C. GREINER.

APPARATUS FOR DRAWING EFFERVESCENT LIQUIDS.

No. 182,657. Patented Sept. 26, 1876.

Fig. 1.

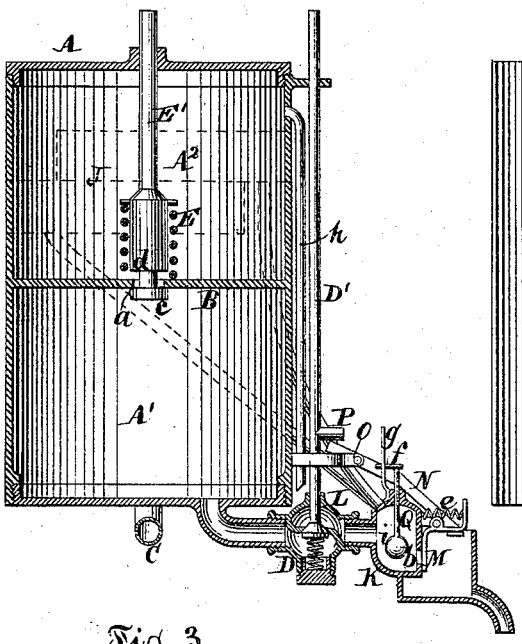


Fig. 2.

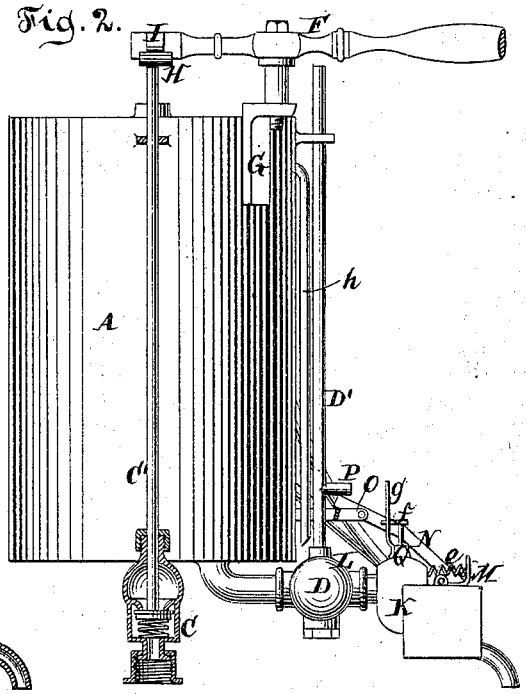
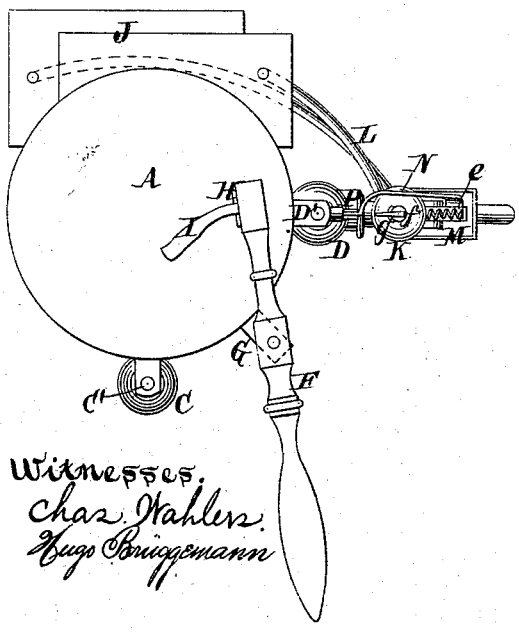


Fig. 3.



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UNITED STATES PATENT OFFICE.

CHARLES GREINER, OF NEW YORK, N. Y.

IMPROVEMENT IN APPARATUS FOR DRAWING EFFERVESCENT LIQUIDS.

Specification forming part of Letters Patent No. **182,657**, dated September 26, 1876; application filed February 19, 1876.

To all whom it may concern:

Be it known that I, CHARLES GREINER, of the city, county, and State of New York, have invented a new and Improved Apparatus for Drawing Effervescent Liquids, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a vertical section of my apparatus. Figure 2 is a side view of the same, partly in section. Fig. 3 is a plan or top view of the same.

Similar letters indicate corresponding parts.

This invention consists in the combination of a liquid-supply valve, a liquid-discharge valve, and a pressure-relieving valve, with a receiving-vessel, and with a lever that sweeps over the stems of the several valves, so that by the motion of this single lever the valves are opened in the proper succession, the liquid is admitted to the receiving-vessel, the surplus pressure is allowed to escape, and finally the liquid is permitted to discharge from the receiving-vessel. The pressure-relieving valve has its seat in a partition which divides the receiving-vessel into two compartments, and said valve is provided with two faces, one on each side of the partition, so that the communication between the two compartments of the receiving-vessel is opened only for short periods during the times the pressure-relieving valve is forced off from its seat, and then again permitted to return, and the escape of an undue quantity of liquid from the main compartment of the receiving-vessel to its secondary compartment is prevented. With the lever which serves to open the several valves is combined a toe, which acts on the pressure-relieving valve at the time the lever opens the liquid-discharge valve, so that the liquid contained in the secondary compartment of the receiving-vessel is permitted to return to the main compartment, and the liquid from the main compartment is permitted to discharge under the ordinary atmospheric pressure. With the liquid-receiving vessel is combined a sirup-reservoir and a sirup-measuring can, through which the liquid discharging from the receiving-vessel passes, so that by admitting to the measuring-chamber the desired quantity of sirup, this sirup becomes mixed with the liquid on discharging from the receiving-chamber, and at the same time the measuring-chamber is washed out for a subsequent charge of the same or of a different kind of sirup. The gate of the measuring-chamber is opened by the action of the stem of the discharge-valve.

In the drawing, the letter A designates the receiving-vessel of my apparatus, which, in this example, has a cylindrical form, and which is divided by a horizontal partition, B, into a lower or main compartment, A^1, and an upper or secondary compartment, A^2. To the main compartment A^1 is connected the liquid-supply valve C, as well as the liquid-discharge valve D, while in the partition B is arranged the pressure-relieving valve E. These several valves C D E are of the description known as self-closing valves, being subjected to the action of springs, which have a tendency to close them. The stems C′ D′ E′ of these valves rise vertically above the top of the receiving-vessel A, while they are situated in the arc of a circle, traversed by one end of a horizontal lever, F, which is pivoted to a bracket, G, at the top of the receiving-vessel. This lever F carries a pawl, H, which is so arranged that when the lever is moved in one direction it depresses the valve-stems C′ E′ D′ in succession, while, when it is moved in the other direction, it passes loosely over the stems. The lever, moreover, has a toe, I, which projects therefrom in such manner as to act on the stem of the pressure-relieving valve E during the time the lever depresses the liquid-discharge valve D. The pressure-relieving valve E passes through an aperture, *a*, in the horizontal partition B, while it is made with two faces, *c d*, one above and the other below the partition B, the lower face serving to close the aperture *a* in the normal position of the valve. When this valve is depressed the communication between the chambers A^1 A^2 remains open only during the time occupied in moving the valve to the extent of the space between the upper and lower faces *c d*.

The valves C D E are so disposed relatively to the horizontal lever F that when the lever is moved so as to depress the valve-stems the liquid-supply valve C is first opened, then the pressure-relieving valve E, and finally the

liquid-discharge valve D, and by this arrangement the liquid from a fountain, which may be connected to the supply-valve C, is admitted to the main compartment A^1 of the receiving-vessel, then relieved of surplus pressure, and finally allowed to discharge from the receiving-vessel. By the peculiar form of the pressure-relieving valve E the escape of too great a quantity of liquid from the compartment A^1 to the compartment A^2 is obviated, while, by the toe I, which depresses the stem of the pressure-relieving valve E during the time the discharge-valve D is opened, the liquid contained in the compartment A^2 is permitted to return to the main compartment. The surplus pressure which is allowed to escape from the liquid into the compartment A^2 is conducted from such compartment by a pipe, *h*.

The letter J designates the sirup-reservoir of my apparatus, which is divided into a series of compartments for receiving different kinds of sirups, and K is a sirup-measuring can, which is connected to each of the compartments of the reservoir J by means of pipes L. The sirup-can K is connected to the liquid-discharge valve D in such a manner that the liquid is caused to pass through the can in its escape from the valve, and the can is provided with a discharge-orifice, *b*, in front of which is placed a gate, M, the gate being hinged to the can, and being subjected to the action of a spring, *e*, which has a tendency to close it.

The sirup-reservoir J is, in this example, attached to the receiving-vessel A, but isolated therefrom. The reservoir, however, can be made separately without departure from my invention. The gate M is lifted against the action of the spring *e* by one end of an arm, N, which is pivoted to a bracket, O, attached to the receiving-vessel A, and which terminates contiguous to the stem of the liquid-discharge valve D, which has a projecting lug, P, above the point of the arm. If a sirup of the desired flavor is admitted to the measuring-can K through one of the pipes L, and the liquid-discharge valve D is opened, the gate M is opened simultaneously therewith by the lug P actuating the arm N, while the liquid from the vessel A commingles with the sirup, and together therewith discharges through the sirup-can. By the passage of the liquid through the measuring-can K, the can is, in a measure, washed out, so that none of the sirup remains in the can, and hence the different kinds of sirups are not liable to become mixed.

The sirup-measuring can K is provided with a device for indicating the quantity of sirup it contains, consisting, in this example, of a float, *i*, which is attached to a vertical rod, Q, extending through the top of the sirup-can K, the rod being provided with an indicating-hand, *f*, which points to a graduated scale, *g*, fastened to the top of the can. It is obvious that when sirup is let into the can K, the float *i* rises, while the hand *f* indicates the position of the float and the amount of sirup in the can. Various other devices, such as, for instance, a transparent gage as used in beer or druggists' measures, may be substituted for the float *i* and its paraphernalia without departure from my invention.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a liquid-supply valve, C, a liquid-discharge valve, D, and a pressure-relieving valve, E, with a receiving-vessel, A, and with a lever, F, arranged to open the several valves, substantially as described.

2. The pressure-relieving valve E, constructed with two faces, *c d*, in combination with a receiving-vessel, A, having a partition, B, with the liquid-supply valve C, and discharge-valve D, substantially as described.

3. The combination, with the lever F, which serves to open the valves C D E, of a projecting toe, I, substantially as described, and for the object specified.

4. The sirup-reservoir J and sirup-measuring can K, in combination with the receiving-vessel A, substantially as described.

5. In combination with the sirup-can K, its gate M, the pivoted arm N, and the projecting lug P, attached to the stem of the liquid-discharge valve D, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 15th day of February, 1875.

CHARLES GREINER. [L. S.]

Witnesses:
W. HAUFF,
E. F. KASTENHUBER.