July 11, 1950 J. W. DAVIS 2,514,848

PIVOTED BATHTUB

Filed Nov. 18, 1946 4 Sheets-Sheet 1

FIG. 1.

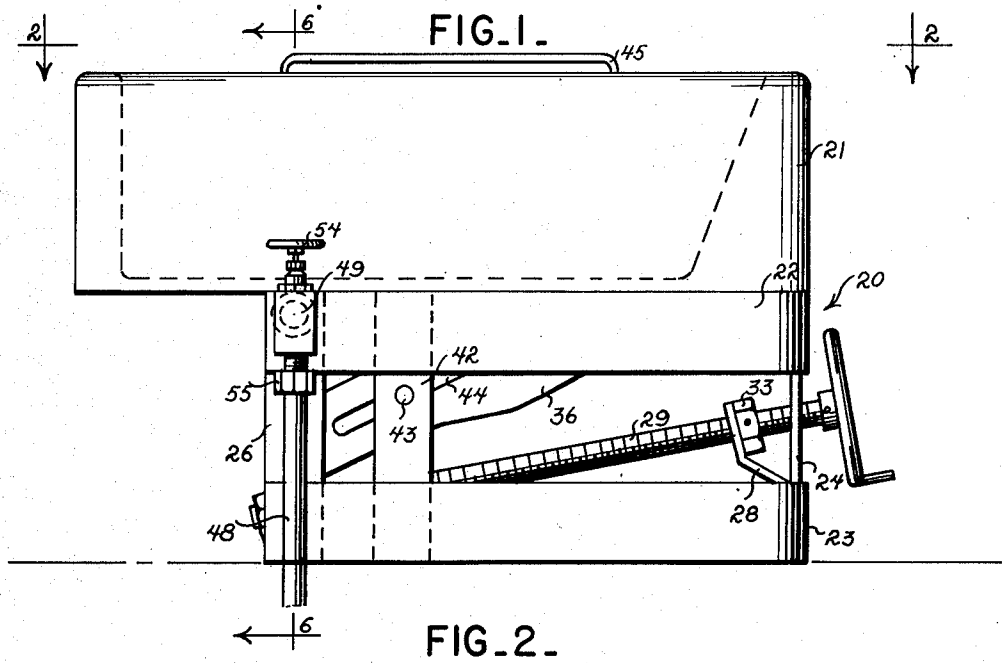
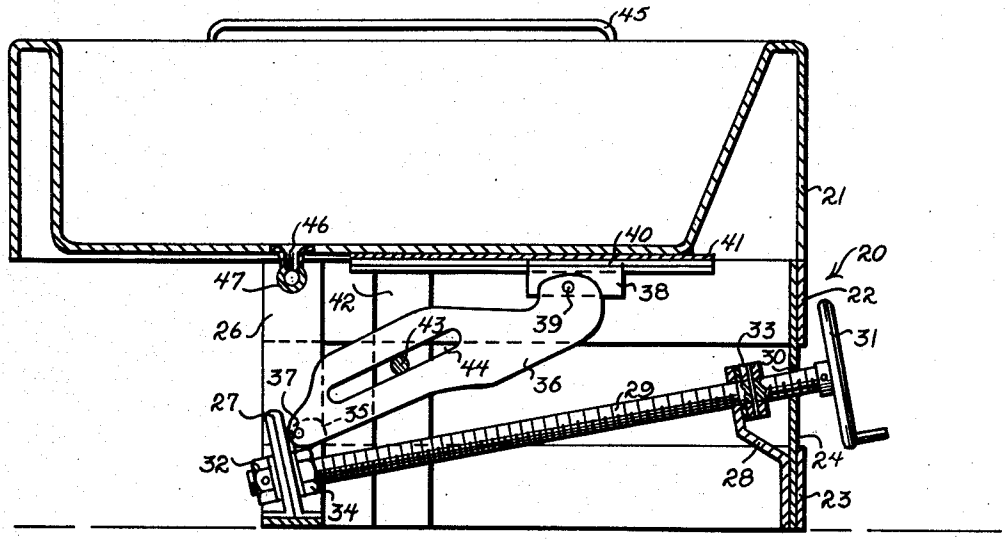


FIG. 2.



INVENTOR.

JOHN W. DAVIS

BY Victor J. Evans & Co.

ATTORNEYS

July 11, 1950 J. W. DAVIS 2,514,848

PIVOTED BATHTUB

Filed Nov. 18, 1946 4 Sheets-Sheet 2

FIG. 3.

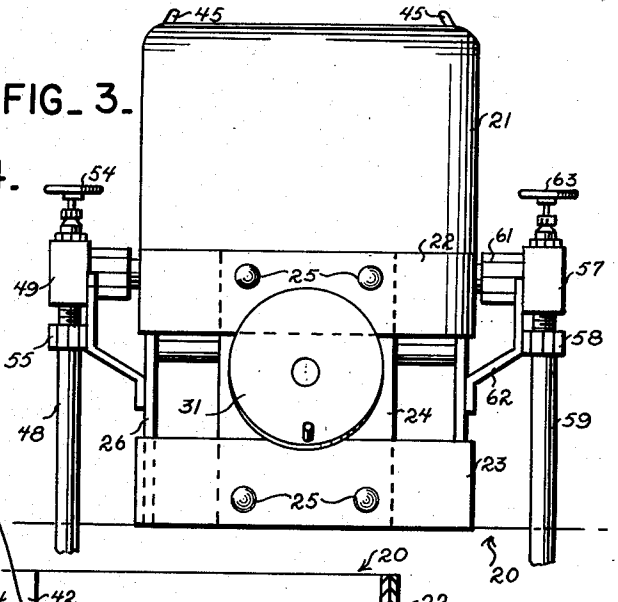
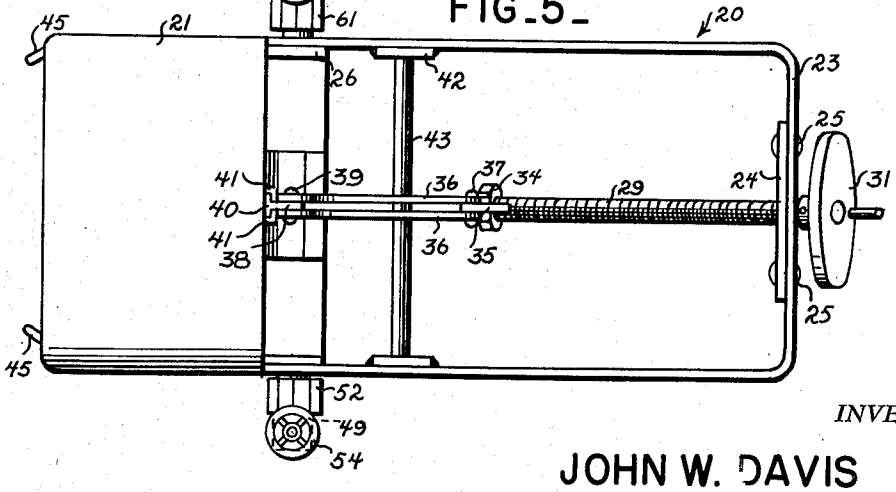


FIG. 4.

FIG. 5.



INVENTOR.

JOHN W. DAVIS

BY Victor J. Evans & Co.

ATTORNEYS

July 11, 1950 J. W. DAVIS 2,514,848

PIVOTED BATHTUB

Filed Nov. 18, 1946 4 Sheets-Sheet 3

FIG. 6.

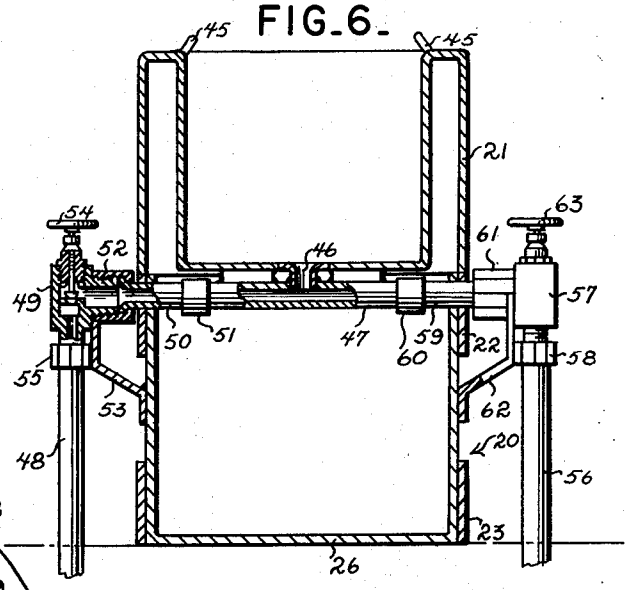


FIG. 7.

INVENTOR.

JOHN W. DAVIS

BY Victor J. Evans & Co.

ATTORNEYS

July 11, 1950 J. W. DAVIS 2,514,848

PIVOTED BATHTUB

Filed Nov. 18, 1946 4 Sheets-Sheet 4

FIG. 8.

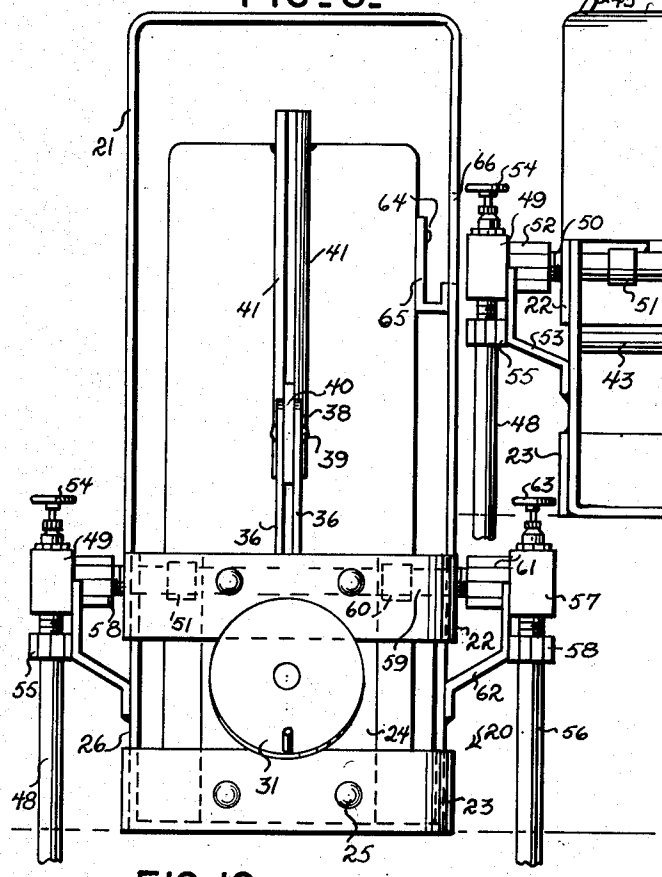


FIG. 9.

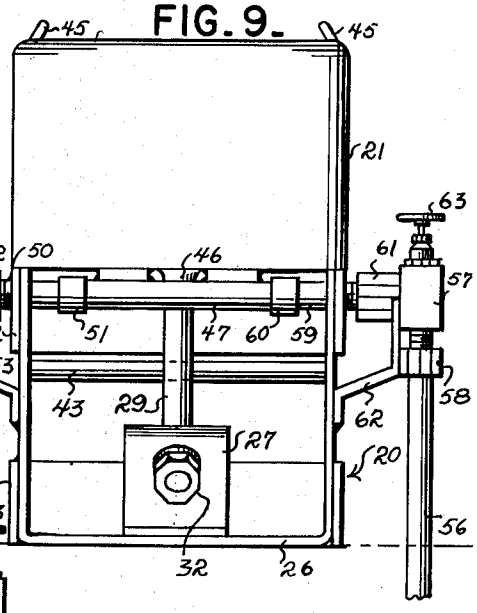
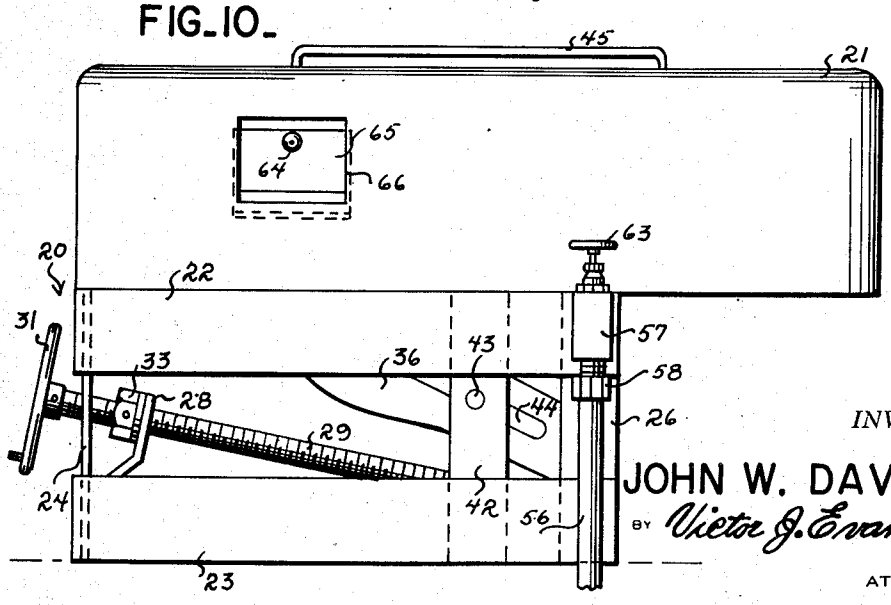


FIG. 10.



INVENTOR.

JOHN W. DAVIS

BY Victor J. Evans & Co.

ATTORNEYS

Patented July 11, 1950 2,514,848

UNITED STATES PATENT OFFICE

2,514,848

PIVOTED BATHTUB

John W. Davis, El Monte, Calif.

Application November 18, 1946, Serial No. 710,686

2 Claims. (Cl. 4—176)

1

This invention relates to bath tubs, and more particularly to a bath tub that is adapted to be used by physically handicapped individuals.

An object of the invention is to provide a bath tub having means which will raise the tub to a vertical position, so that an individual may stand or otherwise place themselves in the tub, and then by reversing the raising means, lower the tub to a horizontal position for the taking of a bath therein.

The raising and lowering means is to be operated by a second individual, and not by the occupant of the tub, since physical condition of the occupant would prevent their operation of the raising and lowering means.

With the above and other objects and advantages in view, the invention consists of the novel details of construction, arrangement and combination of parts more fully hereinafter described, claimed and illustrated in the accompanying drawings in which:

Figure 1 is an elevational view of an embodiment of the invention;

Figure 2 is a sectional view on the line 2—2 of Figure 1 in bathing position;

Figure 3 is an end view thereof;

Figure 4 is a sectional view similar to Figure 3 with the bath tub in vertical occupant receiving position;

Figure 5 is a bottom plan view thereof;

Figure 6 is a sectional view on the line 6—6 of Figure 1;

Figure 7 is an elevational view of the tub in occupant receiving position;

Figure 8 is a rear view of Figure 7;

Figure 9 is an end view of the end opposite to that shown in Figure 3 and

Figure 10 is a side elevational view of the side opposite to that shown in Figure 1.

Referring more in detail to the drawings, the reference numeral 20 comprises the supporting base or stand for the tub 21, and comprises two horizontally disposed parallel substantially U-shaped members 22 and 23 respectively which are connected together at their respective bases in spaced relation to each other by the vertical plate member 24, such connection being made by use of suitable fastening means 25.

Connected to the ends of the members 22 and 23 by welding or the like is a vertically disposed U-shaped member 26, which spaces the members 22 and 23 in the same manner as the member 24.

Secured to the center of the base of the member 26 is a bearing member 27, and together with the bearing member 28, secured to the rear of

2

the member 24, centrally thereof at the bottom thereof, forms journalling means for the screw operating rod 29 which extends beyond the plate 24 by means of the opening 30, and has a hand operated wheel 31 thereon for the turning of the screw, as will be later described.

A nut 32 is keyed to the opposite end of the rod 29 and a nut 33 is positioned on the outer side of the bearing 28 and keyed thereto as is nut 32. Mounted on the rod 29 is the travelling nut 34 which is caused to travel on the rod upon rotation of the hand wheel 31. The nut 34 is provided with an apertured ear 35 which is connected to the links or arms 36 by a pivot pin 37. The arms are parallel to each other and spaced from each other at one end by the ear 35 and at the other end by the depending projection 38 to which the arms are connected by a pivot pin 39. The projection 38 is formed integral with the head 40 providing a T-shaped structure which is slidably mounted on the bottom of the tub 21 by means of parallel relatively spaced guide tracks 41, which are secured to the bottom of the tub 20.

Secured to the members 22 and 23, inwardly of and adjacent to the member 26, by welding or the like, is another U-shaped member 42 which carries the guide rod 43 which is slidably mounted in the alined elongated slots 44 in the arms 36 for the guiding thereof during the raising and lowering of the tub 21.

In operation, the hand wheel 31 is rotated to cause the tub to assume a vertical position, and then a handicapped person can back into the tub and grasp the hand rails 45 on the upper edge of the tub and hold themselves in the tub until the hand wheel is rotated in the opposite direction to move the tub downwardly to a horizontal position for use in bathing.

The tub 21 is provided with a combined inlet and outlet 46 in the bottom thereof, which communicates with combined drain and supply pipe 47. The drain may be placed at either side of the tub, but for purposes of illustration, the drain pipe in this instance will be designated as 48, having the hand operated valve 49 connected to the pipe 48 at the upper end thereof, and by a coupling 50 and nut 51 to the drain end of the pipe 47. The nut 52 for joining the coupling 50 to the valve 49 is loosely mounted in the forked end of an arm 53 which is secured to one side of the member 26, and to the valve 49. Thus by operation of the hand wheel 54, water can be drained from the tub 21, and the valve is connected to pipe 48 by the usual connection 55.

The supply pipe 56 is connected to the hand operated valve 57 by the usual connection 58, and the valve 57 is connected to the opposite end of pipe 47 by a coupling 59 and nut 60. The nut 61 for joining the coupling 59 to the valve 57 is loosely mounted in the forked end of an arm 62 which is secured to the opposite side of the member 26 to that of the nut 52, and to valve 57 in like manner. By operation of the hand wheel 63, water can be supplied to the tub for bathing purposes. The pipe 47, together with the couplings 50 and 59 provide the pivot means for the tub during the raising and lowering thereof by the means previously described.

Secured inwardly of the tub, by fasteners 64, is a shelf or compartment 65 which is adapted to hold soap or other bath supply accessories, access being gained thereto by means of an opening 66 in the side of the tub, as shown in Figure 10.

Thus means has been provided for supplying water to the tub, and draining water therefrom, and it is believed that from the foregoing description, the operation and construction of the tub will be apparent to those skilled in the art.

It is also to be understood that changes in the minor details of construction, arrangement and combination of parts may be resorted to, provided they fall within the spirit of the invention and the scope of the appended claims.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. In a bath tub, the combination which comprises a bath tub stand, a bath tub positioned on said stand with one end thereof projecting beyond the associated end of the stand, means pivotally mounting said tub on the end of the stand at a point spaced from the projecting end of the tub whereby when tilted, the tub is positioned substantially vertical with the open upper surface extended outwardly to facilitate the entrance of an invalid into the tub, and operating means for actuating the tub from a vertical to a horizontal position with an invalid therein.

2. In a bath tub, the combination which comprises a bath tub stand, a bath tub positioned on said stand with one end thereof projecting beyond the associated end of the stand, means pivotally mounting said tub on the end of the stand at a point spaced from the projecting end of the tub whereby when tilted, the tub is positioned substantially vertical with the open upper surface extended outwardly to facilitate the entrance of an invalid into the tub, a threaded rod rotatably mounted and angularly positioned in the stand, a hand wheel on the outer end of the threaded rod for rotating the same, a follower having an upwardly extended ear threaded on the shaft, a link having an elongated slot therein pivotally mounted on the ear on the upper side of the follower, a tube with a slot in the undersurface mounted on the lower side of the bath tub, a slider slidably mounted in the tube having a projection extending through the slot thereof, means pivotally mounting the end of the link opposite to the end mounted on the ear of the follower on the projection of the slider, and friction means on the threaded rod for preventing longitudinal movement thereof as it is rotated.

JOHN W. DAVIS.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
237,494	Damen	Feb. 8, 1881
1,367,896	Simpson	Feb. 8, 1921