May 20, 1941. G. A. BUCKEL 2,242,939

BATHTUB

Filed Nov. 24, 1939

Fig. 1.

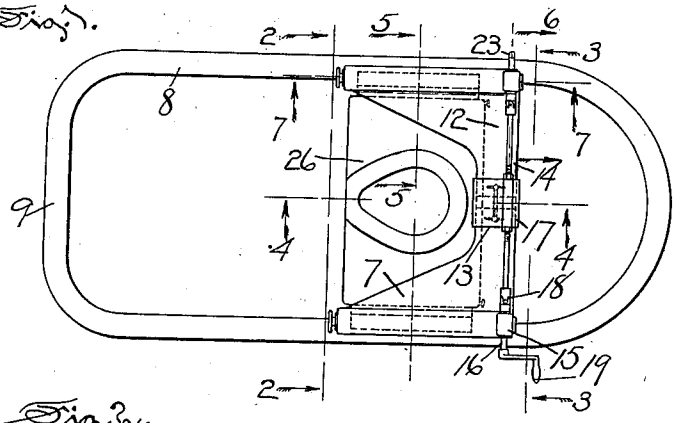


Fig. 2.

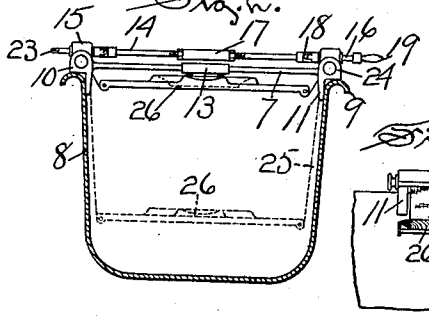


Fig. 4.

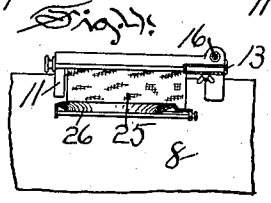


Fig. 3.

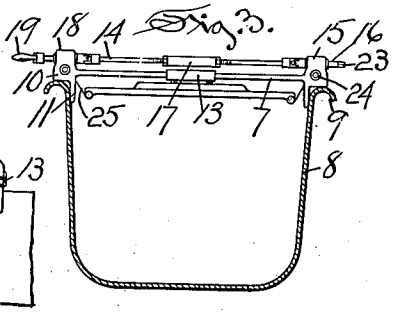


Fig. 5.

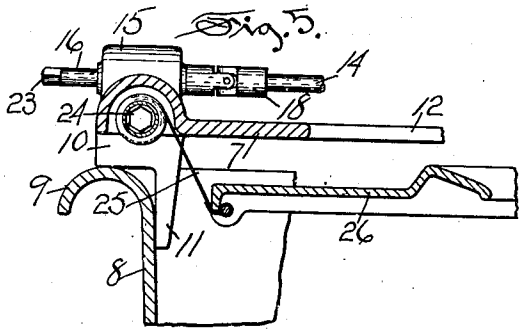


Fig. 6.

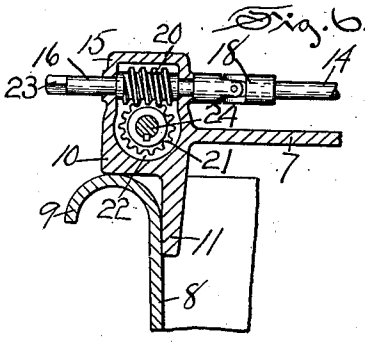


Fig. 7.

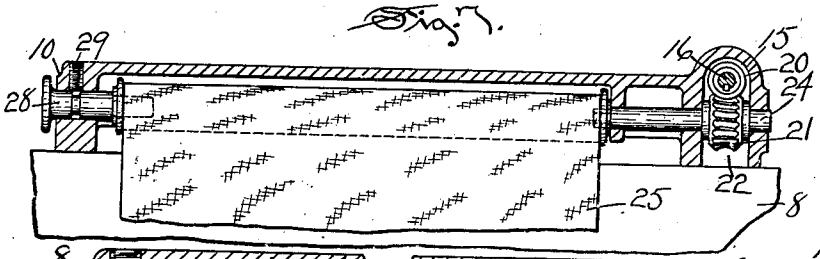
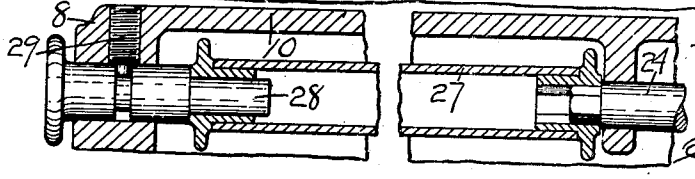


Fig. 8.



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2,242,939

BATHTUB

Gustav A. Buckel, Hartford, Conn.

Application November 24, 1939, Serial No. 305,787

4 Claims. (Cl. 4—185)

My invention relates to bathtubs of the type commonly used in residences, apartments, etc., and an object of my invention, among others, is the construction of an apparatus which may be attached to a tub and which will enable a person to enter the tub in an easy manner and without danger of falling, the appliance being especially applicable for use with heavy persons and invalids and particularly in hospitals.

One form of a device embodying my invention and in the construction and use of which the objects herein set out, as well as others, may be attained is illustrated in the accompanying drawing, in which—

Figure 1 is a plan view of a bath tub showing my improved attachment affixed thereto.

Figure 2 is a view in cross section through the tub showing the seat raised and on a plane denoted by the dotted line 2—2 of Figure 1.

Figure 3 is a similar view but showing the seat lowered and on a plane denoted by the dotted line 3—3 of Figure 1.

Figure 4 is a view in section on a plane denoted by the dotted line 4—4 of Fig. 1.

Figure 5 is a view on enlarged scale and in section on a plane denoted by the dotted line 5—5 of Fig. 1.

Figure 6 is a similar view on a plane denoted by the dotted line 6—6 of Fig. 1.

Figure 7 is a view in section on a plane denoted by the dotted line 7—7 of Fig. 1.

Figure 8 is a view on enlarged scale in lengthwise central section through a part of the device as shown in Figure 7.

In the accompanying drawing the numeral 8 denotes a bath tub of any common form and in the present case having a rolled edge 9. A bracket 10 is formed to fit the edge of the tub and rest on its upper surface with a downwardly extending lip 11 to retain the bracket in position. Two of these brackets are provided, one for each side of the tub, and they each have on one end an extension or strut 12 which merges into a web 7 to stiffen the brackets and retain the opposite ends thereof in place on the lip 9 of the tub. The adjacent ends of the extensions are joined by a sleeve 13 shaped to fit the ends of the webs in a manner common to structures of this type.

A cross shaft is mounted near its opposite ends in bearings 15 on each of the brackets. This cross shaft consists of two sections joined by a coupling 17 in the form of a turnbuckle that may be secured against loosening by lock nuts as shown in Figs. 1, 2, and 3. Each section of the cross shaft comprises two parts 14 and 16 connected by a toggle joint 18. Each of the outer or end parts 16 has a worm 20 meshing with a worm wheel 21 located in a recess 22 in the bracket 10, as shown particularly in Fig. 6 of the drawing. A squared end 23 is formed on each of the end sections 16 of the shaft for the reception of a handle 19 by means of which the shaft may be turned.

The worm wheels 21 are each secured to a roller shaft 24 supported in bearings in one end of the bracket 10 as shown in Fig. 7. A seat support 25 composed of some flexible material as canvas is secured at its upper edge to one of two rollers 27, there being two of these supports located one on each side of the tub. A seat 26 is attached to the outer edge of each of the supports 25 in any suitable manner.

In use in order to enable a person to enter the tub the seat will be raised to the position shown in Fig. 2. The person may then sit upon the seat with the legs and feet hanging outside of the tub. Now by turning on the seat the feet and legs of the person may be lifted over the edge of the tub either by assistance or otherwise, depending upon the strength of the person. Then by means of the handle 19 the seat with the person resting thereon may be lowered into the tub and into water contained therein. In a reversal of the operation in order to enable the person to leave the tub the handle is turned to raise the seat to its uppermost position. The legs and feet of the person are then raised and lifted over the edge of the tub from which position the person may readily rise to an upright position.

In the particular construction herein shown the rollers 27 are each removably engaged at one end with the shaft 24 and also at the opposite end with a stud shaft 28, which parts may be readily slipped one into the other, the stud shaft 28 being removably held in place as by means of a set screw 29 threaded into the bracket 8 and having a reduced end entered into a groove in the stud shaft, as shown in Figure 8.

In accordance with the provisions of patent statutes, I have described the principles of operation of my invention, together with the device which I now consider to represent the best embodiment thereof; but I desire to have it understood that the device shown is only illustrative and that the invention may be carried out by other means and applied to uses other than those above set out.

I claim:

1. A bathtub attachment comprising brackets formed to seat on the top edge of a bathtub on opposite sides thereof, each bracket having a

recess extending lengthwise thereof to form a downwardly opening housing, rollers rotatably mounted in said housings above the bounding edges thereof, flexible supports secured to said rollers, a seat secured to the outer ends of said supports and raisable thereby to a position flush with the top edge of the tub, struts extending between the brackets to retain them in position on the edge of the tub, a shaft operatively connected with the rollers to rotate them, and means for operating said shaft.

2. A bathtub attachment comprising brackets each formed with a notched recess on its under side and a lug to contact the inner surface of a bathtub to insure relative maintained positioning of the ends of the brackets and with a recess in each bracket downwardly opening on the under side comprising a housing, rollers rotatably mounted in said housings above the bounding lower edges thereof, flexible supports secured to said rollers, a seat secured to the outer ends of said supports and raisable thereby to a position flush with the top of the tub, struts extending between the brackets to retain them in position on the edge of the tub, a shaft operatively connected with the rollers to rotate them, and means for operating said shaft.

3. A bathtub attachment comprising brackets formed to seat on the top edge of a bathtub on opposite sides thereof, rollers rotatably mounted in said brackets, flexible supports secured to said rollers, a seat secured to the outer edges of said supports, a cross shaft comprising two sections each operatively connected with one of said rollers, means for extensibly connecting the sections of said cross shafts, struts extending between the brackets to retain them in position on the edge of the tub, webs extending in gradually increasing width from near the ends of the brackets to said struts to maintain rigid parallelism of the brackets in spaced relation and to provide clearance for said seat, and means for operating said shaft.

4. A bathtub attachment comprising brackets formed to fit on the top of opposite sides of a tub, said brackets each having a downwardly opening recess in its under side, a stud shaft projecting into said recess at one end thereof, a roller removably engaged with said shaft in said recess and above the lower edge of the bracket, a roller shaft projecting into said recess and removably engaging said roller therein, seat supports adapted for winding upon said rollers, a seat secured to the ends of said supports, a cross shaft supported in said brackets and comprising sections extensibly connected, and means for operating said cross shaft.

GUSTAV A. BUCKEL.