June 7, 1932. R. H. MOORE 1,861,932

DOUCHE APPARATUS

Filed May 28, 1931

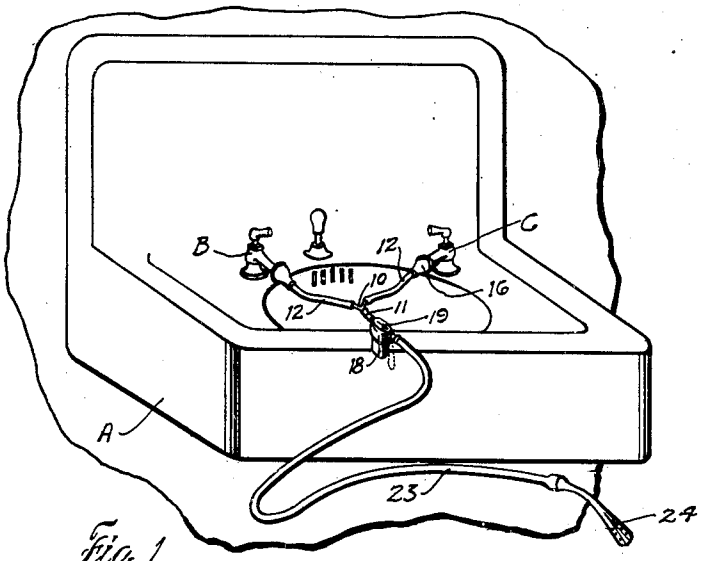


Fig. 1

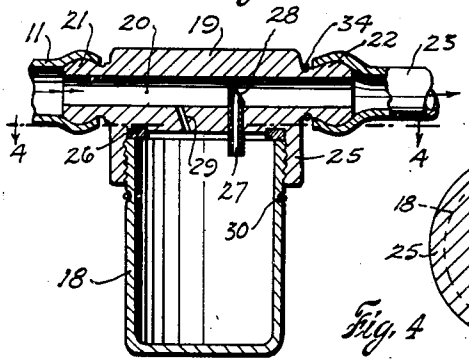


Fig. 2

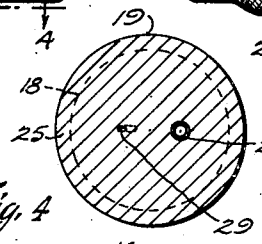


Fig. 4

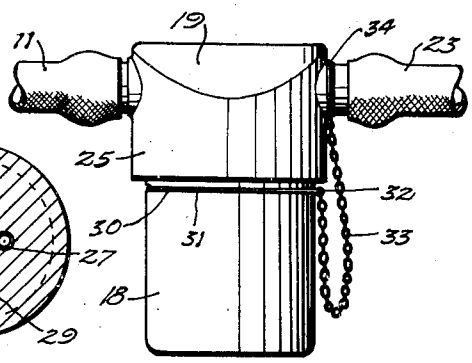


Fig. 3

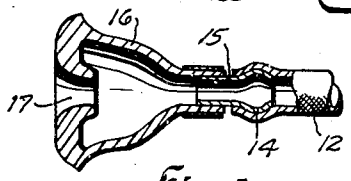


Fig. 5

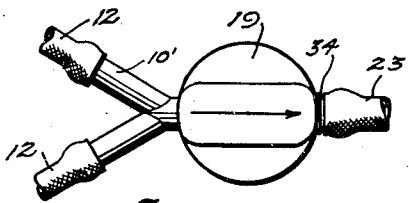


Fig 7

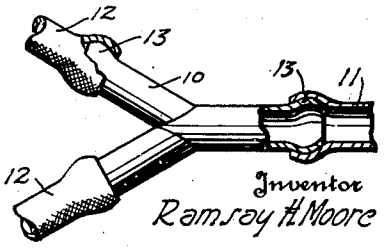


Fig. 6

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UNITED STATES PATENT OFFICE

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DOUCHE APPARATUS

Application filed May 28, 1931. Serial No. 540,571.

This invention relates to new and useful improvements in douche apparatuses.

One object of the invention is to provide an improved douche apparatus which may be attached to a source of running water, such as a faucet or faucets, whereby an admixture of hot and cold water, modulated to the desirable degree may be utilized in a highly efficient manner.

An improved object of the invention is to provide improved means whereby a portion of the flowing stream of water may be bypassed into a receptacle to form a medicated solution and this solution united with the flowing stream, thus making for a more sanitary as well as a more effective douche.

A further object of the invention is to provide improved means whereby the apparatus may be connected with a hot water faucet and a cold water faucet, either singly or together, thus providing for different temperatures and streams of various force and quantities.

Another object of the invention is to provide an improved form of medicament receptacle making possible the use of a liquid, tablet or powdered type of medicament, as well as being convenient, compact and accessible.

A construction designed to carry out the invention will be hereinafter described together with other features of the invention.

The invention will be more readily understood from a reading of the following specification and by reference to the accompanying drawing in which an example of the invention is shown, and wherein:

Figure 1 is a perspective view of a lavatory having a douche apparatus constructed in accordance with the invention, connected to the faucets thereof,

Figure 2 is a vertical sectional view of the medicament container and the tube connections thereto,

Figure 3 is an elevation of the same,

Figure 4 is a horizontal cross-sectional view taken on the line 4—4 of Figure 2,

Figure 5 is a sectional view of one of the faucet couplings,

Figure 6 is a detail of the Y-connection for the faucet attachment, and

Figure 7 is a plan view showing a modified form of container hook-up.

In the drawing the numeral 10 designates a Y-connection made of hard rubber or other suitable material. A short flexible tube 11 is connected to the stem of the connection, while feed tubes 12 are connected to the branches of the connection. The connection 10 may have bosses 13 at its extremities over which the tubes are stretched as is best shown in Figure 6, thus making for tight connections.

Each feed tube has one end secured over the boss 14 of a nipple 15 which is fastened in the stem of an adapter or coupling 16. Each adapter is formed of soft rubber or other suitable material and provided with an enlarged hollow body having a central opening 17. Such adapters are now in common use and form no particular part of the invention.

In Figure 1, I have shown a lavatory A having a hot water faucet B and a cold water faucet C. The adapters 16 are slipped onto the ends of the faucets, which are received in the openings 17, whereby the adapters are frictionally held on the faucets. Owing to the elastic nature of the adapters they will fit different sizes of faucets. While I have shown an assembly for connection to two faucets, the invention is not to be so limited, and a connection may be made for one faucet as hereinafter described.

A medicament container comprising a cup 18 and a cap 19 is provided for connection with the short tube 11. This container may be formed of any suitable material, however, it has been found satisfactory to construct these parts of hard rubber. The cap 19 is preferably, but not necessarily, circular in shape, and is provided with a diametrical duct 20 extending therethrough. A projecting boss 21 is formed at one end of the duct and a similar boss 22 is formed at the opposite end of said duct.

One end of the short tube 11 is secured over the boss 21 and a discharge tube 23 of varying length is secured over the boss 22. It is pointed out that the tubes 11 and 23 may be of any desired lengths according to the pur-

pose for which the apparatus is used as well as the distance from the faucet to the location of the user. Any suitable nozzle may be secured to the end of the tube 23, and I have shown a nozzle 24 connected thereto in the usual manner but which forms no particular part of the invention. It is pointed out that where it is desired to connect the device to a single faucet, the tube 11 and the Y-connection 10 are removed, and one of the feed tubes 12 is secured directly to the boss 21. This may be done where hot and cold water is supplied through a single faucet or for any other reason.

The cap 19 has a depending annular flange 25 which is internally screw-threaded and the upper end of the cup 18 is provided with external screw-threads. A gasket 26 of soft rubber or other suitable material is seated within the flange and the cup is screwed up against this gasket thus forming a fluid tight joint. An atomizing quill 27 is fastened in the cap so as to project into the duct 20 and to depend into the cup. The top of the quill is beveled at 28 on the side next to the discharge tube 23 so that the water in flowing through the duct 20 will induce a suction or discharge in its direction of flow, and to accentuate this feature the quill may extend to the top of the duct.

Between the quill and the boss 21 the cap is provided with a small inclined port 29 extending from the bottom of the duct to the bottom of the cap so as to discharge or by-pass a small portion of the stream of water into the cup 18. This port is in advance of the quill and is inclined toward the quill so that a portion of the stream of water will readily pass into the cup when flowing through the duct 20. A suitable medicament, detergent, or any other material of which it is desired to form a solution may be placed in the cup 18 and may be either in liquid, powdered or tablet form.

It is pointed out that the port 29 is considerably smaller than the duct 20 and thus only a portion of the water passing through said duct will flow into the cup. It is desirable to form in the cup a concentrated solution, and to feed this solution from the cup into the stream of water in such proportion as to procure a proper mixture. The water upon entering the cup will form with the contents thereof the desired solution and this solution will be discharged in small quantities through the quill 27 directly into the stream of water flowing through the channel 20. By this arrangement a violent agitation of the contents of the cup is avoided, yet the port 29 produces a sufficient jet to thoroughly admix the influent water and a liquid or a powder contained in the cup. As a matter of convenience a small ring 30 is confined in a circumferential groove 31 on the outer surface of the cup just below the flange 25. This ring is provided with an eye 32 to which one end of a small chain 33 is attached. The other end of the chain is secured to a small ring 34 snugly fitting around the neck of the boss 22. By this arrangement, the cup and cap are tied together and misplacing of the cup is obviated. The cup may also be suspended by the chain for drying or airing when necessary.

In using the apparatus the cup 18 is unscrewed from the flange 25 and the medicament, detergent, or other material with which it is desired to form a solution, is placed in said cup and the cup is then screwed into the flange against the gasket 26 so as to form a fluid tight joint. The adapters 16 are then pushed onto the ends of the faucets B and C which are received in the opening 17 of each adapter. The faucets are then opened to supply hot and cold water which is mixed into a single stream by the Y-connection 10, and this stream discharged into the duct 20 through the tube 11. The temperature may be controlled and regulated by adjusting the faucets. Of course, if it was not desired to use a medicament, detergent, or any other material in the cup 18, the apparatus would operate exactly the same except that no solution would be formed.

The major portion of the stream of water flows through the duct 20 and is discharged into the tube 23, from which it is finally discharged by the nozzle 24. A portion of the flowing stream of water is by-passed through the port 29 into the cup 18 and admixes or dissolves the ingredients of said cup, thus forming a concentrated solution. This solution is discharged through the quill 27 and by reason of the bevel 28 is induced to flow in the direction in which the stream is traveling. By this arrangement the solution is fed into the stream of water as it passes through the duct 20, and thus a diluted solution is discharged into the tube 23.

There are many advantages to this apparatus. Owing to the fact that only a small portion of the water is discharged into the cup through the port 29 said water when first discharged through the nozzle 24 will be substantially free from any admixture with the contents of the cup 18 and this condition will be prolonged if the faucets are only partially opened to produce a slow flow under low pressure. Of course, after the by-passed water has had an opportunity to mix with the ingredients in the cup and form a solution, such solution will be discharged into the flowing stream of water.

It is obvious that the apparatus may be used for various purposes either as a douche or for flushing operations. Also any kind of a spray, brush, or other device could be attached to the tube 23, and the use of the apparatus is thus not limited to bodily use. The bosses 21 and 22 are advantageous as are the bosses of the Y-connection 10 and other

parts because they prevent accidental disconnection of the parts which would interrupt the service of the device.

In Figure 7 I have shown a modified form. A Y-connection 10′ similar to the connection 10 has its stem secured directly to the cap 19 in registration with the duct 20, thus eliminating the boss 21 and the tube 11. The feed tubes 12 are attached directly to the branches of the connection 10′, otherwise the apparatus is the same. It is obvious that the cup 18 and cap 19 may be made of any suitable size and of any suitable material.

This application is filed as a continuation in part of my co-pending application filed September 8, 1930, Serial No. 480,470.

Various changes in the size and shape of the different parts, as well as modifications and alterations, may be made within the scope of the appended claims.

Having illustrated and described preferred forms of the invention, what I claim, is:

1. In an apparatus of the character described, a container including a cup and a cap, the cap of the container having a transverse passage extending therethrough and a single small inlet and a single outlet between the passage and the cup for by-passing a portion of the liquid from said passage both being of considerably less capacity than the passage so as to discharge a comparatively smaller stream of liquid from the cup into the stream of liquid flowing through the passage.

2. In an apparatus of the class described, a container including a cup and a removable cap forming a closure for the cup, the cap having a transverse duct with two openings communicating with the cup for by-passing a portion of the liquid through said cup, separable means for establishing a connection at one end of the duct of the cap with a water faucet, and a flexible tube removably connected with the opposite end of the duct of the cap to conduct a mixed liquid therefrom.

3. In an apparatus of the character described, a cap having opposite bosses and a duct extending transversely through the cap and also through said bosses, flexible conductors engaged around said bosses, one of said conductors having an adapter for connection with a water faucet and the other conductor having a discharge medium on its end, an annular flange depending from the cap and a cup having its upper end screwed into the flange, the cap having an inlet from its duct to the cup and an outlet from the cup to the duct, both the inlet and the outlet of the cap being considerably smaller than the duct so as to only by-pass a portion of the liquid flowing through the duct into and out of said cup.

4. An apparatus as set forth in claim 3 and a quill inserted in the outlet of the cap having its upper end extending transversely of the duct.

5. In an apparatus of the character described, a cap having a transverse duct and projections at each end of the duct, a flexible supply tube connected to one of the projections of the cap, a flexible adapter connected with the supply tube and having an opening for frictionally engaging the end of a faucet, a flexible discharge tube connected with the other projection of the cap, an internally screw-threaded flange depending from the cap, a cup having its upper end screw-threaded and engaged in the flange, the cap having a small port extending from the duct so as to discharge into the cap, and a quill mounted in the cap and extending from the cup into the duct in the path of the liquid flowing through the latter.

In testimony whereof I affix my signature.

RAMSAY H. MOORE.