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Conklin

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[54] COMBINATION SHOWER AND TOILETRY DISPENSER

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[52] **U.S. Cl.** **239/307,** 4/145, 222/383, 239/310, 239/305

[51] **Int. Cl.**.....**B05b 7/32,** B05b 9/00

[58] **Field of Search**.....4/145, 146, 152, 153, 159, 4/191; 239/304, 305, 310, 307; 222/383, 384; 141/105; 137/565, 604

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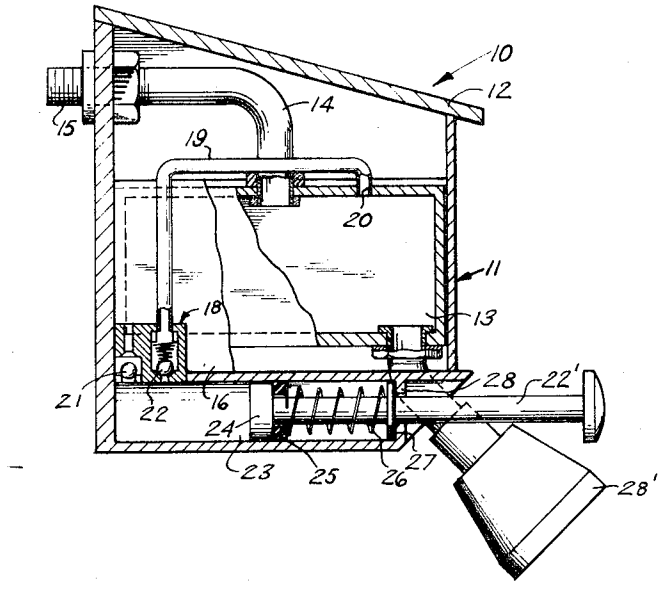
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Assistant Examiner—Stuart S. Levy

[57] **ABSTRACT**

A dispenser device that will replace the common shower head within a shower stall. This device includes, primarily, pushbutton valve means for urging a liquid soap into a water mixing chamber and has check valve means for controlling the flow of the liquid soap. A second pushbutton valve of the device enables the user to deliver liquid soap into the hand when desired, prior to turning the water on.

5 Claims, 3 Drawing Figures



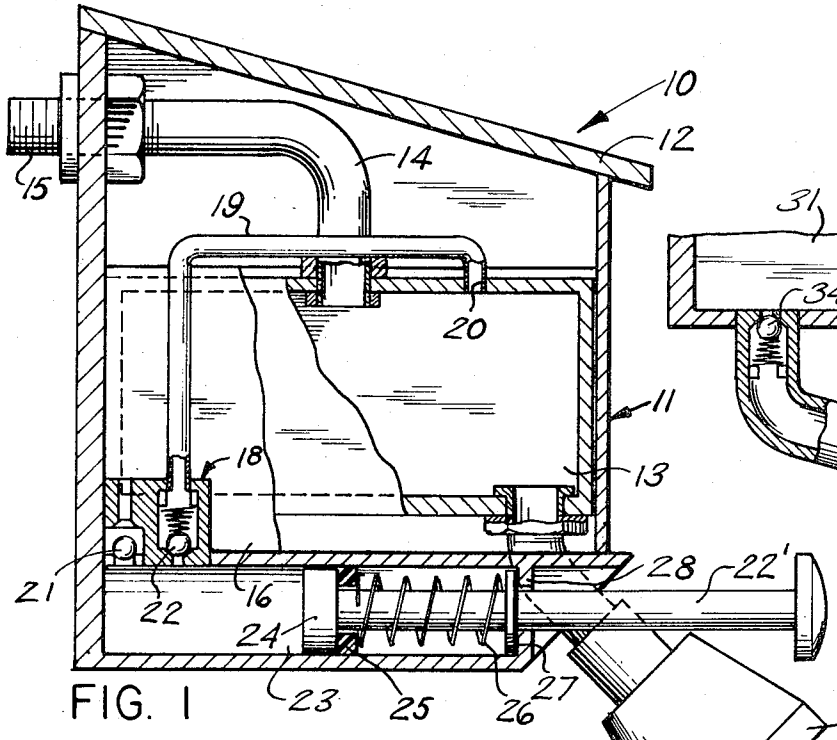


FIG. 1

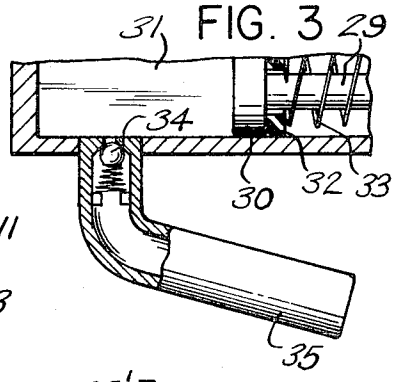


FIG. 3

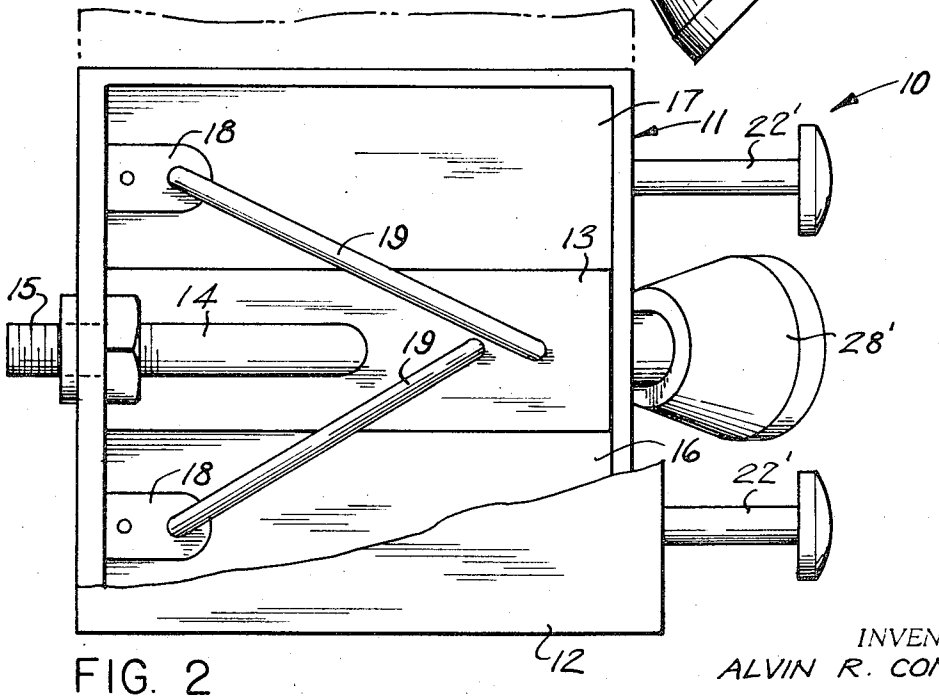


FIG. 2

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COMBINATION SHOWER AND TOILETRY DISPENSER

This invention relates to shower stalls, and more particularly to a combination shower and toiletry dispenser.

It is therefore the primary purpose of this invention to provide a combination shower and toiletry dispenser which will replace the common shower head and will serve as reservoir means for fluids which may be mixed with the water when the water is turned on and emitted from a shower head extending from the device.

Another object of this invention is to provide a dispenser of the type described which may manually dispense the liquid soap or other toiletry without mixing it with the water coming from the shower head of the device.

Another object of the present invention is to provide a device of the type described which will be adaptable for the storage and handling of liquids, such as, soap, shampoo, hair rinse, body rinse, body creme and the like, the device when desired, enabling the heretofore described liquids to be mixed with the stream of water coming from the shower head and the device serves to increase the cleanliness of the area where it is installed.

Normally, a bar of soap is provided in a public gym, golf clubhouse, army barracks, nursing home, hospital for all to use. The instant invention herein, serves to thus provide for better and safer health and will also serve to decrease the cost of soap consumed. In the event of the use of bar soap which is provided for a guest, the guest uses it once and the maid must dispense with the balance and in addition, the maid must pick up the paper wrapper and clean where the unused portion of the soap was left. If the guest does not use the soap, he may take it away and thus it requires increased cost for the motel operator and the like.

A further object of this invention is to provide a device of the type described of which it can be easily installed in the place of the commonly used shower head in shower stalls and the owner may purchase the toiletry products in large amounts and may pour them into the reservoirs of the device as needed.

A still further object of this device is to provide a dispenser of the type described which will include spring-loaded plungers having piston means for raising a quantity of the liquid out of the dispenser, the operation being controlled by ball check valve means.

Other objects of the present invention are to provide a combination shower and toiletry dispenser which is simple in design, inexpensive to manufacture, rugged in construction, easy to use and efficient in operation.

These and other objects will be readily evident upon a study of the following specification and the accompanying drawing wherein:

FIG. 1 is a side view of the present invention shown in elevation and partly broken away;

FIG. 2 is a top plan view of the present invention shown partly broken away; and

FIG. 3 is a fragmentary side view of the unit portion of the device which will dispense the liquid directly into the hand of the user.

According to this invention, a combination shower and toiletry dispenser **10** is shown to include a housing **11** having a removable cover **12**. In the center of housing **11** is a water and toiletry mixing chamber **13** which includes at its upper extremity a water inlet pipe **14** having an externally threaded nipple **15** for installation in the shower stall after the removal of the common shower head (not shown).

A chamber **16** and a chamber **17** on either side of the water chamber **13**, receives a quantity of liquid toiletry, such as soap.

It shall be noted that any number of products may be stored for dispensing within the chamber **16** and **17**.

A valve assembly **18** is secured within each of the chambers **16** and **17** of housing **11** and provides control means for the toiletries contained therein.

A tube **19** extending from each of the valve assemblies **18**, is fixedly secured within the upper extremity of the chamber **13**. Tubes **19** provide passage way means for the liquid into the mixing chamber **13**.

Each of the valve assemblies **18** includes a ball-check valve **21** and a ball-check valves **22**.

A plunger **22'** is slideable within cylinder **23** of housing **11**, and secured fixedly to one end of plunger **22'** is a piston **24** having a piston ring **25**.

Plunger **22'** is returned by means of coil spring **26** carried thereon and a washer **27** abuts with end wall **28** which serves as stop means for plunger **22'**.

It will also be noted that chambers **16** and **17** may include any of the toiletries desired for being dispensed.

An alternate plunger **29** includes a piston **30** slideable within cylinder **31** of housing **11** and plunger **29** includes a return spring **33** which operates in the manner heretofore described of plunger **22'**.

A check valve **34** carried within outlet pipe **35**, serves to prevent the continuous flow of the product when it is dispensed into the user's hand by means of the plunger **29** when it is pressed.

When dispenser **10** is filled with the desired liquids, the liquids will flow through ball-check valve **21** into the cylinders **23** and when the plunger **22'** is pushed forward by the user, the ball-check valve **21** closes and the ball-check valve **22** opens and thus the liquid is carried to the mixing chamber **13**. When the plunger **22'** one or the other, are released the springs **26** will return the plunger **22'** to its normal position during which the check valve **21** opens and the check valve **22** closes.

It shall further be noted that when the liquid passes through either one of the tubes **19** and out of the opening **20** into the chamber **13**, the water when turned on, comes out of the unit pipe **14** and mixes with the product and is then expelled from the shower head **28'**.

When the pushbutton plunger **29** is urged forward the product is forced past the check valve **34** and is egressed from the outlet pipe **35** into the hand of the user as shown in FIG. **3** of the drawing.

What I now claim is:

1. A combination shower and toiletry dispenser, comprising, a hollow housing, plural chambers within said housing, a cover carried by said housing for covering the chambers, a water inlet pipe carried by said housing providing connection means for said dispenser, a pair of valve assembly means and connecting tubes carried within said housing providing control means for fluid products carried within chambers of said housing said chambers including a water or mixing chamber connected to said tubes, plungers carried by said housing with piston and piston ring means for forcing said fluid products through said tubes to the water mixing

chamber of said dispenser, a shower head connected to said water mixing chamber providing a means of directing water and said fluid products from said dispenser.

2. The combination according to claim 1, wherein said plungers of said device are slideably carried within cylinders in the lower extremity of said device and said plungers include a piston and its connected ring means for compressing and urging fluid out of the valve assembly associated with its particular fluid containing chamber, said valve assembly including two check valves, said plunger causing one check valve to close and the other to open up said valve assembly, the result being, that said fluid is urged upwards through a tube into said mixing chamber and thus water when passing through the inlet pipe of said dispenser, will mingle with said fluid and thus dispense said fluid out of the shower head connecting with said mixing chamber.

3. The combination according to claim 2, wherein said plungers are spring-returned to their full extended position external of said housing of said dispenser by said spring being carried upon said plunger between an in-wall which serves as stop means and against the piston ring means of said plunger and when said spring returns to said plunger it simultaneously causes suction to take place and gravity to enact upon said fluid so that it enters one of said check valves of said valve assembly while the other of said valve within said assembly closes.

4. The combination according to claim 3, wherein when one of said plungers of said device is activated by manual pressure with the fingers, it urges a pre-determined quantity of said fluid into said mixing chamber and thus said fluid and said water is dispensed simultaneously from said shower head at the lower extremity of said housing of said device.

5. The combination according to claim 3, wherein an alternate plunger of said device is carried within cylinder means in the lower extremity of said device and a check valve is included within a pipe extending from the bottom wall portion of said device and said check valve enables fluid to be drawn into said cylinder receiving said plunger above said pipe portion without it automatically being carried out of said outlet pipe of said device.

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