J. SHEEHAN.

APPARATUS FOR DELIVERING AERATED WATERS AND OTHER EFFERVESCING BEVERAGES.

APPLICATION FILED JULY 11, 1917.

1,302,092.

Patented Apr. 29, 1919.

2 SHEETS—SHEET 1.

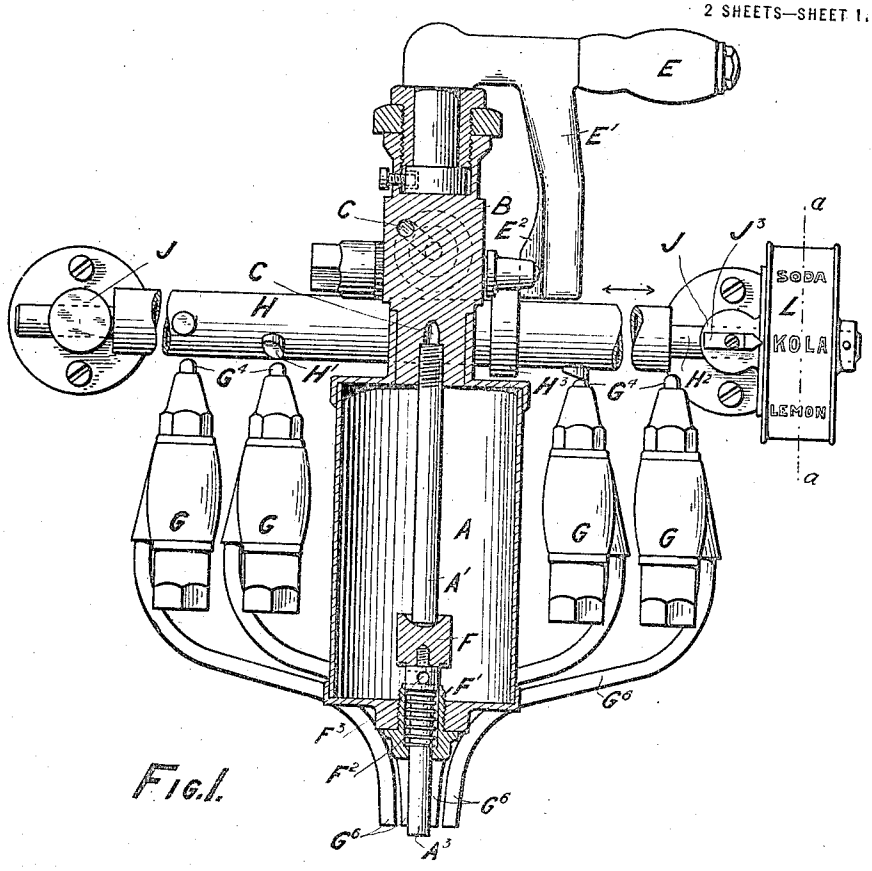


FIG. 1.

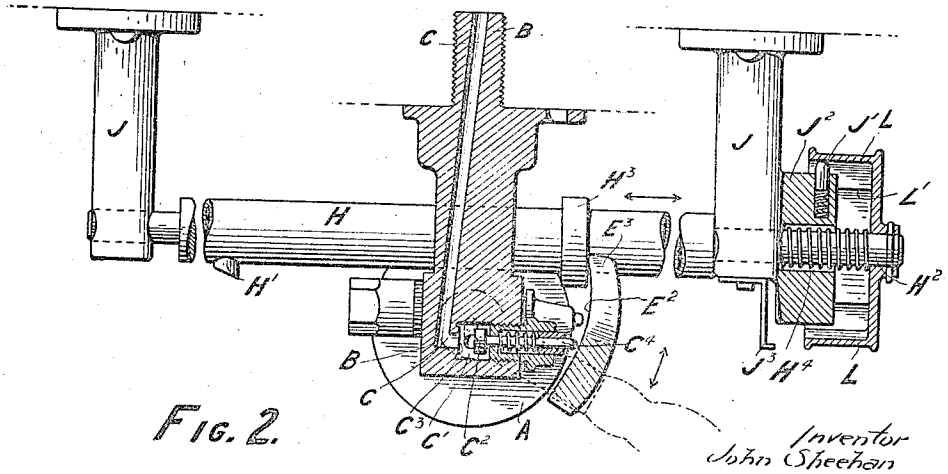


FIG. 2.

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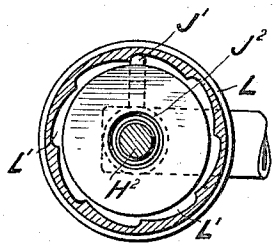


FIG. 3

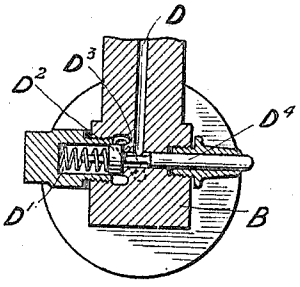


FIG. 4.

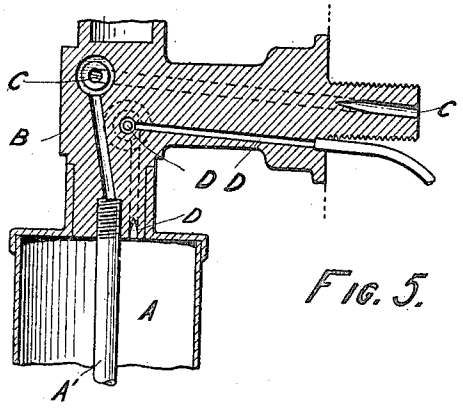


FIG. 5.

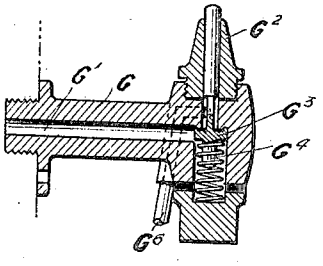


FIG. 6.

Inventor
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UNITED STATES PATENT OFFICE.

JOHN SHEEHAN, OF MELBOURNE, VICTORIA, AUSTRALIA, ASSIGNOR TO LUDWIG OWEN MENCK, WILLIAM JAMES BALLANTYNE, AND JOHN SHEEHAN, TRADING AS THE AERATED WATER MACHINERY COMPANY, OF MELBOURNE, AUSTRALIA.

APPARATUS FOR DELIVERING AERATED WATERS AND OTHER EFFERVESCING BEVERAGES.

1,302,092. Specification of Letters Patent. Patented Apr. 29, 1919.

Application filed July 11, 1917. Serial No. 179,826.

To all whom it may concern:

Be it known that I, JOHN SHEEHAN, a subject of the King of Great Britain, residing at 330 St. Kilda road, Melbourne, in the State of Victoria, Commonwealth of Australia, have invented certain new and useful Improvements in an Apparatus for Delivering Aerated Waters and other Effervescing Beverages, of which the following is a specification.

This invention relates to an improved apparatus for delivering or dispensing aerated waters and effervescing beverages and relates more especially to an apparatus for delivering soda water (*i. e.* water charged with carbonic acid gas) directly into a glass together with any one of a number of selected syrups whereby with one operation of the handle or lever of the tap any particular beverage may be dispensed according to the taste of the customer.

The object of this invention is to provide means whereby with expedition and facility any one of a wide range of syrups may be selected so that a number of different beverages may be dispensed from the one apparatus.

This invention is an improvement upon or a modification of prior Patent No. 1,176,103 dated 21st March, 1916, which has been granted in the United States. The invention therein described comprises in combination a chamber for holding a certain quantity of gas charged liquid having an automatic discharge valve at the bottom, a valve for cutting off connection between the said chamber and the carbonating vessel, a snifting valve for reducing the pressure in the said chamber and a valve for simultaneously delivering syrup all operated by the one handle or lever. In the aforesaid patent the operating handle was preferably moved in a horizontal plane and generally to the right so that it could be operated by the right hand of the dispenser while the glass or other vessel was held in the other hand, and it is desirable more especially when used in bars that the handle when moved across to complete engaging position should be retained thereat mechanically so that the hands may be free during the discharge of the liquid for serving customers.

An apparatus constructed according to this invention comprises the combination with a chamber having a discharge valve, a snift valve, and soda water cut off valve of a device for operating any one of a plurality of syrup valves. This device consists of a sliding bar or rod having a number of cams mounted thereon at different circumferential positions so that by setting the aforesaid bar to any particular position in accordance with an indicator and subjecting the said bar to a longitudinal sliding movement any particular cam is adapted to operate its corresponding syrup valve and effect the discharge of that particular syrup for flavoring the beverage required.

Referring to the accompanying sheet of drawings;—

Figure 1 is a front elevation partly in section of an apparatus embodying this invention showing the parts in position for discharging soda water and one selected syrup—in this case "Kola;"

Fig. 2 is a horizontal section on the line *a—a* Fig. 1 the indicator drum being shown in section;

Fig. 3 is a vertical section of the indicator drum on line *b—b* Fig. 1;

Fig. 4 is a detail sectional view of the snift valve;

Fig. 5 is a vertical section of the valve head showing the soda water inlet and snift outlet parts;

Fig. 6 is a vertical section of one of the syrup valves.

A is a chamber adapted to contain a predetermined quantity of soda water or gas charged liquid under pressure. This chamber A is similar in construction to that described and illustrated in prior patent granted in the United States No. 1,176,103 and is normally in communication with a carbonator or other source of supply of soda water having a valve by which it may be cut off therefrom, a snift valve by which the pressure may be reduced and an automatic

discharge valve at the bottom which is normally closed by the pressure of the liquid within the same, but is adapted to automatically discharge by the counter pressure of a spring immediately the pressure is reduced within the said chamber.

For this purpose the chamber A is connected to a head piece B within which are formed two separate ports or passages C and D. The port or passage C communicates with the carbonator or other source of supply of gas charged liquid and connects into the interior of the chamber A through the pipe or tube A′ (Figs. 1 and 5). The port or passage C communicates with the atmosphere and connects into the top of the chamber A as shown in Fig. 5. The port or passage C for the soda water is controlled by a valve accommodated within a chamber C′ in the head piece B as shown in Fig. 2. This valve is of the spindle type comprising a double seated valve head C^2 which in normal position is held by the pressure of the gas and spring seated against the gland of the chamber C′ so that the port or passage C is in open communication with the chamber A but when pressure is exerted on the spindle C^4 the valve head C′ engages the seat C^3 in the chamber C′ closing the passage C and cutting off the communication between the chamber A and the carbonator. Similarly the port or passage D is controlled by a snift valve which is accommodated within a chamber D′ in the head piece B. This valve is shown in detail in Fig. 4 and is also of the spindle type having a valve head D^2 which in its normal position is adapted to close the port or passage D by the pressure of the spring but when pressure is imparted to the spindle D^4 the valve head D^2 is moved out of engagement with the seat D^3 in the chamber D′ thereby opening the passage D. Both of these valves are arranged horizontally within the head piece B and are adapted to be operated by a suitable cam upon the operating handle or lever in such a manner that in practice the valve for cutting off communication with the carbonator is operated momentarily before the opening of the snift valve. For the purpose of operating these valves a handle or lever E is provided mounted upon the top of the head piece B having a downwardly projecting lug E′. This lug E′ is formed with a rearward extension E^2 the inside faces of which operate as a cam to engage the spindles C^4 and D^4 of the valves as the handle E is moved horizontally from left to right. It will of course be understood that the mechanism may if desired be so disposed as to give the reverse movement *i. e.* in a left hand direction. The soda water chamber A is also provided with an automatic discharge valve at the bottom which consists of a block F situated within a sleeve F′ and having a spring F^2. Within this block F are a series of holes F^3 which allow of passage of the liquid when the said block F is lifted by the spring F^2 delivering through the discharge pipe A^3, the block engaging the bottom of the pipe A′ when the same is elevated.

For the purpose of providing a plurality of syrup valves whereby any one of a number of different syrups may be selected I provide a series of syrup valves mounted in series horizontally preferably upon either side of the chamber A. These syrup valves may be of any number, but for the sake of convenience I have found that eight syrup valves (four being mounted upon either side of the chamber) meet all ordinary requirements, one extra discharge being reserved without any syrup to supply soda water. The detail construction of these syrup valves is shown in Fig. 6 being of the ordinary spindle construction comprising a casing G within which is a port or passage G′ which is controlled by a valve head G^2 engaging a seat G^3 operated by a spindle G^4 against the pressure of a spring. Each of these valves is provided with a delivery pipe G^6 which discharges immediately against the soda water outlet pipe A^2 so that in operation soda water and syrup are simultaneously discharged into the glass, and the proper mixing thereof insured.

The mechanism for allowing of selection of syrups is shown more particularly in Figs. 1 and 2 and consists of a sliding bar H having mounted thereon a number of inclined cams H′ one for each syrup valve. These cams H′ are mounted upon the bar H in different circumferential positions so that when the bar H is set at any particular position and a sliding reciprocating movement imparted thereto only one syrup valve will be engaged the others being inoperative. The bar H is slidably mounted in suitable brackets or standards J and upon one side (preferably the right hand side) is provided an indicator barrel L. This indicator barrel is shown in detail more especially in Figs. 1, 2 and 3 having upon its periphery the various flavorings indicated. This barrel L is mounted upon an extension H^2 of the bar H and is internally formed with a series of ratchet recesses L′ adapted to engage a spring pin J′ mounted upon the block J^2 secured to the bracket or spindle J. The ratchet shaped depressions L′ correspond in number with the number of syrup or flavoring provided and the spring pin J′ is adapted to retain the indicator barrel L at the position with the name of the particular syrup opposite the indicator pointer J^3 in which position the particular cam coinciding therewith will engage the particular syrup valve controlling the flow of that syrup designated. The sliding cam bar H

is actuated with a sliding movement from right to left whereby the inclined cams are adapted to depress the spindles of the syrup valves by means of the cam extensions E^3 upon the handle E which engages a shoulder H^3 upon the bar H. The bar H is caused to move back into its normal position when released by the handle E by means of a spring H^4 accommodated within the indicator barrel L.

In operation the indicator barrel L is set with any particular flavoring opposite the pointer J^2. The handle E is then actuated with a full movement from left to right and is mechanically retained in that position so that the hands of the operator are free for serving purposes. In this operation the cam face E^2 first engages the spindle C^4 of the soda water valve cutting off the supply of soda water and then the spindle D^4 of the snift valve by which the pressure is reduced within the chamber A and then by a final movement the bar H is moved across as shown in Fig. 1, actuating the spindle G^4 of the syrup valve controlling the flow of the syrup corresponding with that set upon the indicator. The reduction of the pressure within the chamber A enables the spring F′ to elevate the block F and effect the discharge of soda water through the pipe A^2 delivering into a glass or other receptacle in conjunction with a certain regular flow of syrup as required. Immediately the flow of soda water is completed the handle E is moved back to its normal position projecting to the front when the soda water valve is again opened and the snift valve D closed allowing the chamber A being recharged and the sliding bar H moves back to its normal position out of engagement with the syrup valve and the discharge valve is closed by the pressure of the liquid within the chamber A.

I claim:—

1. In apparatus for delivering aerated waters and the like of the class described having a plurality of syrup valves a device for selecting any particular syrup and causing the valve controlling the same to be actuated by the operation of the handle or lever consisting of a slidable rod or bar having a number of cams mounted thereon at different circumferential positions with means for setting the said bar so that any particular cam shall engage its corresponding syrup valve when the bar is moved longitudinally substantially as described.

2. In apparatus for delivering aerated waters and the like the combination with a chamber having an automatic discharge valve at the bottom, a snift valve and a soda water cut off valve, a plurality of syrup valves all operated by the one lever or handle of a device for selecting any particular syrup valve and causing the same to be actuated by the operation of the said handle or lever consisting of a slidable bar actuated with a longitudinal movement by the said handle or lever having a number of cams mounted thereon at different circumferential positions, together with means for setting the aforesaid bar so that any particular cam will engage its corresponding syrup valve when the bar is moved longitudinally substantially as described.

3. In apparatus of the class described a device for selecting any particular syrup valve and causing the same to be actuated by the operation of the handle or lever consisting of a slidable bar or rod having a number of cams mounted thereon at different circumferential positions each one corresponding with a particular syrup valve means for imparting a longitudinal movement to the said bar consisting of a shoulder on the said bar adapted to be engaged by a cam or face on the operating handle or lever substantially as described.

4. In apparatus of the class described a device for selecting any particular syrup valve and causing the same to be actuated by the operation of the handle or lever consisting of a slidable bar or rod having a number of cams mounted thereon at different circumferential positions each one corresponding with a particular syrup valve having means for imparting longitudinal movement to the said bar or rod by the movement of the operating handle or lever and means for indicating any particular syrup corresponding with any particular valve consisting of an indicator barrel having internal ratchet recesses engaging a spring pin substantially as described.

5. In apparatus of the class described a device for selecting any particular syrup valve and causing the same to be actuated by the operation of the handle or lever consisting of a slidable bar or rod H having cams H′ mounted in brackets J having a shoulder H^2 adapted to engage a cam E^3 on the operating handle E, an indicating barrel L having internal ratchet recesses L′ engaging a spring pin L^2 a stationary indicator J^2 mounted on the bracket J all operated substantially as described and as shown in the drawings.

6. Apparatus for delivering aerated waters and the like in combination a soda water chamber having an automatic discharge valve at the bottom, a head piece having two spring spindle valves and mounted horizontally on the side thereof adapted to be engaged by cam faces upon the handle or lever one valve cutting off the soda water communication with the carbonator and the other valve opening communication with said chamber and the atmosphere, a plurality of syrup valves arranged in series on either side of the said chamber a slidable bar or

rod having cams in different circumferential positions, an indicator barrel on the end thereof whereby the said bar or rod may be set in any particular position so that the selected syrup valve is engaged by its particular cam, an extension on the said handle engaging a shoulder on the said bar or rod for imparting longitudinal movement thereto by the operation of the said handle or lever substantially as described and as illustrated in the drawings.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN SHEEHAN.

Witnesses:
WM. A. HACK,
G. R. CULLEN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."