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W. A. SCHATZ  
DISPENSING FAUCET  
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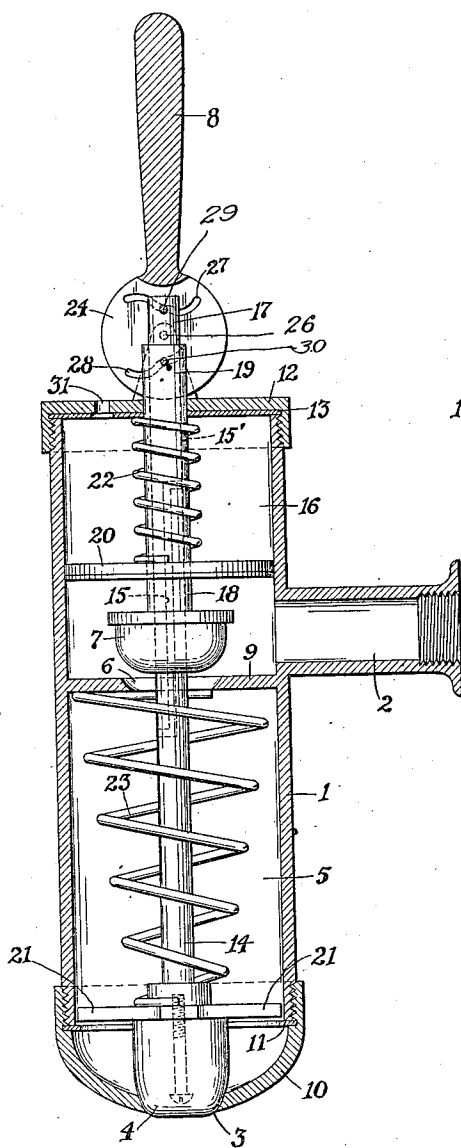


Fig. 1

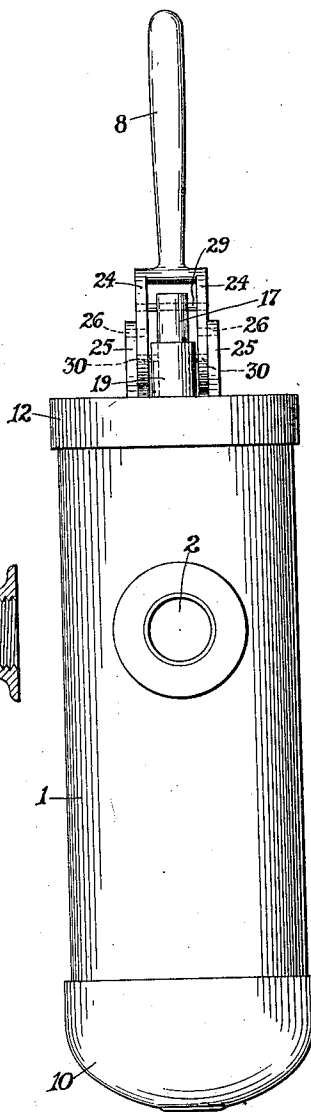


Fig. 2

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## UNITED STATES PATENT OFFICE.

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## DISPENSING FAUCET.

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This invention relates to liquid-dispensing faucets.

It is an object of the invention to provide a simple and efficient faucet, capable of convenient and reliable operation, to permit at will a measured intermittent or a continuous liquid discharge.

A further object is to provide an improved faucet of the character mentioned having features of functional advantage and structural superiority, as will in part be noted hereinafter in connection with the following description of the accompanying drawing, which illustrates a preferred embodiment of the invention and in which

Figure 1 is a vertical sectional view through the faucet in closed position, and

Fig. 2 is an elevational view at right angles to Fig. 1.

Referring more particularly to the drawing, the faucet includes a casing 1 having an inlet 2, a discharge opening 3 (closable by valve 4), a measuring chamber 5 with an inlet 6 (closable by valve 7) and an operating handle 8 to govern the positions of the valves 4 and 7, as will be described.

The casing 1 is preferably tubular, and conveniently has a dividing wall 9, which is provided with the opening 6. In order to close the casing at its lower end a dished bottom member 10 may be utilized, it being observed that this member is formed with the discharge opening 3, and that packing, such as 11, may be employed in order to assure a fluid-tight seal. Likewise, the upper end of the casing may carry a cover 12, conveniently secured in position by screw-threads, a disk 13 of suitable material being employed in order to assure a sealing of the parts.

The valve 4 may be removably attached to the lower end of an operating stem 14, which may be tubular, or at least provided with a passage 15 (indicated in dotted lines) extending from a portion somewhat below the casing wall 9 to the portion well within the upper end of the casing 1, which, as will appear, constitutes an air chamber 16. The stem 14 itself extends axially of the casing and projects its extremity 17 above the latter. The valve 7 in turn is carried at the lower end of a tube 18 which encloses the first-named stem and is concentrically disposed relatively thereto, which tube also projects its end 19 without the casing, but to an ex-

tent less than the end 17. The stem 18 above the valve 7 also carries a disk piston 20. Valve 4 is centered at the lower end by suitable means, such as guiding prongs 21, carried thereby. The stem 18 is also provided with an opening 15', shown out of registry of the stem 14, but, as will appear, capable of registry with the latter under certain conditions of operation to open communication from the air chamber 16 through the passage 15 into the measuring chamber 5 and allow flow of the contained liquid in the latter through the discharge opening 3.

Valve 7 is normally urged toward closing position by a coil spring 22 which surrounds the stem 18 and re-acts between the cover 12 and the piston top 20, while valve 4 is likewise normally urged towards closing position by a coil spring 23 located in measuring chamber 5 and re-acting between the dividing wall 9 of the casing and the lower guide member 21. The position of the two valves, however, is governed by connections between the ends 17 and 19 of the stems 14 and 18 with the operating handle 8, and for this purpose the handle at its lower end is bifurcated with two parallel and equal dimensional circular ears 24, which fit between and are centrally connected to upstanding ears 25 on cover 12 by pivots 26. The ears 24, in addition, are provided with a pair of registering upper cam slots 27 and a pair of lower registering cam slots 28, as shown in Fig. 1, while the upper extremity of the valve stem 14 carries a cross pin 29 having its ends within the slots 27, and the upper extremity of the stem 18 carries pins 30, having their extremities in the slots 28. It will be apparent that as the handle 8 is rotated about its pivotal axis 26, vertical movement of the stems 14 and 18 (with the valves 4 and 7 thereof) with relation to each other and to the casing 1, will be brought about in accordance with the shape of the slots 27 and 28.

The operation of the faucet will now be described. If the operating handle 8 is rotated to the right (Fig. 1), the stem 18 remains unmoved, since the pins 30 traverse a portion of the cam slot 28 on the arc of a circle, having its center at the axis 26 of the operating handle. Valve 7 consequently remains open. During this movement, however, stem 14 is raised by the pins 29 trav-

ersing the left portion of the cam slots 27 (as viewed in Fig. 1). Therefore valve 4 is raised and a clear passage opened from the faucet inlet 2 through the opening 3 to permit a continuous flow of liquid from the faucet. The reverse movement of the handle 8 to upright position restores the parts to position shown, and stops the liquid flow. In this position it will be observed that the chamber 5 and the chamber above the dividing wall 9 and below the piston 20 are filled with the liquid from the source to which the inlet 2 is connected.

When, now, the operating handle 8 is rotated to the left (Fig. 1), stem 18 is first depressed to cause valve 7 to seat in the opening 6 and close communication from the inlet 2 to the chamber 5. Valve stem 14, during such movement of the operating handle, is not disturbed, but immediately thereafter valve 4 is raised, while valve 7 continues to be closed, and consequently the discharge opening 3 is cleared to permit flow only of the contents of the chamber 5, which has conveniently a predetermined measured amount, for example, one ounce. Discharge of the liquid from the chamber 5 is further facilitated by reason of the registry at this time of the opening 15' in stem 18 with the upper end of the passage 15 in stem 14, so that the liquid, as discharged is displaced by air from the chamber 16; the latter being in communication with atmosphere by an opening 31. Reverse movement of the operating handle, as will be apparent, serves first to close the valve 4, and subsequently open valve 7 to the position of parts shown in the figure.

It is apparent, from the foregoing, that the improved device is capable of convenient operation to deliver at will either a definite measured amount or a continuous flow. On this account the faucet is particularly adapted for use in connection with beverage delivery, for example, with concentrated syrups or liquids which customarily are mixed before drinking. On account of the location of the discharge opening 3 and the co-operating shape of the valve 4, it will be apparent that the faucet is substantially dripless. Also it is to be noted that as the various pins 29, 26 and 30 may be removable the parts of the faucet may be readily disassembled and removed for thorough quick cleaning. The device as a whole is of conventional and attractive shape. The parts are capable of economical manufacture and not likely to get out of order or deteriorate in service.

It is to be understood, moreover, that cer-

tain features of the invention, as above described, are susceptible of modification and embodiment in other detailed forms and relationships without departure from the intended scope of the following claims.

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

1. In a dispensing faucet, in combination, a valve casing having a measuring chamber and provided with inlet and outlet openings, independently movable valves for said openings, contiguous stems for said valves projecting without said casing, operating means to effect the independent or joint closing and opening of said valves, and means whereby, when said inlet valve is closed and said outlet valve is opened, said measuring chamber is placed in communication from above with the atmosphere.

2. In a dispensing faucet, in combination, a tubular valve casing having a lower measuring chamber provided with an inlet at its upper end and an outlet at its lower end, independently movable valves for said inlet and said outlet, a vertical stem for said outlet valve extending upward axially through and beyond said casing, a tubular stem for said inlet valve enclosing said stem of said outlet valve and projecting a lesser distance than the latter beyond said casing, an operating member supported without said casing, and connections, including cam means, between said member and said stems respectively, whereby movement of said member in one direction serves to effect continuous liquid flow through said measuring chamber and movement in the other direction serves to discharge only intermittent, measured liquid quantities.

3. In a dispensing faucet, in combination, a valve casing having a measuring chamber provided with an inlet and outlet, independently movable valves for said inlet and said outlet, both normally spring-pressed toward closed position, stems for said valves extending through and without said casing, and a rotatable operating member having operative connection with said stems without said casing whereby movement of said member in one direction holds said inlet valve open and opens said outlet valve, and movement in the other direction from said intermediate position first closes said inlet valve while maintaining said outlet valve closed and then opens said outlet valve while maintaining said inlet valve closed.

In testimony whereof I affix my signature.

WILLIAM A. SCHATZ.