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BEVERAGE DISPENSING DEVICE

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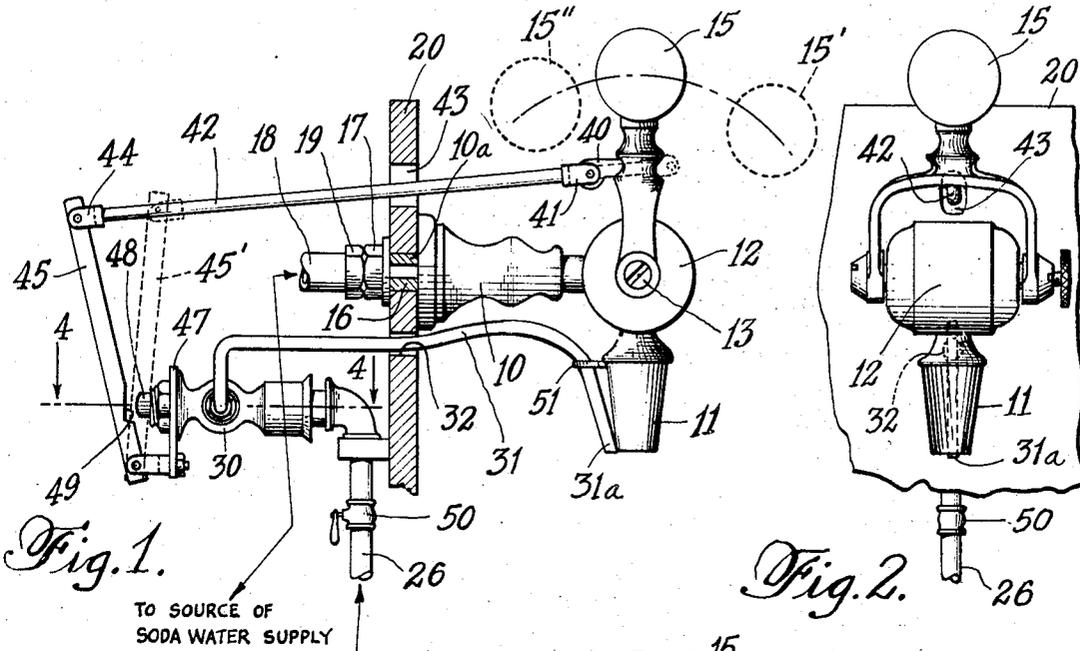


Fig. 1.

Fig. 2.

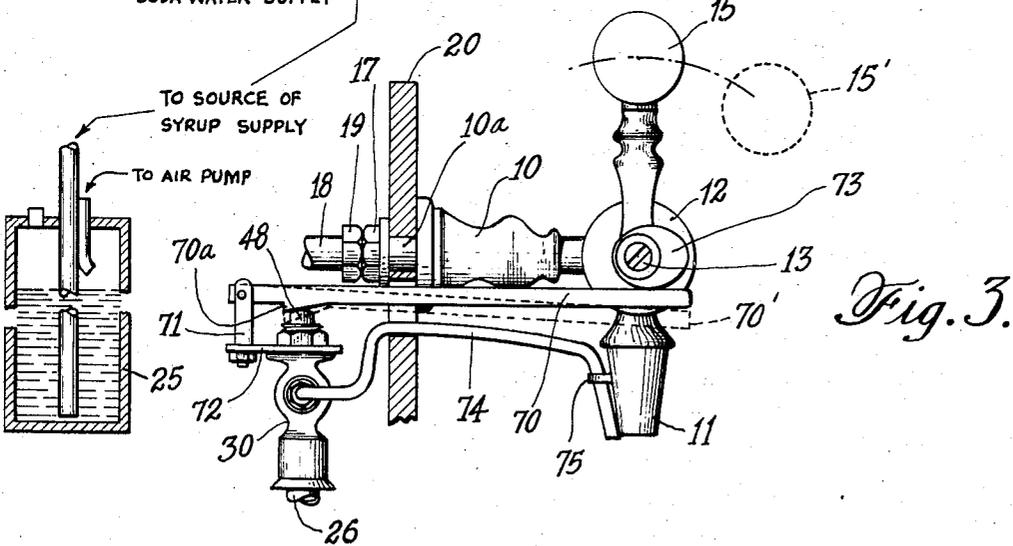


Fig. 3.

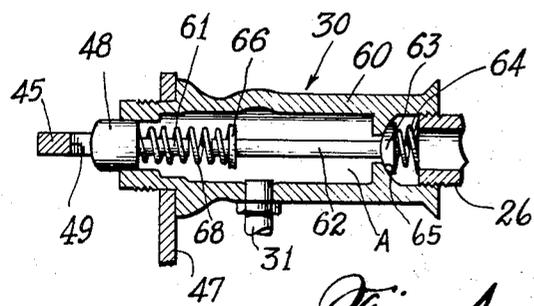


Fig. 4.

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BEVERAGE DISPENSING DEVICE

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4 Claims. (Cl. 225—26)

This invention relates to beverage dispensing devices. More particularly, my invention relates to an improved construction for devices designed to dispense beverages containing a mixture of syrup and charged water.

One of the objects of my invention is to provide a novel and improved beverage dispensing apparatus of the class described by means of which there shall be provided a continuous flow of syrup and charged water in a predetermined fixed proportional relationship, irrespective of the size of the container into which the beverage is dispensed.

Another object of my invention is to provide a novel and improved beverage dispensing apparatus of the class described in which the syrup and the charged water may be fed simultaneously from separate sources of supply in a predetermined fixed proportional relationship directly from the said supply sources, thereby eliminating mixing chambers, measuring chambers and similar intermediate compartments.

Still another object of my invention is to provide, in a dispensing apparatus of the class described, novel and improved means for feeding the syrup by pressure and which means shall maintain the feeding flow of said syrup uniform and constant despite variations in the said feeding pressure.

Other objects of my invention will become apparent in the following detailed description thereof.

In the accompanying drawing, in which is shown some of the various possible embodiments of my invention,

Fig. 1 is a side elevational view, partly in section, of a beverage dispensing apparatus constructed and arranged in accordance with my invention;

Fig. 2 is a front elevational view thereof;

Fig. 3 is a view similar to Fig. 1, but illustrating a modified form of my invention; and

Fig. 4 is an enlarged cross-sectional view taken substantially on the line 4—4 of Fig. 1.

Referring now in detail to the drawing, and more specifically to Figs. 1, 2 and 4 thereof, I have illustrated a beverage dispensing apparatus, constructed and arranged in accordance with my invention and adapted for use in dispensing beverages of the type containing a mixture of syrup and soda water.

The said apparatus may comprise a suitable faucet 10 having a discharge nozzle 11 and controlled by a valve 12. The said faucet 10, nozzle 11 and valve 12 may be of any standard type well

known to the art and operated by an oscillative handle 15 fixed to the rotatably mounted shaft 13 for rotation therewith. The said faucet 10 may be mounted on a supporting wall 16 by having the tubular portion 10a thereof pass through an opening in the wall 16 and held in position by a nut 17 threadedly received thereon, as shown in Fig. 1. A pipe 18 is threadedly connected to the tubular faucet part 10a by means of the nut 19, the said pipe 18 leading from any suitable, well known source of charged water, well known to the art and which is usually positioned in the cellar or basement of the establishment.

In accordance with my invention, I provide a supply of syrup in any suitable container adapted for the purpose and designed to be fed by pressure means in any suitable manner well known to the art, such as for example the tank 25 shown diagrammatically in the drawing. The said syrup is fed from the tank 25 through the pipe 26, through the valve 30 and from thence out through tubing 31, terminating at a point closely adjacent the discharge end of the nozzle 11, so that the syrup and charged water will flow simultaneously into the tumbler or any other suitable container. The tubing 31 may pass freely through an opening 32 in the wall 20.

Further, in accordance with my invention, I arrange to supply the syrup at a predetermined pressure in relation to the pressure of the charged water, so that the amount of syrup supplied will always be in direct proportion to the amount of charged water and as a result, any sized tumbler or container may be filled in a continuous flow without the necessity of first measuring out separate quantities of syrup and charged water which must then be led to a chamber and dispensed therefrom by emptying the contents of the mixing chamber into the tumbler. I have found that satisfactory results are obtained by feeding the syrup under a pressure of approximately 25 lbs. while the charged water is supplied under a pressure of approximately from 120 to 160 lbs.

In accordance with my invention, I have provided the following means for operating my apparatus so that the syrup and charged water will automatically flow directly from their supply sources by the operation of the single dispensing valve 12, in its customary manner.

The valve handle 15 is provided with a projecting lug portion 40 to which there is pivotally attached the forked end-piece 41 of a rigid rod 42. The rod 42 passes freely through an opening 43 in the wall 20 and is provided with another forked end-piece 44. A lever 45 is pivotally connected

at one end thereof to the forked end-piece 44 and at the opposite end is pivotally connected to a forked member 46 rigidly attached to a plate 47 which in turn is carried by the valve 30. The valve 30 is preferably of the type operated by a

slidable push button 48, the said push button being so disposed as to be in the path of pivotal movement of the lever 45. It is thus seen from the above described construction that when it is desired to dispense a soda and syrup mixture, it is merely necessary to pivotally move the valve handle 15 in a clockwise direction, as viewed from Fig. 1 of the drawing, to the dotted line position 15'. In the position 15' of the handle 15 the charged water will normally flow from the source through the pipe 18 and out through the nozzle 11. At the same time, it is noted that the rod 42 will have caused the lever 45 to pivotally move in a clockwise direction to the dotted line position 45' to force the push button 48 inwardly and thereby open the valve 30 to permit the flow of syrup from the tank 25 through the pipe 26 and tubing 31 and into any desired container. Such flow of syrup and charged water will be continuous as long as the valve 12 remains in the last described open position, with the handle in the position 15', or until the supply of syrup or charged water is exhausted. A valve 50 may be provided to control the flow of syrup from the container 25. The lever 45 may be provided with an angularly notched portion 49 to facilitate its contact with the push button 48. If desired, in order to position the end portion 31a of the tubing 31 near the discharge end of the nozzle 11 and to aid in supporting the same, I may provide an apertured projecting lug 51 on the nozzle 11, through which the tubing 31 passes.

It is well known in the art that valves of the type such as 12 herein disclosed also operate to open position when the handle is swung in a counter-clockwise direction, as, for example, to the position 15'' shown in Fig. 1. As can be clearly seen from Fig. 1 of the drawing my apparatus is so designed that when the valve is opened to the position indicated by the handle 15'', charged water alone will be dispensed because of the fact that the lever 45 will be out of contact with the push button 48 of the valve 30, and therefore the flow of syrup will stop.

I provide the following construction for the valve 30, designed to maintain the flow of syrup from the supply 25 uniform and constant regardless of variations in the pressure supply used for causing the syrup to flow, so that the predetermined proportional relationship between the quantity of syrup and of charged water will not be disturbed.

As shown in Fig. 4, the valve 30 comprises a casing 60 having a chamber A. The push button 48 is provided with a stem portion 61 in alignment with a valve stem 62 spaced from the stem 61 and carrying the valve head 63. A spring 64 normally maintains the valve head 63 against its seat 65 to stop the flow of syrup through the tube 26. The stem 62 is provided with a shoulder 66 and a spring 68 surrounds the spaced stems 61 and 62 and abuts the said shoulder 66 and the push button 48.

It is thus seen from the above described construction that when it is desired to have the syrup flow from the container 25 to the tubing 31, it is merely necessary to push the button 48 inwardly against the actions of the springs 64 and 68. While the pressure under which the

syrup is fed remains constant, the said syrup will flow through the valve 30 and out of the tubing end 31a in a constant and uniform flow. However, whenever fluctuation of the pressure supply, feeding the syrup, occurs, the valve head 63 will be correspondingly moved to alter the space between it and the valve seat 65, so that when there is an increase in pressure, the said space will become smaller and thus limit the amount of syrup flowing through the valve and when the pressure under which the syrup is fed, falls, the said space between the valve head 63 and the seat 65 will become larger, thereby permitting a greater quantity of syrup to flow. It is thus seen that valve 30 operates as a governor or regulator to provide a constant rate of flow for the syrup.

In Fig. 3 of the drawing, I have illustrated a modified form of my invention for simultaneously operating the charged water and syrup valves. In this form of my invention, I provide the same faucet 10 with its handle 15 and valve 12 leading to a source of supply through the pipe 18. I also provide the same valve 30 for automatically controlling the flow of syrup directly from the source. However, in this form instead of the lever 45 and rod 42 I provide a single lever 70 which is pivotally connected to a forked member 71, which, in turn, is rigidly attached to a plate 72 carried by the valve 30. On the valve shaft 13, I mount a cam 73 for rotation therewith. When the valve handle 15 is moved in a clockwise direction, to the dotted line position 15', the cam 73 is so designed that it will pivotally move the lever 70 downwardly to contactively engage and push the button 48 inwardly to open the valve. In this form of my invention, as in the Figs. 1, 2 and 4 form, I provide bendable tubing 74 similar to the tubing 31 for carrying syrup to a point adjacent the discharge nozzle 11. A suitable holding member 75 may be provided to support the tubing 74. The lever 70 may be provided with a projecting portion 70a to facilitate the operation of the push button 48.

While in the drawing I have illustrated my invention as applied to a single faucet 10 for supplying a beverage, it is understood that any number of faucets may be mounted on the wall 20 and operated in the same manner.

In accordance with the provisions of the patent statutes, I have herein described the principle and operation of my invention, together with the apparatus which I now consider to represent the best embodiment thereof, but I desire to have it understood that the apparatus shown is only illustrative and that the invention can be carried out by other means. Also, while it is designed to use the various features and elements in the combinations and relations described, some of these may be altered and others omitted without interfering with the more general results outlined, and the invention extends to such use.

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

1. In a beverage dispensing apparatus of the class described, the combination of a source of syrup supply, a source of soda water supply, a dispensing faucet valve for controlling the flow of soda water directly from its source, into a tumbler, and a second valve independent of said faucet valve for controlling the flow of syrup directly from its source into said tumbler, pressure means for causing the flow of said syrup from its source normally, said second valve comprising means for maintaining the speed of flow of the

said syrup therethrough substantially constant despite variations in the said pressure means.

2. In a beverage dispensing apparatus of the type wherein soda water and syrup are fed under different pressures from separate sources of supply into a dispensing tumbler or the like container, that improvement which comprises providing a single control means for causing the simultaneous, continuous flow of soda water and syrup in predetermined proportional speed of flow, in accordance with said different pressures, directly from said sources of supply to said tumbler, said means comprising a first valve for controlling the flow of said soda water, a second valve independent of said faucet valve for controlling the flow of said syrup, said second valve comprising means for automatically maintaining the flow of said syrup at a constant predetermined pressure despite variations of pressure at the source of syrup supply, said first and second valves being normally in closed position, and means whereby the opening of one valve will cause the simultaneous opening of the other valve.

3. Beverage dispensing apparatus comprising a dispensing faucet, a source of soda water supply, piping interconnecting said soda water supply to said faucet, pressure means for causing said soda water to flow directly to said faucet, a first

5 valve to control the flow of soda water from its source to said faucet, a source of syrup supply, piping leading from said syrup supply and having a free open end thereof disposed adjacent said faucet, pressure means for causing said syrup to flow from its source directly to said free open end of said piping to be discharged therefrom, and a second valve independent of said first valve and interposed between said free open end of said piping and said syrup supply, said second valve being normally closed to prevent the flow of syrup from its source, and means interconnecting said first and second valves so that the opening of said first valve to dispense soda water will automatically and simultaneously open said second valve to permit the flow of syrup to be discharged through the said open free end of the said piping, said second valve comprising means to maintain the rate of flow of said syrup therethrough substantially constant regardless of variations of pressure in the syrup pressure means.

10 15 20 25 4. Beverage dispensing apparatus according to claim 3 in which the relationship of the pressures under which the syrup and soda water is caused to flow is in the proportion of approximately 25 pounds for the syrup to from approximately 120 pounds to approximately 160 pounds for the soda water.

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