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1,940,210

FAUCET SYRINGE

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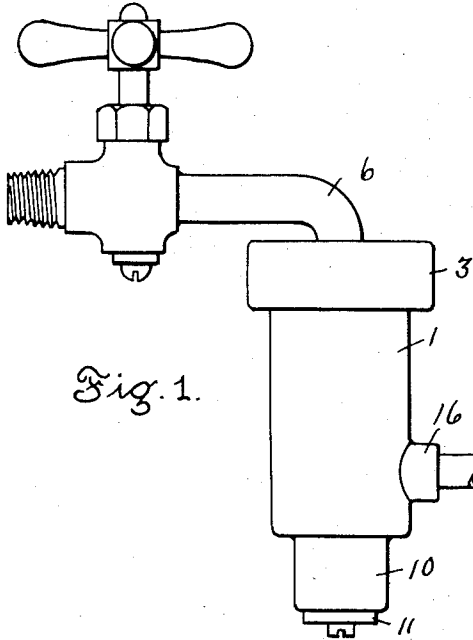


Fig. 1.

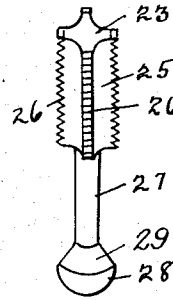


Fig. 5.

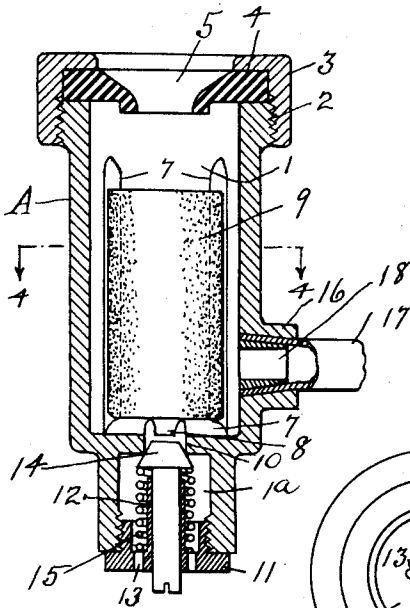


Fig. 2.

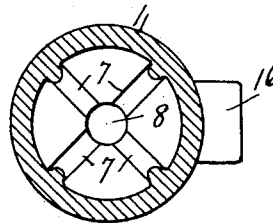


Fig. 4.

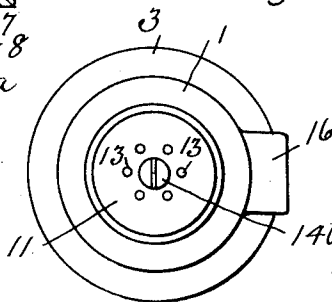
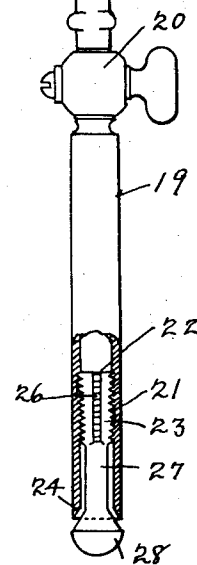


Fig. 3.



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FAUCET SYRINGE

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3 Claims. (Cl. 128—229)

This invention relates to an improved faucet syringe, and has for its object to provide a simple and efficient device that can be readily attached to any faucet and which is provided with a chamber for holding a medicated tablet, or cartridge, or other medicinal preparations, which is in constant contact with the water as it passes from the faucet to the nozzle of the syringe as it is being used. A further object of my invention is to provide means for automatically regulating the pressure of water as it passes through the syringe. A further object of my invention is to provide a nozzle that will discharge a cone-shaped or circular spray in the shape of an inverted umbrella.

The invention consists of the novel construction and arrangement of the parts and combination of parts hereinafter more fully set forth in the following specification and pointed out in detail in the appended claims.

In the accompanying drawing,—

Figure 1 shows my invention secured to a water faucet, the outer end of the nozzle being broken away and shown in section.

Figure 2 is a vertical longitudinal section of the casing showing the upper medicating chamber and lower chamber housing the relief valve.

Figure 3 is an inverted plan view of the casing.

Figure 4 is a section on the line 4—4 of Figure 2.

Figure 5 is an enlarged perspective view of the pin member that fits in the end of the nozzle.

Referring to the accompanying drawing, forming part of this specification, and in which like reference numerals designate like parts throughout the several views thereof, A designates a cylindrical casing open at both ends which is formed of hard rubber, or other suitable non-corrodible material divided by a partition to be hereinafter described, into an upper medicating chamber 1, and lower chamber 1^a. On the casing A adjacent the upper end thereof are formed threads 2 adapted to receive in threaded engagement a flanged retaining ring 3. Between the ring 3 and the upper edge of the chamber 1 is a rubber, or other suitable flexible disk 4 having a central opening 5 to allow it to be pushed over the end of the faucet 6 to which latter it is held friction tight. The medicating chamber 1 is provided on its inner surface with a number of ribs or projections 7 which extend down to the bottom of the chamber 1 and across the bottom to the central opening 8. The medicating tablet 9 rests on the ribs 7 at the bottom of the chamber

1 which together with the ribs extending up the side of the chamber 1 allows the water entering the chamber 1 from the faucet 6 to flow all around the tablet 9 so that the water becomes thoroughly medicated before passing out of the chamber 1 and through the syringe. The above mentioned bottom of the upper chamber 1 is formed by a transverse partition 10 which is integral with the body of the casing A and divides the same into the upper medicating chamber 1 and lower chamber 1^a, as clearly shown in Fig. 2. The opening or passage 8 as referred to is centrally formed in the partition 10 and serves to communicate the upper and lower chambers in the manner to be hereinafter described. Below the medicating chamber 1 is a small chamber 1^a which has communication with the chamber 1 through the passage 8. Screw-threaded in the open end of the chamber 1^a is a cap 11 having a sleeve 12 integral therewith and a number of apertures 13 which permits fluid entering said lower chamber to flow out. Mounted in the sleeve 12 is a relief valve 14 which is seated in the passage 8 and is held normally seated by the coiled spring 15. The stem of the valve 14 is slidably guided in the sleeve 12 and projects through the cap 11, the valve 14 being formed with a tapered surface the outer edge thereof being positioned within said passage when the valve is seated. At the side of the medicating chamber 1 is a projecting base 16 provided with a discharge opening 16^a into which one end of the rubber tubing 17 is secured. The inner surface of the discharge opening 16^a is tapered and the tubing 17 is held therein by a hollow wedge or tapered nipple 18 which is pushed into the end of the tubing 17 from the inside of the chamber 1 and serves to hold the tubing 17 securely in the discharge opening 16^a. The opposite end of the tubing 17 is provided with a nozzle 19 having a cut-off valve 20 of any desired construction. The nozzle 19 is screw-threaded on its inner surface near the outer end thereof at 21 and has a shoulder 22 on its inside surface against which the inner end of a pin 23 abuts when in position in the nozzle. The outer end of the nozzle 19 is tapered outwardly at 24. The pin 23 is cut away at 25 to form longitudinally spaced ribs 26 the outer surfaces thereof being threaded to permit the pin to be screwed into the end of the nozzle 19 with the inner end of the pin 23 abutting against the shoulder 22. The said pin 23 has a contracted neck 27 and a head 28, the under surface 29 of said head 28 being flared outwardly in the shape of a trun-

cated cone to conform to the taper on the outer end of the nozzle 19, which causes the water flowing through the nozzle 19 to assume the shape of an inverted cone as it leaves the end of the nozzle. The outer end of the pin 23 beyond the flared end 29 projects outwardly of the nozzle and is formed with a rounded tip.

After the device is secured to a faucet, as shown in Figure 1 of the drawing, the water is turned on and as it enters the medicating chamber 1 it flows around the medicinal tablet 9 and out through the discharge opening 16^a and through the tube to the nozzle 19 from which it is sprayed. Should the pressure of the water from the faucet 6 exceed a predetermined pressure the relief valve 14 will be unseated and part of the water will then flow through the chamber 10 and out through the apertures 13 into the bowl or tub over which the faucet projects, thus preventing any sudden pressure of water passing through the nozzle 19. When the pressure of the water is reduced the relief valve 14 will be seated through the action of the coiled spring 15.

It will thus be seen that as the medicating chamber is attached directly to the faucet, the water entering the chamber will come immediately into contact with the medicinal tablet, or other medicinal preparation being used, and continue in contact therewith, until the water leaves the chamber 1 and thus become thoroughly medicated. And in the event of a sudden increase of the water supply beyond a certain predetermined pressure, the relief valve 14 will be immediately unseated and allow part of the water to flow into the chamber 1^a and through the apertures 13 to the bowl or tub over which the faucet projects, thereby avoiding any danger, or disagreeable effects, of a sudden change of the water pressure while the syringe is being used.

Having thus described my invention, what I claim is:

1. A faucet syringe comprising a hollow unitary casing open at both ends, a transverse partition integral with said casing and dividing the same into an upper medicating chamber and a lower chamber, an annular rubber member seated on the open end of the upper chamber, a retaining ring removably secured to said casing for clamping said rubber member in fluid tight engagement with said casing, a passage in said partition communicating both chambers, upright projections on the partition within the upper chamber, inwardly directed projections on the casing wall in said upper chamber, said projections adapted to be engaged by a medicated cartridge and defining therewith spaced pockets for the circulation of the medicating solution around said cartridge, and a discharge nozzle secured to said upper chamber.

2. In combination with a faucet syringe comprising a hollow unitary casing open at both ends and formed to provide an upper and lower chamber connected together by a passage, of a pressure relief valve comprising a perforated cap removably secured to the open end of said lower chamber and provided with an inwardly projecting integral sleeve in alignment with said passage, a valve stem slidably guided within said sleeve, a valve on said valve stem seated in said passage, and a compression coil spring surrounding said sleeve and engaging said valve for normally maintaining said valve seated.

3. The structure as specified in claim 2, said valve stem projecting outwardly of said cap and said valve being provided with a tapered surface, the tapered edge thereof being positioned within said passage when said valve is seated.

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