July 31, 1951 O. G. BROWN 2,562,598

BATH CHAIR

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Fig. 2.

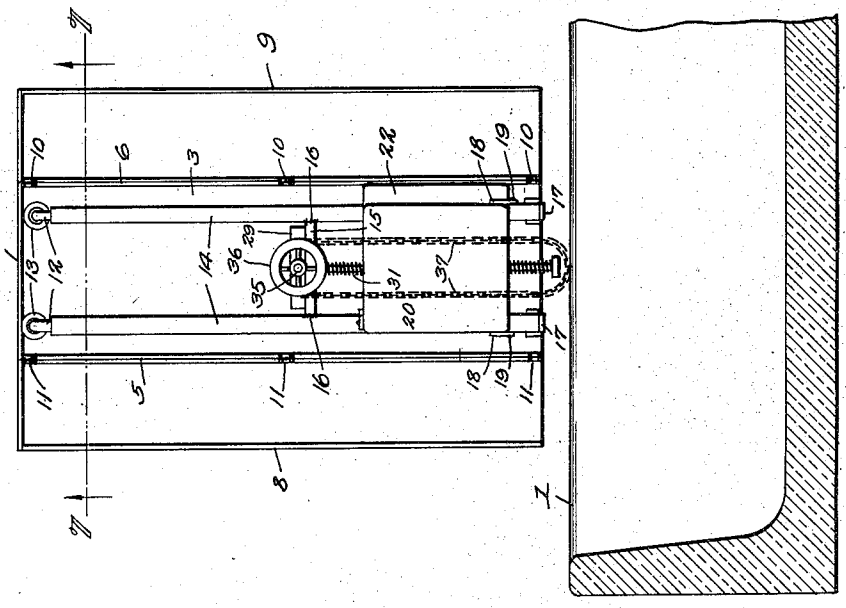
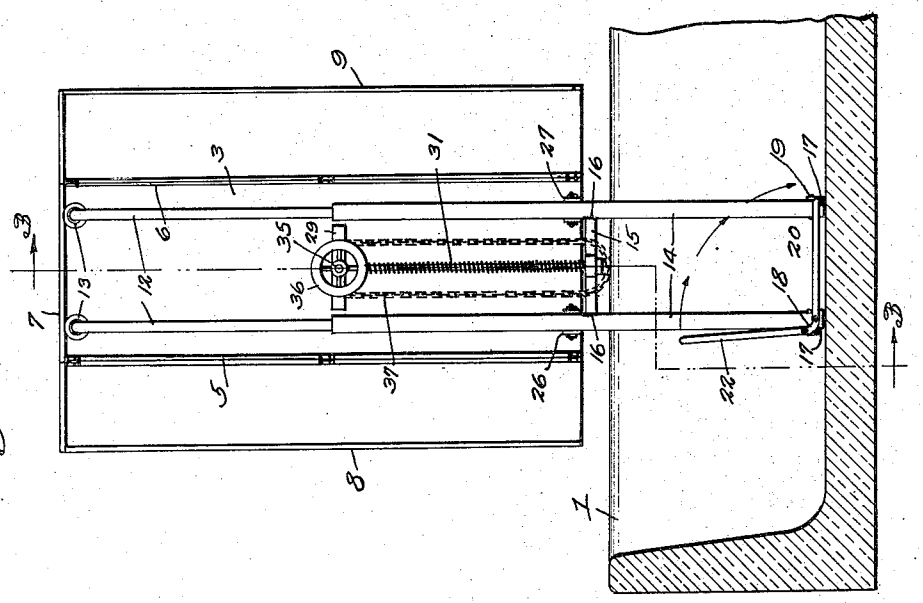


Fig. 1.



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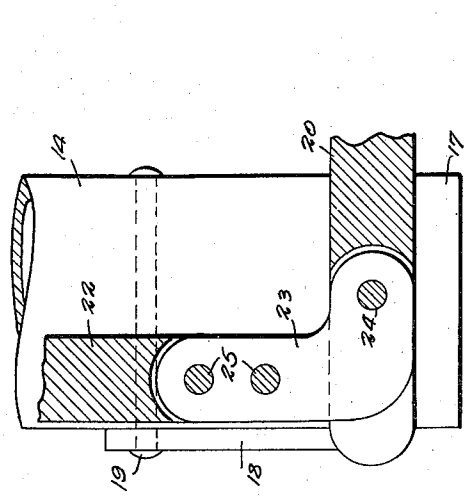


Fig. 6.

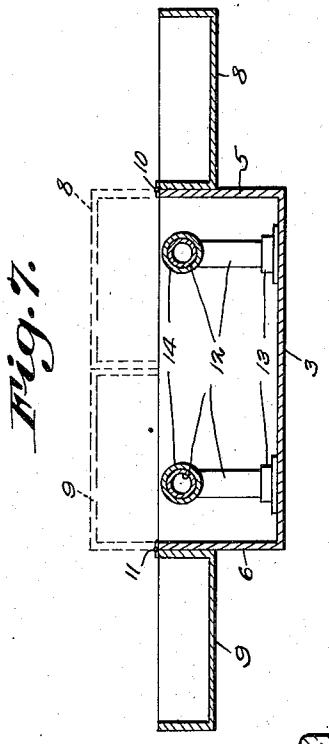


Fig. 7.

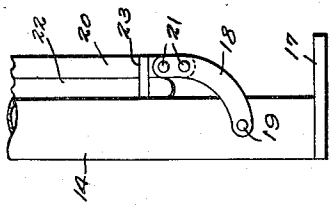


Fig. 5.

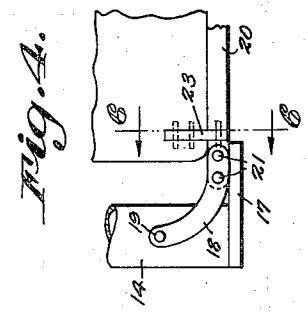


Fig. 4.

Fig. 3.

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Patented July 31, 1951 2,562,598

UNITED STATES PATENT OFFICE

2,562,598

BATH CHAIR

Omer G. Brown, Kane, Pa.; Margaret Brown executrix of said Omer G. Brown, deceased

Application March 25, 1948, Serial No. 16,960

1 Claim. (Cl. 4—185)

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This invention relates to improvements in bath chairs.

An object of the invention is to provide an improved bath chair for use in connection with a bath tub.

Another object of the invention is to provide an improved vertically adjustable bath chair for use in connection with a bath tub.

A further object of the invention is to provide an improved manually operable vertically adjustable bath chair for use in connection with a bath tub, the same being foldable and concealable in a cabinet supported upon a wall beside the tub when the chair is not actually in use.

A still further object of the invention is to provide an improved manually operated, mechanically operable bath chair for use in a bath tub, said chair being highly efficient in operation and relatively inexpensive to manufacture and produce.

Other objects will appear as the description proceeds.

In the accompanying drawings which form a part of this application,

Figure 1 is a front elevation of the improved bath chair shown in lowered or operative position within a bath tub which is shown in sectional elevation.

Fig. 2 is a front elevation of the improved bath chair shown in elevated or inoperative position within a bath tub which is shown in sectional elevation.

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 1.

Fig. 4 is an enlarged detail view of the lower end of one of the chair supporting tubes and seat supporting hinge with seat shown in operative position.

Fig. 5 is an enlarged detail view of the lower end of one of the chair supporting tubes and seat supporting hinge with seat shown in folded position.

Fig. 6 is an enlarged detail sectional view on the line 6—6 of Fig. 4.

Fig. 7 is a sectional view taken on the line 7—7 of Fig. 2.

Like characters of reference are used throughout the following specification and the accompanying drawings to designate corresponding parts.

In carrying out the invention, there is illustrated and shown a bath tub 1 and a wall 2 of a room adjacent one side of the built in bath tub 1.

The improved bath chair construction is composed of a wall mounting plate 3 which will be firmly secured to the wall 2 above the tub 1 and adjacent one end thereof. The wall plate 3 will form the back of a cabinet which will have oppositely disposed forwardly extending side walls 5 and 6 and a connecting top 7.

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A pair of door members 8 and 9 will be hinged at 10 and 11 to the forward vertical edges of the side walls 5 and 6, and will close the open front of the cabinet when swung closed.

A pair of inverted L-shape guide tubes 12 will be disposed within the cabinet, and will be firmly secured to the upper portion of the wall mounting plate 3 by means of the supporting collar fittings 13. The tubes 12 will be arranged in transverse spaced relation, and will extend downwardly to the approximate level of the top of the tub 1.

A pair of chair supporting bearing tubes 14 will be slidably positioned about the lower or free ends of the L-shape guide tubes 12, and will be connected together adjacent their central portions by the transversely extending cross tube 15 welded at 16 at its opposite ends to the bearing tubes 14.

Forwardly extending plates 17 will be secured to the lower ends of the bearing tubes 14, and arcuate swingable chair supporting arms 18 will be pivotally connected at points 19 with the bearing tubes 14.

A chair seat 20 will be secured to the outer ends of the arms 18 by means of the fasteners 21, and a chair back 22 will be hinged to the chair seat for folding against the same by means of the L-shape strap hinges 23, secured at 24 and 25 respectively to the chair seat and chair back.

Bearing rollers 26 and 27 will be supported by the forwardly extending arms 28 secured to the wall mounting plate 3, and will be engaged by the bearing tubes 14 as they are vertically moved upwardly and downwardly.

A forwardly extending support and gear housing 28 will be secured by means of the bolts 30 to the wall mounting plate 3, and will rotatably support the upper end of the chair raising and lowering screw 31, the lower end of the screw 31 being threaded vertically through a threaded opening 32 in the cross tube 15 connected between the bearing tubes 14.

A bevel gear 33 will be secured upon the upper end of the screw 31 within the gear housing 29, and will mesh with a bevel gear 34 secured to the inner end of the operating shaft 35 extending through the front of the gear housing 29. A

large pulley 36 will be secured to the outer end of the operating shaft 35, and a loop of chain 37 will be disposed about the pulley and will extend downwardly a short distance therebelow.

In operation, assuming that the chair back 22 is folded against the chair seat 20, and that the seat is raised to its uppermost position and housed within the cabinet, to use the seat, the cabinet doors 8 and 9 will be swung open and the chair loops 37 will be pulled to rotate the pulley 36 and the intermeshing bevel gears 33 and 34 and the operating screw 31, will cause the bearing tubes 14 with the chair seat 20 to lower to a position for the chair to extend just above the bottom of the tub 1. The chair back 23 will then be opened and the person taking a bath may seat thereon. Obviously the chair may be opened when at the approximate level of the top of the tub and seated upon, and then lowered as before mentioned. The reverse pulling upon the chair loop 37 will raise the chair 22, and the same may again be folded and stored into the cabinet.

While the preferred embodiment of the instant invention has been illustrated and described, it will be understood that it is not intended to limit the scope of the invention thereto, as many minor changes in detail of construction may be resorted to without departure from the spirit of the invention.

Having thus described my invention what I claim as new and desire to secure by Letters Patent of the United States is:

A bath chair attachment for bath tub use comprising a cabinet adapted to be secured to a supporting surface at one side of the bath tub and directly above the bath tub, spaced guide

tubes secured within the cabinet and extending downwardly into the tub, bearing tubes slidably mounted on the guide tubes, a seat secured to the lower ends of the bearing tubes, gearing mounted within the cabinet including a vertical rotary screw, a horizontal bar connecting the bearing tubes having a threaded opening through which said screw moves moving the bearing tubes and chair longitudinally of the guide tubes, a beveled gear secured to the upper end of the rotary screw, a horizontal shaft mounted at the upper end of the rotary screw, a gear secured to the inner end of said horizontal shaft meshing with said beveled gear, a large pulley secured to one end of said horizontal shaft, a loop moving over the pulley operating the pulley and horizontal shaft, said loop extending to a point adjacent to said seat in easy access to the person seated on the seat whereby said bearing tubes and seat are moved vertically.

OMER G. BROWN.

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