Sept. 8, 1959 H. C. MILLER 2,902,699

DEVICE FOR BATHING AND DRESSING INFANTS

Filed Nov. 19, 1956 5 Sheets-Sheet 1

FIG. 1

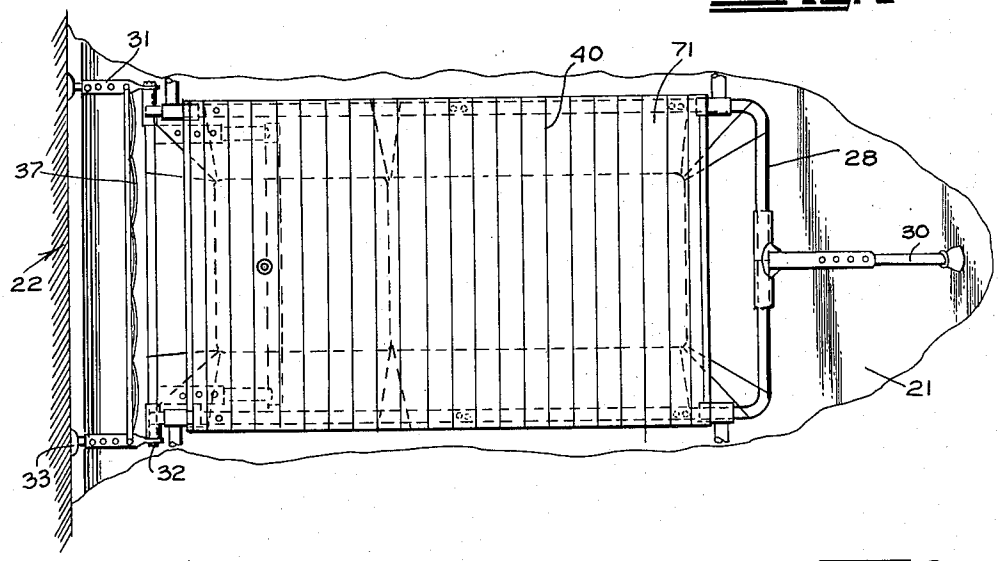
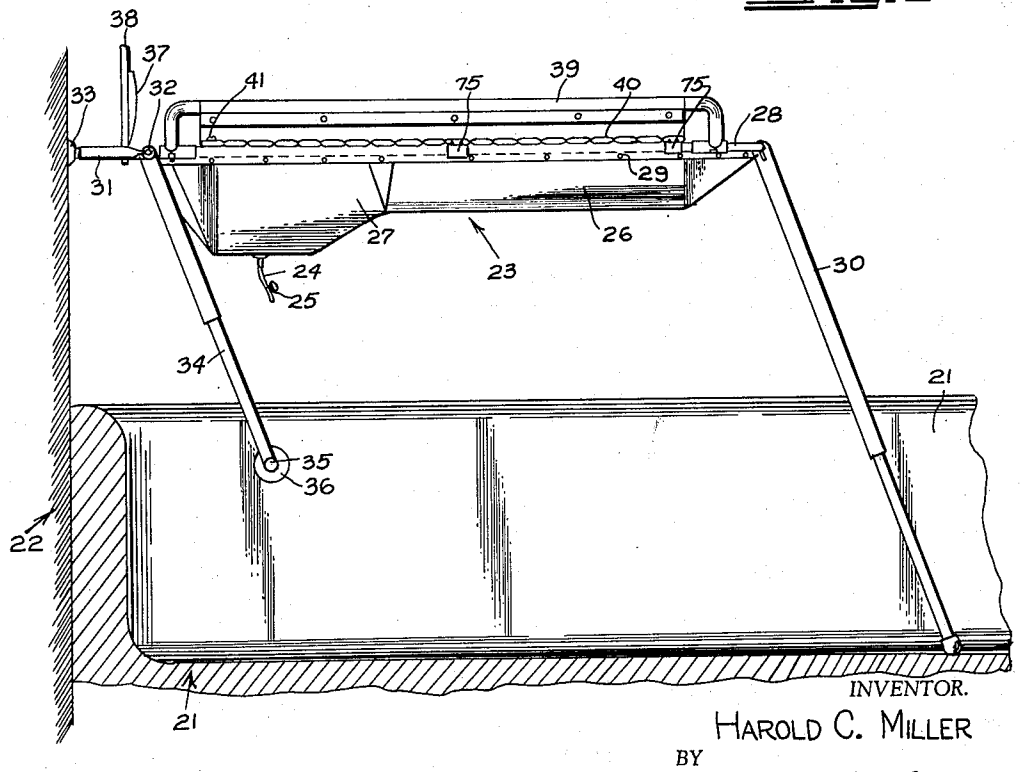


FIG. 2



INVENTOR.
HAROLD C. MILLER
BY
Ernest Siegel
Atty.

Sept. 8, 1959 H. C. MILLER 2,902,699

DEVICE FOR BATHING AND DRESSING INFANTS

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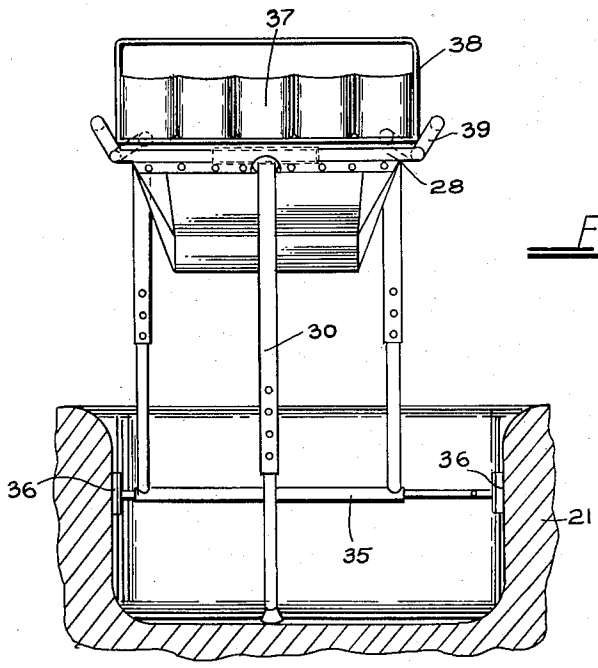


FIG. 3

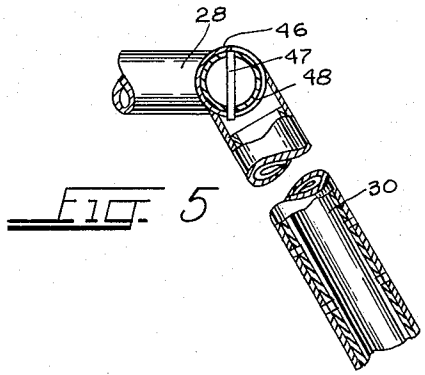


FIG. 5

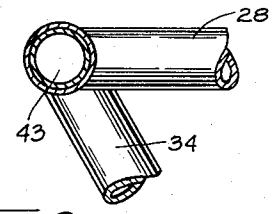


FIG. 6

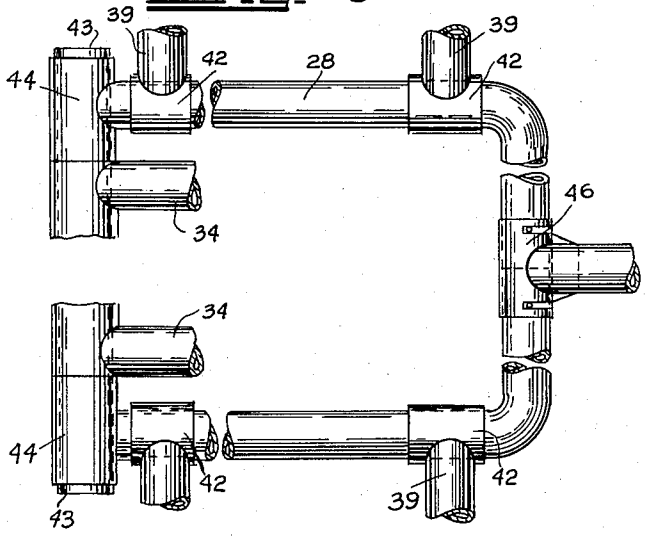


FIG. 4

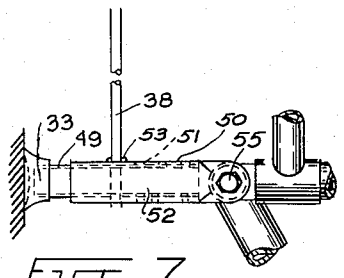


FIG. 7

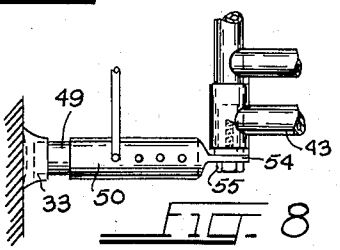


FIG. 8

INVENTOR.
HAROLD C. MILLER
BY
Albert Siegel
Atty.

Sept. 8, 1959 H. C. MILLER 2,902,699

DEVICE FOR BATHING AND DRESSING INFANTS

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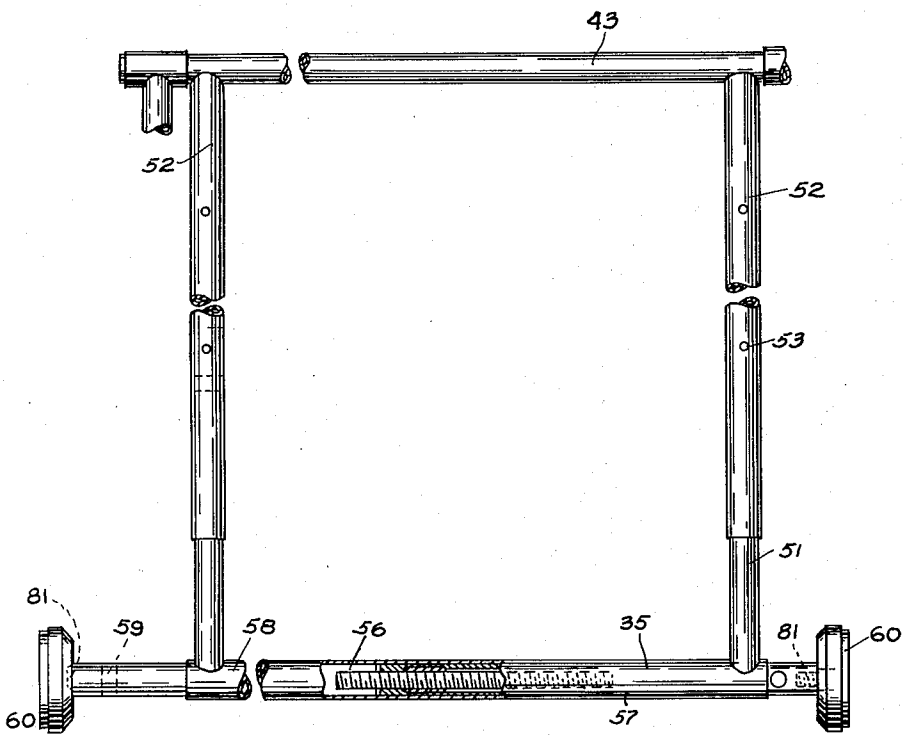


FIG. 9

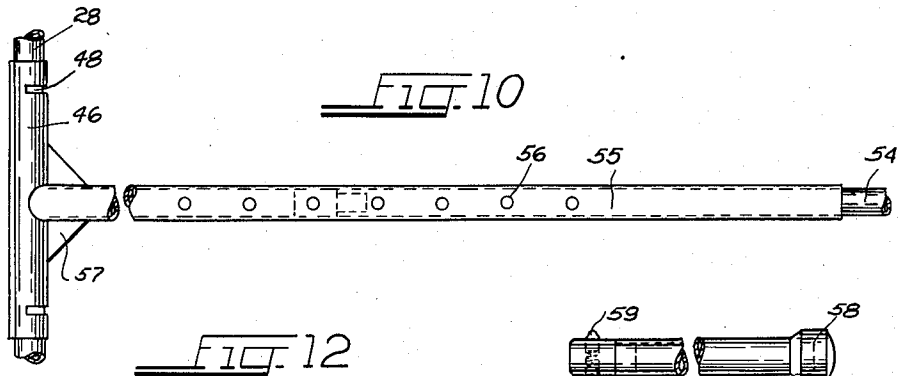


FIG. 10

FIG. 12

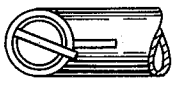


FIG. 11

INVENTOR.
HAROLD C. MILLER
BY
Albert Siegel
Atty.

Sept. 8, 1959 H. C. MILLER 2,902,699

DEVICE FOR BATHING AND DRESSING INFANTS

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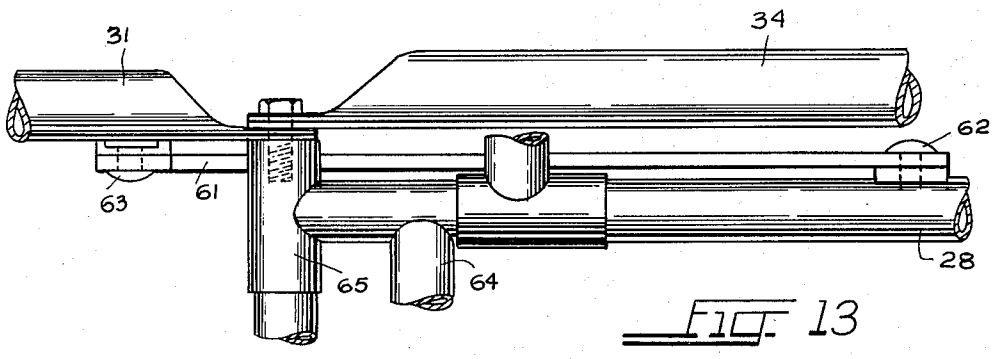


FIG. 13

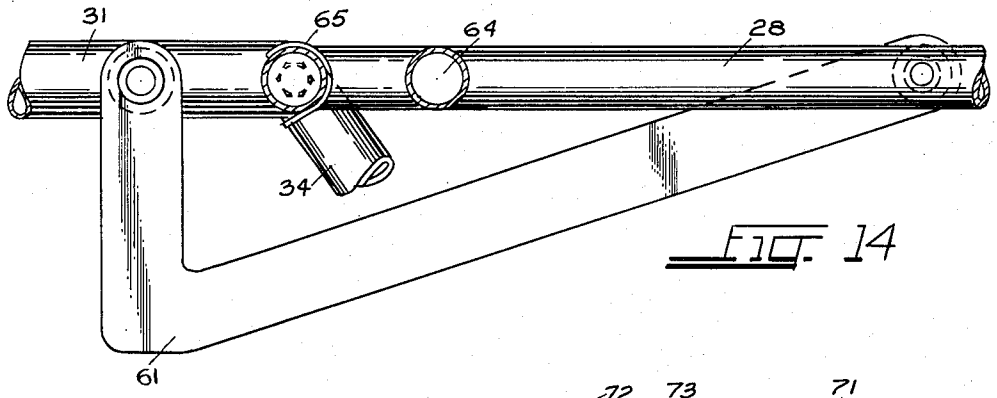


FIG. 14



FIG. 15

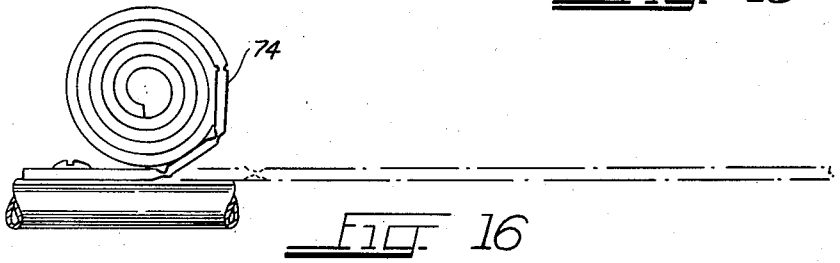


FIG. 16

INVENTOR.
HAROLD C. MILLER
BY
Albert Siegel
Atty.

Sept. 8, 1959 H. C. MILLER 2,902,699

DEVICE FOR BATHING AND DRESSING INFANTS

Filed Nov. 19, 1956 5 Sheets-Sheet 5

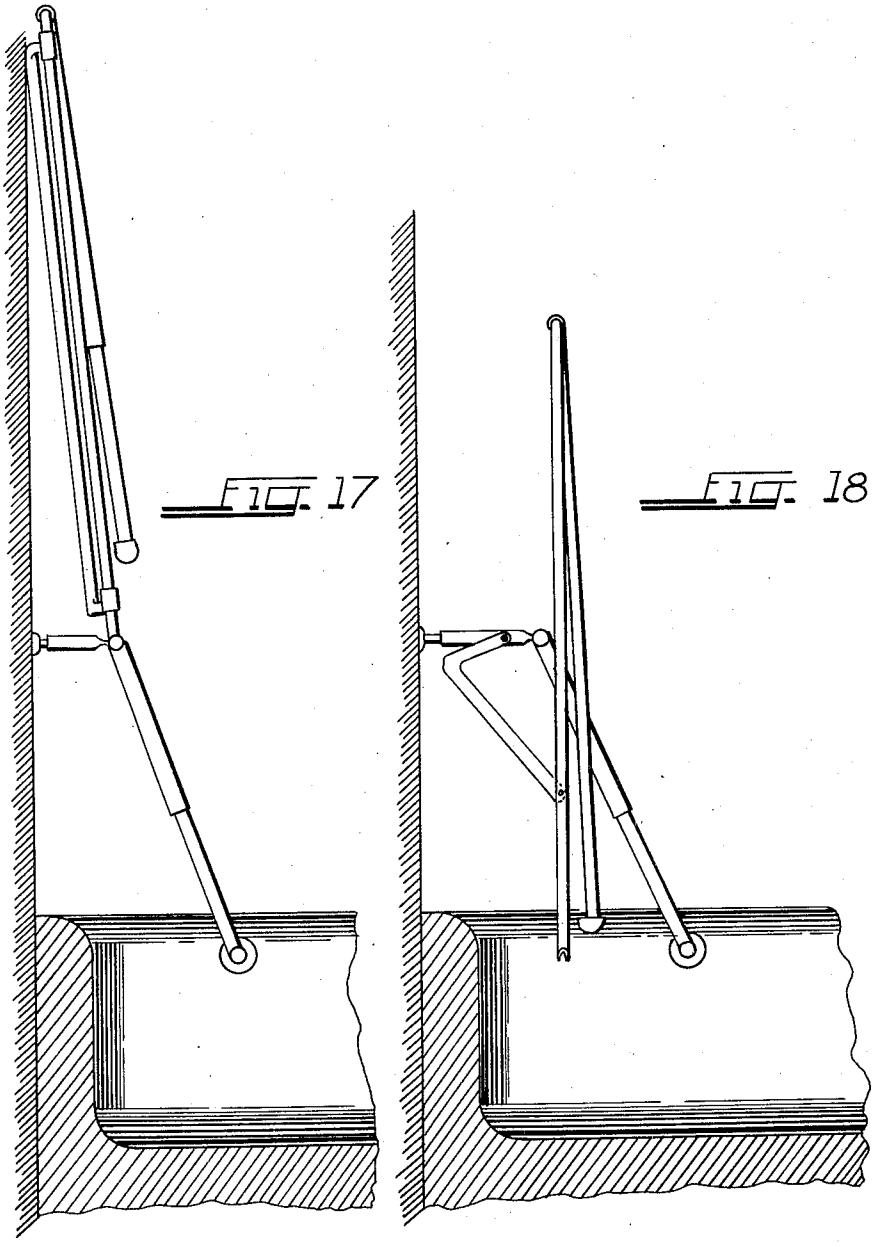


FIG. 17

FIG. 18

INVENTOR.
HAROLD C. MILLER

BY
Albert Siegel
Atty.

United States Patent Office 2,902,699 Patented Sept. 8, 1959

2,902,699

DEVICE FOR BATHING AND DRESSING INFANTS

Harold C. Miller, Chicago, Ill.

Application November 19, 1956, Serial No. 623,059

4 Claims. (Cl. 4—177)

The instant invention relates to a combination bathing device-dressing table unit for infants and more particularly to such devices which are capable of being stored in a folded or closed condition when not in use. Not only may the instant device be both easily stored and readied for use, but of equal importance is the fact that it may be stored in situ. This is to say that my device may be used and then stored in the usual bathtub or the like without interfering with the normal use of said tub when the device is folded. With its safety factors and minimal space requirements the instant invention is well suited for use in the limited space provided in our modern housing.

An object of the instant invention is to provide a baby bath-dressing table unit which may be securely installed in a bathtub and which also may be readily stored in place without interfering with adult use of such tub.

Another object of the instant device is to provide a baby bath unit which is extremely safe because of the almost impossibility of such device overturning.

A further object of the instant invention is to provide a sturdy baby bath which may be installed, used, and stored in an adult bathtub.

Yet another object of the instant invention is to provide a dressing table unit for infants for use in combination with a baby bath which also is extremely safe for use and which in no way can injure an infant or the person handling such infant.

Still another object of the instant invention is to provide a baby bath-dressing-table unit which permits the baby to be held directly over the bath while being transferred to the dressing table.

These and other objects, features, and advantages of the instant invention will become apparent to those skilled in the art from the following disclosure thereof and the drawings attached hereto and made a part hereof.

In the drawings:

Figure 1 is a top view of the instant device;

Figure 2 is a front view;

Figure 3 is an end view;

Figure 4 is a segmented view of the frame means of the instant device viewed from above;

Figure 5 is a view of the attachment of the end support leg to the frame means;

Figure 6 is a partial sectional view of a means of attaching the side support legs to the frame;

Figure 7 is a partial sectional view from the side illustrating how the instant device may be in part supported by a wall;

Figure 8 is a view from above of that portion of the device illustrated in Figure 7;

Figure 9 illustrates the main support means of the instant device, partially in section;

Figure 10 is a detailed view of the end support leg and its bushing attachment to the main frame portion;

Figure 11 illustrates the detent means used particularly in the central support leg and in the other components where detents are indicated;

Figure 12 illustrates the pin and slot means used with the end support leg to control its rotation;

Figure 13 illustrates the top view of a modification of the instant invention; wherein a slightly different hinge means is used;

Figure 14 illustrates the side view of the modification in Figure 12;

Figure 15 is a sectional view of a portion of the dressing table component;

Figure 16 schematically illustrates the dressing table in the rolled position;

Figure 17 illustrates one modification of the instant invention that of Figure 2 stored; and

Figure 18 illustrates a further modification of the instant invention, that of Figures 12 and 13 when stored.

Until the advent of my invention infant bathing devices have been set up in a manner similar to folding tables or the like, that is, on the floor. Devices in the most widespread use consist of a pliable bathtub supported on foldable legs. These devices are useful only on flat surfaces and a person would be considered reckless indeed to even attempt to use one on the curved surfaces presented by the great majority of adult tubs. A dressing table is side-mounted on hinges, usually along the length of the tub. When the tub is being used the dressing table normally stands straight up, and is lowered or dropped into the flat, dressing position. Since the dressing table normally completely covers the top of the infant tub, as it is rotated downward the baby must be held away from the tub until the table is secure.

Before describing a device produced in accordance with my invention I think a brief description of how it is used will assist in understanding the structural details. One of my primary aims was to produce a baby bathtub which could be conveniently used and stored in a small apartment. The instant device accomplishes these ends since it is used in an adult bathtub and is stored between periods of use in a most convenient location, namely against a small portion of the bathroom wall. Another of my aims was to be able to conveniently position the device for use, and conversely to readily change it to its non-use, stored position. In my invention these ends are most simply met—to be used the unit is merely rotated downward, and it assumes a secure, stable position; to store the unit merely entails a rotational movement upward. Another of my aims was to provide an infant dessing table which could be conveniently readied for use. In most dressing table-bathing units presently available when the person washing the infant wishes to use the dressing table, usually the wet, slippery, wiggling infant is held in one arm while the other arm positions the table. While the dressing table is being lowered the infant must be held away from the tub. Occassionally babies fall. In my device, on the other hand, the dressing table is first partially unrolled while the infant is still in the tub. Then the person washing may carry the infant with both hands, place him on the unfolded portion of the table, and then proceed to unroll the table to its full length. In devices produced according to my invention the infant need not be removed from above his bathtub while the dressing table is positioned. Even if the table is not unrolled until the infant is taken from the tub, he can still be carried directly over the tub. The advantages of my device I think will be evident to anyone who has had occassion to use the old style units.

Referring now to the drawings:

In Figures 1, 2 and 3 the overall construction of a device produced in accordance with my invention may be seen. The device is used primarily in a bathtub, indicated generally by the numeral 21 and rests in part against the bathroom wall, 22. It is of course understood that my structures may be used outside of an adult bathtub,

but the most convenient location for storage, filling and draining etc., will be in such tub. The tub portion, indicated generally at 23, is preferably made of pliable material, waterproof of course, such as canvas, rubber, or plastics. If desired, a solid matter such as aluminum could be formed into the tub, but this not only might injure the child, but would undoubtedly add greatly to the cost of producing the device.

The contents of the tub 23 are readily emptied through an outlet drain 24 controlled by clamp 25. It is of course understood that any other known means of controlling the outflow may be used. As seen particularly in Figure 2, the tub 23 may be formed of two areas 26 and 27 of different depths. While this varying depth structure is not essential to the instant invention it is readily understood that it adds safety and convenience to its use. The infant may be washed in the shallow portion 26 while the deep part 27 acts as a reservoir for rinse water. Or the infant may be washed in the deep portion, and then allowed to play, or await transfer to the dressing table in the shallower part.

The tub portion 23 is supported by a generally rectangular frame member 28. In Figure 2 is seen the method of attaching the tub 23 to the frame 28. If pliable material is used such material may be most simply locked around the frame by button snaps 29, or the like. This allows ready convenient removal of the tub 23 for special cleaning, repair, or for whatever other reason this becomes necessary.

An end support leg 30 is swingably mounted on frame 28; the details of such mounting and of the construction of such leg will be presented below. Extension members 31 are connected to the frame 28 through a joint means 32. At the wall end of each extension 31, there is a suction cup, 33 or a friction pad or the like, first to provide support and second to assist in keeping the device from sliding. Directed downwardly at a slight forward angle from frame member 28 are a pair of support legs 34. These support legs are rotatably mounted on a central support crosspiece 35, such crosspiece being the primary supporting member of the instant device. At both ends of crosspiece 35 are socket-mounted pressure pads 36, or the like, the purpose of which is to rigidly engage the side walls of the bathtub 21.

Although not essential to the utility of the instant invention, but very convenient for use therewith are the storage pockets 37, placed at one end of the structure. These may be readily formed and are supported by frame member 38, the downward facing ends of which are attached to extension arms 31.

Two safety bars each indicated by the numeral 39 are mounted on frame member 28. These may be rotated outwardly to almost a 45° angle when the unit is being used and then may drop to lie flat when the unit is stored. This flattened position assists first in retaining the dressing table unrolled when the device is stored, and second in the holding of towels, diapers, etc., which may be kept in the stored unit.

The dressing table indicated generally at 40 is best seen in its unrolled position in Figures 1 and 2. It consists of coated slat-like pieces, so jointed as to roll up, yet forming a practically solid, rigid platform when unrolled. The table 40 rests on the frame 28 and is bolted at 41 to such frame member.

Figure 4 schematically represents the various elements attached to or mounted on frame 28. This frame member 28 may conveniently be made of stainless steel tubing, or the like. Wood, steel rods, aluminum or other material than can provide a rigid framework may also be used. The ends of the two safety bars 39 are seen. The safety bar members are attached to and rotatably mounted on frame 28 through bushing members 42. These bushings may be conveniently devised and so made to co-operate with frame member 28 as to control the rotation of the safety bars to a movement of approximately 135°; that is from flat against the dressing table to 45° from the vertical as shown in Figure 3. It is seen that the frame 28 is pivotally mounted on hinge frame member 43. It is at this point that the unit is hinged, either to rotate upward to close, or downward, if closed, to open. Again, bushing members, 44 or the like, are used to hinged the frame. The support legs 34 are also attached to hinged member 43. The end support leg 30 is also rotatably mounted on frame 28 through bushing member 46.

For secure support of the tub 23 when unfolded support leg 30 must be prevented from rotating too far forward. This may easily be accomplished in a number of ways, but for purposes of the instant example a stop pin 47 rigidly attached to frame 28 and extending to engage a limiting slot 48 in the bushing 46 is used. This is illustrated in Figures 5 and 12. The bushing 46 encircling frame member 28 has the slot 48, and the pin 47 stops thereagainst when the leg 30 has been rotated to its full extent commensurate with safety. The leg 30 may rotate freely on the bushing from an area practically flat against frame 28 through an arc of approximately 120 degrees. As the leg is moved to an angular position greater than 30° from the vertical its ability to support and secure the tub is lessend. Most preferably the leg should be positioned at an outward angle of approximately 30 degrees. The frame pin 47 and slot in the bushing insure that the leg does not move too far forward when the tub is positioned for use, for, as shown, forward movement is prevented by the pin engaging the slot.

Figure 6 illustrates the mounting of legs 34 to the hinge member 43. This is most readily accomplished by welding or a like procedure. Both legs 34, are rotatable with the hinge member 43.

In Figures 7 and 8 the wall portion of the unit is shown. Suction cups 33 firmly press against and adhere to wall 22. It should be understood that suction means or others which cause strong adherence are not essential to the instant invention. These end portions of the extension members 31 provide support for the device and assist in keeping it from sliding along the wall. The ends, therefore, may be made of practically any convenient non-skidding material. It is seen that extension members 31 consist of an inner and an outer tubular member 49 and 50 respectively. The inner member may be moved to control the length of the extension member 31 and to thus determine the distance of the overall unit from the wall 22. Both extension members are individually adjustable. They may be set at different lengths in order to compensate for any irregularities, such as window sills, etc., in the wall. It is of course necessary to control or lock the concentric tube components at some convenient position and such control or locking means can be of a multiplicity of forms. In the illustration locking is provided by placing rod 38 through holes 51 and 52 in the inner and outer tubes respectively. At the position indicated by numeral 53, there is located on rod 38 a stopping means, such as a slight elevation or a pin, to prevent the rod from dropping through the holes 51 and 52 when in the locked position. The adjustment of the length of member 31 is thus quite simple-merely disengage rod 38, telescope or extend the concentric tubes and then lock.

Figures 7 and 8 also illustrate one mode of interconnection between extension member 31 and the hinge frame member 43. The outer tubular member 50 may be conveniently flattened, as indicated at 54, and a hole drilled through the flattened portion. Members 31 and 43 are then tightly bolted by bolt 55.

In Figure 9 the central support crosspiece 35 and its attachments are shown. The crosspiece consists primarily of two interthreaded rods, 56 and 57, and an outer supporting concentric tube 58. As one rod is turned, the other remaining stationary, the total length

of the combined rods will vary depending upon the rotational direction. In the drawing a tool insertion hole **59** is shown to illustrate one of many convenient methods in which the rod length may be extended or shortened. The operator need only insert a screw driver or the like to rotate member **56**.

At either end of crosspiece **31** and more specifically at the outer ends of rods **56** and **57**, are attached pressure pads **60**. These are mounted at socket **81**, and are free to assume any position whereby they may rigidly press against the side walls of the adult bathtub **22**. If both tub walls were prefectly straight, socket mounting would be unnecessary, but since many tubs are made with sloping side walls some means of enabling the pads to securely press against these walls must be provided. The pads, **60** have preferably at the external portions rubber or other frictional means.

The outer tube **58**, of the crosspiece **35** is basically a strengthening sleeve for the threaded inner rods **56** and **57**. This sleeve **58** is rotatable on the components encompassed within its bore and the support legs **34** are attached thereto; thus the support legs are rotatable about member **58**. If desired the sleeve may be made non-rotatable, but in that case the support legs would have to be attached through bushings or the like to insure rotatability.

Figure 9 also illustrates the construction of support legs **34**. These too are expandable to assist in the height positioning of tub **23**. It is seen that here again we have two concentric tubes, an inner **51**, and an outer **52**. These are preferably detent controlled, as indicated at **53**; thus by depressing the detent button the overall length of the leg may be expanded or contracted.

The legs **34** are attached to hinge frame member **43**. If member **43** is freely rotatable then the legs may be attached directly thereto. If on the other hand member **38** is locked in position then the legs must be attached through bushing members.

In Figure 10, the structure of the end support leg **30**, is shown. This too consists of inner and outer tubular members, **54** and **55** respectively, and again for the purpose of determining the length of the tube, detent means **56** are again used to control the length. The leg **30** is rotatably mounted on frame member **38** by a bushing **46** and as above stated the degree of rotation is controlled by a pin and slot **47** and **48**. Actually, I have found that two such pins and slots are preferable to insure that the requisite stoppage is available. This is indicated in the drawing. The leg **30** is directly attached to the bushing **46** and this connection is braced by a pair of brace wings **57** to insure stability and long use.

Figure 11 illustrates the bottom of leg **30** and also its detent means. The detent as described herein is the same as that in other components where the use of a detent is mentioned. Briefly, the end of the leg has a friction cup **58**, the purpose of which is to assist in keeping the leg from sliding along the bottom of the bathtub, first to assist the stability of the device, and secondly to keep the leg **30** from marring the enamel finish of the adult tub. I have found that a rubber tip as used in canes or crutches is well suited for this purpose.

The detent means, mentioned to exemplify a movement control element of the instant invention are well known, but for purposes of a complete description they will be at least briefly mentioned. The detents consist of a button member **59** engaged into a spring **60**. The end of the spring rests against the wall of the inner tube and the button projects through a hole concurrent through both inner and outer tubes. When the button is depressed beneath the surface of the outer tube relative movement of the two tubes is possible and the button may pop up at the next hole in the direction in which the inner tube was moved, in which case the system will be again locked. Just where the button will emerge is in part determined by the speed at which the tube is moved.

In view of the above description of the frame unit of the instant invention it will be understood that when the device is folded the height will be measured from approximately the point at which the suction cups **33** engage the wall to the point at which the end support leg **30** is mounted on frame member **28**. In some cases it may be necessary to mount my device at that end of the tub at which the shower fixtures are located and it may be in some cases that these shower fixtures would be covered by tub **23**. For use under these circumstances my device may be slightly modified to permit its storage at a point lower than the shower fixtures. It may also be possible that even if the shower hardware would not be covered by tub **23** that the housewife would prefer a device of this nature that could be stored lower yet still provide the full sized baby bath tub and dressing table. It is to this end that the modification shown in Figures 13 and 14 is directed.

In the device described thus far, the main rotational movement when storing the device or positioning it for use takes place about hinge frame member **43**. In the modification further joints and frame elements are added to reduce the folded frame height. In the drawings it is seen that an angular frame member **61** is pivotally attached to both frame member **28** and extension member **31** at bolts **62** and **63** respectively. A frame spacer tube **64** is added to strengthen the frame. Hinges **65** are appended to either end of the hinge frame member **43**. In this modification the support legs **34** are located outside of frame member **28** rather than to the inside.

The operation of this modification is as follows: as the frame **28** is rotated upward it first pivots on hinge **43**. However, as the rotation reaches approximately 45° the hinge member slips through the open portion of the new hinge **65** attached to extension member **31**. As the hinge **65** is cleared rotational support for the frame is provided by the angular member **61**. Since this angular member is rotatably bolted at **62** and **63** it is free to swing backward and to drop into its rest position. The net effect of such hinge detachment and downward drop of member **61** is to permit the frame **28** to rest when stored in a position lower than that when such modifying hinge means are not utilized.

Figures 1, 2, 15 and 16 illustrate the construction of the dressing table component of the instant invention. This consists of a series of wood slats or the like **71**, coated with a rubberized material **72**, each separate unit being attached by the interconnection of the rubberized material as at **73**. As shown in Figure 16, the united slats may be rolled as at **74** when the dressing table is not in use. The dressing table is supported by frame member **28**.

In order that the dressing table is secure when unrolled I use several of the clips **75** illustrated in Figure 2. These clips are spaced at the ends of every fourth or fifth (or whatever grouping the manufacturer desires) slat and rest on the outer portion of frame member **28**. These clips slip between the frame and the tub material to insure that the dressing table is secure.

In Figures 17 and 18 are shown side views of the two modifications of the instant invention in the stored position.

The operation and use of devices produced in accordance with my invention is quite simple. First to install the device: the central support crosspiece is approximately positioned and then tightened into final position by turning through tool hole **59**. The height desired is readily obtained by adjusting the lengths of the three legs, **30**, **34** and **34**. The distance from the wall is fixed through detent means and the suction cups **33** are pressed against the wall. The dressing table is positioned by mere unrolling. When the unit is to be stored the guard bars are folded in, the device is rotated upwardly and the top end allowed to rest against the wall. The cen-

tral crosspiece is the only part then remaining in the tub and this provides either an excellent footrest or backrest to the adult using the tub.

It will be understood that modifications and variations may be effected without departing from the spirit and scope of the mood concepts of the instant invention.

I claim as my invention:

1. A device for bathing and dressing infants which is used in an adult bathtub and stored at one end thereof when not in use, comprising in combination: a pliable bathtub; an elongated, rigid, unitary rectangular support frame carrying said bathtub, said frame comprising two opposite longer side members, a first shorter end member rigidly interconnected with said side members, a second shorter end member opposite said first end member, and means pivotally connecting one similar end of each side member to said second end member; a support leg; means pivotally connecting said support leg to said first end member; a pair of support legs; means pivotally connecting said pair of support legs to said second end member; a support crosspiece having socket-mounted pressure pads at its ends, said crosspiece being formed of threadedly engaged concentric tubes; means pivotally connecting said pair of support legs opposite the connection thereof to said second end member to said support crosspiece; extension members having detached ends of friction material attached to said support frame; means connecting said extension members to said second end member; two safety bars; means swingably connecting each of said bars to a side member of said frame; a rollable dressing table comprising a multitude of coated, interconnected slats, said dressing table, when open, being supported on said support frame, and means connecting said dressing table to one end of said support frame, said device being securely positionable in an adult bathtub through said crosspiece, and readily openable and closeable through rotation of said frame about said second end member.

2. A device for bathing infants which is used in an adult bathtub and stored at one end thereof when not used, comprising in combination: a pliable bathtub; an elongated, rigid, unitary rectangular support frame carrying said bathtub, said frame comprising two opposite longer side members, a first shorter end member rigidly interconnected with said side members, a second shorter end member opposite said first end member, and means pivotally connecting one similar end of each side member to said second end member; a support leg; means pivotally connecting said support leg to said first end member; a pair of support legs, means pivotally connecting said pair of support legs to said second end member; a support cross-piece having socket mounted pressure pads at its ends, said cross-piece being formed of threadedly engaged concentric tubes; means pivotally connecting said pair of support legs opposite the connection thereof to said second end member to said support crosspiece; extension members having detached ends of friction material attached to said support frame; means connecting said extension members to said second end member; two safety bars, and means swingably connecting each of said bars to a side member of said frame; said device being securely positionable in an adult bathtub through said crosspiece, and readily openable and closeable through rotation of said frame about said second end member.

3. A device for bathing and dressing infants which is used in an adult bathtub and stored at one end thereof when not in use, comprising in combination: a pliable bathtub; an elongated, rigid, unitary rectangular support frame carrying said bathtub, said frame comprising two opposite longer side members, a first shorter end member rigidly interconnected with said side members, a second shorter end member opposite said first end member, and means pivotally connecting one similar end of each side member to said second end member; a support leg; means pivotally connecting said support leg to said first end member; a pair of support legs; means pivotally connecting said pair of support legs to said second end member; an extendable support crosspiece having means to press against the walls of an adult bathtub at its ends; means pivotally connecting said pair of support legs opposite the connection thereof to said second end member to said support crosspiece, and a dressing table attached to and supported on said support frame, said device being securely positionable in an adult bathtub through said crosspiece and readily openable and closeable through rotation of said frame about said second end member.

4. A device for bathing infants which is used in an adult bathtub and stored at one end thereof when not in use, comprising in combination: a pliable bathtub; an elongated, rigid, unitary rectangular support frame carrying said bathtub, said frame comprising two opposite longer side members, a first shorter end member rigidly interconnected with said side members, a second shorter end member opposite said first end member, and means pivotally connecting one similar end of each side member to said second end member; a support leg; means pivotally connecting said support leg to said first end member; a pair of support legs; means pivotally connecting said pair of support legs to said second end member; an extendable support crosspiece having means to press against the walls of an adult bathtub at its ends, and means pivotally connecting said pair of support legs opposite the connection thereof to said second end member to said support crosspiece, said device being securely positionable in an adult bathtub through said crosspiece and readily openable and closeable through rotation of said frame about said second end member.

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