

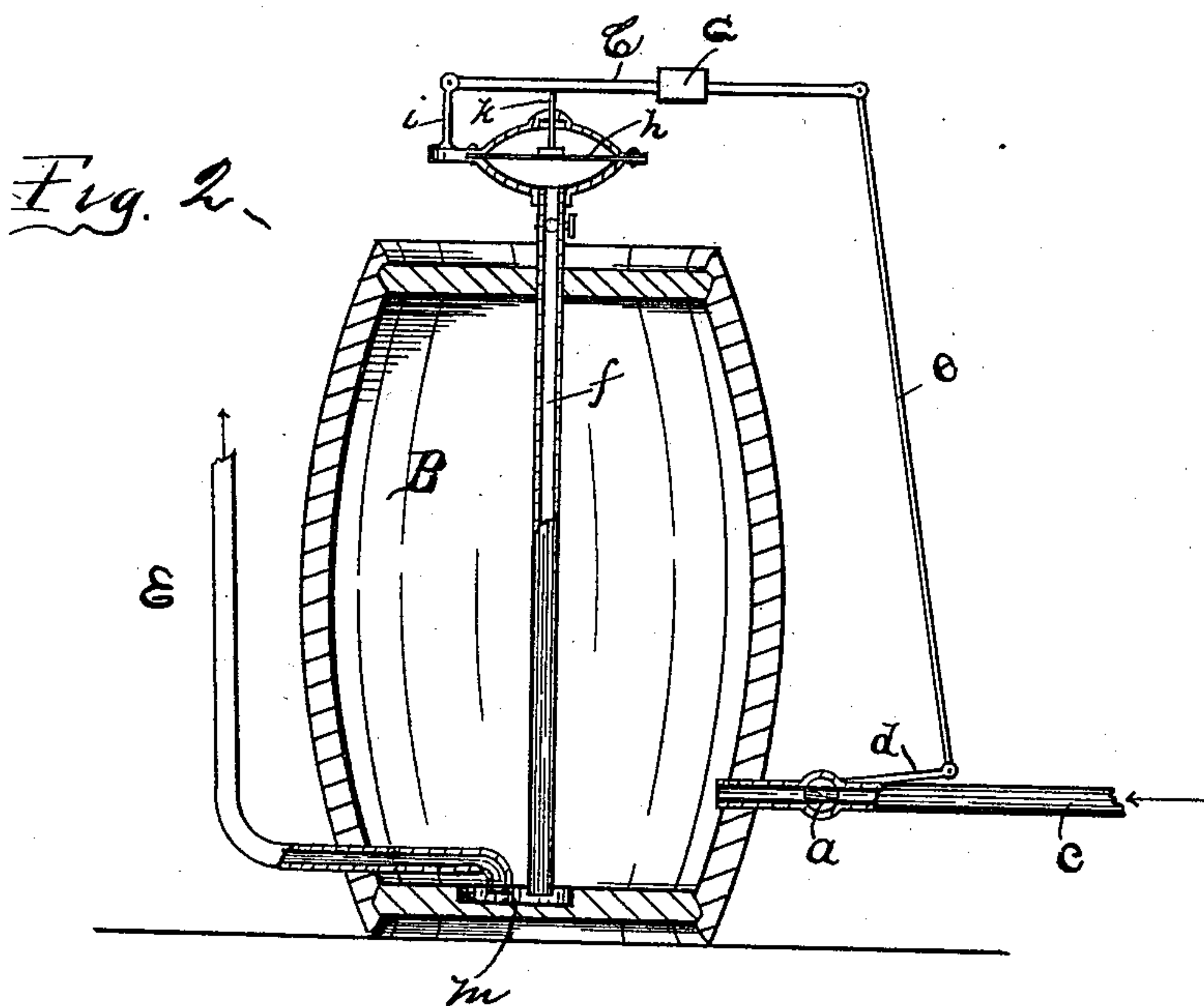
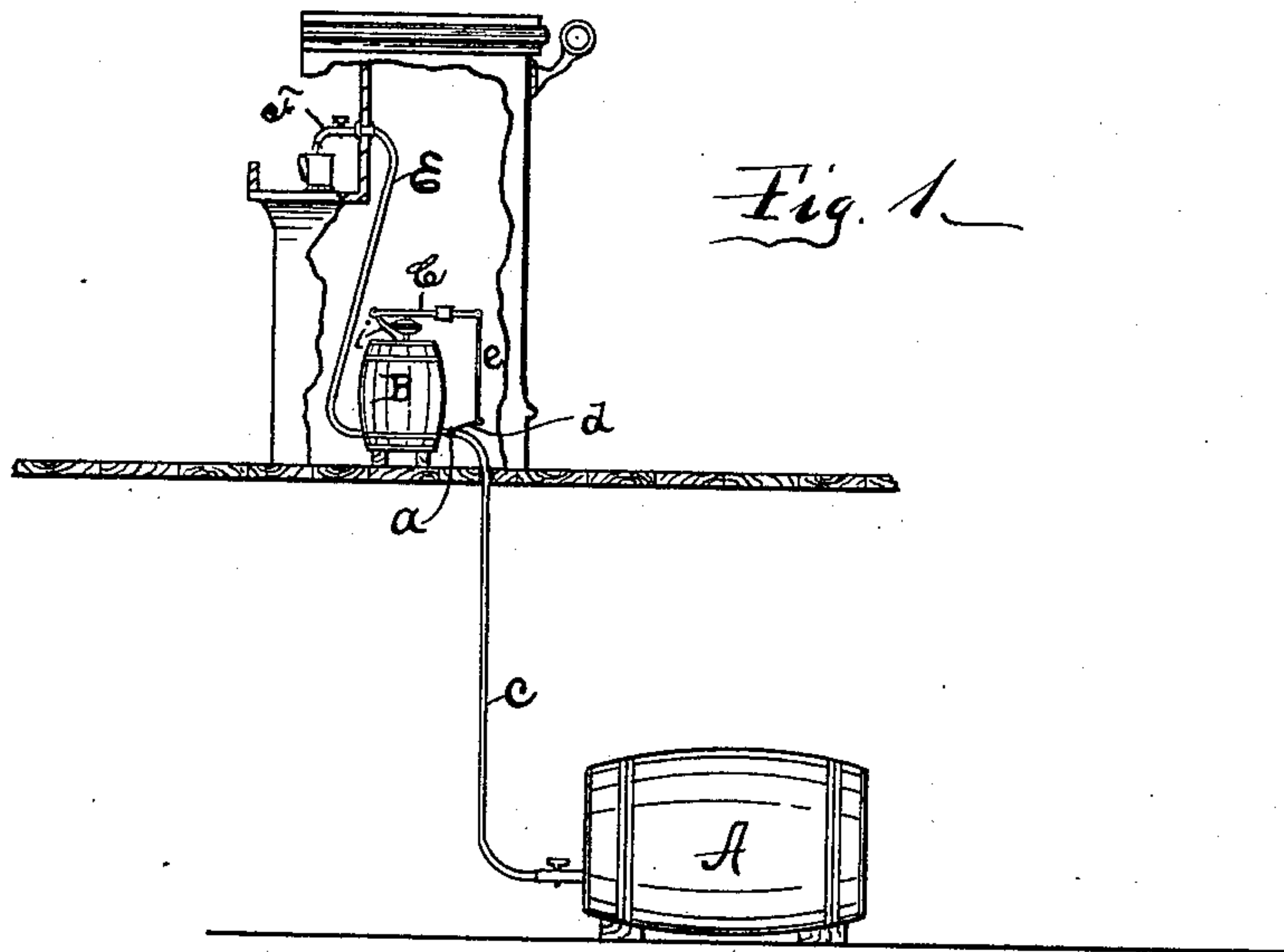
(No Model.)

J. W. L. COIT & J. R. McNAMARA.

BEER DRAWING APPARATUS.

No. 335,566.

Patented Feb. 9, 1886.



Witnesses:

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By their Atty.
Frank H. Allen.

UNITED STATES PATENT OFFICE.

JOHN W. L. COIT AND JOHN R. McNAMARA, OF NORWICH, CONNECTICUT.

BEER-DRAWING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 335,566, dated February 9, 1886.

Application filed December 5, 1885. Serial No. 184,764. (No model.)

To all whom it may concern:

Be it known that we, JOHN W. L. COIT and JOHN R. McNAMARA, both citizens of the United States, and residents of Norwich, New London county, Connecticut, have invented certain new and useful Improvements in Beer-Drawing Apparatus, which improvements are fully set forth and described in the following specification, reference being had to the accompanying sheet of drawings.

Our improvements are in that class of beer-drawing devices in which an auxiliary tank or reservoir is interposed between the original barrel and the delivery-tap for the purpose of partially settling the liquid, thus enabling the operator to draw continuously a great number of glasses of beer or ale free from froth.

Our immediate object is to produce at a moderate cost a settling-tank provided with an automatic pressure-regulator and cut-off, from which there shall be no escape of gas, except as such gas passes outward with the liquid.

We are aware that there have been constructed heretofore settling-tanks provided with a "blow-off" cock to relieve the gas-pressure in the dome of said tanks, so that the volume of liquid may flow in and take the place before occupied by said gas; but in such devices the escape of gas tends to leave the beer flat and insipid, the result being practically the same as when drawn into an open pail or measure and allowed to stand and settle.

Our purpose is to effect the settling process before the beer comes in contact with the air, thus retaining the full life and body of the beer, yet avoiding the objectionable froth.

We have found by actual experiment that ale or beer will settle under a pressure of ten pounds, or less, and also that the volume of froth increases proportionately with the increased pressure. While it is not desirable to vent the original barrel to reduce the pressure, it is practicable to draw from said original barrel a small quantity into an auxiliary tank and hold it there under a greatly-reduced pressure. This we do by means of the mechanism illustrated in the annexed drawings, in which—

Figure 1 is a general view of our complete device as it appears when ready for use, and Fig. 2 is a vertical sectional view of the auxiliary settling-tank, showing also the automatic pressure-regulator.

The letter A represents the original barrel of ale or beer, which, for convenience, may be located in a cellar or underneath the counter.

B represents our settling-tank, which may be located at any convenient point between the original barrel and the delivery-tap at the bar. Tank B has in one side a plug-faucet, *a*, whose outer end is connected with a pipe, *c*, leading directly to the barrel A. This plug-faucet *a* is provided with a lever-handle, *d*, of more than usual length, having at its free end an eye to receive a connecting-rod, *e*, leading upward to a pressure-regulator, which we will proceed to describe. Said regulator is of the form commonly known as a "diaphragm-regulator," and consists of a tube, *f*, extending downward into tank B, and having a dome substantially oval in vertical section, said dome being formed of two companion sections, between which a disk or diaphragm, *h*, of rubber, is secured when the dome is assembled. A bracket, *i*, formed, preferably, as a part of the dome, extends upward, and within its free end is pivoted a lever-arm, C, which rests on a valve-rod, *k*, said arm C being practically a lever of the third order. Rod *k* passes downward through the upper half part of the dome, and is formed, preferably, with a large head, which rests on the rubber disk *h*. The free end of lever-arm C is connected with the operating-handle *d* of faucet *a* by rod *e*, above described, the several parts being so adjusted that the upward movement of the lever C will act to close the plug-faucet *a*, through which the liquid enters the settling-tank, and thus shut off the inflow of liquid. A pipe or flexible tube, E, leads outward from tank B, preferably near its lower end, and to this pipe may be attached a tap or faucet, F, located at any desired place. On lever-arm C is located a movable weight, G, which may be so adjusted that a less or greater pressure may act to move said lever-arm, as will be fully understood by referring to the drawings.

To explain the action of our device, we will assume that tank B has already been connect-

ed with barrel A and filled with beer or ale from said barrel. The operator now draws from delivery-cock F one or more glasses of the liquid, which action reduces slightly the pressure in tank B, and as a natural result the rubber diaphragm *h* is slightly depressed. The lever-arm C follows downward, and through the connection above described cock *a* is opened to allow a fresh supply of liquid to enter from barrel A. As the pressure gradually rises in tank B, disk *h* is again forced upward and cock *a* is closed, the whole operation being automatically performed, and without the undue escape of a particle of gas.

15 We have found it both convenient and cheap to use a small lager-beer cask for the tank B.

We do not claim to have invented the diaphragm-regulator which we have described, as we are aware that the same general form has been in common use with steam-generators as a means for operating the draft-damper. In order to be able to draw from the very bottom of tank B, when desired, we have bored the bottom head of said tank, as shown at *m*, and have extended pipe *e* well downward into the recess so formed.

Our apparatus as described is especially valuable for drawing ale, which coming, as it usually does, in very large barrels, is cooled with difficulty; but with our improved device the settling-tank may be easily jacketed with

ice or located in an ordinary ice-box, while the original barrel may remain, as heretofore, in the cellar or store-room.

Having thus described our invention, we claim—

1. The combination, with the barrel A and a settling-tank connected therewith by a pipe, of a valve located adjacent to the eduction end of said pipe, a lever-arm connected with the valve, a pressure-regulator comprising a dome having a flexible diaphragm, a pipe extending from the dome into the settling-tank, a pivoted lever connected with the lever-arm by a rod, *e*, and a valve-rod depending from the lever and resting on the flexible diaphragm, as set forth.

2. The combination, with the barrel A, tank B, and pipe C, connecting them, of a valve in said pipe, the lever-arm *d*, the pressure-regulator comprising a dome having a flexible diaphragm, and a pipe extending from the dome into the tank, the standard *i*, a lever pivoted thereto and connected with the lever-arm by a rod, *e*, a valve-rod depending from the lever and resting on the flexible diaphragm, and a movable weight on the lever, as set forth.

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Witnesses:

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