

A. WARD.
COLLAPSIBLE WASHTUB.
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1,097,690.

Patented May 26, 1914.

Fig. 1.

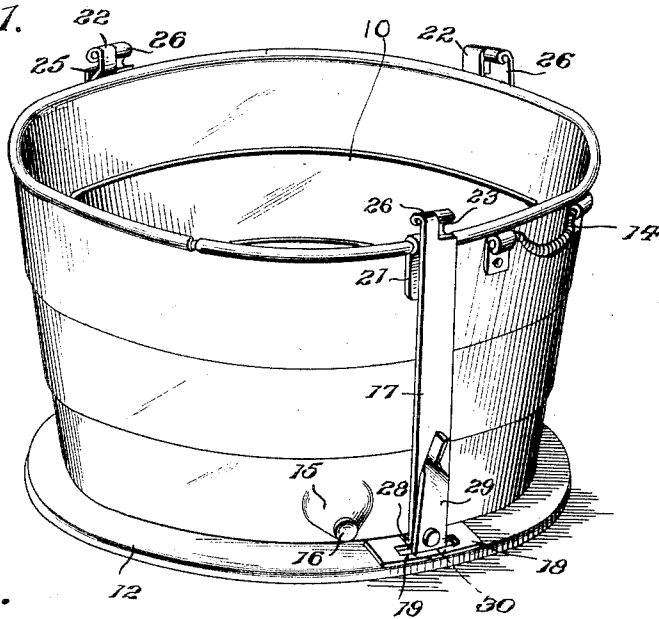


Fig. 2.

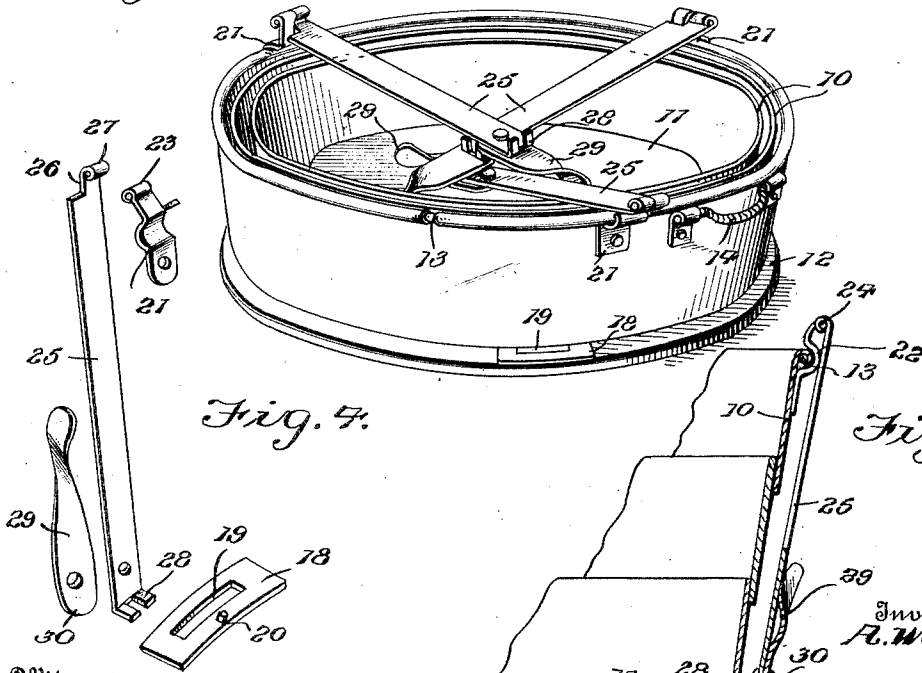
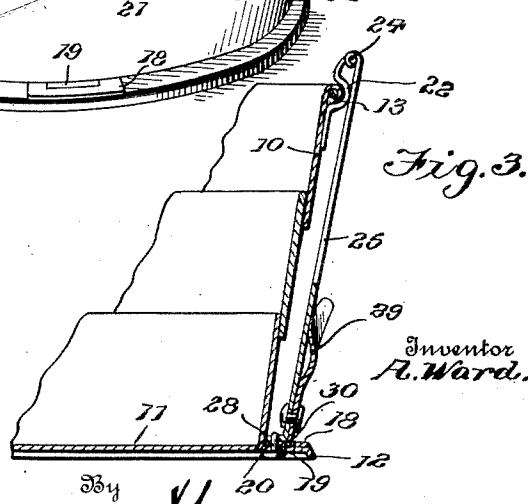


Fig. 4.

Witnesses

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Fig. 3.



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UNITED STATES PATENT OFFICE.

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COLLAPSIBLE WASHTUB.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ANNIE WARD, citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful
5 Improvements in Collapsible Washtubs, of which the following is a specification.

My invention relates to new and useful improvements in wash tubs, the primary
10 object of my invention being the construction of a collapsible wash tub which, when not in use, may be stored in a relatively small space.

A further object of my invention is to
15 provide an all metallic collapsible wash tub having a body portion consisting of a plurality of telescopic ring shaped members, one of which is closed at one end to provide a bottom for the tub, said closure being extended to provide an exterior peripheral
20 flange forming a seat for the remaining members when the body is collapsed.

A still further object of my invention is to provide means for positively holding the
25 members making up the body of the tub in extended position when the tub is in use and so preventing inadvertent collapsing of the tub. And a still further object of my invention is to so arrange this locking mechanism that the locking bars or braces constituting the locking mechanism may be
30 swung inwardly and out of the way when the tub is collapsed.

With these and other objects in view, my
35 invention will be more fully described, illustrated in the accompanying drawing, and then specifically pointed out in the claims which are attached to and form a part of this application.

40 In the drawing: Figure 1 is a perspective view of my improved wash tub as it would be in use; Fig. 2 is a similar view, showing the position of the parts when the tub is collapsed; Fig. 3 is a fragmentary vertical
45 sectional view showing certain details in construction; Fig. 4 is a perspective view of one of the locking devices employed in securing the body members of the tub in extended position; the parts of the locking devices being shown in unassembled relation.
50

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

55 In the preferred embodiment of my invention, the body of the tub is made up of

a plurality of telescopic sections 10, each of which is ring-shaped, tapering from its upper to its lower end. All of the sections taper uniformly and the internal diameter of the lower end of each section is slightly
60 less than the external diameter of the upper end of the next section below. Because of this, when the sections are moved to extended position, the upper and lower ends of adjacent sections will frictionally engage each other to form tight joints. These sections are made of sheet metal of any desired weight and are preferably tinned, galvanized or otherwise treated to prevent their
65 oxidization or corrosion. Although a wash tub having but three sections is illustrated in the drawing, it will be clear that as many sections as deemed advisable, and sections of any desired height, may be employed. 70

The innermost or smallest section is closed at its lower end to provide a bottom 11 for the tub and this closed end is projected externally to provide a circumferential flange 12 of sufficient width to support all the sections of the body member of the tub when said sections are collapsed. The upper edge of the outer or largest section which, consequently, is the upper section, is reinforced by a wire ring 13 which surrounds said section and about which the upper edge of the section is rolled as clearly shown in Fig. 3. This upper section is provided at diametrically opposite points with swingingly
75 mounted handles 14 of any desired type which not only serve as a means for moving the tub about when in use, but also as a means for drawing the various sections of the tub to extended position as it will be clear that if the lowermost section of the tub is held against upward movement and the upper section raised by grasping the handles 14, the entire tub will be extended. The lower section is preferably reinforced at a point adjacent the bottom of the tub as
80 shown at 15 and provided with a drain opening having a closure 16 of any suitable type, the only limitation being that this closure be of such a style as not to extend unduly beyond the body member in order that it will not interfere with the proper
85 nesting of the upper body members about the lower. 90 95 100 105

In order to lock the telescopic body members of the tub against collapsing when in extended position, I provide a plurality of
locking devices, indicated as a whole by the 110

numeral 17, these locking devices being located at spaced intervals about the tub. Three or more of these locking devices should be employed and as they are all identical in construction a description of one will suffice for all. Each of these locking devices includes a plate 18 which is soldered or otherwise secured upon the upper face of the flange 12 and which is provided with a longitudinally extending slot 19. A pin or stud 20 extends upwardly from this plate between the slot and the body of the tub and preferably midway of the length of the slot. A hinge plate 21 is riveted or otherwise secured to the outer face of the upper body member 10 of the tub, one of these hinge plates being provided for each of the slotted plates. As best shown in Fig. 3 of the drawing, the intermediate portions of these hinge plates are curved outwardly and upwardly and then inwardly as at 22 to engage about the reinforcing bead formed by bending the upper edge of the body member about the binding wire 13. The extended upper end of the hinge plate is then cut-away to provide an upwardly and outwardly directed tongue, the free terminal of which is bent to form a bearing 23 for the pintle pin 24 of the hinge.

A locking bar or brace 25 is cut-away at one end to provide a tongue 26, the terminal of which is bent to form a bearing 27 co-acting with the bearing 23 to receive the pintle pin 24 by means of which the locking bar is hingedly connected to the hinge plate in such a manner that the locking bar may be swung downwardly to extend in spaced relation along the outer face of the tub as shown in Figs. 1 and 3 or swung inwardly to rest within the tub as shown in Fig. 2.

The free end of the locking bar is provided with a laterally directed bifurcated terminal 28, the arms of which are adapted to seat one upon either side of the upwardly directed stud 20 of the co-acting plate 18 when the tub members are in extended position and the locking bar is swung to the position shown in Figs. 1 and 3. Swingingly mounted upon the outer face of the locking bar 25 adjacent its lower end, is a clamping lever 29 having a cam nose 30 adapted to work in the slot 19 of the plate 18. This clamping lever is so arranged that when swung at right angles to the locking bar 25, its lowermost portion will be above the lower end of said bar while, when swung upwardly into alignment with the locking bar, its cam nose will extend below the lower end of the locking bar.

In operation, assuming that the tub is collapsed as shown in Fig. 2, the parts of the body of the tub are drawn to extended position by holding the lowermost member down and raising the uppermost member by the handles 14. The locking bars are then

swung outwardly, downwardly and inwardly to seat their bifurcated terminals 28 about the studs 20 of the respective slotted plates 18, the locking bars being so proportioned that this may be readily done when the tub is in practically fully extended position. During this positioning of the locking bars, the clamping levers are turned to extend at right angles to their respective bars. As soon, however, as the locking bars have been properly positioned, the clamping levers are swung upwardly into alignment with their clamping bars, thus forcing their cam noses into the slots 19 of the respective plates 18 and exerting upward pressure upon the respective locking bars to further expand the body member.

The engagement of the arms of the bifurcated terminals of the locking bars about the studs of the slotted plates relieves the hinges by which the locking bars are mounted upon the upper tub sections from lateral strain and also tends to prevent rotation of the upper member of the tub with respect to the lower member when in extended position. The clamping levers not only serve to more completely extend the body of the tub, but also, because of their engagement in the slots of the plates 18, serve to securely lock the locking bars against outward swinging movement which might otherwise free them from the flange 12 and permit collapsing of the tub.

The peculiar formation of the hinge plates 21 and manner in which they engage beneath the reinforcing bead of the upper body member is such that the strain exerted upon these hinge plates by the locking bars is exerted to a considerable extent against the reinforcing bead, thus relieving the rivets or other fastening devices, by which the hinge plates are secured to the tub, from a great part of the strain which they otherwise would have to support.

While I have illustrated and described a collapsible tub construction in all its details and with considerable particularity, it will of course be understood that I do not wish in any way to limit myself to the specific details of construction, so illustrated and described, as various changes, within the scope of the appended claims, may at any time be made in the tub construction, without in the slightest degree departing from the spirit of my invention.

Having thus described the invention, what is claimed as new is:

1. A collapsible wash tub including a plurality of telescopic body members, a bottom closing one end of one of the members and extending beyond the same to provide a peripheral flange, locking bars hingedly secured to another of the members and movable into engagement with the flange to hold the body members in extended position.

tion, slotted plates secured to the flange, and cam levers carried by the locking bars and adapted to engage in the slots of the plates.

5 2. A collapsible wash tub including a plurality of telescopic body members, a bottom closing one end of one of the members and extending beyond said member to provide a peripheral flange, locking bars hing-
10 edly secured to another of the members and movable into engagement with the flange to hold the body members in extended position, the flange engaging terminals of the locking bars being laterally bent and slot-
15 ted, and pins carried by the flange to seat in said slots.

3. A collapsible wash tub including a plurality of telescopic body members, a bottom closing one end of one of the members and
20 extending beyond said members to provide a peripheral flange, locking bars hingedly secured to another of the members and movable into engagement with the flange to hold the body members in extended position, the flange engaging terminals of the lock-
25 ing bars being laterally bent and slotted, pins carried by the flange to seat in said slots, and cam members carried by the locking bars and movable to engage the flange
30 to prevent disengagement of the pins from the slots.

4. A collapsible wash tub including a plurality of telescopic body members, a bottom closing one end of one of the members and
35 extended beyond the same to provide a peripheral flange, locking bars hingedly secured to another of the members and movable into engagement with the flange to hold the body members in extended position, means carried by the locking members
40 and engageable with the flange to prevent outward swinging of the locking members, and means carried by the flange and engageable with the locking members to prevent
45 lateral swinging of the locking members.

5. A collapsible wash tub including a plurality of telescopic body members, a bottom closing one end of one of the members and
50 extended beyond the same to provide a peripheral flange, locking bars hingedly secured to another of the members and mov-

able into engagement with the flange to hold the body members in extended position, means carried by the locking members and engageable with the flange to prevent out- 55
ward swinging of the locking members, and means carried by the flange and engageable with the locking members to prevent lateral swinging of the locking members, said
60 latter means including pins carried by the flange and engaging slots formed in the terminals of the locking members.

6. A collapsible wash tub including a plurality of telescopic body members, a bottom closing one end of one of the members and
65 extended beyond the same to provide a peripheral flange, locking bars hingedly secured to another of the members and movable into engagement with the flange to hold the body members in extended position, means carried by the locking members
70 and engageable with the flange to prevent outward swinging of the locking members, and means carried by the flange and engageable with the locking members to prevent lateral swinging of the locking members, said former means including slotted
75 plates carried by the flange, and cam members pivoted on the locking bars and movable to extend in the slots of said plates. 80

7. A collapsible wash tub including a plurality of telescopic body members, a bottom closing one end of one of the members and extended beyond the same to provide a
85 peripheral flange, locking bars hingedly secured to another of the members and movable into engagement with the flange to hold the body members in extended position, the free terminals of said locking bars being laterally directed and slotted, pins carried by
90 the flange and adapted to seat in the slotted terminals of said locking bars when the latter engage the flange, slotted plates carried by the flange, and cam members carried by the locking bars and movable to seat in the
95 slots of the plates.

In testimony whereof I affix my signature in presence of two witnesses.

ANNIE WARD. [l. s.]

Witnesses:

ELIAS A. WRIGHT,
AMY FINCH.