

(19)



(11)

EP 4 105 395 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
21.12.2022 Bulletin 2022/51

(51) International Patent Classification (IPC):
E03C 1/04 (2006.01) **A47K 3/00** (2006.01)
E03C 1/06 (2006.01)

(21) Application number: **22176375.8**

(52) Cooperative Patent Classification (CPC):
E03C 1/06; A47K 3/00; E03C 1/0408

(22) Date of filing: **31.05.2022**

(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
Designated Extension States:
BA ME
Designated Validation States:
KH MA MD TN

(71) Applicant: **AQUALISA PRODUCTS LIMITED**
Westerham,
Kent TN16 1DE (GB)

(72) Inventor: **SNELL, Jake**
East Malling, ME19 6BD (GB)

(74) Representative: **J A Kemp LLP**
80 Turnmill Street
London EC1M 5QU (GB)

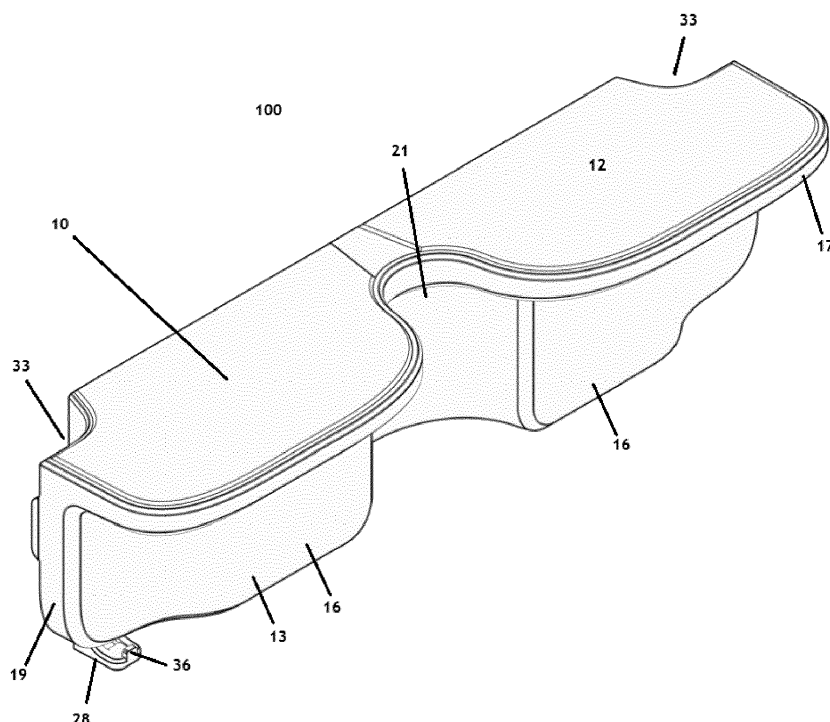
(30) Priority: **18.06.2021 GB 202108747**

(54) SHOWER SHELF, ASSEMBLY AND SHOWER UNIT

(57) In the present invention is provided a shower shelf for concealing at least part of a disused water pipe, the shelf comprising: a wall connection portion configured to be fixed to a wall, the wall comprising at least one disused water pipe protruding from the wall, the wall connection portion comprising an opening configured to re-

ceive at least part of the disused water pipe; a cover, wherein the shelf defines a cavity between the wall connection portion and the cover, the cavity being configured to house at least part of the disused water pipe; and an upper ledge positioned over the cavity. Also provided is a riser rail assembly and a shower unit.

Fig 1A

**EP 4 105 395 A1**

Description

[0001] The present invention relates to a shelf suitable for use in a shower, and more particularly to a shower shelf, a riser rail assembly comprising a shower shelf and the attachment of components of a riser rail to a shower shelf, and an electrical controller for controlling the provision of hot and cold water to a showerhead supportable on the shower riser rail. The present invention also relates to a method of installing the shelf for use in a shower.

[0002] Most conventional shower units include a riser rail for supporting a showerhead for dispensing water with the riser rail being fixed to a wall at either end. The showerhead is then attached to a slider on the riser rail and the showerhead is attached through a flexible tube to a water supply. The water supply is often a unit mounted on the wall at the base of, or below, the riser rail. The user can control the water supply by using taps or a controller connected to the water supply to open and close valves which vary the amount of hot and cold water which is dispensed by the showerhead to control the temperature of the water.

[0003] These conventional shower units generally require the water supply to be provided by water pipes located in the wall, i.e. which are part of a concealed system. In order to install such a shower unit, channels are generally chiselled out of the wall to fit the pipes, or the pipes are attached to the outside of the wall and some form of partition wall (i.e. a casing of some sort) is provided around them. Thus, the water pipes are generally housed within this wall or partition wall in a concealed system.

[0004] The water supply is normally provided in the shower space, where water dispensed by the showerhead will reach the water supply. Thus, the wall (or partition wall) will be protected to prevent water damage of the wall and surrounding areas. It is well understood that such spaces are generally water-proofed. Often, the shower space including the wall is tiled and grouted to prevent water permeating the wall, although options other than tiling are available. Water-proofing a shower space, e.g. by tiling, can be expensive as the materials themselves can be costly and installation normally involves a skilled person to prepare and tile the walls. After the shower is finished, the tiling (or appropriate finishing) will cover the wall housing the water pipes so that they are not visible.

[0005] For various reasons, a user may want to change the shower unit from a pre-existing one. For example, the user may wish to switch from a concealed shower system to an exposed shower system (in which the water supply is positioned outside of the wall to which the shower system is connected). The user is generally limited to choosing certain shower options that fit the water supply already provided in the wall, otherwise they would need to remove the finishing around the water supply, which normally involves re-tiling the whole shower area. Re-tiling the whole area can be very costly. Additionally, this

can lead to unnecessary waste due to replacing the wall finishing which might otherwise be maintained.

[0006] A user may replace the shower unit with an exposed shower system, e.g. a ceiling fed shower system which provides water from the ceiling rather than water pipes in the wall. This is beneficial as it does not limit the user to the exact location of the previous water supply. The previous water supply pipes (i.e. disused pipes) can be capped or blocked and the water can be redirected to the new ceiling fed shower unit via new water pipes. Although this is beneficial in that the pre-existing water pipes (i.e. disused pipes) do not need to be moved, the valves over the pipes will be removed and part of the water supply pipes will be exposed. This may be unsightly. The user is normally prevented from excavating around the water supply pipes to cut the pipes back, because this would require additional tiling. This might result in additional cost, and in some cases, the same tiles may not be available to the user. Thus, there are limited options when updating the shower unit which do not involve retiling the whole shower area.

[0007] The present invention provides a shower shelf for concealing a disused water pipe, the shelf comprising: a wall connection portion configured to be fixed to a wall, the wall comprising at least one disused water pipe protruding from the wall, the wall connection portion comprising an opening configured to receive at least part of the disused water pipe; a cover, wherein the shelf defines a cavity between the wall connection portion and the cover, the cavity being configured to house at least part of the disused water pipe; and an upper ledge positioned over the cavity.

[0008] In this way, a shelf can be used to conceal the pre-existing water supply pipes when updating a shower unit. Covering the pipes is beneficial in that the user can update the system and cap off the previously used pipes (i.e. redundant water pipes) without having to remove the previous pipework or re-tile. Thus, such a shelf is beneficial in hiding the redundant pipework so that additional costly works to remove the previous water pipes can be avoided. This allows much cheaper and quicker retrofitting of a shower system and also reduces overall waste such that the renovation work can be more environmentally friendly. The shelf provides the dual function of concealing pre-existing water pipes whilst also providing a structure on which a user can rest items for use in the shower, e.g. soap, shampoo, conditioner, etc..

[0009] Overall, the shelf of the present invention provides a cheaper alternative to redoing an entire bathroom whilst allowing installation of a new system, preferably which is a smart/digital system as discussed further below. This provides users with an upgrade solution that does not involve disruption to existing tiles. Not only is this cheaper, it is also less hassle for the user and results in less dust during renovation, etc.. Similarly, this provides installers with an upgrade solution that does not involve major pipework alterations, and which allows for easy and fast installation.

[0010] According to a further aspect of the present invention there is provided a riser rail assembly for attaching a rail to a wall, the assembly comprising the shelf described above and a riser rail.

[0011] In this way, the shelf can be used to conceal the redundant water pipes as described above, and the riser rail can be easily attached to the wall to fit a new shower system.

[0012] According to a further aspect of the present invention there is provided a shower unit comprising: a showerhead for dispensing water; the riser rail assembly described above, the riser rail being configured to support the showerhead; a flexible tube for connecting the showerhead to a water supply, wherein the riser rail includes a water passage disposed therein for the passage of water therethrough from a first end to a second, opposite end, and wherein the flexible tube is connected to the second end.

[0013] In this way, the shelf can be used to conceal the previous water pipes as described above and the shower system can easily be installed on the wall to replace a pre-existing shower unit.

[0014] The present invention will now be described by way of example only, with reference to the following drawings in which:

Fig 1A is a schematic front view of an embodiment of a shelf according to the present invention;

Fig 1B is a schematic back view of the embodiment shown in fig 1A;

Fig 2A is a schematic front view of an embodiment of a riser assembly according to the present invention, and Fig 2B is an exploded view of fig 2A;

Fig 3 is a schematic view of an embodiment of a shower unit according to the present invention;

Fig 4 shows a variation of a shelf according to the present invention;

Fig 5A shows a variation of a shelf according to the present invention, and Fig 5B shows an exploded view of Fig 5A;

Figs 6A and 6B are variations of a shelf according to the present invention;

Fig 7A shows a variation of a shelf according to the present invention, and Fig 7B shows a further view of the shelf of Fig 7A;

Fig 8A shows a variation of a shelf according to the present invention, and Fig 8B shows a further view of the shelf of Fig 8A;

Fig 9 shows a variation of a shelf according to the

present invention;

Fig 10A shows a variation of a shelf according to the present invention, and Fig 10B shows a further view of the shelf of Fig 10A.

[0015] The figures show the components described below. The components depicted in the figures are not to scale. In the figures, like parts are indicated with like reference numerals.

[0016] In the present invention, a shower shelf is provided for concealing at least part of disused water pipe. A shower shelf is a shelf to be used or fixed in a shower region. More specifically, the shower shelf is for concealing the part of the disused water pipe which protrudes from a wall, e.g. a part of the redundant water pipe which may be capped. Figures 1A and 1B show an example of the shower shelf 10. A version of the shower shelf in situ is shown in figures 2A and 2B.

[0017] The shelf can be attached to a wall 100 as shown in figure 2A. The wall 100 comprises disused water pipes 101, as shown in figure 2B, which generally correspond to a disused hot water pipe and a disused cold water pipe. At least one disused water pipe 101 protrudes from the wall 100. As will be clear from figure 2A, when the shelf is affixed to the wall 100 over the water pipes 101, the shelf 10 conceals the water pipes 101 such that they are not visible. Additionally, the shelf beneficially covers any screw holes and/or wall markings around the disused water pipes, which may have been made when attaching the previous valve to the wall.

[0018] The shelf 10 comprises wall connection portion 11, an upper ledge 12, and a cover 13. Generally, the wall connection portion 11 is used to connect the shelf 10 to the wall 100, the upper ledge 12 is the part on which the user can rest items to be supported by the shelf 10, and the cover 13 is a front part of the shelf 10.

[0019] The wall connection portion 11 is configured to be fixed to a wall 100. The wall connection portion 11 may be considered as a back side of the shelf 10. The wall connection portion 11 may be the only part of the shelf 10 which is connected to the wall 100. The wall connection portion 11 may be adjacent to the wall 100 when in position, i.e. the wall connection portion 11 may be flush with the wall 100. At least part of the wall connection portion 11 may be in direct contact with the wall 100 when in position. The wall connection portion 11 may be affixed to wall 100 by any appropriate means, such as screws. The wall connection portion 11 is preferably substantially vertical when affixed to the wall 100, as shown in the figures.

[0020] The wall connection portion 10 may have shaped portions on a surface for strengthening the wall connection portion 10, e.g. on a surface configured to face the wall when the shelf is in position on the wall. The shaped portions are beneficial in adding support and rigidity to the wall connection portion 10. This may be particularly useful when the wall connection portion 10 is

formed by injection moulding. The shaped portions may otherwise be referred to as ribs. The shaped portions are generally thinner than the main body of the wall connection portion 10. The shaped portions are shown as hexagons in figure 1B. Alternatively, other shapes may be used. Thus, the shaped portions may not be hexagons. The shaped portions may comprise parallel walls. The shaped portions may not be included.

[0021] The wall connection portion 11 comprises at least one opening 14 configured to receive at least part of the disused water pipe. In other words, the opening 14 may be a hole through which at least part of the disused water pipe is received in the shelf. In other words, each opening 14 is for the passage therethrough of at least part of one or more disused water pipes 101. The opening may otherwise be referred to as a slot. Each opening 14 in the wall connection portion 11 is large enough for part of at least one disused water pipe 101 to sit within the opening 14 when the shelf 10 is affixed to the wall 100 over the disused water pipe 101. This is shown in figure 2B. The opening 14 may be configured to receive part of two disused water pipes 101. Thus, the opening may be one large slot rather than two smaller slots. Alternatively, each opening 14 may be configured to receive part of a single water pipe 101.

[0022] The opening 14 may be an enclosed aperture, as shown in figures 1A, 1B, and 2B. The opening 14 may be a recess, i.e. an aperture which is not fully enclosed, as shown in figure 4. In this case, the opening 14 may not comprise the lower part 27 of the opening so that the opening is not fully enclosed.

[0023] For example, the opening 14 may have a width w between approximately 5 to 30 cm wide, or preferably approximately 5 to 20 cm wide, or preferably approximately 5 to 15 cm wide, or preferably approximately 5 to 10 cm wide. The opening 14 may be larger, e.g. approximately 30 cm wide if configured to receive part of two disused water pipes 101. The opening 14 may be smaller, e.g. between approximately 5 to 15 cm if configured to receive part of a single disused water pipe 101. In one example, brackets are provided on the wall around the disused water pipes. The brackets may be approximately 60 mm in width. In this instance, the width of the opening 14 may be between approximately 6-8 cm. The disused water pipes are typically spaced about 150 mm apart. This is common amongst most wall mounted mixer valves such as bar valve showers. Thus, if two openings are provided they may be spaced apart to allow for the distance between the used water pipes, for example, the openings 14 may be approximately 15 cm from the middle of one opening to the middle of the other opening. If a single opening is used, it may be at least 21 cm or more to allow for both brackets and the distance between the disused water pipes. These values are for example only and it would be understood that the opening, or openings, should be large enough to fit the disused water pipes and any appropriate bracket or cap on the disused water pipe. Preferably the shelf is quite compact, but it could be

smaller or larger in size.

[0024] A height h of the opening 14 may be between approximately 4 cm to 20 cm, preferably between 5 to 10 cm. Preferably, the height is between approximately 6-7 cm. The height h of the opening 14 may be substantially the same value as the width w . The height h of the opening 14 may be slightly smaller than the width w . For example, the height may be between approximately 6 to 7 cm and the width may be approximately 6 to 7 cm (or any other width described above). For example, the height may be between approximately 6 to 7 cm and the width may be approximately 21 to 22 cm (or any other width described above). It will be understood that any appropriate width and height of the opening(s) may be selected which will depend on the size of the opening 14 for receiving the redundant water pipe(s) and may depend on the overall size of the shelf.

[0025] The upper ledge 12 may provide a platform on which a user can rest items, such as shampoo, soap, and/or conditioner, etc.. This is beneficial to allow easy access to these items whilst in the shower, especially when the base of the shower is wet which might increase likelihood of slipping if the items are otherwise rested on the ground. Additionally, this is beneficial in that items can be rested on the shelf 10, whereas with prior known systems a user may have rested items on the shower valve, which is not designed for this purpose and may result in damage to the valve over time.

[0026] The wall connection portion 11 and the upper ledge 12 may be integral as shown in figure 2B. Specifically, at least part of the upper ledge 12 and the wall connection portion 11 may be integral. Thus, the wall connection portion 11 may be formed as a single piece with at least part of the upper ledge 12. Alternatively, the upper ledge 12 may be connected to the wall connection portion 11 by other means, such as adhesive.

[0027] The wall connection portion 11 may be configured to support the upper ledge 12. For example, the wall connection portion 11 may comprise protrusions which extend from the wall connection portion 11 and provide structural support to the upper ledge 12. These protrusions 43 are shown in figure 4.

[0028] The cover 13 may be spaced apart from the wall connection portion 11. The cover 13 may be a panel substantially opposite the wall connection portion 11. The cover 13 may be substantially parallel to the wall connection portion 11. The cover 13 may be a front side of the shelf 10. The cover 13 may have a front face 16 which covers the disused water pipes 101 when the shelf is affixed to the wall 100. The front face 16 may be the outwards facing part of the cover 13, e.g. which is substantially parallel to the wall 100 when the shelf 10 is affixed to the wall 100.

[0029] The cover 13, or at least part of the cover such as the front face 16, is preferably substantially vertical when the shelf 10 is affixed to the wall 100, as shown in the figures. The cover 13 may have a flat portion. For example, the front face 16 may be a flat portion. The

cover 13 may be any appropriate shape. The cover may be substantially flat, or planar, as shown in figures 5A and 5B. The cover 13 may be curved. The cover 13 may be curved inwards toward the wall at a base of the cover. For example, the cover may curve inwards toward the wall in the bottom corners of the cover 13.

[0030] The cover 13 may be positioned at the edge of the upper ledge 12. The cover may be connected to, or positioned adjacent to, an outer edge of the upper ledge 12. The cover 13 may be connected to the outermost part of the upper ledge 12. As shown in figures 2A and 2B, the cover 13 may comprise an edge portion 17 at the edge of the upper ledge 12 (i.e. a lip around the upper ledge 12) and an underside 18 beneath the upper ledge 12. At least part of the cover 13 may be positioned beneath the upper ledge 12. The cover 13 may be positioned set back from a front edge of the upper ledge 12, such that the upper ledge 12 overhangs the rest of the shelf 10.

[0031] The upper ledge 12 and the cover 13 may be separate components. The upper ledge 12 and the cover 13 may be configured to fit together when the shelf 10 is formed. The parts of the shelf may fit together such that the upper ledge 12 and the cover 13 are adjacent to each other without need for attachment between these components. In other words, the upper ledge 12 and the cover 13 may not be connected, even if they are in direct contact. For example, the upper ledge 12 may be connected to the wall connection portion 11 and the cover 13 may be connected to the wall connection portion 11. Alternatively, the upper ledge 12 may be connected to the cover 13, e.g. by adhesive. Alternatively, at least part of the cover 13 and at least part of the upper ledge 12 may be integral. Thus, part of the upper ledge 12 and part of the cover 13 may be formed as a single integrated piece (for example, as shown in figures 5A and 5B). The whole of the upper ledge 12 and the cover 13 may be integral.

[0032] The cover 13 can be connected to the wall connection portion 11 by any appropriate means. For example, the cover 13 may be at least partially connected to the wall connection portion 11 by a screw which can be inserted through fixing hole 30 in the cover 13 and corresponding fixture 31 in the wall connection portion 11. Additionally or alternatively, the wall connection portion 11 may comprise at least one, and preferably two, crush rib bosses with mating parts on the cover 13. The idea of the crush ribs is that when the parts go together the ribs will be crushed between the two mating parts to create a tighter fit. The crush ribs could be provided on the cover 13 instead of the wall connection portion.

[0033] The shelf 10 defines a cavity 15 between the wall connection portion 11 and the cover 13, i.e. in the space between the wall connection portion 11 and the cover 13. The cavity 15 is the internal space between the front and back of the shelf 10. The cavity 15 is configured to house at least part of the disused water pipe 101. Thus, when the shelf is affixed to the wall 100, at least part of one of the water pipes 101 (i.e. the part exposed from

the wall 100) sits within the opening 14 and the cavity 15. More specifically, the cover 13 is positioned relative to the wall connection portion 11 to define the cavity 15 between the wall connection portion 11 and the cover 13 for housing the disused water pipe 101. Thus, the cover 13 is spaced apart from the wall connection portion 11 to allow room for the disused water pipe 101 to be positioned between the wall connection portion 11 and the cover 13. As described further below, the cavity 15 may be configured to house a single disused water pipe, or multiple disused water pipes.

[0034] The upper ledge 12 is positioned over the cavity 15. Thus, when the shelf is positioned in the usual way on the wall, the upper ledge 12 is above the cavity 15.

[0035] Preferably, the upper ledge 12 is substantially perpendicular to wall connection portion. The upper ledge 12 may be substantially horizontal when the shelf 10 is affixed to the wall 100. The upper ledge 12 may be slightly sloped towards the wall 100. The upper ledge 12 may have small incline relative to horizontal, e.g. approximately $0.5-3^\circ$ to horizontal. Thus, when in position, the ledge may be at approximately $87-89.5^\circ$ between the wall on one side, and approximately $90.5-93^\circ$ to the wall on the other side. Preferably, the upper ledge has a 1° slope, i.e. the ledge is at approximately 89° between the wall and a top surface of the upper ledge 12 so that water will drain off the upper ledge 12 towards the wall. Providing a small incline of the upper ledge 13 may be beneficial for directing water to a back edge of the upper ledge 13 so that water runs along the back edge and down the wall 100. Alternatively, the draft angle could be 89° so that the water runs off the front face. Additionally or alternatively, both sides of the shelf 10 could be 89° from the centre out towards the sides so that water drains off the two sides (i.e. at either end of the shelf). Theoretically, the slope angle could be larger, however, it is preferably that the slope angle is not too large otherwise objects (e.g. shampoo bottles) places on the shelf 10 will slide off the shelf 10.

[0036] Preferably, the cavity 15 is enclosed. Preferably the cavity 15 is at least partially enclosed by the upper ledge 12, wall connection portion 11, and cover 13. The cavity 15 may be further enclosed when the shelf 10 includes sides 19 and/or a base 20 as described below. The cavity 15 may be fully enclosed within the shelf 10 when the shelf 10 is affixed to the wall 100.

[0037] As shown in at least figures 1A, 1B and 2B, the cover 13 may comprise sides 19 which extend between the front face 16 of the cover 13 and the wall connection portion 11. If present, the sides 19 are formed at the sides of the shelf 10. The sides 19 may extend from an edge of the front face 16 to the wall connection portion 11, i.e. to connect the front face 16 to the wall connection portion 11. Thus, the sides 19 can bridge a gap between the wall connection portion 11 and the front face 16 of the cover 13. Although the sides 19 are shown as part of the cover 13 in figures 1A, 1B, and 1C, the sides 19 could additionally or alternatively be integral with another part of the

shelf 10, e.g. the wall connection portion 11 and/or the upper ledge 12 and/or base part (described below). Alternatively, the sides 19 could be provided as separate elements attached to any of the wall connection portion 11, the upper ledge 12, the cover 13 and/or base part 20.

[0038] As shown in at least figure 1B (and figure 7B), the cover 13 may comprise a base part 20 which extends between the cover 13 and the wall connection portion 11. The base part may be substantially horizontal. The base part 20 may extend between a front face 16 of the cover 13 and the wall connection portion 11. The base part 20 may extend from an edge of the front face 16 to the wall connection portion 11, i.e. to connect the front face 16 and the wall connection portion 11. Although the base part 20 is shown as part of the cover 13 in figure 1B, the base part 20 could additionally or alternatively be integral with another part of the shelf 10, e.g. the wall connection portion 11.

[0039] When the shower shelf 10 is in position, the water provided by the shower will generally be released from a position above the shelf 10. Therefore, water from the showerhead will generally travel down over the ledge and will not get into the cavity 15 even without a base portion 20 and/or sides 19, especially if the upper ledge 12 overhangs the wall connecting portion 10 and/or cover 13. Even if water did get within the cavity 15, this should not have any significant impact on the shelf 10. Although a base part 20 may be beneficial in reducing likelihood of water being inside the shelf 10, it is preferable, and not a necessity. Although the figures generally include sides 19 and base part 20, it will be understood that these features are optional and either of these features may not be used. In this case, at least one side of the shelf 10 and/or the base part may be open, which would reduce material needed to form the shelf 10.

[0040] Although the shelf could usefully be provided by itself, it may be configured to fit with other components. For example, the shelf may be configured to fit with a riser rail. As described above, the riser rail can be used to support a showerhead. The riser rail may additionally be used as part of the water supply to the showerhead, as described further below. It may be beneficial for the shelf 10 to be configured to receive the riser rail in some capacity so as to support the riser rail 22 as shown in figure 2A. The riser rail 22 will be described further below.

[0041] The shelf 10 may comprise a riser receiving opening 21 in which the riser rail 22 can be positioned. Providing a riser receiving opening 21 is beneficial in that it allows robust connection between the riser rail and shelf 10.

[0042] The riser receiving opening 21 may be a recess, such as an indent or groove formed in the shelf 10, and particularly the upper ledge 12, in which the riser rail 22 may be positioned. The riser rail receiving opening 21 is shown as such a recess in figure 1A, 1B and 2A. In this case, the recess may be an opening, rather than an enclosed aperture. In this case, the riser rail 22 may be positioned external to (i.e. on the outside of) the shelf 10.

Thus, the riser 22 rail may be adjacent to the shelf 10 but positioned within the riser receiving portion 21. This may be beneficial in more easily attaching the riser rail 22 to the shelf 10 and thus, the wall 100, when the riser rail 22 is to be provided.

[0043] Alternatively, the riser receiving opening 21 may be formed by an enclosed aperture. In this case, the riser rail 22 may be positioned within and fully surrounded by the riser receiving opening 21. The riser receiving opening 21 may be formed by an enclosed aperture in the upper ledge. This is shown in at least figures 5B, 6A, 6B, 7A, 8A, 8B, and 9. This may be beneficial in providing more robust support of the riser rail 22. In this case, the riser rail 22 may be held in the riser receiving opening 21 without any additional features. Thus, the riser rail 22 may extend through the shelf 10. The riser rail 22 may be held in place in the riser receiving opening 21 by a friction fit between the opening and the riser rail 22. The riser rail 22 may be held in place by the riser receiving opening 21 by other means, such as adhesive. The riser rail 22 may be fixed to a flexible hose 24 (described below) which extends through a bottom of the shelf 10. Either way, the riser rail 22 or the flexible hose 24 can extend out of the bottom of the shelf 10, e.g. through an aperture in the base (if provided). The riser rail 22 may extend through a riser receiving opening in the upper ledge 12 and through a corresponding opening in the cover 13, such as shown in figure 9.

[0044] The shelf 10, and preferably the cover 13, may comprise a riser mating component (not shown) which can be used to hold the riser rail 22 in place. The riser mating component is configured to receive a corresponding mating component connected to the riser rail 22. The mating component may be a clip, hook or a slot with corresponding mating parts on either the shelf or connected to the riser rail. This may be beneficial in further securing the riser rail 22 to the shelf 10 to keep the riser rail 22 in the correct position relative to the wall 100. Such mating components may be used when the riser receiving opening 21 is a recess, but may not provide any additional benefit when the riser receiving opening 21 is an enclosed apertures.

[0045] The position of the riser rail receiving opening 21 (i.e. at which the riser rail 22 is to be positioned) on the shelf may depend on the overall look of the shelf 10 and/or the preferred position of the shelf 10 (which may depend on the space available for the shelf 10). The riser receiving opening 21 might be positioned so as to sit between the disused water pipes 101. In other words, the shelf 10 may be configured to house a disused shower pipe on either side of the riser receiving opening 21. This is shown in at least 1-6A, and 8A-9. This may be beneficial when the replacement shower unit is to stay in substantially the same place as the previous shower unit. The cavity 15 may provide a space within the shelf 10 for housing the disused shower valve on either side of the riser receiving opening 21. The shelf 10 may comprise one main cavity with space on either side of the

riser rail 22 in which a disused water pipe can be positioned. Alternatively, the shelf may comprise two main cavities, with one either side of the riser rail 22, wherein each of the main cavities is configured to house a single disused water pipe 101.

[0046] Alternatively to the above, the shelf 10 may define a cavity for housing two disused shower valves on one side of the riser receiving opening. This is shown in figures 6B, 7A and 7B. The cavity 15 may have one main cavity suitable for receiving two disused water pipes. The shelf may comprise two main cavities, both on the same side of the riser receiving opening, in which a disused water pipe 101 can be positioned. This may be beneficial when the replacement shower unit is to be shifted compared to a previous shower unit. For example, a user may find that the previous water pipes were too close to the wall and providing a shelf with the redundant water pipes covered to one side of the riser rail 22 allows more space between an adjacent wall and the riser rail 22.

[0047] Either configuration may be preferred and could be combined with any other features. It may be beneficial to use one configuration over the other depending on the space available and where the riser rail is to be positioned compared to the pre-existing water pipes which are to be disused and concealed.

[0048] A controller 26 may be provided. The controller 26 is configured to receive input from the user. The controller 26 is configured to generate electrical signals based on user input to the controller 26. Thus, the controller may be an electric controller. When the electric controller is provided, this may be used to provide a smart/digital system. The controller could be referred to as a control unit. The user input may relate to a desired temperature and/or pressure of water to be dispensed by the system. The controller 26 may comprise a display which may display characteristics of the water being dispensed, e.g. indicators of temperature and/or pressure. The controller 26 may receive the user input in a variety of different ways, e.g. via buttons, levers, and/or a touch screen (e.g. as part of the display), on the controller 26. The user input may be converted by the controller 26 to electrical signals which are sendable via electrical wiring. The user input may be converted to wireless signals, which are sent over some form of wireless network.

[0049] The controller 26 may be attached (or at least attachable) to the shelf 10 and/or the riser rail. In figures 2A, 2B, 3 and 9, the controller is attached to the riser rail. In figures 5A-8A, 10A and 10, the controller is attached to the shelf 10. Providing the controller attached to the shelf 10 and/or riser rail 22 may be beneficial in that the controller is in an easily accessible part of the shower. It may be beneficial to provide any wiring used for the controller within the shelf 10 and/or the riser rail 22.

[0050] The controller 26 may be attached to the riser rail 22, i.e. directly connected to the riser rail 22. For example, the controller 26 could be held in place on the riser rail 22 with a riser rail connector 25 as shown in figure 2B. The riser rail connector 25 may attach to the

shelf 10. The controller 26 may connect to the riser rail to be positioned in line with the shelf, as shown in figure 2A. In other words, the controller 26 may be positioned in front of the shelf, and particularly, in front of riser receiving opening 21. The controller 26 may be connected to the riser rail above or below the shelf 10. For example, the controller 26 may connect to the riser rail below the shelf 10 as shown in figure 9.

[0051] The controller may be attached to the shelf 10, i.e. directly connected to the shelf 10. For example, the controller 26 could fit within a recess on the front of the shelf 10, or could be positioned on a front part of the shelf 10, i.e. protruding out further than other parts of the shelf 10. Preferably the controller 26 is positioned on the front of the shelf (e.g. connected to cover 13), even if within a recessed part of the shelf 10, as this allows more design freedom over the size and shape of the controller 26. Additionally, having the controller 26 mounted on the front of the shelf or being positioned further forward, makes it easier for the customer to operate, in particular the turning temperature dial (if present).

[0052] Preferably the controller 26 is circular as shown, however, this is not a necessity and other shapes, e.g. square, oval, triangular, rectangular etc. may be used. The controller might include a display screen as shown with a touch button or touch screen. Alternatively, the controller may include buttons (without a display screen), or any appropriate variation which allows user input to the controller.

[0053] The shelf 10 may comprise a controller supporting portion 32 configured to attach to the controller 26, i.e. a part of the shelf 10 which is specifically configured to connect to and support the controller 26. For example, the controller supporting portion 32 may comprise a mating component configured to receive a corresponding mating component of the controller 26. The controller 26 may be configured to attach to the controller supporting portion 32. The controller 26 and or the controller supporting portion mating component may comprise a hook, slot or clip and a corresponding part to which the hook, slot or clip connects to. The controller may be mounted to a controller back plate with a clip, and the controller may then be rotated and secured with a screw to the controller back plate. The controller back plate could be part of the controller supporting portion 32.

[0054] When the controller 26 is attached directly to the shelf 10, the controller may be substantially aligned with the riser receiving opening 21 (and the riser rail 22 if provided). This is shown in at least figures 5B and 6A. However, the controller 26 may not align with the riser receiving opening 21 (and the riser rail 22 if provided). For example, the controller 26 may be offset from the riser receiving opening 21 (and the riser rail 22 if provided), for example as shown in figure 6B.

[0055] The controller 26 could be configured to connect to the shelf (via the controller receiving portion 26) and the riser rail 22. For example, the controller 26 may slot into the shelf, e.g. as shown in figure 5A, and may also

comprise a clip to connect to the riser rail 22.

[0056] When the controller 26 is provided, electrical components relating to the controller, e.g. control wire 42, may be positioned at least partially within the shelf.

[0057] When any electrical components are positioned within the shelf, which may be the case in any of figures 5A, 5B, 6A, 6B, 7A, 7B, 8A or 8B for example, it is particularly beneficial for the shelf to be fully encapsulated, i.e. for the cavity to be enclosed. This would prevent water from entering the cavity 15 and tampering with the electronics. It may be beneficial for a sealant, e.g. silicone, to be used between the upper ledge 12 and the wall 100 (e.g. a bead of silicone) to prevent water from draining down the back of the shelf 10. Sealant could be used around any/all edges of the shelf 10 in contact with the wall 100.

[0058] If the controller is separate from the shelf, e.g. as shown in figures 9, 10A and 10B, there may not be any electronics within the shelf cavity 15. For example, the controller 26 may be electrically connected through the riser only, and not the shelf 10. In this case, the cavity may not be fully enclosed. There may be holes in the base of the shelf, e.g. in lower part 27 as shown in figure 1B, for the water to drain out of if it gets in.

[0059] As shown in at least figures 1A, 1B, 2A and 2B, the shelf may be formed to comprise two recesses 33 (which may otherwise be referred to as hose restraints or slots) between the shelf 10 and the wall 100. The recesses 33 are configured to receive flexible tube 24. The flexible tube 24, which may otherwise be referred to as a shower hose, may be braided or smooth. It is beneficial in that the flexible tube 24 can be positioned in one of the recesses 33 so that the flexible tube can be kept out of the way of the user. It may be beneficial to provide a recess 33 on either side of the shelf 10 because this allows the user to position the flexible tube 24 on either side of the shelf 10 depending on which is more convenient. However, the recess 33 may be provided on only a single side of the shelf 10. Although many of the figures are shown with at least one recess 33, the shelf 10 may not comprise any recesses 33, may comprise one recess 33, or may comprise two recesses 33, i.e. the recess 33 is optional.

[0060] The recess 33 may be formed by a curved side wall 34. The recess 33 may comprise a protrusion 35 which extends from an outer edge of the curved side wall. The protrusion may be beneficial in keeping the flexible tube 24 positioned between the curved side wall 34 and the wall 100.

[0061] The shelf 10 may comprise hooks 28 on which a user may hang items for use in the shower. The shelf 10 may comprise two hooks 28, e.g. one hook at either end of the shelf 10 as shown in figure 1B. The hooks 28 may be connected to the wall connection portion 10. The hooks 28 may be integral with the wall connection portion 10. The hooks 28 may protrude from a bottom of the shelf 10. There may be any appropriate number of hooks. For example, only one hook may be provided, or more than

two hooks, e.g. three, or four, or five or more hooks could be provided on the shelf. Although various figures of the shelf show hooks, no hooks may be provided, i.e. the hooks are optional.

[0062] Although the hooks 28 are generally shown as being connected to the wall connection portion 10, the hooks could additionally or alternatively be connected to another element of the shelf 10, e.g. the upper ledge 12 and/or the cover 13 and/or the sides 19 and/or the base portion 20. The hooks may be integral with any component of the shelf or could be connected by other means, e.g. adhesive. For example, a hook 28A may be provided on an outside of the cover 13 as shown in figures 8A and 8B. When provided on the cover 13, the cover 13 may be shaped so as to provide the hook 28A beneath the upper ledge 12 so that the hook 28A does not protrude out of the shelf further than the upper ledge 12 as shown in figure 8A.

[0063] In Fig 8A, it is noted that the upper ledge 12 is formed of one portion, which may or may not be integrally formed with the wall connection portion 10. As described below, the upper ledge 12 could be formed of multiple layers and may have a top layer as described below, e.g. made of glass.

[0064] Each hook 28 may comprise a protrusion 36 at the end of the hook 28. The hook protrusion 36 may be beneficial in keeping items positioned on the hook 28 in place, i.e. to reduce the likelihood of the item falling off the hook 28. Preferably, the hook protrusion 36 extends upwards, as shown in figure 1B. A similar hood protrusion 26A is shown for the hook 28A provided on the cover of figures 8A and 8B.

[0065] It will be understood that the shelf described in any of the above variations may optionally be provided with the riser rail 22 and thus, could be part of a riser rail assembly. The riser rail assembly may be suitable for attaching the riser rail 22 to the wall 100. The riser rail 22 may be attached to the shelf, which in turn is attached to the wall 100. Thus, the riser rail may be indirectly attached to the wall 100.

[0066] The shelf 10 and riser rail 22 may have any of the above described features, for example, a riser rail connector 25 configured to connect the riser rail to the shelf 10. The riser rail connector 25 may comprise a clip, slot or hook to connect to the shelf 10. Alternatively, the riser rail connector 25 may be connected to a clip, slot or hook on the shelf 10. The riser rail assembly may comprise the controller 26, which may optionally be attached to the riser rail 22.

[0067] The riser rail assembly may further comprise a clip 23 for attaching the riser rail to the wall above shelf. Alternatively, the clip 23 could be connected below the shelf 10. The clip may be particularly beneficial for keeping the riser rail 22 in position. This can reduce the likelihood of the riser rail 22 becoming displaced, which could lead to water leaks. The clip may provide a wall portion 23A, a connecting portion 23B and a clip cover 23C. The wall portion 23A may be connected to the wall 100 via

any appropriate fastener, e.g. at least one screw. The riser rail 22 may be received in the wall portion 23A. The connecting portion 23B may attach to the wall portion 23A and may keep the riser rail 22 in position relative to the wall portion 23A. The connecting portion 23B may attach to the wall portion 23A in any appropriate way, e.g. by slotting onto the wall portion 23A. The clip cover 23C may cover the wall portion 23A and the connecting portion 23B to improve the look of the clip 23.

[0068] Additional components of a shower may also be provided. In an embodiment, a shower unit may be provided. The shower unit may comprise the riser rail assembly. Thus, the shower unit may comprise the riser rail 22 and the shower shelf 10, e.g. having any of the variations disclosed herein. The shower unit may comprise a showerhead 37 for dispensing water. The riser rail 22 is configured to support the showerhead 37. The shower unit comprises the flexible tube mentioned above 24. The flexible tube 24 connects the showerhead 37 to a water supply. The riser rail 22 includes a water passage disposed therein for the passage of water therethrough from a first end to a second, opposite end. The flexible tube 24 is connected at one end to the second end of the riser rail 22. The flexible tube 24 is connected at the other end to the showerhead 37. Thus, the water is supplied by the water supply at the first end of the riser rail 22, travels through the riser rail 22 to the second end of the riser rail, travels through to the flexible tube 24, and passes to the showerhead 37.

[0069] Hot and cold water may be supplied to a water pipe 40 by an valve 41, as shown in figure 3. As shown in figure 3, the valve 41 may be provided above the shower shelf and showerhead. For example, the valve 41 may be positioned in or above the ceiling of the bathroom, e.g. in a loft space. The valve 41 may mix hot water supplied to the shower system by a hot water pipe 38 and cold water supplied to the shower system by a cold water pipe 39. The temperature of the water can be controlled by controller 26. Water pipe is positioned within riser rail 22 to provide water from the valve 41 to the flexible tube. As described above, electronic signals can be sent from the controller 26 to the valve 41. The valve may be an electronically controlled valve 41. The electronic signals could be received by the valve 41 via a control wire 42 (i.e. a data cable) which connects the controller 26 and a processor. The processor is shown as part of the valve 41 in Fig 3. However, the processor may be provided outside of the valve 41 and may be electronically connected to the valve 41. The controller 26 may be powered via the control wire 42. The control wire 42 may be disposed within the riser rail 22, for instance, alongside the water pipe 40. Therefore, the control wire 42 travels up the rail. Thus, electrical signals from the controller 26 are sendable along at least a portion of the riser rail 22 to the first end of the riser rail. These signals through the data cable may enable temperature control and/or turning on and off of the shower through interaction with the controller. Alternatively, the electronic signals could be re-

ceived wirelessly from the controller 26. In this case, the controller may be powered by batteries. The controller 26 may be attached to the riser rail 22 or the shelf 10 as described above. The system may be referred to as a smart system or a digital system when comprising an electronic controller which is used to control the shower.

[0070] Generally, the shelf 10 described above is used to conceal two disused water pipes 101. In these embodiments, the shelf comprises at least one cavity, or multiple cavities, to house the multiple disused water pipes 101. Thus, a single shelf may be used to conceal two disused water pipes. However, the shelf 10 may be configured to house a single disused water pipes. In this case, multiple shelves may be provided, wherein each shelf conceals a single disused water pipe 101. For example, two shelves 10A, 10B used to conceal two disused water pipes, for example, each shelf 10A, 10B may be configured to cover a single disused water pipe 101. This is shown in figures 10A and 10B.

[0071] In this case, each shelf 10A, 10B may comprise a single opening (corresponding to opening 14) for receiving the disused water pipe 101. Thus, the shelf may be provided with a wall connection portion 11 comprising a single opening configured to receive at least part of the disused water pipe. The shelf 10 may comprise a cavity 15 large enough to house one disused water pipe. In this instance, the cavity 15 may be large enough to house a single disused water pipe, i.e. not large enough to house two disused water pipes. Thus, each shelf 10A, 10B may define a cavity for housing a single disused water pipe 101.

[0072] The multiple shelves may be provided as part of the riser rail assembly. When the two separate shelves 10A, 10B are provided, each shelf defines a cavity for housing a single disused water pipe. The shelf 10A, 10B configured to house a single disused water pipe will generally be smaller than a shelf configured to house two disused water pipes (as in figures 1 to 9). When multiple shelves are provides, e.g. as in figures 10A and 10B, the shelves may have a gap formed between them when affixed to the wall 100. The riser rail 22 may be positioned in the gap between the two shelves. As shown in figure 10A, the controller 26 may be attached to the riser rail 22. Each shelf 10A, 10B configured to house a single disused water pipe may only include a single recess 33 configured to receive the flexible tube 24. Preferably, the recess is formed on an outer side portion of the shelf (which is further from the riser rail 22).

[0073] When the riser rail 22 and/or controller 26 is positioned to one side of both of the disused water pipes 101, the shelf 10 may comprise at least part of the upper ledge 12 and/or cover 13 extending on the other side of the riser rail 22 and/or controller 26 than the disused water pipes 101. Thus, the shelf may include at least one cavity housing the pipes, at least part of the upper ledge 12, and at least part of the cover 13 on one side of the riser rail 22 and/or the controller 26, and at least part of the upper ledge 12 and/or cover 13 on the other side of

the riser rail 22 and/or the controller 26. This is shown in figures 7A and 7B.

[0074] The shelf may be affixed to the wall in any appropriate manner. Generally, the wall connection portion 11 is attached to the wall 100 and the other components of the shelf 10 are attached to the wall connection portion 11. The wall connection portion 11 may comprise fixing holes 29 through which screws can be used to affix the wall connection portion 11 to the wall 100. The fixing holes 29 may be any appropriate shape. Other fixing means could be used instead, however, using screws are likely to be sufficiently secure and easy to install. Providing fixing holes 29 may be beneficial in that they can be formed in the shelf 10 when the shelf is being manufactured. This should avoid any additional fixing holes being made in the shelf 10 during installation, which could damage the shelf.

[0075] The upper ledge 12 may optionally comprise multiple elements. Thus, the upper ledge may comprise separate elements (e.g. layers) which are connected together. The elements may be connected together in any appropriate way, e.g. using adhesive. For example, the upper ledge 12 may have a supporting surface 12A and a top layer 12B. The top layer 12B may provide the surface on which the user rests items. The top layer 12B may be a planar portion. The top layer 12B may be thermoplastic polymer (e.g. PMMA), glass or acrylic. The supporting surface 12A may support the top layer 12B. The top layer 12B might be a separate element. The top layer 12B might be attached to the top of the supporting surface 12B, for example, using adhesive, e.g. using waterproof 3M adhesive. The top layer 12B could be removable to allow easier cleaning of the top of the shelf. The top layer 12B may be swapped with another top layer to change the look of the shelf 10. The top layer 12B may be a coating layer on the supporting surface 12A. When the shelf 10 is constructed, only the top layer 12B may be visible. The supporting surface 12A may be connected to other components of the shelf 10, such as the wall connection portion 11 and/or the cover.

[0076] The shower shelf components may be made of any appropriate waterproof material. For example, the shelf may be made of a plastic, for example, a thermoplastic polymer, such as Acrylonitrile butadiene styrene (ABS). ABS is beneficial as it is suitable for injection moulding, which might be used to manufacture parts of the shelf, and can be plated, e.g. using chrome. Part of the shelf may be plated, e.g. chrome plated. As described above, at least part of the shelf, e.g. the top layer 12B, may be made of thermoplastic polymer (e.g. PMMA), glass or acrylic. Components may be attached to each other in any appropriate way, for example, using adhesive such as waterproof 3M adhesive. Although the shelf 10 has various features which can be used in combination with a riser rail 22 and/or corresponding shower unit, it will be noted that the shelf could be provided separately. The shelf 10 can be useful without any additional components by providing a ledge on which to place items,

and concealing redundant water pipes.

[0077] The riser rail assembly and/or shower unit described above may be supplied with appropriate pipe caps to place over the end of the water pipes to prevent water leaking from the redundant pipes. It may be beneficial to provide the caps as they may be selected to ensure they can be easily attached to the wall as well as filing within the shelf 10 when attached to the wall 100. However, the caps can be obtained separately to ensure that the correct valve cap is provided for the pipe. For example, the caps may be push fit, screw fit or soldered fit.

[0078] It is described above that certain components of the shelf 10 are integral. Multiple components may be formed as one integrated piece. For example, the wall connection portion 11, upper ledge 12 and/or cover 13 may be an integrated piece. For example, the shelf may be provided as two separate parts, with a first part including the wall connection portion and the base, and the second part comprising the upper ledge and the cover. Either the first part and/or the second part may comprise at least one side. All the shelf components could be integral, for example if the shelf is 3-D printed, die cast, machined or injection moulded. Alternatively, various elements may be provided separately. Individual elements could be manufactured in any appropriate way, e.g. by 3-D printing, die casting, machining or injection moulding. The separate elements may be attached to each other in any appropriate manner, e.g. using adhesive and/or mating components.

[0079] Various additional components could be added to the shelf. For example, lighting could be added. The lighting may be switched between different options. Additionally or alternatively, integrated speakers may be provided. Lighting and/or speakers may be used to provide light or sound respectively from the base, cover 13 and/or upper ledge 12. Different coloured lighting may be provided. Lighting and/or integrated speakers may be electrically connected to the controller 26, e.g. via electrical wiring within the shelf 10. The user may control the lighting and/or speakers by using the controller 26. The lights and/or speakers could be battery operated and might be controlled via wireless signals from the controller 26.

[0080] Various components are described herein with mating components comprising a hook, slot or clip. It is understood that any appropriate fastening component may be used as well as, or instead of any combination of the clip, slot, crush rib, or hook described.

[0081] Throughout the present disclosure, redundant water pipes are generally referred to as disused water pipes. These pipes may or may not be capped, although it is preferred that the disused water pipes are capped or blocked in some way to avoid leakage from the redundant pipes. Any suitable cap may be placed on the exposed pipework sticking out of the wall. For example, a threaded cap, soldered cap, a push fit cap, etc. may be used. Additionally or alternatively, redundant water pipes may be

fitted with isolation valves, which may be positioned further along the redundant water pipes, to block the redundant pipes. The use of isolation valves are beneficial for providing additional protection, but may only be used when there is access to fit the valves. It is advisable to also cap off the pipework sticking out from the bathroom wall. The disused water pipe may be blocked/sealed in any appropriate way.

[0082] An advantage of the shelf of the present invention is that it can be easily installed to conceal previously used i.e. redundant, water pipes. For example, a method of installing the shelf includes capping exposed water pipes, providing at least one shelf 10 as described herein, placing the shelf on the wall over at least one disused water pipe and affixing the shelf 10 to the wall. In this way, redundant water pipes can be easily concealed using the shelf without having to re-tile or otherwise redecorate the area around the redundant water pipes.

[0083] Affixing the shelf to the wall may comprise fitting the wall connection portion 11 to the wall such that the disused water pipes each sit within an opening of the wall connection portion 11. Next, the wall connection portion may be affixed to the wall 100, for example, by inserting screws into the wall through the fixing holes 29 provided in the wall connection portion 11. Other parts of the shelf, such as any separate parts of the upper ledge and/or cover 13 can be attached to the wall connection portion 11 by additional screws, or another appropriate fixing means, such as adhesive.

[0084] The method may further comprise connecting the riser rail. This may include affixing the riser rail to the wall. Preferably, this includes connecting the riser rail to the shelf and to the wall above the shelf. The method may further comprise connecting the controller 26 to the shelf 10 and/or the riser rail 22. If the controller 26 requires electrical wiring to be connected through the shelf 10 and/or riser rail 22, then it may be more convenient to position the wiring within the shelf 10 and/or riser rail 22 respectively before attaching these components to the wall 100. The method may include exposing water pipes, e.g. by removing previously used shower valves connected to water pipes in the wall.

[0085] Although the shelf is described above for use with an electronic controller and ceiling fed shower system. The shower shelf may be provided without additional components in order to conceal redundant shower pipes, for example, if a shower is to be fitted on another nearby wall. In other words, the shelf may not include the riser receiving opening and the controller receiving portion. The shelf may not include the riser and the controller. In this case, the shelf may be simply a shelf covering up the previous installation.

[0086] Also, it will be understood that although the shelf is configured to receive the disused water pipes, the same shelf could be used as a shelf without concealing any water pipes at all. For example, the shelf could be used in new shower installations. In this case, the shelf, which may have any of the above described features,

can simply be affixed to the wall (without concealing any disused water pipes).

[0087] References in the present disclosure which relate to up, upper, down, lower, top, bottom should be understood as describing relative locations of the components of the shelf, riser rail and or shower unit when installed as intended, for example as shown in any of the figures. The shelf, riser rail, and or shower shelf may be provided in any alternative configuration or orientation, e.g. in which the top becomes the bottom and the base is the top and so on.

[0088] Embodiments may be provided according to the following clauses:

Clause 1. A shower shelf for concealing at least part of a disused water pipe, the shelf comprising:

a wall connection portion configured to be fixed to a wall, the wall comprising at least one disused water pipe protruding from the wall, the wall connection portion comprising an opening configured to receive at least part of the disused water pipe;

a cover, wherein the shelf defines a cavity between the wall connection portion and the cover, the cavity being configured to house at least part of the disused water pipe; and

an upper ledge positioned over the cavity.

Clause 2. The shelf of clause 1, further comprising a controller configured to generate electrical signals based on user input to the controller.

Clause 3. The shelf of clause 2, further comprising a controller supporting portion configured to attach to the controller.

Clause 4. The shelf of any preceding clause, wherein the cavity is enclosed.

Clause 5. The shelf of any preceding clause, wherein the shelf is shaped to form a recess between the shelf and the wall, the recess being configured to receive a flexible tube.

Clause 6. The shelf of any preceding clause, further comprising at least one hook which protrudes from a bottom of the shelf.

Clause 7. The shelf of any preceding clause, wherein at least part of the upper ledge and the wall connection portion are integral.

Clause 8. The shelf of any preceding clause, wherein at least part of the upper ledge and the cover are integral.

Clause 9. The shelf of any preceding clause, wherein the wall connection portion comprises fixing holes through which screws can be used to affix the wall connection portion to the wall.

Clause 10. The shelf of any preceding clause, wherein the upper ledge comprises a riser receiving opening in which a riser rail can be positioned, wherein the riser receiving opening is formed by a recess or an enclosed aperture in the upper ledge.

Clause 11. The shelf of clause 10, wherein the shelf is configured to house a disused water pipe on either side of the riser receiving opening.

Clause 12. The shelf of clause 10, wherein the shelf defines a cavity for housing two disused water pipes on one side of the riser receiving opening.

Clause 13. A riser rail assembly for attaching a riser rail to a wall, the assembly comprising:

a riser rail; and

the shelf of any one of clauses 1 to 9.

Clause 14. The riser rail assembly of clause 13, further comprising a riser rail connector configured to connect the riser rail to the shelf.

Clause 15. The riser rail assembly of either of clauses 13 or 14, further comprising a controller attached to the riser rail.

Clause 16. The riser rail assembly of any one of clauses 13 to 15, further comprising a clip for attaching the riser rail to the wall above the shelf.

Clause 17. The riser rail assembly of any one of clauses 13 to 16, wherein the upper ledge comprises a riser receiving opening in which a riser rail can be positioned, wherein the riser receiving opening is formed by a recess or an enclosed aperture in the upper ledge, optionally wherein:

a) the shelf defines a cavity for housing the disused shower valve on either side of the riser receiving opening; or

b) the shelf defines a cavity for housing two disused shower valves on one side of the riser receiving opening.

Clause 18. The riser rail assembly any one of clauses 13 to 16, comprising two shelves, wherein each shelf defines a cavity for housing a single disused water pipe.

Clause 19. The riser rail assembly of clause 18, wherein the riser rail is positioned between the two shelves.

Clause 20. A shower unit comprising:

a showerhead for dispensing water;

the riser rail assembly of any one of clauses 13 to 19, the riser rail being configured to support the showerhead;

a flexible tube for connecting the showerhead to a water supply, wherein the riser rail includes a water passage disposed therein for the passage of water therethrough from a first end to a second, opposite end, and wherein the flexible tube is connected to the second end.

Clause 21. The shower unit of clause 20, further comprising a controller for generating electrical signals, the electrical signals being sendable along at least a portion of the riser rail to the first end.

Clause 22. The shower unit of clause 21, wherein the controller is attached to the riser rail and/or the controller is attached to the shelf.

30 Claims

1. A shower shelf for concealing at least part of a disused water pipe, the shelf comprising:

a wall connection portion configured to be fixed to a wall, the wall comprising at least one disused water pipe protruding from the wall, the wall connection portion comprising an opening configured to receive at least part of the disused water pipe;

a cover, wherein the shelf defines a cavity between the wall connection portion and the cover, the cavity being configured to house at least part of the disused water pipe; and

an upper ledge positioned over the cavity.

2. The shelf of claim 1, further comprising a controller configured to generate electrical signals based on user input to the controller.

3. The shelf of claim 2, further comprising a controller supporting portion configured to attach to the controller.

4. The shelf of any preceding claim, wherein the cavity is enclosed.

5. The shelf of any preceding claim, wherein the shelf

is shaped to form a recess between the shelf and the wall, the recess being configured to receive a flexible tube.

6. The shelf of any preceding claim, further comprising at least one hook which protrudes from a bottom of the shelf. 5
7. The shelf of any preceding claim, wherein at least part of the upper ledge and the wall connection portion are integral, and/or at least part of the upper ledge and the cover are integral. 10
8. The shelf of any preceding claim, wherein the wall connection portion comprises fixing holes through which screws can be used to affix the wall connection portion to the wall. 15
9. The shelf of any preceding claim, wherein the upper ledge comprises a riser receiving opening in which a riser rail can be positioned, wherein the riser receiving opening is formed by a recess or an enclosed aperture in the upper ledge, optionally wherein: 20
 - a) the shelf is configured to house a disused water pipe on either side of the riser receiving opening; or 25
 - b) the shelf defines a cavity for housing two disused water pipes on one side of the riser receiving opening. 30
10. A riser rail assembly for attaching a riser rail to a wall, the assembly comprising: 35

a riser rail; and

the shelf of any one of claims 1 to 9.
11. The riser rail assembly of claim 10, further comprising: 40
 - a) a riser rail connector configured to connect the riser rail to the shelf; and/or
 - b) a controller attached to the riser rail; and/or
 - c) a clip for attaching the riser rail to the wall above the shelf. 45
12. The riser rail assembly of either one of claims 10 or 11, wherein the upper ledge comprises a riser receiving opening in which a riser rail can be positioned, wherein the riser receiving opening is formed by a recess or an enclosed aperture in the upper ledge, optionally wherein: 50
 - a) the shelf defines a cavity for housing the disused shower valve on either side of the riser receiving opening; or 55
 - b) the shelf defines a cavity for housing two disused shower valves on one side of the riser re-

ceiving opening.

13. The riser rail assembly either one of claims 10 or 11, comprising two shelves, wherein each shelf defines a cavity for housing a single disused water pipe, preferably wherein the riser rail is positioned between the two shelves.
14. A shower unit comprising:
 - a showerhead for dispensing water;
 - the riser rail assembly of any one of claims 10 to 13, the riser rail being configured to support the showerhead;
 - a flexible tube for connecting the showerhead to a water supply, wherein the riser rail includes a water passage disposed therein for the passage of water therethrough from a first end to a second, opposite end, and wherein the flexible tube is connected to the second end.
15. The shower unit of claim 14, further comprising a controller for generating electrical signals, the electrical signals being sendable along at least a portion of the riser rail to the first end, preferably wherein the controller is attached to the riser rail and/or the controller is attached to the shelf.

Fig 1A

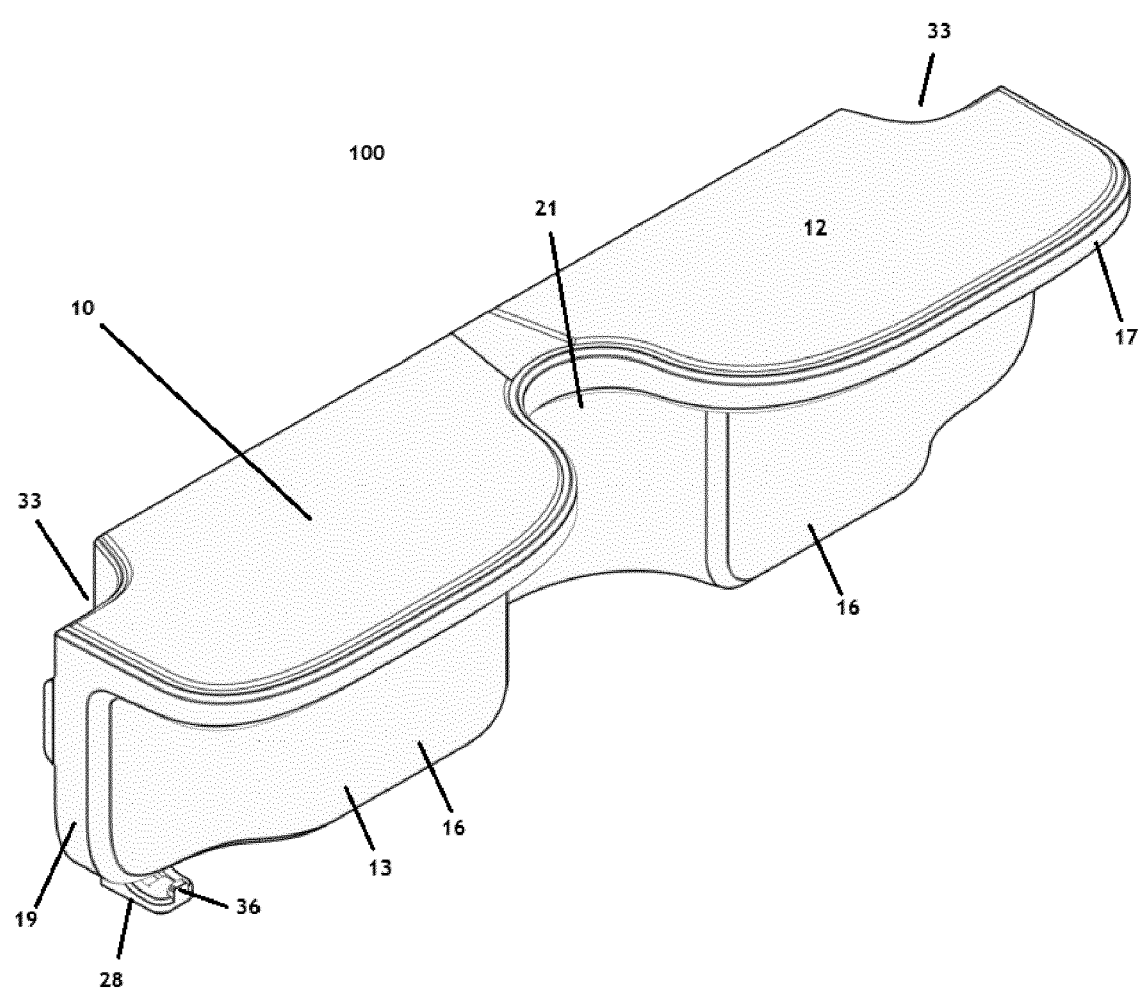


Fig 1B

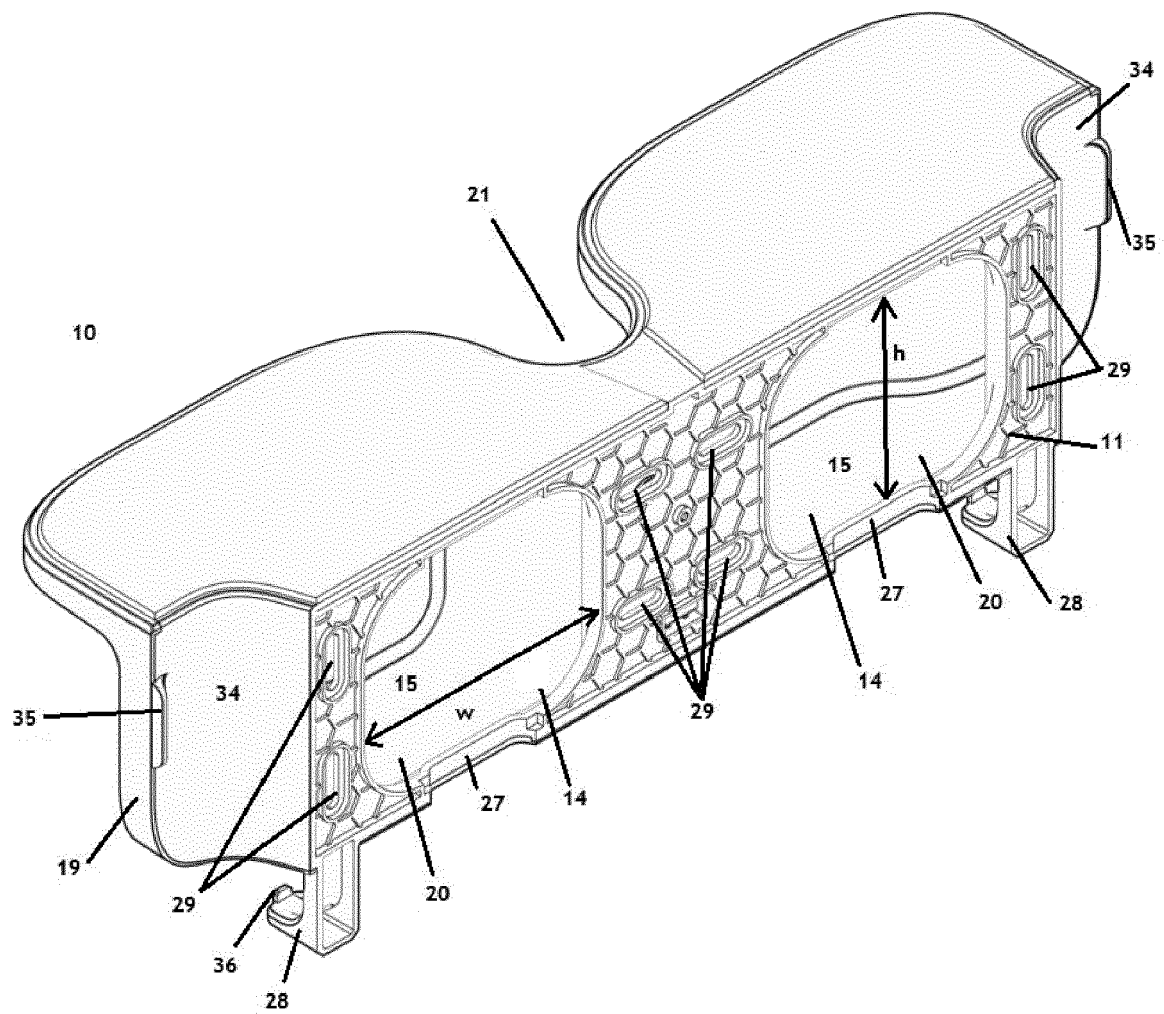


Fig 2A

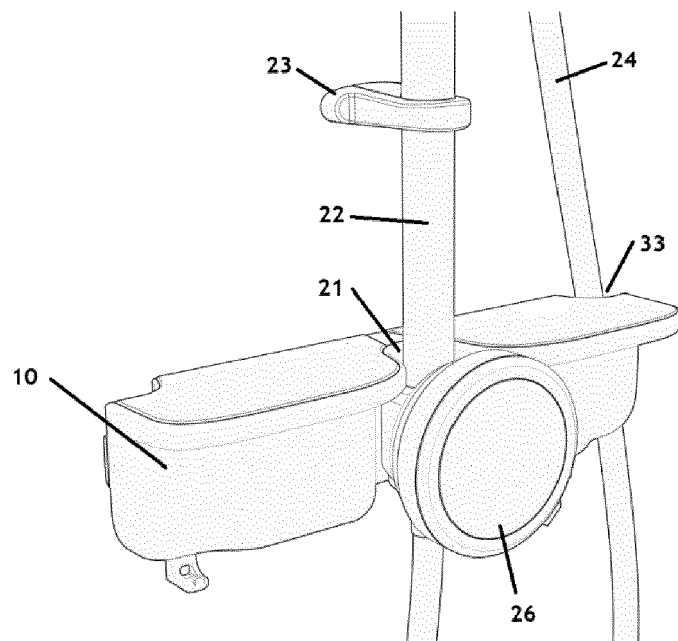


Fig 2B

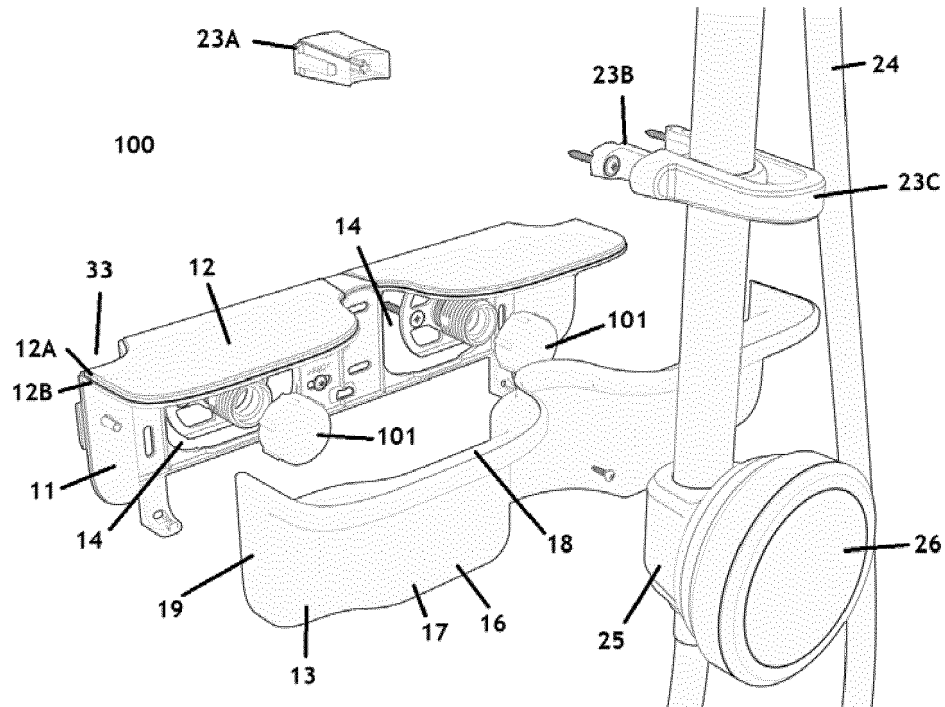


Fig 3

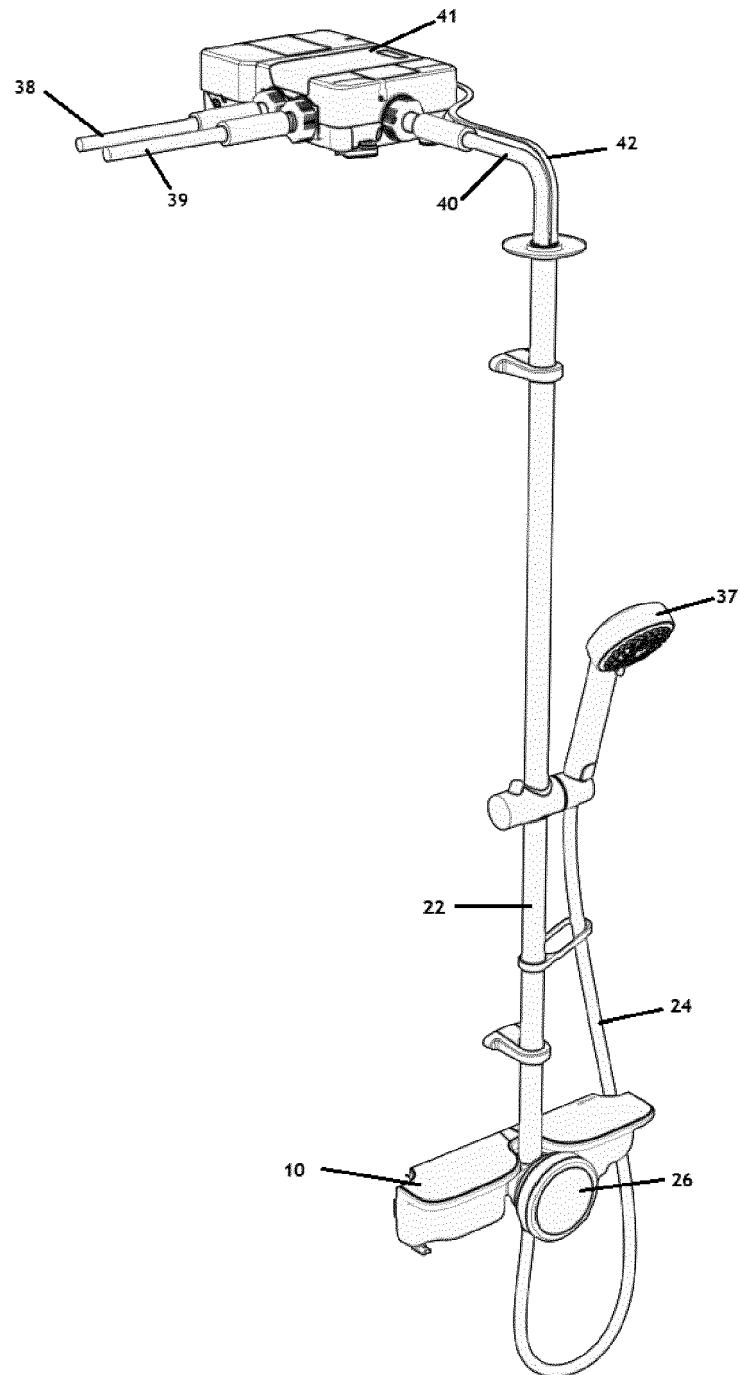


Fig 4

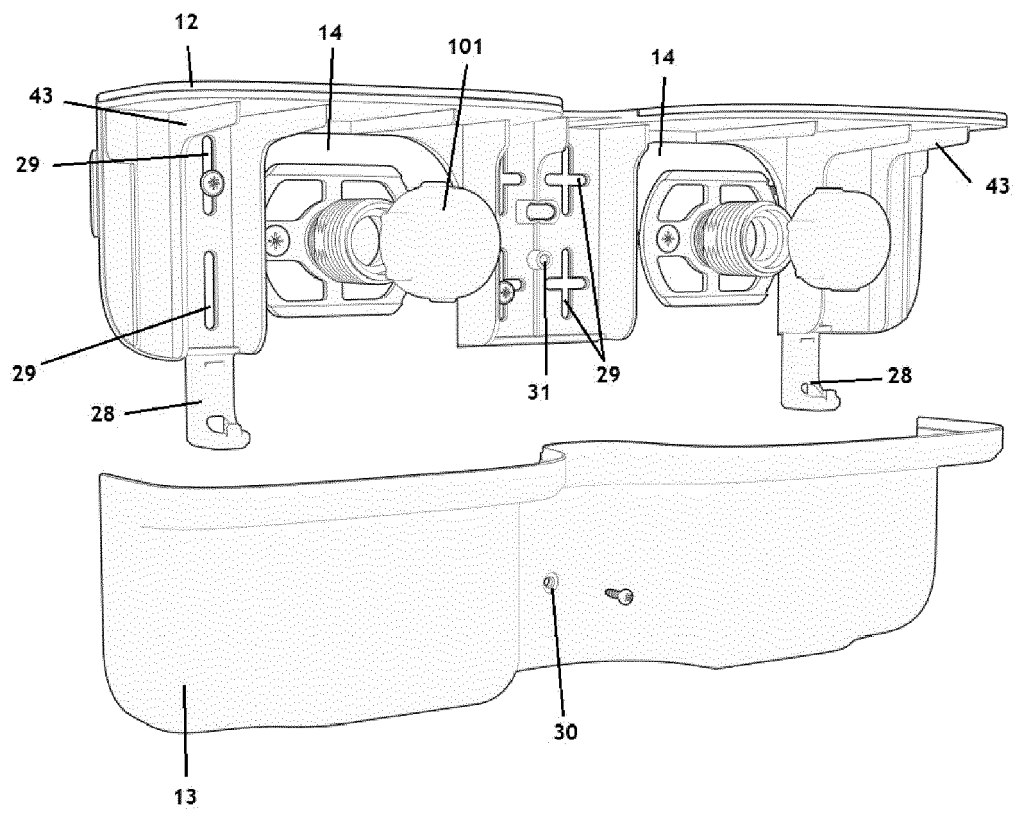


Fig 5A

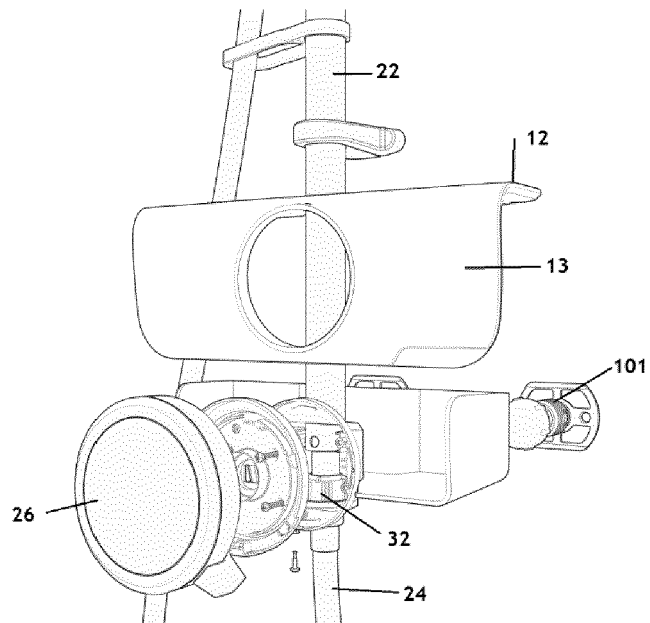


Fig 5B

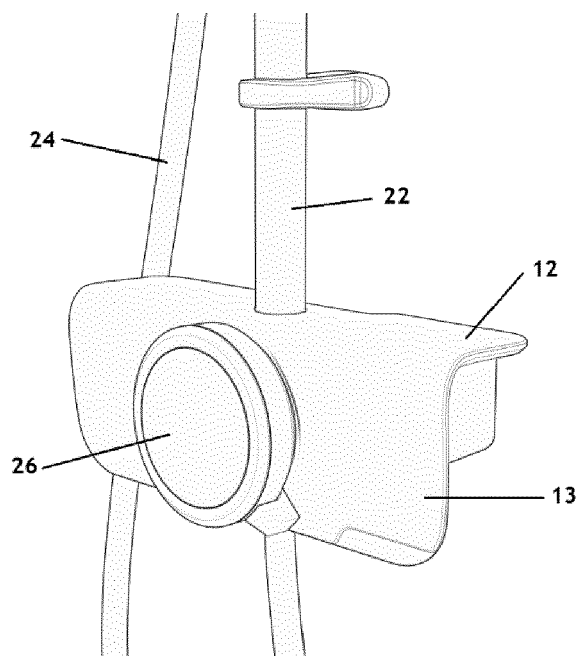


Fig 6A

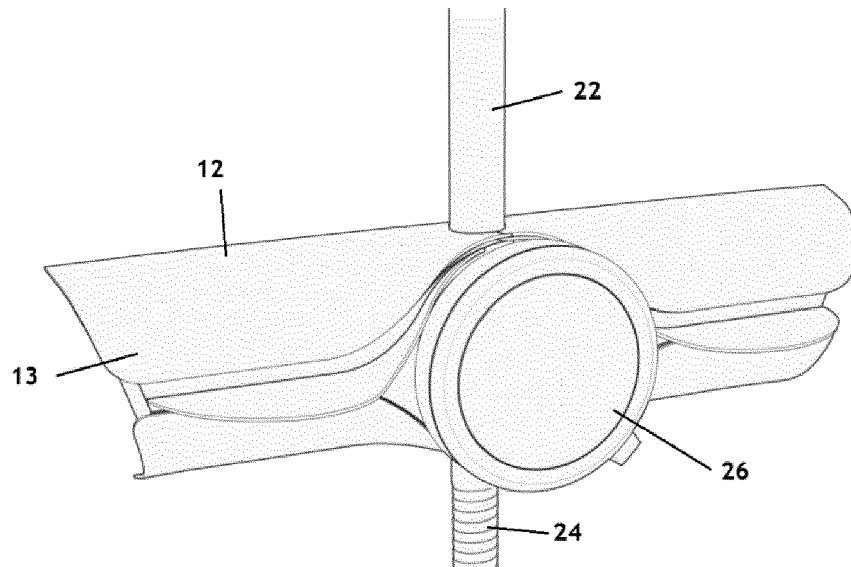


Fig 6B

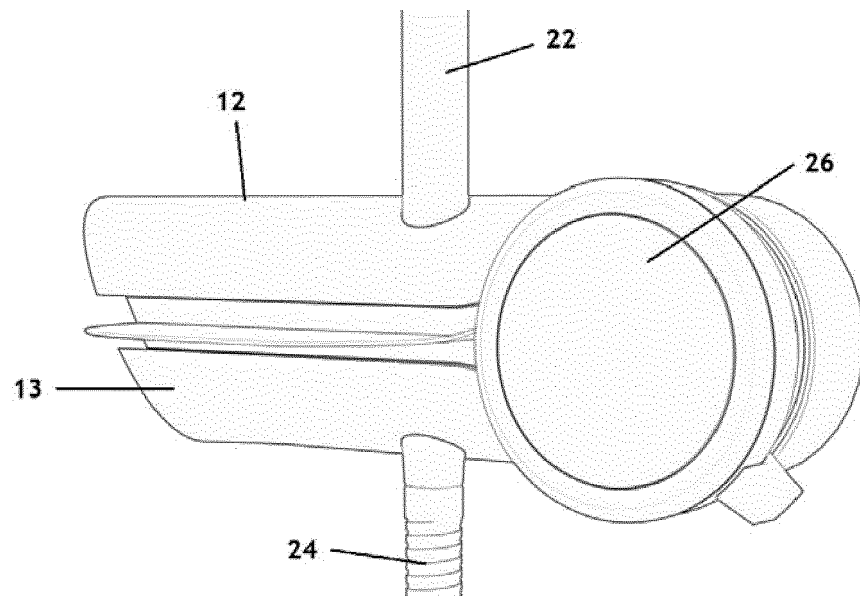


Fig 7A

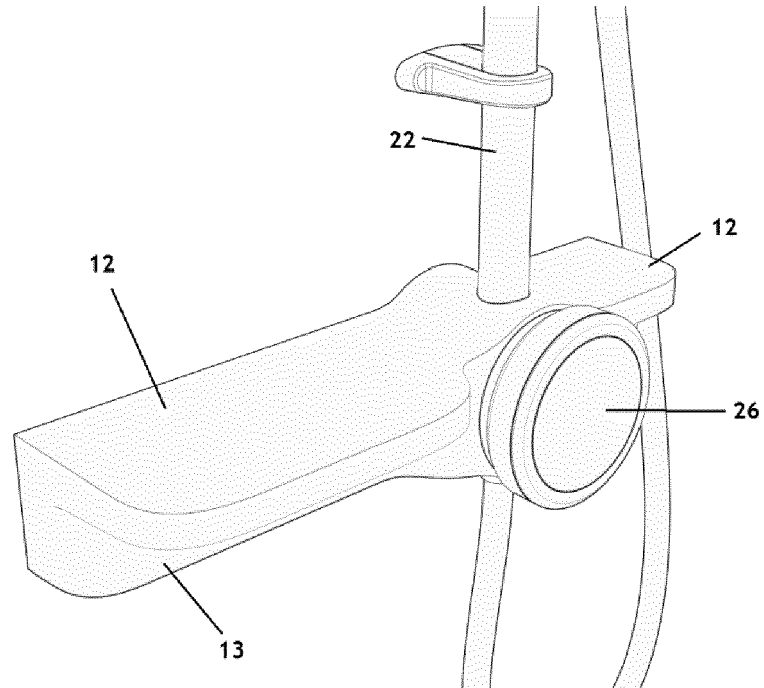


Fig 7B

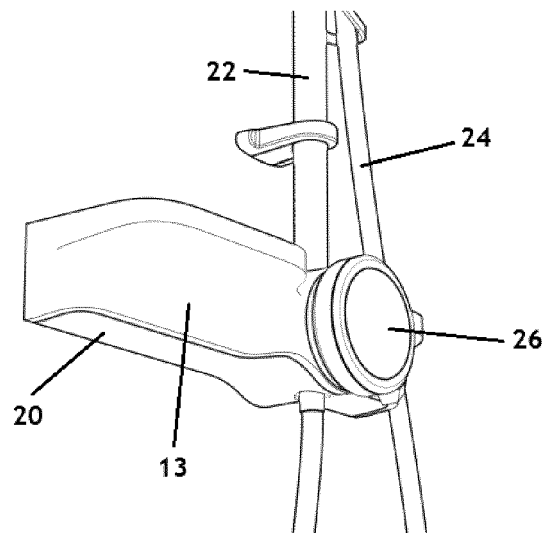


Fig 8A

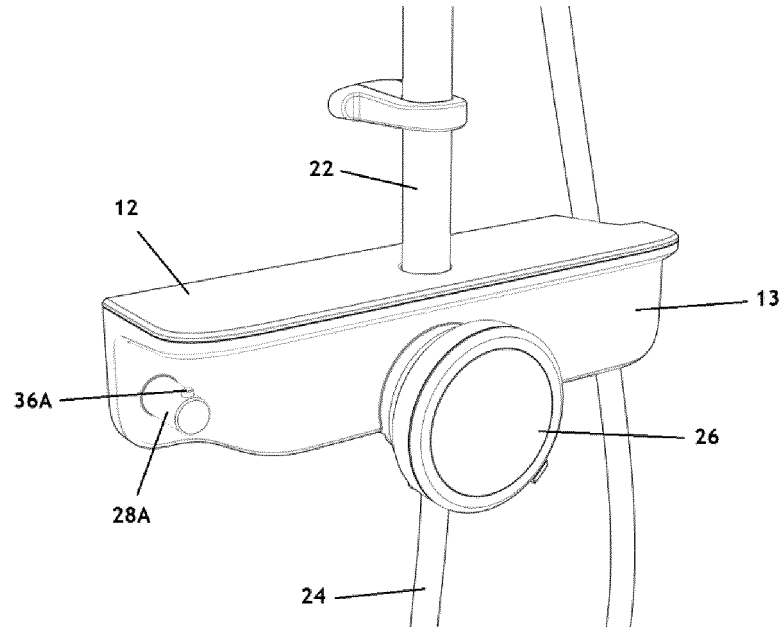


Fig 8B

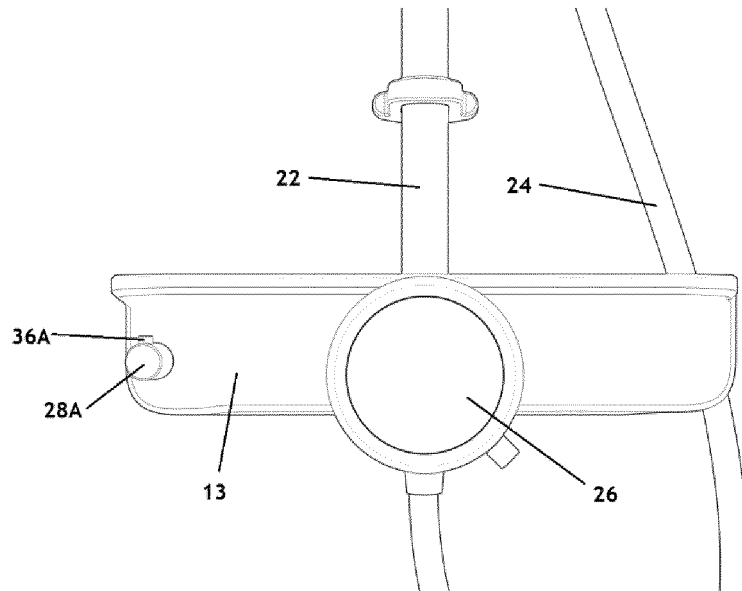


Fig 9

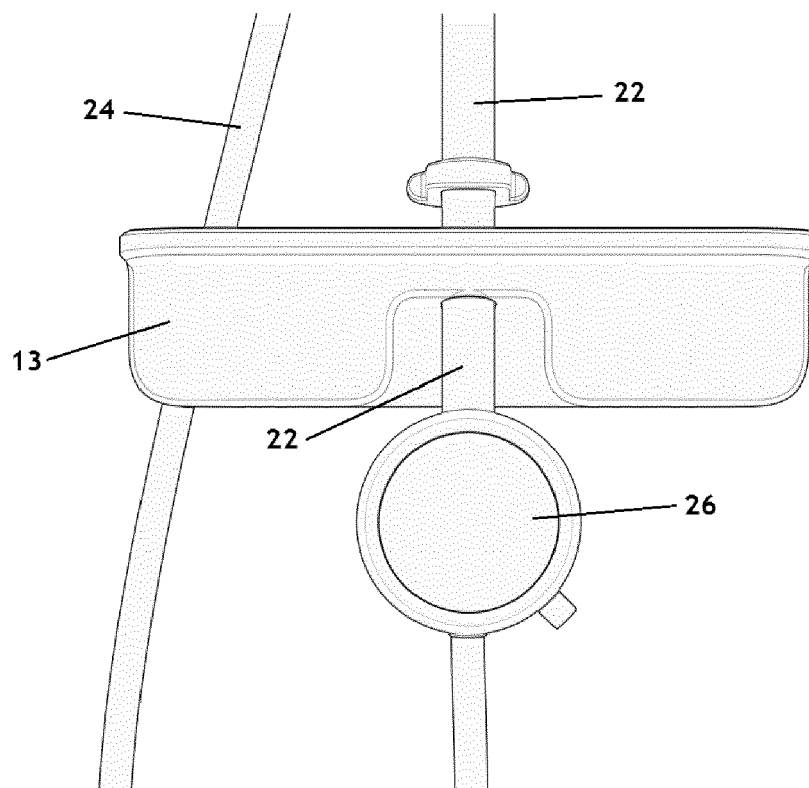


Fig 10A

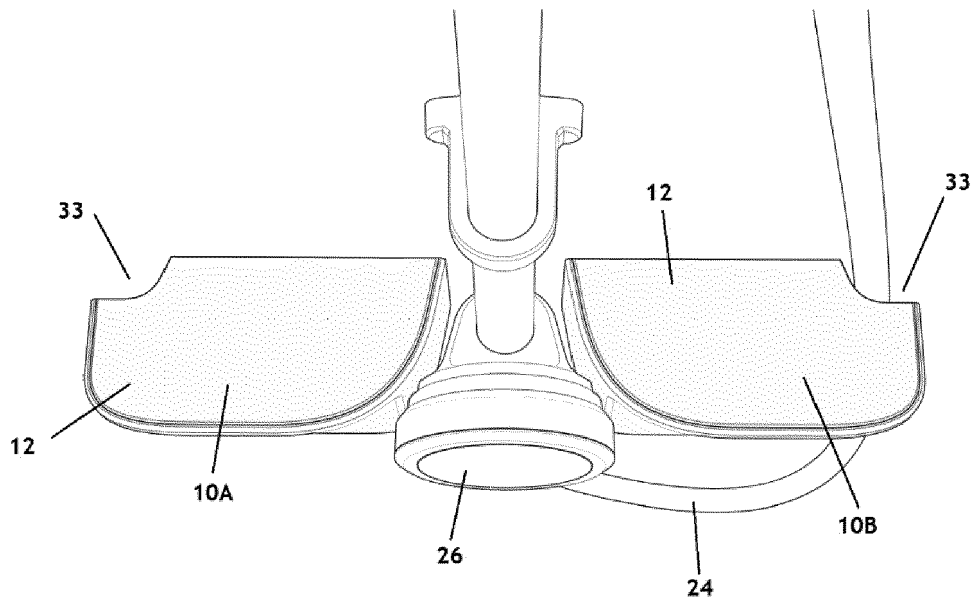
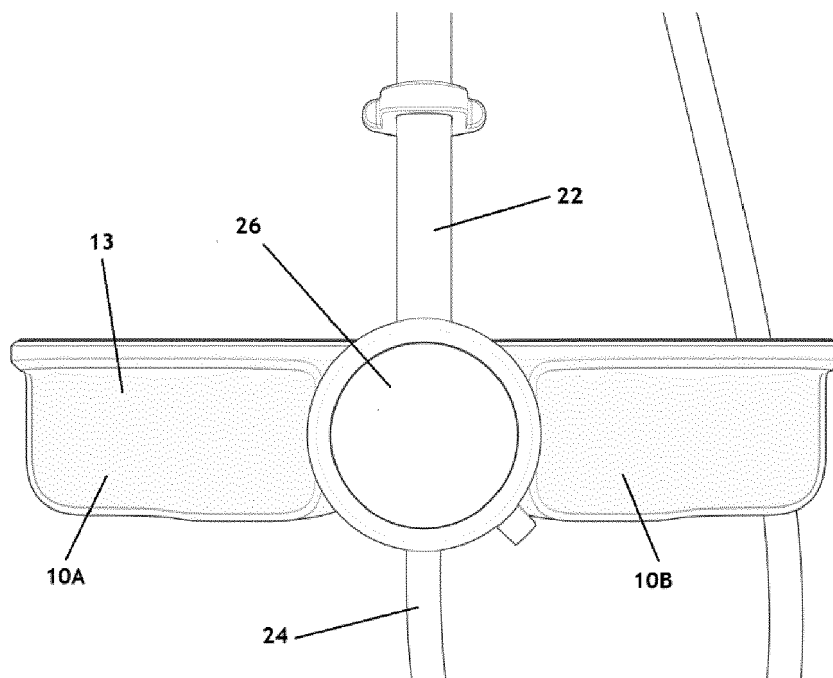


Fig 10B





EUROPEAN SEARCH REPORT

Application Number

EP 22 17 6375

5

10

15

20

25

30

35

40

45

50

55

1

EPO FORM 1503 03.82 (P04C01)

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	KR 101 568 957 B1 (IS DONGSEO CO LTD [KR]) 12 November 2015 (2015-11-12)	1, 4-14	INV. E03C1/04
Y	* paragraphs [0001] - [0053]; figures 1-7b *	2, 3, 15	A47K3/00 E03C1/06
Y	JP 2003 184139 A (TOTO LTD) 3 July 2003 (2003-07-03) * paragraphs [0001] - [0036]; figures 1-11 *	2, 3, 15	
A	KR 200 475 805 Y1 (LTD TS JAVA) 5 January 2015 (2015-01-05) * paragraphs [0001] - [0044]; figures 1-5 *	14, 15	
			TECHNICAL FIELDS SEARCHED (IPC)
			E03C A47K
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 19 October 2022	Examiner Posavec, Daniel
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 22 17 6375

5 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
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

19-10-2022

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
KR 101568957 B1	12-11-2015	NONE	
JP 2003184139 A	03-07-2003	NONE	
KR 200475805 Y1	05-01-2015	NONE	