

(19)



(11)

EP 4 230 815 B1

(12)

EUROPEAN PATENT SPECIFICATION

(45) Date of publication and mention of the grant of the patent:
02.07.2025 Bulletin 2025/27

(21) Application number: **21881456.4**

(22) Date of filing: **03.02.2021**

(51) International Patent Classification (IPC):
E03D 1/00 (2006.01) E03D 1/012 (2006.01)

(52) Cooperative Patent Classification (CPC):
E03D 1/0125

(86) International application number:
PCT/CN2021/074982

(87) International publication number:
WO 2022/083030 (28.04.2022 Gazette 2022/17)

(54) **HIDDEN WATER TANK THAT IMPROVES DISASSEMBLY AND ASSEMBLY OF INTERNAL ASSEMBLIES**

UNTERPUTZ-SPÜLKASTEN ZUR VERBESSERUNG DER DEMONTAGE UND MONTAGE VON INTERNEN ANORDNUNGEN

RÉSERVOIR DE CHASSE D'EAU ENCASTRÉ AMÉLIORANT LE DÉMONTAGE ET L'ASSEMBLAGE D'ENSEMBLES INTERNES

(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

(30) Priority: **20.10.2020 CN 202011121425**

(43) Date of publication of application:
23.08.2023 Bulletin 2023/34

(73) Proprietor: **Xiamen R&J Precision Technology Co., Ltd.**
Xiamen, Fujian 361028 (CN)

(72) Inventor: **WEI, Wu**
Xiamen, Fujian 361026 (CN)

(74) Representative: **Ipside**
7-9 Allée Haussmann
33300 Bordeaux Cedex (FR)

(56) References cited:
EP-A1- 2 336 435 EP-A2- 0 563 870
EP-B1- 0 933 481 CN-A- 105 544 671
CN-A- 112 112 230 CN-U- 202 850 152
CN-U- 204 849 969 CN-U- 205 369 437
CN-U- 209 221 615 CN-U- 211 312 730
DE-A1- 1 709 501 DE-A1- 102008 026 843
DE-A1- 102016 011 937

Note: Within nine months of the publication of the mention of the grant of the European patent in the European Patent Bulletin, any person may give notice to the European Patent Office of opposition to that patent, in accordance with the Implementing Regulations. Notice of opposition shall not be deemed to have been filed until the opposition fee has been paid. (Art. 99(1) European Patent Convention).

Description

Technical Field

[0001] The present invention relates to the field of toilet fittings, in particular to a hidden water tank that improves disassembly and assembly of internal assemblies.

Background Art

[0002] In order to save an occupied space of a building, the overall volume of a water tank of a toilet tends to be smaller and smaller. As shown in a hidden water tank with a detergent storage box, which is disclosed in Chinese utility model patent application no. 201820239651. X, a water tank is provided with a mounting seat fixedly protruding to a mounting window, and a cover plate (i.e. a panel) covers the mounting window and is fixedly connected to the mounting seat. However, with the diversification of product functions, there are more and more assemblies to be replaced and repaired inside the water tank, such as water inlet/outlet valves, intelligent modules, etc. The disassembly and assembly operations of the above assemblies bring troubles to a small-volume water tank structure and make it difficult to disassemble and assemble. Document EP0933481 B gives an example of a device for fastening an actuating element to a flush-mounted cistern, having at least one spacer bolt which engages in an opening of a holding element and has an external toothing which engages with an internal toothing of the said opening. However, more sophisticated mechanisms for facilitating assembly and disassembly of internal assemblies are still needed.

Summary of the Invention

[0003] To this end, the present invention provides a hidden water tank for improving disassembly and assembly of internal assemblies to effectively solve the above problems.

[0004] In order to achieve the above objective, the present invention provides the following technical solution:

a hidden water tank for improving disassembly and assembly of internal assemblies, the hidden water tank comprising a water tank body provided with a mounting window, and at least one mounting seat positioned at an edge of the mounting window and used for assembling a connecting panel, wherein the mounting seat is movably connected and arranged on the water tank body, and by means of the movement of the mounting seat, the mounting seat can be switched between a first positioning state in which the mounting seat protrudes in a direction toward the center of the mounting window and a second positioning state in which the mounting seat retracts toward the edge of the mounting window.

[0005] The hidden water tank of the invention is particular in that the arrangement of movable connection of

the mounting seat is a hinged arrangement or a slidable connection.

[0006] When the mounting seat is a hinged arrangement, further preferably, a plane where the mounting window is located is defined as a first plane, an axial direction of a hinge shaft connecting the mounting seat and the water tank body is perpendicular to the first plane, and the mounting seat swings on a parallel plane parallel to the first plane and can be switched between the first positioning state and the second positioning state.

[0007] Still more further preferably, the mounting seat is arranged on an inner wall surface of the water tank body.

[0008] More further preferably, the inner wall surface of the water tank body is further provided with a stop portion in a protruding manner.

[0009] Further preferably, a plane where the mounting window is located is defined as a first plane, an axial direction of a hinge shaft connecting the mounting seat and the water tank body is parallel to the first plane, and the mounting seat swings on a perpendicular plane perpendicular to the first plane and can be switched between a first positioning state and a second positioning state.

[0010] More further preferably, a fixed seat is fixedly connected to the inner wall surface of the water tank body, and the mounting seat is hinged to the fixed seat.

[0011] When the mounting seat is a slidable arrangement, further preferably, the inner wall surface of the water tank body is provided with a slide groove, and the mounting seat is slidably fitted to the slide groove in the inner wall surface of the water tank body.

[0012] Further preferably, the mounting seat is provided with a mounting hole.

[0013] With the technical solution of the present invention, the beneficial effects are as follows.

[0014] The mounting window is enabled to have a larger mounting area by means of a second positioning state of retracting to the edge of the mounting window, and the mounting window can be assembled and connected to the connecting panel by means of a first positioning state of protruding in a direction toward the center of the mounting window. Without changing the size of original components (such as the size of the mounting window, the connecting panel, etc.), by means of a movably arranged mounting seat, the requirements of disassembling and assembling internal assemblies can be met, thereby effectively solving the problem that it is difficult to disassemble and assemble the internal assemblies in a small-sized water tank structure in the prior art, and achieving a simple structure and being easy to implement.

Brief Description of the Drawings

[0015]

Fig. 1 is a schematic structural diagram of a hidden water tank of embodiment I in a first positioning state;

Fig. 2 is a partial schematic structural diagram of the hidden water tank of embodiment I in a second positioning state;

Fig. 3 is a partial schematic structural diagram of a hidden water tank of embodiment II in a first positioning state;

Fig. 4 is a partial schematic structural diagram of the hidden water tank of embodiment II in a second positioning state;

Fig. 5 is a partial schematic structural diagram of a hidden water tank of embodiment III in a first positioning state; and

Fig. 6 is a partial schematic structural diagram of the hidden water tank of embodiment III in a second positioning state.

Detailed Description of Embodiments

[0016] The present invention provides drawings to further illustrate the various embodiments. The drawings, which are part of the disclosure of the present invention, are mainly used to illustrate the embodiments and can explain the operation principle of the embodiments together with the relevant explanation in the description. With reference to these contents, a person of ordinary skill in the art should be able to understand the advantages of the present invention. Assemblies in the drawings are not drawn to scale, and like reference numerals are usually used to indicate like assemblies.

[0017] The present invention will now be further described with reference to the drawings and particular embodiments.

[0018] In the following embodiments, the term "outward" or "inward" is defined relative to the position of a mounting window, "outward" refers to a direction in which a water tank body faces the mounting window, and "inward" refers to a direction in which the mounting window faces the water tank body. The term "forward" refers to a direction in which an inner side wall of the water tank body faces an outer wall surface of the water tank body, and the term "backward" refers to a direction in which the outer wall surface of the water tank body faces the inner side wall of the water tank body. The terms "upward" and "downward" refer to a vertical direction of the water tank in an assembled state.

Embodiment I

[0019] Referring to Figs. 1 and 2, this embodiment provides a hidden water tank that improves disassembly and assembly of internal assemblies, the hidden water tank comprising a water tank body 10 and a mounting seat 30 for a connecting panel (not shown), wherein the water tank body 10 is provided with a mounting window 20, and a plane where the mounting window 20 is located is defined as a first plane. Specifically, when the water tank is assembled, the mounting window 20 is a vertical window, that is, the first plane is a vertical plane. The

mounting seat 30 is movably arranged on the water tank body 10, specifically, the mounting seat 30 is hinged on the water tank body 10, and more specifically, an axial direction of a hinge shaft (not shown) connecting the mounting seat 30 and the water tank body 10 is perpendicular to the first plane. The mounting seat 30 swings on a parallel plane (also being a vertical plane) parallel to the first plane and can be switched between a first positioning state (as shown in Fig. 1) in which the mounting seat protrudes in a direction toward the center of the mounting window 20 and a second positioning state (as shown in Fig. 2) in which the mounting seat retracts toward an edge of the mounting window.

[0020] When it is necessary to assemble or disassemble an assembly such as a water inlet valve into or from the water tank body 10, in the state of Fig. 1, the mounting seat 30 is toggled, so that the mounting seat 30 swings downward to the second positioning state in which the mounting seat retracts to the edge of the mounting window, as shown in Fig. 2, thus the effective area of the mounting window 20 for the access of the assembly can be increased. In this specific embodiment, the mounting seat 30 can swing to be completely hidden in the water tank body 10, which does not affect the access of the assembly at all. After the operation is completed, the mounting seat 30 is toggled to swing upward, and the mounting seat 30 is switched to the first positioning state in which the mounting seat protrudes in a direction toward the center of the mounting window 20, thus realizing a normal fixed assembly with the connecting panel. Without changing the size of original components (such as the size of the mounting window 20, the connecting panel, etc.), the problem that it is difficult to disassemble and assemble the internal assemblies in a small-sized water tank structure in the prior art can be effectively solved, and the structure is simple and easy to implement.

[0021] Further preferably, in this embodiment, the mounting seat 30 is arranged on an inner wall surface of the water tank body 10, thus it can give way to the mounting of the connecting panel, so that the connecting panel can be better attached to an outer wall surface of the water tank body 10, and the assembly is more stable and simpler. Of course, in other embodiments, the mounting seat 30 can also be arranged on the outer wall surface of the water tank body 10, etc. When the mounting seat 30 is arranged on the outer wall surface of the water tank body 10, the mounting seat 30 itself protrudes from the outer wall surface of the water tank body 10. In order to allow the connecting panel to be attached to the outer wall surface of the water tank body 10, a clearance groove can be arranged at a position of the connecting panel corresponding to the mounting seat 30. When covered, the mounting seat 30 is accommodated in the clearance groove, and other positions of the connecting panel can be well attached to the outer wall surface of the water tank body 10.

[0022] Further preferably, in this embodiment, the inner wall surface of the water tank body 10 is further

provided with a stop portion 11 in a protruding manner. When the mounting seat 30 swings to be perpendicular to an outer edge of the mounting window 20, it indicates that the mounting seat moves to a position for the connecting panel, and at this time, the mounting seat is stopped and limited by the stop portion 11 to realize positioning. That is, in this specific embodiment, the mounting seat 30 swings in a lower semicircle (i.e., a lower half of a circle), and the stop portion 11 is located above the mounting seat 30. When the mounting seat 30 swings upward to a position for assembly, the mounting seat is stopped by the stop portion 11, which limits the mounting seat from continuing to swing upward, so that the mounting seat 30 can be quickly positioned and the operation is simpler. Of course, in other embodiments, if the mounting seat 30 swings in an upper semicircle (i.e., an upper half of a circle), the stop portion 11 is located below the mounting seat 30 correspondingly. When the mounting seat 30 swings downward to a position for assembly, the mounting seat is stopped by the stop portion 11, which limits the mounting seat from continuing to swing downward. Alternatively, there is no need for the limit of the stop portion 11, and so on.

[0023] Further, the movable arrangement of the mounting seat 30 enables the mounting seat 30 to realize a fine adjustment in its movable direction, so as to be better aligned with a mounting structure of the connecting panel.

[0024] Further preferably, in this embodiment, the mounting seat 30 is provided with a mounting hole 301, specifically a screw hole, and the mounting seat is fixedly assembled to the connecting panel by means of the mounting hole 301. Specifically, the connecting panel is also provided with a mounting hole, and then a bolt is used to pass through the mounting hole in the connecting panel and the mounting hole 301 of the mounting seat 30 in sequence for screw connection and fixation. Of course, in other embodiments, the mounting structure on the mounting seat 30 can also be replaced by other structures, such as clamping grooves, hook and loop fasteners, etc., as long as it can be mounted to and match the structure on the connecting panel.

Embodiment II

[0025] This embodiment provides a hidden water tank that improves disassembly and assembly of internal assemblies, the structure of which is substantially the same as the structure of embodiment I except in that referring to Figs. 3 and 4, in this embodiment, an axial direction of a hinge shaft 13 connecting the mounting seat 30 and the water tank body 10 is parallel to the first plane, and the mounting seat 30 swings (i.e., swings back and forth) on a perpendicular plane perpendicular to the first plane to be switched between a first positioning state (as shown in Fig. 3) and a second positioning state (as shown in Fig. 4).

[0026] As in this specific embodiment, when it is ne-

cessary to assemble or disassemble an assembly such as a water inlet valve into or from the water tank body 10, in the first positioning state shown in Fig. 3, the mounting seat 30 is toggled forward, so that the mounting seat 30 swings forward to be switched to the second positioning state in which the mounting seat retracts to the edge of the mounting window, as shown in Fig. 4, thus the effective area of the mounting window 30 for the access of the assembly can be increased and the operation is convenient. After the disassembly and assembly operations of the internal assemblies are completed, in the second positioning state shown in Fig. 4, the mounting seat 30 is toggled backward, so that the mounting seat 30 swings backward to the first positioning state in which the mounting seat protrudes in a direction toward the center of the mounting window, as shown in Fig. 3, thus realizing a normal fixed assembly of the connecting panel and the mounting seat 30.

[0027] More further preferably, in this embodiment, a fixed seat 12 is fixedly connected to the inner wall surface of the water tank body 10, and the mounting seat 30 is hinged to the fixed seat 12, that is, the water tank body 10 is hinged to the mounting seat 30 by means of the fixed seat 12 arranged on the water tank body. With such an arrangement, when the mounting seat 30 is in the first positioning state, as shown in Fig. 3, the mounting seat does not interfere with the mounting of the connecting panel, so that the connecting panel can be well attached to the outer wall surface of the water tank body 10.

[0028] More specifically, a U-shaped opening (not indicated) with an outward opening is formed at an outer end of the fixed seat 12, a hinge projection 31 of the mounting seat 30 extends into the U-shaped opening, and a hinged assembly of the U-shaped opening and the hinge projection 31 is realized by means of the hinge shaft 13. That is, the hinge shaft 13 passes through the hinge projection 31, and two ends of the hinge shaft are fixed on two side walls of the U-shaped opening, so as to realize the hinged assembly of the mounting seat 30 and the fixed seat 12. Meanwhile, the hinge projection 31 of the mounting seat 30 also extends inward to a position where the hinge projection can overlap with the inner wall surface of the water tank body 10. When the mounting seat 30 is toggled backward from the second positioning state shown in Fig. 4 to the first positioning state shown in Fig. 3, the hinge projection 31 of the mounting seat 30 can abut against the inner wall surface of the water tank body 10, thereby limiting the mounting seat 30 from continuing to turn backward, and realizing rapid positioning. Of course, in other embodiments, the configuration of the structure and position of the mounting seat 30 may not be limited to this. For example, the mounting seat 30 may also be directly hinged on a side wall of the water tank body 10 surrounding the mounting window 20 or hinged on the outer wall surface of the water tank body 10.

Embodiment III

[0029] This embodiment provides a hidden water tank that improves disassembly and assembly of internal assemblies, the structure of which is substantially the same as the structure of embodiment I except in that referring to Figs. 5 and 6, in this embodiment, the mounting seat 30 is slidably arranged on the water tank body 10, so that the mounting seat 30 can slide and protrude in a direction toward the center of the mounting window 20 by sliding relative to the water tank body 10 to reach a first positioning state (as shown in Fig. 5); and the mounting seat can slide and retract to the edge of the mounting window 20 to reach a second positioning state (as shown in Fig. 6). Switching between the first positioning state and the second positioning state is realized.

[0030] When it is necessary to assemble or disassemble an assembly such as a water inlet valve into or from the water tank body 10, in the first positioning state shown in Fig. 5, the mounting seat 30 is pressed, so that the mounting seat 30 slides and retracts to the edge of the mounting window 20 to reach the second positioning state shown in Fig. 6, thus the effective area of the mounting window 20 for the access of the assembly can be increased and the operation is convenient. After the disassembly and assembly operations of the internal assemblies are completed, the mounting seat 30 can be pulled out in a direction toward the center of the mounting window 20, which is simple to operate.

[0031] Further preferably, in this embodiment, the sliding direction of the mounting seat 30 is arranged perpendicular to the side wall of the mounting window 20. Of course, in other embodiments, it can also be tilted at a certain angle, as long as the switching between the first positioning state and the second positioning state can be ensured.

[0032] Further preferably, the inner wall surface of the water tank body 10 is provided with a slide groove (not shown), and the mounting seat 30 is slidably fitted to the slide groove in the inner wall surface of the water tank body 10, thereby realizing a slidable assembly. Moreover, the mounting seat 30 is arranged on the inner wall surface of the water tank body 10, which can give way to the mounting of the connecting panel, so that the connecting panel can be well attached to the outer wall surface of the water tank body 10. Of course, in other embodiments, the slidable assembly structure and arrangement position of the mounting seat 30 are not limited to this.

[0033] Further, the movable arrangement of the mounting seat 30 enables the mounting seat 30 to realize a fine adjustment in its movable direction, so as to be better aligned with a mounting structure of the connecting panel.

[0034] Specifically, two mounting seats 30 are provided on the water tank body 10, that is, the mounting seats are respectively arranged on outer edges of two opposite sides of the mounting window 20, such as left

and right outer edges in Fig. 1, so as to realize the fixed assembly with the connecting panel. Of course, in other embodiments, the number of the mounting seats 30 is not limited to this, and more mounting seats, such as four mounting seats can be provided, that is, the mounting seats 30 are provided on upper, lower, left and right outer edges of the mounting window 20. One mounting seat can also be provided. When one mounting seat is provided, the water tank body 10 can be provided with a structure different from the mounting seat 30, such as a slot. One end of the connecting panel is connected by an insertion fit with the slot, and the other end is mounted by a connection to the mounting seat 30.

Claims

1. A hidden water tank for improving disassembly and assembly of internal assemblies, the hidden water tank comprising a water tank body (10) provided with a mounting window (20), and at least one mounting seat (30) positioned at an edge of the mounting window (20) and used for assembling a connecting panel, wherein

the mounting seat (30) is movably connected and arranged on the water tank body (10), and by means of this arrangement of movable connection

of the mounting seat (30), the mounting seat (30) can be switched between a first positioning state in which the mounting seat (30) protrudes in a direction toward the center of the mounting window (20) and a second positioning state in which the mounting seat (30) retracts toward the edge of the mounting window (20),

characterised in that

the arrangement of movable connection of the mounting seat (30) is a hinged arrangement or a slidable arrangement.

2. The hidden water tank for improving disassembly and assembly of internal assemblies according to claim 1, wherein the arrangement of movable connection of the mounting seat (30) is the hinged arrangement, **characterized in that** a plane where the mounting window (20) is located is defined as a first plane, whereby the hinged arrangement comprises a hinge shaft, wherein the axial direction of the hinge shaft connecting the mounting seat and the water tank body (10) is perpendicular to the first plane, and the mounting seat (30) swings on a parallel plane parallel to the first plane and can be switched between the first positioning state and the second positioning state.
3. The hidden water tank for improving disassembly and assembly of internal assemblies according to

claim 2, **characterized in that** the mounting seat (30) is arranged on an inner wall surface of the water tank body (10).

4. The hidden water tank for improving disassembly and assembly of internal assemblies according to claim 3, **characterized in that** the inner wall surface of the water tank body (10) is further provided with a stop portion (11) in a protruding manner.
5. The hidden water tank for improving disassembly and assembly of internal assemblies according to claim 1, wherein the arrangement of movable connection of the mounting seat (30) is the hinged arrangement, **characterized in that** a plane where the mounting window (20) is located is defined as a first plane, wherein the hinged arrangement comprises a hinge shaft, and the axial direction of the hinge shaft connecting the mounting seat (30) and the water tank body (10) is parallel to the first plane, and the mounting seat (30) swings on a perpendicular plane perpendicular to the first plane and can be switched between the first positioning state and the second positioning state.
6. The hidden water tank that improves disassembly and assembly of internal assemblies according to claim 5, **characterized in that** a fixed seat is fixedly connected to an inner wall surface of the water tank body (10), and the mounting seat (30) is hinged to the fixed seat.
7. The hidden water tank for improving disassembly and assembly of internal assemblies according to claim 1, wherein the arrangement of movable connection of the mounting seat (30) is the slidable arrangement, **characterized in that** an inner wall surface of the water tank body (10) is provided with a slide groove, and the mounting seat (30) is slidably fitted to the slide groove in the inner wall surface of the water tank body (10).

Patentansprüche

1. Verborgener Wassertank zum Verbessern des Aus- und Einbaus von inneren Baugruppen, wobei der Verborgene Wassertank einen Wassertankkörper (10), der mit einem Montagefenster (20) versehen ist, und mindestens einen Montagesitz (30) umfasst, der an einem Rand des Montagefensters (20) positioniert ist und zum Einbauen einer Verbindungsplatte verwendet wird, wobei

der Montagesitz (30) beweglich verbunden und am Wassertankkörper (10) angeordnet ist, und mittels dieser Anordnung zur beweglichen Verbindung des Montagesitzes (30) der Montage-

sitz (30) zwischen einem ersten Positionierungszustand, in dem der Montagesitz (30) in einer Richtung zur Mitte des Montagefensters (20) hin vorspringt, und einem zweiten Positionierungszustand, in dem sich der Montagesitz (30) zum Rand des Montagefensters (20) zurückzieht, umgeschaltet werden kann, **dadurch gekennzeichnet, dass** die Anordnung zur beweglichen Verbindung des Montagesitzes (30) eine angelenkte Anordnung oder eine verschiebbare Anordnung ist.

2. Verborgener Wassertank zum Verbessern des Aus- und Einbaus von inneren Baugruppen nach Anspruch 1, wobei die Anordnung zur beweglichen Verbindung des Montagesitzes (30) die angelenkte Anordnung ist, **dadurch gekennzeichnet, dass** eine Ebene, in der sich das Montagefenster (20) befindet, als erste Ebene definiert ist, wobei die angelenkte Anordnung eine Gelenkwelle umfasst, wobei die Axialrichtung der Gelenkwelle, die den Montagesitz und den Wassertankkörper (10) verbindet, senkrecht zur ersten Ebene ist, und der Montagesitz (30) in einer parallelen Ebene parallel zur ersten Ebene schwenkt und zwischen dem ersten Positionierungszustand und dem zweiten Positionierungszustand umgeschaltet werden kann.
3. Verborgener Wassertank zum Verbessern des Aus- und Einbaus von inneren Baugruppen nach Anspruch 2, **dadurch gekennzeichnet, dass** der Montagesitz (30) an einer inneren Wandfläche des Wassertankkörpers (10) angeordnet ist.
4. Verborgener Wassertank zum Verbessern des Aus- und Einbaus von inneren Baugruppen nach Anspruch 3, **dadurch gekennzeichnet, dass** die innere Wandfläche des Wassertankkörpers (10) weiter mit einem vorspringenden Anschlagabschnitt (11) versehen ist.
5. Verborgener Wassertank zum Verbessern des Aus- und Einbaus von inneren Baugruppen nach Anspruch 1, wobei die Anordnung zur beweglichen Verbindung des Montagesitzes (30) die angelenkte Anordnung ist, **dadurch gekennzeichnet, dass** eine Ebene, in der sich das Montagefenster (20) befindet, als erste Ebene definiert ist, wobei die angelenkte Anordnung eine Gelenkwelle umfasst, und die Axialrichtung der Gelenkwelle, die den Montagesitz (30) und den Wassertankkörper (10) verbindet, parallel zur ersten Ebene ist, und der Montagesitz (30) in einer senkrechten Ebene senkrecht zur ersten Ebene schwenkt und zwischen dem ersten Positionierungszustand und dem zweiten Positionierungszustand umgeschaltet werden kann.
6. Verborgener Wassertank, der den Aus- und Einbau

von inneren Baugruppen verbessert, nach Anspruch 5, **dadurch gekennzeichnet, dass** ein fester Sitz fest mit einer inneren Wandfläche des Wassertankkörpers (10) verbunden ist und der Montagesitz (30) an dem festen Sitz angelenkt ist.

7. Verborgener Wassertank zum Verbessern des Aus- und Einbaus von inneren Baugruppen nach Anspruch 1, wobei die Anordnung zur beweglichen Verbindung des Montagesitzes (30) die verschiebbare Anordnung ist, **dadurch gekennzeichnet, dass** eine innere Wandfläche des Wassertankkörpers (10) mit einer Schiebenut versehen ist, und der Montagesitz (30) verschiebbar in der Schiebenut in der inneren Wandfläche des Wassertankkörpers (10) angebracht ist.

Revendications

1. Réservoir d'eau dissimulé pour améliorer le démontage et l'assemblage d'ensembles internes, le réservoir d'eau dissimulé comportant un corps de réservoir d'eau (10) doté d'une fenêtre de montage (20), et au moins un siège de montage (30) positionné au niveau d'un bord de la fenêtre de montage (20) et utilisé pour assembler un panneau de raccordement, dans lequel

le siège de montage (30) est raccordé et agencé de manière mobile sur le corps de réservoir d'eau (10), et au moyen de cet agencement de raccordement mobile du siège de montage (30), le siège de montage (30) peut être commuté entre un premier état de positionnement dans lequel le siège de montage (30) fait saillie dans une direction vers le centre de la fenêtre de montage (20) et un deuxième état de positionnement dans lequel le siège de montage (30) se rétracte vers le bord de la fenêtre de montage (20),

caractérisé en ce que

l'agencement de raccordement mobile du siège de montage (30) est un agencement articulé ou un agencement coulissant.

2. Réservoir d'eau dissimulé pour améliorer le démontage et l'assemblage d'ensembles internes selon la revendication 1, dans lequel l'agencement de raccordement mobile du siège de montage (30) est l'agencement articulé, **caractérisé en ce qu'**un plan où se trouve la fenêtre de montage (20) est défini comme un premier plan, moyennant quoi l'agencement articulé comporte un arbre articulé, dans lequel la direction axiale de l'arbre articulé raccordant le siège de montage et le corps de réservoir d'eau (10) est perpendiculaire au premier plan, et le siège de montage (30) oscille dans un plan parallèle qui est

parallèle au premier plan et peut être commuté entre le premier état de positionnement et le deuxième état de positionnement.

3. Réservoir d'eau dissimulé pour améliorer le démontage et l'assemblage d'ensembles internes selon la revendication 2, **caractérisé en ce que** le siège de montage (30) est agencé sur une surface de paroi interne du corps de réservoir d'eau (10).

4. Réservoir d'eau dissimulé pour améliorer le démontage et l'assemblage d'ensembles internes selon la revendication 3, **caractérisé en ce que** la surface de paroi interne du corps de réservoir d'eau (10) est en outre dotée d'une partie d'arrêt (11) de manière saillante.

5. Réservoir d'eau dissimulé pour améliorer le démontage et l'assemblage d'ensembles internes selon la revendication 1, dans lequel l'agencement de raccordement mobile du siège de montage (30) est l'agencement articulé, **caractérisé en ce qu'**un plan où se trouve la fenêtre de montage (20) est défini comme un premier plan, dans lequel l'agencement articulé comporte un arbre articulé, et la direction axiale de l'arbre articulé raccordant le siège de montage (30) et le corps de réservoir d'eau (10) est parallèle au premier plan, et le siège de montage (30) oscille dans un plan perpendiculaire qui est perpendiculaire au premier plan et peut être commuté entre le premier état de positionnement et le deuxième état de positionnement.

6. Réservoir d'eau dissimulé qui améliore le démontage et l'assemblage d'ensembles internes selon la revendication 5, **caractérisé en ce qu'**un siège fixe est raccordé de manière fixe à une surface de paroi interne du corps de réservoir d'eau (10), et le siège de montage (30) est articulé au siège fixe.

7. Réservoir d'eau dissimulé pour améliorer le démontage et l'assemblage d'ensembles internes selon la revendication 1, dans lequel l'agencement de raccordement mobile du siège de montage (30) est l'agencement coulissant, **caractérisé en ce qu'**une surface de paroi interne du corps de réservoir d'eau (10) est dotée d'une rainure coulissante, et le siège de montage (30) est ajusté de manière coulissante dans la rainure coulissante dans la surface de paroi interne du corps de réservoir d'eau (10).

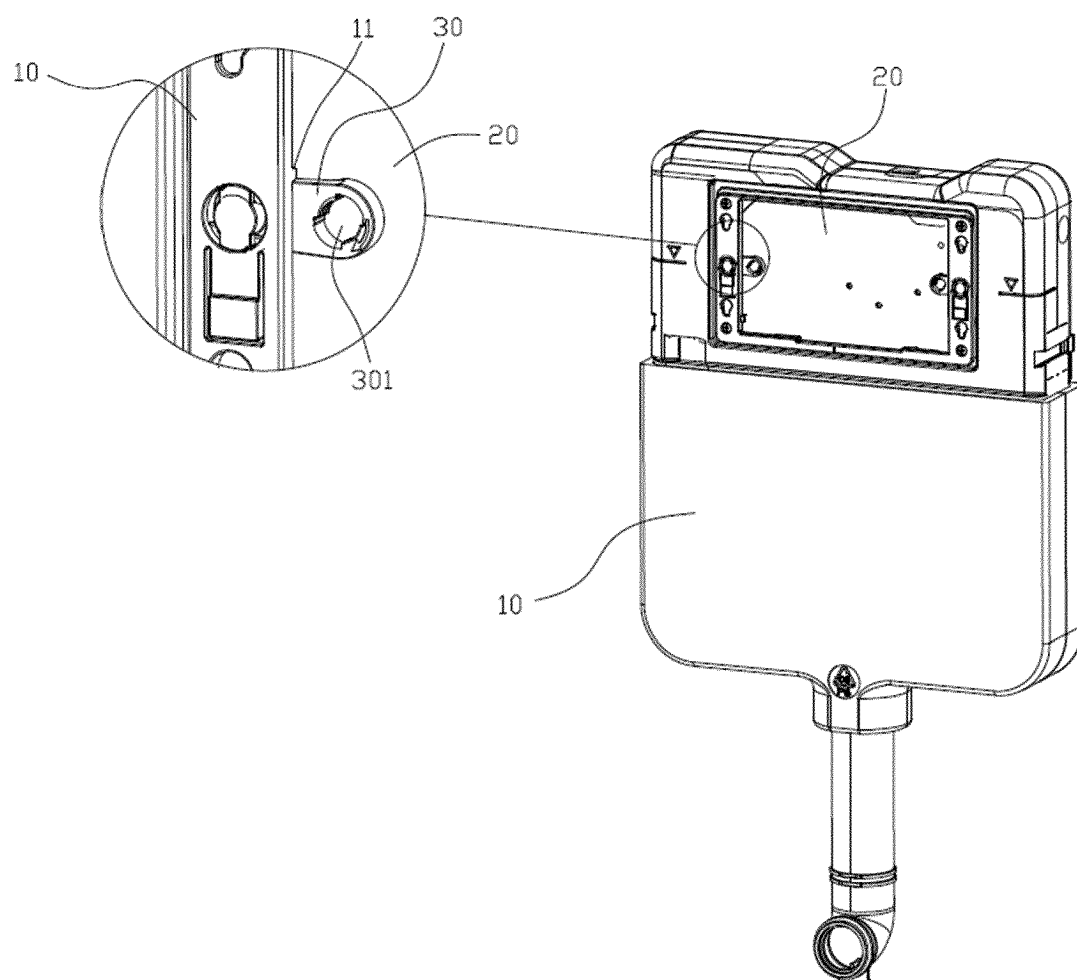


FIG. 1

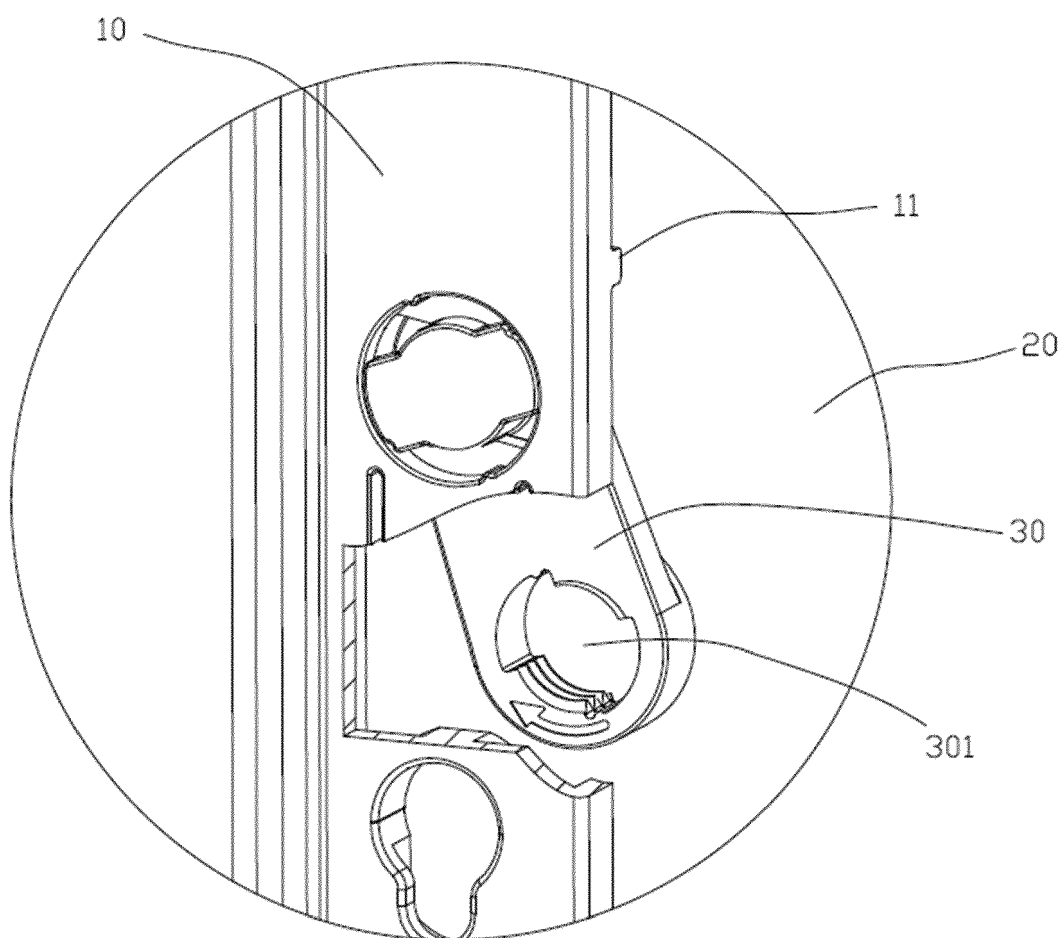


FIG. 2

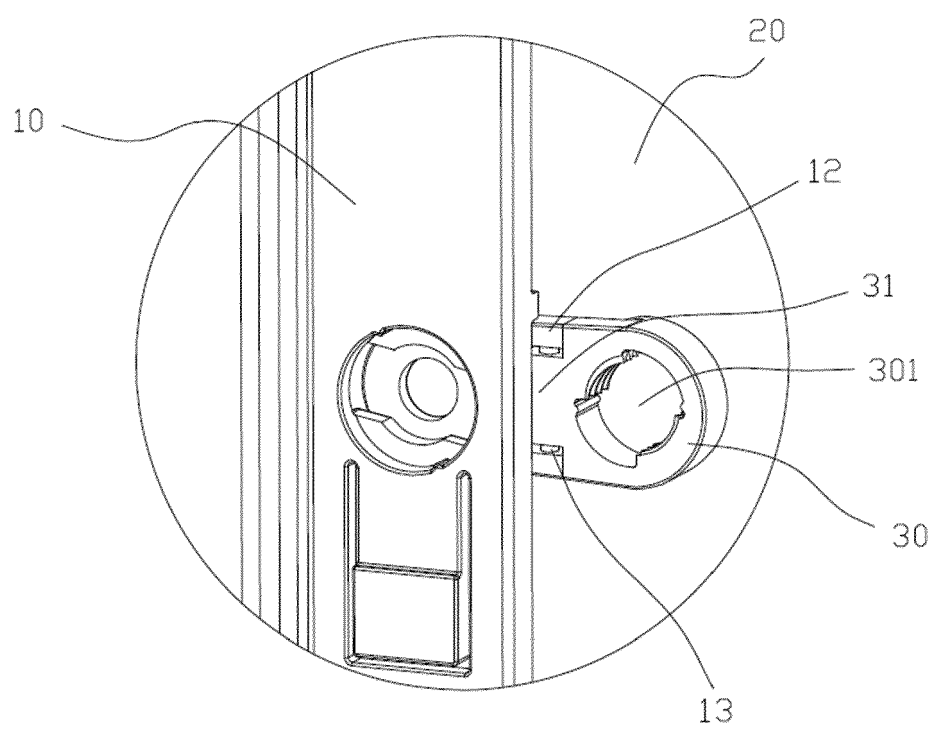


FIG. 3

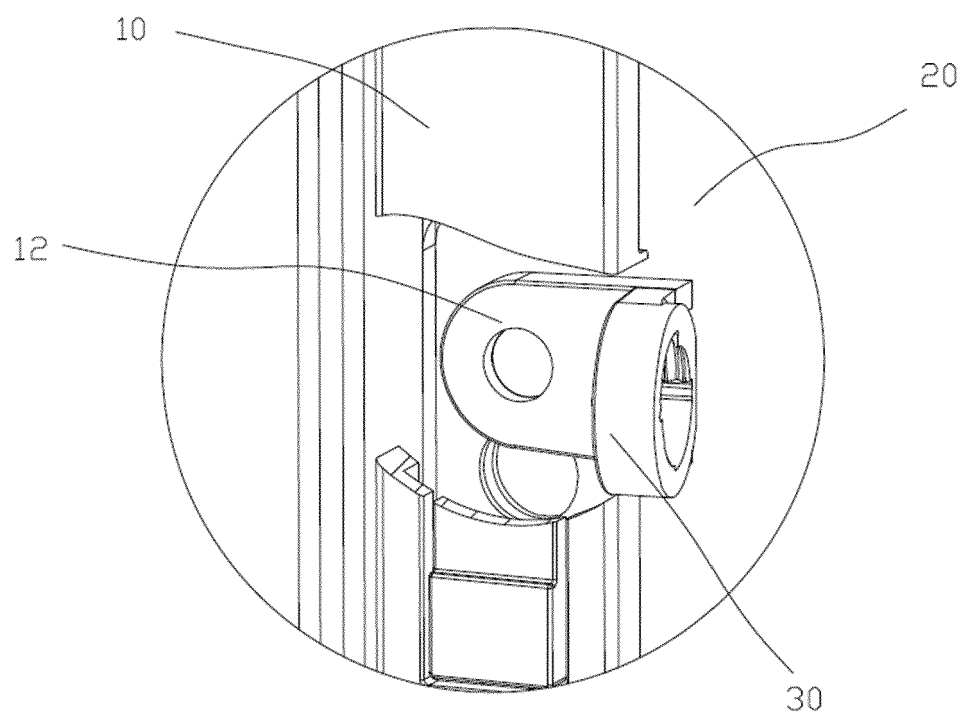


FIG. 4

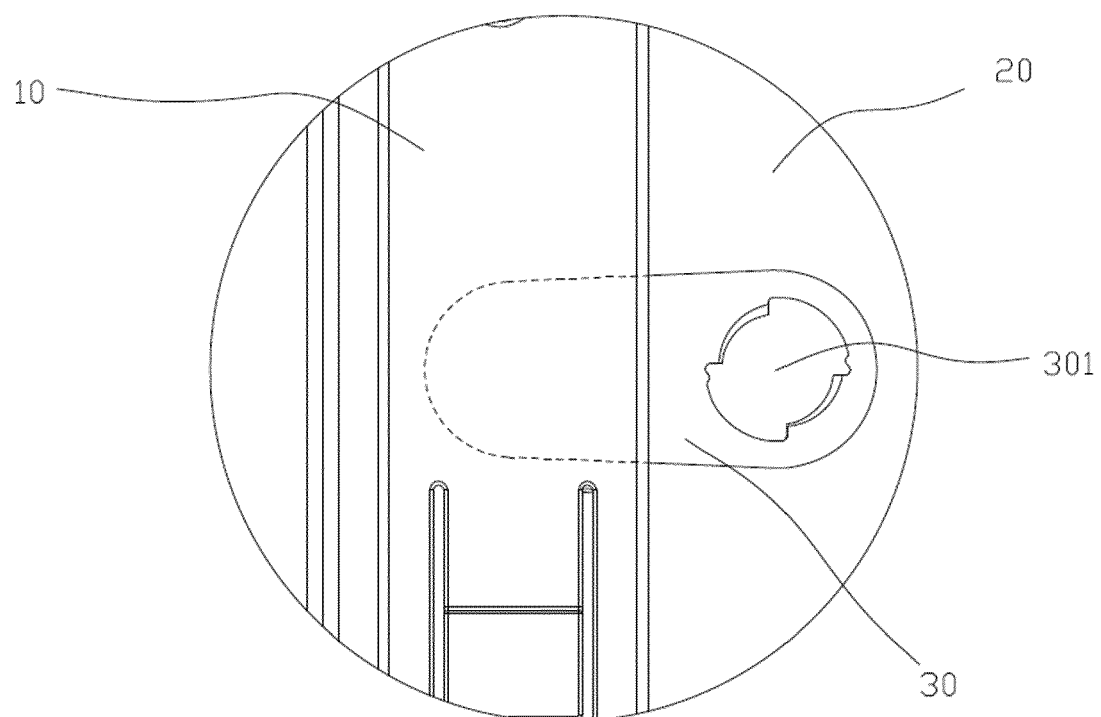


FIG. 5

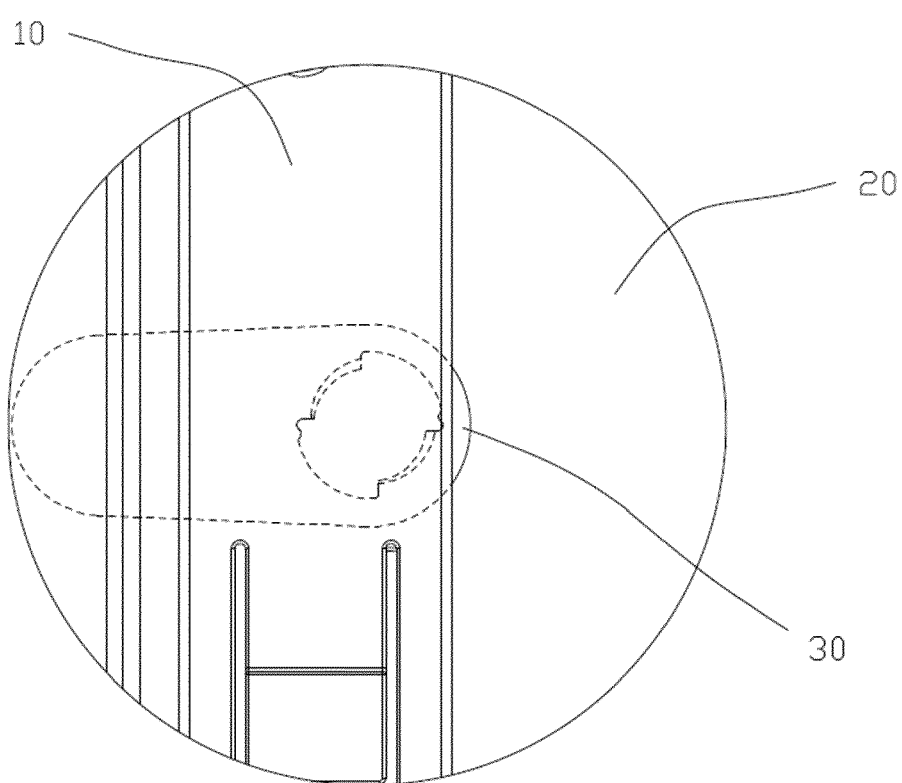


FIG. 6

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- CN 201820239651X [0002]
- EP 0933481 B [0002]