

No. 665,357.

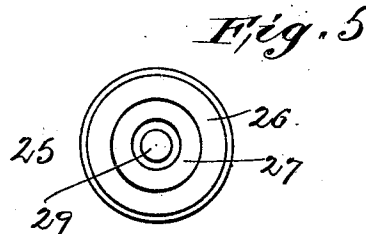
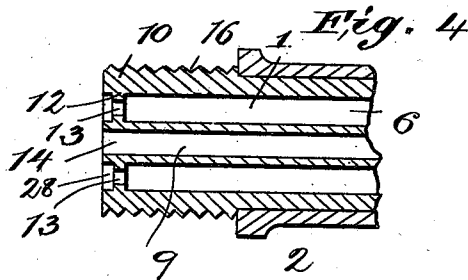
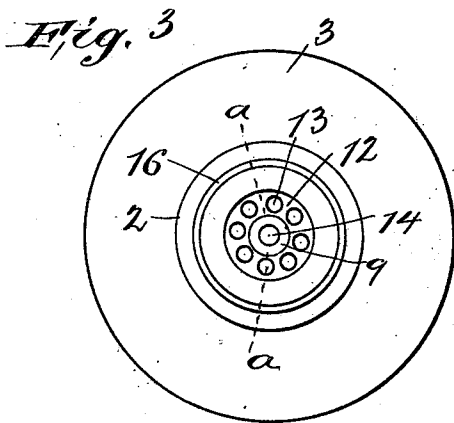
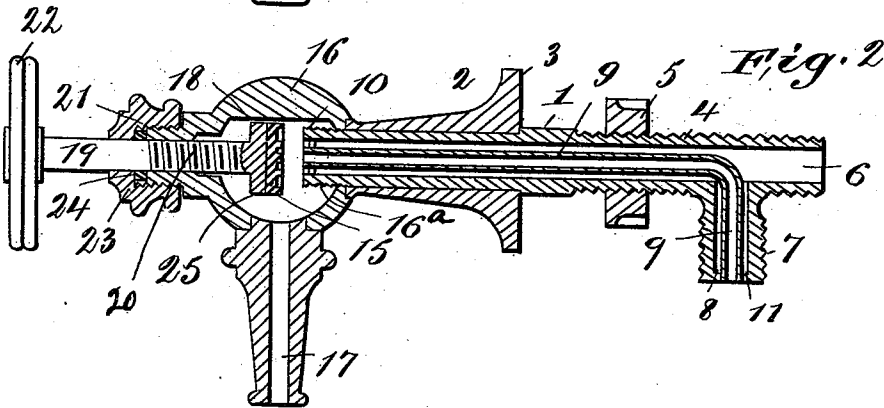
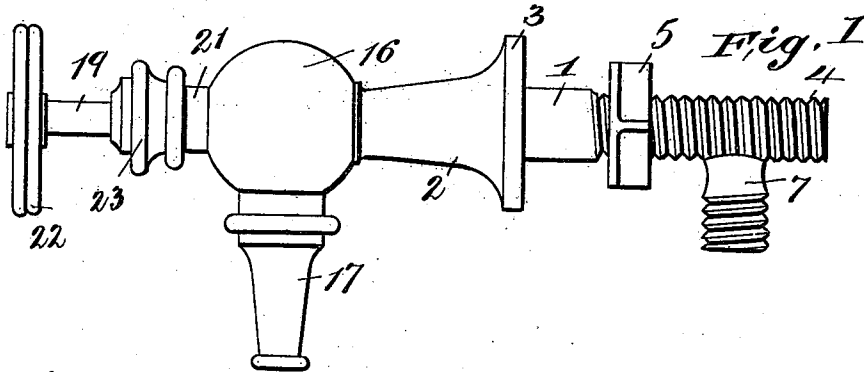
Patented Jan. 1, 1901.

O. W. ACKERMAN.

DELIVERY FAUCET OR VALVE FOR AERATED LIQUIDS.

(Application filed Apr. 3, 1900.)

(No Model.)



Witnesses,
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UNITED STATES PATENT OFFICE.

OTTO W. ACKERMAN, OF HOT SPRINGS, VIRGINIA.

DELIVERY FAUCET OR VALVE FOR AERATED LIQUIDS.

SPECIFICATION forming part of Letters Patent No. 665,357, dated January 1, 1901.

Original application filed August 5, 1899, Serial No. 726,252. Divided and this application filed April 3, 1900. Serial No. 11,404.
(No model.)

To all whom it may concern:

Be it known that I, OTTO W. ACKERMAN, a citizen of the United States, residing at Hot Springs, county of Bath, State of Virginia, (whose post-office address is care of Rubino Healing Springs Company, of same place,) have made certain new and useful Improvements in Delivery Faucets or Valves for Aerated Liquids, of which the following is a specification, this application being a division of my application for patent filed August 5, 1899, Serial No. 726,252.

My invention relates to a delivery-faucet adapted to be used for the dispensing of aerated beverages, more especially in apparatus for making and dispensing artificial mineral waters; and it consists of a faucet which is adapted to deliver and dispense a predetermined amount of carbonated water or gas and mineral water automatically in their respective proportions or quantities.

My invention therefore resides in the construction of parts hereinafter described, and further pointed out in the claims, in which—

Figure 1 is a side view. Fig. 2 is a longitudinal sectional elevation. Fig. 3 is an end view enlarged, showing the nozzles that lead into the chamber of the faucet. Fig. 4 is a sectional elevation thereof on the line *a a*, Fig. 3; and Fig. 5 is an end view of the valve used in the faucet.

Similar numerals of reference indicate like parts throughout the several views.

I have shown an arrangement whereby unequal quantities or the desired proportions of the mineral and carbonated water may be commingled, which is as follows:

At 1 is the tube, shown provided with a movable collar 2, having a flange 3 and a threaded portion 4 to receive a nut 5, whereby the tube can be passed through the wall of a tank and be clamped thereto and support the tube. The tube 1 has a bore 6 leading from a suitable source of supply of carbonated water. The tube 1 also has a branch 7 let into it, either formed integrally therewith or fixed in any desired manner. The branch 7 is provided with a bore 8, which communicates with the bore 6.

Within the bore 6 of the tube 1 is a tube 9, one end of which leads to the delivery end 10

of the tube 1, it being deflected at an angle to and through the bore 8 of the branch 7, where it opens out of the end of the branch, which latter is otherwise closed, as at 11, so that mineral-water solution from a suitable source of supply may pass through the tube 9.

Within the bore 6 at the delivery end 10 of the tube 1 is a diaphragm or disk 12, formed with a plurality of apertures 13, which surround the bore of the tube 9, (see Figs. 3 and 4,) these apertures being in communication with the bore 6 of the tube 1. The area of the apertures 13 and the number of the same are proportioned to the quantity of liquid to be mixed with the mineral water. For instance, I have shown nine apertures 13 and one bore 14, whereby nine streams of the carbonated liquid to one stream of mineral water can be delivered at the same time; but the relative proportions of the carbonated liquid and mineral water to be mixed can be varied as desired either by increasing or decreasing the number of apertures 13 and their area with respect to the area of the bore 14 of the tube 9.

The delivery end 10 of the tube 1 projects into a chamber 15 of a suitable valve-casing 16, (see Fig. 2,) the casing being shown threaded upon the correspondingly-threaded end 16^a of tube 1 and provided with a delivery spout or duct 17, connecting with the chamber 15. At 18 is a valve located in the chamber 15 and provided with a stem 19, having screw-threads 20, that mesh with threads in packing-joint 21, whereby when the handle 22 of the stem 19 is rotated the valve may be seated against the end of the tube 1 to prevent the passage of liquid or gas therefrom and can be unseated, as shown in Fig. 2.

At 23 is a cap threaded upon the joint 21, and 24 is packing to make a tight joint for the valve-stem.

While the valve 18 may have any suitable facing, I preferably provide a pad 25, having a seat 26, having an annular flange 27 projecting from its face to enter a depression 28 in the end of the tube 1, that is produced by placing the diaphragm or disk 12 at a distance back from the delivery end 10 of the tube 1, as shown in Fig. 4, whereby the flange 27 will enter the depression 28 and abut against the

face of diaphragm 12 and close the openings 13. The pad 25 has also a central circular projection 29, adapted to enter the bore 14 of the tube 9 to close the same. Thus it

5 will be seen that a double seating of the valve is provided—that is to say, the flange 27 and projection 29 enter the depression 28 and bore 14, while the flush face 26 of the pad abuts against the end 10 of the tube 1.

10 From the foregoing it will be understood that when the valve 18 is unseated the carbonated liquid will pass through the bore 6 and apertures 13 in the diaphragm 12 into the chamber 15, and simultaneously the mineral

15 water will pass through the tube 9 into said chamber and will pass in a commingled condition from the tap 17.

Having described my invention, I claim—

20 1. A faucet having a central bore, a chamber in said faucet to which said bore leads, a pipe passing through said bore into said chamber, an apertured diaphragm in said bore an outlet from said chamber, and a valve adapted to simultaneously open and close the opening in the bore and the said pipe, substantially as described.

25 2. A faucet comprising a tube having a bore, a valve-controlled chamber said bore leading into said valve-controlled chamber

30 an apertured diaphragm in said bore, a pipe passing through said bore into said chamber,

a tap leading from said chamber, and a valve adapted to simultaneously open and close the bore and pipe, substantially as described.

3. In a faucet, the combination of a tube 35 having a bore and an inlet thereto, an apertured diaphragm within the said bore located at a distance from the end thereof, a tube within said bore leading through said diaphragm, a casing having a chamber connected 40 with tube, a valve within said chamber having a flange to enter the bore of the first-mentioned tube to close the openings in the diaphragm, and means for operating said valve substantially as described.

4. In a faucet, the combination of a tube 45 having a bore, an apertured diaphragm within said bore located at a distance from the end thereof, a tube within said bore leading through said diaphragm, a casing having a 50 chamber connected with said tubes; a valve located in said chamber, arranged to close the openings in the said tubes, said valve also having a projection to enter the bore of the inner tube, and means for operating said 55 valve, substantially as described.

Signed at Healing Springs, county of Bath, State of Virginia, this 6th day of March, 1900.

OTTO W. ACKERMAN.

Witnesses:

A. M. STIMSON,
CHAS. G. HENSLEY.