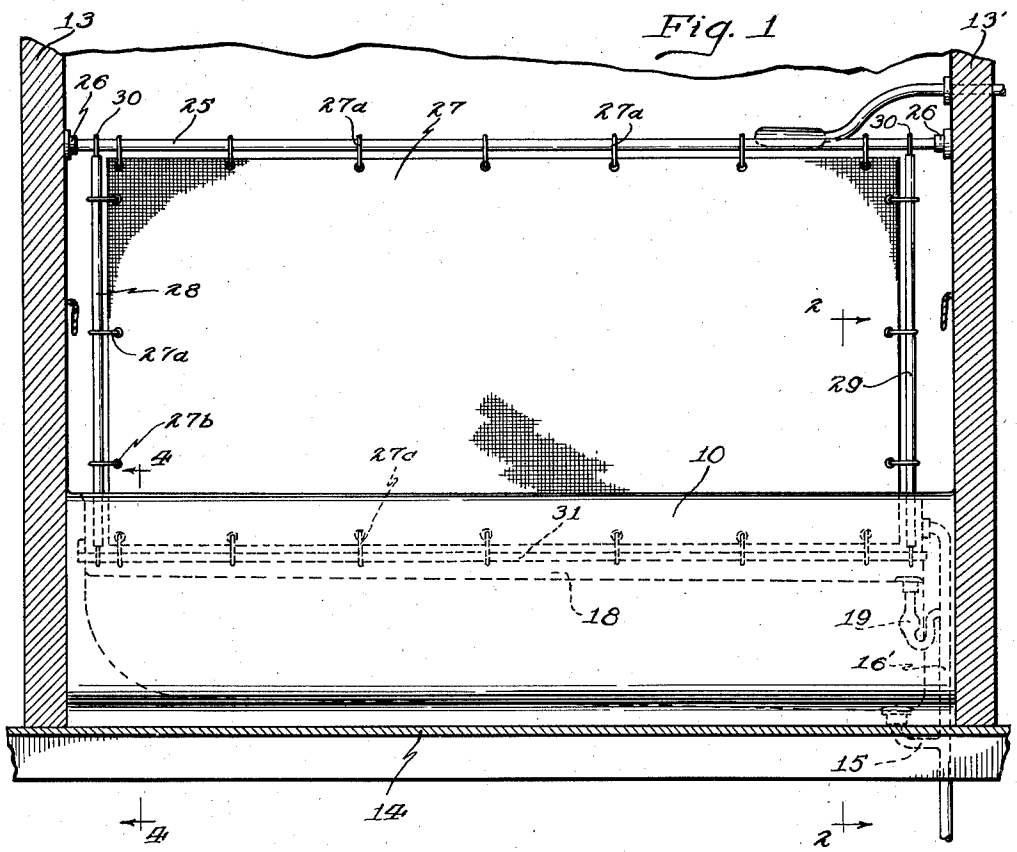
June 29, 1937. C. WEBER 2,085,559

BATHTUB CONSTRUCTION

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Fig. 1



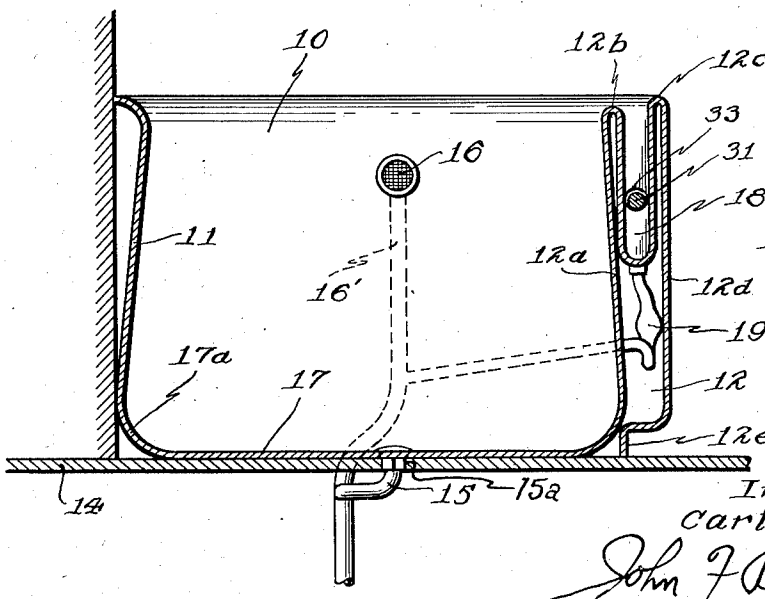


Fig. 2

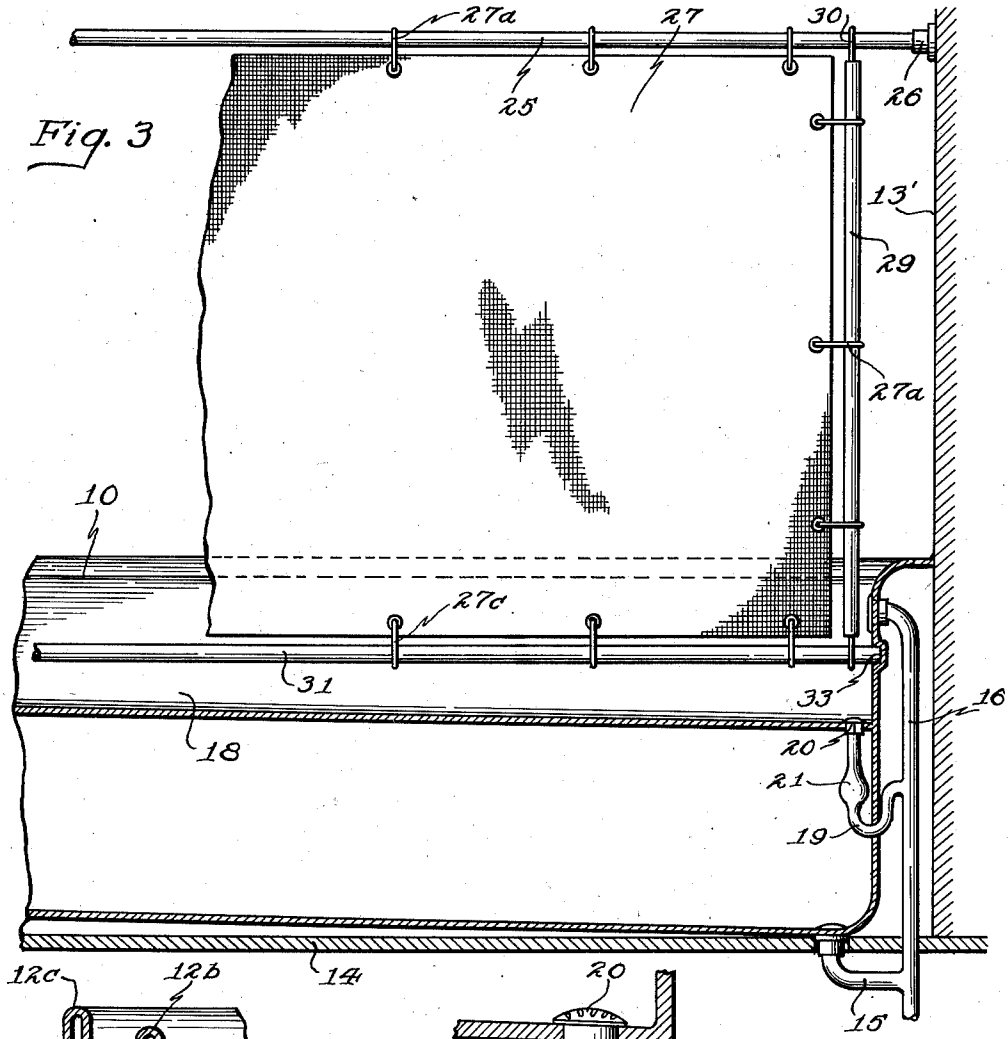
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BATHTUB CONSTRUCTION

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Fig. 3



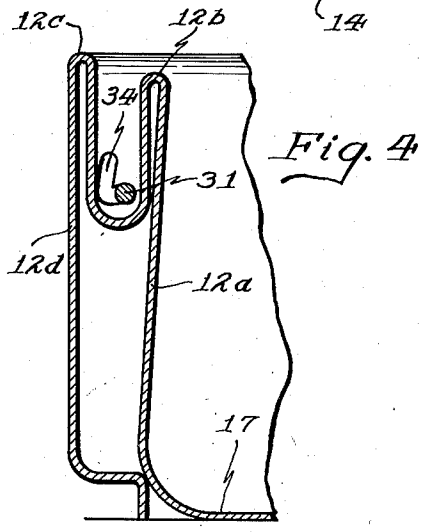


Fig. 4

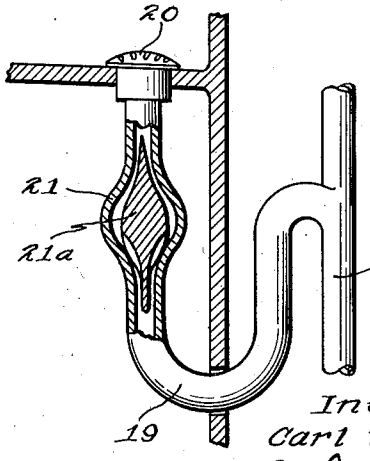


Fig. 5

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Fig. 6

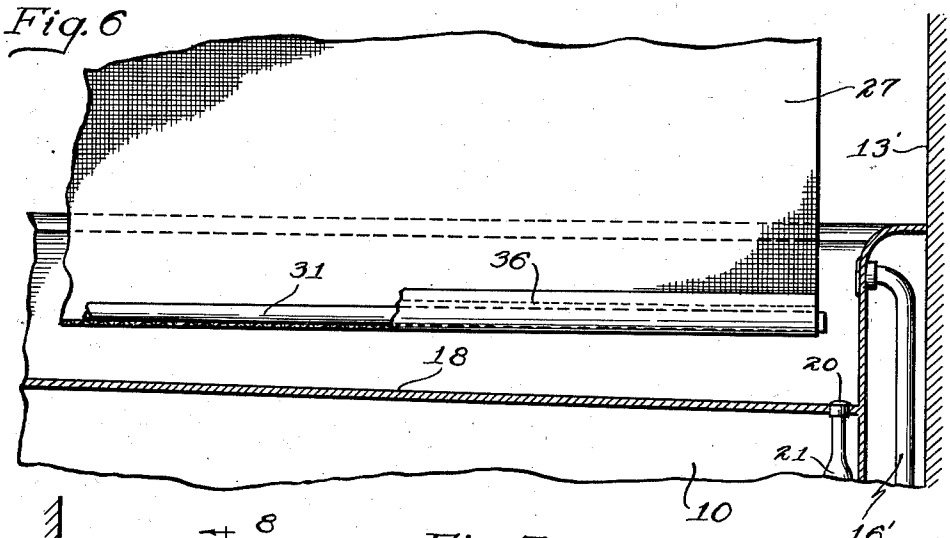


Fig. 7

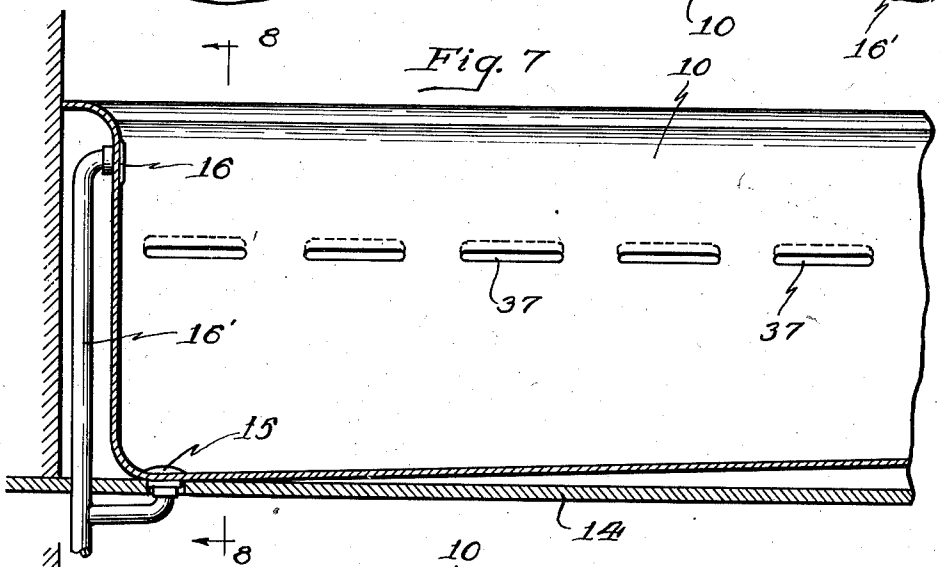
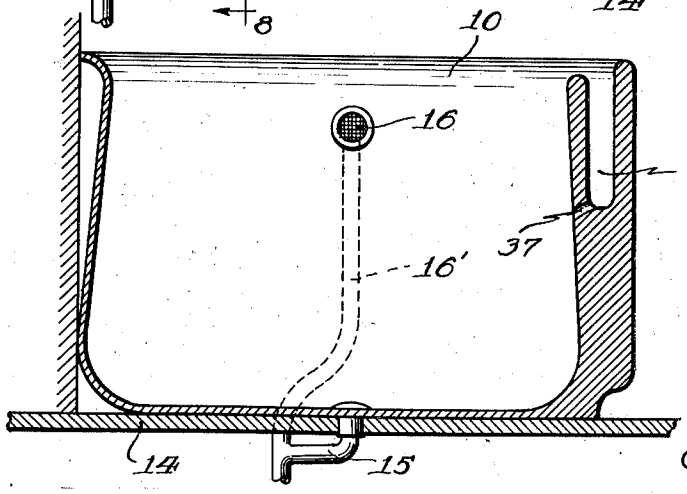


Fig. 8



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UNITED STATES PATENT OFFICE

2,085,559

BATHTUB CONSTRUCTION

Carl Weber, Chicago, Ill.

Application September 18, 1936, Serial No. 101,366

13 Claims. (Cl. 4—149)

My invention relates to a new and novel combination bath tub construction and curtain and suspension and guide means therefor, and is directed particularly to a new, practical and inexpensive tub having novel and practical features permitting the removable attachment and suspension into the normally outer side thereof of the shower curtain.

It is a well known fact that in the use of conventional shower devices and shower curtains in present bath rooms, especially in hotels, that the users, when using the shower either push outwardly or permit the lower portion of a slidable curtain to hang outwardly of the tub with the result that very frequently considerable water runs upon the floor of the bath room into the room proper with material damage to floors and furnishings as well as the bath room walls.

In numerous other cases guest users fill the bath tub to the level of the overflow discharge permitting the bath curtain to hang partly in the bath water with the result that the floating soap and dirt adheres to the bath tub curtain and dries thereon requiring very frequent laundering and replacement of the curtain with consequent expense. My invention entirely eliminates the possibility of either of these expensive and very frequent incidents. These prime objects and elimination of waste, dirt, work and curtain replacement is accomplished by my invention in any one of the forms which I hereinafter illustrate.

An important object of my invention is the provision of a bath tub of novel and practical design having a substantially flat bottom completely across the same and extending nearly from one side edge to the other and having one longitudinal wall thereof formed relatively thick and having a relatively narrow inclined longitudinal panel or groove extending from one end of said side wall to the other, said drain panel having a drain outlet connected with the usual drain system of the tub.

A further object of my invention is the provision of a bath tub having a substantially flat bottom and a longitudinally extending upwardly opening in said grooved panel in one longitudinal wall thereof, said groove permitting the lower end of a shower curtain to be either loosely suspended therein or to be releasably attached therein to prevent said curtain from being pulled out and objectionably flapping in the water contained in the tub, thereby becoming dirty and likewise to prevent said curtain from being pulled outwardly to hang outside of the tub, thereby preventing the well known and frequent dripping of the water from the curtain on the bathroom floor.

A further object of my invention is the provision of a bath tub having a groove provided along one wall therein having drain outlet means from said groove either into the normal drain system directly or into the tub itself and a pair of vertical suspended rods having means engaging an upper and a lower spaced apart guide rod, the flexible curtain being removably attached to said rods to provide for convenient mounting and dismounting for laundering, the lower of said rods optionally being within said groove of said bath tub.

Other and further objects of my invention will be apparent from the following description and claims.

My following drawings are an illustrative embodiment of my invention and form a part of this application, in which:

Fig. 1 is a side elevational view showing a bath tub mounted between two spaced apart walls in the usual manner, the side elevational view of the tub being similar to that of the conventional tub, and showing the manner in which the flexible curtain may be suspended.

Fig. 2 is a cross sectional view taken on line 2—2 of Fig. 1.

Fig. 3 is a partially cross sectional view taken on line 3—3 of Fig. 2 through the outer wall of the tub and also showing a portion of the curtain in suspended position.

Fig. 4 is a fragmentary enlarged view of the goose-necked drain conduit showing a float back-water valve therein.

Fig. 5 is a cross sectional view through the center of the tub showing a slightly modified form wherein the drain outlets from the longitudinal channel of the outer bath tub wall are formed in said wall to discharge into the interior of the tub.

Referring to Figs. 1 and 2, reference numeral 10 designates a tub which in horizontal cross section is substantially rectangular and which has opposing longitudinal walls 11 and 12 substantially as shown. Said tub 10 is illustrated in Fig. 1 as mounted between vertical walls 13 and 13' upon a conventional floor 14 and having the usual drain outlet pipe 15 leading from a bottom drain port 15a and an overflow drain outlet port 16 substantially near the upper periphery of the tub at one end thereof, which said drain outlet 16 is connected with a conventional drain system in conventional manner by

means of the downwardly extending drain pipe 16' to which drain pipe 15 is also connected and which leads into the building drain system.

As clearly shown in Fig. 2, it will be noted that the longitudinal side wall of the tub 10 is not perpendicular to the bath tub bottom designated by the reference numeral 17 and is in a position of an acute angle with respect to said bottom and forming a relatively sharp curve 17a at the juncture at said side wall 11 and bottom 17. An important object of my invention is the safety features thereof which include a relatively flat bottom extending substantially across the entire tub, this eliminating the frequent foot slippage and frequent accidents caused by users slipping upon the sloping bottom of the tub either when stepping thereinto or at other times.

As clearly shown in Fig. 2, the bottom 17 forms a sharp curve at its juncture with the integral outer wall 12, which said wall 12 extends vertically but inclined inwardly a distance equal to substantially one-half the depth of the tub, thence is bent or turned back upon itself to form relatively narrow upper inner rim 12b which is preferably in a plane slightly lower than the outer periphery of the tub. Said wall 12 extends downwardly and thence again upwardly to form a relatively deep compartment or groove 18 extending from one end of the tub to the other, that is substantially the entire length of the tub, as clearly indicated in dotted lines in Fig. 1 and in cross section in Fig. 3. Said wall 12 is further bent and formed to form the outer tub rim 12c in a plane substantially coinciding with the entire tub rim, and thence extends vertically downwardly to form vertical wall portion 12d to a point a short distance from the tub supporting surface where said vertical wall is bent to form a sharp curve 12d and in a horizontal direction to meet the inner curved portion of the tub and thence the edge of said wall 12 is bent at right angles and downwardly to form wall portion 12e which may preferably rest upon the bath supporting surface.

It is to be borne in mind that while the illustration of the drawings which has just been described describes a tub formed of a relatively strong metal, suitably enameled, that a similar construction presenting identical surfaces and embodying the same structural features may be formed from a tub made, cast or moulded from well known plastic mixtures which include clay and other suitable workable type of earth in combination with known binding ingredients such as plaster, cements, and the like. I have illustrated in Fig. 8 a cross sectional view of a tub of similar construction made for example from clay, cements and other known materials such as used in making earthenware and bath room fixtures and which are suitably baked and finished during their process of manufacture.

Referring to Figs. 1, 2 and 3, it will be noted that I form the longitudinal groove 18 of substantial depth and sloping downwardly toward the drain end of the tub so that water dripping from the curtain into said groove 18 will quickly run by gravity therefrom. At the lower and drain end of groove 18 and between the wall sections 12a and 12d I provide a goose-neck drain pipe 19, the upper end of which is suitably threaded in the drain outlet 20 at the lower end of groove 18, the opposite end of said goose-neck being suitably connected to the downwardly extending overflow pipe 16. In the form of Figs. 1 and 3 a pear-shaped enlarged portion 21 is formed in said goose-necked drain pipe which contains an elongated tapered float valve 21a which is of a size to seat, when elevated and floated, against the annular internal shoulder of said pear-shaped enlarged portion to act as a stop plug and back-water valve to prevent water entering groove 18 from the overflow drain pipe 16', the object of such stoppage being to prevent soap, dirt and foreign particles from entering groove 18 and adhering and accumulating upon the walls thereof when the bath tub is filled to the overflow outlet 16.

As shown in Figs. 1 and 3, I illustrate one of a number of manners in which a flexible curtain of fabric or other flexible material may be suspended for sliding movement, so that one of its ends seats in and engages an annular recess 33 shown at the right of Figs. 2 and 3 and its opposite end removably seats and is secured with an L-shaped recessed slot 34 shown at the left of Fig. 4. In this particular form, to which I do not limit myself, a horizontal cross bar 25 is mounted in a pair of suitable wall plates 26 which are fastened on opposing walls of the bathroom opposite each other. Flexible shower curtain 27 is loosely suspended on bar 25 by means of suitable rings 27a of wood, metal or composition or other suitable material, which are slidable on said bar 25. The opposite normally vertical edges of shower curtain 27 have attached thereto spaced apart rings 27a, which are preferably a detachable type. Said loops on the opposite ends of said curtain are adapted to encircle vertical bars 28 and 29 respectively, one of said bars being at each end of said curtain. Said bars 28 and 29 have suitable eyelets 30 at both ends of each thereof, the upper of said eyelets being of a size to encircle and be slidable along bar 25 to provide for convenient drawing and folding of said curtain in the desired position.

In the preferred illustration of Fig. 1, the lower end of said curtain also has suitable loops or rings 27c in spaced apart position along the lower edge thereof, said loops being adapted to encircle and slidably engage the lower horizontal rod 31 which lies within groove 18 and longitudinally thereof and which has its ends removably engaging supporting recessed slots 33 and 34. The eyelets 30 in the lower ends of the two vertical extending bars 29 are adapted to encircle and slide on horizontal bar 32.

It will be apparent with the foregoing construction the lower end of the curtain will be removably and slidably retained within groove 18; that any water falling or splashing thereon will fall into said groove and drain therefrom; that the lower end of the curtain will be maintained out of contact with the floating soap and dirt of the tub water and that no water will be permitted to splash either from the shower or the tub upon the floor or other supporting surface. Further, when the bathtub is filled to the level of overflow, the discharged dirty water will not enter groove 18 due to the fact that float valve 21a will rise and prevent the water from backing up to groove 18.

Fig. 6 is a fragmentary cross-sectional view of a tub of similar construction to that heretofore described, illustrating however a less expensive method of retaining the lower portion of the shower curtain within the groove 18. In this construction, shower curtain 27 has its lower edge doubled back and stitched to form hem 36 through which a rod of suitable size is slipped, and thence the curtain and inserted rod is

dropped into groove 18 wherein the rod 32 holds the same by gravity.

Fig. 8 is a cross-sectional and partially fragmentary view illustrating a tub having walls of similar construction as that heretofore described, with the modification that means for draining groove 18 comprises a plurality of spaced apart elongated slots or apertures 37 which form communication passages between the bottom of groove 18 and the inside of the tub. In this form, the drain pipe 19 and drain port 20 are entirely omitted, it being apparent that the water will drain directly from groove 18 into the tub proper.

Various changes may be made in the embodiment of the invention herein specifically described without departing from or sacrificing any of the advantages of the invention or any features thereof, and nothing herein shall be construed as limitations upon the invention, its concept or structural embodiment as to the whole or any part thereof except as defined in the appended claims.

I claim:

1. A bath tub having a relatively flat bottom and one relatively thick longitudinal vertically extending wall and a rounded upper periphery, said relatively thick wall having a longitudinal upwardly extending groove therein to provide for reception and retention of the lower end of a curtain or the like.

2. A bath tub having a relatively flat bottom and one longitudinal wall thereof extending inwardly and thence outwardly to form a rounded rim, and having the opposite longitudinal wall of relatively thick construction, said relatively thicker wall having a relatively deep longitudinally grooved panel therein extending substantially from one end of said tub to the other to provide for reception of the lower end of a curtain or the like and to provide a guard for said curtain.

3. A bath tub having a relatively flat bottom and one longitudinal wall thereof extending inwardly and thence outwardly to form a rounded rim, and having the opposite longitudinal wall of relatively thick construction, said relatively thicker wall having a relatively deep longitudinally grooved panel therein extending substantially from one end of said tub to the other to provide for reception of the lower end of a curtain or the like and to provide a guard for said curtain, said longitudinally extending groove being inclined toward one end of said tub and having drain outlet means extending through said thicker wall.

4. A bath tub having a relatively flat bottom, a drain outlet port and an overflow port and having opposed longitudinal walls, one of said walls being relatively thick and having a relatively deep longitudinally extending groove opening upwardly and forming a double walled portion on opposite sides of said groove, the walled portion between said groove and the interior of the tub extending to a lesser height than the outer portion of said wall.

5. A bath tub having a relatively flat bottom, a drain outlet port and an overflow port and having opposed longitudinal walls, one of said walls being relatively thick and having a relatively deep longitudinally extending groove opening upwardly and forming a double walled portion on opposite sides of said groove, the walled portion between said groove and the interior of the tub extending to a lesser height than the outer portion of said wall, said groove being inclined and having a drain outlet port at the lower end thereof and a drain outlet conduit connecting said groove drain port and extending exteriorly of the tub.

6. A bathtub having substantially opposed ends and opposite longitudinal side walls, one of said side walls being slightly inclined inwardly toward the tub periphery, the other of said longitudinal side walls having a relatively tipped downwardly extending upwardly opening groove longitudinally thereof to provide a guarded compartment for the reception and retention of a shower curtain edge, the upper portion of said grooved side wall between said groove and the inside of the tub being adapted to prevent water entry from said tub into said groove.

7. A bathtub having substantially opposed ends and opposite longitudinal side walls, one of said side walls being slightly inclined inwardly toward the tub periphery, the other of said longitudinal side walls having a relatively tipped downwardly extending upwardly opening groove longitudinally thereof to provide a guarded compartment for the reception and retention of a shower curtain edge, the upper portion of said grooved side wall between said groove and the inside of the tub being adapted to prevent water entry from said tub into said groove, said groove being inclined in one direction, and drain means connecting the lower end of said groove with a drain system.

8. In a bathtub having substantially vertical ends and drain ports, opposed longitudinal walls formed integrally with said tub, one of said walls having a longitudinally extending upwardly opening groove adapted to receive a portion of the suspended curtain or the like, said groove bifurcating said wall, the inner portion of said bifurcated side wall being shorter than the outer portion, and a drain outlet port through said bifurcated wall communicating with said groove.

9. In a bathtub having substantially vertical ends and drain port, opposed longitudinal walls formed integrally with said tub, one of said walls having a longitudinally extending upwardly opening groove adapted to receive a portion of the suspended curtain or the like, said groove bifurcating said wall, the inner portion of said bifurcated side wall being shorter than the outer portion; a drain outlet port in said groove; an overflow port in the end wall of said tub; a drain pipe leading therefrom, and a drain pipe connecting said groove drain port and said overflow drain pipe.

10. A bathtub having a substantially flat bottom and opposed vertically extending longitudinal side walls, one of said side walls having a relatively deep longitudinally extending groove therein to provide for retention of a portion of a flexible curtain, the inner portion of said grooved wall having a plurality of spaced apart apertures therethrough providing drain outlet port leading from said groove to the interior of the tub.

11. In a bathtub having a bottom drain outlet and an upper overflow outlet; drain pipes connected to said outlet and overflow ports; one of the longitudinal walls of said tub being grooved centrally thereof thereby bifurcating said wall to provide a compartment for reception of a curtain edge; a drain pipe connection between said groove and said first mentioned drain pipes; and retaining means in the end walls of said tub at opposite ends of said groove for releasably mounting a curtain retaining rod therein.

12. In a bathtub having a bottom drain outlet

and an upper overflow outlet; drain pipes connected to said outlet and overflow ports; one of the longitudinal walls of said tub being grooved centrally thereof thereby bifurcating said wall to provide a compartment for reception of a curtain edge; a drain pipe connection between said groove and said first mentioned drain pipes; and retaining means in the end walls of said tub at opposite ends of said groove for releasably mounting a curtain retaining rod therein, said rod adapted to be mounted in said retaining means.

13. In a combined bathtub and shower curtain construction, a bathtub having a drain outlet port and having one longitudinal wall thereof formed with a relatively deep groove, said wall having a drain port communicating with said groove; the ends of said bathtub having recessed slots at the opposite ends of said groove to permit releasable mounting therein of a curtain rod; a curtain rod mounted in said recessed slots and in said groove; a substantially horizontal curtain rod mounted above said grooved bathtub wall; a flexible curtain; ring members on opposite ends of said flexible curtain and slidably engaging both said upper and lower rods.

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