United States Patent

[11] **3,581,996**

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[21] Appl. No. **803,601**
[22] Filed **Mar. 3, 1969**
[45] Patented **June 1, 1971**

[54] **SOAP ATTACHMENT FOR SHOWER BATH**
7 Claims, 4 Drawing Figs.

[52] **U.S. Cl.** **239/317,** 137/625.32, 222/145, 292/259
[51] **Int. Cl.** **B05b 7/26**
[50] **Field of Search** 239/310, 317; 292/257, 259; 222/145; 137/205.5, 604, 625.29, 625.32

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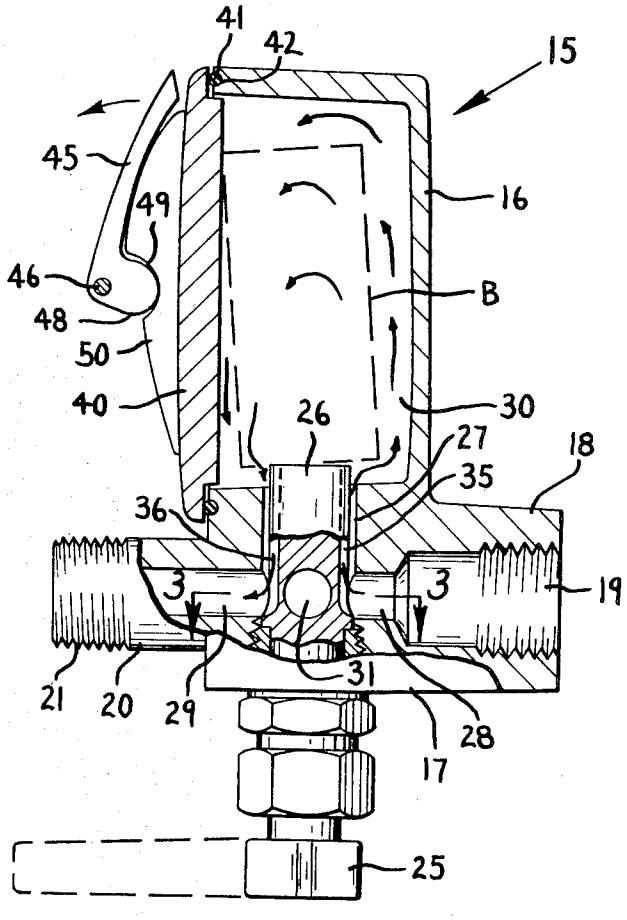
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ABSTRACT: A soap container is mounted on the pipe to the shower spray head. A two-way valve in the device directs the flow of water either through the soap chamber or bypassing the soap chamber so that soapy or clear water may be caused to issue from the spray head.



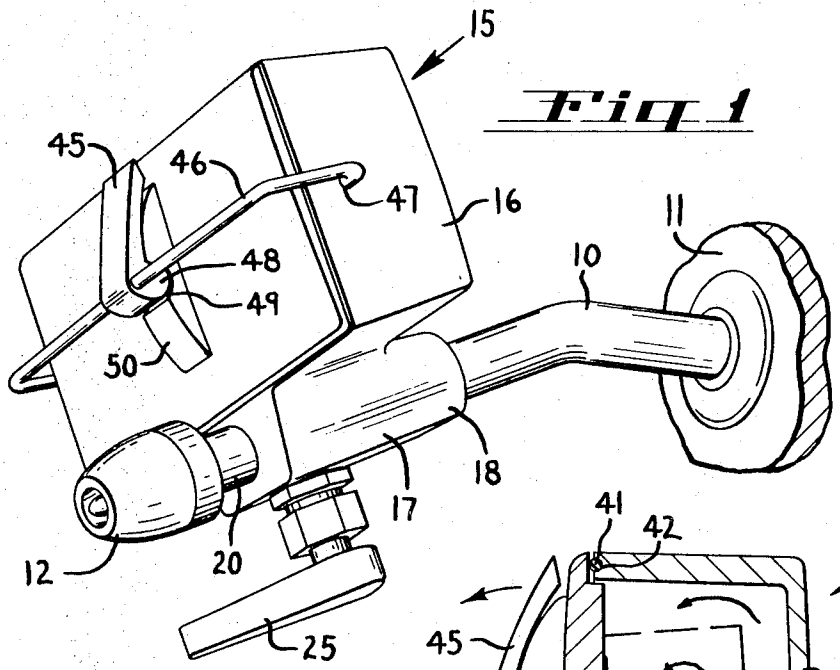


Fig 1

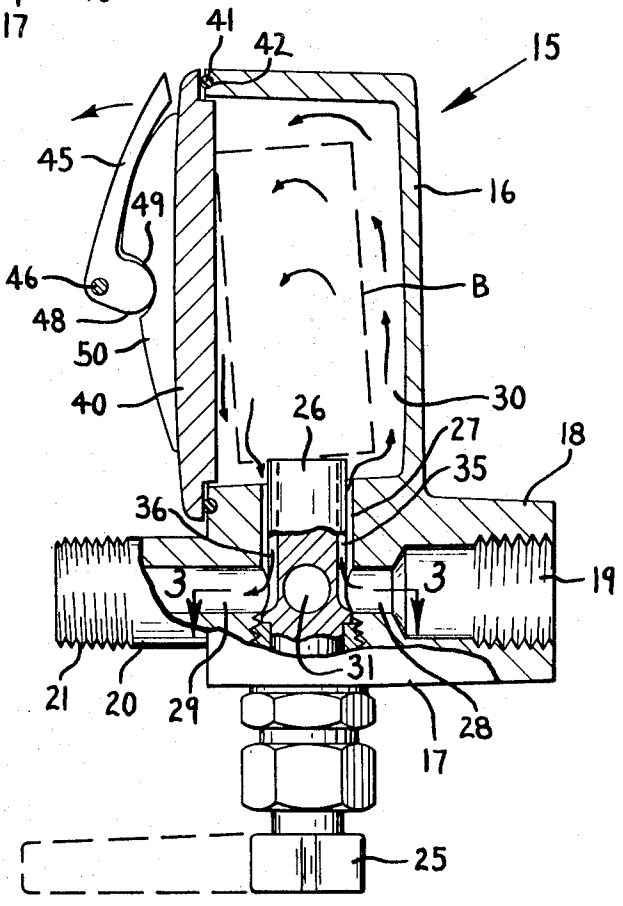


Fig 2

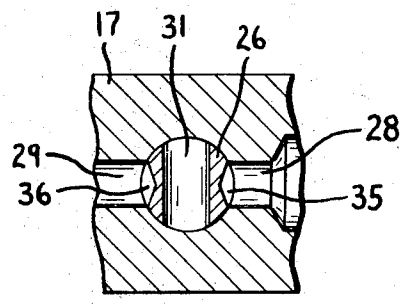
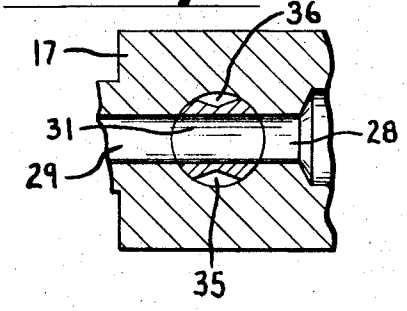


Fig 3

Fig 4



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SOAP ATTACHMENT FOR SHOWER BATH

BACKGROUND OF THE INVENTION

This invention relates to a device for soaping the water in a shower bath.

As a convenience to bathers there is need for a device to soap the water issuing from a shower head so that the bather will not have to handle a wet and slippery bar of soap. By applying the soap directly to the shower spray, the bather may soap his whole body very quickly and efficiently and then, by merely turning a valve, shut off the soapy water and turn on clear water to wash the soap off his body. With such a device, the soap is handled in dry condition and only when it becomes necessary to insert a new bar of soap into the soap chamber of the device.

Devices heretofore proposed for this purpose have been too complicated and expensive to be practical. They have generally required installation by a plumber whereby the average person could not purchase such a device and install it himself on his own shower. In most cases the devices heretofore proposed required liquid soap and would not operate with ordinary bath soap in bar form.

Objects of the invention are, therefore, to provide an improved soap attachment for a shower head, to provide a soap attachment for use with ordinary bath soap in bar form, to provide a novel two-way valve which will direct the water selectively through a soap chamber to provide soapy water or bypassing the soap chamber to provide clear water, and to provide a device of the type described which is of simple and inexpensive construction and which may be installed by the user without requiring the services of a professional plumber.

SUMMARY OF THE INVENTION

The present device is of extremely simple construction comprising only a soap holder, a two-way valve and suitable pipe connections for installation on the shower pipe. The valve is designed to direct the flow of water around the bar of soap in such a manner that the soap is readily dissolved in the water to produce a soapy spray from the shower head. When the valve is turned to a different position, the stream of water bypasses the soap holder and clear water issues from the shower head.

The device is installed by merely unscrewing the shower head and screwing the present device on the shower pipe. Then the shower head is screwed onto the device. The installation may be accomplished by the purchaser as it does not involve the plumbing in the wall. The device also does not affect the usual mixing valve which turns the hot and cold water off and on and controls the temperature of the mixture.

The invention will be better understood and additional objects and advantages will become apparent from the following description of the preferred embodiment illustrated on the accompanying drawing. Various changes may be made in the details of construction and arrangement of parts and certain features may be used without others. All such modifications within the scope of the appended claims are included in the invention.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a perspective view of a soap attachment for a shower head embodying the principles of the invention;

FIG. 2 is a sectional view of FIG. 1;

FIG. 3 is a sectional view on the line 3–3 in FIG. 2; and

FIG. 4 is a view similar to FIG. 3, showing the valve in a different position.

DESCRIPTION OF THE PREFERRED EMBODIMENT

FIG. 1 shows a common form of bath shower where the shower pipe 10 projects out of wall 11. Normally, the spray head 12 is mounted directly on the end of pipe 10 and the water is turned on and off and controlled as to temperature by a mixing valve, not shown, usually mounted on wall 11 some distance below the shower pipe 10.

The device 15 of the invention comprises a unitary casting having a soap container 16 with a valve and connector body 17 formed as a boss integral with the lower side of the soap container. One end of body 17 provides a connector 18 equipped with internal threads 19 to screw on the threaded end of pipe 10 after spray head 12 has been removed. The other end of body 17 forms a connector 20 having external threads 21 to receive the spray head 12. Thus, in installation all that is required is to remove spray head 12 from pipe 10, screw the connector 18 on the pipe and then screw the spray head on connector 20. The soap container 16 is positioned on the upper side of pipe 10 which places valve handle 25 on the under side of the pipe in a convenient position for the user.

Valve handle 25 is connected with the lower end of a plug-type valve member 26 which is mounted for rotation in a cylindrical bore 27 in midposition in body 17. The lower end of bore 27 communicates with inlet opening 28 and outlet opening 29 and the upper end of the bore communicates with chamber 30 in the soap container. Plug 26 contains a diametral bore 31 forming a passageway for clear water from inlet opening 28 to outlet opening 29 when the plug is turned in its FIG. 4 position. In this position of the plug the flow of water bypasses soap chamber 30 and no water circulates through the soap chamber.

When plug 26 is turned 90° to its position shown in FIGS. 2 and 3, a pair of longitudinal grooves 35 and 36 on opposite sides of the plug circulate water through the soap chamber. The bore 31 passes between the grooves 35 and 35 in spaced relation to the bottom of the grooves. Thus, groove 35 forms an inlet passageway directing water from opening 28 upward across one side of the bar of soap B in FIG. 2, across the top of the soap and then downward across its end surfaces to dissolve some of the soap. The soapy water leaves the soap chamber through an outlet passageway formed by groove 36 and outlet opening 29 for discharge through the spray head.

This arrangement of grooves 35 and 36 on opposite sides of plug 26 causes the water to flow in contact with at least four surfaces of the soap bar as well as portions of its other two surfaces so that an adequate amount of soap is dissolved in the water during the brief interval of time required for the water to pass through the soap chamber. Plug 26 projects into the bottom of chamber 30 to hold the bar of soap in elevated position so that the water can flow under the soap as shown by the arrows.

One side of the soap chamber is closed by a cover 40 which seats on a rubber O-ring 41 mounted in a peripheral groove 42. Cover 40 may be retained on container 16 by any suitable means such as the quick release latch device illustrated. Latch lever 45 is pivotally mounted on a spring wire bail 46 which is pivotally mounted at its ends in sockets 47 in opposite ends of container 16. Lever 45 has a bellcrank cam 48 which seats in a recess 49 on cover plate projection 50.

As shown in FIGS. 1 and 2, lever 45 is held in overcenter position by the spring tension of bail 46 to press the margins of cover plate 40 tightly against O-rings 41. This is effective to seal the soap chamber 30 against leakage under the water pressure existing in the chamber during operation of the device. The cover is released by merely swinging the upper end of lever 45 to the left whereby lever 45 and bail 46 will drop down, permitting the cover to be withdrawn for insertion of a new bar of soap when necessary.

After the user has finished his shower and shut off the water at the mixing valve or other shut off valve provided, the water may be drained out of the soap chamber by merely turning the valve 26 to its position shown in FIGS. 2 and 3. Water in the soap chamber may then run out through groove 36 and outlet opening 29. This prevents waste of soap which would otherwise occur if the soap were kept constantly immersed in water.

Having now described my invention and in what manner the same may be used, what I claim as new and desire to protect by Letters Patent is:

1. A soap attachment device for a shower bath comprising a soap container having a soap chamber therein, connector means on said container for interposing the device between

the spray head and spray pipe of a shower fixture, and a two-way valve in said container having a passageway arranged by to bypass said chamber in one position of the valve and having inlet and outlet passageways arranged to circulate water through said chamber and out of said valve to said spray head in a second position of the valve, said inlet and outlet passageways in said valve communicating with opposite sides of said chamber to circulate water around a bar of soap therein, said valve comprising a rotary plug valve, opposite sides of the plug being relieved to form said inlet and outlet passageways extending longitudinally along said plug, said bypass passageway comprising a diametral bore extending transversely through said plug between said longitudinal passageway, said rotary plug projecting upward into the bottom of said soap chamber to support a bar of soap in spaced relation above the bottom of said chamber.

2. A device as defined in claim 1, said valve and connector means being contained in a boss on the under side of said soap container.

3. A device as defined in claim 2, said soap container and said boss being integral parts of a one piece casting.

4. A device as defined in claim 1 including a cover on said soap container, and quick release means detachably securing said cover on said container.

5. A device as defined in claim 4, said quick release means comprising a single overcenter locking lever arranged to clamp said cover on the container.

6. A device as defined in claim 5, said locking lever comprising a bellcrank cam engageable with said cover, and a spring wire bail pivotally supporting said locking lever, said bail having ends pivotally mounted on said container.

7. A soap attachment device for a shower bath comprising a soap container having a soap chamber therein, a boss on the underside of said container, aligned horizontal inlet and outlet passageways in said boss adapted for connection with supply pipe and spray head of a shower, respectively, a vertical bore in said boss, the upper end of said bore opening into said soap chamber and opposite sides of said bore having openings communicating with said inlet and outlet passageways, a rotary plug valve in said bore having a diametral passageway therethrough interconnecting said inlet and outlet passageways to discharge clear water from the attachment in one position of the valve, and a pair of longitudinal grooves in opposite side surfaces of said valve plug extending from said inlet and outlet passageways to the upper end of said plug arranged to circulate water around a bar of soap in said chamber and discharge soapy water from the attachment when said valve is rotated 90° from said one position.