

(No Model.)

W. R. DALES.
LIQUID DISPENSING APPARATUS.

No. 530,681.

Patented Dec. 11, 1894.

Fig. 1.

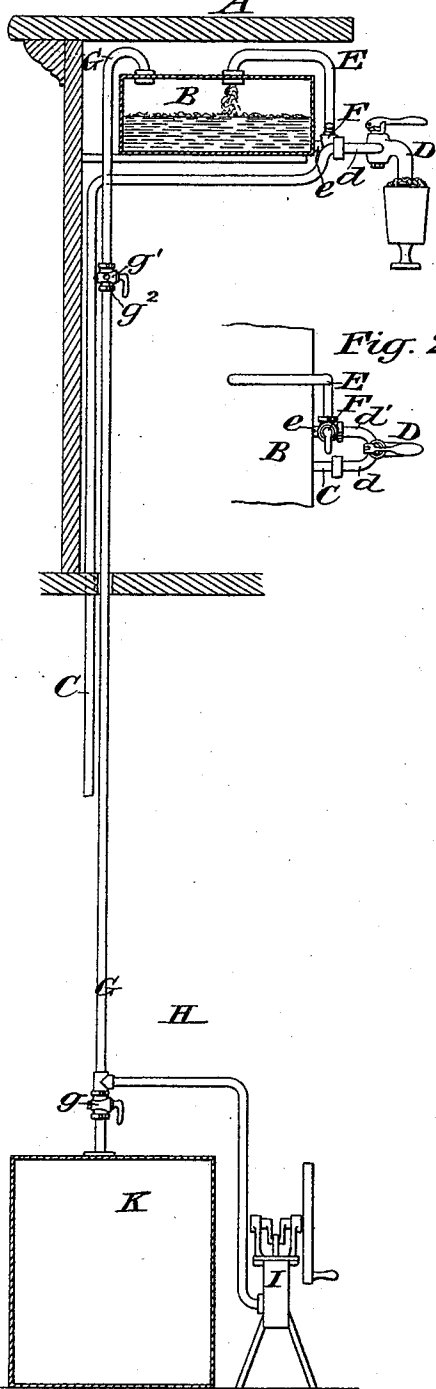


Fig. 2.

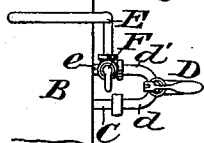


Fig. 3.

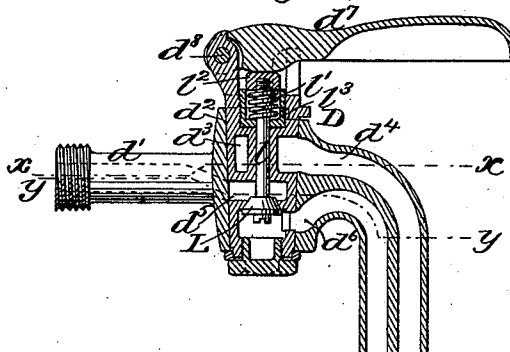


Fig. 4.

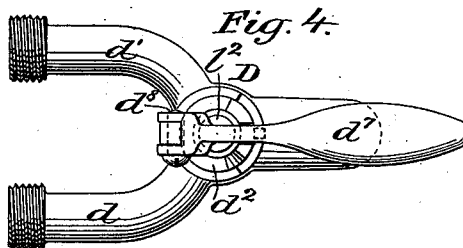


Fig. 5.

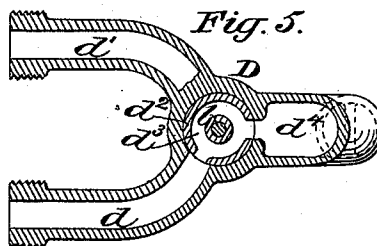
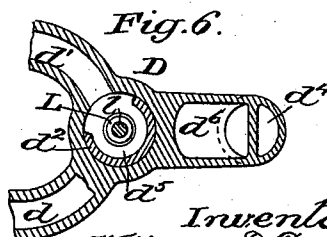


Fig. 6.



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UNITED STATES PATENT OFFICE.

WILLIAM R. DALES, OF NEW YORK, N. Y.

LIQUID-DISPENSING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 530,681, dated December 11, 1894.

Application filed August 7, 1894. Serial No. 519,638. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM R. DALES, of New York, in the county and State of New York, have invented a new and useful Improvement in Liquid-Dispensing Apparatus, of which the following is a specification.

My invention relates to an improvement in liquid dispensing apparatus in which provision is made for removing the surplus froth from the surface of a liquid which tends to effervesce as it becomes exposed to the air, or of removing one of several strata of fluid from another and returning it to a suitable receptacle from which it may be further utilized as may be desired.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is a view in side elevation, partly in section, of the apparatus as it is set up in use. Fig. 2 is a plan view of a portion of the apparatus. Fig. 3 is an enlarged view in vertical central section of the discharge faucet. Fig. 4 is a top plan view of the faucet. Fig. 5 is a horizontal section in the plane indicated by line *x, x* of Fig. 3, and Fig. 6 is a longitudinal section in the plane indicated by line *y, y* of Fig. 3.

The particular form of apparatus in which I have chosen to illustrate my invention is that which is designated for dispensing beer, where the beer is forced from a keg in the basement or cellar up to a discharge faucet at the back of the bar.

The bar is denoted by A and may be of any well known or approved form. Beneath it, a shallow tank B is located, which is employed as a receptacle for the returned froth which may be removed from the discharged liquid in the manner to be hereinafter explained.

The pipe for transmitting the liquid from the supply is denoted by C, and it leads to and connects with one branch *d* of the discharge faucet D. Another branch *d'* of the faucet connects with a pipe E leading to the interior of the upper portion of the tank B, which latter is made air tight for the purpose of forming a vacuum therein. Another pipe *e* leads from the bottom of the tank B to the pipe E, a two way cock F being provided at their juncture, so that the pipe E leading to

the air space in the tank may be cut off at the same time the pipe *e* is opened to the branch *d'* of the faucet.

A pipe G leads from the air space of the tank B down to an air exhausting device, located in the present instance in the basement or cellar H, and consisting of an exhaust pump I, of any well known or approved form. The pipe G also leads to an air tight tank K, located in the basement or cellar, and employed as an auxiliary vacuum chamber to assist the vacuum which is formed in the air space of the tank B.

A stop cock *g* is located in the pipe G intermediate of the auxiliary tank K and the point where the exhaust device connects with the pipe G, so that the tank K may be cut off and removed or repaired while the pump continues to act directly upon the air space in the tank B, and a second cock *g'* is located in the pipe G, within reach of the bar-tender, so that he may shut off the effect of both the pump and the auxiliary tank K when it is desired to draw the liquefied or condensed froth from within the tank B. The cock *g'* is provided with an air passage *g²* which opens to admit air into the tank B to permit the discharge of the liquid therein, at the same time that the cock is turned to shutoff the pump and auxiliary tank, said air passage being closed by the turning of the cock to open the pipe G to said pump and auxiliary tank.

The faucet D is conveniently located in or below the plane of the bottom of the tank B, so that the liquid from said tank will discharge under the influence of gravity when permitted to do so.

The two branches *d* and *d'* communicate with a central chamber of the faucet, which chamber is adapted to receive a turn plug *d²*, provided with a recess *d³* which, when the plug is turned in one direction opens communication between the branch *d* and the exit passage *d⁴* of the faucet, the said turn-plug forming a cut off between said branch *d* and passage *d⁴* when turned in the opposite direction.

A second recess *d⁵* in the turn plug is at all times in open communication with the branch *d'*, and communication between the recess *d⁵* and the exit passage *d⁶* of the faucet is opened

and closed by a valve L, having its stem l extended centrally up, through the turn plug d^2 , into engagement with a valve operating lever d^7 , hinged to the turn plug at d^8 and serving as a handle to turn the plug, as well as a valve operating lever. The valve L is held normally seated by a spring l' inserted between an abutment l^2 on its stem and a shoulder l^3 on the plug.

I have shown the exit passageways d^4 and d^6 , as formed within the circular nozzle of the faucet, but it is obvious that they might be formed in separate branches if preferred.

In operation suppose it be required to draw a glass of beer. The plug d^2 is turned to open the passageway d^4 to the branch d and the beer flows from the supply keg. As it foams in the glass, the lever d^7 may be depressed, thereby opening communication between the mass of foam and the vacuum tank, and the foam will be "sucked" back into the vacuum tank until there remains in the glass only the desired quantity. As the liquid from the condensed foam accumulates in the tank, it may be drawn either alone or in connection with a proportion of beer from the keg, as may be thought best, since the lever d^7 may be depressed at any point on the rotary movement of the turn plug. Where the condensed foam is to be drawn from the tank B, the vacuum is cut off as hereinbefore explained.

While I have shown the apparatus as applied to the removal of foam from beer, it is to be understood that I do not limit myself to such specific application of it, but intend to employ it in connection with any liquid where it may be practicable.

It is evident that slight changes might be resorted to in the form and arrangement of the several parts without departing from the spirit and scope of my invention. Hence I do not wish to limit myself strictly to the structure and arrangement herein shown and described, but

What I claim is—

1. A liquid dispensing apparatus, compris-

ing a discharge conduit leading from a supply, a vacuum tank, a return conduit leading from the vacuum tank and means for controlling the discharge and return of the liquid, substantially as set forth.

2. A liquid dispensing apparatus, comprising a discharge conduit leading from a supply, a vacuum tank, a return conduit leading from the upper portion of the vacuum tank, a branch conduit leading from the bottom of the vacuum tank to the said return conduit and means for controlling the discharge and return of the liquid, substantially as set forth.

3. A liquid dispensing apparatus, comprising a discharge conduit leading from a supply, a vacuum tank, an auxiliary vacuum tank connected with the aforesaid vacuum tank, a return conduit leading from the first named vacuum tank and means for controlling the discharge and return of the liquid, substantially as set forth.

4. The faucet provided with a plurality of inlet conduits and a plurality of discharge conduits, a cut off for one of the conduits and a valve carried by said cut off, for controlling the opening and closing of another conduit, substantially as set forth.

5. The faucet provided with a plurality of inlet and discharge conduits, a turn plug interposed in the conduits and forming a cut off for one of them, and a valve seated in the turn plug and forming a cut off for another of the conduits, substantially as set forth.

6. The faucet provided with a plurality of inlet and discharge conduits, a turn plug interposed in the conduits and forming a cut off for one of the conduits, a valve seated in the turn plug and forming a cut off for another of the conduits, and a valve operating lever carried by the turn plug for operating the valve at any point during the turning of the plug, substantially as set forth.

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