D. W. ANDERSON.

COMBINED FOLDING BATH TUB AND SHOWER STALL OR SHOWER BATH.

APPLICATION FILED NOV. 25, 1916.

1,235,091.

Patented July 31, 1917.

3 SHEETS—SHEET 1.

Fig. 1.

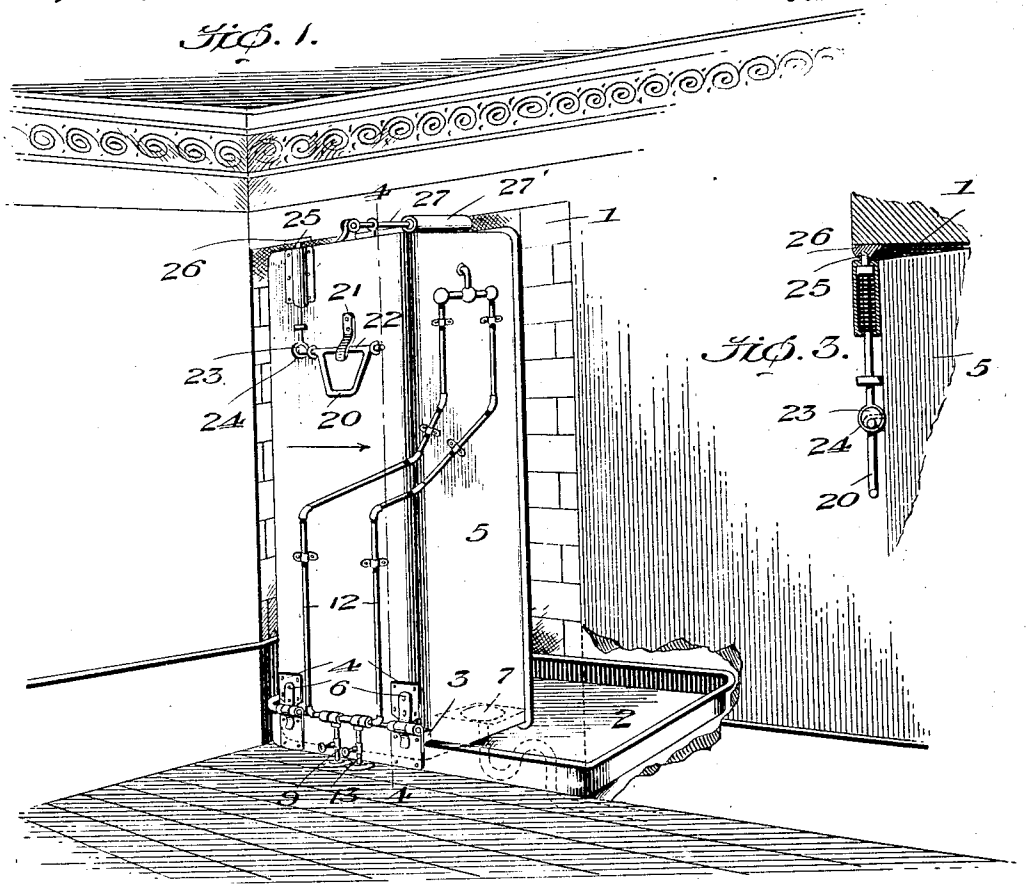
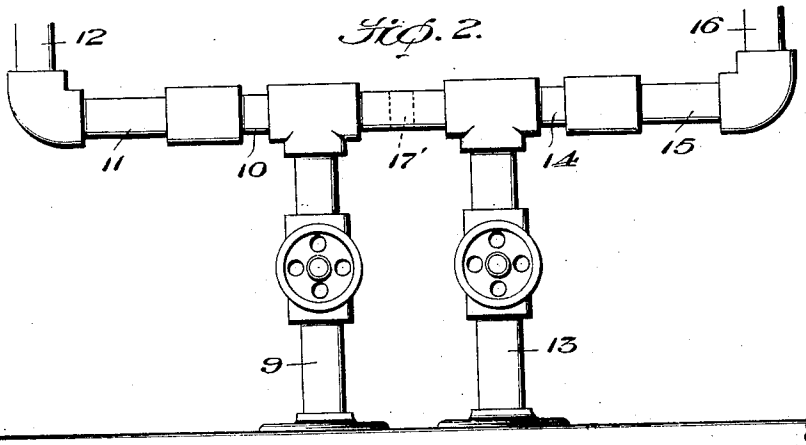


Fig. 3.

Fig. 2.



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Witness

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3 SHEETS—SHEET 2.

Fig. 4.

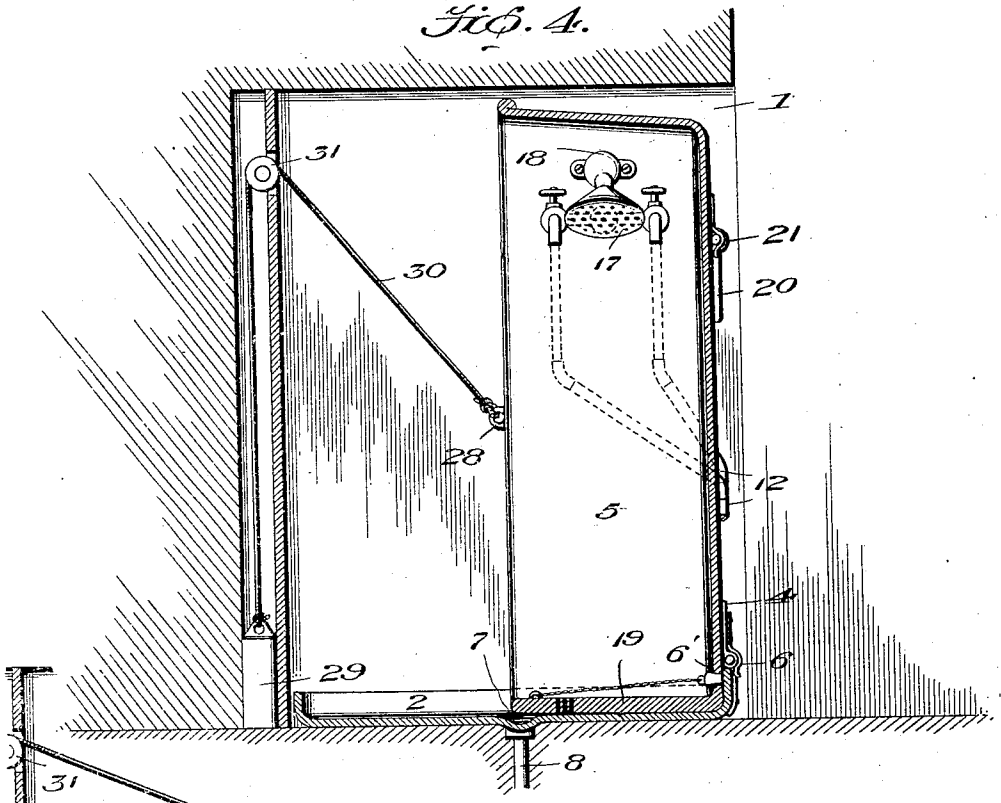
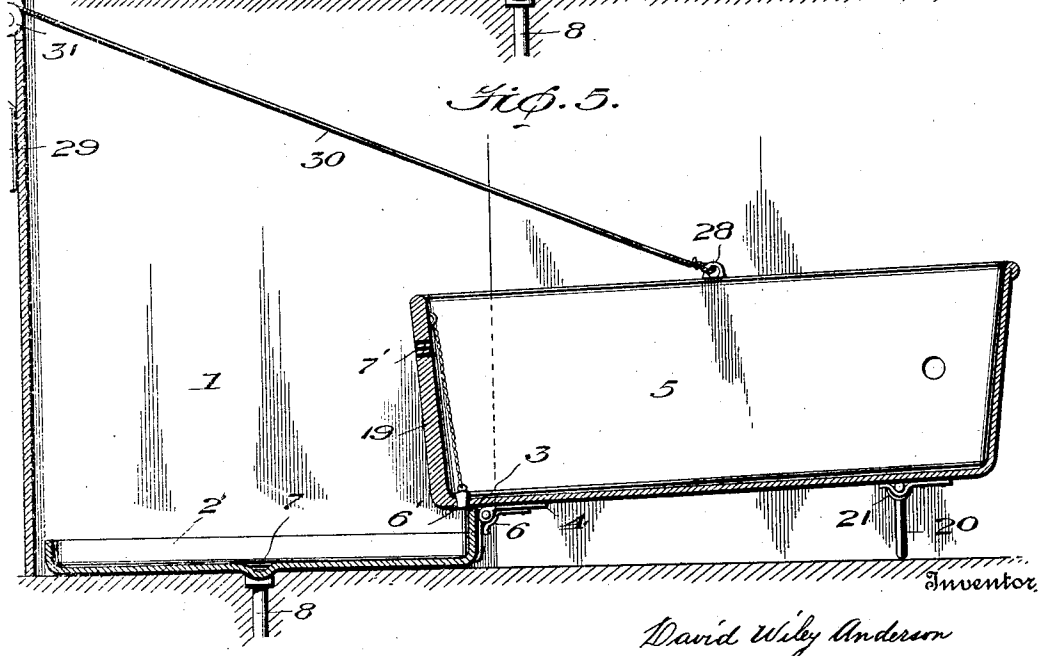


Fig. 5.



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3 SHEETS—SHEET 3.

Fig. 6.

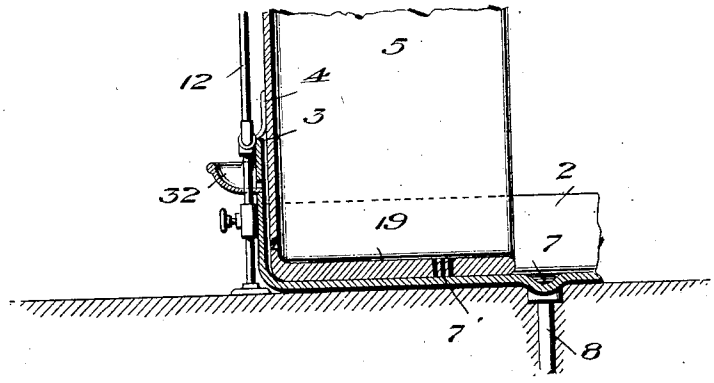


Fig. 7.

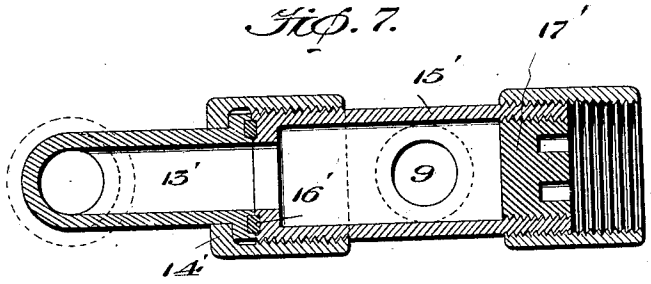
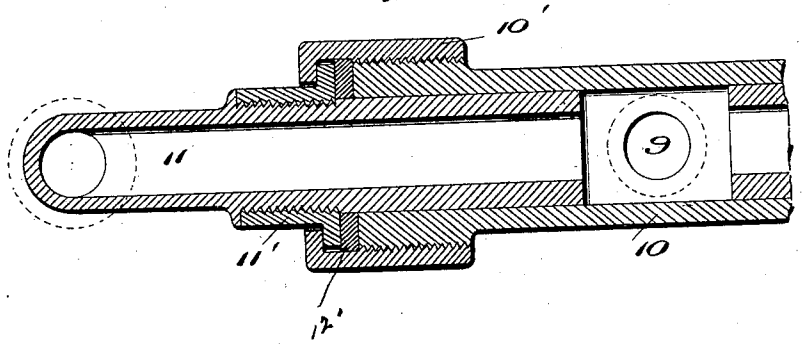


Fig. 8.



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UNITED STATES PATENT OFFICE.

DAVID WILEY ANDERSON, OF RICHMOND, VIRGINIA, ASSIGNOR TO UNIVERSAL BATH EQUIPMENT CORPORATION, OF RICHMOND, VIRGINIA, A CORPORATION.

COMBINED FOLDING BATH-TUB AND SHOWER-STALL OR SHOWER-BATH.

1,235,091. Specification of Letters Patent. **Patented July 31, 1917.**

Application filed November 25, 1916. Serial No. 133,327.

To all whom it may concern:

Be it known that I, DAVID WILEY ANDERSON, a citizen of the United States, residing at Richmond, in the county of Henrico and State of Virginia, have invented certain new and useful Improvements in Combined Folding Bath-Tubs and Shower-Stalls or Shower-Baths, of which the following is a specification.

This invention relates to a combined folding bath tub and shower stall, or shower bath, and is especially designed for use in connection with bath tubs which are capable of being lifted or folded out of the way and into a recess or alcove of a room or apartment when not in use.

The main object of this invention is to provide a novel, simple, durable, economical and efficient folding bathing apparatus, which will occupy but little space in the room when in use, and when folded up will be inclosed within a recess which may be curtained off from the room, or the recess can be closed with an ordinary door, in which event the device would extend far enough into the recess so as to allow the door to close without coming in contact with the tub or any of the equipment connected therewith.

Another object of the invention is to provide a complete and effective bathing apparatus combined with a receptacle adapted to receive the lower end portion of the bath tub when the tub is in its folded position, and to receive and carry off all the waste or foreign matter, said tub forming three walls of a shower stall when in its folded up position.

A further object of the invention is to provide an improved folding bathing apparatus combined with hinged hot and cold water and shower bath supply pipes leading to the upper or outer portion of the tub, said tub having spring hinges connected to a receptacle.

A still further object of the invention is to furnish a combined folding bath tub and shower stall, or shower bath, with a spring hinged tub thickened with an excess of metal or weighted at the hinged end portion thereof which will have a tendency to raise up the tub to its closed or folded position, also to connect the tub with a counter-balance weight, a pneumatic checking device employed to prevent undue slamming or jarring of the tub when raised to its folded position, and a latch operated by a folding leg or bracket to lock the tub in its upright position.

The foregoing and such other objects as may appear from the ensuing description are attained by the novel features of construction, arrangement, location and combination of the parts hereinafter more fully described, illustrated in the accompanying drawings, and particularly pointed out in the claims appended hereto, it being understood that slight changes in the form, proportion, and minor details of the construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Reference now being had to the accompanying drawings which form a part of this specification and in which similar numerals of reference indicate like parts throughout the several views, it will be seen that:—

Figure 1, is a perspective view illustrating the improved bathing apparatus embodying my invention.

Fig. 2, is an enlarged view showing in elevation a portion of the hot and cold water supply pipe.

Fig. 3, is a detail view partly in section showing the means for locking the tub in its folded up position.

Fig. 4, is a longitudinal sectional view taken on the line 4—4, Fig. 1, looking in the direction of the arrow, and showing the tub in its folded position.

Fig. 5, is a longitudinal sectional view taken on the line 4—4, Fig. 1, showing the tub in a position ready for use.

Fig. 6, is a detail sectional view showing the lower portion of the tub and the receptacle broken away, with the tub seated in the receptacle in an upright position, a section of the drain cup connected to the receptacle and showing a portion of the supply pipe and the waste pipe in full lines, and

Figs. 7 and 8, are horizontal sectional views of the hinged supply pipe joints.

In carrying out my invention as illustrated, and which shows a preferred construction, the numeral 1, indicates a recess or alcove of a room or apartment, 2 a receptacle of any suitable or desirable material forming the bottom or floor portion of the recess, provided at its front portion with an upward integral extension 3, to which is se-

cured the spring hinges 4, one leaf of each spring being firmly secured to the folding bath tub 5, said spring hinges being adapted to assist in elevating the tub to an upright or folded position when not in use, each spring having a leaf spring plate 6 rigidly secured thereto, and at a suitable or convenient point the bottom of the receptacle is provided with a depression 7, which communicates with a waste pipe 8, adapted to drain off all waste water and foreign matter that is led or emptied into the receptacle, and if desired, the said receptacle may be arranged to sink below the floor level.

The numeral 9 indicates a vertical hot water supply pipe connected to a horizontal pipe 10, and to the latter pipe is connected the hinged joint pipe 11 which connects with the hot water supply pipe 12, while 13 is a cold water supply pipe connected with a horizontal pipe 14, to which is joined the hinged pipe 15, connected to the cold water supply pipe 16, both pipes 12 and 16 being secured to the bottom of the tub, at a suitable distance from the lower end thereof, are then run to one side of the tub and up its side to a point near the top or outer end portion of the tub where they enter the tub and are provided with suitable discharge cocks located on either the outside or inside of the tub, and at this point the supply pipes are suitably connected with a shower head or spray 17 located within the tub at its upper or outer end portion, said head or spray having a ball and socket joint 18, so constructed that it can be manipulated to any desired angle in order to cast the shower or sprays of water on the person taking the shower bath, and the hinged pipe joints are in a direct center horizontally with the spring hinges which engage the bath tub with the receptacle.

The hub 5 is preferably thickened or weighted at its lower or inner end 19, so that in connection with the spring hinges will aid in lifting the tub to its upright or folded position, and the upward extension 3 of the receptacle to which the tub is hinged allows the tub when unfolded for use to stand above the floor at a greater height than the receptacle, the bottom of the receptacle being so shaped that the lower end of the tub when folded up comes flush with the floor of the receptacle and forms a portion of the floor of the receptacle, when ready for a shower bath, and the bottom of the tub when unfolded will be on a slight incline toward the receptacle, so that the waste water from the outlet 6′ of the tub, as well as from the overflow 7′, will drain directly into the receptacle and out through the waste pipe 8′.

To the underside of the folding tub near its upper or outer end is pivotally secured a folding leg or bracket 20, and a plate spring 21 for holding the bracket 20 in both its folded and extended position, and at one end of the upper pivoted bar 22, is rigidly secured a cam disk 23, which is embraced by a ring 24, formed at the inner end of the locking bolt 25, said bolt being adapted to engage the keeper 26 secured to the upper front portion of the recess and thereby lock the top of the tub in its upright folded position, the bracket or leg 20, and the locking bolt 25 being so connected together that by unfolding or extending the said leg the cam disk 23 will be rotated within the ring 24 and withdraw the bolt from its keeper, when the tub may be lowered for use.

The front or upper end portion of the folding tub is provided with a plunger or rod 26, employed in connection with a suitable pneumatic checking device 27 secured to the upper portion of the recess in such a position as to register in alinement with the said plunger 26 and serving to permit the tub to be elevated to an upright folded position without being subjected to any undue slamming or jarring effect.

The folding bath tub is also connected at 28 with a counter-balance weight 29, by a rope or chain 30 which passes over a pulley 31, said weight being located in any desirable or convenient place and connected with the tub in any suitable manner so as to have a tendency to raise the tub to its upright or folded position, and may be used, if desired, in connection with the spring hinges and weighted inner end of the tub for elevating the said tub.

By reference to Fig. 8 of the drawings it will be seen that the hinged joint supply pipe 11 is fitted within and overlaps the stationary horizontal supply pipe 10, the latter having a screw-threaded end portion to which is fitted a screw-threaded flanged coupling tube 10′ adapted to embrace a screw-threaded flanged coupling tube 11′, fitted to the hinged supply pipe 11, with a suitable packing 12′ interposed between the end of the stationary pipe 10, and the flanged end portion of the coupling tube 11′, so that the inner hinged supply pipe 11 can be easily turned on the inside of the outer stationary tubing 10 without moving or turning the said outer tubing, thus providing means whereby the tub may be folded and unfolded at will without interference with the water supply, while Fig. 7 shows a slightly modified form for connecting a hinged supply pipe 13′ provided with a flanged inner end portion, which flanged portion is embraced by the flanged end of a coupling tube 14′, fitted to the threaded end portion of the horizontal supply pipe 15′ with a suitable packing 16′ interposed between the engaged ends of the said stationary and hinged supply pipes, so that the hinged pipe 13′ may be easily turned within

the flanged coupling tube 14′, the horizontal stationary pipe being provided with a plug 17′ secured within the same to prevent the mixing of the hot and cold water until it reaches the desired position at the outer end portion of the tub.

While I have shown a plate spring in connection with the hinge for securing the tub to the receptacle, it will be readily obvious that a coiled spring of suitable strength may be utilized in connection with the construction of the hinges employed for the purpose.

The front portion of the receptacle 2 is provided with a drain cup or tray 32, shown in Fig. 6, located beneath the horizontal stationary supply pipes and the hinged joint supply pipes, said tray 32 communicating with the inner portion of the receptacle, so that in the event of leakage at the joints of the supply pipes at any time, the water will be caught within the tray, thence emptied into the receptacle, from whence it is drained off by the waste pipe leading to the sewer.

It will be understood that the three sides of the shower stall or recess, other than the walls formed with the tub, may be faced with marble, tile, or any suitable material, while the tub and receptacle may be made of any desirable material, they are preferably made of enameled metal and the soap holder and other bathing equipments can be suitably supported in any desired position on the walls of the recess.

It will be readily perceived that when the tub is in the upright or folded position to be used as a shower bath the bottom and sides thereof form a portion of the shower stall, giving access to the shower stall by passing in on the side of the tub, and I may employ a combination of cocks in connection with the shower head or spray, or with cocks and shut off valves independent of the spray for regular bathing, and so that the shower can be used in the tub when it is unfolded, or the shower head can be used to supply the tub with hot and cold water, or the hot and cold water can run into the tub independent of the ball joint shower head.

By the construction and arrangement of bathing apparatus herein described it will be seen that space is economized, heating and lighting of the ordinary bath room is eliminated, thus saving both heat and light, that it is easily cleaned, can be installed at a reasonable cost making every room a bath room, and always ready for use.

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

1. A bath apparatus comprising a receptacle, a folding tub hinged thereto, hinged water supply pipes connected to the tub leading to the outer or upper end portion of the tub, and a shower spray carried by the tub at the outer end portion thereof.

2. A bath apparatus comprising a receptacle, a folding tub hinged thereto, hinged water supply pipes connected to the tub and leading to the outer or upper end portion of the tub, a shower spray carried by the tub at the outer upper end portion thereof, and means connected to the tub for elevating it to an upright folded position.

3. A bath apparatus comprising a receptacle located within a recess and provided with an integral upward extension, a folding tub hinged to said extension, hinged water supply pipes connected to the tub, a shower spray carried by the tub at its outer or upper end portion, and means connected to the tub for elevating it to an upright folded position.

4. A bath apparatus comprising a receptacle having an integral upward extension, a folding tub hinged to said extension, hinged water supply pipes connected to the tub, a shower spray carried by the tub at its outer or upper end portion, and means connected to the tub for locking it in its upright position.

5. A bath apparatus comprising a receptacle having an integral upward extension, a folding tub, spring hinges for securing the tub to said upward extension, hinged water supply pipes connected to the tub, and a folding leg and locking means carried by the tub and connected together for the purpose specified.

6. A both apparatus comprising a receptacle having an upward extension, a folding tub, spring hinges secured to said tub and receptacle for fastening the tub to the receptacle, hinged water supply pipes connected to the tub, and a shower spray carried by the tub at its outer end portion.

7. A bath apparatus comprising a receptacle having an upward integral extension at its front portion, a folding tub, spring hinges secured to the tub and receptacle for connecting the tub with the receptacle, hinged water supply pipes secured to the tub, a shower spray carried by the tub at its outer end portion, and means connected to the tub for elevating it to an upright position.

8. A bath apparatus comprising a receptacle provided with an integral upward extension, a folding tub thickened at one end thereof, spring hinges secured to the tub and receptacle for connecting the tub to the receptacle, hinged water supply pipes secured to the tub, and a shower spray connected to the tub at its outer end portion.

9. A bath apparatus comprising a receptacle provided with an integral upward extension and a water outlet, a folding tub weighted at its inner end portion, spring

hinges secured to the tub and receptacle for connecting the tub to the receptacle, hinged water supply pipes connected to the tub, and a shower head secured to the tub at its upper end portion.

10. A bath apparatus comprising a receptacle provided with a receptacle having an upward integral extension at its front portion, a folding tub, spring hinges secured to said tub and receptacle for fastening the tub to the receptacle, hinged water supply pipes connected to the tub, a shower spray secured to the tub at its outer end portion, locking means connected to the tub, and a supporting leg pivotally secured to the tub and connected to said locking means.

11. A bath apparatus comprising a receptacle having an integral upward extension, a folding tub, spring hinges for securing the tub to the receptacle, hinged water supply pipes connected to the tub, a shower head secured to the tub at its outer end portion, and a checking device carried by the tub to prevent an abrupt shock when the tub is folded and locked into the upright position.

12. A bath apparatus comprising a receptacle having an integral upward extension, a folding tub, spring hinges secured to the tub and said upward extension for connecting the tub with the receptacle, hinged water supply pipes secured to the tub, means for elevating the tub to its upright folded position, and means for locking the tub in its folded position.

13. A bath apparatus comprising a receptacle having an integral upward extension, a folding tub, spring hinges for securing the tub to the extension of said receptacle, hinged water supply pipes connected to the tub, means for elevating the tub to its upright folded position, and means carried by the tub to prevent concussion when the tub is folded into the upright position.

14. A bath apparatus comprising a receptacle having an upward integral extension, a folding tub having a thickened inner end portion, spring hinges for securing the tub to the said upward extension of the receptacle, hinged water supply pipes connected to the tub, means connected to the tub for elevating it to its upright folded position, means pivotally secured to the tub for supporting its outer end portion, and locking means connected to the tub.

15. A bath apparatus comprising a receptacle having an upward integral extension, a drain cup connected to the receptacle at its front portion and communicating with the interior of the receptacle, a folding tub, spring hinges for securing the tub to the upward extension of the receptacle, hinged water supply pipes connected to the tub, means connected to the tub for lifting it to its upright folded position, a shower head secured to the tub at its outer end portion, and means secured to the tub for locking it in its folded position.

DAVID WILEY ANDERSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."