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L. L. BARNHART, JR
SANITARY DOUCHE DISPENSER

2,710,006

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Fig. 1.

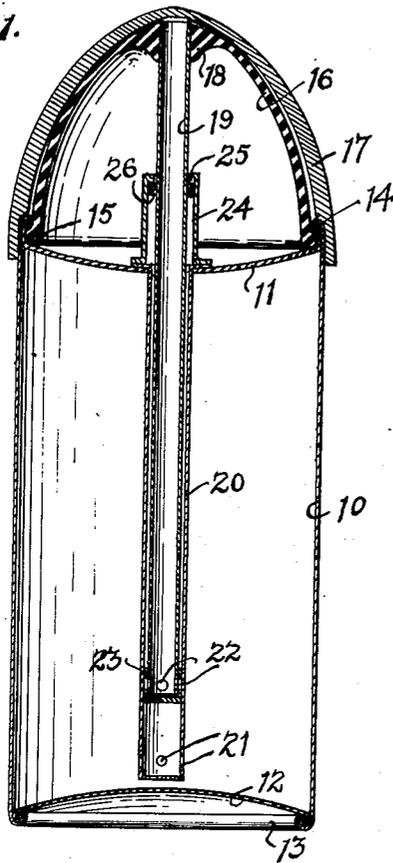


Fig. 2.

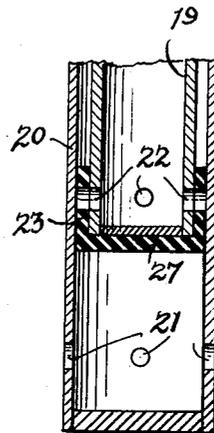


Fig. 3.

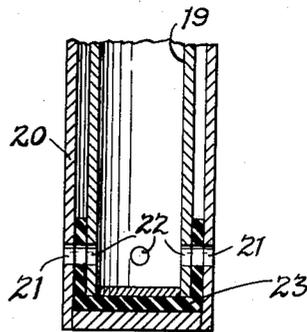
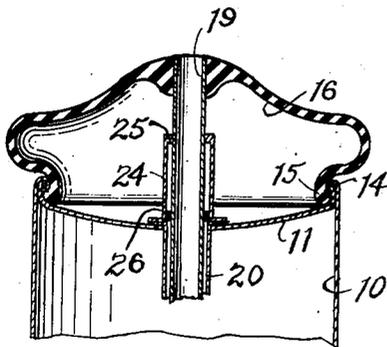


Fig. 4.



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SANITARY DOUCHE DISPENSER

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5 Claims. (Cl. 128—251)

My present invention relates to personal hygiene and more particularly to a safe, convenient and disposable sanitary douche dispensing device.

An object of the invention is to provide a sanitary douche dispensing container from which an hygienic douche will be automatically expelled in a safe and sanitary manner when applied to the person of a user.

Another object of the invention is to provide a disposable container in which a douche may be sold and safely transported until the need therefor is required.

A further object of the invention is to provide a novel valve and actuating mechanism for an hygienic fluid containing receptacle which will become automatically operative to dispose the contained fluid upon contact with the body of the user.

Other objects and advantages will be in part evident to those skilled in the art and in part pointed out herein-after in connection with the accompanying drawing wherein there is shown by way of illustration and not of limitation a preferred embodiment of the invention.

In the drawing:

Figure 1 is a vertical sectional view showing a preferred embodiment of the invention,

Figures 2 and 3 are fragmentary sectional views showing details of the invention in different operating positions, and

Figure 4 is a fragmentary view illustrating a condition of the apparatus when in use.

The matter of personal hygiene presents many complicated problems and this is particularly true of women who are required to travel and reside in hotels where the facilities generally maintained around a home are not available. One particular difficulty is found in the matter of a safe, and convenient douche, and unless the party carries along in her baggage the required sanitary materials, there is no effective manner by which such an operation may be performed away from the home. It is therefore a major object of the present invention to provide a disposable container which may be purchased in a drugstore in charged form with a suitable, antiseptic solution which may be conveniently used in a safe and entirely automatic manner by simply applying the container to the body of a user.

For a more detailed description of the invention, reference is now had to the accompanying drawing where in Figure 1, I have shown a cylindrical container 10 having ends 11 and 12 which are crimped to the body of the container so that there will be no leaks when the container is charged with a fluid under pressure. A lower beading 13 of the container is of conventional form, whereas a beading 14 at the upper end thereof is extended upwardly or otherwise deformed to provide an annular recess into which a bead 15 carried by a rubber or nipple like cap 16 of yieldable material is seated. This rubber or nipple-like cap 16 extends outwardly beyond the upper end of the container 10 and presents a soft and yielding body contacting surface which will become deformed inwardly when pressure is applied axially thereupon. To

prevent an inadvertent deformation of this cap or nipple 16 when the device is sold or until used, I also provide a rigid cover 17 of metal or a plastic cap which is here shown as seated upon the container 10 in protective relation with the nipple 16. In this showing the cap 17 has a slip fit much like the cover on an ordinary can, but it will be understood that it may be screw threaded or otherwise secured upon the container 10. To insure against tampering the cap 17 may also be secured with a breakable seal.

At this point it will be noted that the nipple-like cap 16 is thickened at its outer end as at 18 and carries a solution discharging tube 19 that is closed at its inner end and extends axially into the container 10 where it is seated in a tubular valve member 20 with which it cooperates. This tubular valve 20 is disposed centrally within the container 10 and extends substantially to the bottom thereof and at its end it is provided with one or more fluid conducting ports 21 through which a solution under pressure within the container 10 will be discharged when the device is in use. The solution discharging tube 19 normally extends into the tubular valve member 20 to a point closely adjacent the fluid conducting ports 21 and at its end the discharge tube 19 is provided with one or more ports 22 that are adapted to be brought into register with the fluid conducting ports 21 of the valve member 20. Disposed outwardly beyond the ports 21 the discharge tube 19 also carries an annular packing 23 that operates to seal the container 10 against any inadvertent discharge of its contained solution when the dispenser is not in use. To limit outward movement of the valve member 19 by pressure exerted from within the container 10 there is a cylindrical limit stop 24 which has an inturned annular flange 25 at its outer end that is engaged by an annular ring or stop 26 carried by the fluid discharge tube 19. In this manner the fluid discharge tube 19 is held in its inactive position with limited freedom of inward motion sufficient to align the ports 22 thereof with the ports 21 of the valve member 20.

In now referring to Figures 2 and 3 of the drawings it will be seen that the annular packing 23 is perforated or provided with fluid conducting ports in alignment with the ports 22 of the discharge tube 19. For durability I have shown the annular packing 23 as in the form of a cup with a bottom portion 27 that extends around and over the end of the discharge tube 19. As shown in Figure 2, when the device is not in use the discharge tube 19 will be in its outwardly extended position with its ports 22 out of register with the ports 21 and when in use the parts will assume the positions shown in Figure 3 where the ports 22 of the discharge tube 19 will be positioned in register with the ports 21 of the tubular valve member 20.

The particular solution with which the container 10 is charged will depend upon the use for which the charged device is ultimately intended. As for the pressure employed this will be low and only sufficient to discharge the contents of the container 10. This pressure may be provided with a gas charged liquid or the container 10 may carry an elastic sack with air or gas under pressure which will expand and expel the solution from the container when the ports 21 and 22 of the device are brought into register. As an alternative it is also possible that the container may carry a capsule charged with gas or air under pressure which will be perforated by an inward movement of the fluid discharge tube 19.

As shown in Figure 4 of the drawing when the device is in operation the rubber or flexible nipple-like cap 16 will yield under pressure and assume a configuration conforming to the surface of a body against which it is placed and when so deformed the cap or nipple 16 will

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form a seal from the atmosphere and insure a full discharge of the solution at the point where required.

While I have, for the sake of clearness and in order to disclose the invention so that the same can be readily understood, described and illustrated a specific form and arrangement, I desire to have it understood that this invention is not limited to the specific form disclosed, but may be embodied in other ways that will suggest themselves to persons skilled in the art. It is believed that this invention is new and all such changes as come within the scope of the appended claims are to be considered as part of this invention.

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

1. In an automatic douche dispensing device, the combination of a sealed container having a douche solution under pressure therein, a yieldable body engaging member portion carried by said container adapted and arranged to conform to a portion of the human body against which it may be pressed, a discharge tube carried by said yieldable body engaging member extending into said container having a port at its inner end through which said douche solution may be discharged, and means responsive to an inward deformation of said yieldable body engaging member for controlling the flow of fluid through the ports of said discharge tube when the device is in use.

2. In an automatic douche dispensing device, the combination of a sealed container for a douche solution under pressure, a yieldable body engaging member mounted upon and encompassing one end of said container, said member being adapted and arranged to conform to a portion of the human body against which it may be pressed, a discharge tube carried by said yieldable portion extending into said container and having ports at its inner end through which a douche solution may be discharged, and means within said container having ports with which the ports of said discharge tube register upon an inward deformation of said yieldable body engaging member for controlling the flow of fluid from said container when the device is in use.

3. In an automatic douche dispensing device, the combination of a cylindrical container adapted to contain a solution under pressure, an inwardly extending tubular valve member sealed to one end of said container and having fluid conducting ports at the inner end thereof, a fluid discharge tube slidably mounted within said tubular valve member also having fluid discharge ports at its end, a packing at the outer end of said tube to prevent escape of fluid from said tubular valve member, a stop means for retaining said discharge tube in a definite outwardly extending position, and a nipple of soft pliable material secured to and extending outwardly from one

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end of said container into which the outer end of said discharge tube is seated with its open end exposed to the atmosphere, said nipple being adapted and arranged to be deformed when pressed against the body of a user and move said fluid discharge tube inwardly to place the ports of said tube and said valve member in register and permit the escape of the solution from said container and through said discharge tube.

4. In an automatic douche dispensing device, the combination of a cylindrical container adapted to contain a solution under pressure, a tubular valve member sealed to one end extending centrally into said container and having fluid conducting ports at the inner end thereof, a fluid discharge tube slidably mounted within said tubular valve member having fluid conducting ports and a packing disposed at its end to prevent escape of fluid from said tubular valve member, means for retaining said fluid discharge tube in a definite outwardly extending position, and a deformable nipple of soft pliable material secured to and extending outwardly from one end of said container into which the outer end of said discharge tube is seated with its open end exposed to the atmosphere adapted and arranged to move said discharge tube inwardly and bring the ports thereof into register with the ports of said valve member and permit the escape of the solution from said container through said discharge tube when said nipple is deformed by engagement with the body of a user.

5. In an automatic douche dispensing device, the combination of a cylindrical container for a solution under pressure, an inwardly extending tubular valve member sealed within and extending through one end of said container and having fluid conducting ports at the inner end thereof, a fluid discharge tube slidably mounted within said tubular valve member also having fluid discharge ports, a packing at the outer end of said tube to prevent escape of fluid from said tubular valve member, stop means for retaining said fluid discharge tube in an outwardly extending position, and a nipple of soft pliable material at one end of said container into which the outer end of said discharge tube is seated with its open end exposed to the atmosphere, said nipple being adapted and arranged when pressed against the body of a user to move said fluid discharge tube inwardly and place the port of said tube in register with the port of said valve member and thus permit the escape of the solution from said container and through said discharge tube.

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