Oct. 1, 1946. C. W. LLOYD 2,408,664

MIXING FAUCET FOR BEVERAGES

Filed May 17, 1945

Fig. 1.

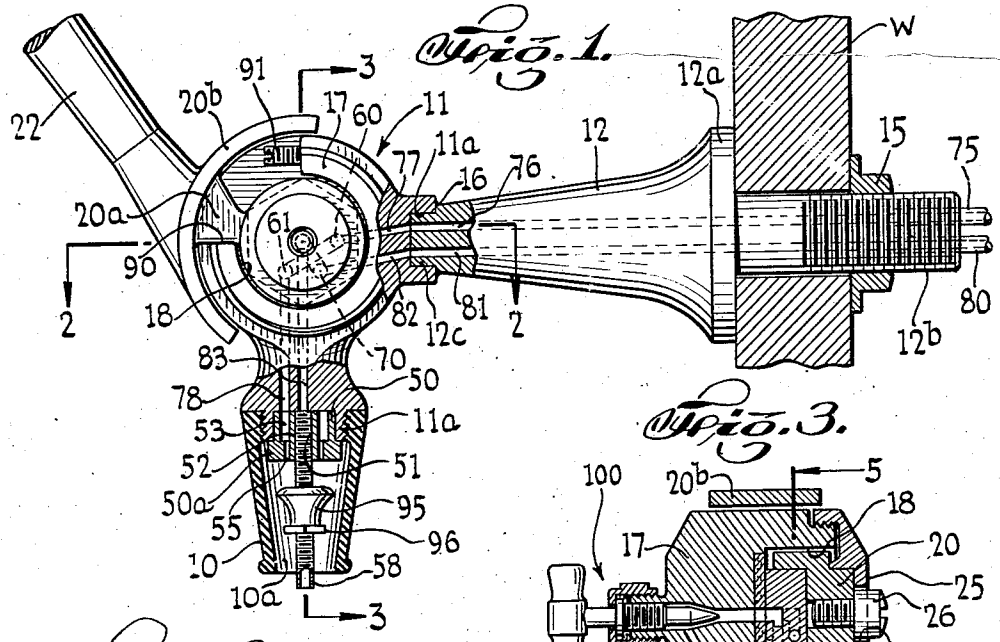


Fig. 3.

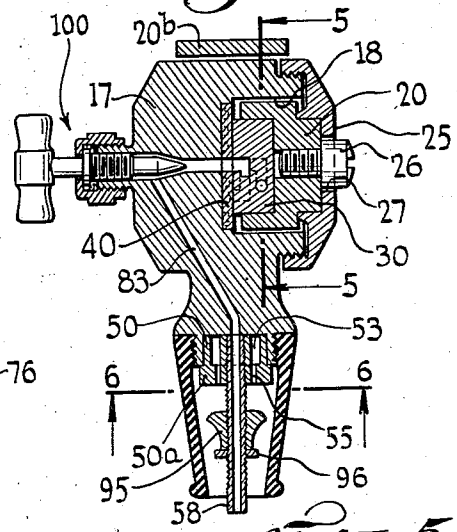


Fig. 2.

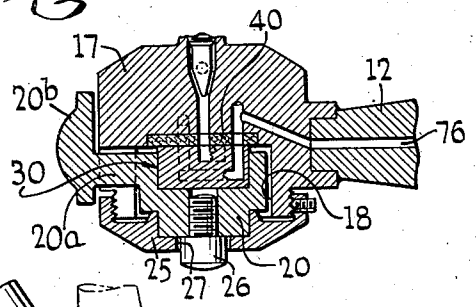


Fig. 4.

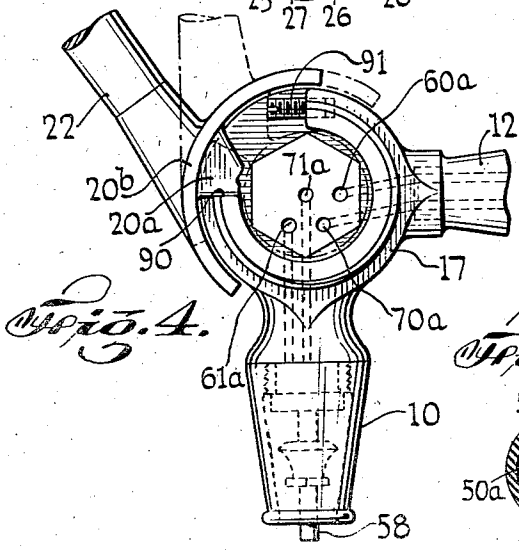


Fig. 5.

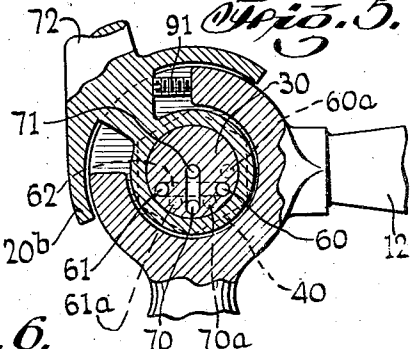
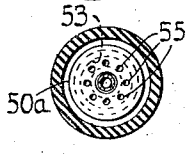


Fig. 6.



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2,408,664

UNITED STATES PATENT OFFICE

2,408,664

MIXING FAUCET FOR BEVERAGES

Charles William Lloyd, Brooklyn, N. Y., assignor to Ginger-Cola Dispenser, Inc., Brooklyn, N. Y., a corporation of New York

Application May 17, 1945, Serial No. 594,197

6 Claims. (Cl. 225—26)

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This invention relates to beverage dispensing devices of the type shown and described in my co-pending application, Serial No. 468,722, filed Dec. 11, 1942, now Patent No. 2,379,532, for Beverage dispensing devices. More particularly my invention is directed towards an improved construction for dispensing faucets.

One of the objects of my invention is to provide a novel and improved dispensing faucet which shall be so constructed and arranged that syrup under pressure and charged water under pressure may be fed simultaneously from their respective sources of supply through the said faucet continuously and directly into a tumbler, the said faucet being additionally provided with an improved single control means for automatically permitting or stopping the simultaneous flow of water and syrup.

Another object of my invention is to provide a novel and improved dispensing faucet of the character described designed for controlling the flow of syrup and charged water from their respective sources of supply directly into a tumbler to be mixed therein, in which the means for feeding the syrup and charged water are so arranged that changes in the relative proportional pressures under which the syrup and charged water flow will be reduced to a minimum whenever the pressures at the sources of supply change.

Still another object of my invention is to provide a dispensing faucet of the class described which shall be characterized by the compactness and simplicity of its construction and assembly.

Other objects of my invention will become apparent as the description proceeds or will hereinafter be pointed out.

In the accompanying drawing,

Fig. 1 is a vertical cross-sectional view, partly in elevation, of a beverage dispensing faucet constructed and arranged in accordance with my invention;

Fig. 2 is a cross-sectional view taken substantially along the line 2—2 of Fig. 1;

Fig. 3 is a cross-sectional view taken substantially along the line 3—3 of Fig. 1, but with a cap member added;

Fig. 4 is a view of a portion of the device shown in Fig. 1, but in elevation and with certain uppermost portions removed to disclose the construction thereof;

Fig. 5 is a cross-sectional view taken substantially along the line 5—5 of Fig. 3; and

Fig. 6 is a cross-sectional view taken on the line 6—6 of Fig. 3.

Referring now in detail to the drawing I have

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shown a beverage dispensing device constructed and arranged in accordance with my invention and comprising generally a spout portion 10, a control valve portion 11 and an inlet portion 12. The inlet portion 12 may comprise a longitudinal flared member terminating in an abutment shoulder 12a adapted to abut a supporting wall W, and a pipe-like portion 12b extending through an opening 14 in the support W. The pipe portion 12b may be externally threaded and a correspondingly threaded nut 15 provided to maintain the beverage device in firm attachment to said support. The valve portion 11 is fixedly attached to the inlet portion 12 by any suitable means, such as, for example, by providing a reduced shoulder 12c at the end of the inlet 12 which is frictionally received in a correspondingly shaped recess 11a in the valve portion 11 and the two members are welded together as shown by the numeral 16 in Fig. 1 of the drawing.

The control valve portion 11 comprises a main body portion 17 having a circular opening 18 in one surface thereof which is adapted to freely rotatably house a valve carrier 20 having an integral web 20a extending outwardly beyond the main body portion 17 and supporting an arcuate flange member 20b. A handle member 22, is attached to the flange 20b to facilitate the rotational movement of the said valve carrier 20 within the opening 18. A cap member 25 threadedly mounted on the main body portion 17 so as to close the opening 18, holds the member 20 captive within the said opening 18. To insure proper axial rotational movement of the valve carrier 20 within the opening 18, I provide an enlarged headed screw 26 in the carrier 20 and a hole 27 in the cap 25 into which the said head of said screw 26 is received with a slight tolerance for the said screw head. Into an opening 29 in the carrier 20 I frictionally mount a valve shutter 30, the function and operation of which will soon be described. A leather washer member 40 is interposed between the shutter 30 and the bottom wall of the opening 18.

The spout portion 10 comprises a tubular member open at the bottom and threadedly attached to an annular depending flange portion 11a of the valve 11, as clearly shown in the drawing. Into the inner opening of the flange 11, I frictionally mount a ring member 50, having a relatively thickened bottom wall 50a extending below the said flange 11. The ring member 50 is provided with an axial through opening 51, surrounded by a hub portion 52 to form an annular chamber 53 between the valve body 11 and the

bottom wall 50a of the ring member 50a. The bottom wall 50a is provided with a plurality of circumferentially arranged apertures 55 communicating with the annular chamber 53 and with the hollow area 10a of the spout 10. The axial opening 51 in the ring member 50 is threaded and an externally threaded pipe member 58 is received therein, the said pipe 58 extending downwardly through the hollow area 10a and projecting slightly below the mouth of the spout 10.

The valve shutter 30 is provided with two independent substantially U-shaped passageways for the passage of liquid therethrough. One of the said passageways designed to control the passage of charged water therethrough comprises the inlet portion 60, the outlet portion 61 and the interconnecting portion 62. The other passageway designed to control the flow of syrup comprises the inlet portion 70, the outlet portion 71 and the interconnecting portion 72. The valve shutter 30 is preferably made of such thickness that the interconnecting passage portions 62 and 72 may be disposed at different levels.

Leading from a source of charged water supply under pressure from any suitable well known supply source (not shown) is a feed pipe 75 (see Figs. 1 and 4) passing through the pipe 12b and communicating directly with a passageway 76, in the inlet portion 12. The valve body 11 is provided with a passageway 77 communicating directly with the passageway 76 and leading directly to and communicating directly with the inlet port 60 of the valve shutter 30, when the said valve shutter is in the open or registered position as shown in Fig. 1 of the drawing. A passageway 78 is provided in the body of the valve 11, which communicates with the annular chamber 53 and with the outlet port 61, when the valve is in open or effective position as shown in Fig. 1. It is thus seen, that when the shutter valve is in open position as shown in Figs. 1 to 4, charged water will flow from its source directly to the annular chamber 53 from which it will flow downwardly through the apertures 55 and out through the mouth of the spout 10 and into a suitable tumbler.

As noted in my said co-pending application, Serial No. 468,722, now Patent No. 2,379,532, syrup is contained in a suitable storage tank (not shown) under pressure and flows directly through a feed pipe 80 disposed in the pipe 12b, and directly through a communicating passageway 81, in the inlet portion 12 and thence through a communicating passageway 82, leading directly to and into the inlet port 70, when the said port 70 is in the open or effective position as shown in Fig. 1. A passageway 83 in the valve body, leading directly from the outlet port 71 and communicating directly with the pipe 58.

It is thus seen, from the above description, that while the charged water is flowing into a tumbler, directly from its source, as above described, the syrup will simultaneously flow directly from its source into the tumbler. As explained in my said co-pending application, Serial No. 468,722, now Patent No. 2,379,532, the relative proportions between the pressures of the charged water and syrup is such that no matter how long the faucet is held in open position there will continue to flow a properly proportioned and sweetened beverage into the tumbler, thus eliminating the necessity of measuring chambers for the syrup.

The washer 40 is provided with openings 60a, 61a and 70a, corresponding to the inlet and outlet ports 60, 61 and 70, 71 respectively, the said openings 60a, 61a, 70a and 71a being aligned with the open position of the valve shutter, as shown in Figs. 1 and 4.

The valve body 11 is provided with an abutment portion 90 to limit the rotational movement of the shutter 30 in a counter-clockwise direction as viewed from Fig. 1, the said last named limited position being the one in which the valve 30 is in open effective position, as in Fig. 1. To close the valve 30 to simultaneously shut off the supply of charged water and syrup, the handle 22 is merely rotated in a clockwise position, from that shown in Fig. 1, to the position illustrated in Fig. 5. A set screw 91, in the valve body 11 and disposed in the path of rotational movement of the flange 20a may be provided to adjust the closed position of the valve shutter 30.

Threadedly mounted on the pipe 58 is a baffle member 95 directly in the path of the charged water which flows through the apertures 55 to prevent splashing of the charged water directly into the tumbler. A nut 96 may be employed to maintain the baffle 95 in any desired adjusted position.

To regulate the amount of syrup flow so as to provide the dispensed beverage with any selected degree of flavor, I may provide a needle valve 100 of any well known standard type and dispose in the passageway 83 interconnecting the outlet 71 with the pipe 58.

It will thus be seen that there is provided a device in which the several objects of this invention are achieved, and which is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention and as various changes might be made in the embodiments above set forth, it is to be understood that all matter herein set forth or shown in the accompanying drawing is to be interpreted as illustrative and not in a limiting sense.

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

1. In a beverage dispensing device of the character described a faucet comprising an inlet-member, a nozzle portion having a discharge orifice and a valve body interconnecting said inlet member and said nozzle, a shutter valve rotatably mounted in said valve body and adapted to be moved to open or closed position, said shutter valve having a first inlet port, a first outlet port and a first passageway interconnecting said first inlet and outlet ports, a second inlet port, a second outlet port and a second passageway interconnecting said second inlet and outlet ports, said passageways being disposed in different planes in the shutter valve a first passageway in said inlet member for the feeding of charged water under pressure directly from its source, said last named first passageway communicating directly with said first inlet port when the said shutter valve is in open position, a second passageway in said inlet member for feeding syrup under pressure directly from its source, said last named second passageway communicating directly with said second inlet port when said shutter valve is in open position, a first passageway in said nozzle portion communicating directly with said first outlet port and said discharge orifice when said shutter valve is in open position, and a second passageway in said nozzle portion communicating directly with said second outlet port and with said discharge orifice when

said shutter valve is in open position whereby charged water and syrup may flow simultaneously into a tumbler directly from their independent sources through said discharge orifice, and means for selectively moving said shutter valve to open or closed position.

2. A faucet according to claim 1 in which a needle valve is mounted on said valve body adjacent the said second passageway which communicates directly with said second outlet port and said discharge orifice, to alter the quantity of syrup flowing to said discharge opening directly from its source of supply and in which adjustable baffle means is disposed in the path of charged water within said discharge orifice to regulate the flow thereof.

3. A faucet according to claim 1 in which there is provided a tube, said tube being disposed axially of said discharge orifice and communicating directly with the said second passageway for leading the syrup from said second outlet port, and means for mounting said tube on said nozzle portion, a portion of said tube extending below said discharge orifice so that the mixture of syrup and charged water will be effected after they reach the tumbler and a baffle adjustably mounted on said tube for regulating the flow of charged water.

4. A faucet according to claim 1 in which there is provided a tube, said tube being disposed axially of said discarge orifice and communicating directly with the said second passageway for leading the syrup from said second outlet port, and means for mounting said tube on said nozzle portion, said tube being externally threaded, and a baffle member threadedly mounted on said tube, to prevent undesired splashing of the charged water through the said orifice, the said baffle being movable on said tube to regulate the pressure of said charged water as it is discharged through said orifice.

5. A faucet according to claim 1 in which there is provided a ring member mounted on said nozzle portion, said ring member comprising a hub portion, a bottom wall and an upstanding surrounding side wall, said last named side wall being spaced from said hub to form an annular chamber communicating directly with the said first passageway in said nozzle portion which leads directly from said first outlet port, the said bottom wall being apertured, said apertures communicating directly with said annular chamber and said discharge orifice.

6. A faucet according to claim 1 in which there is provided a ring member mounted on said nozzle portion, said ring member comprising a hub portion, a bottom wall and an upstanding surrounding side wall, said last named side wall being spaced from said hub to form an annular chamber communicating directly with the said first passageway in said nozzle portion which leads directly from said first outlet port, the said bottom wall being apertured, said apertures communicating directly with said annular chamber and said discharge orifice, a tube having one end thereof threaded into said hub portion and substantially axially disposed with respect to said discharge orifice, said tube communicating directly with the said second passageway in said nozzle portion which leads directly from the said second outlet port, and a baffle plate adjustably mounted on said tube and disposed in the path of flow of charged water through said apertures.

CHARLES WILLIAM LLOYD.

Disclaimer

2,408,664.—*Charles William Lloyd*, Brooklyn, N. Y. MIXING FAUCET FOR BEVERAGES. Patent dated Oct. 1, 1946. Disclaimer filed Oct. 23, 1948, by the assignee, *Dispensers, Inc.*

Hereby enters this disclaimer to claims 1 and 4 in said specification.

[*Official Gazette November 30, 1948.*]