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(54) **SHOWER COLUMN WITH IMPROVED ADJUSTABLE SUPPORT**

(57) A shower column (4) comprising a column body (8) having a main longitudinal extension axis (Y-Y), which extends from a lower end (12), where it is connected to a water connection (16), to an upper end (20), where it comprises or supports a water supply point (24). The column body (8) slides along said main longitudinal extension axis (Y-Y). The column comprises a wall mount (28) for the column body (8) having a first end (32) at least partially surrounding a side wall portion (36) of the column body (8) and a second end (40) shaped to secure the column body (8) to a wall or panel, and locking/unlocking means (44) of the column body (8) relative to the main longitudinal extension axis (Y-Y). The locking/unlocking means (44) comprise a pusher (48) movable from an extracted or locking position, wherein it abuts against said side wall (36) of the column body (8) so as to lock the column body (8) in place, to a retracted position wherein it does not interfere with the column body (8).

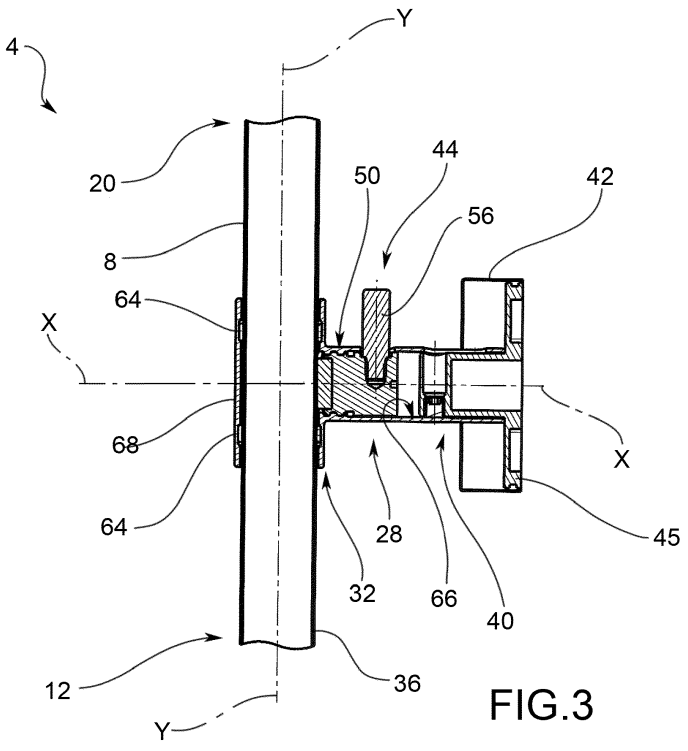

FIG.3

EP 3 929 365 A1

Description

FIELD OF APPLICATION

[0001] The present invention relates to a shower column with an improved adjustable support for adjusting at will the position and therefore the supply height of a hand shower or shower head supported by said column.

STATE OF THE ART

[0002] As is known, shower columns are used in the sanitary fittings industry typically within shower enclosures or cabins to support hand showers or shower heads for water supply.

[0003] Shower columns comprise a pipe, typically metal, which has both the function of conducting water to a supply point consisting of a hand shower or a shower head, and the function of physically supporting said hand shower or the shower head.

[0004] The shower column then extends from a lower end where it is fluidly connected to at least one supply tap (preferably of the mixer type) to receive a flow of water to be delivered, to an upper end where it supports the hand shower or shower head to which it distributes water to be delivered by means of a supply pipe housed in a cavity of the shower column.

[0005] Between said lower and upper ends, the shower column provides at least one mounting wall or panel to limit the portion of the column overhanging the lower tap body.

[0006] During installation, it is obviously necessary to adjust the height of the supply point, i.e., the upper end of the column that acts as a support point for the hand shower or shower head.

[0007] This adjustment is carried out by the fact that the shower column is usually connected telescopically or slidably with respect to the tap body.

[0008] Then, once the desired height has been established, depending on the user's needs and/or size, the installer provides for fixing the position of the shower column typically using tools, such as wrenches, screwdrivers, or Allen wrenches on special threaded mounting means arranged at the tap body and/or at the mounting wall or panel.

[0009] This operation is rather inconvenient since it requires the use of tools such as screwdrivers, Allen wrenches or wrenches often on threaded means that are difficult to access because they are expediently hidden for design reasons.

[0010] In other cases, these mounts are easily accessible and visible, as in the case of exposed nuts or bolts, coaxial to the column and/or wall mount, with the risk that they may be easily scratched or damaged as a result of mounting them.

[0011] It follows that, regardless of the type of mounting used, the user makes the adjustment when installing the shower column and then does not change it again (due to the inconvenience of the operation and the risk of scratching/damaging visible parts of the shower column).

[0012] Clearly the lack of adjustment of the shower column, even though it provides a telescoping connection to the tap body, constitutes a limitation for shower column users. In effect, said users will be forced to adapt to the single height adjustment chosen during installation, regardless of their actual needs and stature.

[0013] If one considers the differences in age, height, and build between the members of the same household, it is evident how the adjustments of the known solutions are necessarily a compromise between needs that may strongly conflict with each other.

[0014] Therefore, the known solutions for shower columns have the problem of being inconvenient to adjust and, in effect, are no longer adjusted after the time of their first installation.

DISCLOSURE OF THE INVENTION

[0015] Thus, there is a need to resolve the cited drawbacks and limitations with reference to the prior art.

[0016] In particular, there is a need to provide an adjustable support for the shower column, which makes it easy to lock and unlock.

[0017] This requirement is satisfied by a shower column with adjustable support according to claim 1.

DESCRIPTION OF DRAWINGS

[0018] Further features and advantages of the present invention will be more readily understood from the following description of its preferred and non-limiting examples of embodiments, wherein:

[0019] Fig. 1a depicts a cross-sectional view, in an assembled configuration, of a shower column in accordance with an embodiment of the present invention;

[0020] Fig. 1b depicts a perspective view, in separate parts, of a shower column in accordance with an embodiment of the present invention;

[0021] Fig. 2 depicts a plan view, in assembled configuration, of the shower column in Fig. 1;

[0022] Fig. 3 depicts a cross-sectional view of the shower column in Fig. 1, along the cross-sectional plane III-III shown in Fig. 2.

[0023] The elements or parts of elements in common among the embodiments described below will be indicated by the same numerical references.

DETAILED DESCRIPTION

[0024] With reference to the aforesaid figures, an overall schematic view of a shower column has been indicated with the numerical reference 4.

[0025] The shower column 4 comprises a column body 8 having a main longitudinal extension axis Y-Y. Typically, but not exclusively, the column body has a cylindrical shape and is axisymmetric with respect to said prevailing

longitudinal extension axis Y-Y. In other words, typically the column body has a cylindrical shape with a circular cross-section; obviously other geometries are also envisaged, such as elliptical, square, rectangular cross-sectional geometries, etc.

[0026] The column body 8 extends from a lower end 12, where it is shaped to be fluidly connected to a water connection 16, to an upper end 20, where it comprises or supports a water supply point 24. More specifically, the column body 8 at said lower end 12 is telescopically coupled, by means of a related telescopic coupling 19, with a pipe 18 connecting to said water connection 16. The telescopic coupling allows the related hydraulically sealed translation between the column body 8, which translates along the main longitudinal extension axis Y-Y for adjustment of its position, and said pipe 18, which is instead fixed.

[0027] The water connection 16 preferably comprises a mixer tap.

[0028] Further, preferably, the column body 8 is mechanically supported and/or guided by said mixer tap 16; for example, the mixer tap comprises a seat that accommodates and guides the column body 8 along said main longitudinal extension axis Y-Y.

[0029] The water supply point 24 comprises, for example, a hand shower or a shower head.

[0030] The hand shower or shower head may be connected to the column body 8 via, for example, a curved portion in a known manner. The column body 8, therefore, may not have the shape of a straight cylindrical bar along its extension but may have curved or non-straight portions, especially at said lower end 12 and upper end 20.

[0031] The straight section, between said ends 12, 20, will ensure the guided sliding of the column body 8 to allow its height adjustment with respect to the main longitudinal extension axis Y-Y.

[0032] The column body 8 in effect slides along said main longitudinal extension axis Y-Y, as better described below.

[0033] The shower column 4 comprises a wall mount 28 for the column body 8 between the lower end 12 and the upper end 20.

[0034] The wall mount 28 comprises a first end 32 that at least partially surrounds a side wall portion 36 of the column body 8 and a second end 40 shaped to secure the shower column 4 to a wall or panel.

[0035] Thus, the first end 32 is used to attach the wall mount 28 to the column body 8; the second end 40 is used to secure said mount 28 to a wall or panel, typically by means of pins, screws, bolts, expansion plugs, and the like. The second end 40 may, for example, be associated with a mounting plate 45 provided with respective holes for the passage of said pins, screws, bolts, expansion plugs, and the like.

[0036] It is also possible to provide a cover 42.

[0037] The shower column 4 comprises locking/unlocking means 44 of the column body 8 relative to said main longitudinal extension axis Y-Y.

[0038] Advantageously, said locking/unlocking means 44 comprise a pusher 48 arranged at the first end 32 of the wall mount 28.

[0039] The pusher 48 is movable from an extracted or locked position, wherein it abuts against the side wall 36 of the column body 8 so as to lock the column body 8 in place, to a retracted position, wherein it does not interfere with the column body 8, allowing it to slide/adjust relative to the main longitudinal extension axis Y-Y.

[0040] The pusher 48 is contained within the wall mount 28 and is coaxial therewith.

[0041] In particular, the pusher 48 moves along a transverse direction X-X substantially perpendicular to the main longitudinal direction Y-Y of said column body 8.

[0042] According to an embodiment, said pusher 48 is associated with the wall mount 28 according to a screw-type connection 50, along said transverse direction X-X.

[0043] Preferably, the screw is on the pusher 48 while the nut is recessed on an inner side wall of the wall mount 28.

[0044] The pusher 48 is provided with a head 52 that is at least partially counter-shaped with respect to the side wall 36 of the column body 8 with which it interfaces in abutment.

[0045] The head 52 preferably comprises a front wall having a cylindrical lateral surface shape so as to conform to the cylindrical side wall 36 of the column body 8.

[0046] According to one embodiment, said head 52 is made of a polymeric material, typically rubber.

[0047] Preferably, said head 52 is a disc, removable relative to the pusher 48, so that it may also be replaced and may be made of a material different from the material of said pusher.

[0048] Preferably, the pusher 48 is provided with an operating lever 56 accessible from outside the wall mount 28 for rotating the pusher 48 relative to the wall mount 28. For example, said operating lever 56 is arranged along a radial direction R-R perpendicular to the transverse direction X-X.

[0049] The wall mount 28 comprises, for example, a slot 60 delimiting two rotational end stops of the operating lever 56, for locking and unlocking the column body 8, respectively.

[0050] Between the column body 8 and the wall mount 28 is interposed at least one sliding bushing 64, positioned on an inner side wall 66 of the wall mount 28 to facilitate the sliding of the column body 8 relative to said main longitudinal extension axis X-X.

[0051] For example, the wall mount 28 has an overall 'T' configuration wherein at the first end 32 the head of the 'T' has a collar 68, which coaxially surrounds the column body 8, and the shank 72 of the 'T' engages, through the second end 40 and the mounting plate 45, a mounting wall or panel.

[0052] The operation, i.e., adjustment of a shower column with an adjustable support according to the present invention will now be described.

[0053] In particular, at the time of the initial installation

or at any other time when the user wishes to adjust the height of the supply point 24, it is sufficient to loosen the pusher 48, i.e., to arrange the pusher 48 in a backward or non-interference position with the side wall 36 of the column body 8. In this way, it is possible to freely slide the column body 8 along the main longitudinal extension axis Y-Y, which may translate within the wall mount 28, in particular within the collar 68 and the associated sliding bushings 64.

[0054] Once the desired adjustment has been made, the predetermined position of the column body 8 is locked. For this purpose, the operating lever 56 is turned so as to rotate the pusher 48 along the transverse direction X-X.

[0055] In this way, the head 52 of the pusher 48 comes to rest against the side wall 36 of the column body 8 and causes said column body to be locked in position. Preferably, as shown, the head 52 is counter-shaped with respect to said side wall 36 according to a cylindrical geometry so as to facilitate locking.

[0056] Whenever the user wishes to change the height adjustment of the shower column 4, it will be sufficient to release the pressure of the pusher 48 on the column body 8 by turning the operating lever 56 in reverse so as to retract the pusher 48 relative to the column body 8 and repeat the above-described adjustment. This operation will be carried out by the user directly without the aid of any type of tool and without damaging or scratching in any way the side wall 36 of the column body 8 nor the wall mount 28 or other parts of the column 4.

[0057] It is to be noted that the stroke of the pusher 48 is very limited, being equal to a fraction of the pitch of the screw-nut coupling between the pusher 48 and the wall mount 28 equal to the maximum angle of rotation of the operating lever 56.

[0058] Typically, said maximum angle of rotation, defined by the width of said slot 60, is 90-180 degrees; this means that the corresponding stroke of the pusher is ¼-½ of the pitch of the screw-nut coupling between the pusher 48 and the wall mount 28.

[0059] As may be appreciated from what has been described, shower columns with adjustable supports according to the invention make it possible to overcome the drawbacks presented in the prior art.

[0060] In particular, the present invention makes it possible to provide a shower column solution that is easily adjustable by any user quickly and without the aid of any type of tool.

[0061] In effect, it is sufficient to grip and partially rotate the operating lever to be able to raise or lower the shower column and thus the support and water supply point through the corresponding hand shower or shower head fixed to the upper end of the shower column. Thus, it is sufficient to simply turn the same operating lever in the opposite direction to lock the shower column in the new position thus established.

[0062] This operation may be repeated at will by the user when necessary and always quickly and without the use of any type of tool.

[0063] In addition, this adjustment does not result in any damage to visible parts of the shower column.

[0064] Any users, having the need to adapt the supply height to their needs, may unlock the operating lever, make the adjustment, and lock the column in a few seconds from inside the shower enclosure without the need to use any type of tool and without running the risk of damaging or scratching parts of the shower column or its supports.

[0065] A person skilled in the art, for the purpose of satisfying contingent and specific needs, may make numerous modifications and variations to the above-described solutions, all still contained within the scope of the invention as defined by the following claims.

Claims

1. A shower column (4) comprising

- a column body (8) having a main longitudinal extension axis (Y-Y),
- said column body (8) extending from a lower end (12), where it is shaped to be fluidly connected to a water connection (16), to an upper end (20), where it comprises or supports a water supply point (24),
- said column body (8) sliding along said main longitudinal extension axis (Y-Y),
- a wall mount (28) for the column body (8), between the lower end (12) and the upper end (20), comprising a first end (32) at least partially surrounding a portion of the side wall (36) of the column body (8) and a second end (40) shaped to lock the column body (8) to a wall or panel,
- locking/unlocking means (44) of the column body (8) with respect to said main longitudinal extension axis (Y-Y),

characterized in that

- said locking/unlocking means (44) comprise a pusher (48), arranged at the first end (32) of the wall mount (28), the pusher being movable from an extracted or locked position, wherein it abuts against said side wall (36) of the column body (8) so as to lock the column body (8) in position, to a retracted position, wherein it does not interfere with the column body (8).

2. The shower column (4) according to claim 1, wherein said pusher (48) is contained inside the wall mount (28) and is coaxial therewith.

3. The shower column (4) according to claim 1 or 2, wherein said pusher (48) moves along a transverse direction (X-X) substantially perpendicular to the

main longitudinal direction (Y-Y) of said column body (8).

4. The shower column (4) according to any of the claims from 1 to 3, wherein said pusher (48) is joined to the wall mount (28) according to a screw-type connection (50), along said transverse direction (X-X).

5. The shower column (4) according to any of the claims 1 to 4, wherein said pusher (48) is provided with a head (52) at least partially counter-shaped with respect to the side wall (36) of the column body (8) with which it interfaces in abutment.

6. The shower column (4) according to claim 5, wherein said head (52) comprises a front wall with a cylindrical lateral surface shape.

7. The shower column (4) according to claim 5 or 6, wherein said head (52) is made of polymeric material.

8. The shower column (4) according to claim 5, 6 or 7, wherein said head (52) is a disc removable with respect to the pusher (48).

9. The shower column (4) according to any of the claims 1 to 8, wherein the pusher (48) is equipped with an operating lever (56) accessible from the outside of the wall mount (28), to achieve the roto-translation of the pusher (48) with respect to the wall mount (28).

10. The shower column (4) according to claim 9, wherein said operating lever (56) is arranged along a radial direction (R-R) perpendicular to the transverse direction (X-X).

11. The shower column (4) according to claim 9 or 10, wherein said wall mount (28) comprises a slot (60) that delimits two rotational end stops of the operating lever (56) in locking and unlocking the column body (8).

12. The shower column (4) according to any of the claims 1 to 11, wherein between the column body (8) and the wall mount (28) at least one sliding bushing (64) is placed, fixed on an inner side wall (66) of the wall mount (28), to facilitate the sliding of the column body (8) with respect to said main longitudinal extension axis (Y-Y).

13. The shower column (4) according to any of the claims 1 to 12, wherein the wall mount (28) has an overall 'T' configuration wherein at the first end (32) a head of the 'T' has a collar (68) which coaxially surrounds the column body (8), and a shank (72) of the 'T' engages, through the second end (40), a mounting wall or panel.

14. The shower column (4) according to any of the claims from 1 to 13, wherein said supply point (24) of water comprises a hand shower or shower head and/or wherein, at the lower end (12), the column body (8) is fluidly connected to a water connection (16) via a mixer tap.

15. The shower column (4) according to any of the claims from 1 to 14, wherein, at the lower end (12), the column body (8) is mechanically supported and/or guided by a mixer tap.

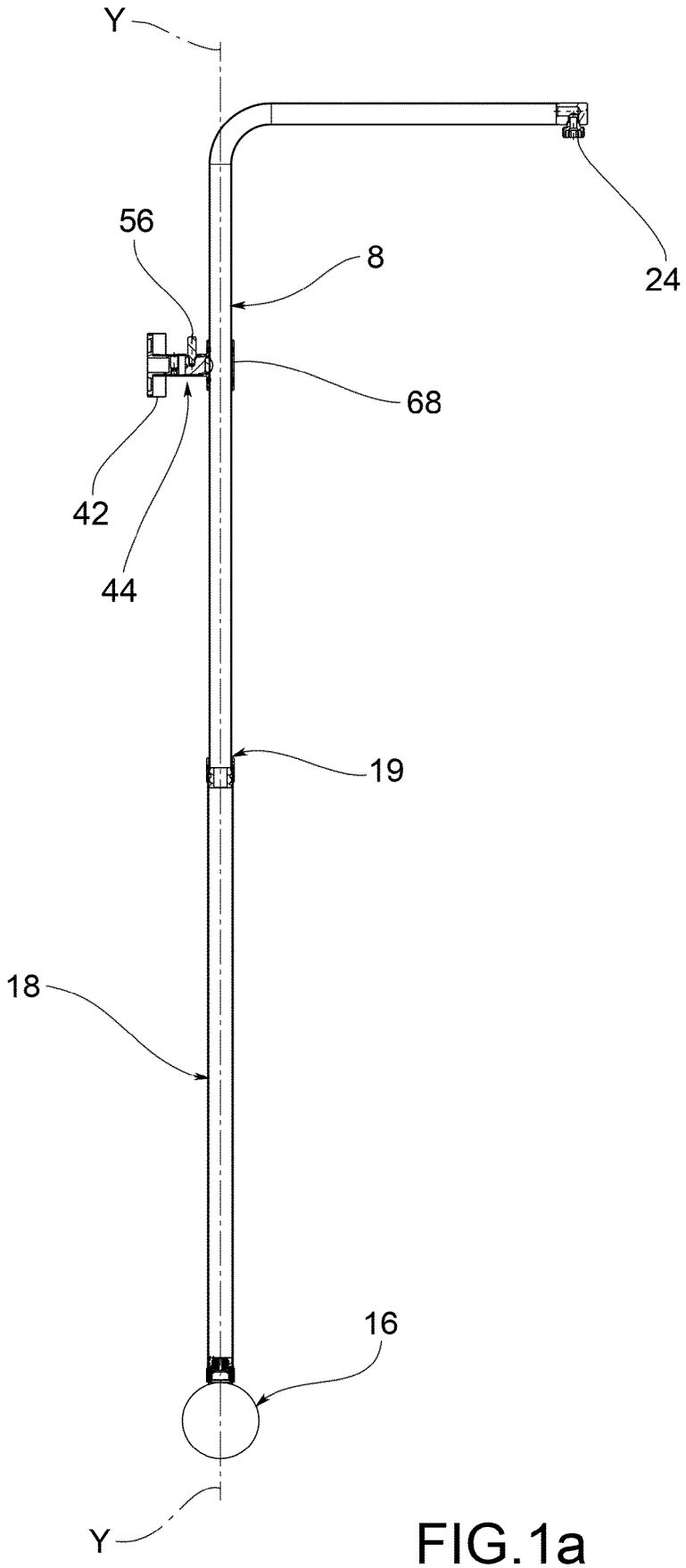

FIG.1a

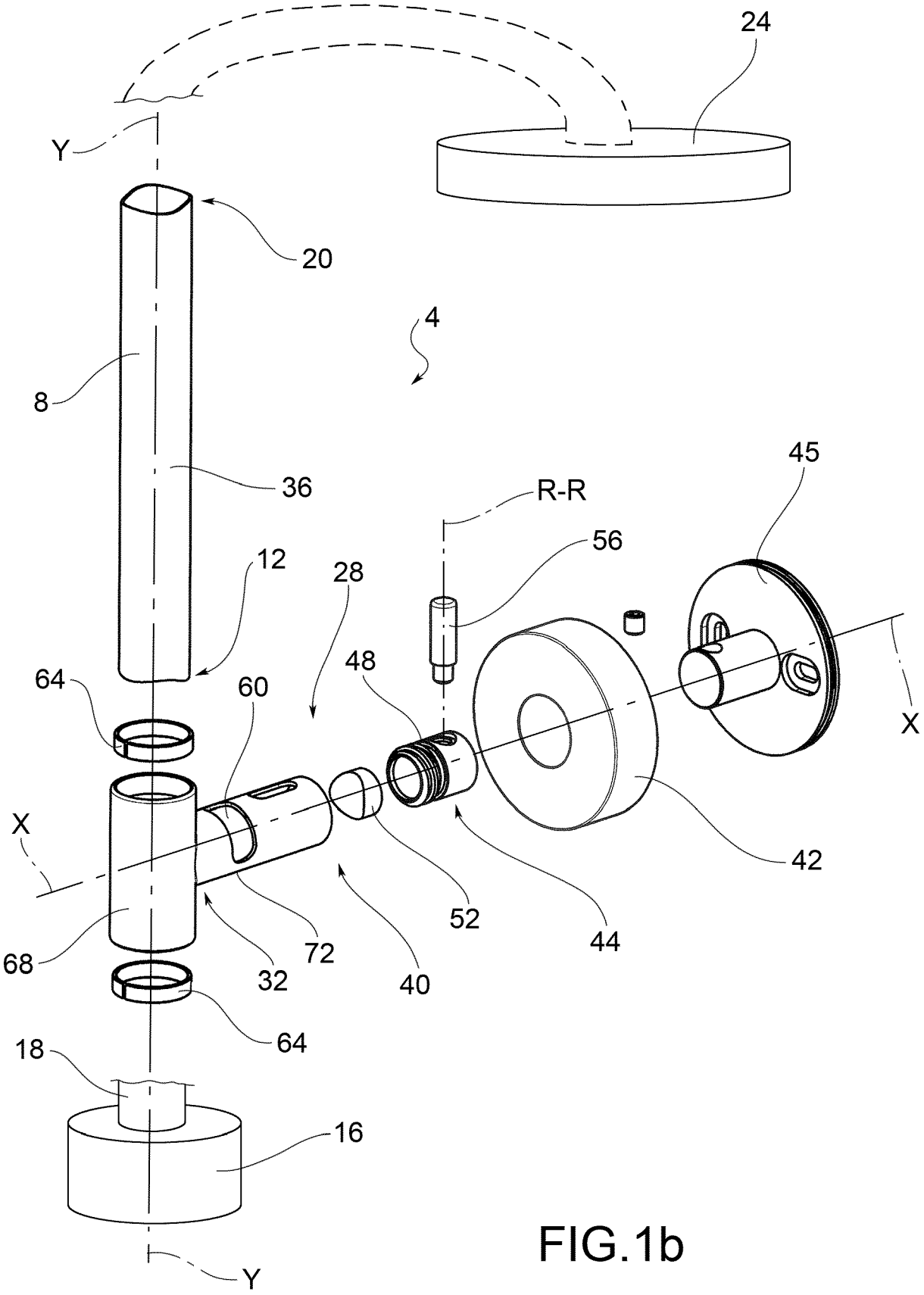

FIG.1b

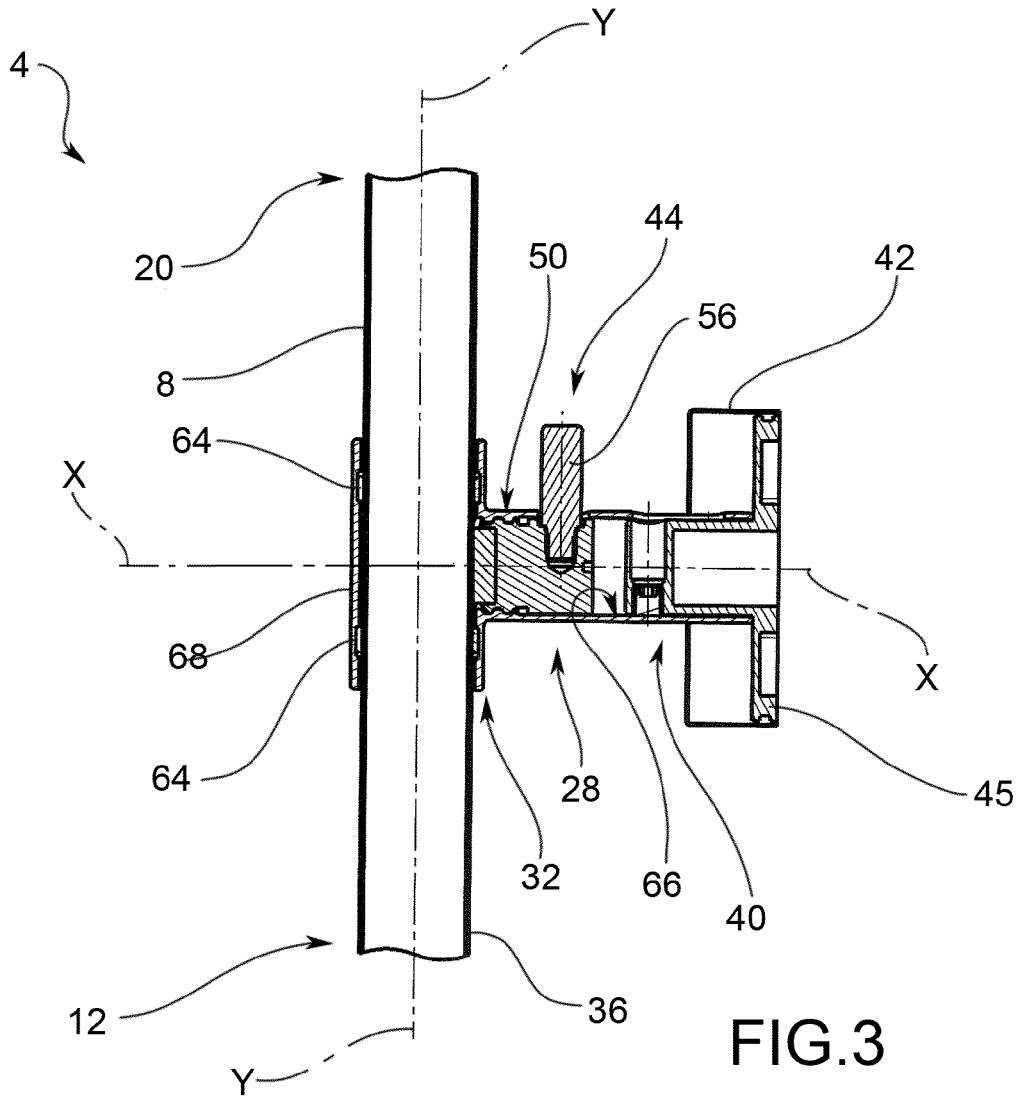
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FIG.3

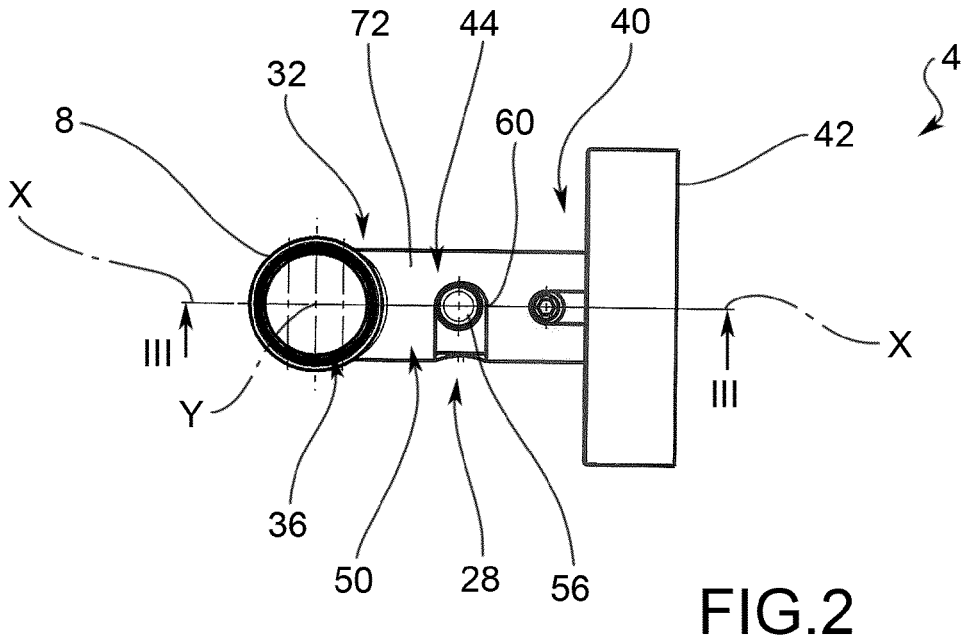
72
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FIG.2

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EUROPEAN SEARCH REPORT

Application Number
EP 21 17 8974

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 A	CN 108 894 288 A (FUJIAN NANAN LANYUAN SANITARY EQUIPMENT CO LTD) 27 November 2018 (2018-11-27) * figures 1-5 * -----	1-3,5-8, 12-15 4,9-11	INV. E03C1/06 E03C1/04
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A	CN 202 355 298 U (XIAMEN SOLEX TECHNOLOGY CO LTD; HUASONG ZHOU) 1 August 2012 (2012-08-01) * figures 2,4-6 * -----	1	

TECHNICAL FIELDS SEARCHED (IPC)

E03C

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	29 October 2021	Isailovski, Marko

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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29-10-2021

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