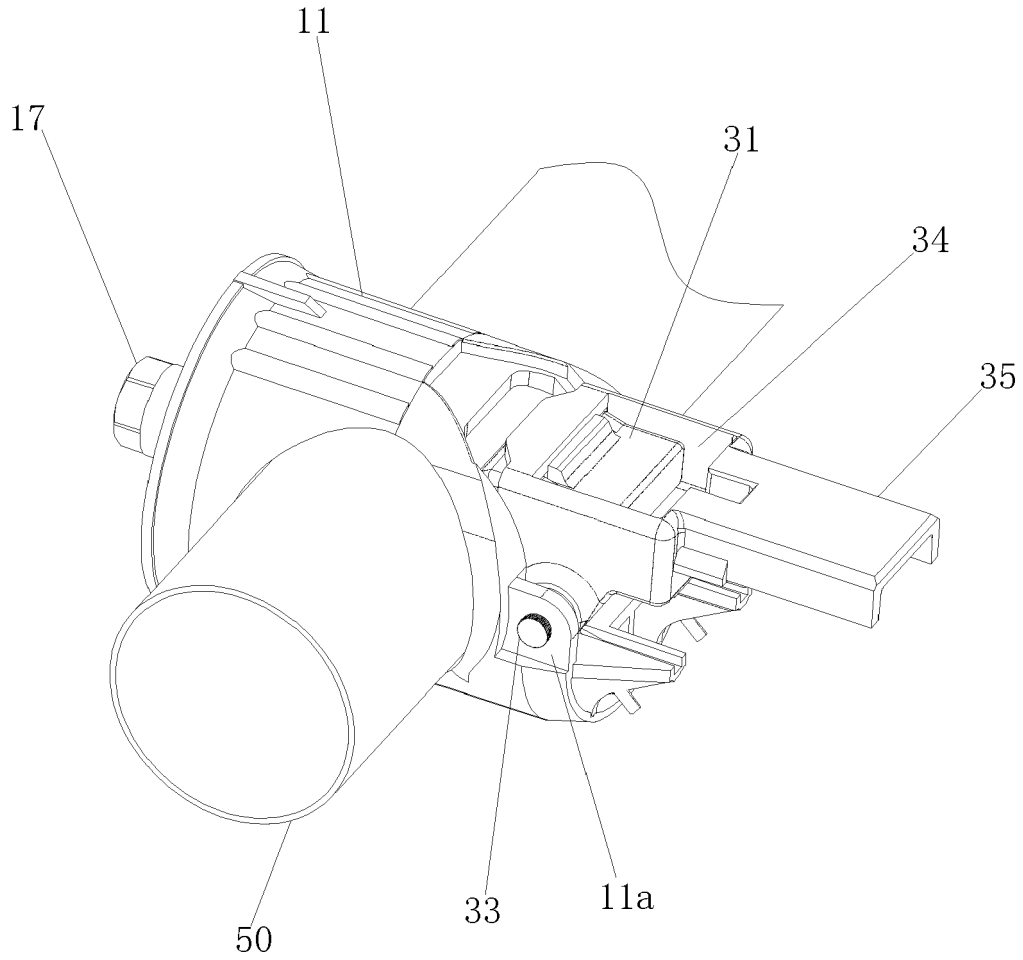


FIG. 5

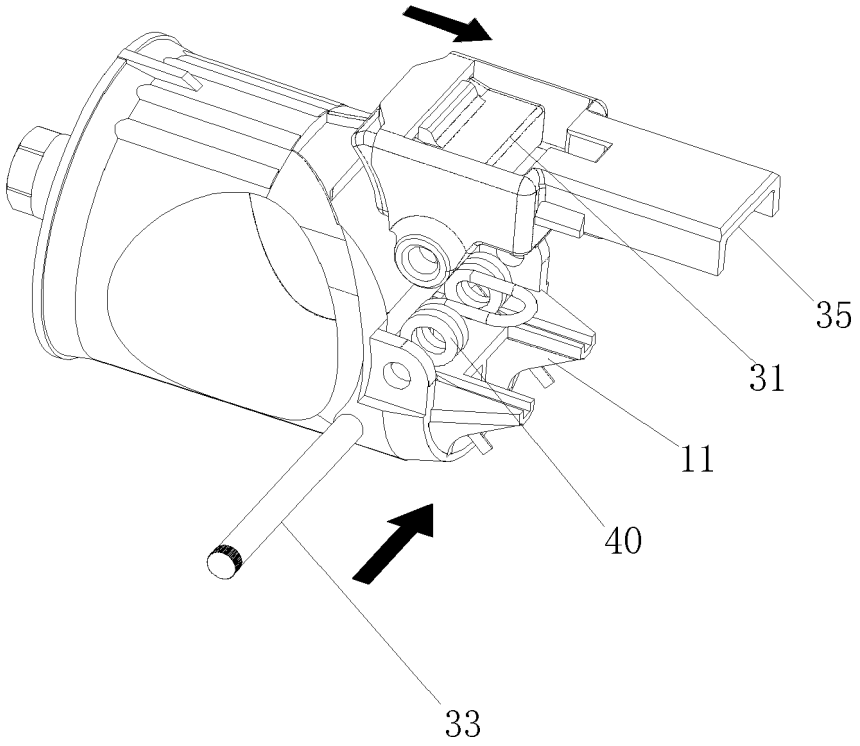


FIG. 6

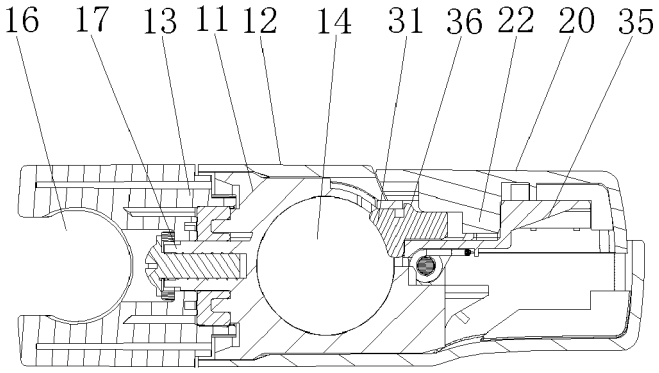


FIG. 7

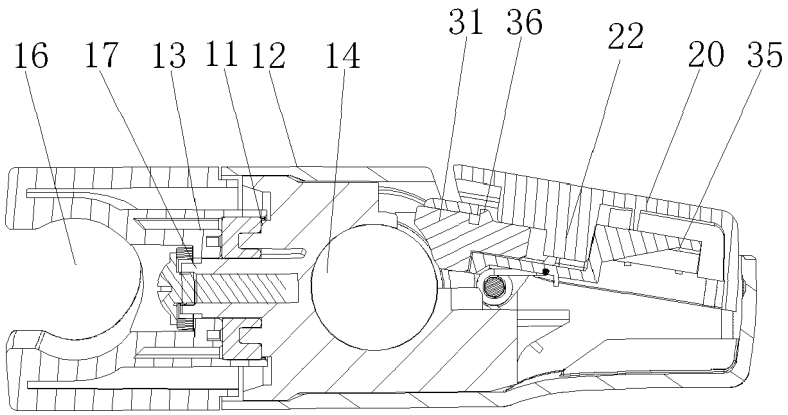


FIG. 8

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# EUROPEAN SEARCH REPORT

Application Number
EP 22 15 0803

## DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document with indication, where appropriate, of relevant passages | Relevant to claim | CLASSIFICATION OF THE APPLICATION (IPC) |
|---|---|---|---|
| X | CN 211 937 576 U (FUJIAN XIHE SANITARY WARE TECH CO LTD)<br>17 November 2020 (2020-11-17)<br>* figures 1-8 *<br>----- | 1-10 | INV.<br>E03C1/06 |

TECHNICAL FIELDS SEARCHED (IPC)

E03C

1 The present search report has been drawn up for all claims

| Place of search | Date of completion of the search | Examiner |
|---|---|---|
| The Hague | 10 March 2022 | Zuurveld, Gerben |

CATEGORY OF CITED DOCUMENTS

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10-03-2022

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|---|---|---|---|
| CN 211937576 U | 17-11-2020 | NONE | |

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