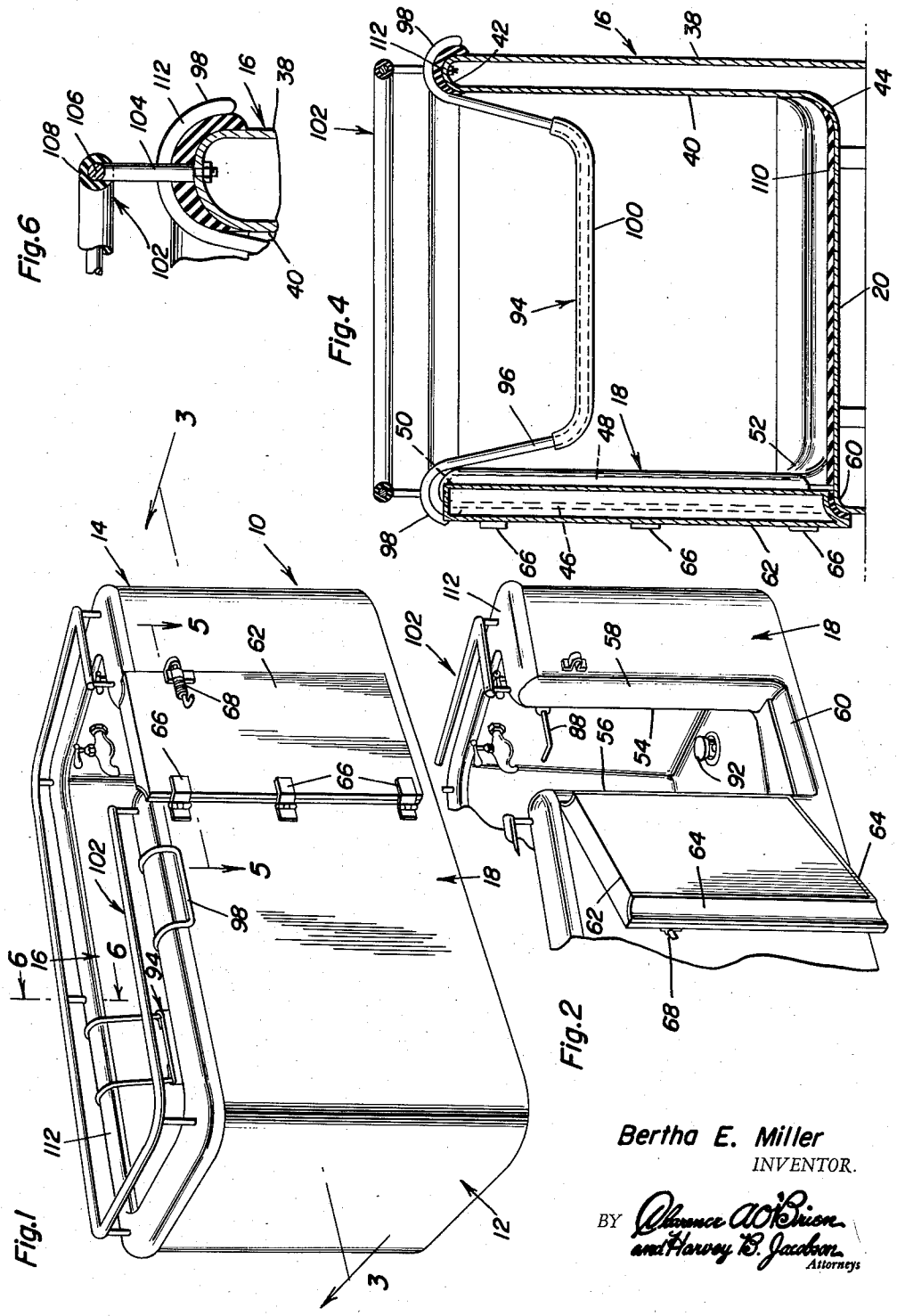
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INVALID'S BATH TUB

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INVALID'S BATH TUB

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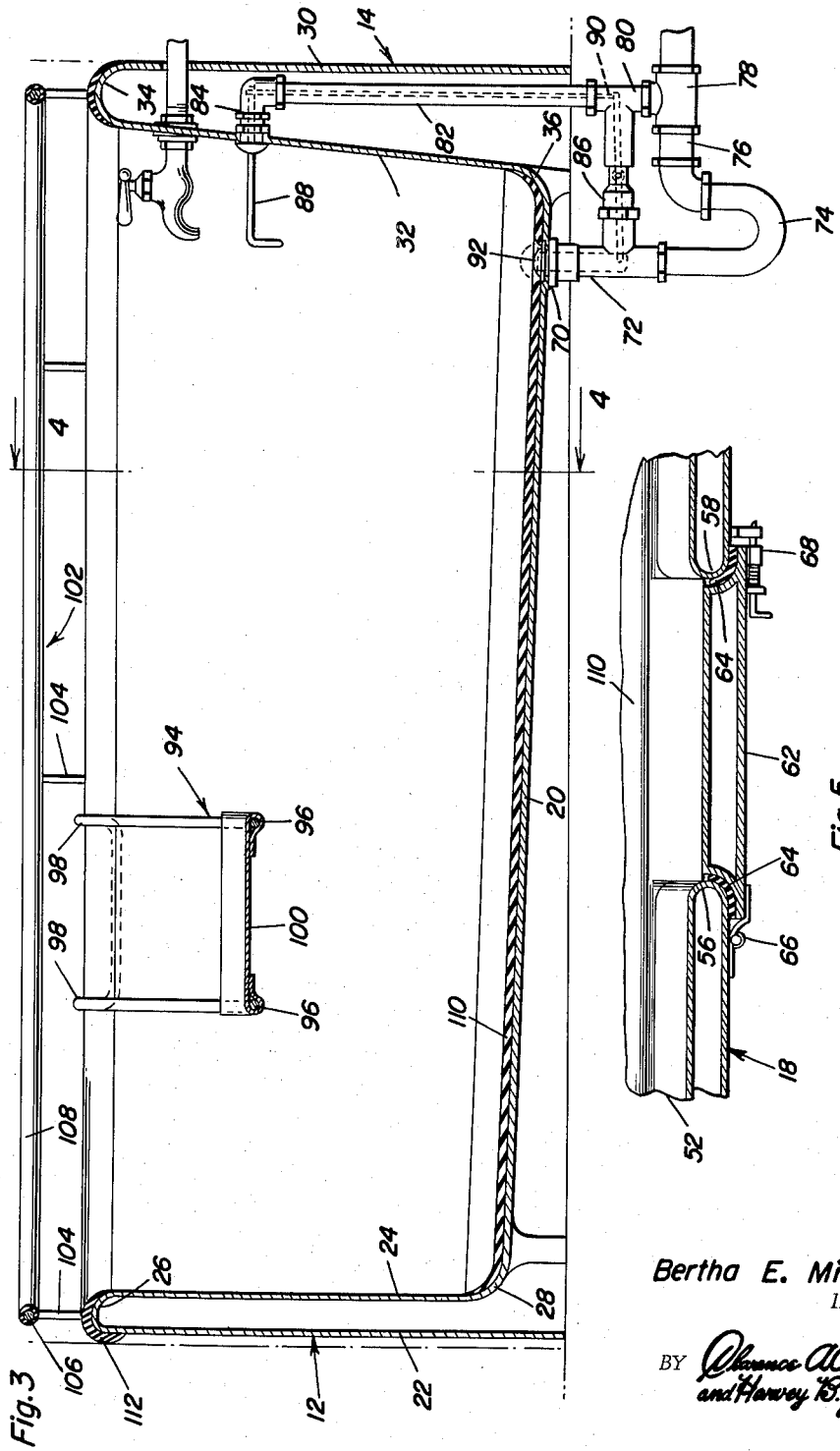


Fig. 3

Fig. 5

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INVALID'S BATH TUB

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1 Claim. (Cl. 4—185)

This invention relates in general to new and useful improvements in plumbing fixtures, and more specifically to an improved bath tub particularly designed for use by invalids.

The bath tubs which are commonly in use of necessity have high sides so as to prevent the escape of water. While the average person may easily step over the sides and become seated in the bath tub, there are many invalid persons who find it impossible to step over the side of the bath tub and become seated therein. For that reason these persons have been unable to take a bath in the normal manner. It is therefore the primary object of this invention to provide a bath tub which is especially designed for use by invalids, which bath tub is provided with an entrance opening which extends upwardly from the bottom wall of the bath tub through an upper edge of the side wall in which the entrance opening is formed, the entrance opening being closed by a door which is sealed relative to the side wall of the bath tub when in its closed position so as to prevent the escape of water thereby.

Another object of this invention is to provide a bath tub which is specially designed for invalids, the bath tub being provided with a hand rail about the upper edge thereof, the hand rail being covered with a non-slip material whereby the person getting into and out of the bath tub may grip the hand rail so as to facilitate their movements with respect to the bath tub.

Another object of this invention is to provide an improved bath tub for use particularly by invalids, the bath tub having a bottom wall with a definite slope between the rear and front walls thereof and a drain therein adjacent the front wall whereby the drainage of water from the bath tub is assured, the drain being provided with a closure which is provided with a remote actuator whereby one disposed in the bath tub in a comfortable position may move the closure between open and closed positions.

A further object of this invention is to provide an invalid's bath tub, the bath tub being provided with an opening in the side wall thereof to facilitate the direct walking into and there being slidably carried by the side walls and depending down into the bath tub a seat whereby an invalid may deposit himself or herself on the seat in a sitting position without finding it necessary to become seated on the bottom of the bath tub as is customary, thereby facilitating the entry and exit of the invalid from the bath tub, the bath tub also having a bottom wall with a non-slip surface to prevent slipping of the invalid while moving about in the bath tub.

These together with other objects and features which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view showing the invalid's bath tub which is the subject of this invention;

Figure 2 is a fragmentary perspective view similar to Figure 1 and shows the door of the bath tub in its open position;

Figure 3 is an enlarged transverse sectional view taken substantially upon the plane indicated by the section line 3—3 of Figure 1 and shows further the details of the bath tub including the specific closure for the drain and the operator there;

Figure 4 is a sectional view taken substantially upon the plane indicated by the section line 4—4 of Figure 3 and shows the details of the seat carried by the side walls of the bath tub;

Figure 5 is an enlarged fragmentary sectional view taken substantially upon the plane indicated by the section line 5—5 of Figure 1 and shows the details of the door and the relationship thereof with respect to the entrance opening; and

Figure 6 is an enlarged fragmentary sectional view taken substantially upon the plane indicated by the section line 6—6 of Figure 1 and shows the details of a hand rail carried by the bath tub.

Referring now to the drawings in detail, it will be seen that there is illustrated the bath tub which is the subject of this invention, the bath tub being referred to in general by the reference numeral **10**. The bath tub **10** is of a construction similar to existing bath tubs and includes a rear wall **12**, a front wall **14** and side walls **16** and **18**. The bath tub **10** also includes a bottom wall **20**.

As is best shown in Figure 3, the rear wall **12** includes an outer wall portion **22** and an inner wall portion **24** which are connected together at their upper ends by an upper portion **26**. The outer wall portion **22** extends down beyond the inner wall portion **24** and functions as a skirt. The inner wall portion **24** is integrally connected to the bottom wall **20** by a curved part **28**.

The front wall **14** is constructed similar to the rear wall **12** in that it includes an outer wall portion **30** and an inner wall portion **32** which are connected together at their upper edges by an upper portion **34**. The inner wall portion **32** is spaced from the outer wall portion **30** a suitable distance to permit the positioning of necessary plumbing within the front wall **14**. The inner wall portion **32** is connected to the forward end of the bottom wall **20** by a curved part **36**.

Referring now to Figure 4 in particular, it will be seen that the side wall **16** includes an outer wall portion **38** and an inner wall portion **40** which are disposed in spaced relation. The inner wall portion **40** is connected to the outer wall portion **38** by an upper portion **42**. The outer wall portion **38** extends down below the bottom wall **20** and forms a skirt. The inner wall portion **40** is connected to the side edge of the bottom wall **20** by an integral curved part **44**.

The side wall **18** is constructed similar to the side wall **16** and includes an outer wall portion **46**, an inner wall portion **48**, an upper portion **50** connecting together the two, and a curved part **52** connecting the inner wall portion **48** to the bottom wall **20**. The side wall **18** differs from the side wall **16** in that the forward part thereof is provided with an entrance opening **54**. The entrance opening **54** extends upwardly from the bottom wall **20** through the upper edge of the side wall **18** to facilitate the entry and egress of an invalid with respect to the bath tub **10**. The entrance opening **54** is defined by spaced vertical parts **56** and **58** and a lower part **60** which extend between the inner wall **48** and the outer wall **46**, as is best shown in Figure 2. It is to be noted that the part **60** is disposed coextensive with the bottom wall **20**, as is best shown in Figure 4.

In order that the entrance opening **54** may be closed to prevent the escape of water from the bath tub **10**, there is provided a door **62**. The door **62** is of a con-

figuration to match the entrance opening 54 and to partially fit therein, as is best shown in Figure 5. The door 62 is provided along the vertical edges and bottom edge thereof with a suitable sealing strip or gasket 64 which engages the boundaries of the entrance opening 54 and forms a seal therewith. This is best shown in Figures 4 and 5. The door 62 is mounted on the side wall 18 by means of vertically spaced hinges 66. Also, a suitable latch 68 is provided to retain the door in a tightly closed position.

The bath tub 10 will be provided with suitable plumbing including a drain fitting 70 formed in the bottom wall 20 adjacent the front wall 14. The bottom wall 20 has a definite slope from the rear wall 12 towards the front wall 14 to ensure the proper drainage of water. Connected to the fitting 70 is a pipe 72 to which there is in turn connected a trap 74 and a waste pipe 76. The waste pipe 76 includes a T-fitting 78 which has in turn coupled thereto a T-fitting 80. Extending upwardly from the T-fitting 80 is a pipe 82 disposed within the front wall 14 and which terminates in a right angle fitting 84 at the upper end thereof opening through the inner wall portion 32. The pipe 72 is in the form of a T-fitting and has coupled thereto by means of a pipe 86 the T-fitting 80. A suitable operator 88 is carried by the fitting 84 and projects into the bath tub 10 for convenient manipulation by a person disposed therein. The operator 88 is connected by means of suitable linkage 90 to a closure 92 which may be used to control the flow of water through the drain fitting 70. Thus it is unnecessary for a person to lean over to the bottom of the bath tub 10 to open or close the drain thereof.

An invalid also finds it difficult to be seated on the bottom wall of a bath tub in the normal manner. Accordingly, for the convenience of an invalid, it is proposed to provide an elevated seat which is referred to in general by the reference numeral 94. The seat 94 includes a pair of longitudinally spaced frame members 96 which are U-shaped in elevation, as is shown in Figure 4, and which terminate in outwardly and downwardly directed hook portions 98. The hook portions 98 engage over the upper edges of the side walls 16 and 18 to support the seat 94. Extending between the frame members 96 is a suitable webbing 100 which is formed of a non-slip material. The seat 94 will be preferably designed for the individual who is to use the bath tub 10. Thus the height of the webbing 100 above the bottom wall 20 may be varied as is desired for the individual.

The bath tub 10 is also provided with certain safety features to facilitate the entry and eggress of an invalid and to assure against injury. These safety features include a hand rail which is referred to in general by the reference numeral 102. The hand rail 102 extends about a major portion of the periphery of the bath tub 10 and extends upwardly from the upper edges of the walls thereof. The hand rail 102 includes suitable upright supports 104 to which there is suitably secured a rail member 106. The rail member 106 is provided with a suitable anti-slip covering 108 to facilitate the gripping thereof. Also, the bottom wall 20 is provided with a suitable non-slip covering 110. Further, if it is so desired, the upper edges of the walls of the bath tub 20 will be provided with a padding 112 to prevent injury.

From the foregoing description of the bath tub 10, it will be readily apparent that the bath tub 10 is so designed whereby it may be used equally as well by invalids and other persons. On the other hand, the bath tub 10 is so designed whereby an invalid may enter or exit from the bath tub 10 without the necessity of climbing over the sides thereof as is required with respect to a customary bath tub. Also, because of the provision of the seat 94, it is not necessary that the invalid become seated on the bottom of the bath tub in the normal awkward position which is impossible for many invalids to do. Further, there is provided a remote operator for the drain so that the invalid, while seated on the seat 94, may operate the drain closure 92. In addition to these features, there are the safety features which prevent the slipping of the invalid while moving about in the bath tub 10. These, together with the foregoing listed features cooperate to provide a bath tub especially designed for invalids and which will permit invalids to take baths in the normal manner which heretofore invalids were unable to do. It is to be understood that the position of the entrance opening 54 and the door 62 may be varied as is desired and the door 62 may be either right or left in its mounting.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

An invalid's bath tub comprising a rounded top, a pad of arcuate cross section mounted on said top, posts mounted on said top, and a hand rail mounted on the posts, said posts passing through the pad and secured to said top for securing said pad in position on the tub.

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