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(54) **FAUCET MAIN BODY FAST DETACHING AND REPLACING METHOD, AND FAUCET STRUCTURE FOR IMPLEMENTING THE SAME**

(57) A faucet main body fast detaching and replacing method and a faucet structure for implementing the same, comprising the following steps: placing a fast detaching structure on a mesa; and detaching and replacing a faucet bottom seat, that is connected and locked tight to a faucet set main body and the mesa. The faucet main body fast detaching and replacing method is simple, while the faucet structure is compact, as such facilitating fast detaching the faucet main body.

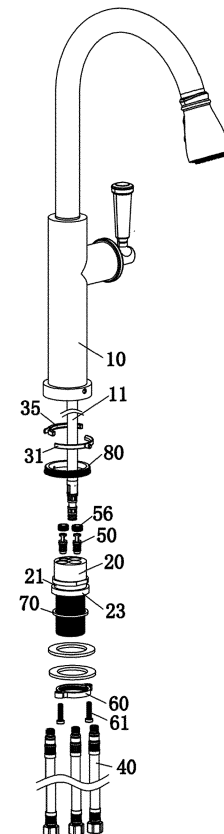


Fig. 2

Description

BACKGROUND OF THE INVENTION

Field of the Invention

[0001] The present invention relates to a faucet detaching and replacing method, and in particular to a faucet main body fast detaching and replacing method and a faucet structure for implementing the same.

The Prior Arts

[0002] In general, faucet and faucet related components tend to be worn out or damaged after long period of use. At this time, the faucet and faucet related components have to be detached, repaired, or replaced. Also, after long period of usage, the contaminated and dirty faucet has to be detached, cleaned, and sterilized. In addition, sometimes, the faucet has to be detached and replaced to make it compatible with the setting of the room. However, in detaching a faucet, the water supply switch has to be closed, while the repairman has to crawl into a very small space in the counter under the faucet, that is rather tedious and inconvenient.

[0003] Therefore, presently, the design and performance of the faucet is not quite satisfactory, and it leaves much room for improvement.

SUMMARY OF THE INVENTION

[0004] In view of the problems and drawbacks of the prior art, the present invention provides a faucet main body fast detaching and replacing method and a faucet structure for implementing the same, that is simple in design, compact in structure, to facilitate fast detaching of faucet main body components.

[0005] The present invention provides a faucet main body fast detaching and replacing method, comprising the following steps: placing a fast detaching structure on a mesa; and detaching and replacing a faucet bottom seat, that is connected and locked tightly to a faucet set main body and the mesa.

[0006] In an aspect of the present invention, the fast detaching structure includes: a ring-shaped slot, a push button position blocking component, a water channel, and an automatic water closing component. The ring-shaped slot is disposed around an outer perimeter at an upper end of the faucet bottom seat. The push button position blocking component is disposed in a lower end of the faucet set main body, to act in cooperation with the ring-shaped slot, to perform detaching. The water channel is disposed in the faucet bottom seat, and is connected to a water input hose. And, the automatic water closing component is disposed in the water channel, and when a water input tube of the faucet set main body is detached from the water channel, it automatically closes the water channel.

[0007] In another aspect of the present invention, the push button position blocking component is formed by a push button ring and a position blocking ring, both having an arc shape cross section area and facing each other with its arc notch, both ends of the push button ring and the position blocking ring being pressed against each other.

[0008] In yet another aspect of the present invention, the fast detaching structure further includes: a protrusion knob, and a pair of elastic arms. The protrusion knob, disposed in a middle of the push button ring, to protrude out of a side wall of a faucet. The pair of elastic arms are disposed on an outer arc face of the position blocking ring, and facing toward a lower end inner wall of the faucet set main body, to push out the protrusion knob of the push button ring, and to fasten the position blocking ring in the ring-shaped slot.

[0009] In a further aspect of the present invention, the automatic water closing component includes: a piston block, an upper connection tube, a lower connection tube, a spring, an upward movement restriction block, and a downward movement restriction step face. The piston block is disposed in an expand cavity of the water channel. The upper connection tube is connected and fixed to an upper portion of the piston block, used to press and connect a water inlet tube, with its side wall provided with a water input slot port. The lower connection tube is connected and fixed to a lower portion of the piston block, with its side wall is provided with a water output slot port. The spring is sleeved around the lower connection tube, and is located between the piston block and a lower tapering port of the expand cavity. The upward movement restriction block is located in the water channel, and is thread-connected to the piston block at an upper tapering port of the expand cavity. And, the downward movement restriction step face is located in the water channel, and is provided with the lower connection tube at a lower tapering port of the expand cavity.

[0010] In an aspect of the present invention, the fast detaching structure further includes: a position restriction flange, disposed on the faucet bottom seat, and located at a lower side of the ring-shaped slot; a gasket, embedded in a lower side face of the position restriction flange; and a longitudinal regulating bolt, disposed between thread holes on both sides of a lock tight ring.

[0011] The present invention also provides a fast detachable and replaceable faucet structure of a faucet main body, comprising: a faucet set main body, a faucet bottom seat, a ring-shaped slot, a push button position blocking component, a water channel, and an automatic water closing component. The faucet bottom seat is used to act in cooperation with the faucet set main body to connect and lock tight a mesa. The ring-shaped slot is disposed around an outer perimeter at an upper end of the faucet bottom seat. The push button position blocking component is disposed in a lower end of the faucet set main body acting in cooperation with the faucet bottom seat, to act in cooperation with the ring-shaped slot, to

perform detaching. The water channel is disposed in the faucet bottom seat, and connected to a water input hose. The automatic water closing component is disposed in the water channel, and when a water input tube of the faucet set main body is detached from the water channel, it automatically closes the water channel.

[0012] In an aspect of the present invention, the push button position blocking component is formed by a push button ring and a position blocking ring, both having an arc shape cross section area and facing each other with an arc notch, both ends of the push button ring and the position blocking ring being pressed against each other.

[0013] In another aspect of the present invention, the fast detachable and replaceable faucet structure further includes: a protrusion knob, disposed in a middle of the push button ring, to protrude out of a side wall of a faucet; and a pair of elastic arms, disposed on an outer arc face of the position blocking ring, and facing toward a lower end inner wall of the faucet set main body, to push out the protrusion knob of the push button ring, and to fasten the position blocking ring in the ring-shaped slot.

[0014] In yet another aspect of the present invention, the automatic water closing component includes: a piston block, an upper connection tube, a lower connection tube, and a spring. The piston block is disposed in an expand cavity of the water channel. The upper connection tube is connected and fixed to an upper portion of the piston block, used to press and connect a water inlet tube, with its side wall provided with a water input slot port. The lower connection tube, connected and fixed to a lower portion of the piston block, with its side wall is provided with a water output slot port. And, the spring is sleeved around the lower connection tube, and located between the piston block and a lower tapering port of the expand cavity.

[0015] In a further aspect of the present invention, the fast detachable and replaceable faucet structure of the faucet main body further includes: a tight seal ring, an upward movement restriction block, and a downward movement restriction step face. The tight seal ring is sleeved on the piston block. The upward movement restriction block is located in the water channel, and is thread-connected to the piston block at an upper tapering port of the expand cavity. And the downward movement restriction step face is located in the water channel, and is provided with the lower connection tube at a lower tapering port of the expand cavity.

[0016] In a further aspect of the present invention, the fast detachable and replaceable faucet structure of the faucet main body further includes: a position restriction flange, a plurality of outer threads, a gasket, and a longitudinal regulating bolt. The position restriction flange is disposed on the faucet bottom seat, and is located at a lower side of the ring-shaped slot. The plurality of outer threads are disposed at a lower side of the position restriction flange on the faucet bottom seat, that is connected and locked tightly to the mesa through a lock tight ring acting in cooperation with the outer threads. The gasket

is embedded in a lower side face of the position restriction flange. And, the longitudinal regulating bolt is disposed in thread holes located between two sides of a lock tight ring.

[0017] Compared with the Prior Art, the present invention has the following advantages in that, its method is simple, while its faucet structure is compact, thus facilitating fast detaching of the faucet main body. As such, when the faucet is damaged, in replacing the faucet, it is only required to press and hold the protrusion knob on the faucet to pull out the entire faucet to achieve detaching the faucet, then the new faucet of the same type can be placed in the faucet bottom seat under the mesa for replacement. The entire replacing process can be fast and simple, there is no need to close or open any water supply line, it is not required to detach and screw tight the bolts and nuts, and there is no need for the repair man to crawl into the narrow space under the basin table to detach and then lock tight the screws and the water pipe. Also, faucets of various types can be used in the replacement depending on user's preference, and be compatible with the setting of the room. Thus, when the faucet is broken down, it can be detached quickly and sent to repair. When the faucet becomes dirty after long time usage, it can be detached quickly and put into clean water to wash clean, or it can be placed into sterilization equipment for sterilization.

[0018] Further scope of the applicability of the present invention will become apparent from the detailed descriptions given hereinafter. However, it should be understood that the detailed descriptions and specific examples, while indicating preferred embodiments of the present invention, are given by way of illustration only, since various changes and modifications within the spirit and scope of the present invention will become apparent to those skilled in the art from the detail descriptions.

BRIEF DESCRIPTION OF THE DRAWINGS

[0019] The related drawings in connection with the detailed descriptions of the present invention to be made later are described briefly as follows, in which:

Fig. 1 is a schematic diagram of a faucet main body according to an embodiment of the present invention;

Fig. 2 is an exploded view of a faucet main body according to an embodiment of the present invention;

Fig. 3 is a schematic diagram of an internal structure of a fast detaching structure according to an embodiment of the present invention;

Fig. 4 is a cross section view along A-A line of Fig. 3 according to an embodiment of the present invention;

Fig. 5 is an internal water stoppage structure according to an embodiment of the present invention;

Fig. 6 is a schematic diagram of enlarged area B of

Fig. 5 according to an embodiment of the present invention;

Fig. 7 is a schematic diagram of an automatic water closing component in a faucet bottom seat according to an embodiment of the present invention;

Fig. 8 is a schematic diagram showing installation of a faucet bottom seat according to an embodiment of the present invention; and

Fig. 9 is a schematic diagram showing detaching a faucet set main body from a faucet bottom seat according to an embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0020] The purpose, construction, features, functions and advantages of the present invention can be appreciated and understood more thoroughly through the following detailed descriptions with reference to the attached drawings.

[0021] Refer to Figs. 1 to 9 respectively for a schematic diagram of a faucet main body according to an embodiment of the present invention; an exploded view of a faucet main body according to an embodiment of the present invention; a schematic diagram of an internal structure of a fast detaching structure according to an embodiment of the present invention; a cross section view along A-A line of Fig. 3 according to an embodiment of the present invention; an internal water stoppage structure according to an embodiment of the present invention; a schematic diagram of enlarged area B of Fig. 5 according to an embodiment of the present invention; a schematic diagram of an automatic water closing component in a faucet bottom seat according to an embodiment of the present invention; a schematic diagram showing installation of a faucet bottom seat according to an embodiment of the present invention; and a schematic diagram showing detaching a faucet set main body from a faucet bottom seat according to an embodiment of the present invention.

[0022] As shown in Figs. 1 to 9, the present invention provides a faucet main body fast detaching and replacing method, comprising the following steps: placing a fast detaching structure on a mesa 90; and detaching and replacing a faucet bottom seat 20, that is connected and locked tightly to a faucet set main body 10 and the mesa 90.

[0023] In an embodiment of the present invention, the fast detaching structure includes: a ring-shaped slot 21, a push button position blocking component 30, a water channel 22, and an automatic water closing component 50. The ring-shaped slot 21 is disposed around an outer perimeter at an upper end of the faucet bottom seat 20. The push button position blocking component 30 is disposed in a lower end of the faucet set main body 10, to act in cooperation with the ring-shaped slot 21, to perform detaching. The water channel 22 is disposed in the faucet bottom seat 20, and is connected to a water input hose

40. And, the automatic water closing component 50 is disposed in the water channel 22, and when a water input tube 12 of the faucet set main body 10 is detached from the water channel 22, it automatically closes the water channel 22.

[0024] In an embodiment of the present invention, the push button position blocking component 30 is formed by a push button ring 31 and a position blocking ring 35, both having an arc shape cross section area and facing each other with its arc notch, both ends of the push button ring 31 and the position blocking ring 35 being pressed against each other.

[0025] In an embodiment of the present invention, the fast detaching structure further includes: a protrusion knob 32, and a pair of elastic arms 36. The protrusion knob 32, disposed in a middle of the push button ring 31, to protrude out of a side wall of a faucet. The pair of elastic arms 36 are disposed on an outer arc face of the position blocking ring 35, and facing toward a lower end inner wall of the faucet set main body 10, to push out the protrusion knob 32 of the push button ring 31, and to fasten the position blocking ring 35 in the ring-shaped slot 21.

[0026] In an embodiment of the present invention, the automatic water closing component 50 includes: a piston block 51, an upper connection tube 52, a lower connection tube 53, a spring 54, an upward movement restriction block 56, and a downward movement restriction step face 57. The piston block 51 is disposed in an expand cavity 24 of the water channel 22. The upper connection tube 52 is connected and fixed to an upper portion of the piston block 51, used to press and connect a water inlet tube 12, with its side wall provided with a water input slot port. The lower connection tube 53 is connected and fixed to a lower portion of the piston block 51, with its side wall is provided with a water output slot port. The spring 54 is sleeved around the lower connection tube 53, and is located between the piston block 51 and a lower tapering port of the expand cavity 24. The upward movement restriction block 56 is located in the water channel 22, and is thread-connected to the piston block 51 at an upper tapering port of the expand cavity 24. And, the downward movement restriction step face 57 is located in the water channel 22, and is provided with the lower connection tube 53 at a lower tapering port of the expand cavity 24.

[0027] In an embodiment of the present invention, the automatic water closing component 50 further includes: a piston block 51, an upper connection tube 52, a lower connection tube 53, a spring 54, an upward movement restriction block 56, and a downward movement restriction step face 57. The piston block 51 is disposed in an expand cavity 24 of the water channel 22. The upper connection tube 52 is connected and fixed to an upper portion of the piston block 51, used to press and connect a water inlet tube 12, with its side wall provided with a water input slot port. The lower connection tube 53 is connected and fixed to a lower portion of the piston block 51, with its side wall provided with a water output slot port, so that when water channel 22 is opened, water will

flow in through the water input hose 40, and then through the water output slot port of the lower connection tube 53, subsequently, the water flows and bypasses the piston block 51, and then it flows into the upper connection tube 52 through its water input slot port, and it flows into the water inlet tube 12. The spring 54 is sleeved around the lower connection tube 53, and is located between the piston block 51 and a lower tapering port of the expand cavity 24, so that the piston block 51 is able to automatically close the water channel 22.

[0028] In an embodiment of the present invention, the fast detachable and replaceable faucet structure of the faucet main body further includes: a tight seal ring 55, an upward movement restriction block 56, and downward movement restriction step face 57. The tight seal ring 55 is sleeved on the piston block 51, to enhance the water channel tight seal. The upward movement restriction block 56 is located in the water channel 22, and is thread-connected to the piston block 51 at an upper tapering port of the expand cavity 24, to achieve upward movement restriction of the piston block 51. The downward movement restriction step face 57 is located in the water channel 22, and is provided with the lower connection tube 53 at a lower tapering port of the expand cavity 24, so that when the water channel 22 is opened, the lower connection tube 53 is pressed against and connected to the downward movement restriction step face 57, to achieve downward movement restriction of the piston block 51.

[0029] In an embodiment of the present invention, a position restriction flange 23 is disposed on the faucet bottom seat 20, and is located at a lower side of the ring-shaped slot 21. A plurality of outer threads are disposed at a lower side of the position restriction flange 23 on the faucet bottom seat 20, that is connected and locked tightly to the mesa 90 through a lock tight ring 60 acting in cooperation with the outer threads.

[0030] In an embodiment of the present invention, a gasket 70 is embedded in a lower side face of the position restriction flange 23, and is in contact with the upper side face of the mesa 90. A tight seal pad and a copper pad are disposed between the lock tight ring 60 and a lower side of the mesa 90. Thread holes are provided on both sides of the lock tight ring 60, so that the longitudinal regulating bolts 61 can be thread-connected therein, to adjust the distance between the lock tight ring 60 and the mesa 90, to reduce the spiral depth during installation, while preventing the lock tight ring 60 from detaching.

[0031] In an embodiment of the present invention, a position restriction flange 23 is disposed on the faucet bottom seat 20, and is located at a lower side of the ring-shaped slot 21. A gasket 70 is embedded in a lower side face of the position restriction flange 23. The longitudinal regulating bolt 61 is disposed in thread holes between two sides of a lock tight ring 60.

[0032] The present invention also provides a fast detachable and replaceable faucet structure of a faucet main body, comprising: a faucet set main body 10, a

faucet bottom seat 20, a ring-shaped slot 21, a push button position blocking component 30, a water channel 22, and an automatic water closing component 50. The faucet bottom seat 20 acts in cooperation with the faucet set main body 10 to connect and lock tight a mesa 90. The ring-shaped slot 21 is disposed around outer perimeter at an upper end of the faucet bottom seat 20. The push button position blocking component 30 is disposed in a lower end of the faucet set main body 10 acting in cooperation with the faucet main body 20, to act in cooperation with the ring-shaped slot 21, to perform fast detaching. The lower portion of the faucet bottom seat 20 is provided with inner threads, to thread-connect the water input hose 40. Inside the faucet bottom seat 20 is provided with 2 to 4 channels 22, connected to the water input hose 40. An automatic water closing component 50 is disposed in the water channel 22, such that when a water input tube 12 of the faucet set main body 10 is detached from the water channel 22, the automatic water closing component 50 closes the water channel 22 automatically. As such, when the faucet set main body 10 is detached, the faucet bottom seat 20 will automatically close the water channel 22, such that in the detaching and installing process, there is no need to close the input water switch. Therefore, the preset state of the automatic water closing component 50 is a water channel closing state.

[0033] In an embodiment of the present invention, the push button position blocking component 30 is formed by a push button ring 31 and a position blocking ring 35, both having an arc shape cross section area and facing each other with its arc notch, both ends of the push button ring 31 and the position blocking ring 35 being pressed against each other. The fast detachable and replaceable faucet structure of the faucet main body further includes: a protrusion knob 32, disposed in a middle of the push button ring 31, to protrude out of a side wall of a faucet; and a pair of elastic arms 36, disposed on an outer arc face of the position blocking ring 35, and facing toward a lower end inner wall of the faucet set main body 10. The elastic arms 36 are able to push the push button ring 31 toward the other side inner wall at the lower end of the faucet set main body 10, to fasten the position blocking ring 35 in the ring-shaped slot 21, in realizing fast fastening. Meanwhile, in detaching, through pressing the protrusion knob 32 inward, it is able to detach the position blocking ring 35 from the ring-shaped slot 21, in realizing fast detaching.

[0034] In an embodiment of the present invention, the push button ring 31 and the position blocking ring 35 are restricted in the lower end portion of the faucet set main body 10 through a ring-shaped lock tight block 80 having outer threads. The faucet set main body 10 is further provided with a pulling tube 11 penetrating through the faucet bottom seat 20 from top to bottom.

[0035] The application of the faucet structure is as follows:

1. Placing the gasket 70 around the assembled faucet bottom seat 20, then penetrating them through a through hole on the mesa 90 from top to bottom, then place the tight seal pad and the copper pad around the faucet bottom seat 20, while using the lock tight ring 60 to lock the faucet bottom seat 20 tightly on the mesa 90.

2. Connecting the water input hose 40 to the faucet bottom seat 20.

3. After installing the push button position blocking component 30 onto the faucet set main body 10 through using the ring-shaped lock tight block 80, installing the faucet set main body 10 onto the faucet bottom seat 20, so that the push button position blocking component 30 is fastened into the ring-shaped slot 21 of the faucet bottom seat 20; meanwhile, place the pulling tube 11 through the faucet bottom seat 20. After inserting the water input tube 12 of the faucet set main body 10 into the channel 22, connect and press it against the upper connection tube 52. Then, when the faucet set main body 10 is pressed downward, the water input tube 12 makes the piston block 51 to move downward, to achieve opening of the water channel 22.

4. When detaching the faucet set main body 10, all it has to do is to press the protrusion knob 32 inward, to make the position blocking ring 35 detach from the ring-shaped slot 21, to realize detaching the faucet set main body 10. In detaching the faucet set main body 10, the water input tube 12 is detached from the upper connection tube 52, so that the piston block 51 returns to its original position, to close the water channel 22. As such, when detaching the faucet set main body 10, the water channel 22 is closed automatically.

[0036] The above detailed description of the preferred embodiment is intended to describe more clearly the characteristics and spirit of the present invention. However, the preferred embodiments disclosed above are not intended to be any restrictions to the scope of the present invention. Conversely, its purpose is to include the various changes and equivalent arrangements which are within the scope of the appended claims.

Claims

1. A faucet main body fast detaching and replacing method, comprising the following steps:

placing a fast detaching structure on a mesa;
and
detaching and replacing a faucet bottom seat, that is connected and locked tightly to a faucet set main body and the mesa.

2. The faucet main body fast detaching and replacing

method as claimed in claim 1, wherein the fast detaching structure includes:

a ring-shaped slot, disposed around an outer perimeter at an upper end of the faucet bottom seat;

a push button position blocking component, disposed in a lower end of the faucet set main body, to act in cooperation with the ring-shaped slot, to perform detaching;

a water channel, disposed in the faucet bottom seat, and connected to a water input hose; and an automatic water closing component, disposed in the water channel, and when a water input tube of the faucet set main body is detached from the water channel, it automatically closes the water channel.

3. The faucet main body fast detaching and replacing method as claimed in claim 2, wherein the push button position blocking component is formed by a push button ring and a position blocking ring, both having an arc shape cross section area and facing each other with its arc notch, both ends of the push button ring and the position blocking ring being pressed against each other;

the fast detaching structure further includes:

a protrusion knob, disposed in a middle of the push button ring, to protrude out of a side wall of a faucet; and

a pair of elastic arms, disposed on an outer arc face of the position blocking ring, and facing toward a lower end inner wall of the faucet set main body, to push out the protrusion knob of the push button ring, and to fasten the position blocking ring in the ring-shaped slot.

4. The faucet main body fast detaching and replacing method as claimed in claim 2, wherein the automatic water closing component includes:

a piston block, disposed in an expand cavity of the water channel;

an upper connection tube, connected and fixed to an upper portion of the piston block, used to press and connect a water inlet tube, with its side wall provided with a water input slot port;

a lower connection tube, connected and fixed to a lower portion of the piston block, with its side wall provided with a water output slot port;

a spring, sleeved around the lower connection tube, and located between the piston block and a lower tapering port of the expand cavity;

an upward movement restriction block, located in the water channel, and thread-connected to the piston block at an upper tapering port of the expand cavity; and

a downward movement restriction step face, located in the water channel, and provided with the lower connection tube at a lower tapering port of the expand cavity.

5. The faucet main body fast detaching and replacing method as claimed in claim 2, wherein the fast detaching structure further includes:

a position restriction flange, disposed on the faucet bottom seat, and located at a lower side of the ring-shaped slot;
a gasket, embedded in a lower side face of the position restriction flange; and
a longitudinal regulating bolt, disposed between thread holes on both sides of a lock tight ring.

6. A fast detachable and replaceable faucet structure of a faucet main body, comprising:

a faucet set main body;
a faucet bottom seat, used to act in cooperation with the faucet set main body to connect and lock tight a mesa;
a ring-shaped slot, disposed around an outer perimeter at an upper end of the faucet bottom seat;
a push button position blocking component, disposed in a lower end of the faucet set main body acting in cooperation with the faucet bottom seat, to act in cooperation with the ring-shaped slot, to perform detaching;
a water channel, disposed in the faucet bottom seat, and connected to a water input hose; and
an automatic water closing component, disposed in the water channel, and when a water input tube of the faucet set main body is detached from the water channel, it automatically closes the water channel.

7. The fast detachable and replaceable faucet structure of the faucet main body as claimed in claim 6, wherein the push button position blocking component is formed by a push button ring and a position blocking ring, both having an arc shape cross section area and facing each other with its arc notch, both ends of the push button ring and the position blocking ring being pressed against each other; the fast detachable and replaceable faucet structure further includes:

a protrusion knob, disposed in a middle of the push button ring, to protrude out of a side wall of a faucet; and
a pair of elastic arms, disposed on an outer arc face of the position blocking ring, and facing toward a lower end inner wall of the faucet set main body, to push out the protrusion knob of the push button ring, and to fasten the position

blocking ring in the ring-shaped slot.

8. The fast detachable and replaceable faucet structure of the faucet main body as claimed in claim 6, wherein the automatic water closing component includes:

a piston block, disposed in an expand cavity of the water channel;
an upper connection tube, connected and fixed to an upper portion of the piston block, used to press and connect a water inlet tube, with its side wall provided with a water input slot port;
a lower connection tube, connected and fixed to a lower portion of the piston block, with its side wall provided with a water output slot port; and
a spring, sleeved around the lower connection tube, and located between the piston block and a lower tapering port of the expand cavity.

9. The fast detachable and replaceable faucet structure of the faucet main body as claimed in claim 6, further comprising:

a tight seal ring, sleeved on the piston block;
an upward movement restriction block, located in the water channel, and thread-connected to the piston block at an upper tapering port of the expand cavity; and
a downward movement restriction step face, located in the water channel, and provided with the lower connection tube at a lower tapering port of the expand cavity.

10. The fast detachable and replaceable faucet structure of a faucet main body as claimed in claim 6, further comprising:

a position restriction flange, disposed on the faucet bottom seat, and located at a lower side of the ring-shaped slot;
a plurality of outer threads, disposed at a lower side of the position restriction flange on the faucet bottom seat, that being connected and locked tightly to the mesa through a lock tight ring acting in cooperation with the outer threads;
a gasket, embedded in a lower side face of the position restriction flange; and
a longitudinal regulating bolt, disposed between thread holes on both sides of a lock tight ring.

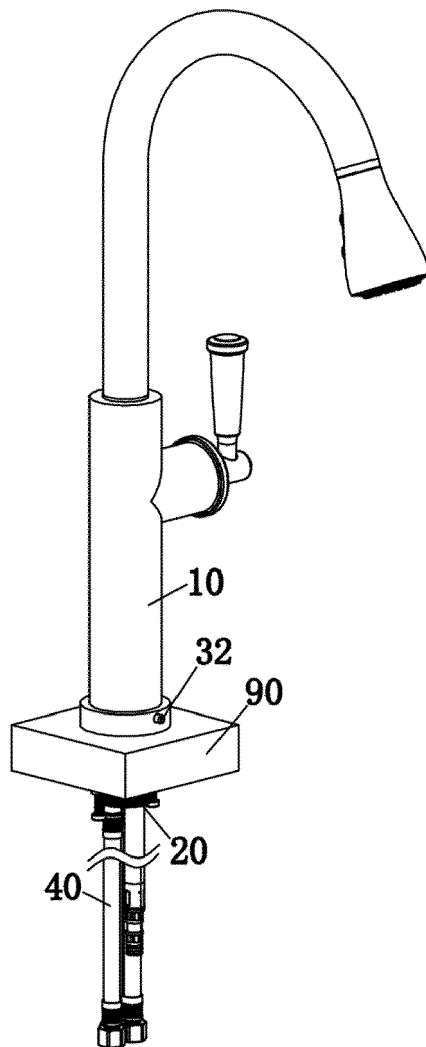


Fig. 1

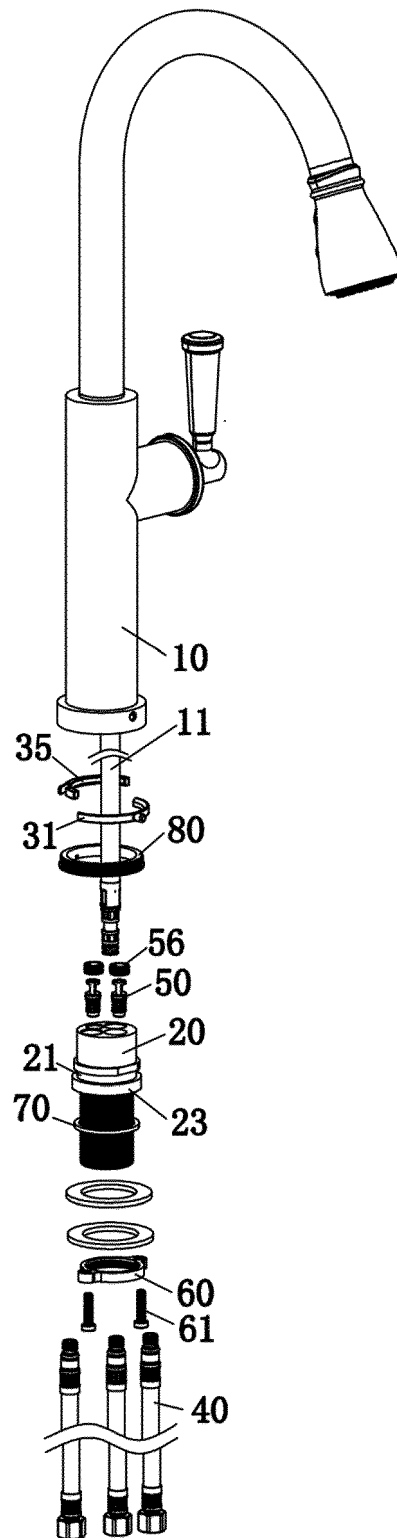


Fig. 2

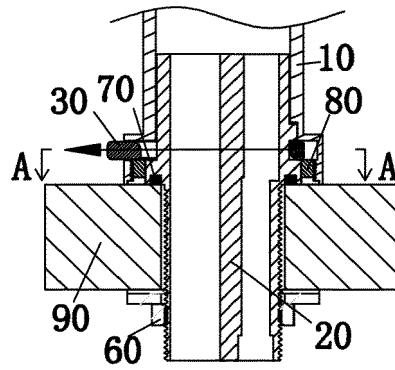


Fig. 3

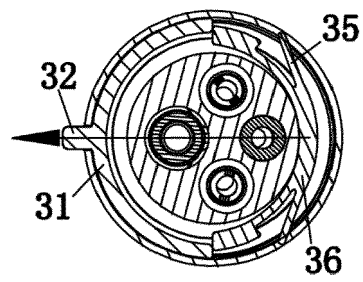


Fig. 4

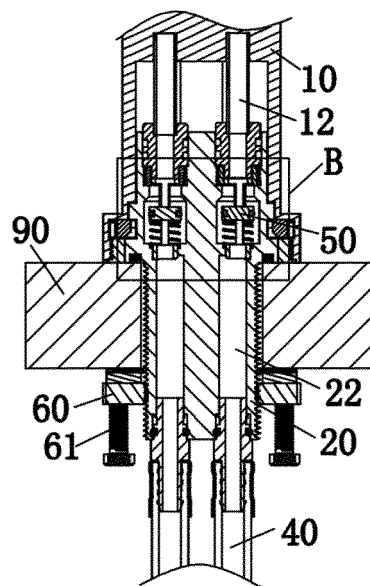


Fig. 5

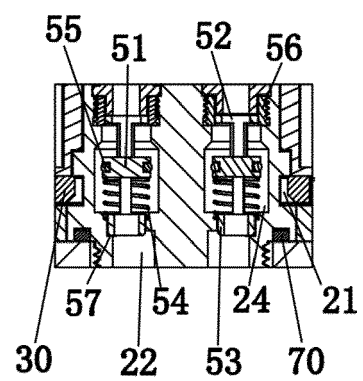


Fig. 6

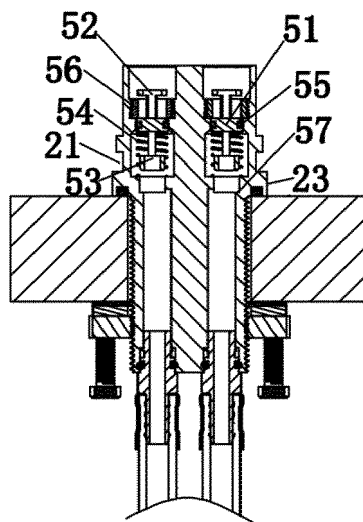


Fig. 7

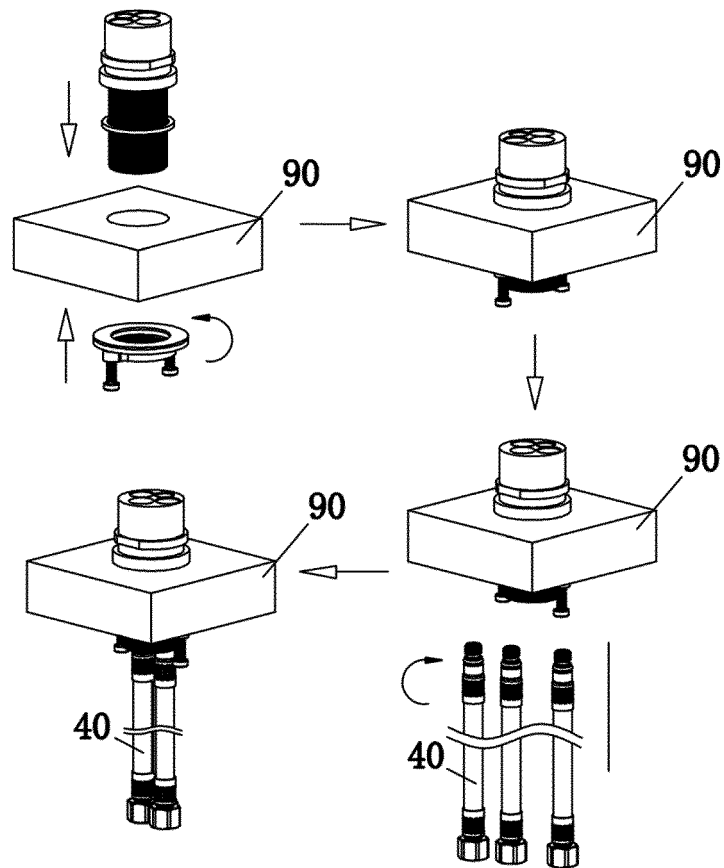


Fig. 8

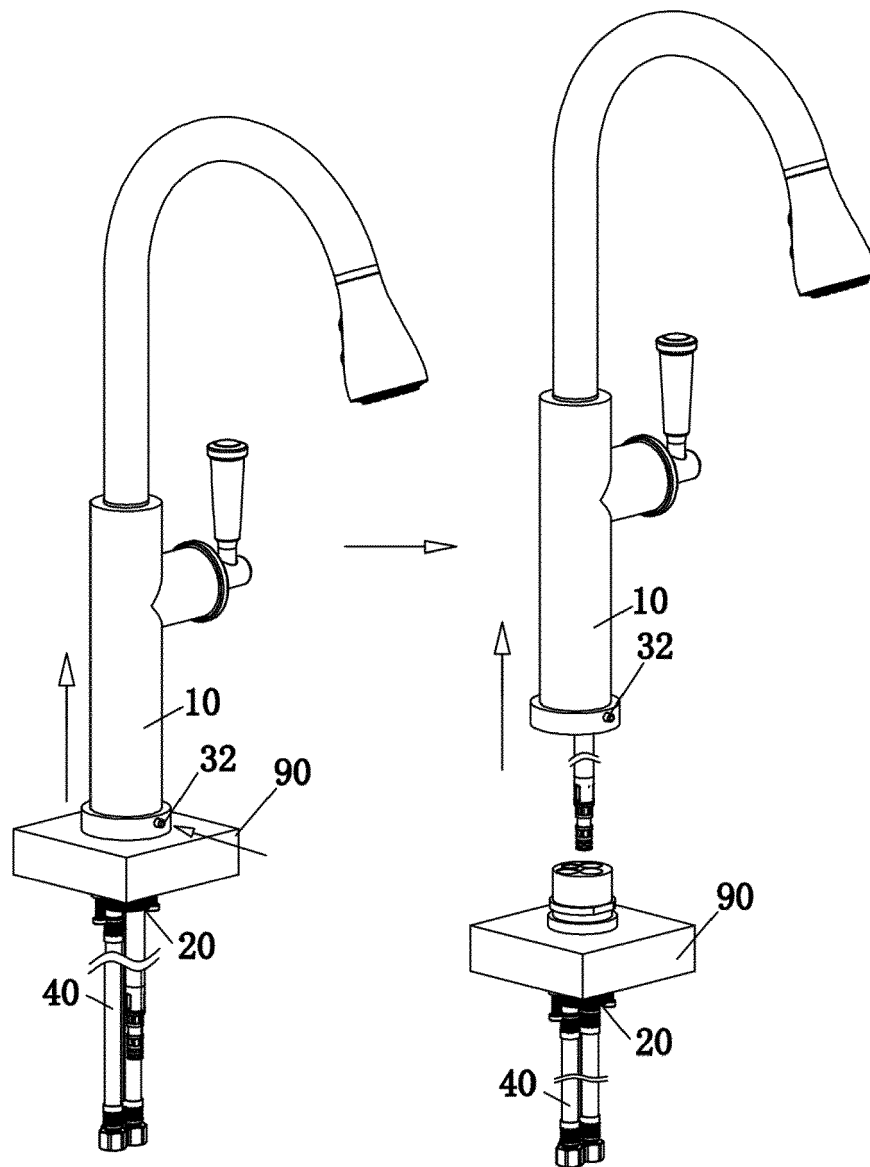


Fig. 9



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