J. H. McELROY.

SHOWER BATH APPARATUS.

APPLICATION FILED APR. 6, 1909. RENEWED MAY 27, 1912.

1,225,985. Patented May 15, 1917.

2 SHEETS—SHEET 1.

Fig. 1.

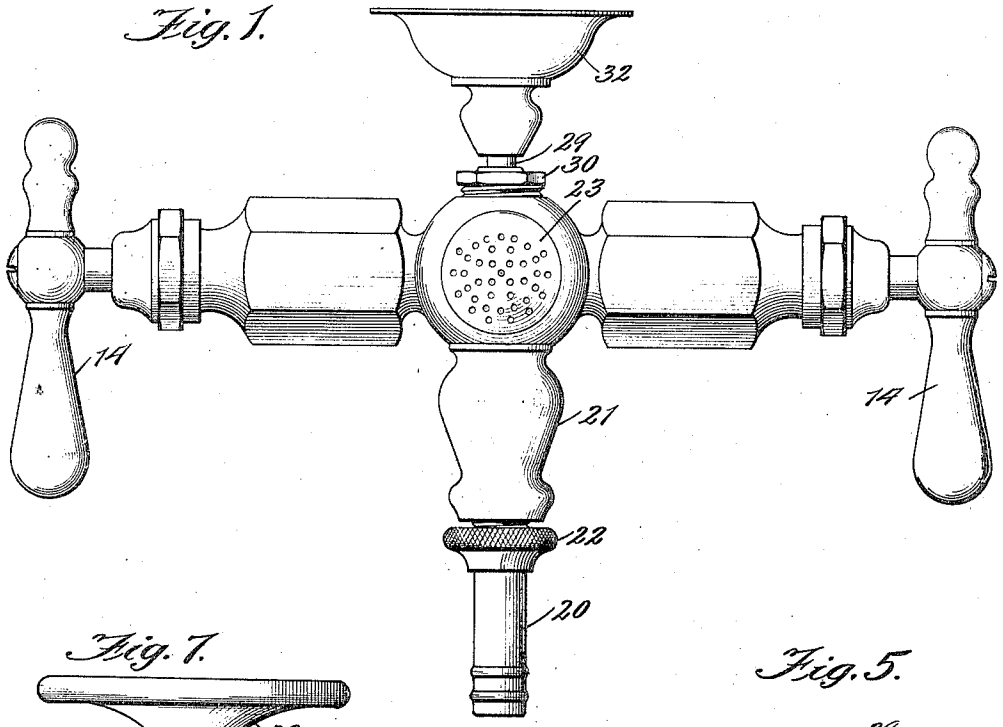


Fig. 7.

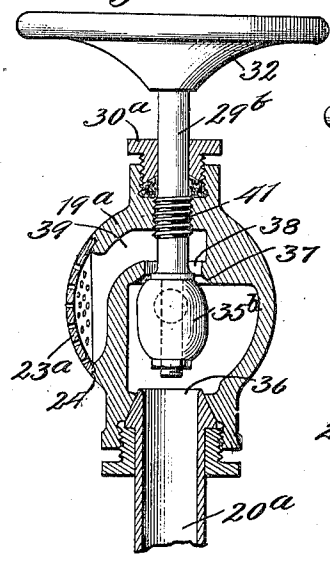
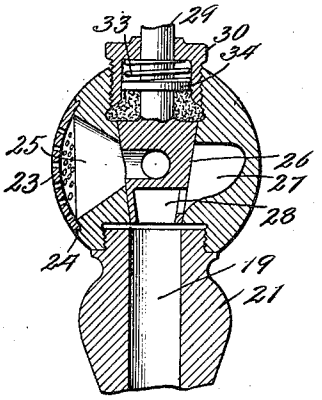


Fig. 5.



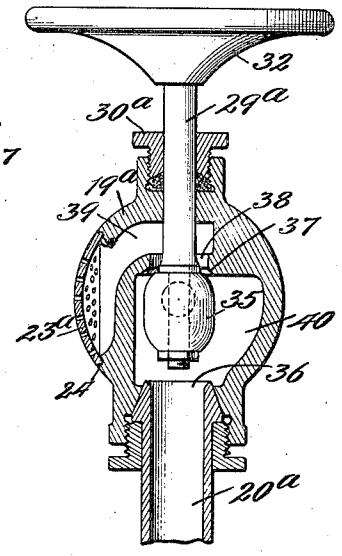


Fig. 6.

Witnesses:

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2 SHEETS—SHEET 2.

Fig. 2.

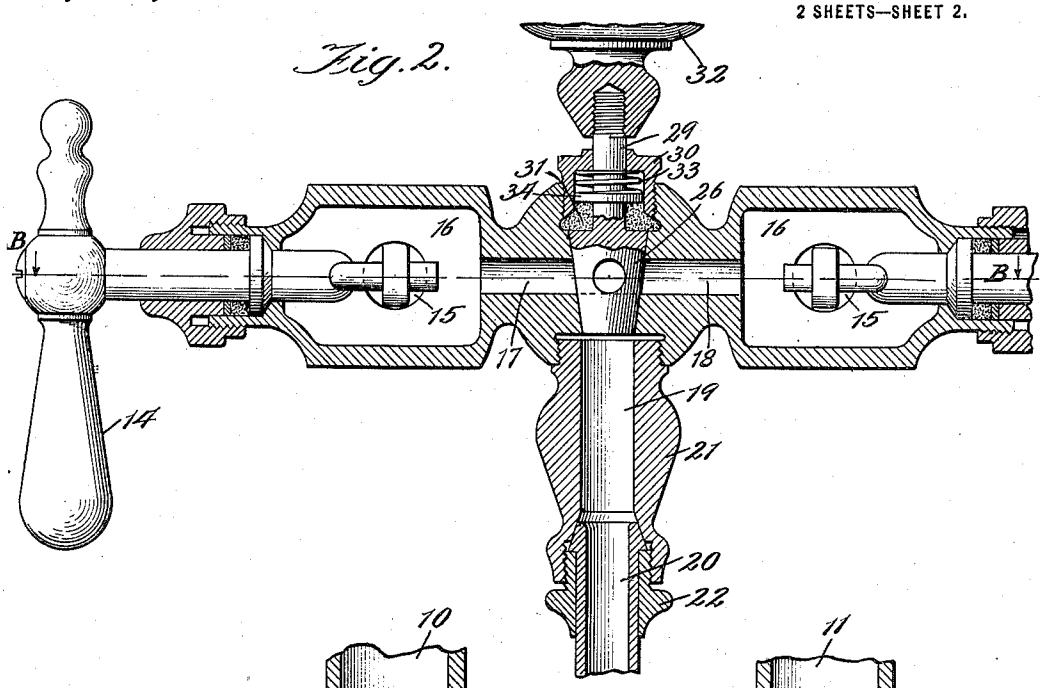


Fig. 3.

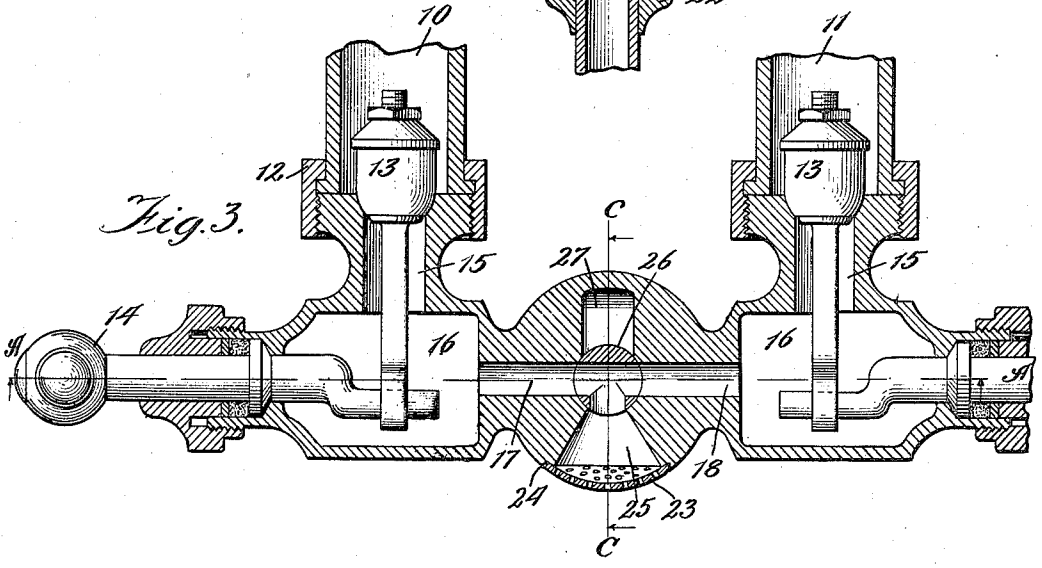
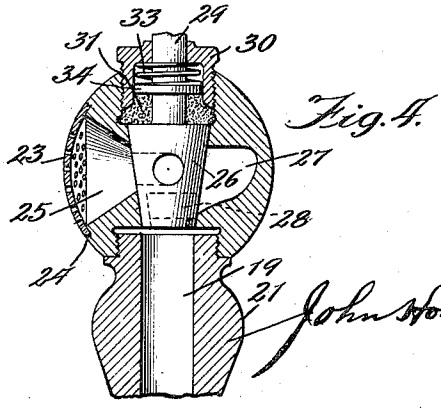


Fig. 4.



Witnesses:

Inventor:

John Howard McElroy

UNITED STATES PATENT OFFICE.

JOHN HOWARD McELROY, OF CHICAGO, ILLINOIS.

SHOWER-BATH APPARATUS.

1,225,985. Specification of Letters Patent. Patented May 15, 1917.

Application filed April 6, 1909, Serial No. 488,164. Renewed May 27, 1912. Serial No. 700,080.

To all whom it may concern:

Be it known that I, JOHN HOWARD McELROY, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Shower-Bath Apparatus, of which the following is a full, clear, and exact specification.

My invention is concerned with shower-bath apparatus adapted to throw a spray into an ordinary bath tub, and which shall constitute a part of the permanent fixtures, and which shall be simple and compact, and which shall not take up more space or otherwise differ materially in appearance from the ordinary bath-tub fixtures.

To this end my present invention is embodied in certain novel structures, to illustrate which I have annexed hereto two sheets of drawings, in which the same reference characters are used to designate identical parts in all the figures, of which,—

Figure 1 is a front elevation of a fixture embodying my invention;

Fig. 2 is a vertical section of the same on an enlarged scale, on the line A—A of Fig. 3;

Fig. 3 is a horizontal section on the line B—B of Fig. 2;

Fig. 4 is a detail in section on the line C—C of Fig. 3:

Fig. 5 is a vertical section on the same line as Fig. 4, with the section also extending through the valve body;

Fig. 6 is a view similar to Fig. 4, illustrating a modification; and

Fig. 7 is a view similar to Fig. 6, illustrating another slight modification.

In carrying out my invention, it will be understood that I employ a fixture which is adapted to be connected to the hot-water pipe 10 and the cold-water pipe 11 by the unions 12, and the fixture is provided with valves 13 controlled by handles 14, and closing the passages 15 which lead to the chambers 16, which in turn have the passages 17 and 18 leading into the opening or passage 19 through the mixing-chamber body and its extension 21, which passage extends preferably substantially vertical in its general direction. In the ordinary fixture construction, these passages 17 and 18 open into the passage 19, which is provided with the nozzle 20 secured to the extension 21 of the fixture by the nut 22.

In carrying out my invention, I add to the ordinary construction thus far described a curved nozzle disk 23, which preferably has its edges threaded so that it can be removably secured in a suitable recess 24 in the portion of the mixing-chamber body which faces toward the tub. This disk 23 has perforations therein of a suitable size and arrangement to throw the water with the ordinary pressure into the body of the tub, so that a person sitting therein will receive the impact of the shower without any material quantity of the water being thrown outside of the tub. As the size and number of the apertures in the disk should decrease with the amount of the pressure, in order to fill the tub with the spray, I preferably make the disk 23 removable, as above stated, and supply a plurality of disks, so that the proper discharge area can be secured in the particular location to which the fixture is applied. The body of the mixing chamber is provided with a flaring cavity 25 which extends from the valve body 26 to the disk 23. The valve body 26 is provided with a three-way passage, the opposite apertures of which are intended to register with the passages 17 and 18, and if the valve is turned as shown in the drawings, the water will pass from the chamber 16 out through the flaring passage 25 and into the tub as a spray. If the valve is turned one hundred and eighty degrees from the position shown, the water passes back into the passage 27, and passes from there through the passage 28 into the passage 19, through which it is discharged into the bath tub in the ordinary manner. The mixing-chamber body will, of course, have the ground seats for the valve body 26, which has the stem 29 projecting up through a packing gland 30 screwed into the top of the mixing-chamber body, and a packing 31 may be interposed to prevent any possibility of leaking through the gland 30. The stem 29 conveniently has the customary soap dish 32 secured on the upper end, and to keep the valve seated, I may interpose the helically-coiled expanding-spring 33 between the packing gland and a valve 34 secured to the stem 29.

In Fig. 6 I have shown a somewhat simpler construction, in which a vertically-movable valve 35 is attached to the stem 29^a, which can be slid up and down through the packing gland 30^a. The body of the valve 35 in this construction is preferably made of rubber, and is adapted to be brought in

engagement either with the seat 36 conveniently formed on the top of the nozzle 20^a, or with the seat 37 formed in the mixing-chamber body 19^a at the lower end of the short passage 38 opening into the passage 39, which has its end flaring out to the perforated disk 23^a. As in the other form, the hot and cold water passages 17 and 18 open into the mixing chamber 40, and the water will pass down through the nozzle 20^a, or up through the passage 38 and out through the shower disk 23^a, depending upon whether the valve is raised or lowered.

In Fig. 7, I have illustrated a slight modification, in which the valve stem 29^b has the threads 41 thereon coöperating with the threaded portion of the mixing-chamber body so that the valve 35^b will be held in either position of adjustment by the action of the threads, and not depend upon the friction of the stem in the packing and the pressure of the water.

While I have shown and described my invention in the forms which I at present consider best adapted to carry out its purposes, it will be understood that it is capable of modifications, and that I do not desire to be limited in the interpretation of the following claims except as may be necessitated by the state of the prior art.

I am aware of the structure having a similar purpose shown in the patent to Caldwell No. 769,429, of September 6, 1904, and do not claim the same as my invention, but what I do claim, and desire to secure by Letters Patent of the United States, is:

1. In a device of the class described, the combination with a hot-water cock, of a cold-water cock, a spherical mixing-chamber body between said cocks, an apertured disk mounted in the face of said body through which a shower of water can be thrown into the tub, a discharge outlet into the tub, and a valve in said mixing-chamber body adjustable to discharge the water through the apertures or the outlet, as may be desired.

2. In a device of the class described, the combination with a hot-water cock, of a cold-water cock, a spherical mixing-chamber body between said cocks, an apertured disk removably mounted in the face of said body through which a shower of water can be thrown into the tub, a discharge outlet into the tub, and a valve in said mixing-chamber body adjustable to discharge the water through the apertures or the outlet, as may be desired.

3. In a device of the class described, the combination with a hot-water cock, of a cold-water cock, a spherical mixing-chamber body between said cocks, an apertured disk threaded into the face of said body through which a shower of water can be thrown into the tub, a discharge outlet into the tub, and a valve in said mixing-chamber body adjustable to discharge the water through the apertures or the outlet, as may be desired.

In witness whereof I have hereunto set my hand and affixed my seal, this 2nd day of April A. D. 1909.

JOHN HOWARD McELROY. [L. S.]

Witnesses:
F. E. BROM,
JNO. G. ELLIOTT.