TUB-RAIL SUPPORTED INFANT'S BATH

Elmer Rocher, Shaker Heights, Ohio, assignor to Century Products, Inc., Cleveland, Ohio, a corporation of Ohio
Filed May 16, 1963, Ser. No. 260,990
8 Claims. (Cl. 4—5)

This invention relates generally to bathing equipment for infants, but has reference more particularly to equipment of this nature which is supported on the rails of a conventional bathtub.

A primary object of the invention is to provide equipment of this character which can be quickly and easily set up and which greatly facilitates the bathing of infants.

Another object of the invention is to provide equipment of this character having easily adjustable means for adapting the equipment for use with bathtubs of varying widths.

A further object of the invention is to provide equipment of this character having means for locking the equipment against movement in a direction transversely of the bathtub.

A still further object of the invention is to provide a frame or support for the infant's bath, which consists of a minimum number of parts which can be manufactured inexpensively, quickly and easily assembled, and which frame can be easily collapsed or folded into substantially flat form for storage purposes when not in use.

Other objects and advantages of my invention will be apparent during the course of the following description.

In the accompanying drawings forming a part of this specification, and in which like numerals are employed to designate like parts throughout the same:

FIG. 1 is a perspective view, showing the equipment as set up on a conventional bathtub for use;

FIG. 2 is an end elevation view of the equipment, as viewed from the right end of FIG. 1;

FIG. 3 is a cross-sectional view, on an enlarged scale, taken on the line 3—3 of FIG. 2, and showing one of the adjustable clamps;

FIG. 4 is a fragmentary cross-sectional view, on an enlarged scale, taken on the line 4—4 of FIG. 1, and showing details of the bracing links;

FIG. 5 is a cross-sectional view, taken on the line 5—5 of FIG. 4, and

FIG. 6 is a cross-sectional view, on an enlarged scale, taken on the line 6—6 of FIG. 1.

Referring more particularly to the drawings, there is disclosed a conventional bathtub 1, having tub rails 2 and 3, and a spigot 4 for filling the tub.

There is further disclosed a small tub or bath basin 5 in which the infant can be bathed, and which can be filled from the spigot 4 by means of a flexible hose 6. The tub basin 5 is preferably made of a molded plastic, but can be made of other suitable materials, and is provided at one end with a drainage hose 7. Preferably, also, the tub basin 5 will contain a removable inclined member 8, for supporting the infant in the tub basin 5 while being bathed.

The tub or bath basin 5 is supported in a horizontal position, above the bathtub 1, at a level at which access to the infant is facilitated. For this purpose, a frame or framework is provided.

The frame or framework comprises a pair of transversely spaced parallel members, generally designated by reference numerals 9 and 10, of identical construction, each being formed from a single length of tubular metallic stock, bent to provide horizontal base portions 11 and 12, joined to each other, as at 13, a vertical leg portion 14, a horizontal bath-supporting portion 15, parallel to and in vertically-spaced relation to the portions 11 and 12, and an inclined leg portion 16. The joints at the corners of these frame members are smoothly rounded, as shown.

The leg portions 14 of the frame members 9 and 10 are interconnected adjacent their lower ends by a pair of flat link members 17 and 18, the outer ends of which are pivotally secured to the leg portions 14 by means of pivot pins 19, and the inner ends of which are pivotally connected to each other, as by means of a pivot pin 20.

The leg portions 16 of the frame members 9 and 10 are similarly interconnected adjacent their lower ends by a pair of flat link members 21 and 22, the outer ends of which are pivotally secured to the leg portions 16 by means of pivot pins 23, and the inner ends of which are pivotally connected to each other, as by means of a pivot pin 24.

For the purpose of preventing the link members 17, 18, 21, 22 and from moving below the positions shown in FIG. 1, retainer elements 25, of inverted U-shaped cross-section, are secured to the link members, as by means of the pins 20 and 24, as best shown in FIG. 6. These retainer elements permit the link members to be moved upwardly from the position shown in FIG. 1, as when the frame is to be folded or collapsed, but prevent the link members from moving downwardly after they have been aligned with each other, as in FIG. 1.

For the purpose of locking or retainer the frame members 9 and 10 in their upright position, and the link members 17, 18, 21, and 22 in their aligned position, as shown in FIG. 1, the pairs of flat link members 17—18, 21—22, and 17—22, are provided.

The link members 26 are pivotally secured to the link member 19 and 18 by means of pivot pins 30, and the link members 27 are pivotally secured to the leg portions 14 of the frame members by means of pivot pins 31. The link members 26 and 27 are pivotally connected to each other by means of pivot pins 32. The link members 26 and 27 are adapted to be latched or locked in their aligned position, as seen in FIG. 1, by means of nested indentations 33 and 34 on the link members 26 and 27 respectively, as shown in FIGS. 4 and 5.

For the purpose of preventing the link members 26—27 from moving below the positions shown in FIG. 1, the link members are provided with arcuate elements 26a and 27a respectively, as shown in FIGS. 4 and 5, which are formed from the metal of these link members, and are nested in and in abutment with each other when the link members are in the position shown in FIG. 1. These elements act as abutments to lock the link members in their aligned position.

The link members 28 are pivotally secured to the link members 21 and 22 by means of pivot pins 35, and the link members 29 are pivotally secured to the leg portions 16 of the frame members by means of pivot pins 36. The link members 28 and 29 are pivotally connected to each other by means of pivot pins 37. The link members 28 and 29 are adapted to be latched or locked in their aligned position, as seen in FIG. 1, by means of nested indentations (not seen) similar to the indentations 33 and 34. The link members 28—29 are provided with elements (not seen) similar to the elements 26a and 27a of the link members 26 and 27, for the purpose of locking these members in their aligned position, as shown in FIG. 1.

For the purpose of preventing marring of the tub rails 2 and 3 by the frame members 9 and 10, length 39 of rubber or plastic hose are provided, which cover the joints between the portions 11 and 14 and between the portions 12 and 16 of the frame members, these lengths of hose extending for a substantial distance along the portions 11 and 12 of the frame members, as best seen in FIG. 2.

For the purpose of securing the frame members 9 and

Patented Oct. 6, 1964
10 against movement transversely of the tub 1, that is to say, to the right or left, as viewed in FIG. 2, clamp elements 39 are provided. Each of these clamp elements, as indicated in FIG. 3, is formed or molded of a plastic material, and is provided adjacent its upper end with an opening 40, through which the hose elements 38 pass. Above the openings 40, the clamp elements 39 are provided with furcations 41 and 42. The furcation 41 has an opening 43 for passage of a wing screw 44, and the furcation 42 has an opening 45, aligned with the opening 43, and in the wall of which a threaded nut or bushing 46 is embedded, and to which the screw 44 is threadedly secured. By tightening the screws 44, the clamp elements 39 may be tightly gripped to the hose elements 38.

The elements 39 extend downwardly into the tub 1, and are in abutment with the inner walls of the tub, as shown in FIGS. 1 and 2, thereby preventing shifting of the frame members 9 and 10 transversely of the tub. It is to be noted, however, that the screws 44 may be loosened to permit the elements 39 to be moved to adjusted positions along the hose elements 38, thereby adjusting the spacing of the element 39 to tubes of different widths.

By making the elements 39 of a relatively soft and flexible plastic such, for example, as polyethylene, the furcations 41 and 42 may be spread apart to permit attachment of the elements 39 to the hose members 28 after the frame members have been formed. It may be further noted that the infant’s tub or bath is supported by the frame members 9 and 10 at a position closely adjacent the front of the tub 1, so as to facilitate access to the infant during bathing of the infant.

After the infant has been bathed, the tub 5 is easily removed by merely lifting it off the frame members 9 and 10.

The frame can then be easily lifted and removed from the tub 1, without the aid of any tools, and after removal from the tub 1, the frame members 9 and 10 can be moved into contiguity with each other, by moving or folding all of the link members 17, 18, 21, 22, 26, 27, 28 and 29 upwardly. In this manner, the frame can be collapsed or folded into a flat package which can be easily stored in a relatively small space.

It is to be understood that the form of my invention, herewith shown and described, is to be taken as a preferred example of the same, and that various changes may be made in the shape, size and arrangement of parts thereof, without departing from the spirit of the invention or the scope of the subjoined claims.

Having thus described my invention, I claim:

1. In combination with a conventional bathtub having front and rear walls provided with tub rails, an infant’s bathtub having an outwardly extending rim at its ends, and means for supporting said infant’s tub in vertically-spaced relation to said conventional tub, said means comprising a pair of upright frame members spaced longitudinally of said conventional tub and supported on the rails of said conventional bathtub, each of said frame members consisting of a horizontal base portion, a vertical front leg portion extending from one end of said base portion and in substantially the plane of the front wall of said conventional tub, a horizontal portion shorter than said base portion and extending rearwardly from the upper end of said front leg portion in vertically-spaced parallel relation to said base portion, and an inclined rear leg portion extending from the rear end of said vertically-spaced horizontal portion to the rear end of said horizontal base portion, said vertically-spaced portions of said frame members engaging the lower surfaces of said rim for supporting said infant’s tub in a position adjacent the plane of said front wall, whereby access to the infant’s tub by a person standing in front of said front wall is facilitated.

2. The combination, as recited in claim 1, including link members pivotally connected to said frame members and to each other and adapted to be collapsed upon each other to permit said frame members to be moved into contiguity with each other for storage purposes, upon removal of said infant’s tub from said frame members.

3. The combination, as recited in claim 2, including means for preventing said link members from moving below a position of alignment with each other.

4. The combination, as recited in claim 3, including means secured to the horizontal base portions of said frame members and adjustable therealong, said elements depending into said conventional tub and adapted for engagement with the inside surfaces of the walls of the tub, whereby to prevent movement of said frame members transversely of said tub.

5. Means for supporting an infant’s bathtub in vertically spaced relation to a conventional bathtub, said means comprising a pair of upright horizontally spaced frame members and adapted to be supported on the rails of said conventional tub, each of said frame members consisting of a horizontal base portion, a vertical front leg portion extending from one end of said base portion, a horizontal portion shorter than said base portion and extending rearwardly from the upper end of said front leg portion and in vertically spaced parallel relation to said base portion, and a rear leg portion inclined at an angle of about 45° from the rear end of said vertically-spaced horizontal portion to the rear end of said horizontal base portion.

6. Means as defined in claim 5, including link members pivotally connected to the leg portions of said frame members and to each other, and adapted to be collapsed upon each other to permit said frame members to be moved into contiguity with each other for facilitating storage of said means.

7. Means as defined in claim 6, including means for preventing said link members from moving below a position of alignment with each other.

8. Means, as defined in claim 7, including additional pairs of link members pivotally connected to the legs of said frame members, and additional pairs of link members pivotally connected to said first-named link members, said second and third named link members pivotally connected to each other, said second and third named link members functioning to brace said frame members relatively to said first-named link members, to provide a rigid supporting structure.

References Cited in the file of this patent

UNITED STATES PATENTS

<table>
<thead>
<tr>
<th>Patent #</th>
<th>Date</th>
<th>Inventor</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,042,515</td>
<td>Oct. 29, 1912</td>
<td>Williams</td>
<td></td>
</tr>
<tr>
<td>1,390,444</td>
<td>Sept. 13, 1921</td>
<td>Jeffs</td>
<td></td>
</tr>
<tr>
<td>1,428,039</td>
<td>Sept. 5, 1922</td>
<td>Kratz</td>
<td></td>
</tr>
<tr>
<td>1,766,085</td>
<td>June 24, 1930</td>
<td>Rumor</td>
<td></td>
</tr>
<tr>
<td>2,456,845</td>
<td>Dec. 21, 1948</td>
<td>Stine et al.</td>
<td></td>
</tr>
<tr>
<td>2,547,564</td>
<td>Apr. 3, 1951</td>
<td>Burke</td>
<td></td>
</tr>
<tr>
<td>2,560,575</td>
<td>July 17, 1951</td>
<td>Holland</td>
<td></td>
</tr>
<tr>
<td>3,021,531</td>
<td>Feb. 20, 1962</td>
<td>Hinge</td>
<td></td>
</tr>
</tbody>
</table>