Disclosed herein is a prefabricated shower base. The shower base has a funnelled floor with a drain recess located in it. The drain recess has a bottom wall disposed along a first plane. A perimeter wall surrounds the funnelled floor and has a top perimeter wall surface disposed along a second plane, which defines a shower base threshold. The perimeter wall has a bottom perimeter wall surface disposed along a third plane. The first plane is located below the third plane.
REVERSIBLE LOW PROFILE SHOWER BASE

CROSS-REFERENCE TO RELATED APPLICATIONS


TECHNICAL FIELD

[0002] The present subject matter relates to pre-fabricated shower fixtures, and more particularly to a prefabricated low profile base for a shower enclosure.

BACKGROUND

[0003] Prefabricated bases for shower stalls are typically mounted directly to the floor of a room (i.e., on top of the subfloor and the floor) of a room such as a bathroom. A typical prefabricated shower base or pan includes a sloped bottom wall defining the floor of the pan, and a plurality of lateral walls surrounding the bottom wall and extending upwardly to keep the water inside the shower pan when the shower is in use. A drain hole is provided at the lowest point of the sloped bottom wall to direct the water toward the drain pipe of the building. Typically, the slope of the bottom wall is typically about 2 degrees to properly direct water to the drain.

[0004] Taking a generally rectangular prefabricated shower base as example, the lateral walls of the base include a pair of spaced-apart side walls and a back and front walls extending therebetween. When the base is installed, the side and back walls are adjacent to corresponding watertight walls of the building or, alternatively, are provided with vertically extending shower panels defining the shower enclosure (e.g., glass or acrylic panels). Generally, the front wall of the shower base is left open to provide an access or entrance to the shower stall, which entrance may be closed by pivoting or sliding doors or by a shower curtain. Accordingly, the front lateral wall defines a threshold for the shower base.

[0005] To meet generally accepted North American building codes, the threshold of the shower entrance must extend at least 2 inches above the top of the drain hole defined in the shower pan. However, the overall height of the threshold of prefabricated shower bases relative to the floor of the room in which the shower is installed is significantly higher than 2 inches, (typically at least 3 inches and often considerably higher) because of the thickness of the bottom wall, which must be sufficient to provide adequate rigidity to the base, and to accommodate a cover for the drain hole which is sufficiently thick to meet standards for deflection resistance under load. For example, typical covers made of plastic material have thicknesses of 3/4 inch or more and require a corresponding recess of about ¼ inch deep. The depth of the recess is adapted to accommodate the cover and to provide a small funnelled wall above the cover (e.g., having a height of about 3/4 inch) to permit the water from the bottom wall of the shower pan to be directed to the drain. Further, allowance has to be made for deformation of the base, such as warping, between the drain and the threshold. Therefore, because the base rests directly on the floor, the thicknesses of these elements increase the height of the threshold relative to the surface of the floor.

[0006] Many consumers, however, wish to have a shower enclosure with a floor pan that is approximately level with the floor of the room in which the shower enclosure is located, and with as low an entrance threshold as possible. The height of the entrance threshold is particularly important for people with disabilities or mobility constraints. In North America, there are specific standards for such installations that permit a much lower threshold than usual, but only if the floor of the room where the shower enclosure is located is equipped with another drain to capture water that may splash out of the shower enclosure. Other standards require the addition of a seat, grab bars and the use of a shower curtain instead of a shower door. This may render the use of floor-levelled bases more expensive.

[0007] Further, known prefabricated bases are provided with tiling flanges on one or multiple lateral walls. The tiling flanges extend upwardly (generally vertically) from the corresponding lateral walls and are designed to abut corresponding walls of a building (e.g., a gypsum wall, a plywood wall or a concrete sheet wall), to be tiled. These tiling flanges permit the installation of tiles and reduce water seepage by directing the water falling on the tiled walls towards the bottom wall of the base.

[0008] Because tiling flanges are integral with the corresponding lateral walls, customers and/or installers cannot position the base other than in its predetermined position. Therefore, prefabricated bases manufacturers must consider the different possible positions of a shower base in a room and produce a plurality of bases accordingly. This, however, tends to make the manufacture of prefabricated shower less convenient and more expensive because multiple moulds are required to produce a same model of shower base to accommodate the various possible solutions.

[0009] Therefore, it would be beneficial to be provided with a prefabricated shower base that addresses at least one of the above drawbacks.

BRIEF SUMMARY

[0010] Accordingly, there is provided a prefabricated shower base, comprising:

[0011] a funnelled floor having a drain recess located therein, the drain recess having a bottom wall disposed along a first plane; and

[0012] a perimeter wall surrounding the funnelled floor and having a top perimeter wall surface disposed along a second plane defining a shower base threshold, the perimeter wall having a bottom perimeter wall surface disposed along a third plane, the first plane being located below the third plane.

[0013] In one example, the first, second and third planes are horizontally disposed.

[0014] In another example, the first and second planes are angled from about 1 degree to about 5 degrees with respect to the third plane.

[0015] In another example, the shower base is configured to be mounted on a top surface of a plurality of floor joists. The drain recess is receivable between two adjacent floor joists and extends below the top surface of the adjacent floor joists when the shower base is mounted on the top surface of the plurality of floor joists.

[0016] In another example, the second plane and the third plane are separated by a first distance, the first distance corresponding to a thickness of a floor mounted on the top surface of the floor joists, adjacent to the shower base. The room floor comprises a subfloor and a floor covering. The subfloor and the floor covering have a combined thickness from about ½ inches to about 2 inches. The combined thick-
ness of the subfloor and the floor covering may range from about \( \frac{3}{4} \) inches to about \( \frac{1}{2} \) inches.

[0017] In yet another example, the top perimeter wall surface and the bottom perimeter wall surface are disposed substantially parallel to each other, the top perimeter wall surface and the bottom perimeter wall surface being sufficiently spaced apart to permit location of the shower base in a cavity located in a planar room floor so that the top perimeter wall surface is flush with the planar room floor.

[0018] In one example, the shower base is configured to be mounted on a subfloor. The subfloor is a wood subfloor or a concrete subfloor.

[0019] In another example, the shower base is configured to be mounted on a floor covering. The floor covering is a tile floor, a vinyl floor or a wood floor.

[0020] In another example, the second plane and the third plane are separated by a second distance. The second distance is about one inch.

[0021] In yet another example, the funneled floor has a slope ranging from about 1 degree to about 3 degrees.

[0022] In still another example, the shower base includes, at least one longitudinal slot located in the top perimeter wall surface for receiving a mounting structure therein. The mounting structure is selected from the group consisting of a tiling flange, a glass mounting channel and a slot cover.

[0023] According to another aspect, there is provided a prefabricated shower base, comprising:

[0024] a floor; and

[0025] a perimeter wall surrounding the floor, and having a top perimeter wall surface and at least two holding portions located in the top perimeter wall surface, each holding portion being configured to hold a mounting structure.

[0026] In one example, the holding portions are longitudinal slots.

[0027] In another example, the mounting structure is selected from the group consisting of: a tiling flange, a glass mounting channel and a slot cover.

[0028] According to yet another aspect, there is provided a shower base assembly comprising:

[0029] a shower base for mounting adjacent a wall, the shower base including a floor, a perimeter wall surrounding the floor and having a top perimeter wall surface, and first and second holding portions located in the top perimeter wall surface, each holding portion being configured to hold a mounting structure; and

[0030] first and second interchangeable mounting structures, each mounting structure being configured to engage one of the first and second holding portions.

[0031] In one example, the shower base further includes third and fourth holding portions.

[0032] In another example, the first and second holding portions are first and second longitudinal slots.

[0033] In another example, the first mounting structure is a tiling flange including a tiling portion adapted to be secured to the room wall, and a slot engaging portion for engaging one of the first and second longitudinal slots. The slot engaging portion of the tiling flange may further include a plurality of barbs.

[0034] In one example, the tiling flange further includes a connecting portion extending between the tiling portion and the slot engaging portion, perpendicularly to the tiling portion. The tiling portion may be disposed generally parallel to the top perimeter wall surface and be spaced therefrom by a third distance when the tiling flange is received in one of the first and second longitudinal slots. The third distance may be about one inch.

[0035] In another example, the second mounting structure is a channel including a panel receiving portion having a pair of spaced apart side walls and a bottom wall defining a channel for receiving therein a panel, and a slot engaging portion for engaging one of the first and second longitudinal slots. The slot engaging portion of the channel may further include a plurality of barbs.

[0036] In one example, the spaced apart side walls are spaced by a fourth distance. The fourth distance may be about 2 inches.

[0037] In another example, the second mounting structure is a slot cover including a slot engaging portion for engaging one of the first and second longitudinal slots, and a covering portion extending perpendicularly with respect to the slot engaging portion and being sufficiently wide to cover the one of the first and second longitudinal slots. The slot engaging portion of the slot cover may further include a plurality of barbs.

[0038] In yet another example, the second mounting structure includes a channel for engaging one of the first and second longitudinal slots and a slot cover for engaging the same longitudinal slot, adjacent the channel.

BRIEF DESCRIPTION OF THE DRAWINGS

[0039] In order that the claimed subject matter may be more fully understood, reference will be made to the accompanying drawings, in which like reference numbers are employed to designate similar features, and in which:

[0040] FIG. 1 is a front perspective view of a shower stall comprising a prefabricated shower base in accordance with one embodiment;

[0041] FIG. 2 is a front perspective view of the shower base shown in FIG. 1, with the drain cover removed;

[0042] FIG. 3 is a top plan view of the shower base shown in FIG. 1, with the drain cover removed;

[0043] FIG. 4A is a cross-section view, taken along line IVA-IVA, of the shower base shown in FIG. 3;

[0044] FIG. 4B is a cross-section view, taken along line IVB-IVB, of the shower base shown in FIG. 3;

[0045] FIG. 5A is an enlarged cross-section view of the shower base shown in FIG. 4A, to better appreciate details of the front perimeter wall;

[0046] FIG. 5B is an enlarged perspective cross-section view of the shower base shown in FIG. 4A, to better appreciate details of the back perimeter wall;

[0047] FIG. 5C is an enlarged cross-section view of the shower base shown in FIG. 4B to better appreciate details of the side perimeter wall;

[0048] FIG. 6 is a perspective, cross-section view, taken along line VI-VI, of the shower base shown in FIG. 3;

[0049] FIG. 7 is a front elevation view of the shower base shown in FIG. 1, mounted on a plurality of floor joists for showing the position of the drain recess relative to the plane of the bottom wall;

[0050] FIG. 8 is a back perspective, view of the shower base shown in FIG. 1, with the drain cover exploded from the base;

[0051] FIG. 9 is another back perspective view of the shower base shown in FIG. 1, with the drain cover positioned on the base;
DetaiLED DESCRIPTION

The description which follows, and the embodiments described therein are provided by way of illustration of an example, or examples of particular embodiments of principles and aspects of the present discovery. These examples are provided for the purpose of explanation and not of limitation, of those principles of the discovery. In the description that follows, like parts are marked throughout the specification and the drawings with the same respective reference numerals.

With reference to FIG. 1, a shower stall is shown generally at 100 and comprises a generally rectangular base or pan 102 for location in a corner of a room of a building (e.g., a bathroom or a locker room), adjacent to a pair of generally perpendicular walls 104, 106. The shower stall 100 further includes a front glass panel 108 and a side glass panel 110 mounted on the base 102. The front and side glass panels 108, 110 are disposed generally perpendicularly to each other and respectively abut the walls 104 and 106. The front and side glass panels 108, 110 are also spaced to define an opening or entrance 112 to the shower stall 100. This entrance 112 may be closed by a shower door or a shower curtain (not shown) to prevent water from escaping from the stall 100 when the shower is in use.

Turning now to FIGS. 1, 2 and 3, the base 102 has a rectangular floor 200 surrounded by an outer perimeter wall 201 which includes a front perimeter wall 202, a back perimeter wall 204 and two side perimeter walls 206, 208 extending therebetween. A drain recess 210 provided with a drain hole 212 is located in the floor 200 of the base 102, near the front perimeter wall 202 and generally halfway between the side perimeter walls 206, 208, for draining water toward a drain pipe 114 of the building. The floor 200 includes a front edge 300, a back edge 302 and two side edges 304, 306. A pair of inner edges 308, 310 further extend between the back edge 416 and the drain recess 210 to divide the base 102 into three generally triangular and planar portions, namely a back portion 312, a left portion 314 and a right portion 316. The back portion 312 is slightly inclined downward, from the back edge 302 toward the drain recess 210. Similarly, the left and right portions 314, 316 are slightly inclined downward, from the side edges 304, 306, respectively, toward the drain recess 210, and from the back edge 302 toward the front edge 300. The drain recess 210 is therefore located at the lowest point of the floor 200. Accordingly, the front, left and right portions 312, 314, 316 collaborate to define a funnel capable of directing the water toward the drain recess 210. In one embodiment, the slope of the back, left and right portions 312, 314, 316 is about 2 degrees. This inclination allows a proper flow of water toward the drain recess 210 without compromising the comfort of users. A person skilled in the art will appreciate that the back, left and right portions 312, 314, 316 could have a different slope, and yet fulfill their purpose.

Referring now to FIGS. 2 and 4A to 5B, the front perimeter wall 202 has an inverted U-shaped cross-section. Specifically, the front perimeter wall 202 comprises an inner face 500 extending generally vertically from the floor 200 of the base 102, a rectangular outer face 214 disposed parallel to the inner face 500 and a horizontal top face 502 extending between the outer and inner faces 214 and 500. The outer face 214 has a bottom edge 504 located away from the top face 502 for abutting a plurality of floor joists 116 when the base 102 is installed. Similarly to the front perimeter wall 202, the back perimeter wall 204 comprises a generally horizontal top face 600 and a generally rectangular, vertically extending outer face 602 which has a bottom edge 604 located away from the top face 600. In the embodiment shown in FIGS. 1 to 11, the back perimeter wall 204 has no inner face. Rather, the back portion 312 of the floor 200 extends directly from the drain recess 210 to the top face 600 of the back perimeter wall 204. This configuration allows easy access to the shower stall 100.

Turning now to FIGS. 5C and 6, the side perimeter walls 206, 208 will be described as the side perimeter walls 206, 208 are substantially identical, only side perimeter wall 206 will be described in detail. The side perimeter wall 206 comprises a generally rectangular outer face 1000 having a generally horizontal bottom edge 1002, a generally vertical inner face 1100, spaced apart from the outer face 1000 and extending upwardly from the side edge 304 of the floor 200, and a top face 1108 extending between the outer face 1000 and the inner face 1100. The inner face 1100 has a generally triangular shape and comprises a generally horizontal upper edge 1102, an inclined lower edge 1104 and a front edge 1106 connecting the lower edge 1104 to the upper edge 1102. The inner face 1100 tapers from the front edge 1106 toward a back end 1200, where the lower edge 1104 meets the upper edge 1102. The slope or inclination of the lower edge 1104 corre-
sponds to the slope of the left portion 314 of the floor 200, from the front edge 300 toward the back edge 302 of the floor 200.

[0072] Referring now to FIG. 7, the bottom edges 504, 604 and 1002 of the perimeter walls 202, 204, 206 and 208 are disposed along a common abutment plane P1. Together, the bottom edges 504, 604 and 1002 define a bottom surface 700 of the perimeter wall 201, which abuts a top surface 702 of the floor joists 116. As shown in FIG. 7, the abutment plane P1 is disposed generally horizontally. Furthermore, the top faces 502, 600 and 1108 of the perimeter walls 202, 204, 206 and 208 define a top surface 704 which is disposed along a threshold plane P2 to define a threshold of the shower 100. In the illustrated embodiment, the top surface 704 is substantially parallel to the bottom surface 700 of the perimeter wall 201. As it will become apparent below, this allows a horizontal alignment of the top faces 502, 600 and 1108 relative to floor covering (e.g. tiles 120).

[0073] Referring to FIGS. 5A and 7, the drain recess 210 is adapted to direct water toward the drain 114 of the building. Further, because the drain recess 210 extends downwardly onto a drain plane P2, below the abutment plane P1, it partially engages and projects into the space between two adjacent floor joists 116. In the embodiment shown in FIGS. 1 to 7, the drain recess 210 is generally circular and comprises a cylindrical wall 1700 having an upper circular edge 1702 connected to the floor 200 of the base 102, and a lower circular edge 1704. The drain recess 210 also comprises an annular bottom wall 1706 having an outer circular edge 1708 connected to the lower circular edge 1704 of the cylindrical wall 1700, and an inner circular edge 1710 surrounding the drain hole 212. The bottom wall 1706 has a top face 1714 and a bottom face 1716. As best shown in FIG. 16, the bottom wall 1706 of the drain recess 210 extends along the drain plane P2, which is horizontally disposed and located below the abutment plane P1. In one embodiment, the horizontal plane of the top face 1714 of the bottom annular wall 1706 and the threshold plane P2 are separated by a distance of at least 2 inches, where the distance between the planes P1 and P2 is typically about one inch and the distance between the planes P2 and P3 is also about one inch.

[0074] Referring to FIGS. 1 and 7, in typical floor construction, a plywood subfloor 118 about ½ inches thick is secured on floor joists (e.g. joists 116) and tiles 120 having a thickness of about ½ inches are laid down on the subfloor, to form a floor having a combined thickness of about one inch. A cavity sized and shaped to receive the base 102 is defined in the floor of the room. Since the floor of the room is generally planar, and because the base 102 is mounted directly on the floor joists 116, the top surface of the tiles 120 is disposed on the threshold plane P3, and is horizontally aligned, or flush, with the top faces 502, 600 and 1108 when the base 102 is installed in the cavity of the floor. Further, because the drain recess 210 extends about 2 inches below the threshold plane P3, the distance between the top of the drain and the threshold meets the 2 inches plumbing code requirements which may be found in some jurisdictions. A person skilled in the art will appreciate that the relative position of planes P1, P2 and P3 of the various components of the base 102 can be adjusted to meet different plumbing requirements.

[0075] Alternatively, instead of being disposed horizontally, the threshold plane P3 may be slightly concave. Specifically, the top faces 502, 600 and 1108 of the perimeter walls 202, 204, 206, 208 may be slightly angled with respect to the abutment plane P1 to define a slope oriented towards the floor 200, in order to direct water which may fall on the top surface 704 of the perimeter wall 201 towards the floor 200. In one embodiment, the top faces 502, 600 and 1108 of the perimeter walls 202, 204, 206, 208 are disposed at an angle ranging between about 1 and 5 degrees with respect to the abutment plane P1.

[0076] Moreover, the drain plane P2, and therefore the bottom wall 1706 of the drain recess 210, may be slightly angled with respect to the abutment plane P1. This configuration may be useful or required if the drain pipe 114, which is connected to the bottom wall 1706, is also slightly angled. This configuration may also permit the use of a connecting assembly (not shown) designed to connect the drain pipe 114 to an angled drain recess. In one embodiment, the drain plane P2 is disposed at an angle ranging between about 1 and 5 degrees with respect to the abutment plane P1.

[0077] In one embodiment, not shown, the shower base 102 is provided with a reinforcing structure to improve the structural rigidity of the base 102. In this embodiment, the reinforcing structure takes the form of a grid (not shown) extending downwardly from the floor 200 of the base 102 and having a lower contact surface in horizontal alignment with the bottom edges 504, 604 and 1002 of perimeter walls 202, 204, 206 and 208 (i.e. also disposed on the abutment plane P1) for resting on the floor joists 116. In another embodiment, the underfoot of the floor 200 and perimeter walls 202, 204, 206, 208 can be filled with material, such as the material used for manufacturing the base 102.

[0078] Furthermore, while in this embodiment, the prefabricated base 102 is mounted directly on floor joists 116, it will be appreciated that the base 102 could also be mounted directly on a subfloor such as a wood or plywood subfloor or a concrete subfloor. In this case, a hole would be defined in the surface of the subfloor to receive the drain recess 210 therein. In such case, the floor covering (e.g. tiles, vinyl, hardwood or laminate floor) would be installed around the bases 102 and the height of the threshold would be reduced by a corresponding height of the floor covering. A person skilled in the art will also appreciate that the shower base 102 could be mounted directly on the floor covering. In such case, a hole would be defined in the floor covering and the subfloor for receiving the drain recess 210.

[0079] Referring to FIGS. 1, 8 and 9, a cover 122 is provided to protect a user’s foot from inadvertently entering the drain recess. The cover 122 has a straight edge 800 for abutment against the inner face 500 of the front perimeter wall 202 and a generally curved edge 802 defining a surface having a shape adapted for covering the drain recess 210. The cover 122 is configured for partially resting on the top faces 1108 of the side perimeter walls 206, 208, thereby providing a space 900 for the water to enter the drain recess 210. A person skilled in the art will appreciate that the cover 122 may be configured according to one of various other configurations.

[0080] In FIG. 10 for example, there is shown a cover 1000 which comprises a first straight edge 1002 for abutment against the inner face 500 of the front perimeter wall 202 and a second straight edge 1004 instead of a generally curved edge.

[0081] A person skilled in the art will further appreciate that the shower base 102 may be configured according to one of various configurations, in each of which a drain recess (e.g. drain recess 210) extends downwardly below the abutment plane of the base 102, to engage the space defined adjacent
floor joists (e.g. floor joists 116) to meet plumbing code requirements without the need of increasing the height of the entrance threshold.

[0082] For example, a first alternative embodiment is shown in FIG. 11. In the embodiment, a rectangular shower base 3100 defines a floor pan area 3102 having a sloped floor 3103 and a water catchment area 3104. A front wall 3106, a rear wall 3108 and left and right side walls 3110 and 3112 surround the floor 3103. A line of intermittent grid members 3114 extends upwardly from the floor 3103 and demarcate the transition between the floor pan area 3102 and the catchment area 3104. The grid members 3114 are separated by passages 3116 for allowing water to travel from the floor pan area to the catchment area 3104. In the catchment area 3104, a drain recess 3118, similar to drain recess 210 of base 102 is provided, with a drain hole (not shown), for directing the water toward the drain pipe of the building (not shown). A grate 3120 is removably positioned over the catchment area 3104. The grate 3120 establishes a threshold cover element that hides the drain recess 3118 from view. The grate 3120 may be removed from the base 3100 to facilitate cleaning of the catchment area 3104. The drain recess 3118 may additionally have a perforated drain cover (not shown) to prevent loss of objects down the drain while allowing drainage of water. It will also be appreciated that the grate 3120 can be adapted to permit overflow water to drain in the event that drainage through the passages 3116 are blocked, by providing a plurality of perforations 3122.

[0083] Referring still to FIG. 11, it will of course be appreciated that when the shower base 3100 is in use, water will collect on the base 3100 and travel down the slope of the floor 3103 in the floor pan area 3102, through the passages 3116 that separate the grid members 3114, and under the grate 3120 into the catchment area 3104 and ultimately down the drain recess 3118. The person skilled in the art will further appreciate that the grid members 3114 and the passages 3116 can be adapted to allow water to travel down to the catchment area 3104 while preventing objects that may be used in the shower, such as a soap bar, a shampoo bottle or a razor, to enter the catchment area 3104. Further, similar to base 102, the base 3100 may be used in conjunction with pre-fabricated wall panels or tiled walls, as is known to a person skilled in the art. The shower enclosure may also include either a curtain or a door to prevent water from escaping while the shower is being used.

[0084] It will of course be appreciated by those skilled in the art that many variations are possible. For example, while the above embodiments include a shower fixture base having a bottom which is generally rectangular, numerous other rectilinear or curvilinear shapes could be used. Moreover, the shower may have its entrance at a location other than at the front, such as at a side, and may have more than one entrance, and more than one drain hole.

[0085] FIG. 12 shows a shower base 1200 according to an alternative embodiment. The base 1200 is generally pentagonal and comprises a sloped floor 1202 and a perimeter wall 1204 surrounding the floor 1202 to define a pan 1206 for containing water during operation of the shower. In this embodiment, a drain recess 1208 is defined in the perimeter wall 1204. Specifically, the drain recess 1208 is in communication with the pan 1206 and the floor 1202 is inclined towards the drain recess 1208 to direct water received in the pan 1206 towards the drain recess 1208. The base 1200 further comprises a grate 1210 which is removably positioned over the drain recess 1208 to hide the drain recess 1208 from view.

[0086] FIG. 13 shows a shower base 1300 according to yet another embodiment. The base 1300 is generally rectangular and comprises a sloped floor 1302 and a perimeter wall 1304 including front, back and side perimeter walls 1306, 1308, 1310, 1312 surrounding the floor 1302 to define a pan 1314. In this embodiment, the side perimeter wall 1310 has a curved inner edge 1315 which is indented to define a rectangular drain area 1316 in which is provided a drain recess 1318. The floor 1302 is inclined towards the drain recess 1318 to direct water received in the pan 1314 towards the drain recess 1318. The base 1300 further includes a cover 1320 which is shaped to be placed over the drain area 1316 to cover the drain recess 1318 from view. The cover 1320 has a side edge 1322 which forms an extension of the inner edge 1315 of the side perimeter wall 1310 such that the cover 1320 appears to form part of the side perimeter wall 1310 when the base 1300 is observed from above. The cover 1320 is spaced from the floor 1302 when installed over the drain area 1316 to allow water to flow from the pan 1314 to the drain recess 1318.

[0087] FIG. 14 shows a shower base 1400 according to yet another embodiment. The shower base 1400 is generally rounded and comprises a floor 1402 and a perimeter wall 1404 which includes generally perpendicular first and second straight perimeter walls 1406, 1408 and a curved perimeter wall 1410 extending between the first and second straight perimeter walls 1406, 1408. The first and second straight perimeter walls 1406, 1408 are adapted to abut walls of a room when the base 1400 is installed. A drain recess 1412 is also defined in the floor 1402, which is inclined to direct water towards the drain recess 1412.

[0088] FIG. 15 shows a shower base 1500 according to yet another embodiment. The shower base 1500 is also generally rounded and comprises a floor 1502 and a perimeter wall 1504 surrounding the floor 1502. The perimeter wall 1504 includes generally perpendicular first and second straight perimeter walls 1506, 1508 and a curved perimeter wall 1510 extending between the first and second straight perimeter walls 1506, 1508. In this embodiment, a gutter recess 1512 is defined near the curved perimeter wall 1510 and the second straight perimeter wall 1508. A drain recess 1518 is further defined in the gutter recess 1512, near the second end 1516. The floor 1502 is inclined to direct water into the gutter recess 1512, and thus towards the drain recess 1518.

[0089] FIGS. 16, 17 and 18 show a shower base 1600 according to yet another embodiment. The shower base 1600 is generally saucer-shaped and comprises a floor 1602 and a perimeter sidewalk 1604 having a concave inner face 1606. As shown in FIG. 18, the perimeter sidewalk 1604 is hollow and could be manufactured by extrusion or by a similar technique known to the skilled addressee. The shower base 1600 further includes a drain recess 1608 which is substantially centered on the floor 1602.

[0090] All of the shower bases shown in FIGS. 11 to 18 comprise a drain recess which extends below the floor of the base for positioning between joist beams of a floor, as is the case with the shower base 102 shown in FIGS. 1 to 11. The shower bases described in accordance with the above exemplary embodiments can be used both for regular shower enclosures and for shower enclosures intended for use by persons with disabilities or who have mobility constraints.
Referring to FIGS. 1 to 10 and 19 to 24, the perimeter wall 201 further includes holding portions configured to hold mounting structures for mounting various elements to the shower base 102. Referring specifically to FIGS. 19 to 24, slots 2200, 2202, 2204 and 2206 are defined in the top surfaces 502, 600, 1108 of the front, back and side perimeter walls 202, 204, 206, 208, respectively. As the slots 2200, 2202, 2204 and 2206 are substantially identical, only the slot 2204 will be described. The slot 2204 is longitudinal (i.e. it extends generally between the front perimeter wall 202 and the back perimeter wall 204) and extends downwardly from the top face 1108 of the side perimeter wall 206. Accordingly, the slot 2204 comprises a pair of spaced apart side walls 2300, 2302, connected by a bottom wall 2304. Each slot is configured for receiving therein one of a generally U-shaped tilting flange 2208, a glass mounting channel 2210 and a slot cover 2212.

Referring now to FIGS. 20 to 22, the tilting flange 2208 is generally U-shaped and comprises a first side portion 2400, a second side portion 2402 and a back portion 2404 (shown in FIG. 20) for engaging the slots 2204, 2206 and 2202 of the side and back walls 206, 208 and 204, respectively. The portions 2400, 2402, 2404 being identical, only portion 2400 will be described, with reference to FIG. 21. The first side portion 2400 has a generally Z-shaped cross-section and comprises a generally vertical tilting portion 2500, a generally vertical slot engaging portion 2502 and a generally horizontal connecting portion 2504. Provided on the slot engaging portion 2502 and extending upwardly at an angle of about 45 degrees are a plurality of abutment projections, or bars 2506. As shown in FIG. 22, the bars 2506 about the walls 2300 and 2302 of the slot 2204 to prevent unwanted removal of the tilting flange 2208 from the slots 2202, 2204 and 2206, and to minimize water infiltration in the slots 2202, 2204 and 2206. When the base 102 is installed in the corner of a room, the tilting portion 2500 is secured to a wall of the room. One or more wallboard panels, for example gypsum boards, fibre cement panels or other types of wallboard panels, may then be secured over the wall and the tilting portion 2500 such that the bottom of the wallboard panel abuts the horizontal connecting portion 2504. Note that the wallboard panel cannot be fixed to the shower base 102 so as to advantageously prevent water received in and on the base 102 during a shower from contacting and damaging the wallboard panel. In one embodiment, when the tilting flange 2208 is received in the slots 2202, 2204 and 2206 and is fully engaged therein such that the slot engaging portion 2502 contacts the bottom wall 2304 of the slot, the connecting portion 2504 is disposed generally parallel to the top perimeter wall surface of the shower base 102 and is spaced from the shower base 102 by a distance of about 1 inch.

As best shown in FIG. 23, the channel 2210 comprises a slot engaging portion 2700 similar to slot engaging portion 2502 of tilting flange 2208. Accordingly, the slot engaging portion 2700 has a plurality of upwardly extending projections, or bars 2702, for engaging corresponding side walls of a slot. The channel 2210 also comprises a panel receiving portion 2704 having a generally U-shaped cross-section. The panel receiving portion 2704 comprises a pair of spaced apart side walls 2706, 2708 and a bottom wall 2710 defining a channel 2712 for receiving therein a panel (e.g. panel 110 shown in FIG. 1). Various types of panels may be received in the channel 2712, such as a glass panel or even a prefabricated wall. Accordingly, in one embodiment, the channel 2712 is sized and shaped to receive a panel having a width of up to about 2 inches.

With reference to FIGS. 24, the slot cover 2212 has a generally T-shaped cross-section and comprises a slot engaging portion 2800 and a plurality of upwardly extending projections, or bars 2802, for engaging corresponding side walls of a slot. The slot cover 2212 also comprises a generally flat covering portion 2804 extending perpendicularly to the connecting portion 2800 and being sufficiently wide to cover the slot 2200 and to contact the top face 502 of the front perimeter wall 202 to minimize water infiltration.

FIG. 19 shows the tilting flange 2208, the channel 2210 and the slot cover 2212 assembled to the base 102. The channel 2210 and the slot cover 2212 are disposed adjacent each other and both engage the slot 2200 of the front perimeter wall 202. A person skilled in the art will appreciate that the slot configuration of the base 102 allows positioning the tilting flange 2208, the channel 2210 and the slot cover 2212 interchangeably in the slots 2200, 2202, 2204 and 2206. Accordingly, the front perimeter wall 202 could be positioned adjacent the wall 106 of the room to become a "back" lateral wall. Alternatively, a person skilled in the art could use a tilting flange having two sides (e.g. a L-shaped tilting flange) and two channels to mount a two glass panels, such as in the embodiment shown in FIG. 1.

Therefore, the base 102 and other bases provided with a similar slot arrangement can be said to be "reversible": the installer has the option to orient the base 102 in various ways, contrary to the prior art shower bases which have to be installed in a predetermined position.

One skilled in the art will appreciate that the slots could alternatively receive other types of mounting structures shaped and sized to engage the slots.

The various bases illustrated in FIGS. 1 to 24 may be made of extruded plastic, other synthetic polymers, such as polyvinyl chloride, acrylonitrile-butadiene-styrene, tripolymer, acrylic, polyurethane, fiberglass with gel coat, cast polymer, stainless steel, painted galvanized steel or aluminum, among other materials that are known to those skilled in the art.

Although the above description relates to a specific preferred embodiment as presently contemplated by the inventor, it will be understood that the discovery in its broad aspect includes mechanical and functional equivalents of the elements described herein.

We claim:
1. A prefabricated shower base, comprising: a funnelled floor having a drain recess located therein, the drain recess having a bottom wall disposed along a first plane; and a perimeter wall surrounding the funnelled floor and having a top perimeter wall surface disposed along a second plane defining a shower base threshold, the perimeter wall having a bottom perimeter wall surface disposed along a third plane, the first plane being located below the third plane.
2. The shower base, according to claim 1, in which the first, second and third planes are horizontally disposed.
3. The shower base, according to claim 1, in which the first and second planes are angled from about 1 degree to about 5 degrees with respect to the third plane.
4. The shower base, according to claim 1, is configured to be mounted on a top surface of a plurality of floor joists.
5. The shower base, according to claim 4, in which the drain recess is receivable between two adjacent floor joists and extends below the top surface of the adjacent floor joists when the shower base is mounted on the top surface of the plurality of floor joists.

6. The shower base, according to claim 1, in which the second plane and the third plane are separated by a first distance, the first distance corresponding to a thickness of a room floor mounted on the top surface of the floor joists, adjacent to the shower base.

7. The shower base, according to claim 6, in which the room floor comprises a subfloor and a floor covering.

8. The shower base, according to claim 7, in which the subfloor and the floor covering have a combined thickness from about ½ inches to about 2 inches.

9. The shower base, according to claim 8, in which the combined thickness of the subfloor and the floor covering ranges from about ¼ inches to about 1 ½ inches.

10. The shower base, according to claim 1, in which the top perimeter wall surface and the bottom perimeter wall surface are disposed substantially parallel to each other, the top perimeter wall surface and the bottom perimeter wall surface being sufficiently spaced apart to permit location of the shower base in a cavity located in a planar room floor so that the top perimeter wall surface is flush with the planar room floor.

11. The shower base, according to claim 1, is configured to be mounted on a subfloor.

12. The shower base, according to claim 11, in which the subfloor is a wood subfloor or a concrete subfloor.

13. The shower base, according to claim 1, is configured to be mounted on a floor covering.

14. The shower base, according to claim 13, in which the floor covering is a tile floor, a vinyl floor or a wood floor.

15. The shower base, according to claim 1, in which the second plane and the third plane are separated by a second distance.

16. The shower base, according to claim 15, in which the second distance is about one inch.

17. The shower base, according to claim 1, in which the funnelled floor has a slope ranging from about 1 degree to about 3 degrees.

18. The shower base, according to claim 1, includes, at least one longitudinal slot located in the top perimeter wall surface for receiving a mounting structure therein.

19. The shower base, according to claim 18, in which the mounting structure is selected from the group consisting of: a tiling flange, a glass mounting channel and a slot cover.

20. A prefabricated shower base, comprising: a floor; and
   a perimeter wall surrounding the floor; and having a top perimeter wall surface and at least two holding portions located in the top perimeter wall surface, each holding portion being configured to hold a mounting structure.

21. The shower base, according to claim 20, in which the holding portions are longitudinal slots.

22. The shower base, according to claim 20, in which the mounting structure is selected from the group consisting of: a tiling flange, a glass mounting channel and a slot cover.

23. A shower base assembly comprising:
   a shower base for mounting adjacent a room wall, the shower base including a floor, a perimeter wall surrounding the floor and having a top perimeter wall surface, and first and second holding portions located in the top perimeter wall surface, each holding portion being configured to hold a mounting structure; and
   first and second interchangeable mounting structures, each mounting structure being configured to engage one of the first and second holding portions.

24. The shower base, according to claim 23, further includes third and fourth holding portions.

25. The shower base, according to claim 23, in which the first and second holding portions are first and second longitudinal slots.

26. The shower base, according to claim 25, in which the first mounting structure is a tiling flange including a tiling portion adapted to be secured to the room wall, and a slot engaging portion for engaging one of the first and second longitudinal slots.

27. The shower base, according to claim 26, in which the slot engaging portion of the tiling flange further includes a plurality of barbs.

28. The shower base, according to claim 26, in which the tiling flange further includes a connecting portion extending between the tiling portion and the slot engaging portion, perpendicularly to the tiling portion.

29. The shower base, according to claim 28, in which the tiling portion is disposed generally parallel to the top perimeter wall surface and is spaced therefrom by a third distance when the tiling flange is received in one of the first and second longitudinal slots.

30. The shower base, according to claim 29, in which the third distance is about one inch.

31. The shower base, according to claim 25, in which the second mounting structure is a channel including a panel receiving portion having a pair of spaced apart side walls and a bottom wall defining a channel for receiving therein a panel, and a slot engaging portion for engaging one of the first and second longitudinal slots.

32. The shower base, according to claim 31, in which the slot engaging portion of the channel further includes a plurality of barbs.

33. The shower base, according to claim 31, in which the spaced apart side walls are spaced by a fourth distance.

34. The shower base, according to claim 33, in which the fourth distance is about 2 inches.

35. The shower base according to claim 25, in which the second mounting structure is a slot cover including a slot engaging portion for engaging one of the first and second longitudinal slots, and a covering portion extending perpendicularly with respect to the slot engaging portion and being sufficiently wide to cover the one of the first and second longitudinal slots.

36. The shower base, according to claim 35, in which the slot engaging portion of the slot cover further includes a plurality of barbs.

37. The shower base, according to claim 35, in which the second mounting structure includes a channel for engaging one of the first and second longitudinal slots and a slot cover for engaging the same longitudinal slot, adjacent the channel.