

March 29, 1949.

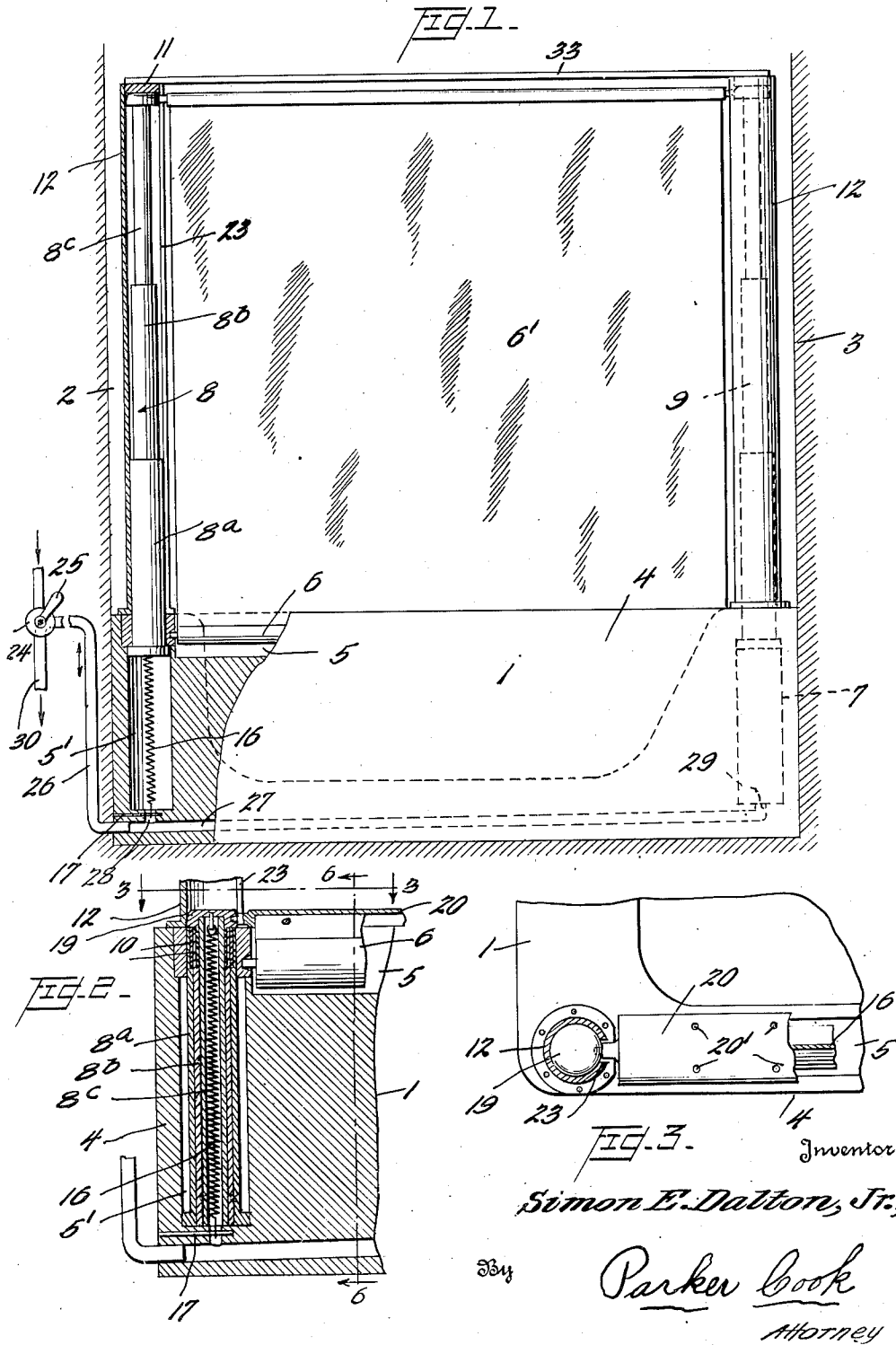
S. E. DALTON, JR

2,465,853

BATHTUB WITH CONTAINED SHOWER CURTAIN

Filed June 10, 1948

3 Sheets-Sheet 1



March 29, 1949.

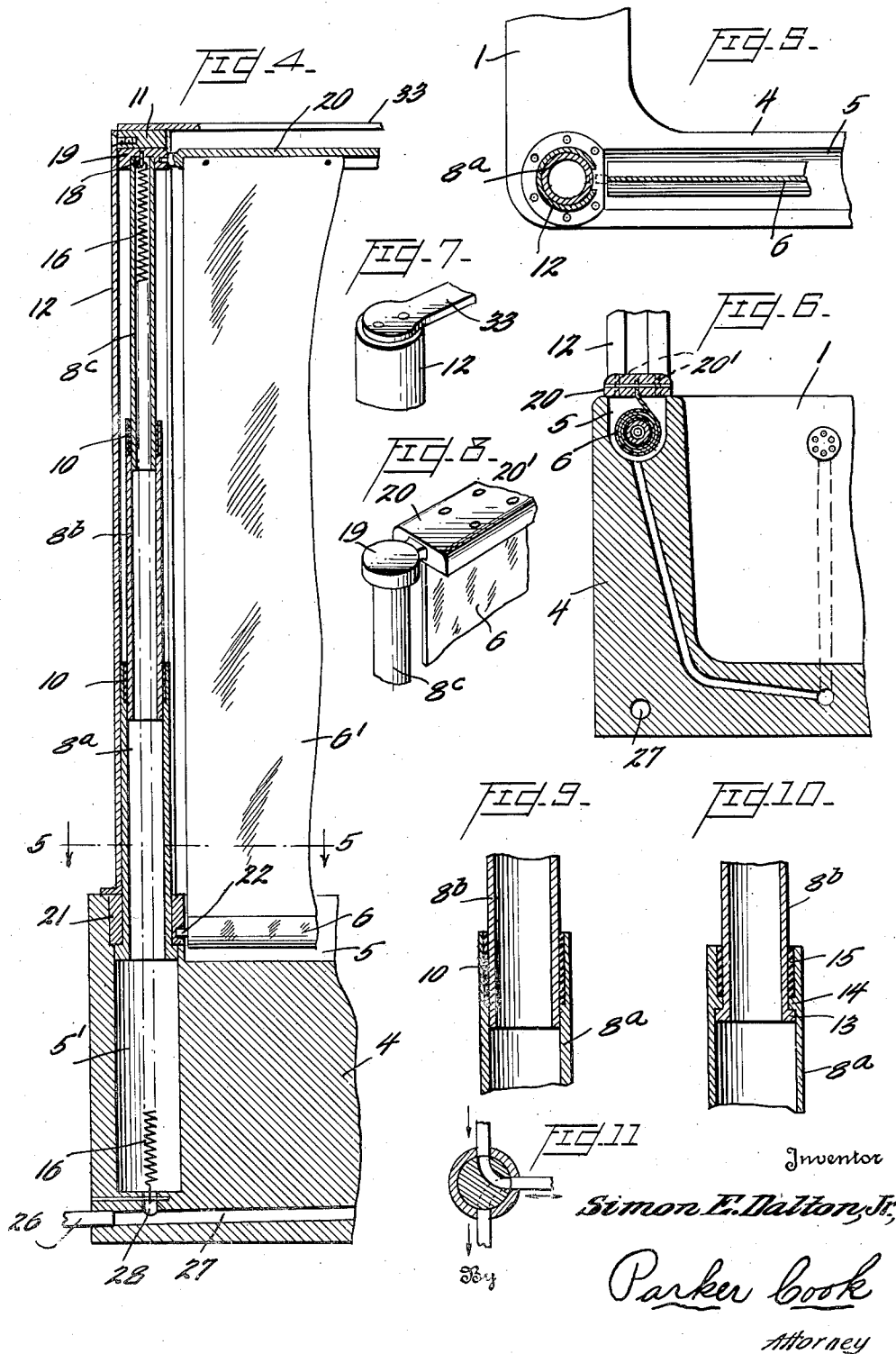
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BATHTUB WITH CONTAINED SHOWER CURTAIN

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3 Sheets-Sheet 2



March 29, 1949.

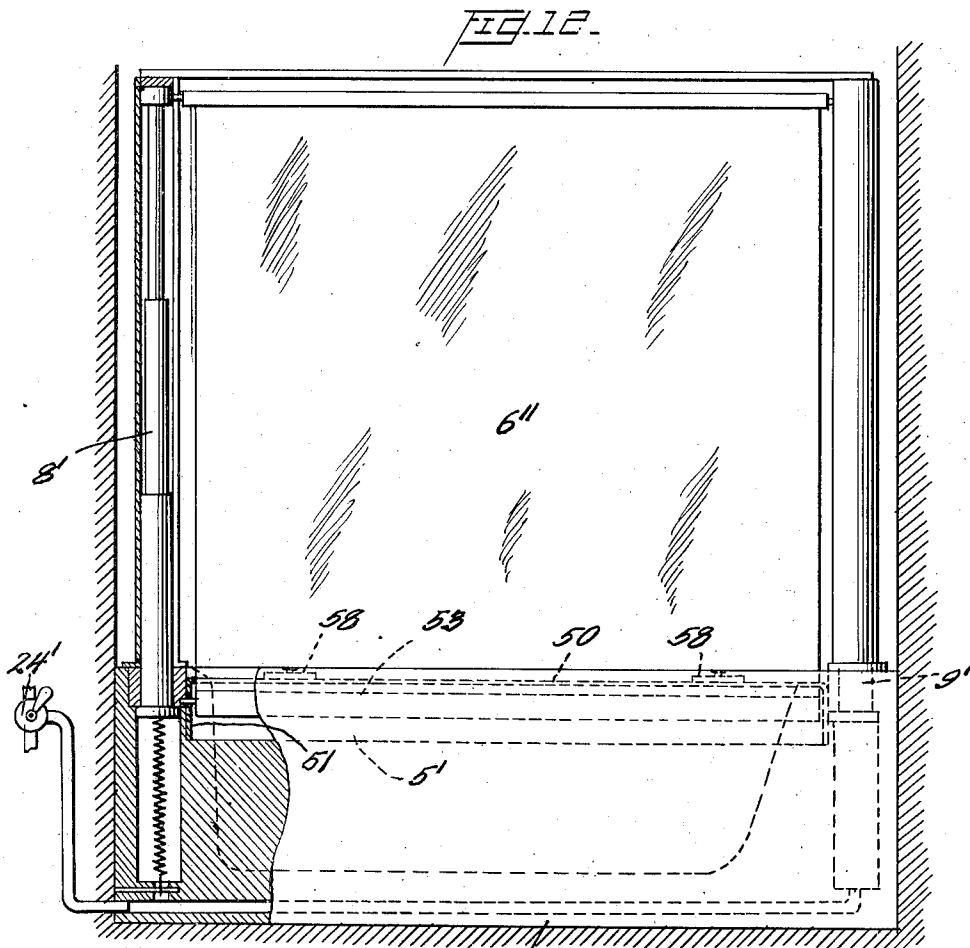
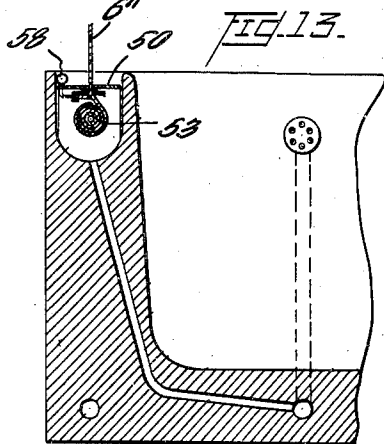
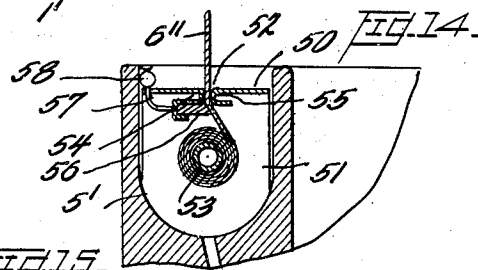
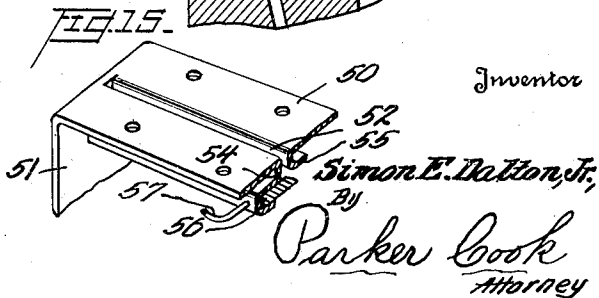
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BATHTUB WITH CONTAINED SHOWER CURTAIN

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3 Sheets-Sheet 3



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BATHTUB WITH CONTAINED SHOWER CURTAIN

Simon E. Dalton, Jr., Ventnor City, N. J.

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9 Claims. (Cl. 4-149)

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My invention relates to new and useful improvements in a bathtub and contained shower curtain and has for an object to provide a bathtub and curtain, which curtain is in a rolled condition when not in use; but, on the other hand, may be readily and quickly and hydraulically raised to provide a protective shield when so desired.

The present invention is similar in several respects to the tub and curtain as illustrated in my patent of March 9, 1943, No. 2,313,421, in that there is a longitudinally extending chamber that houses the curtain, so that when the curtain is in use and the bottom is in the chamber, there is no possibility of the water that splashes on the curtain dropping or running to the floor.

However, in the patent above mentioned, the curtain was in the form of sections which were nested in rather a deep chamber, and the curtain had to be raised by hand; whereas in the present instance there is a relatively shallow longitudinally extending chamber in which is housed a roller curtain; and hydraulic means are used for elevating the curtain so that it is only necessary to manipulate a handle, which in turn is connected with a two-way valve to raise or lower telescopic tubes to the ends of which are fastened the free ends of the curtain.

Still another object of the invention is to provide a bathtub and contained shower curtain, the tub having a longitudinally extending relatively shallow chamber which houses the curtain roller; and two deeper wells at the opposite ends of the tub in which are mounted telescopic tubes to which the free ends of the curtain are secured, while surrounding these two sets of telescopic tubes are larger tubes which form tracks for the sides of the curtain, these telescopic tubes in turn being operated by the admitting of water to the telescopic tubes to extend the same, and liberating the water to allow the tubes to return to their normal position.

Still another object of the invention is to provide a bathtub and contained shower curtain so that there is no possibility of the curtain, at its lower end, ever being outside the tub; and also to provide a relatively simple means for elevating and lowering the curtain by a mere manipulation of the hand.

Still another object of the invention is to provide a tub with a contained curtain, having a longitudinal chamber in which is housed a roller curtain, there being a bar at the free end of the curtain so that when the curtain is in its normal or housed condition, the chamber in the tub will be covered or sealed.

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With these and other objects in view, the invention consists in certain new and novel arrangements and combination of parts as will hereafter be more fully described and pointed out in the claims.

Referring now to the drawings showing the preferred form and a modification,

Fig. 1 is a front view partly in section of the improved tub and shower curtain and showing the curtain in its elevated position,

Fig. 2 is an enlarged, fragmentary, detailed, sectional view, similar to Fig. 1, and showing the curtain in its lower position, the front wall of the tub being shown in section,

Fig. 3 is a fragmentary detailed sectional view taken on line 3-3 of Fig. 2,

Fig. 4 is a fragmentary sectional view similar to Fig. 1, showing the curtain in its raised position, and the elevating means in section,

Fig. 5 is a sectional view taken on line 5-5 of Fig. 4,

Fig. 6 is a sectional view taken on line 6-6 of Fig. 2,

Fig. 7 is a fragmentary perspective showing a portion of the outer tube and the connecting bar attached thereto,

Fig. 8 is a fragmentary perspective showing the manner of joining the well cover to which is secured the free end of the curtain, secured to one of the telescopic supports,

Fig. 9 is a fragmentary sectional view showing a portion of two of the telescopic tubes,

Fig. 10 is a view similar to Fig. 9 but showing a slightly modified form,

Fig. 11 is a diagrammatic view of the operating valve,

Fig. 12 is a front view, partly in section, showing a slightly modified form wherein means are encased in a chamber for squeegeeing and disinfecting the curtain,

Fig. 13 is an enlarged sectional view showing the squeegeeing and disinfecting means as mounted in the supplemental chamber,

Fig. 14 is an enlarged fragmentary detail showing the squeegee and disinfectant means mounted in the supplemental chamber, and

Fig. 15 is a fragmentary perspective of the bracket, squeegee and wick for disinfecting the curtain.

Referring now more particularly to the several views, and for the moment, to Fig. 1, there is shown a bathtub 1, positioned between the walls 2 and 3, although it will be understood, of course, the tub does not have to be set in between two walls.

It will also be understood that the tub may be made in any desired manner, such as case, molded, stamped, laminated, or extruded, or, in any other suitable manner.

As also may be seen from Figs. 1 and 2, there is formed in the front face 4 of the tub 1 at its top chamber 5, which chamber 5 is relatively shallow but deep enough to hold a roller shower curtain 6 to be mentioned hereafter.

In my former patent, No. 2, 313, 421, of March 9, 1943, the front wall of the tub was provided with a similar chamber, but in that instance, the chamber was approximately the depth of the front wall of the tub, and in this chamber were sectional parts of a curtain.

Besides the chamber 5 there may be seen a vertical well 6 near the one end of the front face 4 and a similar well 7 at the other end of the front face of the tub 1. The purpose of these two wells is each to house a set of telescopic tubes 8 and 9; and as the wells and tubes and other parts of these raising units are the same, a description of one will be a description of the other.

Referring to the set 8 it will be noticed that there are the lower tubes 8a and 8b and the uppermost one 8c, which telescope one within the other so that they can be nested or housed, as shown in Fig. 2.

As also may be seen in Fig. 4, at the upper end of the two sections 8a and 8b may be seen the packing glands 10 so that when water is forced into these tubes 8a and 8b, it will not leak where the tubes interfit.

In Fig. 9, I have shown the tubes 8a and 8b on an enlarged scale and also have shown the packing glands 10. It will be noticed that these tubes slide one within the other, and their extended position (see Figs. 1 and 4) is limited by a stop 11 at the top of an outer tube 12 in which the set of telescopic tubes 8 are enclosed.

In Fig. 10 I have shown a slight modification of the section 8b, for instance, as an example, wherein at the inner end of the tube 8b there is a small collar 13 that will impinge against a lug 14 above which end there may be seen a similar packing gland 15. In other words, either form of tube might be utilized to make up this telescopic set, and if the latter is used, it would not be necessary to have a stop at the top of the tube 12.

Extending through the set of tubes 8 may be seen the spring 16 (see Figs. 1, 2 and 4) which is held at its lower end by a pin 17, which extends through the end of the tub, in line with the well 6; while the upper end of the spring 16 (see Fig. 4) is secured to an eyelet 18 which is mounted in a small circular plate which in turn is secured to a cap or seal 20, which is in the form of a bar, and extends the entire length of the tub and acts as a seal for the chamber 5 in which the roller curtain 6 is mounted, the bar 20 being perforated as at 20' to permit the escape of any moisture.

At the upper end of the well 6 there will be noticed a collar 21 which is tightly fitted within the well 6 and in which collar 21 is mounted the trunnion 22 of the roller 6, so that this collar 21 with the trunnion 22 may be positioned before the outer tube 12 is fastened to the collar 21.

As heretofore mentioned the arrangement is duplicated in the well 7 and with the series of tubes 9.

The outer tube 12 is split on its inner side as at 23 so that the connection between the upper

cap 20 and its plug or plate 18 may slide and be guided within the walls forming the track 23.

The curtain material 6' which is attached to the roller 6 may be made of plastic or any of the well known materials that bath curtains are made of, and its free end will be fastened throughout its upper edge to the aforementioned bar or cap 20.

In Figs. 1 and 11, I have shown a two-way valve 24 with a handle 25 and an inlet pipe 26 that extends into the passageway 21 which runs the entire length of the front wall of the tub 4 and has a port 28 extending into the well 6, and, of course, a further port 29 extending into the well 7.

Thus, when the valve 24 is turned, as shown in Fig. 11, the water will pass into the two respective wells 6 and 7; and, of course, force the telescopic tubes to their extended position, as clearly shown in Fig. 1, thus raising the seal 20 to which the material 6' of the curtain is attached, so that the curtain is now in its protective position. On the other hand, when the valve handle 25 is operated in the opposite direction, the water supply will be cut off and the spring 16 and similar spring in the other set 9 will telescope the tubes and the water may pass out of the outlet 30.

This telescoping of the tubes, of course, will lower the curtain so that it will roll up on the roller 6 and the top bar or cap 20 will sit over the chamber 5, as may be seen in Fig. 6.

Thus, it will be seen that it is but a matter of a moment to elevate or lower the shower curtain by simply manipulating the valve handle 25 which may be positioned in any convenient place near the tub.

Also, as shown in Fig. 6, I provide a small drain 31 from the chamber 5 so that any water collected in this chamber 5 will drain off into the main drain 32 of the tub 1.

As also shown in Fig. 1, I may provide a strip or bar 33 that will be fastened to the stops 11 which are mounted at the upper ends of the outer tubes 12, so as to brace these two tubes in which the respective telescopic tubes are mounted.

In Figs. 12 to 15 inclusive, I have shown a way of keeping the chamber 5' and curtain material 6'' in a sanitary condition, and I have shown the chamber 5' of slightly greater depth than the chamber 5 shown in the preferred form, although the arrangement for keeping the well sanitary can be carried out in the preferred form.

It will be understood that otherwise the tub and the operating mechanism are identical.

Referring now specifically to Fig. 12, there will be seen the tub 1' with the chamber 5' and the curtain material 6'', together with the telescopic tubes 8' and 9' all of which parts are identical with those shown in the preferred form.

There is also the valve 24' for admitting water to the tubes 8' and 9'.

However, as clearly seen in Fig. 14, I mount preferably a metal bracket 50 which is supported at its ends by the legs 51, and in the top of the bracket 50 there is a central slot 52 through which the curtain material 6'' passes. This curtain 6'' will be, of course, mounted on a roller bracket 53 similar in all respects to that shown in the preferred form.

Thus, when the bracket 50 is mounted within the chamber 5' and is lowered, the surplus water on the curtain will be removed by contact with the metal walls 54 and 55 defining the slot 52.

Mounted on the underside of the bracket 50 is

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a wick 56 that is fed through the tube 57 from a small reservoir 58 that may be mounted on the top of the bracket 50. There may be a plurality of these oil reservoirs 58 so that the wick 56 will be saturated throughout its length. In this oil reservoir 58 may be used a pine oil or any other unobjectionable disinfectant.

Thus, when the curtain is elevated hydraulically it will probably be dry, but when being lowered, any surplus water will be removed; and also the lubricated wick 56, bearing against the curtain, will keep it in a sanitary condition. Also, the oil evaporating from the wick 56 will tend always to keep the well fresh.

It will be understood that this bracket is to be removable, so that if necessary ever to remove the curtain, it will be readily accessible.

It is also understood that I may use other means of wiping the curtain and supplying a disinfectant. The one shown is illustrative only of one way in which it may be accomplished.

From the foregoing, it will be seen that the arrangement follows in general principles the tub shown in my Patent No. 2,313,421, with an encased curtain; but in this present instance the chamber does not have to be nearly as deep, and hydraulic means are shown for elevating and lowering the curtain, so that it is only necessary to manipulate one handle to raise and lower the curtain.

I have also shown means wherein the greater part of any water on the curtain may be removed when the curtain is lowered and at the same time a disinfectant may be wiped on to the curtain so that the well and the curtain will always be kept in a sanitary condition.

Having thus described my invention, what I claim is new and desire to secure by Letters Patent is:

1. A bathtub having an open top chamber extending along the front face thereof, a roller shower curtain normally housed in said chamber, hydraulically operated elevating means located at the opposite ends of said chamber, and the free end of the curtain connected to said hydraulically operated means, whereby an operation of said hydraulic means will raise said curtain.

2. A bathtub having an open top chamber extending along the front face thereof, a roller shower curtain normally housed in said chamber, hydraulically operated elevating means located at the opposite ends of said chamber, the free end of the curtain connected to said hydraulically operated means, whereby an operation of said hydraulic means will raise said curtain, and mechanical means associated with the hydraulic means for lowering said curtain.

3. A bathtub having an open top chamber extending along the front face thereof, a roller shower curtain normally housed in said chamber, hydraulically operated elevating means located at the opposite ends of said chamber, the free end of the curtain connected to said hydraulically operated means, whereby an operation of said hydraulic means will raise said curtain, and spring means located within the hydraulic means for assisting in lowering said curtain.

4. A bathtub having an open top chamber extending along the front face thereof, a roller shower curtain normally housed in said chamber, elevating means for the curtain in the form of telescopic tubes located at the opposite ends of the said chamber, the free end of the curtain connected to the uppermost of the telescopic tubes, a water supply for said telescopic tubes, 75

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means for supplying water to the tubes and for draining the water from said tubes, and spring means within said telescopic tubes for assisting in lowering the curtain.

5. A bathtub having an open top chamber extending along the front face thereof, a roller shower curtain normally housed in said chamber, a cap for the open top chamber, the free end of the curtain secured to said cap, elevating means for the cap in the form of telescopic tubes located at the opposite ends of said chamber, the cap connected to the uppermost of the telescopic tubes, a water pressure supply for said telescopic tubes, and a valve for admitting the water to the tubes and for draining the same, whereby the curtain may be raised or lowered by manipulation of said valve.

6. A bathtub having an open top chamber extending along the front face thereof, a roller shower curtain normally housed in said chamber, a cap for the open top chamber, the free end of the curtain secured to said cap, elevating means for the cap in the form of sets of telescopic tubes located at the opposite ends of said chamber, the cap connected to the uppermost of the tubes, a split tube for each set of telescopic tubes to thus form a track for the cap, a water pressure supply for the said sets of telescopic tubes, and a single valve for admitting water to the telescopic tubes and for draining the same, whereby the curtain may be raised or lowered by a manipulation of said valve.

7. A bathtub having an open top chamber extending along the front face thereof, a roller shower curtain normally housed in said chamber, a cap for the open top chamber, the free end of the curtain secured to said cap, wells formed in the tub at each end of said chamber, elevating means for the cap in the form of telescopic tubes located in said wells, the cap connected to the uppermost of the respective telescopic tubes, tracks for the cap in the form of tubes also located above the said wells, and a valve for admitting the water to the telescopic tubes and for draining the same, whereby the cap and the curtain may be raised or lowered by manipulation of said valve.

8. A bathtub having an open top chamber extending along the front face thereof, a roller shower curtain normally housed in said chamber, means mounted in the chamber having a restricted opening for squeezing the curtain, means also associated therewith for applying a disinfectant to said curtain, hydraulically operated elevating means located at the opposite ends of the chamber, and the free end of the curtain connected to said hydraulically operated means whereby an operation of said hydraulic means will raise and lower said curtain.

9. A bathtub having an open top chamber extending along the front face thereof, a roller shower curtain normally housed in said chamber, means mounted in the chamber having a restricted opening for squeezing the curtain, a wick associated with said squeezing means, reservoirs for disinfectant connected to said wick end and also mounted in said chamber, hydraulically operated elevating means located at the opposite ends of the chamber, and the free end of the curtain connected to said hydraulically operated means, whereby an operation of said hydraulic means will raise and lower said curtain and squeeze and disinfect the same.

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No references cited.