Aug. 27, 1929. J. M. TRAVIS 1,726,086

FAUCET

Filed March 19, 1928

Fig. 1.

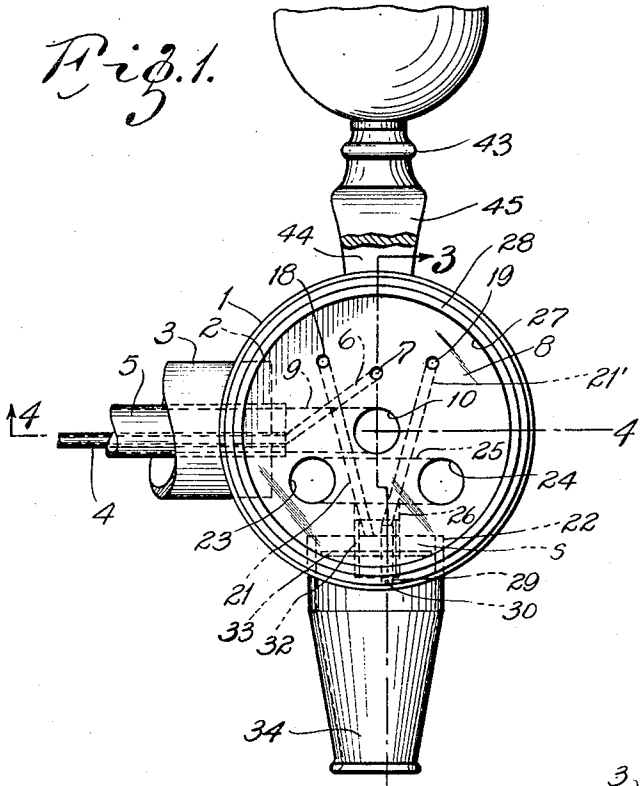


Fig. 2.

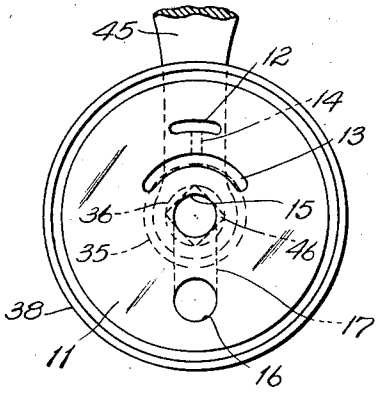


Fig. 4.

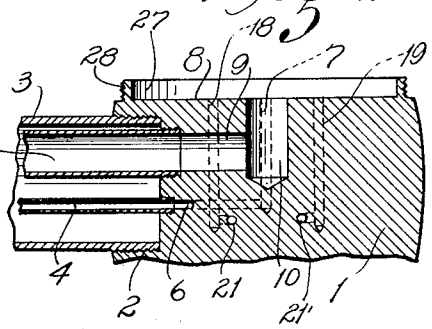


Fig. 3.

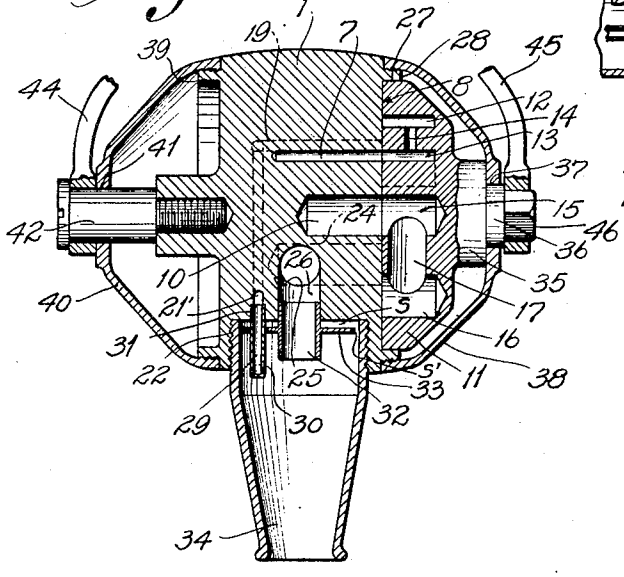
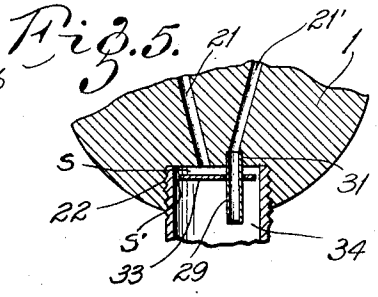


Fig. 5.



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UNITED STATES PATENT OFFICE.

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FAUCET.

Application filed March 19, 1928. Serial No. 262,714.

The present invention has relation to improvements in faucets for beverage purposes and consists in the novel features of construction more fully set forth in the specification and pointed out in the claims.

The principal object of the invention is to provide a faucet of the duplex type; that is, one capable of discharging both syrup and carbonated water wherein the discharge of the syrup and water from the faucet nozzle is controlled by a rotatable disc connected to a rocking handle. A further object is to provide a faucet wherein syrup and a coarse stream of water may be discharged by rotation of the disc in a different direction and a fine stream of water and syrup in an opposite direction so as to produce either a flat drink or a frothy drink. Further objects are to provide a faucet capable of producing two different types of drinks that is positive in its operation, simple in construction, and is not liable to easily get out of order. These advantages together with others that the invention possesses will be better apparent from a detailed description of the invention in connection with the accompanying drawings, in which:—

Figure 1 is a side elevation of my improved faucet with the rotatable disc that controls the ports and cover plate therefor removed, and parts being broken away; Fig. 2 is a view looking at the inner face of said rotatable disc; Fig. 3 is a vertical longitudinal section taken through the faucet on the plane indicated by the line 3—3 in Fig. 1; Fig. 4 is a horizontal transverse section taken on the line 4—4 of Fig. 1; and Fig. 5 is a sectional detail showing the water discharge ports.

Referring to the drawings, 1 represents the body of the faucet having a threaded socket 2 arranged on the side that would normally be the back of the faucet, into which is threaded a pipe housing 3 through which are led a supply pipe 4 for the carbonated water and a supply pipe 5 for the syrup. The pipes 4 and 5 are screw-threaded into the body portion 1 and a diagonally disposed port 6 is provided in the body portion 1, said port being disposed to communicate with pipe 4 and with a port 7 perpendicular to port 6, the port 7 being disposed on a vertical center line of the body 1, leading to the machined face 8 of said body. A syrup port 9 is formed in the body 1 in alinement with pipe 5 and in communication with its component 10 disposed perpendicular to port 9 so as to lead from the machined face 8 on its center. Thus, there are both water and syrup supply ports in the body 1 having their outlets in the machined surface 8 against which rotates a valve disc 11 having arcuate transfer ports 12 and 13 connected by a cross port 14 for the water, and transfer ports 15 and 16 connected by a cross port 17 for the syrup. The function of the transfer ports is to receive the water and syrup from the supply ports 7 and 10, and conduct the water and syrup to discharge ports in the body 1 which are arranged as follows:

The body portion 1 is also provided with water discharge ports 18 and 19 on either side of port 7 and a distance from the center of the body 1 corresponding to the radius describing port 12 in disc 11. The ports 18 and 19 open into the surface 8 and communicate by means of diagonal ports 21 and 21′ respectively with a threaded socket 22 formed in the body 1 a distance of ninety degrees from pipe 3 which would bring socket 22 at what would normally be the bottom of the faucet. Syrup discharge ports 23 and 24 are formed in the body 1 below and on either side of syrup port 10, said ports 23 and 24 being connected by a cross port 25 from which a port 26 leads to the socket 22. Ports 23 and 24 are spaced from the center of the body 1 a distance corresponding to the spacing of port 16, and the water supply port 7 is spaced from the center of body 1 a distance corresponding to the radius of the arc locating port 13 in the disc 11. Thus, when disc 11 is fitted into the bezel 27 formed by the threaded flange 28 projecting from surface 8, port 12 alines with ports 18 and 19, port 13 with port 7, port 15 with port 10, and port 16 with ports 23 and 24. A nozzle 29 having an opening 30 in its side wall is secured into a socket 31 in communicating relation with port 21, and a nozzle 32 provided with an annular flange 33 is fitted into port 26 so as to leave a space *s* between said disc and the bottom of socket 22. The flange 33 is somewhat smaller than the inside of the faucet nozzle 34 which is received by the socket 22 so that there will be an annular space *s′* between the periphery of the flange 33 and the inside of said nozzle. The disc 11 is provided with a boss 35 from which leads a journal 36 having bearing in the opening 37 formed in cover plate 38 screwed onto the threaded

flange 28. The body 1 is provided with a threaded flange 39 opposite to flange 28, and a cover plate 40 is screwed onto the flange 39, said cover plate having a central opening 41 to receive a gudgeon 42 which is screwed into the body 1. An operating handle 43 is provided for the faucet, said handle being bifurcated and the arms 44 and 45 thereof being mounted respectively on the gudgeon 42 and the polygonal extremity 46 of disc 11. When the handle 43 is rocked back and forth, the disc 11 will be rotated through its connection with said handle and port 12 will travel in an arc that will carry it from one port 18 to the other, port 13 at the same time being maintained in communication with port 7 owing to its elongated arcuate formation. Port 15 and port 10 will obviously always be in register as they are both centrally located and port 16 will be caused to move along an arcuate path from port 23 to port 24 or vice versa. It is apparent that when port 12 is between ports 18 and 19, and port 16 between ports 23 and 24, the faucet will be shut off. If it is now desired to draw from the faucet a frothless or flat drink, the handle 43 is swung to a position to cause port 12 to register with port 18, which movement will also bring ports 16 and 24 in register. Water may now flow from port 7 into port 13, through port 14 to port 12, from which point it will be transferred, so to speak, to port 18 and discharged through said port and port 21 into the space *s* behind flange 33 and thence discharged around the periphery of said flange into the nozzle 34. Simultaneous with this discharge of carbonated water, the syrup will flow from port 10 to port 15 through port 17 and be transferred by port 16 to port 24 whence it will discharge through the port 25 from the nozzle 32, mixing with the carbonated water in the faucet nozzle 34. Owing to the large discharge orifice around the periphery of flange 33, the carbonated water will issue therefrom at comparatively low velocity, thus producing very little froth and resulting in the dispensing of a flat drink. If it is now desired to dispense from the faucet a frothy drink, the handle 43 will be moved oppositely so as to cause the port 12 to register with port 19, at which time the syrup ports 10 and 15 and 23 and 16 will be in register. The syrup will, of course, be discharged into the nozzle as before, but the water will now discharge through ports 19 and 21′ to the nozzle 29, whence it will discharge at high velocity through the small aperture 30. The aperture 30 is directed toward the nozzle 32 so that the high velocity stream of carbonated water will be projected into the syrup stream issuing from nozzle 32 and produce a turbulent mixture, resulting in a frothy drink.

Having described my invention, I claim:

1. A faucet comprising a body portion having a valve seat, syrup and water inlet ports in the body portion for conducting said fluids to the valve seat, discharge ports for syrup and water, and a second water discharge port in said body portion, a disc valve arranged to bring into communication the water inlet and discharge ports and the syrup inlet and discharge ports with a predetermined movement, and said valve being arranged to bring into communication the water inlet and auxiliary discharge port and the syrup inlet and discharge ports with a second predetermined movement.

2. A faucet comprising a body portion having a valve seat, syrup and water inlet ports and syrup and water discharge ports in said body portion, said inlet ports being connected to a source of supply, a disc valve adapted for rotation on said valve seat, said valve having transfer ports for conducting syrup and water from the inlet ports to the discharge ports with a rotation to a predetermined position, and means for effecting the discharge of the water from the discharge port at low velocity.

3. A faucet comprising a body portion having a valve seat, syrup and water inlet ports in the body portion for conducting said fluids to the valve seat, discharge ports in said body portion for syrup and water, and a second water discharge port in said body portion, a disc valve rotatable on said valve seat, said valve having a port for bringing the water inlet port into register with either the water discharge port or the second water discharge port, and the disc valve having a port for bringing the syrup port into register with the syrup discharge port when either of the water discharge ports is open.

4. A faucet comprising a body portion having a valve seat, syrup and water ports in said body portion, and a second water port therein, said ports being connected to a suitable source of fluid supply, and a disc valve rotatable on said seat for opening simultaneously the syrup and first mentioned water ports or the syrup and second water ports.

5. A faucet comprising a body portion having a valve seat, a syrup port and a water port complementary thereto in said body portion and a second syrup port and second water port complementary thereto in the body portion, said ports being connected to a source of fluid supply, and a disc valve rotatable on said seat for opening either the first mentioned syrup and water ports or the second syrup and water ports.

In testimony whereof I hereunto affix my signature.

JOHN M. TRAVIS.