Dec. 10, 1963 O. G. BEARDSLEY 3,113,323

SAFETY BATHTUB

Filed May 1, 1961 2 Sheets-Sheet 1

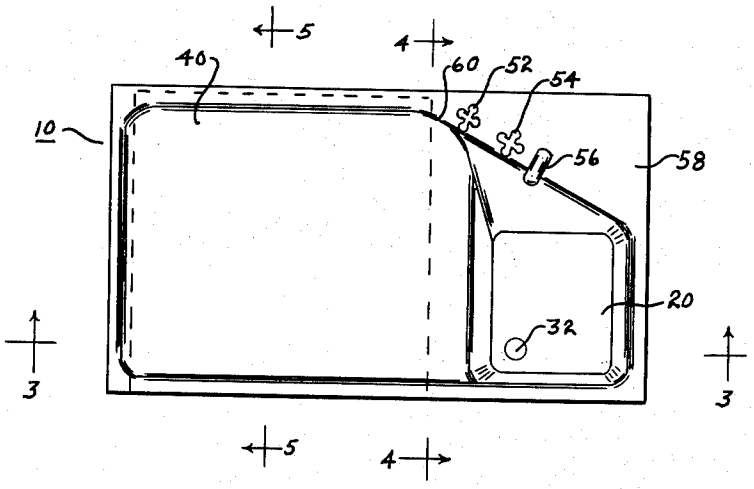


FIG. 2

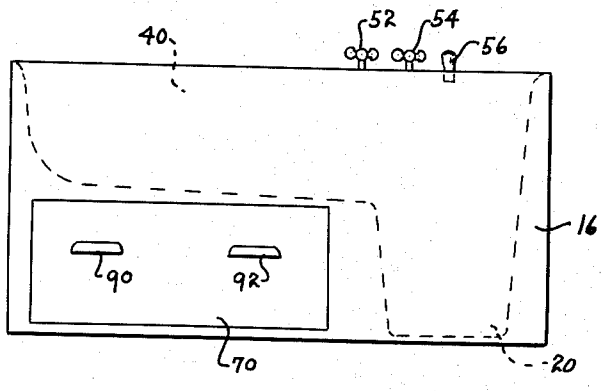


FIG. 1

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SAFETY BATHTUB

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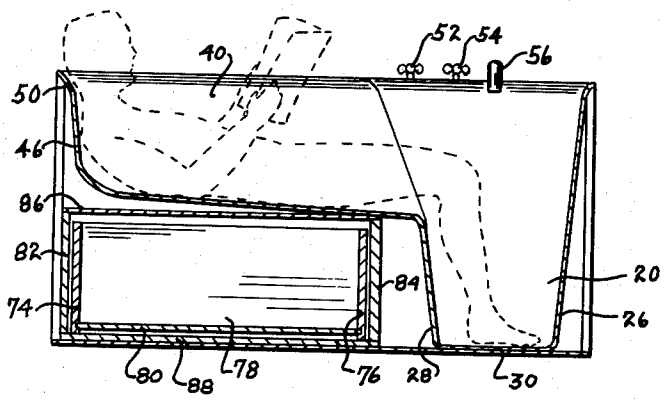


FIG. 3

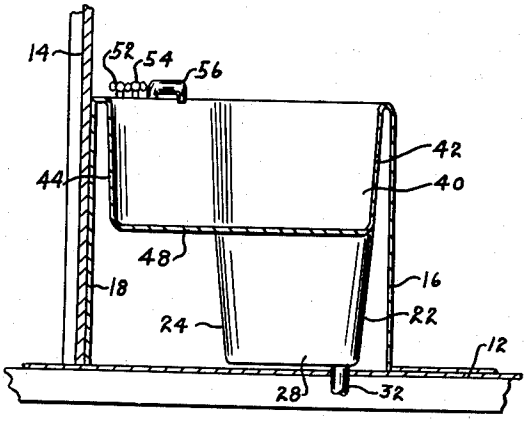


FIG. 4

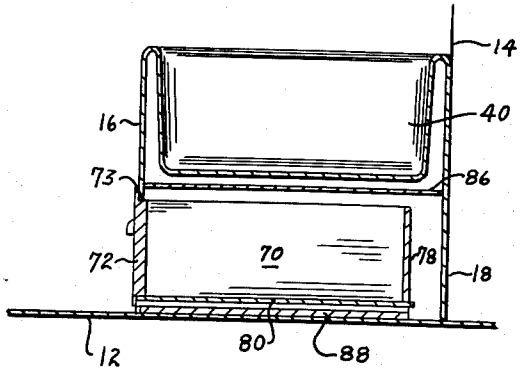


FIG. 5

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SAFETY BATHTUB

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2 Claims. (Cl. 4—173)

The present invention relates to bathtubs, and more particularly to bathtubs designed for maximum safety, efficiency, versatility and economy of water, and adapted for installation and use in confined or limited spaces.

In mobile homes, yachts, efficiency apartments, hotels and small homes where living space is at a premium, one of the places in which an effort is directed to conserving space is in the bathroom, wherein a shower with a small shower compartment is used in place of a bathtub. This type of equipment leaves the home without a place to take a full bath in which the trunk, legs and arms are fully immersed in the water. This may be satisfactory for temporary occupancy of the home or apartment; however, in homes used for permanent year-around living a bathtub normally is essential equipment. In the past, the only solution has been to enlarge the bathroom sufficiently to permit installation of a full size tub at a sacrifice of much needed space in other parts of the living accommodations. It is therefore one of the principal objects of the invention to provide a bathtub for mobile homes and other small homes of limited space, which requires only a small amount of space over and above that required for a conventional shower stall or compartment, and which has all the advantages of a full size bathtub, including sufficient usable space to permit the human body below the neck to be fully immersed in the water with the body in a prone position.

Another object of the invention is to provide a bathtub having a deep portion for receiving the feet and lower part of the legs and a shallow portion for receiving the trunk of the body and the arms in a substantially horizontal position fully submerged in the water, which combines the advantages of the conventional large bathtub with maximum safety and water economy.

A further object of the invention is to provide a bathtube which eliminates most of the hazards of conventional bathtubs, including falls caused by the feet slipping on the bottom of the tub and injuries resulting from muscular strain and the difficult positions necessarily assumed in climbing in and out of a conventional tub from the sitting or reclining positions. Avoiding hazards, as well as conserving energy, is particularly important to the elderly, infirm and convalescing patients.

A further object is to provide a tub of the aforesaid type in which the fixtures for the hot and cold water and the drain are easily reached and operated, both before stepping into the tub and while in the tub, and which permits the bather either to be immersed in a reclining position or to sit upright in a natural sitting position with the lower part of the body and legs fully immersed in the water.

Another object of the invention is to provide a tub which can be used interchangeably either as a full bathtub in which the body below the neck is fully submerged in the water, or as a foot tub in which the occupant may immerse his feet and the lower part of his legs while sitting upright and fully clothed above his knees, and which can be used to take a sponge bath while in the normal sitting position.

Another object is to provide a bathtub which permits

complete submersion of the body with the use of a substantially smaller amount of water than is possible with the conventional bathtub, and which can be installed in a relatively small space with convenient plumbing connections and with standard fixtures and equipment.

A still further object of the invention is to provide a bathtub which can be conveniently and safely used as a baby's bath and which has an easily reached storage compartment forming a part of the bathtub structure for storing towels, soap, powders and other bathing equipment.

Additional objects and advantages of the invention will become apparent from the following description and accompanying drawings, wherein:

FIGURE 1 is a front elevational view of the present bathtub showing the contour of the interior surface in broken lines;

FIGURE 2 is a top plan view of the bathtub shown in FIGURE 1;

FIGURE 3 is a vertical cross-sectional view of the present bathtub taken on line 3—3 of FIGURE 2, showing a person in broken lines to illustrate the manner in which the present bathtub may be used;

FIGURE 4 is a vertical cross-sectional view of the bathtub shown in the preceding figures taken on line 4—4 of FIGURE 2; and

FIGURE 5 is a vertical cross-sectional view of the bathtub taken on line 5—5 of FIGURE 2.

Referring more specifically to the drawings wherein one embodiment of the present invention is shown in detail, numeral 10 designates generally the complete bathtub, and 12 and 14 the floor and one wall of the bathroom in a mobile home or efficiency apartment. The present bathtub may be designed to fit snugly into a space with walls on the two ends and along the back thereof, or the tub may be finished with suitable paneling at one or both ends for installation in a single corner or along one wall, the embodiment shown being designed for confinement on the two ends and along the back by the bathroom walls.

The bathtub 10 consists of front and back panels 16 and 18, respectively, extending from the top of the tub to the floor and being substantially continuous throughout. In place of the back panel 18, a supporting framework may be used, providing it is sufficiently rigid to adequately support the tub. In the present embodiment, the two ends are open since the tub shown is designed to be installed between opposed walls of the bathroom. The internal construction of the bathtub consists of a well 20 of substantially rectangular shape extending from the top of the tub to substantially the bottom, and consisting of side walls 22 and 24 and end walls 26 and 28 integrally joined together and closed at the lower end by a rectangular bottom panel 30. Preferably, the four walls comprising the well slant downwardly and inwardly to enhance the appearance and facilitate cleaning and scrubbing. The bottom of the well is connected to a suitable drain 32 extending from one corner thereof downwardly through the floor 12. The flow of water from the bathtub through the drain may be controlled by a conventional rubber stopper or by any one of a number of suitable mechanically operated valves inserted in the upper end of drain pipe 32. The bottom slopes gently from the four walls toward the entrance to the drain. The well is sufficiently large to permit a person to stand erect with his feet spaced slightly apart for firm support and is

sufficiently deep to permit most of the leg below the knees of an average sized adult to be submerged therein.

The lateral portion of the tub consists of a shallow container 40 formed by side walls 42 and 44, end wall 46 and bottom 48 joined at its two sides to sides 42 and 44, at one end to end wall 46, and at the other end to the upper edge of wall 26 of well 20. Bottom 48 is curved upwardly adjacent end wall 46 and slopes gently therefrom to well 20 so that water will drain readily from container 40. This container is sufficiently long to permit an average size adult to lie lengthwise from his shoulders to his knees and to rest on his back with his head extending upwardly along end wall 46, the upper edge of which is curved at 50 to provide a comfortable support for the head.

Well 20 is placed toward the forward edge at one end of the tub to permit the bather to stand without any interference from the rear wall and to step easily into and from the tub without becoming overbalanced. This position of the well provides a convenient space for hot and cold water control valves 52 and 54, and faucet 56, as well as a substantial ledge 58 for soap, brushes and cloths. If desired, ledge 58 may be preformed to include a soap dish and the like. Rear wall 24 slopes from bottom 28 upwardly and rearwardly with a smooth curve 60 into the rear wall 44 of container 40, thus permitting the bather to lie in a natural position in container 40 with his feet extending downwardly into well 20 without being cramped or his legs or body being distorted. The position of well 20 also permits a combination tub and shower with the shower being used in substantially the same manner as in any conventional tub or shower compartment while the bather is standing upright in well 20.

Since the bottom of container 40 is substantially above floor 12 and well 20 is confined to one end of the tub, a relatively large area is available for storage. This space is utilized in the present embodiment by a large drawer 70 for towels, cloths, brushes and other bathing accessories, which can readily be reached by the bather after he has entered the bathtub. The drawer 70 consists of a front 72 having edges overlapping the margin of the front panel of the bathtub defining hole 73 in which the drawer is inserted, two side walls 74 and 76, rear end wall 78, and bottom 80 all joined together to form a rigid, open-top rectangular structure. The drawer is enclosed beneath the tub by a housing consisting of side walls 82 and 84 and top and bottom walls 86 and 88, respectively. A rear wall is not necessary when back panel 18 of the bathtub is included; however, if a frame as previously mentioned is substituted for panel 18, a rear enclosing wall is preferably provided for the housing. Drawer pulls 90 and 92 are preferably included on the front 72 of the drawer. It is seen that the drawer can be easily reached by the bather either before or after he has entered the tub by merely pulling the drawer forwardly from its enclosing housing.

The present tub may be used advantageously in a number of different ways. One example of complete immersion except for the head is illustrated in FIGURE 3 of the drawings. In this use of the bathtub, the bather draws sufficient water to cover his trunk and legs, leaving merely his neck and head protruding above the water. This position is much more comfortable than could possibly be assumed in a conventional tub of the same dimensions in which the bather would be required to sit or lie in a cramped position on the tub bottom. Further, it is apparent that in entering and leaving the bathtub, the bather merely steps into well 20 and then sits on bottom 48 of container 40 before reclining to the position shown in FIGURE 3. This is particularly important in permitting the bather to enter and leave the tub with little energy and without strain. When the bathtub is used in combination with a conventional shower, the shower is placed above or adjacent to well 20, and the bather stands erect in well 20. During the shower-bath, it is convenient for him to wash his feet and legs by sitting on bottom 48 and permitting the water from the shower to spray onto the feet and legs while he is applying soap and cloth or brush thereto.

The present bathtub can be readily used for a small container for soaking the feet and/or legs by merely drawing water in the lower portion of well 20. The bather then sits on the bottom 48 of container 40 with his feet extending downwardly into the bottom of the well, and bottom 48 forms a comfortable seat for support on which he may recline during the soaking operation. Another important manner of using the present bathtub which is particularly useful in families having a baby is the use of container 40 for a small bathtub or a table for sponging the baby. If container 40 is used as a bathtub, water is drawn in the tub filling well 20 and container 40 so that the water standing above bottom 48 is only several inches deep. However, if the tub is to be used as a table for a sponge bath, water is drawn in well 20 to a point below the level of bottom 48, and the baby is placed on bottom 48 and the water in well 20 used as the source of water for the bathing operation. All of the equipment required for bathing the baby and properly caring for him may be kept in drawer 70 where it is always available.

It is seen that maximum safety is provided by the confined standing area of well 20 which prevents the feet from slipping from beneath the bather. Further, a bath in which the bather's body, with the exception of the head, is completely immersed is possible with the present tub, using only about one-half the water required for complete immersion in a large size conventional bathtub. This, together with the smaller overall size, makes it particularly adapted for use in convalescent homes, hotels, on ocean-going boats and the like. The tub is also designed to permit the faucets to be easily reached by the bather, and the connections under the tub to be easily reached by the plumber.

The present bathtub is preferably constructed of porcelain-coated steel, or plastic or fiberglass, although any other suitable materials such as porcelain-covered cast iron may be used, if desired. Various changes may be made in my tub structure, including placing the drain 32 in the side of well 20 adjacent the bottom thereof and connecting it to a laterally extending drain pipe. While several modifications of the present invention have been mentioned herein, other modifications and changes may be made without departing from the scope of the invention.

I claim:

1. A bathtub for maximum safety and water economy, and for use in confined living accommodations, comprising a front panel supporting the front edge of the tub, a rear panel supporting the rear edge of the tub, four substantially vertical walls forming a rectangular well offset adjacent to a front corner of the tub, and having a width substantially the same as the depth, a bottom in said well having a drain therein adjacent one corner, front and rear side walls generally paralleling said panels extending downwardly from the top and on the internal side thereof, said front wall and the front wall of said well being on a substantially common vertical plane and in juxtaposition to said front panel, an end wall connected to said side walls adjacent the end of the tub opposite said well, a substantially horizontal flat bottom connected to said side and end walls and sloping toward said well and forming a shallow generally rectangularly shaped container disposed adjacent the top of said well and connected at one end to the upper edge thereof, said bottom being approximately twice as long as the width of said well, and a generally triangularly shaped horizontal ledge adjacent said well at the top thereof at the rear corner of the tub.

2. A bathtub as defined in claim 1 wherein a compartment is provided beneath said shallow container having

an opening thereto through said front panel and walls forming a drawer in said compartment.

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