

April 7, 1942.

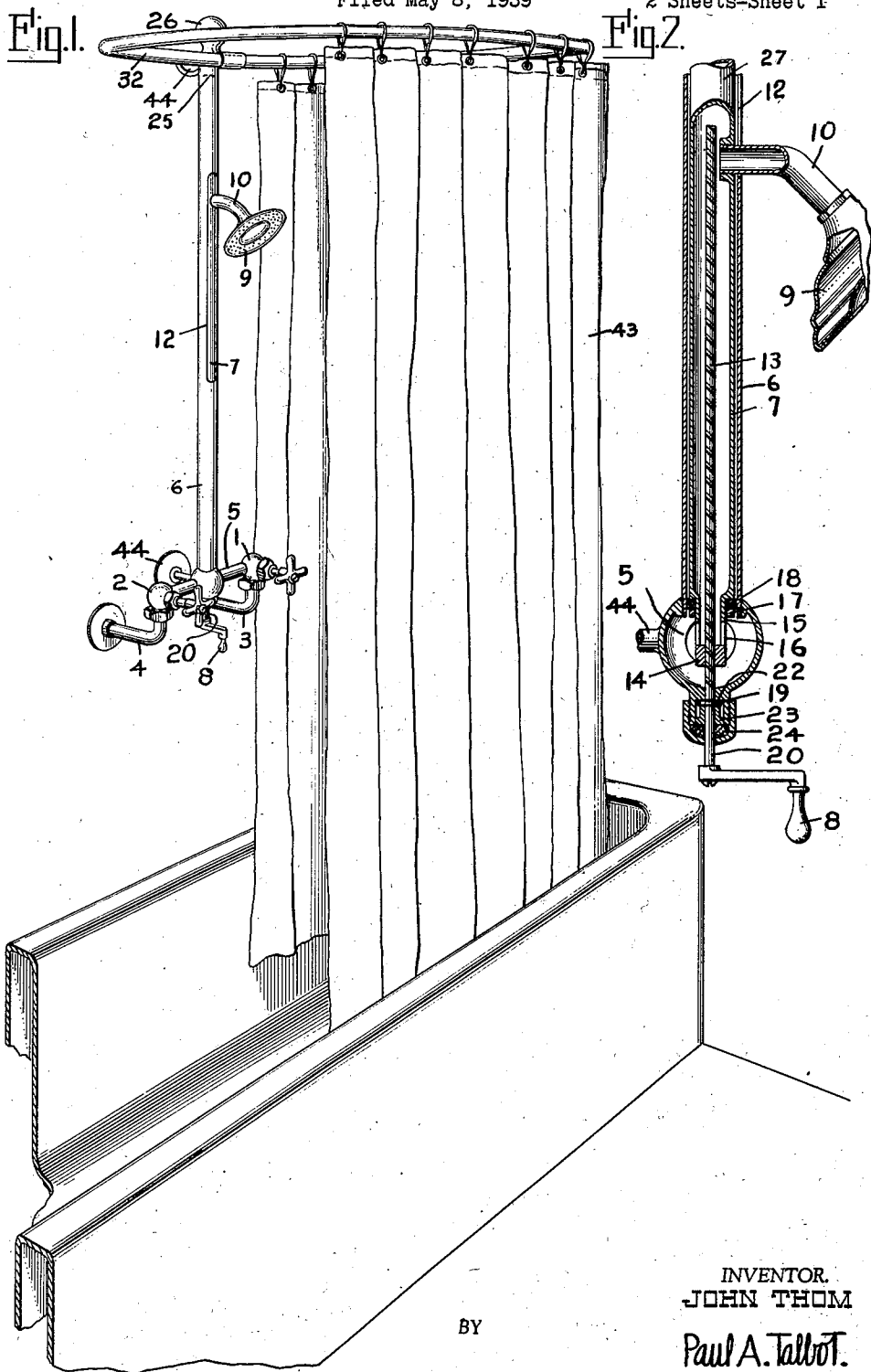
J. THOM

2,279,150

SHOWER

Filed May 8, 1939

2 Sheets-Sheet 1



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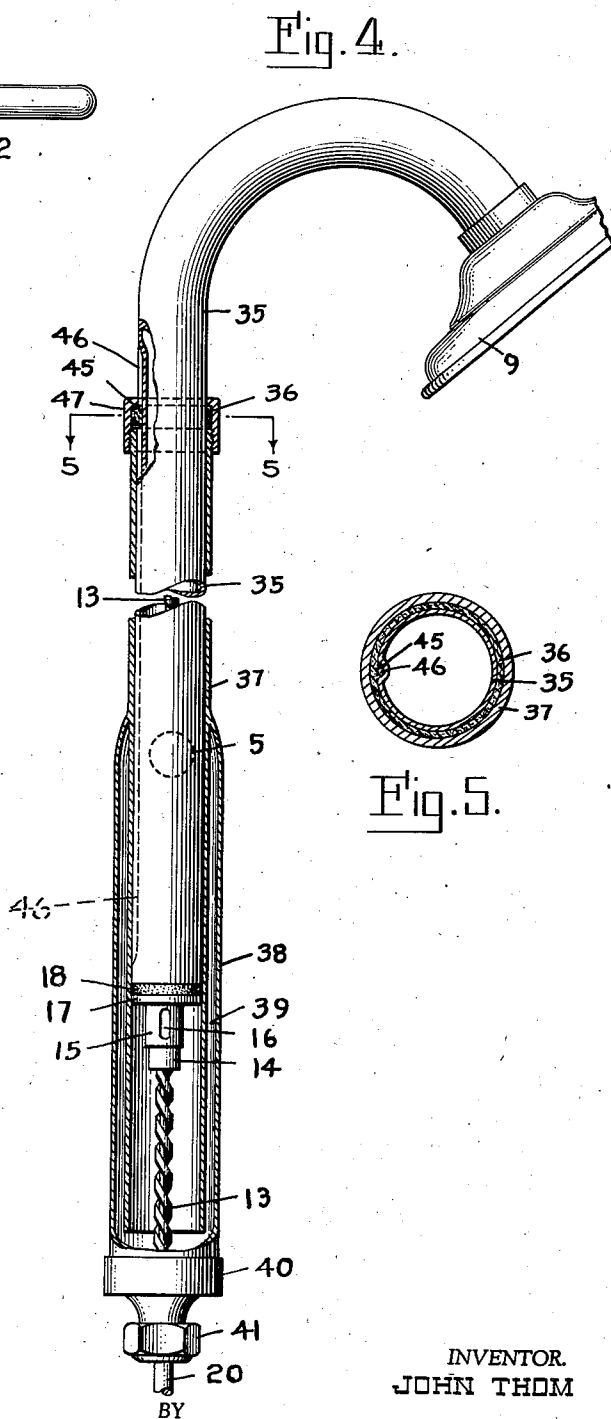
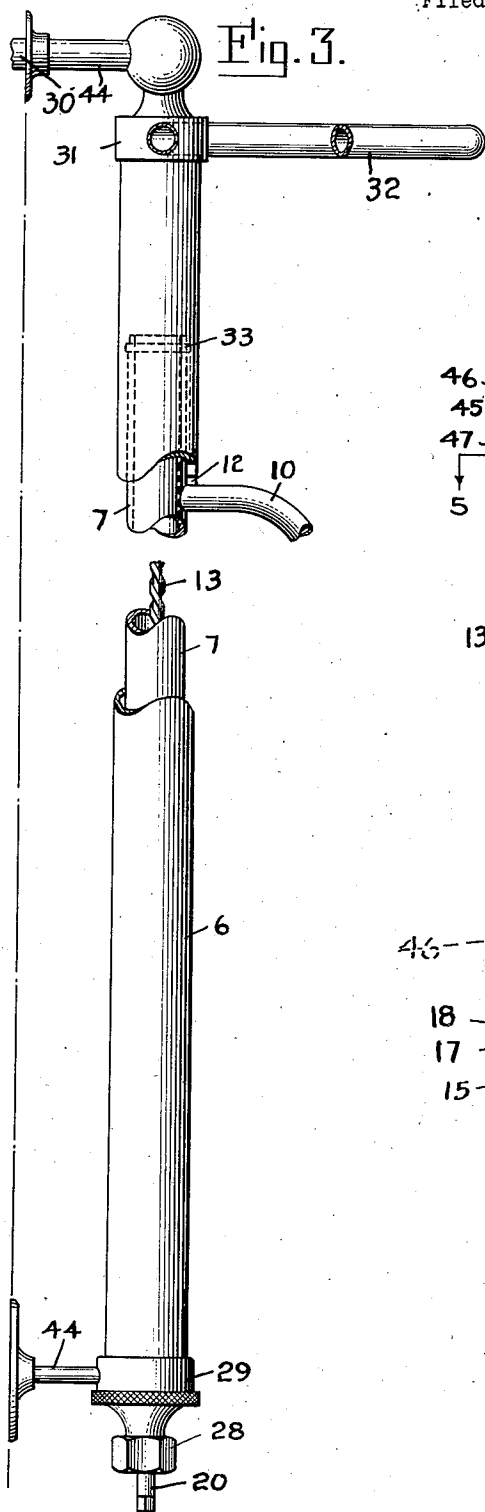
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2 Sheets-Sheet 2



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2,279,150

SHOWER

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Application May 8, 1939, Serial No. 272,369

10 Claims. (Cl. 4-148)

My invention relates to improvements in showers for bathing and particularly to plumbing fixtures and devices for raising and lowering the spray head as desired and has among its objects to provide;

A means of raising and lowering the spray head.

An adjustable shower fixture.

A telescoping tubular wall fitting for showers.

A durable and attractive shower fixture.

An internal tube connected to adjust the height of the spray head.

A universal, adjustable shower.

An adjustable shower bath fixture which may be connected to hot and cold water connections of various types.

A shower and plumbing fixture attachable to water mixing connections.

I accomplish these and other objects by the construction herein described and shown in the accompanying drawings forming a part hereof in which;

Fig. 1 is a perspective view showing an application of my device.

Fig. 2 is a fragmentary section showing an adjusting device.

Fig. 3 is a side elevation of a modification of my device.

Fig. 4 is a side elevation and partial section of a modification.

Figure 5 is a cross-sectional view showing details of the key and key-way for the spray tube shown in Figure 4.

Similar reference characters refer to similar parts throughout the several views of the drawings and in the specification to follow.

Numerous bath spray devices have been commonly used and many have rubber hoses to permit the spray head to be positioned as desired including the change of the height of the spray. The usual spray permanently installed by plumbers and forming a fixture is set with the spray head at a predetermined height on the wall or ceiling and it is this type of fixture or permanent spray to which my improvements are adapted or which is replaced by my device.

I have provided the cold water valve 1 and hot water valve 2 connected to their respective pipes 3 and 4 and to the pipe 5 connecting both valves to a common outlet or discharge.

Substantially at the center of the pipe 5 and between the valves I have provided the vertically extending outer tube 6 within which is slidably guided the spray tube 7 moved up and down as desired by the crank handle 8 and thus provid-

ing the vertical adjustment to the spray head 9 connected by the pipe 10 to the spray tube 7.

The tube 6 is slotted 12 throughout a substantial part of its length and said slot is of sufficient width to permit the free vertical movement of the pipe 10. At the bottom of said slot 12 the tube 6 is extended downwardly to the pipe 5 to which it is attached and is of sufficient length to conceal the adjusting screw 13 when the spray head is at its top position and when the pipe 10 is at the top end of said slot 12.

Within said tube 6 and secured to the lower end of the spray tube 7 is the nut 14 which receives the adjusting screw 13. The nut 14 is secured to the lower end of said spray tube 7 by the extension 15 in which are the apertures 16 permitting the mixed water to enter the spray tube and thereby supplying water at the desired temperature to the spray head.

The extension 15 is sufficiently smaller in diameter and threaded on its exterior to receive the packing nut 17 and the packing ring 18 which prevents leakage of water around the spray tube yet permits its movement within the tube 6.

The adjusting screw is prevented from longitudinal travel by the thrust collar 19 secured to or formed integral with the unthreaded extension 20 which projects downwardly through the pipe 5 and the stuffing box 21 secured thereto. The collar 19 is held between the surface 22 of said pipe 5 and the gland 23 which rests against the packing 24 causing the weight of the tube 7, spray head 9 as well as the thrust of the adjusting screw 13 in raising said tube and the parts carried by it to compress the packing. The weight of the moving parts and the tube 7 are substantially balanced by the pressure of water against the lower end of said tube which is closed at its upper end 25.

The crank handle 8 is secured to the lower end of the adjusting screw and its extension 20 and is conveniently located between the valves 1 and 2 and when operated to turn the adjusting screw easily raises or lowers the spray head 9 as desired.

The top of the tube 6 is preferably closed with the ornamental cap 26 which is located sufficiently above the top end of the slot 12 to permit the upper end 27 above the pipe 10 of the tube 7 to travel freely within the tube 6. The end 27 is greater in length than the slot 12 and is of sufficient length to prevent its top end from showing in said slot when the spray tube is at its lowermost position. In this respect the lower end of the spray tube between the pipe 10 and

packing ring 18 is also longer than the length of the slot 12 to prevent said packing ring from appearing in the slot when the spray tube is at its extreme raised position.

The polished outer surface of both the tubes 6 and 7 having a similar appearance cause the slot 12 to be unnoticed thus affording an attractive appearance to my device.

The adjusting screw 13 preferably has relatively few threads per inch causing the spray head to be moved with relatively few turns of the crank handle 8. Multiple pitch threads may be used to give the desired movement of the head in relation to the movement of the crank.

For places where the mixed hot and cold water may come from above or at the top of my device I have modified the construction as may be seen by referring to Fig. 3 of the drawings, in which the stuffing box 28 is secured to the bottom cap 29. The stuffing box is similar on its interior to the construction shown in the stuffing box of Fig. 2, the thrust surface, however, is provided in the cap 29 and not at the pipe 5.

The single mixed water pipe 30 is connected to the ornamental cap 34 which may also be provided with the curtain ring 32. A packing ring 33 is provided at the top end of the vertically movable spray tube 34 which is connected to the pipe 10 and spray head 9. The tube is similar to the tube shown in Figs. 1 and 2.

In Fig. 4 I have shown a modification in which the spray head 9 is connected to or formed integral with the top end of the vertically movable spray tube 35 and unlike the construction shown in the other views of the drawings has a guide ring 36 at the top of the outer tube 37 through which said tube 35 moves vertically. The tube 37 is extended downwardly beyond the pipe 5 which is connected to a downwardly extended tube 38 which projects beyond the lower end of the tube 37 sufficiently to permit the mixed water from the pipe 5 to flow into the lower end of the tube 37 and into the lower end of the spray tube 35 from the annular space 39 between the tubes 37 and 38. The bottom end of the tube 38 is provided with a cap 40 and stuffing box 41 similar to the bottom cap on the modification shown in Fig. 3.

The same adjusting screw and crank may be used for the modification shown and described above as well as with the construction shown in Figs. 1 and 2.

The ornamental cap shown in Fig. 1 may be provided with a bracket 42 which supports the curtain ring 32 on which the curtain 43 is hung in the usual manner.

My device may be supported and secured to the wall by the brackets 44.

In Figs. 4 and 5 the spray tube 35 is prevented from turning in the outer tube 37 by the projecting key 45 which engages the longitudinal groove or key way 46 in the back or opposite side from the spray head 9. The key 45 may be secured to the guide ring 26 clamped by the nut 47 to the top end of the outer tube 37 and held from turning by said nut.

While I have shown and herein disclosed several modifications of my device other modifications may be made, as will be apparent to plumbers and others skilled in the art to which my invention pertains, after a study of this disclosure and without departing from the principles embodied in and underlying my invention

which is succinctly set forth in the appended claims.

I claim:

1. In a shower fixture, a spray tube, and a tube into which said spray tube is longitudinally movable, a nut in said spray tube and a screw engaging said nut for adjusting the position of said spray tube in said tube.

2. In a shower fixture, a spray tube, and a tube into which said spray tube is longitudinally movable and crank means moving said spray tube in relation to said tube.

3. In a shower fixture, a spray tube, and a tube into which said spray tube is longitudinally movable and an adjusting screw and nut in said spray tube to move said spray tube within said tube.

4. In a shower, an outer tube vertically disposed having a slot therein and means to supply water to said outer tube, a spray tube vertically movable in said outer tube having a pipe and spray head secured thereto and connected to and movable with said spray tube said pipe projecting through and traveling in said slot said spray tube having apertures admitting water from said outer tube.

5. In a shower, an outer tube vertically disposed having a slot therein, a spray tube vertically movable in said tube having a pipe and spray head secured thereto and connected to and movable with said spray tube said pipe projecting through and traveling in said slot, said spray tube having means admitting water from said outer tube and packing means between said tubes preventing water leakage through said slot.

6. In a shower, an outer tube vertically disposed having a slot therein, a spray tube vertically movable in said tube having a pipe and spray head secured thereto and connected to and movable with said spray tube, said pipe projecting through and traveling in said slot, packing preventing leakage into said outer tube and through said slot and means engaging and moving said spray tube vertically to adjust the height of said spray head.

7. In a shower, a tube vertically disposed and secured to the wall having a slot therein, a spray tube vertically movable in said tube having a pipe and spray head secured thereto and connected to and movable with said spray tube said pipe projecting through and traveling in said slot and adjusting screw and crank means operating said screw.

8. In a shower, a tube vertically disposed and having a slot therein, a spray tube movable in said slot and having a spray head, an adjusting screw and crank means operating said screw, a nut engaging said adjusting screw and an apertured extension securing said nut to said spray tube.

9. In a bath shower, an outer tube and water supply means thereto, an inner tube vertically slidable in said outer tube having a keyway on its exterior, and a key secured to said outer tube engaging said keyway to prevent said inner tube from revolving in said outer tube.

10. In a bath shower, an outer tube and water supply means thereto, an inner tube vertically slidable in said outer tube having a keyway on its exterior, and a key movably secured to said outer tube preventing said inner tube from turning.

JOHN THOM.