P. E. MALMSTROM & P. E. DUMMER.

Drawing Effervescent Liquids.

No. 160,925. Patented March 16, 1875.

Fig. 1.

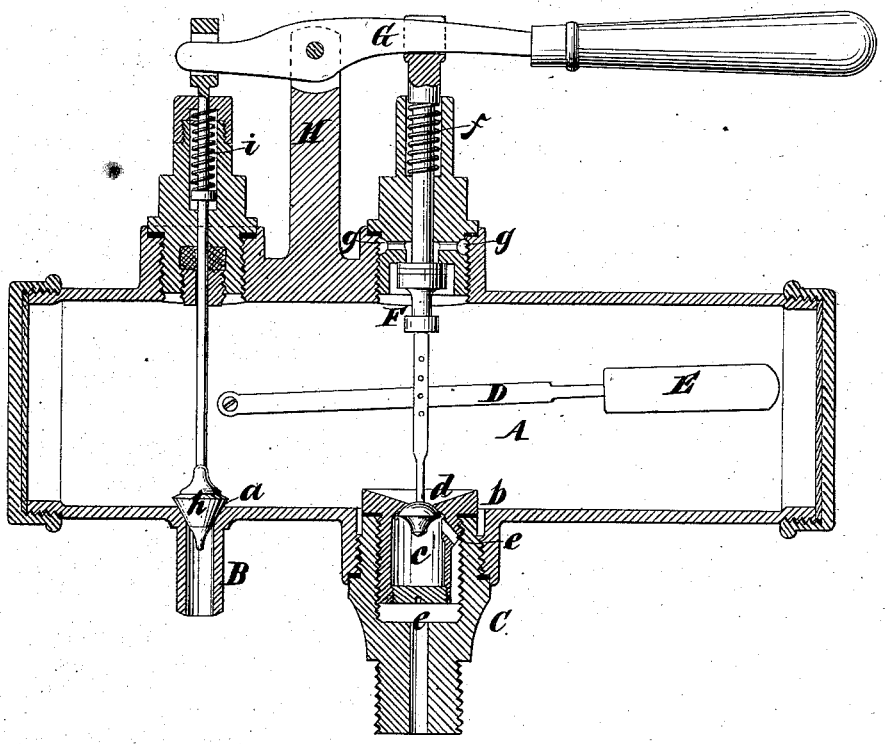
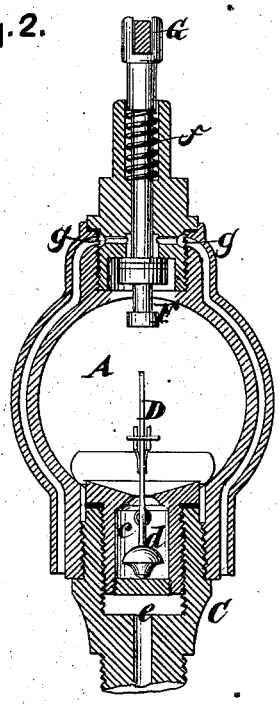


Fig. 2.



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UNITED STATES PATENT OFFICE.

PETER E. MALMSTRÖM AND PAUL E. DUMMER, OF NEW YORK, N. Y.

IMPROVEMENT IN DRAWING EFFERVESCENT LIQUIDS.

Specification forming part of Letters Patent No. **160,925**, dated March 16, 1875; application filed February 8, 1875.

To all whom it may concern:

Be it known that we, PETER E. MALMSTRÖM and PAUL E. DUMMER, both of the city, county, and State of New York, have invented a certain new and Improved Apparatus for Drawing Effervescent Liquids, of which the following is a specification:

This invention is illustrated in the accompanying drawing, in which—

Figure 1 represents a longitudinal vertical section. Fig. 2 is a transverse section in the plane *x x*, Fig. 1.

Similar letters indicate corresponding parts.

This invention relates to an improvement in that class of apparatus for drawing effervescent liquids in which the liquid from the fountain, cask, or barrel is first admitted into a chamber, from which the free gas is permitted to escape, and consequently the liquid is relieved from its surplus pressure before the same is allowed to discharge into the receiving-vessel. Our chamber is so formed that the liquid contained therein has little depth compared with the area of its surface. The induction-valve is situated in a chamber, the upper surface of which forms the seat for said valve, while the induction-port passes up in an oblique direction, terminating in said chamber close beneath the valve-seat, so that the valve, when it is down, cannot be raised up by the force of the inflowing liquid. With the induction-valve is combined a float, which is situated in the chamber, and prevents the liquid from rising in said chamber beyond the desired level. The discharge-valve is situated in a cavity formed in the lowest part of the chamber, so that when said valve is raised, all the liquid contained in the chamber is free to discharge. The discharge-valve is raised by a lever, which serves to depress the vent-valve a little before the discharge-valve is opened, and whenever the vent-valve is depressed it acts on the stem of the induction-valve, so as to open the induction-passage.

In the drawing, the letter A designates a chamber, which is so formed that if the same is filled with liquid to the level of the float, this liquid has but little depth as compared with the area of its surface. In the bottom of this chamber are two apertures, *a b*, in one of which is secured the discharge-pipe B, while the other serves to receive a nipple, C, that connects with the fountain or cask containing the liquid which is to be drawn. In said nipple is formed a chamber, *c*, the upper surface of which forms the seat for the induction-valve *d*, while said valve-chamber communicates through a channel or port, *e*, with the fountain or supply-vessel. The upper portion of said induction-port runs up in an oblique direction, and it terminates close beneath the seat of the induction-valve, so that if this valve is down the force of the inflowing liquid has no tendency to raise it up. The stem of the induction-valve extends up into the chamber A, and it is pivoted to a lever, D, which carries a float, E, so that when the liquid in the chamber A has reached a certain level, the induction-valve will be closed by the action of said float.

The stem of the induction-valve extends up close to the vent-valve F, which is situated in the upper part of the chamber A, and which is closed by the action of a spring, *f*. When said vent-valve is depressed, the interior of the chamber is brought in communication with channels *g*, one or more, which serve to let the surplus gas escape, and also to admit the external air which may be requisite to enable all the liquid contained in the chamber A to discharge.

The discharge-aperture *a* is situated in the lowest part of the chamber A, so that all the liquid contained in said chamber will flow out if the discharge-valve *h* is raised. This valve has its seat on the discharge-aperture, and its stem extends up through a stuffing-box situated in the upper part of the chamber A. A spring, *i*, has a tendency to keep this valve closed.

Both the discharge-valve and the vent-valve are operated by a hand-lever, G, the fulcrum-pin of which has its bearings in a standard, H, rising from the chamber A, said lever being arranged in relation to the stems of the two valves in such a manner that when its handle is depressed the vent-valve F is opened slightly in advance of the discharge-valve, and that any surplus gas contained in the chamber A is free to escape, and the external air is allowed to enter before the liquid commences to discharge. At the same time, when-

ever the vent-valve is depressed, the induction-valve is forced from its seat, so that the chamber A, as soon as the liquid is entirely or partially discharged from the same, can be immediately filled from the fountain, and the liquid will always come up to the same uniform level in said chamber, as indicated by the float.

By these means an apparatus is obtained by which the operation of drawing liquids in their effervescent state is materially improved and facilitated.

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

1. The combination of an oblique channel or port, *e*, with the chamber *c*, containing the induction-valve *d*, substantially as shown and described.

2. The combination of a float, E, with the induction-valve *d* and vent-valve F, said vent-valve, when it is depressed, serving to open the induction-valve against the action of its float, substantially as set forth.

3. The combination of a chamber, A, formed as described, with a discharge-valve, *h*, vent-valve F, float E, induction-valve *d*, and oblique supply-port *e*, all constructed and operating substantially in the manner shown and described.

In testimony that we claim the foregoing we have hereunto set our hands and seals this 5th day of February, 1875.

PETER E. MALMSTRÖM. [L. S.]
PAUL E. DUMMER. [L. S.]

Witnesses:
W. HAUFF,
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