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Russell

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[54] **BATHTUB HAVING IMPROVED SAFETY FOR INFIRM OR HANDICAPPED**

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[52] **U.S. Cl.** **4/173**

[51] **Int. Cl.** **A47k 3/00,** A47k 3/024

[58] **Field of Search** ..... 4/185 S, 185 L, 173

[56] **References Cited**

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3,066,316	12/1962	Russell	4/173
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FOREIGN PATENTS OR APPLICATIONS

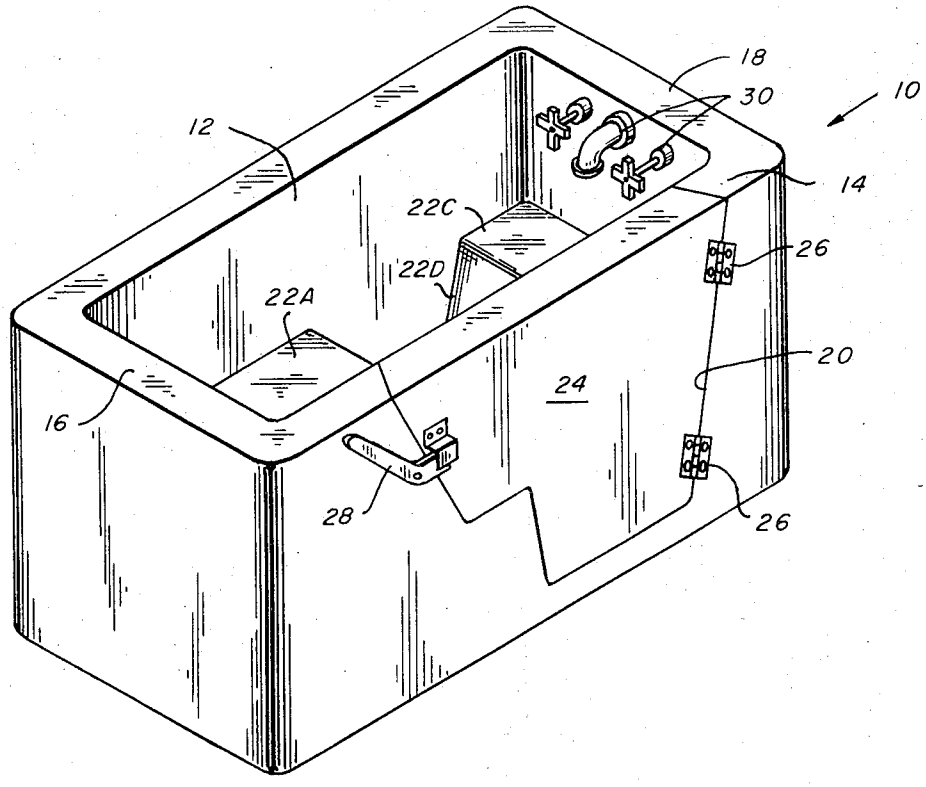
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[57] **ABSTRACT**

A bathtub affording improved safety, especially for the elderly or handicapped, including an opened top tub, the bottom of which has a seat-height horizontal portion extending from one end of the tub and a lower feet-receiving horizontal portion, one wall of the tub having a door opening extending from the top of the tub to the lower feet receiving portion of the tub bottom and the upper portion of the opening being of a width sufficient to expose part of the bottom seat-height horizontal portion, and a door pivotally supported to the tub so that, when the door is in opened position, a user may walk onto the bottom lower feet receiving portion or sit on the exposed part of the bottom seat-height horizontal portion, the door when closed permitting the tub to be filled with water to the height desired.

2 Claims, 2 Drawing Figures



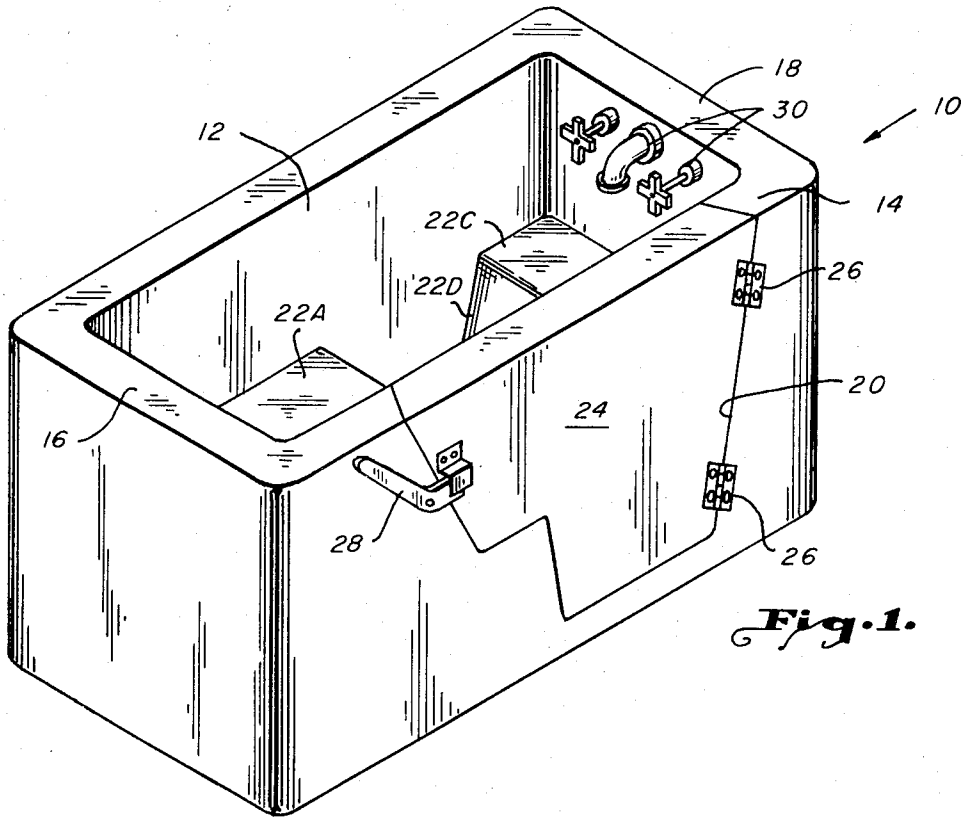


Fig. 1.

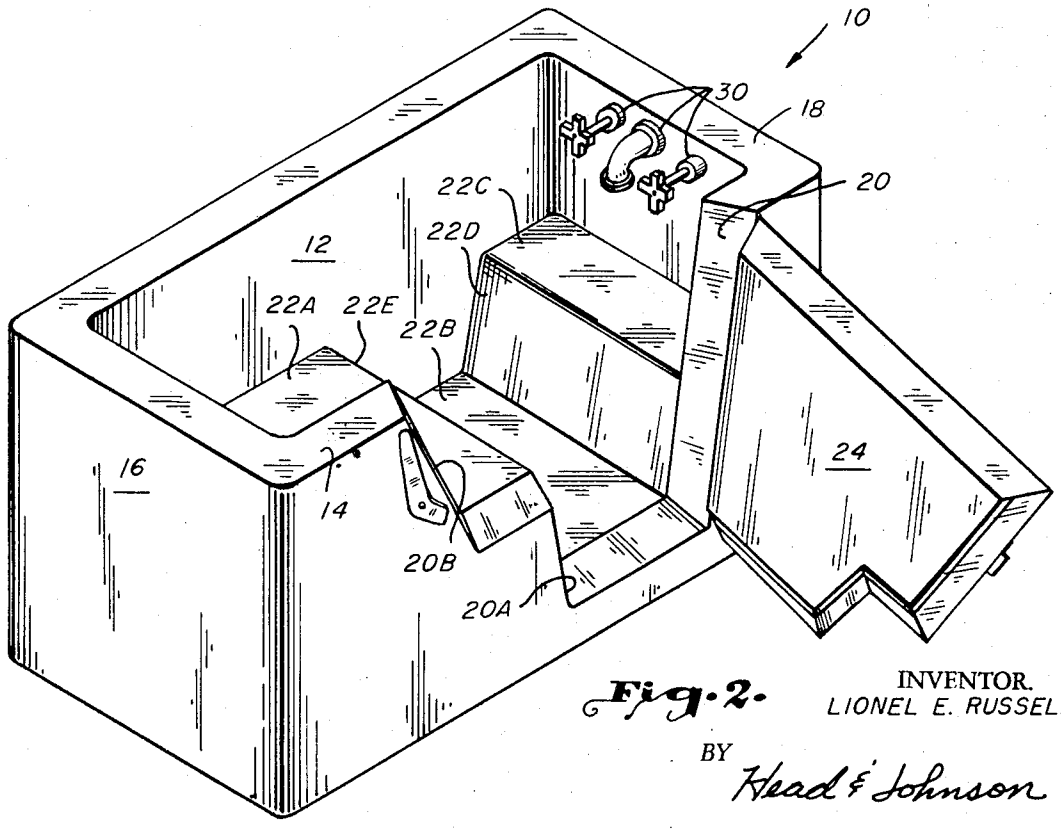


Fig. 2.

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BATHTUB HAVING IMPROVED SAFETY FOR INFIRM OR HANDICAPPED

BACKGROUND, SUMMARY, AND OBJECTS OF THE INVENTION

One of the most difficult aspects of caring for an elderly, infirm, or handicapped person is that of bathing. The typical bathtub in use today sits on the floor with vertical upstanding sidewalls. The user must step over a wall of the tub and then sit down into the tub. While the procedure is completely safe for a normal person it is extremely difficult for the physically limited or infirm. In addition, the chance of slippage on the tub bottom while getting into and out of the tub is always a danger.

To reduce the danger inherent with the typical bathtub the provision of a door in a raised bathtub has been suggested. U.S. Pat. No. 3,066,316, L. E. Russell, inventor, issued December 4, 1962, and the references cited, illustrates this improved type of tub. The arrangement of the bathtub of this previously issued patent affords greatly improved safety over the commonly used bathtub for handicapped and infirmed. The present disclosure relates to an improvement in the bathtub of the type shown in U.S. Pat. No. 3,066,316. Particularly, the present invention provides a bathtub having a door in one sidewall thereof which permits the user to either walk directly into the tub without having to step over a sidewall or, if desirable, to sit directly into the tub. The door of the tub may then be closed and the tub filled with water to the height desired.

It is therefore a general object of this invention to provide a bathtub having improved safety for elderly, infirm, or handicapped.

More particularly, an object of this invention is to provide a bathtub having a door therein permitting the user to step directly into the tub without having to step over a sidewall.

Another object of this invention is to provide a bathtub having a door in one sidewall thereof permitting the user to either step directly into the tub without having to step over a sidewall or to sit directly into the tub at chair-height level.

These objects as well as more specific objects of the invention will be fulfilled by the bathtub described in the following specification and claims, taken in conjunction with the attached drawings.

DESCRIPTION OF VIEWS

FIG. 1 is an isometric view of a bathtub embodying the principles of this invention, the tub having a door in one wall thereof, the door being shown in closed position.

FIG 2 is an isometric view as in FIG. 1 but showing the door in opened position.

DETAILED DESCRIPTION

Referring to FIGS. 1 and 2, a bathtub embodying the principles of this invention is illustrated, it being understood that the actual appearance of a tub having the invention as a portion thereof may depart in many ways from the example illustrated. The tub is generally indicated by the numeral **10** and includes a back sidewall **12**, a front sidewall **14**, a first end wall **16**, and a second end wall **18**. The height of the walls **12-18** are greater than those of the normal bathtub and may be, as an example, approximately twice the height of the normal bathtub.

The tub bottom includes a first seat-height horizontal portion **22A** extending from first end wall **16**, a lower feet- receiving horizontal portion **22B** and a second horizontal seat-height portion **22C** extending from second end wall **18**. The horizontal seat-height portion **22C** is connected with the horizontal feet-receiving portion **22B** by a bottom vertical portion **22D**. In the same manner the first horizontal seat-height portion **22A** is joined to the horizontal feet-receiving portion **22B** by a vertical wall **22E** hidden from view in the drawings. The bottom portions **22D** and **22E** are described as being "vertical" and this expression is used in a general sense as such portions may be slightly declined from the vertical portion **22D** shown in the drawings.

A door opening **20** formed in front sidewall **14** includes a lower portion **20A** which extends to the bottom feet-receiving portion **22B**. This enables the user of the tub to step directly onto bottom portion **22B** without stepping over a sidewall. The upper portion **20B** of door opening **20** is of a width sufficient to expose a part of the bottom seat-height horizontal portion **22A**. This enables a user to sit directly onto a horizontal portion **22A** at chair-height level.

A door **24** is configured to fully close opening **20**. The door is pivotally supported to the front sidewall **14** by means of hinges **26** and is held in closed water-tight or water sealing position by means of a latch **28**. The particular type or configuration of the hinges **26** and latch **28** is not a portion of this invention as these may take a variety of types and arrangements. In addition, the specific means of sealing door **24** to the door opening **20** is not a part of the invention since many arrangements exist for effecting a leakproof seal.

At second end wall **18** plumbing fixtures are shown, indicated by the numeral **30**. Such is not necessarily a part of the invention. In some plumbing arrangements the fixtures are not part of the bathtub but are located above the tub for discharging water downwardly and into the tub and either arrangement would be within the scope of this disclosure.

The invention provides an arrangement for a bathtub having advantages over other known types of tubs. With door **24** opened the user can step directly into the tub without stepping over a wall as is required in using the normal bathtub. If more convenient the user may sit directly onto seat horizontal bottom portion **22A**. This is particularly important for infirm or handicapped people who must move from a wheelchair to the tub. By this arrangement the elevation of the person does not have to change in going from a wheelchair to the tub.

With the user inside the tub the door **24** can then be closed. The user may keep his feet extending downwardly into the lower feet-receiving portion provided by the lower bottom **22B** or, if desired, may extend his feet directly across to be supported on the seat-height portion **22C**. In the drawings the separation between the horizontal portion **22A** and **22C** is shown to be relatively large, however, this is a matter of design and if desired the width of the feet-receiving bottom portion **22B** may be only that minimum required to enable a person to place his feet comfortably therein. If

bottom portions 22D and 22E are more vertical than illustrated the width between the horizontal portion 22A and 22C would be much less than they would appear in the figures. The existence of the downwardly extending recess provided by the lower feet-receiving horizontal bottom portion 22B will not interfere with the normal use of the tub since a person sitting in a bathtub usually has his knees raised slightly. Another advantage of the tub of this invention is that it provides a convenient means for affording a foot bath for those who may not wish to bathe completely and is therefore highly useful to those people having foot problems requiring often foot bathing.

While the invention has been described with a certain degree of particularity it is manifest that many changes may be made in the details of construction and the arrangement of components without departing from the spirit and scope of this disclosure. It is understood that this invention is not limited to the specific embodiments illustrated and described herein for purposes of exemplification, but is to be limited only by the scope of the attached claim or claims, including the full range of equivalency to which each element thereof is entitled.

What is claimed is:

1. A bathtub affording improved safety especially for the elderly, infirm or handicapped, comprising:

an opened top tub having a front and a back wall, a first and a second end wall, and a bottom;

the bottom having a seat-height horizontal portion extending from the first end wall intermediate the height thereof and a lower feet-receiving horizontal portion, the horizontal portions being joined by a bottom vertical portion;

the front wall having a door opening therein of a wider upper dimension and a narrower lower dimension, the lower portion of the door opening extending downwardly to the lower feet-receiving portion of the tub bottom and the wider upper portion of the door opening extending downwardly to said bottom seat height horizontal portion, the wider upper portion being of a width sufficient to expose a substantial portion of said bottom seat-height horizontal portion sufficient to enable a user to sit on such exposed seat-height portion; and

a door of a wider upper dimension and a narrower lower dimension pivotally supported to said tube front side wall and pivotal to an open position wherein a user may walk on to said bottom feet-receiving portion, or sit directly on to said exposed part of said bottom seat-height horizontal portion, said door pivotal to a closed water-tight or water sealing position permitting water to be drawn into the tube to the desired height.

2. A bathtub affording improved safety according to claim 1, wherein said tub bottom includes a second seat-height horizontal portion extending from the second end wall, said bottom lower feet-receiving portion being between said horizontal seat-height portions and the second mentioned seat-height portion being joined with said feet-receiving portion by a second bottom vertical portion.

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