

TITLE: A WALK-IN SHOWER**TECHNICAL FIELD**

[0001] The present invention relates to showers and other bathing apparatus and in particular, to a shower that is convertible to create a bathing enclosure.

BACKGROUND ART

[0002] A variety of attempted solutions to the problem of providing a useful bath that can be used as a shower are illustrated in Figures 1 to 7.

[0003] The inventor notes that in each case, the device provided is a bath with a preformed, moulded bath enclosure, some with a door than can be opened and closed to access the preformed enclosure. Each of these embodiments create a bath having fixed dimensions on moulding.

[0004] The device illustrated in Figures 1 to 3 is called a "Tulip" bath. The forward transparent portion of the shower illustrated in Figure 1 opens downwardly to allow entry to and exit from the shower and also to form a bath as illustrated in Figure 2.

[0005] The device illustrated in Figures 4 and 5 is a rotating wall mounted device which functions as a bath when oriented as illustrated in Figure 4 (with a lower collection area) and as a shower when oriented as illustrated in Figure 5 (with the collection area forming a hood).

[0006] The configuration illustrated in Figure 6 is a bath/shower configuration in which a moulded bath is provided with a glass door that forms a shower screen when closed. The door must be closed when used as a shower because the door swings open in front of the shower furniture which would prevent the shower being used if the door were open when used in the shower configuration. The door is also closed when the device is used as a bath and seals the existing bath enclosure allowing it to be at least partially filled with water.

[0007] The configuration illustrated in Figure 7 is a bath/shower configuration in which a moulded bath is provided with a glass shower screen and a separate door that allows access to the preformed closure and that closes a preformed bath enclosure so that the bath can be filled with water. In this configuration, the door opens inwardly and it may be possible to operate the shower with the door open although it appears that any water would simply escape if the door were open.

[0008] It will be clearly understood that, if a prior art publication is referred to herein, this reference does not constitute an admission that the publication forms part of the common general knowledge in the art in Australia or in any other country.

SUMMARY OF INVENTION

[0009] The present invention is directed to a walk-in shower, which may at least partially overcome at least one of the abovementioned disadvantages or provide the consumer with a useful or commercial choice.

[0010] With the foregoing in view, the present invention in one form, resides broadly in a walk-in shower without a moulded bath enclosure, the shower having at least one fixed wall portion and a deployable wall portion operable in at least two configurations, namely a first shower configuration in which the deployable wall portion is located adjacent to the at least one fixed wall portion of the shower leaving an open entry and exit from the shower and a second bath configuration in which the deployable wall portion is located to close and seal the open entry and exit such that a bath is created to hold a volume of liquid at least temporarily.

[0011] In an alternative form, the present invention resides in a walk-in shower having at least one fixed wall portion and a deployable wall portion operable in at least two configurations, namely a first shower configuration in which the deployable wall portion is located adjacent to one of the at least three wall portions leaving a walk in open entry and exit from the shower and a second bath configuration in which the deployable wall portion is located to close and seal the open entry and exit with movement of the deployable wall creating a bath enclosure to hold a volume of liquid at least temporarily.

[0012] In yet another alternative form, the present invention resides in a method of creating a bath enclosure from a walk-in shower, the method including the step of providing a walk-in shower having at least one fixed wall portion and a deployable wall portion, locating the deployable wall portion adjacent to one of the at least three wall portions leaving a walk in open entry and exit from the shower and deploying the deployable wall portion to close and seal the open entry and exit with movement of the deployable wall creating a bath enclosure to hold a volume of liquid at least temporarily.

[0013] In a further form, the present invention resides broadly in a substantially rectangular walk-in shower without a moulded bath enclosure, the shower having at least three wall portions and a deployable wall portion operable in at least two configurations, namely a first shower

configuration in which the deployable wall portion is located adjacent to one of the at least three wall portions leaving an open entry and exit from the shower and a second bath configuration in which the deployable wall portion is located to close and seal the open entry and exit such that a bath is created to hold a volume of liquid at least temporarily.

[0014] In still another form, the present invention resides in a substantially rectangular walk-in shower having at least three wall portions and a deployable wall portion operable in at least two configurations, namely a first shower configuration in which the deployable wall portion is located adjacent to one of the at least three wall portions leaving a walk in open entry and exit from the shower and a second bath configuration in which the deployable wall portion is located to close and seal the open entry and exit with movement of the deployable wall creating a bath enclosure to hold a volume of liquid at least temporarily.

[0015] In the present specification, the term "wall" is not intended to be limited to walls of the bathroom which may also function to define the limits of the shower but also include shower screens, panels or any member or assembly that is used to define one or more limits of the shower, whether formed from one or more units.

[0016] The walk-in shower of the present invention is particularly adapted for use as a shower with the deployable wall in the open condition. Further, when the walk-in shower of the present invention is in the shower configuration, there is preferably no visible bath present in that there is no moulded bath enclosure. The present invention will normally have a maximum of three walls and a fourth wall that is deployable wall to close the volume and define a bath enclosure.

[0017] The deployable wall will typically be located within or adjacent to the shower area when in the open condition (when used as a shower). This will typically be the stored condition for the deployable wall and the shower is preferably useable with the deployable wall in this location. Water pressure due to the water in the bath when in the bath configuration will typically assist with the sealing of the deployable wall because the deployable wall deploys to the bath configuration from within the shower area.

[0018] The deployable wall can be located outside the shower area when in the open condition (when used as a shower). This will typically be the stored condition for the deployable wall and the shower is preferably useable with the deployable wall in this location. A locking mechanism can be used to fix the deployable wall into either the open or closed position.

[0019] If the deployable wall is located within the shower area when in the open condition (when used as a shower), water pressure due to the water in the bath when in the bath configuration will typically assist with the sealing of the deployable wall because the deployable wall deploys to the bath configuration from within the shower area. A locking mechanism can also be used to fix the deployable wall into either open or closed position.

[0020] It is preferred that the lower portion of each at least one fixed wall, is sealed in order to be watertight. Typically, a number of fixed walls will be provided and these will be sealed to each other and/or to the floor as is current practice when installing or finishing a wet area in the bathroom. As well as the deployable wall being sealed to one or more fixed walls or other sealing assemblies provided, the at least one fixed wall will also generally be sealed to other walls and the floor to define a sealed volume for the containment of water.

[0021] A hob or step [up, down or over a barrier] may be provided but if so, the hob or step will preferably be relatively low in height in order to allow the shower to be a walk-in shower. One possible arrangement to provide a consistent height floor in the shower/bath and the floor outside the shower/bath without requiring some form of elevated structure to seal the deployable wall against is to provide a sealing depression or groove into which a portion of the deployable wall is received in order to seal.

[0022] As mentioned above, the walk-in shower will typically include a number of fixed walls, typically at least three fixed walls. In alternative embodiments, the walk-in shower area may be formed from a continuously curved wall and in that case, only a single fixed wall may be provided. Any number of fixed walls may be provided in the invention is not intended to be limited by the number of fixed walls.

[0023] Each fixed wall will typically be a substantially permanent wall and will normally be sealed to adjacent walls if any, and to the floor. At least one of the fixed walls may be or include a shower screen panel.

[0024] Any one or more of the fixed walls may be or include a wall defining the bathroom itself within which the walk-in shower of the invention is located. As mentioned above, it is preferred that none of the fixed wall portions include a moulded bath shell. However, it is possible that the shower of the present invention may include an enclosure that is moulded but if so, normally the enclosure will be formed by a number of fixed walls and only formed when the deployable wall is actually deployed. There are embodiments of the present invention that include a moulded bathroom blank with a partially moulded bath area provided therein but this

bath enclosure still would require the deployable wall to form an enclosure and without which the bath area would simply have the appearance of three walls with an open fourth wall area.

[0025] The fixed wall portions of the walk-in shower of the present invention may include one or more full height wall portions or partial height wall portions.

[0026] Any material may be used to form the fixed wall portions of the present invention. Further, different walls may be formed from different materials for example, if a shower screen wall portion is provided, then this wall portion may be opaque, partially or fully transparent, such as manufactured from glass (toughened or safety), acrylic or polycarbonate or other material displaying similar look, functional and safety qualities.

[0027] It is also preferred that the fixed wall portions (and the deployable wall) are substantially planar. Further, it is preferred that the fixed wall portions will meet each other and the floor of the walk-in shower at an angle (preferably substantially perpendicular) rather than having arcuate transition zones between the walls and the floor. In some embodiments, an arcuate transition can be provided, particularly for a person to lean against an arcuate angled wall in bath position. This arcuate wall can also be used as a shelf.

[0028] The shower of a preferred embodiment may include one or more spa jets in any one or more of the fixed walls for use when in the bath configuration.

[0029] The shower can also provide a seating mechanism, preferably hidden in a fixed wall, shelf or the deployable wall, that can be deployed on use as a bath. Alternatively the user can use an external seat and use in the bath, or shelf used as a seat permanently deployed.

[0030] The walk-in shower of the present invention includes a deployable wall portion operable in two configurations. The deployable wall portion may deploy in any direction and using any mechanism which functions to allow the wall portion to assume the two configurations. Preferred mechanisms include hinges, wheels, sliding, rolling, runners, track, cable mechanisms and pivoting mechanisms in any direction.

[0031] According to a first preferred embodiment, the deployable wall portion may hinge or pivot about a fixed axis. The axis may be substantially vertical allowing the deployable wall to move (or rotate) substantially horizontally or alternatively, the axis may be substantially horizontal which allows the deployable wall to move (or rotate) substantially vertically.

[0032] For a substantially vertical axis, a mounting member will normally be provided on a

fixed wall portion and/or on the deployable wall portion. Preferably, the mounting member will be provided with or include a hinge or pivot mechanism allowing the deployable wall to be moved relative to the fixed wall portion. The mounting members will also preferably provide a visual identifier to the location of the edge of the fixed wall portion which may be particularly important if the wall portions are transparent. This mounting member also mounts seals to seal the deployable wall.

[0033] Preferably, the mounting members will be provided on or adjacent an edge of the fixed wall portion and the deployable wall portion.

[0034] In use, the deployable wall portion will preferably lie parallel to and closely spaced from or abutting the fixed wall portion from which the deployable wall portion swings when the walk-in shower is in the shower configuration and be within the shower. This will typically maximize the space available in the shower for use and minimise space requirements for the deployable wall.

[0035] The deployable wall will typically swing off an end edge of a sidewall or from an end wall.

[0036] It is important that enough clearance is provided for the deployable wall to swing within or outside the shower area between the open and closed conditions and vice versa without obstructing the shower and bath hardware which are typically mounted to one of the fixed walls of the shower enclosure or items located outside the shower such as fixtures and fittings, plumbing elements, a toilet, cabinet or basin.

[0037] When the deployable wall is in the shower configuration, the deployable wall is "open" and the shower can be used when in this form because the deployable wall is typically located against a fixed wall inside the shower area. This configuration allows the use of pressure produced by the weight of water in the bath when used in that configuration to assist with the sealing of the deployable wall in the "closed" condition.

[0038] In other embodiments, the deployable wall may be located outside the shower or swing, pivot, slide or roll to the outside of the shower enclosure.

[0039] According to a second preferred embodiment, the deployable wall may be provided with a wheel or rolling or sliding or runner or track or cable mechanism or any combination thereof. Again, the deployable wall can be stored inside or outside the shower enclosure against or closely spaced from an existing fixed wall or even located above the shower enclosure to

appear as a bulkhead or similar.

[0040] Deployment from this storage condition will normally be required in order to close the open entry and exit from the shower cubicle in order to form and create the bath configuration.

[0041] In some cases, the deployable wall may form one complete side of the bath or alternatively, the deployable wall may simply close an opening provided in a side of the shower or bath.

[0042] Typically, wheels, rollers or slide or track members are provided in order to allow easy movement of the deployable wall. In a preferred embodiment, one or more rollers or wheels can roll on the shower floor surface and wall surface and/or tracks are provided and engage with corresponding guide channels provided on the wall surface. If the tolerances are sufficiently precise, the deployable wall could have wheels on the side and base of the deployable wall that just roll against the floor and walls rather than requiring any guide mechanism.

[0043] In an alternative preferred embodiment, one or more rollers, wheels can roll on the shower and wall surface and/or tracks are provided and engage with corresponding guide channels provided in a floor and/or wall surface. If the tolerances are sufficiently precise, the deployable wall could have wheels on the side and base of the deployable wall that just roll against the floor and walls rather than requiring any guide mechanism.

[0044] In an alternative preferred embodiment, one or more rollers or wheels are provided with a circumferential groove in order to ride on a raised tongue provided on or in a floor and/or wall surface. In each of these alternative embodiments, movement of the deployable wall will preferably be guided movement in order to minimize or prevent misalignment of the deployable wall during movement and for sealing.

[0045] One or more wheels, rollers or slide or track members can be provided at an upper and/or lower region of the deployable wall. Further, one or more rollers or slide members can be provided at each end or side of the deployable wall to balance the movement of the deployable wall.

[0046] In this embodiment, the deployable wall will preferably be an entire side of a bath enclosure and therefore, will typically create the bath enclosure when moved into the bath configuration. Prior to movement of the deployable wall, there is typically no enclosure at all, merely a number of fixed wall portions and the deployable wall in the stored position against one

of the fixed wall portions. In this position, the deployable wall can be camouflaged against the fixed wall portion and be difficult to see or identify easily for aesthetic reasons. Alternatively, the deployable wall can be of similar material to the shower enclosure or be transparent (such as glass or plastic) or be totally different in order to form a feature, and located close against the fixed wall portion to be identified as part of the shower area. Typically the deployable wall will have a cover applied such as tiles, unless the deployable wall is glass or a material of similar look and functionality. The deployable wall can also be a plastic moulded wall, with or without cover.

[0047] The deployable wall may also move in a manner involving both rotational aspects and sliding aspects. For example, if a shower is provided with a shower screen member with an adjacent opening, the shower screen may be used as a deployable wall and the preferred movement may be to rotate the shower screen about one corner in the same plane as when used as a shower screen to locate a normally vertical edge substantially horizontally whilst sliding/pivot the shower screen laterally to position the shower screen in a position 90° from the shower screen normal position to seal the side of the shower enclosure.

[0048] One or more guides may be provided on the fixed walls of the walk-in shower of the present invention and/or on the deployable wall.

[0049] The deployable wall will typically form the side of the enclosure that forms and closes the enclosure.

[0050] The deployable wall may be associated with a flexible membrane or similar that moves with the deployable wall. Normally, if a membrane is provided, when the deployable wall is moved to the bath configuration, the membrane will typically define a volume to hold the liquid to form the bath enclosure. If the membrane is provided, this will typically simplify the sealing of the bath configuration.

[0051] The fixed side walls of the shower should also be waterproof to the height of the bath at least, especially if no membrane (deployable with the deployable wall) is provided. There may be moulded waterproofing portions provided to seal between the walls and the floor. Further moulded waterproofing portions may be provided to waterproof the inwardly facing surfaces of the walls and/or floor.

[0052] Typically, the membrane, where provided, will be attached to a portion of both the fixed and deployable walls at the height appropriate to form a bath. Preferably, the membrane will fold or deform during movement from the bath to the shower configuration in order to

occupy minimal space and to be hidden from view when in the shower configuration.

[0053] In one preferred aspect, the membrane may be stored within either a fixed wall portion or the deployable wall portion. An extension and retraction mechanism may be provided in order to simplify extension and retraction of the membrane, and preferably the mechanism will be biased into the retracted position but be capable of being at least temporary locked in the extended condition.

[0054] The fixed and/or deployable wall of the present invention may be of any type or configuration. For example, the walls may be solid, hollow, faced, or simply be or include transparent or opaque glass (toughened) or other material to provide a similar look or perform a similar function (e.g. acrylic or polycarbonate or plastic).

[0055] Typically, more latitude or options are provided with a wall which is other than transparent as more components or mechanisms can be hidden or obscured by or within a wall which is other than transparent.

[0056] If one or more of the walls is manufactured from transparent material, then any components which are provided as a part of the invention will normally be provided on a mounting and/or sealing member which is attached to or associated with the transparent wall. This will typically leave the transparent wall substantially unobstructed as many users choose the transparent walls for aesthetic purposes.

[0057] Where a hollow wall is provided, normally the wall will be formed from a frame with an appropriate covering applied to the frame. The frame can be formed from a number of frame members joined to one another or alternatively a unitary frame, such as one formed by moulding, can be provided and covered or not. Typically, one layer of the appropriate covering will be tiles (of various materials e.g. ceramic or glass or the like) or a similar covering in order to provide an aesthetic finish but also to waterproof the wall as much as possible. A further waterproof seal can be provided beneath the tiles or covering, and/or the walls themselves can be a waterproof material such as plastic, with the joins adequately sealed.

[0058] This configuration will also typically allow the mounting of the deployable wall to facilitate movement thereof. Further, the covering provided, if any, can be used to camouflage the deployable wall against the remainder of the walk-in shower. Alternatively the camouflage may be provided by using the same material to form the deployable wall as another portion of the bath enclosure.

[0059] The deployable wall can be fixed in either the open or closed condition, thereby forming either the bath or shower configuration in order to prevent accidental but not determined movement from the open condition or the closed condition.

[0060] Manual movement of the deployable wall is preferred but the movement may be automated or actuable using a movement mechanism.

[0061] Appropriate sealing will be provided to seal the deployable wall in the closed condition when used in the bath configuration. As discussed above, the sealing may be assisted by water pressure when in the bath configuration, and may also have a locking mechanism. Normally, the seal used will be a silicon material but any suitable material for forming the seal can be used such as rubber or a substitute or any pliable or resilient material.

[0062] In particular, it is preferred that a catch or similar mechanism is provided in order to at least temporarily retain the deployable wall in the closed condition. Typically, the catch or similar mechanism will urge the deployable wall into a sealed condition, particularly at the start of filling the cubicle in the bath configuration until the weight of liquid in the cubicle is sufficient to assert enough force to seal the deployable wall in position as well as to retain the deployable wall in the closed condition to prevent accidental movement of the deployable wall.

[0063] The catch or similar mechanism can be of any type and there can be more than one catch or similar mechanism provided. The catch or similar mechanism can include a locking function as well as a catching or latching function. For example, the catch or similar mechanism may include a roller or ball catch, a sprung roller catch, a magnetic or electromagnetic catch, a cam latch, a compression or tension catch or a catch having some form of snib mechanism.

[0064] In a particularly preferred embodiment, the latch or catch may include a substantially U-shaped body with a convergent opening therein which receives a portion of an edge of a fixed or deployable wall or a sealing barrier, and the convergent opening assists with self-location and alignment as well as latching and/or sealing. In use, the convergent opening may be or include a resilient portion which undergoes compression during latching to create a more secure catch mechanism.

[0065] Accessories can be provided in any one or more of the walls of the walk-in shower of the present invention such as spa jets, overflow water waste valves and seats or benches. In particular, where a seat or benches provided, it is preferred that the seat or bench is stowable and deployable into a use condition as required in order to maximise space within the shower but to

allow the seat or bench to be used when desired. However, a fixed bench or seat may be provided if desired.

[0066] Any of the features described herein can be combined in any combination with any one or more of the other features described herein within the scope of the invention.

[0067] The reference to any prior art in this specification is not, and should not be taken as an acknowledgement or any form of suggestion that the prior art forms part of the common general knowledge.

BRIEF DESCRIPTION OF DRAWINGS

[0068] Various embodiments of the invention will be described with reference to the following drawings, in which:

[0069] Figure 1 is an artist's rendition of a prior art combination bath and shower.

[0070] Figure 2 is a view from the side of the combination bath and shower illustrated in Figure 1 in the bath configuration.

[0071] Figure 3 is a view from the side of the combination bath and shower illustrated in Figure 1 in the shower configuration.

[0072] Figure 4 is a front view of a rotatable device which can be used as both a bath and shower, in the bath configuration.

[0073] Figure 5 is a front view of the device illustrated in Figure 4 in the shower configuration.

[0074] Figure 6 is an axonometric view of a prior art bath and shower combination.

[0075] Figure 7 is a photograph of yet another prior art bath and shower combination.

[0076] Figure 8 is a side view of the walk-in shower of a first preferred embodiment of the present invention in the shower configuration with a vertical hinge with deployable wall that pivots horizontally.

[0077] Figure 9 is a rendered side view of the walk-in shower illustrated in Figure 8 in the bath embodiment but with an alternative deployable wall structure with an arrow showing one possible direction of movement of the deployable wall in order to assume the shower

configuration.

[0078] Figure 10 is a rendered side view of the walk-in shower illustrated in Figure 8 in the shower embodiment.

[0079] Figure 11 is a view from above of the walk-in shower illustrated in Figure 8 showing another possible direction of movement of the deployable wall.

[0080] Figure 12 is a view from above of the walk-in shower illustrated in Figure 8 showing a further possible direction of movement of the deployable wall.

[0081] Figure 13 is a view from above of the walk-in shower illustrated in Figure 8 showing yet another possible direction of movement of the deployable wall.

[0082] Figure 14 is a side view of a possible second preferred embodiment of the walk-in shower of the present invention in the shower configuration.

[0083] Figure 15 is a rendered view of the walk-in shower illustrated in Figure 14 according to a preferred embodiment, in the bath configuration.

[0084] Figure 16 is a rendered view of the walk-in shower illustrated in Figure 14 according to an alternative embodiment, in the bath configuration.

[0085] Figure 17 is a rendered view of the walk-in shower illustrated in Figure 15 in the shower configuration.

[0086] Figure 18 is a view from above of the preferred embodiment illustrated in Figure 14 illustrating the movement of the deployable wall.

[0087] Figure 19 is a view from above of the preferred embodiment illustrated in Figure 14 illustrating the position of the deployable wall in the shower configuration.

[0088] Figure 20A is a schematic front elevation view of an alternative embodiment in which the deployable wall moves vertically with the deployable wall in an elevated position.

[0089] Figure 20B is a schematic front elevation view of an alternative embodiment in which the deployable wall moves vertically with the deployable wall in a lowered position.

[0090] Figure 21 is a rendered side view of the walk-in shower illustrated in Figure 8 in the bath embodiment with an arrow showing one possible direction of movement of the deployable

wall in order to detach the deployable wall.

[0091] Figure 22 is a plan view of an alternative embodiment of walk-in shower according to a preferred form of the present invention showing a proposed movement of the deployable wall.

[0092] Figure 23 is a front elevation view of the walk-in shower illustrated in Figure 22 in the shower configuration.

[0093] Figure 24 is a front elevation view of the walk-in shower illustrated in Figure 22 in the bath configuration.

[0094] Figure 25 is a schematic plan view of a possible door configuration according to an aspect of the present invention showing a stored and partially deployed position.

[0095] Figures 26A to 26C is a schematic plan view of a further possible door configuration according to an aspect of the present invention showing a stored, partially deployed and deployed position respectively.

[0096] Figure 27 is a further alternative embodiment of walk-in shower according to the present invention.

DESCRIPTION OF EMBODIMENTS

[0097] According to a particularly preferred embodiment, a walk-in shower without a moulded bath enclosure is provided.

[0098] In each of the preferred embodiments illustrated in Figures 8 to 27, the walk-in shower is a substantially rectangular shower area without a moulded bath enclosure, the shower area having at least three fixed wall portions 11 and a deployable wall portion 12 operable in at least two configurations, namely a first shower configuration in which the deployable wall 12 portion is located adjacent to one of the at least three fixed wall portions 11 leaving an open entry and exit 13 from the shower area and a second bath configuration in which the deployable wall 12 portion is located to close and seal the open entry and exit 13 such that a bath is created to hold a volume of liquid at least temporarily.

[0099] As illustrated, a number of fixed walls defining a partial enclosure are provided and these are sealed to each other and to the floor as is current practice when installing or finishing a wet area of a bathroom.

[00100] A barrier provided for sealing purposes, hob, or step or barrier 14 is provided in each illustrated embodiment which is relatively low in height in order to allow the shower area to be a walk-in shower.

[00101] Each fixed wall 11 is a substantially permanent wall. As illustrated in Figures 8 to 13 one of the fixed walls can be a shower screen panel, whether transparent or not.

[00102] Any one or more of the fixed walls may be a wall defining the bathroom itself within which the walk-in shower of the invention is located.

[00103] The fixed wall portions of the walk-in shower illustrated in Figures 17 to 19 include full height wall portions and a partial height wall portion 11 defining an adjacent toilet area.

[00104] Any material may be used to form the fixed wall portions of the present invention. For example, the different fixed wall portions of the preferred embodiment illustrated in Figures 8 to 13 includes a forward, transparent shower screen wall portion and three other tiled walls that define the shower area. The tiled walls are normally a concrete wall, wooden or metal frame with a sheet member applied, waterproofed and then tiled.

[00105] The deployable wall portion may deploy in any direction and using any mechanism which functions to allow the wall portion to assume the two configurations. Preferred mechanisms include hinges, wheels, sliding, rolling, runners, track and cable mechanisms and pivoting mechanisms. The deployable wall in Figure 12 for example is a sliding wall that will normally be provided with a track or guide as well as wheels, bearings or similar to ease movement thereof.

[00106] According to a first preferred embodiment illustrated in Figures 8 to 11 and 13, the deployable wall portion 12 hinges or pivots about a fixed axis. The axis may be substantially vertical allowing the deployable wall 12 to move (or rotate) substantially horizontally, as illustrated in Figures 11 and 13 or alternatively, the axis may be substantially horizontal which allows the deployable wall 12 to move (or rotate) substantially vertically as illustrated in Figure 9. In the configuration illustrated in Figure 9, the hinge point may be provided at the top of the mounting members 15 or alternatively at the bottom of the mounting members 15. In some configurations in Figure 9, the deployable wall will have to be offset from the adjacent fixed wall.

[00107] For a substantially vertical axis illustrated in Figures 8, 10, 11 and 13, a mounting member 15 can be provided on a fixed wall portion 11 and also on the deployable wall portion 12

with a hinge or pivot mechanism allowing the deployable wall 12 to be moved relative to the fixed wall portion 11. The mounting members 15 will also preferably provide a visual clue to the location of the edge of the fixed wall portion 11 which may be particularly important if the wall portions are transparent.

[00108] The deployable wall portion 12 lies parallel to and closely spaced from or abutting the fixed wall portion 11 from which the deployable wall portion swings when the walk-in shower is in the shower configuration as illustrated in Figures 8, 10, 11 and 13.

[00109] The deployable wall can swing off an end edge of a sidewall as illustrated in Figure 13 or an end edge of an end wall as illustrated in Figure 11. It is important that sufficient clearance is provided for the deployable wall to swing within or outside the shower enclosure between the open and closed conditions and vice versa without obstructing the shower and bath hardware which are typically mounted to one of the fixed walls of the shower enclosure, or other fixtures and fittings outside the shower enclosure.

[00110] As illustrated in Figures 8 and 10, when the deployable wall 12 is in the shower configuration, the wall is "open" and a shower can be used when in this form because the deployable wall 12 is typically located against a fixed wall 11 inside (but can be outside) the shower area rather than obscuring the shower hardware 16 as in some prior art configurations.

[00111] According to a second preferred embodiment illustrated in Figures 12 and 14 to 20B, the deployable wall 12 can be provided with wheels, sliding, rolling or track mechanism. Again, the deployable wall 12 is preferably stored in (but can be outside) the shower configuration against or closely spaced from an existing fixed wall 11.

[00112] Deployment from this storage condition will normally be required in order to close the open entry and exit from the shower area in order to form the bath configuration.

[00113] In some cases, the deployable wall 12 may form one complete side of the bath as illustrated in Figures 14 to 20B or alternatively, the deployable wall 12 may simply close an opening provided in a side of the shower or bath as illustrated in Figure 12.

[00114] Typically, wheels, rollers, slide or track members are provided in order to allow easy movement of the deployable wall.

[00115] One or more guides may be provided on the fixed walls of the walk in shower of the present invention and/or on the deployable wall. The configuration and position of the guides and

wheels, rollers or slide or track members is not critical provided that they are located to provide the required functionality of movement and sealing.

[00116] In a particularly preferred embodiment, the deployable wall 12 preferably forms an entire side of a bath enclosure and therefore, will typically form the bath enclosure when moved into the bath configuration. Prior to movement of the deployable wall 12, there is typically no enclosure at all, merely a number of fixed wall portions 11 (and shower screen(s) if required) and the deployable wall 12 in the stored position against one of the fixed wall portions 11. In this position, the deployable wall 12 will typically be close against the fixed wall portion 11 and may be difficult to see or identify easily if desired. In the deployed position, the moveable nature of the deployable wall is also not immediately obvious to casual viewing. This can be seen in Figures 15 and 17 in particular.

[00117] The fixed and/or deployable wall of the present invention may be of any type or configuration. For example, the walls may be solid, hollow, faced, or simply be or include transparent or opaque glass, acrylic, polycarbonate, plastic or other material that suits the purpose.

[00118] Typically, more latitude or options are provided with a wall which is other than transparent as more components or mechanisms can be hidden or obscured by or within a wall which is other than transparent.

[00119] If one or more of the walls is manufactured from glass such as is illustrated in Figure 16, then any components which are provided as a part of the invention will normally be provided on a mounting and/or sealing member which is attached to or associated with the fixed end walls and/or floor. According to the second embodiment, one or more sealing members 17 may be provided in extending partially into the entry and exit against which the deployable wall can seal. This will typically leave the glass wall substantially unobstructed as many users choose the glass walls for aesthetic purposes.

[00120] Where a hollow wall is provided as illustrated in Figures 15 and 17, normally the wall will be formed from a frame with an appropriate covering applied to the frame, or a hollow moulded frame. Typically, one layer of the appropriate covering will be tiles or a similar covering in order to provide an aesthetic finish, perhaps to match the shower area, but also to waterproof the wall as much as possible. In one embodiment, the deployable wall may be simply be a moulded plastic wall with no covering, to match the fixed walls. Generally if no coverings are provided on the fixed walls then the deployable wall will also lack coverings in order to have

a consistent appearance although this is not always the case.

[00121] This will also typically allow the mounting of the deployable wall to facilitate movement thereof. Further, the covering provided can be used to camouflage the deployable wall against the remainder of the walk-in shower as illustrated in Figure 17 in which it is difficult to distinguish the deployable wall. Accordingly in this Figure, the deployable wall appears to be a shelf provided within the shower rather than a deployable wall.

[00122] Figure 20A is a front elevation view of an alternative embodiment in which the deployable wall moves vertically from a stored position (illustrated in Figure 20A) where it appears as a bulkhead and a deployed condition (illustrated in Figure 20B) where it forms a bath enclosure with the arrows showing the direction of movement. This embodiment may be provided with a lifting, lowering and/or guidance mechanism to assist with movement of the deployable wall.

[00123] An alternative configuration is illustrated in Figure 21. This configuration is similar in most respects to the configuration illustrated in Figure 9 but instead of or in addition to the deployable wall 12 moving as illustrated in Figure 9, the embodiment illustrated in Figure 21 allows the door to be lifted vertically, without rotation in order to disconnect the deployable wall from the fixed wall portion 11. As mentioned, elements of Figure 9 and Figure 21 can be combined if desired.

[00124] An alternative embodiment of the present invention is illustrated in Figures 22 to 24. This embodiment is a smaller configuration and is ideally suited to a smaller configuration such as a 900 mm x 900 mm configuration or a 1200 mm x 900 mm configuration. As illustrated in Figure 22, the deployable wall is hinged wall which rotates about a substantially vertical axis from a stored position lying adjacent to an typically spaced the small distance from the fixed side wall of the shower through approximately 90° to a deployed position in which the edge of the deployable wall abuts a member which will normally be substantially L-shaped (but which can be any suitable shape) which will normally be provided with a seal or similar. The configuration also includes a pair of fixed walls 11 and a shelf seat 30 either deployable or fixed.

[00125] This configuration is illustrated in Figures 23 and 24 in the shower and bath configuration respectively. In the configuration illustrated in Figure 23, the shelf seat 30 is illustrated in the stored condition in which it is position against the real wall of the shower. The shelf seat 30 is illustrated in the deployed condition in Figure 22. The shelf in Figures 23 and 24 can be a permanent fixture.

[00126] An alternative deployable wall configuration which may be used according to the present invention is illustrated in Figure 25. In this configuration, the deployable wall is a two panel wall with the two panels 31 and 32 hinged to one another by a hinge or pivot 33 and one of the panels 31 also hinged to a portion of an adjacent fixed wall 11 by a hinge or pivot 33. In Figure 25, the deployable wall is illustrated in solid lines in the stored condition and in dotted lines in a partially deployed condition. Although illustrated with the deployable wall hinged or hung from the right hand end of the left wall the deployable wall may be hinged or hung from either side of the opening. This embodiment can also be a concertina wall s deployed by sliding or rolling to close and open the opening 13.

[00127] A further alternative deployable wall configuration is illustrated in Figures 26A to 26C. In this configuration, a single deployable wall panel 12 is mounted relative to a fixed wall 11 in a runner or similar at first and thereof. The deployable wall panel 12 is also normally mounted at an opposite end thereof in a runner on the floor. This allows the deployable wall panel 12 to be moved as illustrated in Figure 26A through the position is illustrated in Figure 26B to the deployed condition illustrated in Figure 26C.

[00128] Figure 27 is an alternative embodiment in which a screen or panel is mounted allowing rotation in a vertical plane between a stored condition in which the panel forms a shower screen and a deployed condition in which it is rotated in the direction indicated by the arrow to lie at approximately 90 degrees to close the opening and form an enclosure to contain water (shown in dotted lines). Although this embodiment is particularly suited to the provision of a receiving groove in the floor and wall(s) to receive a portion of the panel thereinto to seal, it can also be used to seal against a barrier provided. In an alternative configuration, two panels may be provided, a first panel fixed as a shower screen as illustrated and a second deployable panel which corresponds to the first panel but is deployable by rotation. In this alternative embodiment, the two panels will overlap in the corner portion when the deployable panel is in the bath enclosure forming position and will correspondingly overlap with one another when in the shower configuration.

[00129] In the present specification and claims (if any), the word "comprising" and its derivatives including "comprises" and "comprise" include each of the stated integers but does not exclude the inclusion of one or more further integers.

[00130] Reference throughout this specification to "one embodiment" or "an embodiment" means that a particular feature, structure, or characteristic described in connection with the

embodiment is included in at least one embodiment of the present invention. Thus, the appearance of the phrases “in one embodiment” or “in an embodiment” in various places throughout this specification are not necessarily all referring to the same embodiment. Furthermore, the particular features, structures, or characteristics may be combined in any suitable manner in one or more combinations.

CLAIMS

1. A walk-in shower without a moulded bath enclosure, the shower having at least one fixed wall portion and a deployable wall portion operable in at least two configurations, namely a first shower configuration in which the deployable wall portion is located adjacent to one of the at least three wall portions leaving an open entry and exit from the shower and a second bath configuration in which the deployable wall portion is located to close and seal the open entry and exit such that a bath is created to hold a volume of liquid at least temporarily.
2. A walk-in shower having at least one fixed wall portion and a deployable wall portion operable in at least two configurations, namely a first shower configuration in which the deployable wall portion is located adjacent to one of the at least three wall portions leaving a walk in open entry and exit from the shower and a second bath configuration in which the deployable wall portion is located to close and seal the open entry and exit with movement of the deployable wall creating a bath enclosure to hold a volume of liquid at least temporarily.
3. A substantially rectangular walk-in shower without a moulded bath enclosure, the shower having at least three wall portions and a deployable wall portion operable in at least two configurations, namely a first shower configuration in which the deployable wall portion is located adjacent to one of the at least three wall portions leaving an open entry and exit from the shower and a second bath configuration in which the deployable wall portion is located to close and seal the open entry and exit such that a bath is created to hold a volume of liquid at least temporarily.
4. A substantially rectangular walk-in shower having at least three wall portions and a deployable wall portion operable in at least two configurations, namely a first shower configuration in which the deployable wall portion is located adjacent to one of the at least three wall portions leaving a walk in open entry and exit from the shower and a second bath configuration in which the deployable wall portion is located to close and seal the open entry and exit with movement of the deployable wall creating a bath enclosure to hold a volume of liquid at least temporarily.
5. A walk-in shower as claimed in any one of the preceding claims wherein a floor level in the walk-in shower is substantially the same as a floor level outside the walk-in shower.

6. A walk-in shower as claimed in any one of the preceding claims wherein the at least one fixed wall portion of the walk-in shower include one or more full height wall portions and the deployable wall portion is a partial height wall portion.
7. A walk-in shower as claimed in any one of the preceding claims wherein the deployable wall portion hinges or pivots about a fixed axis.
8. A walk-in shower as claimed in claim 7 wherein the fixed axis is either substantially vertical allowing the deployable wall to move or rotate substantially horizontally or, substantially horizontal allowing the deployable wall to move or rotate substantially vertically.
9. A walk-in shower as claimed in any one of the preceding claims wherein the deployable wall is provided with a wheel or rolling or sliding or runner or track or cable mechanism or any combination thereof.
10. A walk-in shower as claimed in claim 9 wherein one or more tracks or guide channels are provided to guide movement of the deployable wall.
11. A walk-in shower as claimed in any one of the preceding claims wherein a catch or latch is provided in order to at least temporarily retain the deployable wall in the closed condition.
12. A walk-in shower as claimed in any one of the preceding claims wherein when in the bath configuration, water pressure due to water in the bath assists with the sealing of the deployable wall.
13. A walk-in shower as claimed in any one of the preceding claims wherein the deployable wall is detachably mounted for removal.
14. A method of creating a bath enclosure from a walk-in shower, the method including the step of providing a walk-in shower having at least one wall fixed portion and a deployable wall portion, locating the deployable wall portion adjacent to one of the at least three wall portions leaving a walk in open entry and exit from the shower and deploying the deployable wall portion to close and seal the open entry and exit with movement of the deployable wall creating a bath enclosure to hold a volume of liquid at least temporarily.
15. A method of creating a bath enclosure from a walk-in shower as claimed in claim 14

wherein the shower is substantially U-shaped with three fixed walls and the deployable wall forms a fourth wall to define the bath enclosure when deployed.