W. K. JOHNSTON.

LIQUID MEASURE.

No. 191,971. Patented June 12, 1877.

Fig. 1.

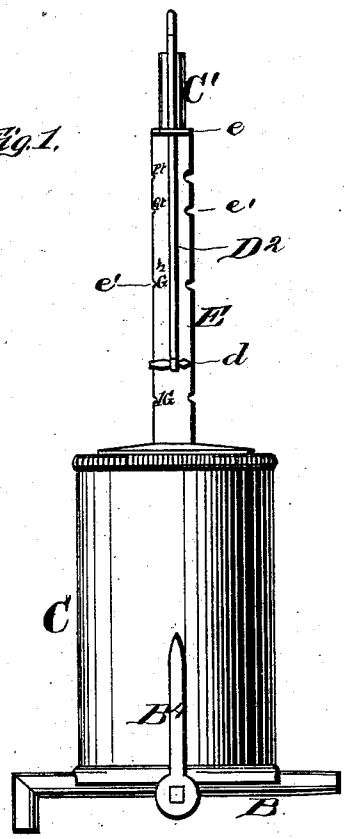


Fig. 2.

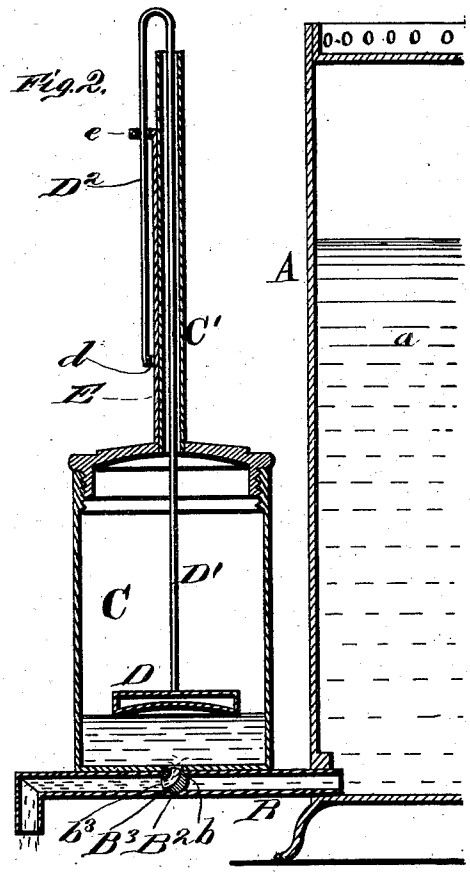
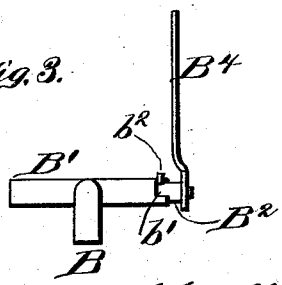


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM K. JOHNSTON, OF CORDOVA, ILLINOIS, ASSIGNOR OF ONE-HALF HIS RIGHT TO CALVIN L. MAXWELL, OF PRINCETON, IOWA.

IMPROVEMENT IN LIQUID-MEASURES.

Specification forming part of Letters Patent No. **191,971**, dated June 12, 1877; application filed January 20, 1877.

To all whom it may concern:

Be it known that I, WILLIAM K. JOHNSTON, of Cordova, in the county of Rock Island and State of Illinois, have invented a new and valuable Improvement in Fluid-Measures; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a front elevation of my fluid-measurer. Fig. 2 is a central vertical sectional view thereof. Fig. 3 is a detail view of the same.

This invention relates to devices for measuring liquids as they are drawn from a tank, hogshead, or reservoir; and it consists in the combination and arrangement of the parts, as will be hereinafter set forth and pointed out in the claims.

In the accompanying drawings, A designates a reservoir, containing liquid *a*, and B designates a faucet-tube leading therefrom. Said tube is provided with an upward opening, *b*, near its middle, which communicates with the bottom of measuring-vessel C. B^1 designates a cross-tube joined to said faucet-tube B, and recessed at one of its ends b^1 to allow the oscillation of a small stud or stop-pin, b^2, on a spigot-shaft, B^2, that turns within said cross-tube. Said shaft B^2 carries a two-way cock, B^3, which has a curved way, b^3, and is operated by a crank-arm or handle, B^4. By turning shaft B^2 to the limit of its oscillation in one direction the liquid *a* is allowed to flow from reservoir A into measuring-vessel C. By similarly turning said shaft in the opposite direction the above communication is cut off, and the contents of measuring-vessel C is allowed to escape through the discharge end of faucet-tube B.

In said measuring-vessel C is a float, D, which carries an upright rod, D^1, that works up and down in a vertical guide-tube, C′, arranged on the top of measuring-vessel C, and communicating with the interior thereof. To said guide-tube C′ is secured a rigid vertical graduated plate, E, which has on its upper end a perforated guide-flange, *e*, and on its edges regularly arranged notches *e′ e′*. The upper end of rod D^1 is bent over the upper edge of guide-tube C′ and brought downward in front of plate E. The downwardly-extending part D^2 of said rod D^1 passes through perforated guide-flange *e*, and carries at its termination a pointer or index, *d*, which is provided at its rear end with a small guide-flange, which embraces and slides upon one of the edges of said plate E.

The operation of said apparatus is as follows: When it is desired to draw off a certain quantity of liquid, the two way faucet-cock is turned, as above described, so as to cut off the communication between the reservoir A and the measuring-vessel C, and to allow the exit of the liquid in the measuring-vessel. As said liquid escapes the float D falls, carrying down the index *d*. When the latter reaches the notation upon plate E which indicates the escape of the quantity desired, the said cock is turned into its other position, cutting off the discharge of said liquid and reopening the communication between reservoir A and measuring-vessel C. The said measuring-vessel then speedily fills again. When the liquid in said reservoir has fallen too low to fill said measuring-vessel, the index or pointer *d* will stand below the zero-point before the measuring begins, and allowance must be made therefor. Thus, if it is desired to draw one gallon, and said index *d* indicates one gallon before the measuring begins, the said index must be allowed to fall until it indicates two gallons before the discharge is cut off, and so with the measurement of other quantities.

When it is necessary to measure in the dark, the operator selects by the sense of touch that one of notches *e′* which corresponds to the quantity of liquid to be drawn, and keeps his finger there until it is touched by the descending index *d*. He then cuts off the discharge of liquid, as before. Serrations, pins, or other distinctly palpable attachments or formations may be substituted for said notches

e'; but in any case they must be arranged at regular intervals on the edges or face of said plate, so as to give the indications desired.

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

1. The combination, with the notched or serrated indicating-plate E, of the measuring-vessel C, float D, guide-tube C′, rod D^1 D^2, and index *d*, substantially as described, and for the purpose set forth.

2. The combination of a notched or serrated indicating-plate, E, with a pointer, *d*, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM K. JOHNSTON.

Witnesses:

CONRAT DOUGT,

CHARLES COX.