Aug. 7, 1956 W. W. WHITTICK 2,757,385

SHOWER RECEPTOR

Filed July 12, 1954

Fig. 1.

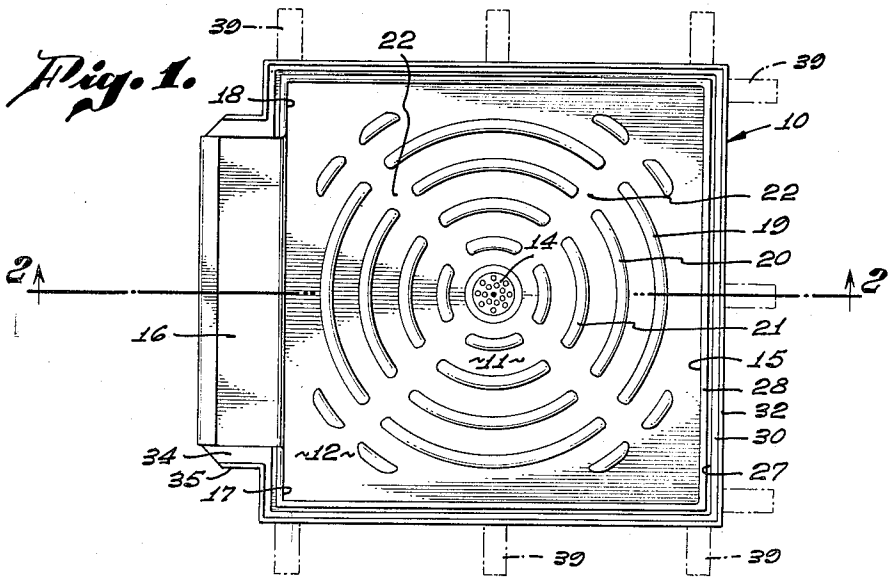


Fig. 2.

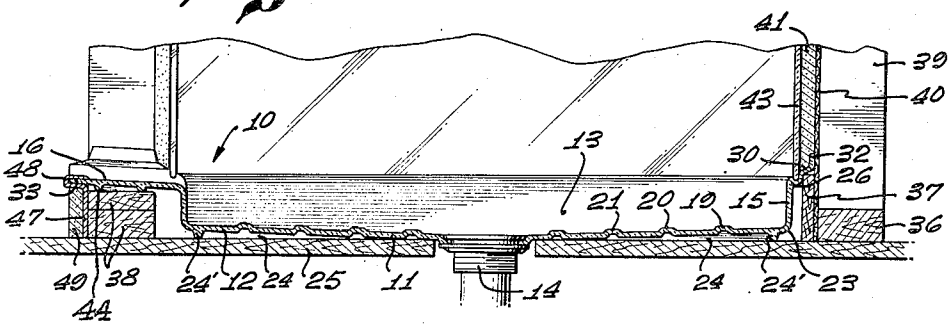


Fig. 3.

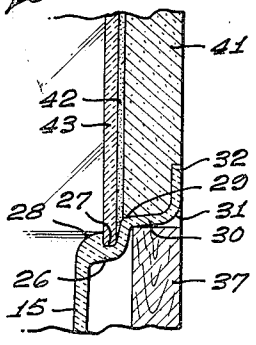
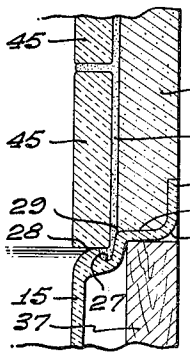


Fig. 4.



WILLIAM W. WHITTICK,
INVENTOR.
Huebner, Beehler,
Worrel and Herzig,
By Vernon D. Beehler
ATTORNEYS.

United States Patent Office

2,757,385

Patented Aug. 7, 1956

2,757,385

SHOWER RECEPTOR

William W. Whittick, Glendale, Calif.

Application July 12, 1954, Serial No. 442,467

11 Claims. (Cl. 4—146)

The invention relates to building materials and has particular reference to a water-tight structure at the bottom of the shower stall for receiving the water falling from the shower head.

Conventional building practice calls for the construction of shower stalls in such fashion that the walls of the shower stall are substantially waterproof and are joined at the bottom to some type of water-receiving receptacle, frequently termed a receptor, the receptor being a water-tight vessel in which the user can stand and at the bottom of which is a drain.

Many receptors are made of tile. Some are constructed of a monolithic concrete-like material and installed as units. Regardless of the particular type of receptor heretofore used, the practice has been to install on the rough flooring before installation of the receptor some waterproof material such as heavy paper impregnated with asphalt. Installations thus constructed make certain that dampness which might infiltrate the receptor is not conducted to the building structure.

Some attempts have been made to simplify receptor construction in that sheet metal pans have been provided. Some of these pans have been constructed of relatively high-priced rust-proof metals such as stainless steel. Regardless of the type of metal, however, the forming of the metal into a pan-like receptacle requires several relatively expensive operations. Even so, metal pans do not permit as many forming operations as may be desirable in order to have edge portions of the pans so constructed that they can be readily installed in the conventional roughing in structure and there made a water-tight portion of the building structure at the edge.

It is therefore among the objects of the invention to provide a new and improved shower receptor inexpensively constructed and so formed that for installation in a shower stall the usual waterproofing of the rough-in structure can be dispensed with.

Another object of the invention is to provide a new and improved low cost shower receptor for shower stalls which makes use of material in the nature of fibreglass reinforced plastic which permits so forming the edges of the receptor that they can be easily and effectively joined to the plaster and tile finish of the interior of the stall, thereby assuring a lasting water-resistant joint.

Still another object of the invention is to provide a new and improved shower stall construction which includes a water-tight receptacle for the bottom, an appropriate base layer to provide a proper interior surface, and a finish surface in the nature of tile or dry wall, the base layer and finish surface being keyed to the outer margin of the receptor in such fashion that a substantially water-resistant structure is assured.

Still further among the objects of the invention is to provide a new and improved shower receptor of lightweight inexpensive construction which at the same time is strong and durable without employment of metal and further constructed in such fashion that it can be installed

in conventional roughing-in and serve when installed as a guide to the proper application of interior surfacing of the shower wall.

Also included among the objects of the invention is to provide a new and improved shower receptor of completely formed fibreglass reinforced plastic material, the periphery of which is given a special configuration about all sides except the threshold side whereby a plaster layer may be rested on the top of the receptor edges and there trued with respect to its surface by making use of the receptor as a guide.

With these and other objects in view, the invention consists in the construction, arrangement and combination of the various parts of the device whereby the objects contemplated are attained, as hereinafter set forth, pointed out in the appended claims and illustrated in the accompanying drawings.

In the drawings:

Figure 1 is a plan view of a receptor with portions of the shower structure shown in phantom lines.

Figure 2 is a longitudinal sectional view taken on the line 2—2 of Figure 1 of the receptor installed in the roughing-in of the building.

Figure 3 is a longitudinal sectional view of one type of finish for the wall of the stall, namely, featuring a dry wall finish.

Figure 4 is a longitudinal sectional view of another type of finish for a shower stall wall showing the application of tiling.

In the embodiment selected to illustrate the invention there is shown a receptor indicated generally by the reference character **10**. The receptor is made essentially of fibreglass reinforced plastic material, preferably a thermosetting plastic, wherein central portions **11** may be of greater thickness than outer portions **12**. The molding of fibreglass reinforced plastic is readily permissive of varying the thickness of sections where a greater thickness is commensurate with greater rigidity and is also permissive of giving to the article thus constructed such configurations at the edges as may be wrought by molding steps in contrast to drawing steps which are the usual steps in forming articles of such nature from sheet metal.

The receptor forms a waterproof dish-like central recess **13** sloping centrally inwardly toward a drain **14**. As shown in the selected embodiment the receptor has a rectangular form and is provided with a wall **15** at the perimeter of the rectangular member. The wall **15** is uniform in height and configuration about three sides and on a fourth side for a short distance each side of a threshold **16**. The short portions of wall on the threshold side are indicated by the reference characters **17** and **18**.

At the bottom the receptor has formed therein a series of raised segmental portions **19**, **20**, **21**, etc., so arranged that passages **22** therebetween provide for free drainage of water toward the drain **14**.

The wall **15** has a rounded corner **23** and extends substantially vertically upwardly. Extending outwardly from the center may be provided a series of triangular flanges **24** so positioned that they are adapted to support parts of the receptor on a sub-floor **25**. A flange **24'** shown in cross-section in Figure 2 may extend around the perimeter.

At the upper edge the wall has an outwardly turned portion **26** forming the innermost element of a compound curve. Indenting the top side of the outwardly turned portion **26** is a recess **27**. The recess is continuous about all three sides where the wall **15** extends to its full height together with the short portions **17** and **18**. It will be noted that on the inside portion of the recess the top edge **28** is lower than a top edge **29** on the outside. The relative difference in height, however, of the inside and outside of the recess is not critical.

Extending beyond the top edge at the outside of the recess is an inwardly sloping flat area **30** which terminates at its outside edge in a rounded corner **31** joining the flat area to a flange **32**.

As clearly shown in Figure 2, the threshold **16** slopes inwardly from an outer edge **33**. It should further be noted that the threshold is lower at its highest point than the top edge of the flange **32**. Certain building codes require this difference in elevation to be of the category of one inch. At each end of the threshold **16** is a flat area **34** at the outermost edge of which is a short vertically extending flange **35**. This flange joins the previously identified flange **32**. Flanges **44** extending from end to end beneath the threshold **16** may be provided upon which the threshold can rest.

When the receptor is installed within and forming part of a shower stall, a frame is built upon the subfloor **25**. This frame may comprise 2 x 4's **36** laid long side down upon the floor and may have a piece of sheathing **37** attached to the 2 x 4 around three sides of the stall. On the fourth side, which will be occupied by the threshold, two 2 x 4's **38** are laid one on top of the other. The receptor may be set so that the under side of the inwardly sloping flat area **30** rests upon the top edge of the sheathing **37**. The threshold will at the same time rest upon the topmost 2 x 4.

It will be noted further that studs **39** extend upwardly from the 2 x 4's **36** to frame the walls of the shower stall.

Some suitable plaster base **40** may be applied to the inside faces of the studs **39**, such plaster base being any one of a number of conventional plaster bases. Over this a layer of plaster **41** is applied. At this juncture it should be noted that the plaster **41** has substantially a thickness equal to the breadth of the inwardly sloping flat area **30** and terminates at the outside edge of the recess **27**. At this point it should be noted that when the inside face of the plaster **41** is trowelled, the recess can be used as a guide for the trowelling.

After the plaster **41** has been applied, if a dry wall structure is to be employed, the surface plaster is given a coating of adhesive material **42** for the purpose of fastening thereto dry tile surfacing **43**. Again the recess **27** plays an important part in that it is adapted to receive the lowermost edge of the dry tile facing, thereby locking the facing in place.

On those installations where separate tiles are to be employed, tiles **45** may be set against the plaster **41** by a suitable tile cement **46**. Again the recess **27** provides for the reception of tile cement in a locked condition so that the lowermost row of tile is securely cemented in a water-resistant fashion with the bottom of the tile resting upon the top edge **28** of the inner wall of the recess **27**. There is avoided therefore by this construction of the receptor formation of the usual wedge of tile cement large at one end and facing inwardly which, when standard practice is employed, is prone to fall out of place.

The inside edge of the threshold may be finished if desired by application of a sheet metal strip **47** having an upper end **48** hooked around the edge of the threshold and extending over the edges of the threshold 2 x 4's **38**. A facing **49** of plaster may be employed to finish off beneath the threshold. A threshold strip of this description is useful in adjusting the effective breadth of the threshold, in or out, depending upon where the 2 x 4's **38** happen to be located.

There has accordingly been shown and described herein a shower stall structure and particularly a receptor or pan for the bottom of the shower stall which, by being fabricated of fibreglass reinforced plastic material, is one capable of being made very light in weight and also one of such design that being installed in conventional roughing-in structure adds considerably to the ease of application of the remaining portion of the shower stall and

in particular the application of plaster and some form of tiling for surfacing the interior of the shower stall.

While I have herein shown and described my invention in what I have conceived to be the most practical and preferred embodiment, it is recognized that departures may be made therefrom within the scope of my invention, which is not to be limited to the details disclosed herein but is to be accorded the full scope of the claims so as to embrace any and all equivalent devices.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A receptor for shower stalls comprising a closed pan of molded sheet material of generally uniform thickness having a bottom, vertical integral walls on all sides joining the bottom, said walls on three sides of the bottom having at the top edge a compoundly curved section comprising a downwardly extending recess adapted to form a plaster guide, an inwardly sloping flat area adjacent the outer edge and an upturned outermost flange adapted to contain plaster on said flat area, one of said sides including an inwardly sloping substantially flat threshold section between portions of said compoundly curved section adjacent the corners, said threshold section being located below the top of said flanges.

2. A receptor for shower stalls comprising a closed pan of molded fibre reinforced plastic material having a ridged bottom sloping centrally toward a central drain, vertical integral walls on all sides having rounded junctions with the bottom, said walls on three sides of the bottom having at the top edge a compoundly curved section comprising a downwardly extending continuous recess having an inner edge lower than an outer edge adapted to form a guide for a layer of base material, an inwardly sloping flat area adjacent the outer edge and an upturned outermost flange adapted to contain said base material on said flat area, and a fourth side including an inwardly sloping substantially flat threshold section located between portions of said compoundly curved section adjacent the corners, said threshold section being located below the bottom of the recesses and the top of said flanges and having flanges at the ends of said threshold section joining respective flanges at the adjacent walls.

3. A shower stall construction comprising conventional rough-in structure including a sub-floor, a substantially rectangular base frame for the walls of the stall, said frame having a receptor support at the inside, a receptor comprising a closed pan of molded material having a bottom and vertical integral walls on all sides of the bottom, said walls on three sides having at the top edge a compoundly curved section comprising a downwardly extending continuous recess, an inwardly sloping flat area adjacent the outer edge and an upturned outermost flange, a fourth side having a centrally located inwardly sloping threshold with an upturned flange at the ends and having portions of said compoundly curved section between ends of the threshold and the adjacent corners, a plaster layer resting on said flat area against the flange and flush with the outer wall of said recess and covering the walls of the stall above the flat area, and a surfacing material on said plaster layer.

4. A shower stall construction comprising conventional rough-in structure including a sub-floor, a substantially rectangular wood base frame for the walls of the stall, said frame having a receptor support at the inside, a receptor comprising a closed pan of molded Fibreglas reinforced plastic material having a ridged bottom sloping centrally toward a central drain, vertical integral walls on all sides having rounded junctions with the bottom and supporting means on the outside of the bottom adjacent the walls, said walls on three sides having at the top edge a compoundly curved section comprising a downwardly extending continuous recess having an inner edge lower than an outer edge, an inwardly sloping flat area adjacent the outer edge and an upturned outer-

most flange, a fourth side having a centrally located inwardly sloping threshold with an upturned flange at the ends and having portions of said compoundly curved section between ends of the threshold and the adjacent corners, a layer of base material resting on said flat area against the inside of said flange and flush with the outer wall of said recess and covering the walls of the stall above the flat area, and a dry wall surfacing material having lower edges thereof locked in said recesses and cemented to said plaster layer.

5. A shower stall construction comprising conventional rough-in structure including a sub-floor, a substantially rectangular wood frame for the walls of the stall, said frame having a receptor support at the inside, a receptor comprising a closed pan of molded Fibreglas reinforced plastic material having a ridged bottom sloping centrally toward a central drain, vertical integral walls on all sides having rounded junctions with the bottom and supporting means on the outside of the bottom adjacent the walls, said walls on three sides having at the top edge a compoundly curved section comprising a downwardly extending continuous recess having an inner edge lower than an outer edge, an inwardly sloping flat area adjacent the outer edge and an upturned outermost flange, a fourth side having a centrally located inwardly sloping threshold with an upturned flange at the ends and having portions of said compoundly curved section between ends of the threshold and the adjacent corners, a layer of base material resting on said flat area against the inside said flange and flush with the outer wall of said recess and covering the walls of the stall above the flat area, and a tile surfacing comprising separate tiles with lowermost tiles supported on said inner edge of the recess and tile cement between said tiles and the plaster layer and locked in said recess.

6. A receptor for shower stalls comprising a closed pan of hard surfaced molded sheet material of generally uniform thickness, vertical integral walls on all sides joining the bottom, a plurality of said walls having a compoundly curved section comprising an upturned outermost plaster containing flange, a flat plaster supporting area at the base of the flange extending inwardly, a generally vertical face extending downwardly from the inner edge of said plaster supporting area and an inwardly extending shelf between said face and the respective vertical integral wall.

7. A receptor for shower stalls comprising a closed pan of hard surfaced molded sheet material of generally uniform thickness, vertical integral walls on all sides joining the bottom, a plurality of said walls having a compoundly curved section comprising an upturned outermost plaster containing flange, a flat plaster supporting area at the base of the flange extending inwardly, a generally vertical face extending downwardly from the inner edge of said plaster supporting area and an inwardly extending shelf between said face and the respective vertical integral wall, a bottom for said pan having a drain aperture therein and said bottom having all portions thereof sloping downwardly to the drain.

8. A receptor for shower stalls comprising a closed pan of molded sheet plastic material having a bottom sloping centrally toward a drain, vertical integral walls on all sides having rounded junctions with the bottom, said walls on three sides of the bottom having at the top edge a compoundly curved section comprising a downwardly extending continuous recess having an inner edge lower than an outer edge adapted to form a guide for a layer of base material, an inwardly sloping flat area adjacent the outer edge and an upturned outermost flange adapted to contain said base material on said flat area, a fourth side including a threshold section located between portions of said compoundly curved section adjacent the corners, said threshold section being located below the upper edge of said outermost flange and having flanges at the ends of said threshold section joining respective flanges at the adjacent walls.

9. A shower stall construction comprising conventional rough-in structure including a sub-floor, a wood base frame for the walls of the stall, said frame having a receptor support at the inside, a receptor comprising a closed pan of molded sheet plastic material having a bottom sloping toward a drain, vertical integral walls on all sides having rounded junctions with the bottom and supporting means on the outside of the bottom adjacent the walls, said walls on three sides having at the top edge a compoundly curved section comprising a continuous recess having an inner edge lower than an outer edge, an inwardly sloping flat area adjacent the outer edge and an upturned outermost flange, a fourth side having a threshold with an upturned flange at the ends and having portions of said compoundly curved section between ends of the threshold and the adjacent corners, a layer of base material resting on said flat area against the inside of said flange and flush with the outer wall of said recess and covering the walls of the stall above the flat area, and a wall surfacing material having lower edges thereof at said recesses and secured to said plaster layer.

10. In combination with a bath receptacle a wall structure for the edge of the receptacle adapted to contain a plaster wall face structure comprising a single member of molded sheet plastic material of substantially uniform thickness, said member comprising a generally vertical section, a rounded upwardly and outwardly sloping shelf at the top of said section, a generally vertical face at the outer edge of said shelf adapted to receive a wall surfacing material, and a generally outwardly and upwardly extending flange at the outer edge of the shelf adapted to receive a plaster base.

11. In combination with a bath receptacle a wall structure for the edge of the receptacle adapted to contain a plaster wall face structure comprising a single member of molded sheet plastic material of substantially uniform thickness, said member comprising a generally vertical section, a bottom having a rounded junction with the vertical section, a rounded outwardly extending shelf at the top of the vertical section adapted to support a wall surfacing material and a generally upwardly extending material confining flange at the outer edge of said shelf, said bottom comprising a pattern of configurations having portions thereof extending downwardly toward a supporting surface for supporting engagement therewith, said pattern of configurations being simultaneously positioned to form drain passages, and a drain communicating with said passages.

References Cited in the file of this patent

UNITED STATES PATENTS

1,684,503	Nilson	Sept. 18, 1928
2,389,724	Falco	Nov. 27, 1945
2,484,240	Northland	Oct. 11, 1949
2,697,231	Strand	Dec. 21, 1954