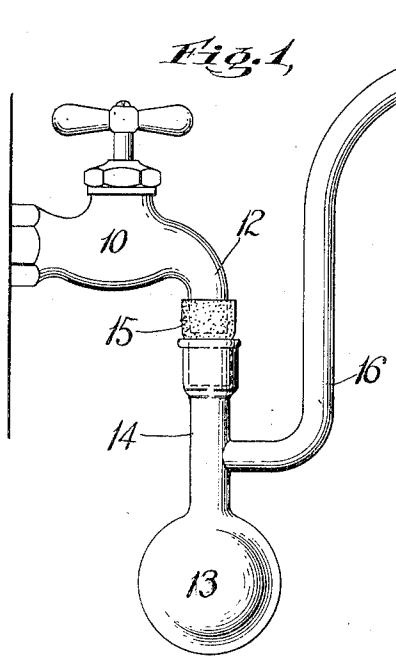
Oct. 25, 1927. 1,646,942

L. L. TUORTO

MOUTH SPRAYING DEVICE

Filed Oct. 6, 1926

Fig. 1,



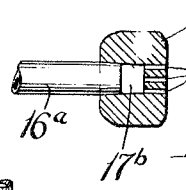


Fig. 2,

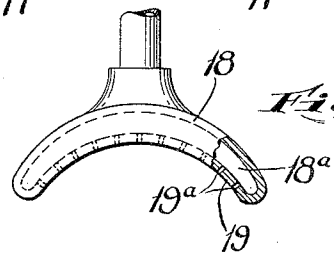


Fig. 3,

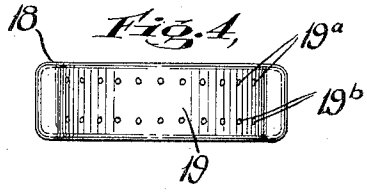
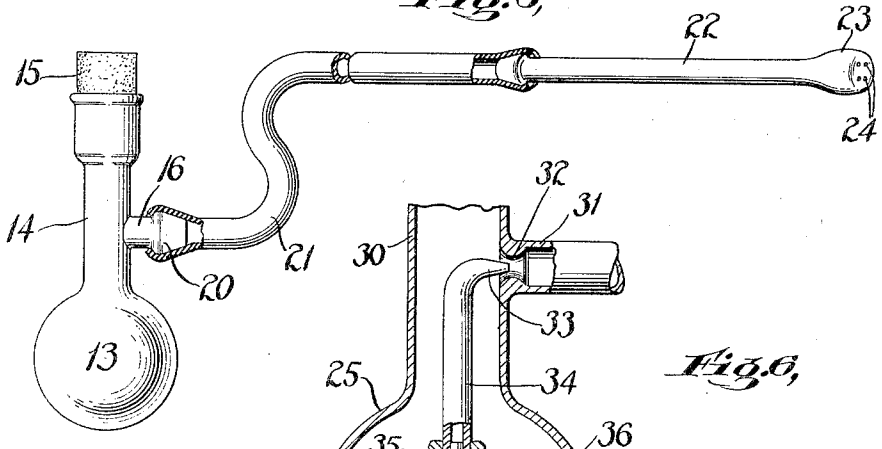


Fig. 4,

Fig. 5,



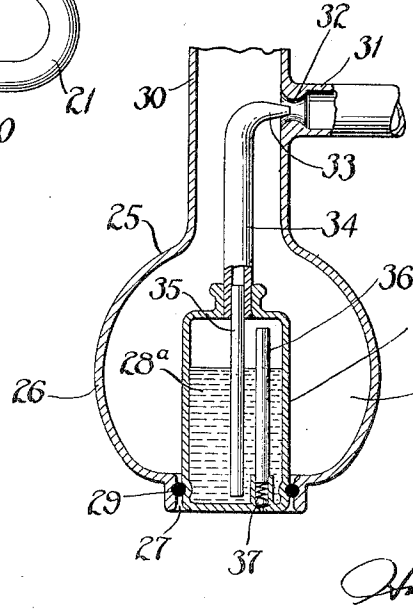


Fig. 6,

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Patented Oct. 25, 1927. 1,646,942

UNITED STATES PATENT OFFICE.

LOUIS L. TUORTO, OF PEQUANAC, NEW JERSEY.

MOUTH-SPRAYING DEVICE.

Application filed October 6, 1926. Serial No. 139,823.

This invention relates to devices for use in spraying the mouth or throat of a person for the purpose of washing or cleansing various parts of the mouth and throat and including the teeth; and the object of the invention is to provide a device of the class specified which is so constructed as to adapt its use in connection with a water discharge faucet or valve whereby the pressure of a conventional water supply may be utilized in the operation of the device, and the pressure of the water being controlled by the faucet or valve; a further object being to provide the device with discharge nozzles constructed to suit the specific purposes for which the same are intended, rendering the device highly efficient in the accomplishment of the desired result; a still further object being to provide means for combining a medicinal, antiseptic or other element with the water to form a solution suitable for the specific purpose intended, which is directed to the desired portion of the body by the use of a suitable discharge nozzle; and with these and other objects in view, the invention consists in a device of the class and for the purpose specified, which is simple in construction and operation, efficient in use, and which is constructed as hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawing forms a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which:—

Fig. 1 is a side view of one form of my improved device and indicating the method of its use.

Fig. 2 is a sectional, detail view of the nozzle seen in Fig. 1.

Fig. 3 is a plan view of a modified form of nozzle, part of the construction being broken away and in section.

Fig. 4 is a face view of the nozzle seen in Fig. 3.

Fig. 5 is a view similar to Fig. 1 but showing a modification; and,

Fig. 6 is a sectional view through another form of device, with part of the construction broken away.

In Fig. 1 of the drawing, I have indicated at 10 a water discharge faucet or valve coupled with a source of water supply, and mounted in connection with the discharge spout 12 of the faucet is one of my improved mouth wash or spray devices. The device seen in Fig. 1 comprises a globe body 13 having a tubular portion 14, at the free end of which the spout 12 of the faucet is adapted to be coupled by means of a coupling member 15 of any kind or class, for example, a rubber tube.

At one side of the tubular portion 14 is a discharge tube 16 which extends outwardly, upwardly and outwardly, and the free end 16^a thereof is provided with a discharge nozzle 17 having a plurality of orifices 17^a which open into a chamber 17^b with which the tube or pipe 16 communicates.

When the device is attached to a faucet or similar water discharge in the manner seen in Fig. 1 and the valve of the faucet opened, the water will pass downwardly into the cylindrical body 13 and out through the discharge tube 16 and thus through the apertures 17^a in the nozzle 17, it being understood that the entire nozzle may be placed in the mouth or the lips may be placed upon the curved portions 17^c on said nozzle whereby the spray of water may be directed to various parts of the mouth for cleansing purposes, and the pressure of the spray will be regulated by the valve in the faucet 10.

In Figs. 3 and 4 of the drawing, I have shown another form of nozzle 18 consisting of an arc-shaped body having a chamber 18^a therein and the concave wall 19 of said body is provided with two sets of discharge apertures 19^a and 19^b. The nozzle 18 is adapted primarily for use in the washing of teeth, it being understood that the concave face or wall 19 of the nozzle is placed upon the teeth of the upper and lower jaws to bring the discharge apertures 19^a—19^b in alinement with the crevices of the teeth, which result may be accurately produced by vertical reciprocation of the nozzle when in use, and the sprays of water or other substance will be directed to the teeth and the crevices between the teeth to effect a perfect wash and cleansing thereof. It will also be understood that the nozzle may be reciprocated laterally to reach the teeth at the back of the jaw, as well as at the front. The nozzle 18 may be coupled with a device similar to that shown in Fig. 1 or as seen in Figs. 5 and 6 of the drawing.

In Fig. 5, I have shown a modification wherein the tube 16 projects slightly from the tubular portion 14 of the device, and is provided with an enlarged or beaded head

20 whereby a flexible tube 21 may be coupled therewith, the other end of said tube coupling with the nozzle employed, it being understood that the nozzle will be constructed to suit the attachment of the flexible tubing 21. In Fig. 5, a nozzle 22 in the form of an elongated tube is shown and the discharge end 23 of said tube is slightly enlarged and provided with a number of discharge apertures 24. The nozzle shown in Fig. 5 of the drawing is adapted for use primarily in reaching the various parts of the throat of the mouth in the application of a liquid wash or cleanser.

In Fig. 6 of the drawing, I have shown a tubular body 25 slightly different in construction than the body 13 in that the cylindrical end 26 is provided with an opening 27 in the bottom thereof to permit of the insertion of a medicinal, antiseptic or other liquid container 28 into the cylindrical portion of said body and the support of said container therein, a suitable packing and retaining ring 29 being employed between the parts as seen. The upwardly directed tubular extension 30 of the body 25 is provided with a discharge tube 31 having a Venturi throat 32 in connection with which a nozzle 33 operates, the nozzle 33 being at the end of a tube 34 which is coupled with the container 28 and is placed in communication with the liquid 28^a in the container by a tube 35 which extends to the bottom of said container. A vent tube 36 is mounted in the container 28 and opens outwardly through the bottom thereof, the opening being controlled by a spring pressed ball valve 37.

It will be understood that a nozzle of any suitable form and construction will be coupled with the free end of the tube 31 and suitable means will be provided for passing water into the tubular portion 30 of the device in order to enter the chamber 38 in the cylindrical portion 26 and to pass out through the Venturi throat 32, and the velocity of flow of water past the nozzle 33 will operate to draw portions of the liquid 28^a in the container 28 to mingle the same with the water as it passes into the discharge tube 31.

It will be understood that any suitable medicinal or antiseptic liquid may be employed to suit the purpose for which the device is used, for example, the tonsils or other affected portions of the throat may be sprayed or cleansed by water plus a suitable medicinal element, it being understood that the medicinal element will be sufficiently strong to produce the desired solution when mingled with the water. In a like manner, antiseptic or other elements may be mingled with the water in a mouth wash pure and simple, or in the cleansing or washing of the teeth to eliminate the use of tooth brushes and similar devices. While I have shown and described certain details of construction for carrying my invention into effect, it will be understood that I am not necessarily limited to the structure herein shown and described, and various changes therein and modifications thereof may be made within the scope of the appended claims without departing from the spirit of my invention or sacrificing its advantages.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A device of the class described comprising a hollow body, means for coupling said body with a liquid supply, an outlet on said body adjacent said first named means, a medicinal or antiseptic container in said body, a discharge tube in communication with the chamber of said container and cooperating with the outlet of said body whereby the liquid introduced into said body and passed through said outlet around said tube will cause the liquid of said container to be discharged from said tube and mingled with the first named liquid, and said outlet being provided with a nozzle.

2. A device of the class described comprising a hollow body, means for coupling said body with a liquid supply, an outlet on said body adjacent said first named means, a medicinal or antiseptic container in said body, a discharge tube in communication with the chamber of said container and cooperating with the outlet of said body whereby the liquid introduced into said body and passed through said outlet around said tube will cause the liquid of said container to be discharged from said tube and mingled with the first named liquid, said outlet being provided with a nozzle, and a vent tube in communication with the upper end of said container.

3. A device of the class described comprising a hollow body, means for coupling said body with a liquid supply, an outlet on said body adjacent said first named means, a medicinal or antiseptic container in said body, a discharge tube in communication with the chamber of said container and cooperating with the outlet of said body whereby the liquid introduced into said body and passed through said outlet around said tube will cause the liquid of said container to be discharged from said tube and mingled with the first named liquid, said outlet being provided with a nozzle, a vent tube in communication with the upper end of said container, and means for detachably supporting the container in said body.

4. A device of the class described comprising a hollow body, means for coupling said body with a liquid supply, an outlet on said body adjacent said first named means, a medicinal or antiseptic container in said

body, a discharge tube in communication with the chamber of said container and cooperating with the outlet of said body whereby the liquid introduced into said body and passed through said outlet around said tube will cause the liquid of said container to be discharged from said tube and mingled with the first named liquid, said discharge tube being provided with a nozzle, a vent tube in communication with the upper end of said container, and means for detachably supporting the container in said body and forming a seal between the container and said body.

5. A device of the class described comprising a hollow body, means for coupling said body with a liquid supply, an outlet on said body adjacent said first named means, a medicinal or antiseptic container in said body, a discharge tube in communication with the chamber of said container and cooperating with the outlet of said body whereby the liquid introduced into said body and passed through said outlet around said tube will cause the liquid of said container to be discharged from said tube and mingled with the first named liquid, said outlet being provided with a nozzle, a vent tube in communication with the upper end of said container, means for detachably supporting the container in said body and forming a seal between the container and said body, and a valve controlling the vent tube.

6. A device of the class described comprising a hollow body, means for coupling said body with a liquid supply, an outlet on said body adjacent said first named means, a medicinal or antiseptic container in said body, a discharge tube in communication with the chamber of said container and cooperating with the outlet of said body whereby the liquid introduced into said body and passed through said outlet around said tube will cause the lnquid of said container to be discharged from said tube and mingled with the first named liquid, said outlet being provided with a nozzle, a vent tube in communication with the upper end of said container, means for detachably supporting the container in said body and forming a seal between the container and said body, a valve controlling the vent tube, and the outlet of said body being flexible.

7. A spray device of the class described comprising a hollow body into which water is adapted to be passed under pressure, means for supporting a medicinal or antiseptic element in connection with said body, a discharge tube on said hollow body at a point intermediate the ends thereof, a tube in communication with said element and positioned in a Venturi throat opening into said discharge tube whereby the passage of water into said hollow body and through said throat into the discharge tube, will mingle said element with the water passed through the discharge tube.

8. A spray device of the class described comprising a hollow body into which water is adapted to be passed under pressure, means for supporting a medicinal or antiseptic element in connection with said body, a discharge tube on said hollow body at a point intermediate the ends thereof, a tube in communication with said element and positioned in a Venturi throat opening into said discharge tube whereby the passage of water into said hollow body and through said throat into the discharge tube, will mingle said element with the water passed through the discharge tube, and the free end of the discharge tube being provided with a nozzle adapted to enter the mouth of the user.

9. A mouth wash device comprising a hollow body provided with a large, spherical, lower end portion and an upwardly directed tubular portion, means at the end of the tubular portion for coupling the same with a liquid supply whereby liquid may be passed downwardly into said lower end portion, a discharge tube on said tubular portion intermediate the end thereof, and said spherical portion, and a nozzle fashioned to enter the mouth of the user at the free end of said discharge tube.

In testimony that I claim the foregoing as my invention I have signed my name this 4th day of October 1926.

LOUIS L. TUORTO.