No. 850,916. PATENTED APR. 23, 1907.

J. J. FITZGIBBON & J. M. TRAVIS.

FAUCET.

APPLICATION FILED MAY 21, 1906.

Fig. 1.

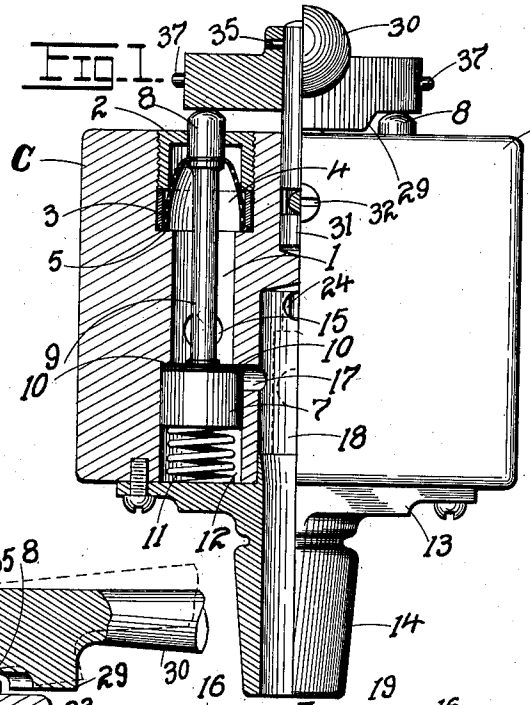



Fig. 5.

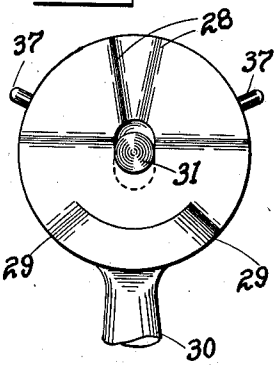
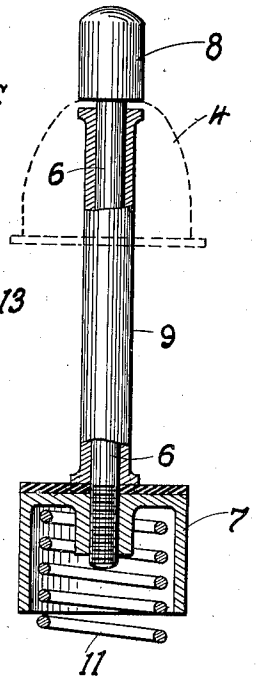



Fig. 4.



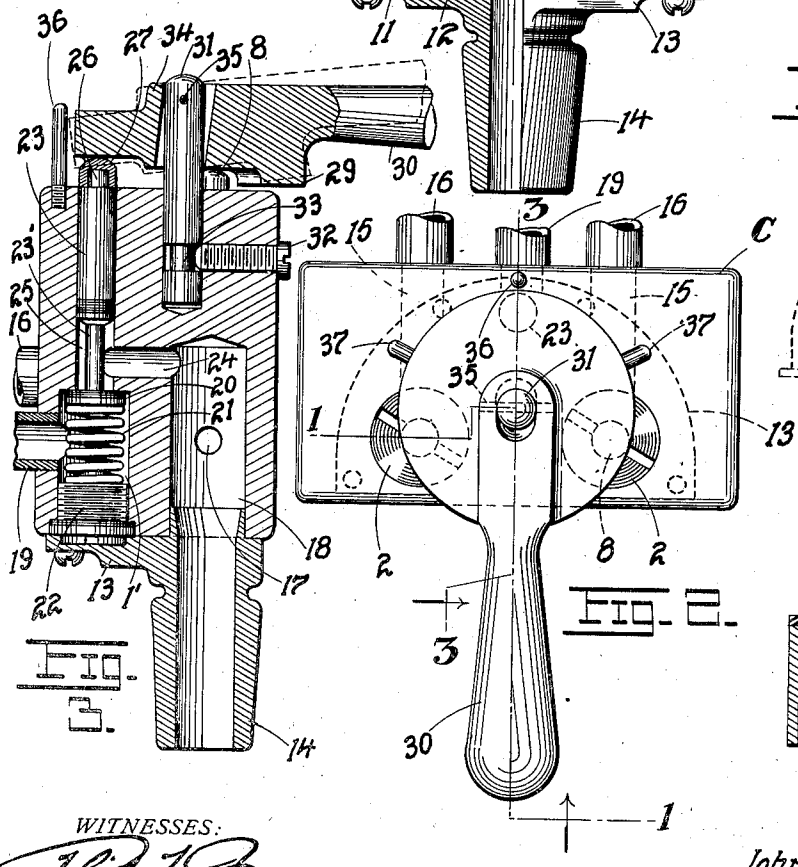




Fig. 3.

Fig. 2.

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## FAUCET.

No. 850,916. Specification of Letters Patent. Patented April 23, 1907.

Application filed May 21, 1906. Serial No. 318,052.

*To all whom it may concern:*

Be it known that we, JOHN J. FITZGIBBON and JOHN M. TRAVIS, citizens of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Faucets, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

Our invention has relation to improvements in faucets for carbonated beverages; and it consists in the novel details of construction more fully set forth in the specification and pointed out in the claims.

In the drawings, Figure 1 is a combined vertical section and elevation of the invention, the section being on the line 1 1 of Fig. 2. Fig. 2 is a top plan thereof. Fig. 3 is a transverse vertical section on line 3 3 of Fig. 2. Fig. 4 is an enlarged combined section and elevation of the valve controlling the syrup-discharge, and Fig. 5 is a bottom plan view of the operating-lever.

The present invention is a modification of the constructions of faucet shown and described in our United States Letters Patent 785,869, dated March 28, 1905, and in our pending application, Serial No. 254,553, filed April 8, 1905, and while contemplating the several advantages of the aforesaid constructions the present device is materially simplified, being in a measure more compact, cheaper to manufacture, and more quickly dispensing the beverage which it is designed to serve. In the present modification the syrup-receptacles are materially reduced in that they are no longer depended on for serving measured quantities of the syrup, the latter flowing into and filling the receptacles from their respective sources of supply as fast as the syrup is withdrawn—that is to say, as long as the valves are in an open position. In the present faucet special provision is made against leakage of the syrup out of the chambered portions of the body portion, such provision consisting in yielding rubber diaphragms coupled to the reciprocating valve-stems, which pass centrally through the chambered portions or receptacles aforesaid.

The faucet consists of other qualifications, whose advantages will be better apparent from a detailed description of the invention, which is as follows:

Referring to the drawings, C represents a suitable casting or body portion, the same being provided with a series (two in the present case) of chambers or receptacles 1 1 for the influx of syrups, said chambers being disposed on opposite sides of the center of the body portion, as shown. The top of each chamber is closed by a screw-cap 2, below which is dropped a ring 3, which is forced by the screw-cap against the edge of a yielding rubber diaphragm 4, bearing on the shoulder or annular seat 5, formed above the syrup-chamber. In this way the edge of the diaphragm is forced against the seat 5, forming a water-tight joint therewith and preventing the syrup entering the chamber or receptacle from leaking out at the top.

The diaphragm is provided with a central opening for the passage therethrough of the valve-stem 6 of the syrup-discharge valve 7, to which the stem is screwed, Fig. 4, the edge of the diaphragm-opening closing over the valve-stem beneath the terminal head 8 of such stem, when by screwing the stem fully into the valve the diaphragm becomes snugly and tightly gripped between said head and the loosely-enveloping sleeve 9. The diaphragm being of rubber of course stretches as the head 8 is inserted through the opening thereof, after which the moment the head has passed fully through the opening the edges of the latter close snugly over the stem 6, when the connection as described is effected. This central connection likewise makes a tight joint at this point. The valve 7 is forced against its seat 10 by the spring 11, confined in the cavity 12 and resting on the plate 13, formed with the discharge-nozzle 14, said plate being secured, by means of screws, to the body portion of the faucet.

Entering each syrup chamber or receptacle 1 from the rear is a feed-passage 15, into which the syrup is conveyed through a pipe 16, leading to any source of syrup-supply, (not shown,) and leading from the chamber at a point below the passage 15 at substantially ninety degrees removed therefrom is a discharge passage or opening 17, normally closed by the valve 7, but which upon a proper depression of the valve permits the syrup to discharge into the central water-discharge passage 18, which communicates directly with the passage of the nozzle 14. Directly behind the passage 18 is a chamber 1′, with which communicates the carbonated water-supply pipe 19, leading to any source of supply. (Not shown.) This chamber is normally closed by a valve 20, the latter be-

ing forced to its seat by a spring 21, confined within the chamber, one end of the spring bearing against the valve and the opposite end being received by a cup 22, screwed into the base of the chamber, the plate 13 being formed with a suitable depression or pocket to snugly close over the projecting head of the cup 22, Fig. 3. The valve 20 is provided with a stem or plunger 23, connected to the valve by a reduced neck 23′ opposite the discharge-passage 24, through which upon depression of the valve 20 the carbonated water is discharged from the chamber 1′ into the passage 18, the water escaping past the valve into the space 25 around the neck 23′, thence into the passage 24, and finally into the passage 18, whence it enters the nozzle 14. The upper end of the valve 23 terminates in a central stud 26, over which is passed a cap 27, which may be renewed from time to time as the same wears away.

The several valves (or rather their stems, which for all intents and purposes must be considered as parts of the valves and which are designated as "stems" only by reason of their reduced dimensions) project beyond the top of the body portion C, said projecting ends being disposed in the paths of suitable cam formations 28 29, disposed on the under side of the short arm of the operating lever or handle 30, the same as in our pending application aforesaid. In the present case the lever is likewise connected to a rotatable stem or post 31, received in a socket of the body portion and held in position by a screw 32, whose inner end engages an annular groove formed about the reduced neck 33 of the post, Fig. 3. The upper end of the post passes through the inclined opening of a hollow boss 34 of the lever, a pin 35 being passed transversely through the boss and post. This arrangement of course permits the lever to have imparted thereto a slight movement or oscillation in a vertical plane apart from its rotation in a horizontal plane about the axis of the post 31, so that as the lever is swung horizontally in one direction or the other from its normal central position, Fig. 2, the cam formations 28 29 will respectively depress the valve 20 and a valve 7. With such depression the syrup (which is at all times free to flow into the receptacle 1) discharges through the passage 17 into the water-discharge passage 18, and the water likewise flows into the passage 18 through the passage 24, where the two mingle and jointly flow through the nozzle 14. Should it be desirable to draw only water, the lever is given a slight vertical oscillation, (see dotted position, Fig. 3,) which suffices to depress the valve 20 off its seat and allow the carbonated water to rush into the passage 18 and nozzle 14. The swing of the lever 30 is limited in either direction by a pin 36 on the body portion engaging the radiating pins 37 37 on the lever. The word "stems" as used in the specification and claims herein of course has reference to that portion or extension of a valve beyond the passage or opening which it controls.

From the foregoing it will be seen that the present faucet operates substantially as our previous inventions; but the same has been materially simplified in particulars, whose advantages must be apparent from the detailed description herein. It may be stated in passing that the heads 8 of the valve-stems being free to pass through the tops of the screw-caps 2 the diaphragms 4 are resorted to to prevent leakage of the syrups through the top of the casting.

Having described our invention, what we claim is—

1. A faucet comprising a body portion chambered for the passage of syrup and water from suitable sources of supply, a discharge-nozzle, discharge-passages leading from the chambered portions to said discharge-nozzle, feed-passages communicating with the chambered portions and with the discharge-nozzle respectively, valves controlling the liquid discharges, stems formed with the valves and passing through the chambered portions, and yielding diaphragms spanning the chambered portions receiving the syrup and coupled respectively to the chamber-walls and to the valve-stems, substantially as set forth.

2. A faucet comprising a body portion chambered for the passage of syrup and water from suitable sources of supply, a discharge-nozzle, discharge-passages leading from the chambered portions to said discharge-nozzle, feed-passages communicating with the chambered portions and with the discharge-nozzle respectively, valves controlling the liquid discharges, stems formed with the valves and passing through the chambered portions, yielding diaphragms coupled centrally to the valve-stems, seats or shoulders formed on the walls of the syrup-chambers and means for clamping the edges of the diaphragms to the seats, substantially as set forth.

3. In a faucet, a body portion chambered for the passage of syrup, a valve-stem operating therein, a yielding diaphragm secured centrally to the stem, a seat formed in the walls of the chamber, and a screw-cap enveloping the stem and adapted to force the edges of the diaphragm against the seat, substantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN J. FITZGIBBON.
JOHN M. TRAVIS.

Witnesses:
EMIL STAREK,
JAS. A. MICHEL.