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[54] **BATH ARRANGEMENTS**

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[58] Field of Search4/185 L, 173, 185 S

[56] **References Cited**

UNITED STATES PATENTS

2,569,825	10/1951	Otis	4/185 S
2,013,720	9/1935	Thompson.....	4/173
2,306,934	12/1942	Cade	4/173
2,648,849	8/1953	Webb et al.....	4/185 L
2,888,683	6/1959	Medlock	4/185 L

2,977,604	4/1961	Miller.....	4/185 S
3,066,316	12/1962	Russell	4/173
3,090,969	5/1963	Maling.....	4/145
3,512,187	5/1970	Thomas et al.....	4/185

FOREIGN PATENTS OR APPLICATIONS

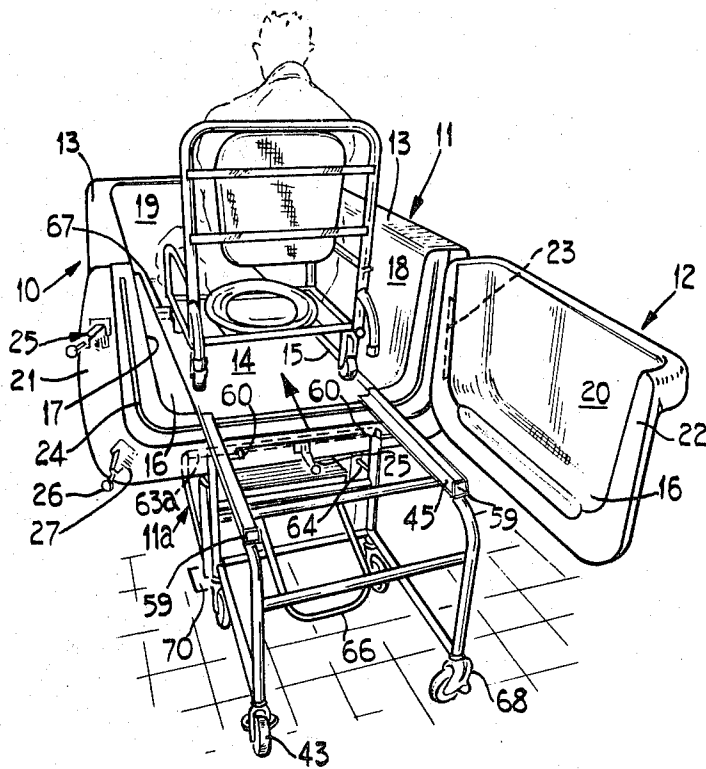
1,460,559	10/1966	France	4/185 L
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[57] **ABSTRACT**

In a bath and chair arrangement especially for the infirm, the bath has an end door and the chair arrangement can be locked to the bath and an upper portion having a seat can be rolled through the open door into the bath. The lower portion is then removed and the door closed for washing of the patient.

10 Claims, 3 Drawing Figures



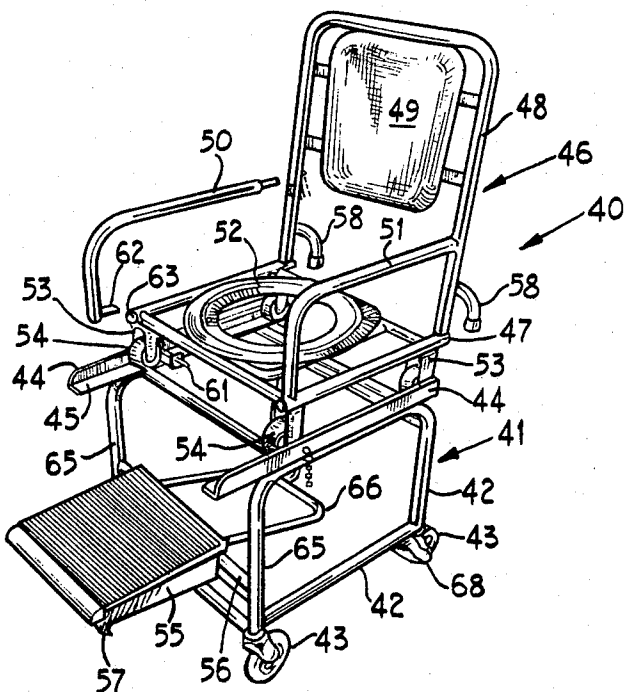
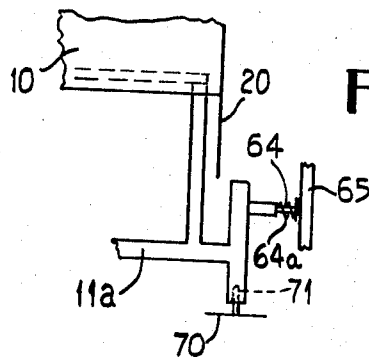
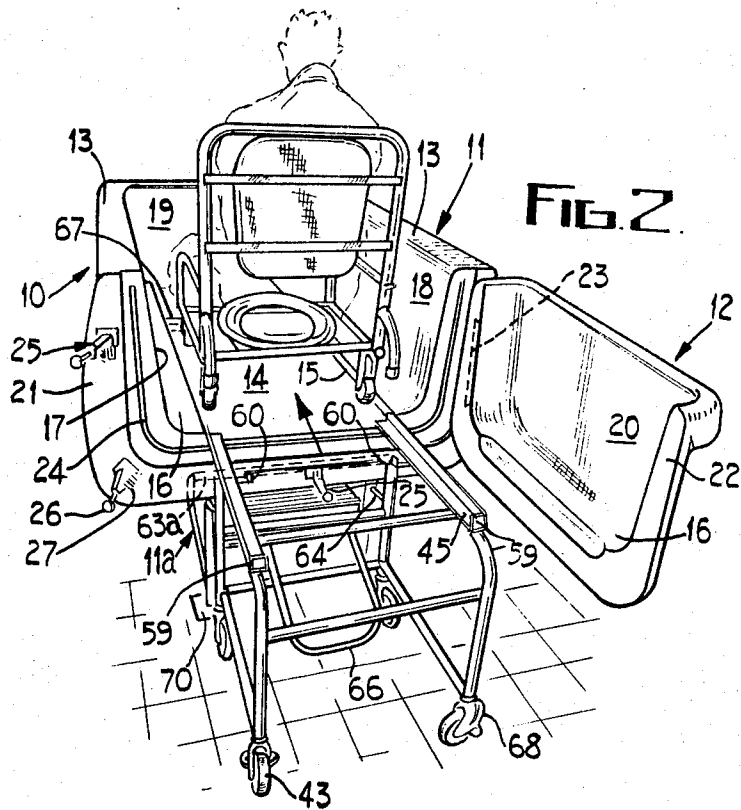


FIG. 1.

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BATH ARRANGEMENTS

This invention relates to baths for human use, and particularly to baths for use by the aged or infirm.

According to one aspect of the invention a bath includes a main portion, a door hinged to the main portion for opening and closing movement, fluid seal means for sealing between the door and the main portion when the door is closed, and means for releasably holding the door in closed position.

According to another aspect of the invention a bath and chair combination comprises a bath and a chair arrangement, said bath comprising a main portion having a floor, a door movable between open and closed positions, fluid seal means for sealing between the door and the main portion when the door is closed, said chair arrangement comprising a wheeled trolley, a chair having a seat and supported on the trolley and movable thereon, the bath and the chair arrangement having releasable locking means for locking the chair arrangement and the bath when the door is open and such that in the locked position the chair can be rolled from the trolley on to said floor.

The invention may be performed in various ways and one specific embodiment will now be described by way of example with reference to the accompanying drawings, in which:

FIG. 1 is a perspective view of a chair for use with a bath;

FIG. 2 is a perspective view of the bath and chair in association; and

FIG. 3 is an elevation of part of the arrangement.

Referring to the drawings, a bath 10 is supported on a frame 11a having four feet 70 (only two shown). As shown in FIG. 3, part of the frame is moulded integral with the bath. The bath has a main portion 11 and a door 12, both of which for example may be made from high gloss glass fiber. The bath is open at the top which is defined by a flat rim 13 and has a generally rectangular flat bottom or floor 14 having an upstanding peripheral wall 15 joined by curved portions 16 to a slightly outwardly inclined side wall 17 or 18 and end walls 19, 20.

The main portion 11 and the door 12 are provided with flanges 21, 22 respectively, the door 12 being hinged at 23 about a vertical axis to an upright portion of the flange 21. A groove in the end surface 21 of the main portion 11 accommodates a rubber or like seal 24, such as an O-ring. Toggle clamps 25 are fixed to the flange 21 and can pivot in relation thereto. Each clamp has a handle 26 and a part 27. When the clamps have been pivoted outwardly, the door can be closed, bringing the flange 22 into engagement with the seal 24. The clamps can then be pivoted inwardly to bring the parts 27 into clamping engagement with the outer end surface of the door releasably to hold the door in fluid-tight closed position.

The bath is provided with the usual hot and cold water supply in the usual way.

The bath is for use by infirm or geriatric persons, although it can, of course, be used by healthy persons.

The bath is primarily intended for use in association with a chair arrangement 40. The chair arrangement 40 comprises a trolley 41 having a tubular steel frame 42 supported on four caster wheels 43. The frame 42 includes two parallel spaced L-section longitudinal channels 44 at the top thereof providing flat horizontal sup-

port surfaces 45. A chair portion 46 of the chair arrangement has a tubular steel frame 47 including a back 48 with a waterproof resilient pad or back rest 49, and arms 50, 51. An annular seat portion 52 is fixed to the frame 47. The frame 47 has secured thereto downwardly extending forks 53. Four cylindrical nylon rollers 54 are respectively mounted for rotation in the forks 53 and are arranged to run on the surfaces 45. A footrest 55 is pivotally secured to a cross-member 56 of the frame 42 and has a downwardly extending nose 57 at its front end. Side handles 58 are provided at the lower part of the back 48. The rear ends of the channels 44 have inturned flanges 59. Brackets 60 are fixed to the channels intermediate their ends and pins 61 releasably extend through aligned apertures in the brackets, the upright portions of the channels and rearward extensions of the front forks so that the chair portion 46 cannot slide forwardly or rearwardly off the channels when the pins 61 are in engaged position.

One arm 50 is removable from the upper chair portion, as shown in FIG. 1, so that a user may be slid sideways from a bed on to the seat 52, whereafter the arm 50 is again attached to the chair portion. The arm 50 is releasably held at one end by a pin passing through the arm and frame and at the front by a stub 62 which enters into an open end 63 of part of the frame.

The door is opened, and the chair arrangement brought up to the open end of the main bath portion 11. The surfaces 45 are at the same level as the floor 14 of the bath. The pins 61 are removed and the chair portion 46 pushed into the main bath portion, see FIG. 2. As the chair arrangement 40 is pushed up to the bath, the foot rest nose 57 engages a cross-member 63a attached to the bath, and the foot rest 55 pivots upwardly so that on a small further forward movement the nose can move downwardly behind the cross-member to hold the trolley portion in position. As the nose pivots upwards, plungers 64 engage the front legs 65 of the frame 42. The plungers are biased outwardly by springs 64a so that on the small further forward movement the springs are compressed and when the nose drops behind the cross-member it is held against the cross-member by the springs. To release the chair, it is necessary to compress the springs further by forward movement of the chair arrangement and then depress a U-shaped member 66 fixed to the footrest so as to pivot the footrest nose upwardly above the cross-member whereafter the chair arrangement can be withdrawn.

The bath floor has upright portions 67 providing stops to limit the forward movement of the chair portion 46.

The rear casters may be of the type which can be locked by depressing a cover 68.

It will be understood that the person's legs are raised from the footrest before the upper chair portion is pushed into the bath.

Having moved the upper chair portion into the bath, the lower chair portion or trolley is withdrawn and the bath door closed. Water can then be admitted to the bath and the person bathed. The water is then allowed to run off, the door opened, the lower chair portion brought up to locked position at the door opening, the upper chair portion, rolled onto the L channels and locked in place by pins 61, the chair arrangement unlocked from the bath and the patient then returned to

the bed. The height of the chair seat will usually be arranged to be at the same height as the bed.

With this arrangement little or no lifting of the patient is required, particularly if the bed and seat are at the same height, and the nurse assisting at or performing the bathing is required to do only a limited amount of bending.

To accommodate wear on the wheels and on the floor, the height of the bath may be adjustable. For this purpose the feet 70 are connected by screws 71 to upright members of the frame 11a so that on slight lifting of the bath the height of the bath can be adjusted by rotating the feet. The water and drain connections permit this small movement of the bath, say up to one-sixteenth inch, and thus the height of the bath floor can be maintained at the level of the L-channels for ease of movement of the upper chair portion into the bath.

I claim:

1. A bath and chair combination comprising a bath and a chair arrangement, said bath comprising a main portion having a floor, a door movable between open and closed positions, fluid seal means for sealing between the door and the main portion when the door is closed, and means for releasably holding the door in closed position, and said chair arrangement comprising a wheeled trolley, and a chair carried by and separable from said trolley, said chair having roller means thereon for movably supporting the chair on the trolley, said trolley being self-supporting and movable freely without reference to the position of the bath so that it can be used to transport persons to be bathed between the bath and locations remote from the bath, the bath and the chair arrangement having releasable locking

means for locking the chair arrangement to the bath when the door is open, and said bath and trolley constituting means formed so that in the locked position the chair can be rolled from the trolley directly on to said bath floor.

2. A combination as claimed in claim 1, in which said releasable locking means comprises engageable parts on the bath and the chair arrangement.

3. A combination as claimed in claim 2, including spring means which, in the locked position, urge said parts into engagement.

4. A combination as claimed in claim 3, in which the bath has at least one spring loaded plunger which in the locked position engages the trolley to urge the parts into engaged position.

5. A combination as claimed in claim 2, in which the trolley includes a pivotal member having a hook portion which can engage behind a cross-member of a support to the bath.

6. A combination as claimed in claim 5, in which the pivotal member is a footrest.

7. A combination as claimed in claim 1, in which the trolley has laterally spaced rails and said chair has rollers which can roll on the rails.

8. A combination as claimed in claim 1, including means for releasably locking together the trolley and chair.

9. A combination as claimed in claim 1, in which the chair has a removable arm to permit an occupant to move sideways on to and off the chair seat.

10. A combination as claimed in claim 6, including a release member which can be depressed to move the footrest upwardly.

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