

No. 854,412.

PATENTED MAY 21, 1907.

P. J. FLYNN.
LIQUID DISPENSING APPARATUS.

APPLICATION FILED AUG. 18, 1906.

3 SHEETS—SHEET 1.

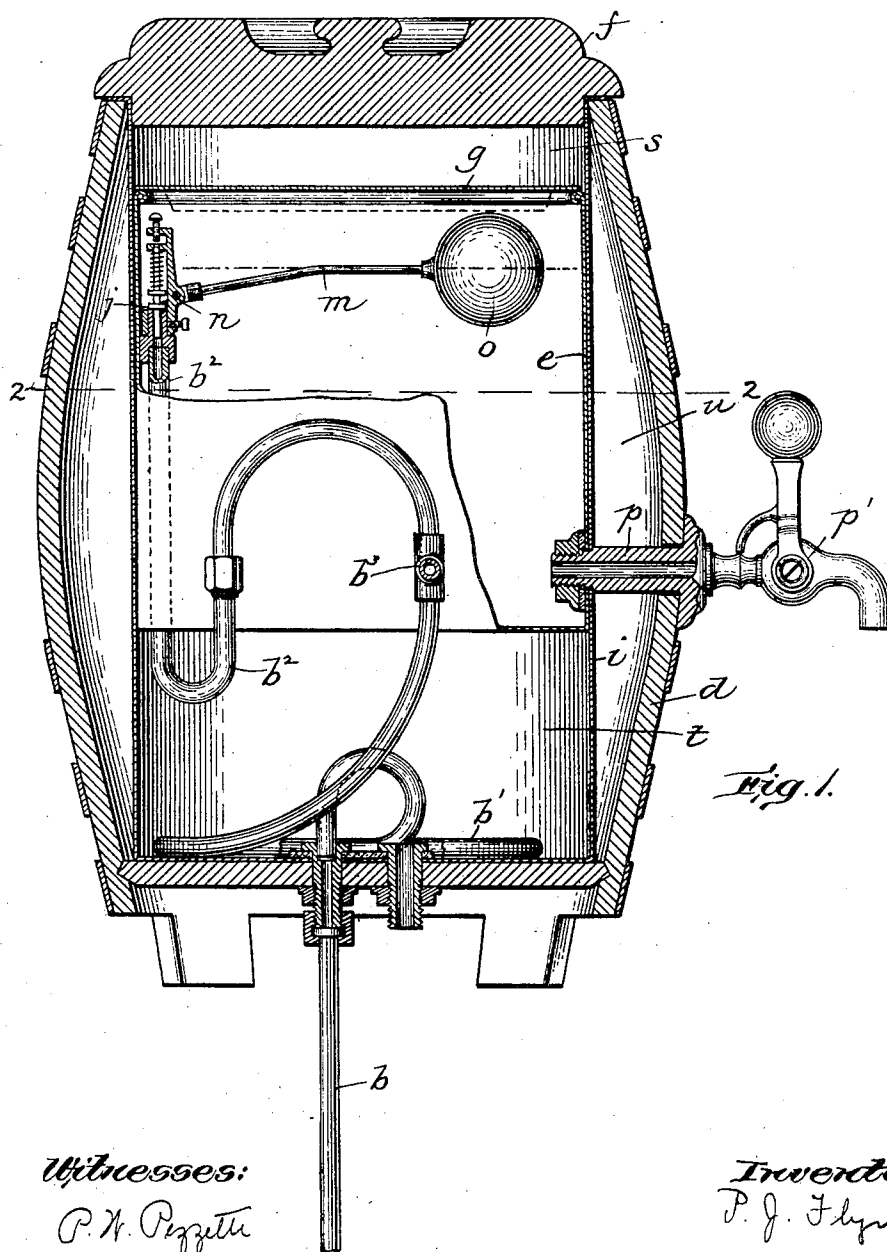


Fig. 1.

Witnesses:

P. H. Popple

E. Batchelder

Inventor:

P. J. Flynn

by *Wight Brown Lundy May*

Attorneys.

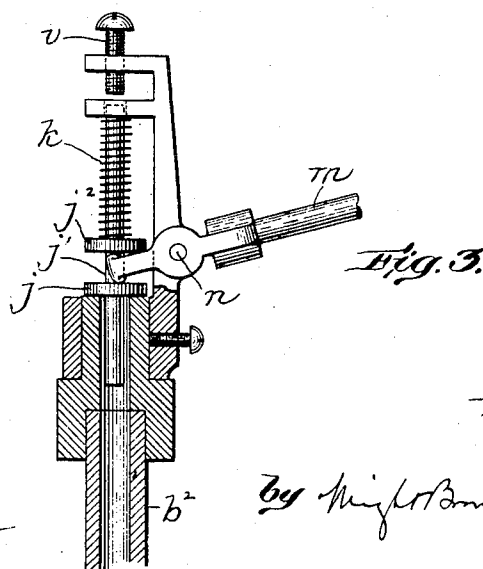
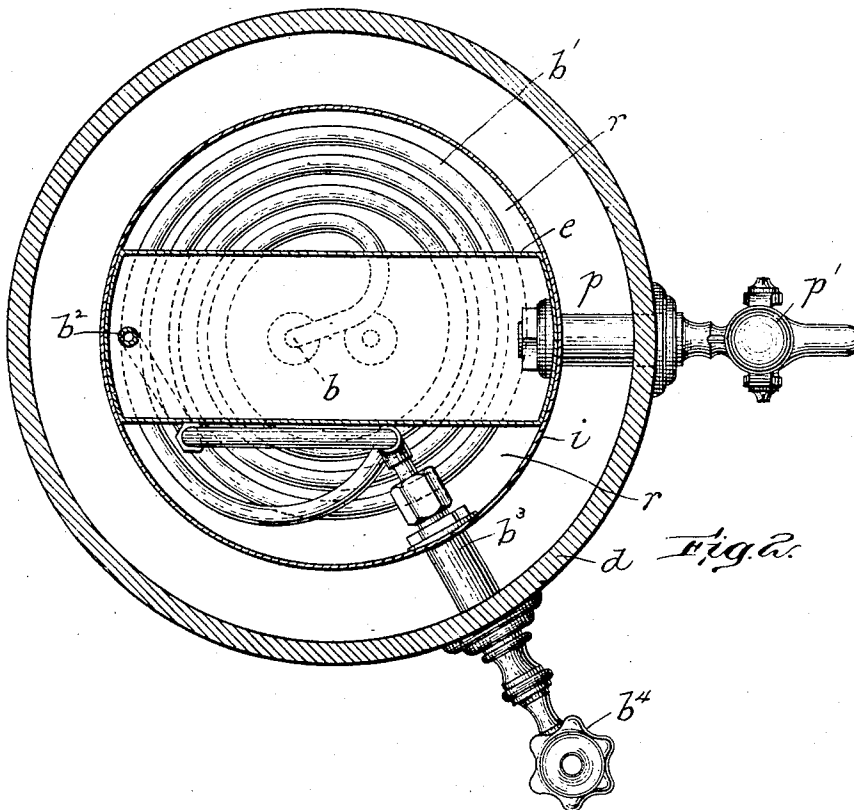
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3 SHEETS—SHEET 2.



Witnesses:

P. H. Pezzetta

E. Batchelder

Inventor:

P. J. Flynn

by Wright & Brown, Lincoln, Mass.

Attorneys.

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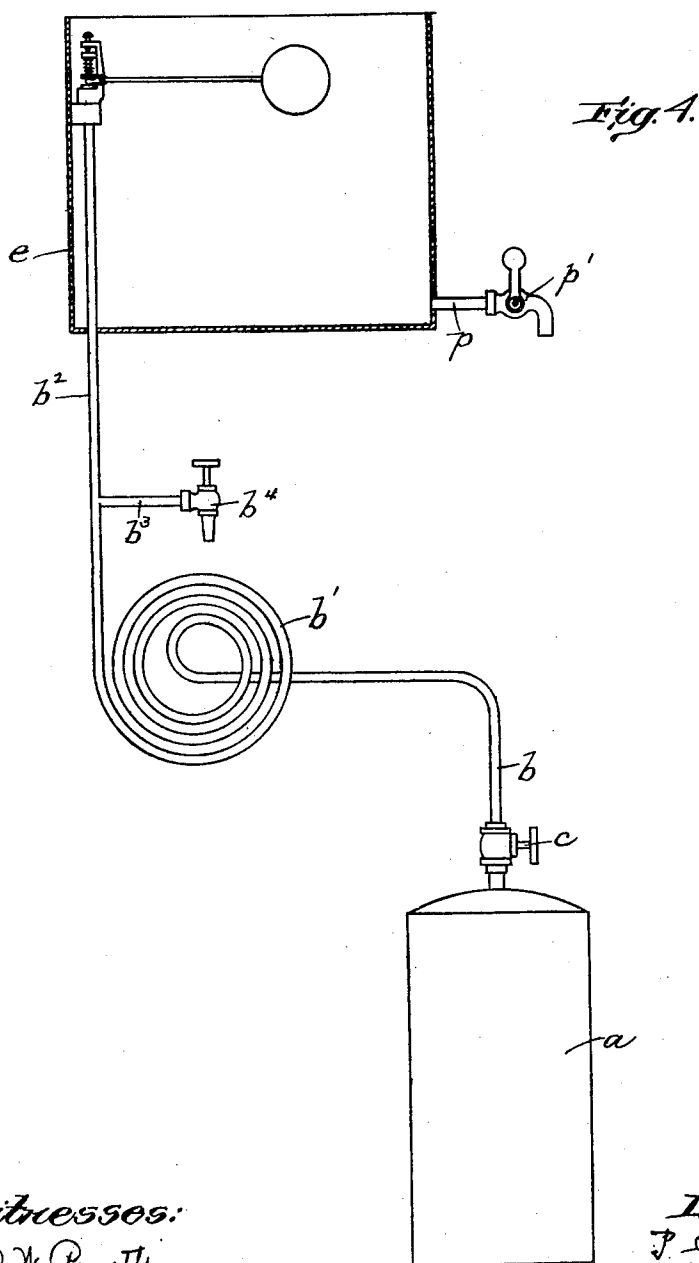


Fig. 4.

Witnesses:

P. W. Poyth

E. Batchelder

Inventor:

P. J. Flynn.

By *Night & Son* *June 4, 1907*

Attorneys.

UNITED STATES PATENT OFFICE.

PATRICK J. FLYNN, OF BOSTON, MASSACHUSETTS.

LIQUID-DISPENSING APPARATUS.

No. 854,412.

Specification of Letters Patent.

Patented May 21, 1907.

Application filed August 18, 1906. Serial No. 331,167.

To all whom it may concern:

Be it known that I, PATRICK J. FLYNN, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Liquid-Dispensing Apparatus, of which the following is a specification.

This invention relates to an apparatus for dispensing or retailing beverages, such as beers, either alcoholic or non-alcoholic, and other liquids which are dispensed in a lively or partially lively condition due to the impregnation of liquid with gas.

The object of the invention is to provide an apparatus whereby two qualities of liquid may be dispensed or delivered in the same vessel, the liquid of one quality being lively, in consequence of the presence of gas in it, and the other flat or still, in consequence of the escape of the gas, both liquids being drawn from a single source.

The invention consists in the improved apparatus which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a vertical sectional view of an apparatus embodying my invention. Fig. 2 represents a section on line 2—2 of Fig. 1, and a plan view of the parts below said line. Fig. 3 represents an enlargement of a portion of Fig. 1. Fig. 4 represents a diagrammatic view illustrating my invention.

The same letters of reference indicate the same parts in all the figures.

In the drawings, *a* (Fig. 4) represents a chamber which is charged with an aerated or gas impregnated liquid, the said chamber being of a sufficient strength to withstand the internal pressure of the charged liquid.

b represents an outlet pipe communicating with the chamber *a*, and provided with a suitable stop cock or shut-off *c*, the pipe *b* being preferably extended to form a coil *b'*, which is adapted to be acted on by a cooling medium, such as ice in a receptacle through which the pipe *b* passes. The said receptacle may be a cask *d*, as shown in Figs. 1 and 2, the coil *b'* resting upon the bottom head of the cask. An extension *b²* of the pipe leading from the coil *b'* has a branch *b³* terminating in a faucet *b⁴*, which is adapted to deliver the charged liquid from the chamber *a*. the branch *b³* extending through one side of the cask *d*, as shown in Fig. 2. The extension *b²* enters a reservoir *e*, which is open to the at-

mosphere, so that the charged liquid from the chamber *a* after entering the reservoir *e* through the extension *b²*, will lose its effervescence, and become flat. The reservoir *e* as here shown is open at its upper end, and provided with a loosely fitting cover, which while protecting the contents of the reservoir *e* against dust, etc., does not prevent the escape of gas therefrom. A loose inner cover *g* may be employed for the same purpose.

In practice the reservoir *e* is attached to a cylindrical container *i*, which extends from end to end of the cask, and has a closed end resting on the bottom of the cask, and an open end at the opposite end of the cask, the cover *f* fitting the said open end. The inner cover *g* fits the open end of the reservoir *e*, as shown in Fig. 1. The pipe extension *b²* extends through the bottom of the receptacle *e*, and nearly to the top of said receptacle, where it discharges the liquid. The outlet end of the extension *b²* has a valve *j* attached to a rod or stem *j'*, which is movable in fixed guides, and is normally closed by means of a spring *k*.

m represents a lever which is pivoted at *n* to a fixed support, and is provided with a float *o* adapted to be raised by an accumulation of liquid in the reservoir *e*. When the level of the liquid in the reservoir *e* has been suitably reduced by the removal of liquid through an outlet pipe *p*, provided with a cock *p'*, the descent of the float *o* and lever *m* causes the shorter arm of said lever, which is engaged with a collar *j²* on the stem *j'*, to raise the valve *j*, and thus permit the entrance of liquid through the pipe *b²* into the reservoir *e*. When the liquid rises in the reservoir *e* to a predetermined height, a corresponding rise of the float *o* causes the shorter arm of the lever *n*, aided by the spring *k*, to close the valve *j*, and shut off the entrance of liquid into the reservoir *e*. The outlet pipe *p* extends through one side of the cask, as shown in Figs. 1 and 2.

From the foregoing it will be seen that the described apparatus is adapted to dispense either aerated or charged liquid alone from the chamber *a*, or flat liquid alone from the receptacle *e*, or a mixture of said liquids. It will also be seen that the reservoir *e* is kept automatically supplied with liquid from the chamber *a* so long as the latter remains charged, the liquid entering the reservoir *e* losing its effervescence and becoming flat, owing to the escape of gas from the said reservoir.

The reservoir *e* is preferably provided with flat opposite sides, between which and the corresponding portions of the casing *i* are formed chambers or spaces *r r*, which communicate with chambers or spaces *s t* in the upper and lower end portions of the casing *i*, the reservoir *e* being shorter than the casing *i*, as shown in Fig. 1. The spaces *r r* and *s t* are adapted to receive ice for the purpose of cooling the liquids dispensed by the apparatus. When the covers *f* and *g* are removed, ice may be inserted in the spaces *r r* until the said spaces and the lower space *t* are filled. Then after the cover *g* is replaced, the space *s* may be filled with ice, the cover *f* being subsequently replaced. The casing *i* is preferably cylindrical and of uniform diameter, while the cask *d* bulges at its central portion, so that an air space *u* is formed around the casing *i*, and the ice therein, the said air space tending to preserve the ice.

v represents an adjustable stop screw adapted to limit the upward movement of the valve stem *j'* and valve *j*, thus preventing excessive or needless downward movement of the float *o*. The pipe *b* and its branches constitute a branched conduit leading from a source of charged liquid supply, one branch delivering charged liquid to the dispensing faucet *b'*, while the other branch delivers charged liquid to the reservoir *e*, in which the liquid becomes flat owing to the escape of gas from the reservoir.

I claim:

35 A liquid dispensing apparatus comprising an outer casing, an inner casing bearing on

the bottom of the outer casing, the body portions of the inner and outer casings being separated by a closed air space *u*² surrounding the inner casing, a flat-liquid reservoir *e* attached to the upper part of the inner casing, and separated from the bottom of the latter by an ice storage space *t* which is also surrounded by the air space *u*², spaces *r r* being provided between opposite sides of the reservoir and the inner casing for the admission of ice to the space *t* and for the storage of ice above the latter, a conduit leading from a charged-liquid supply and entering the chamber *t*, the conduit having branches within said chamber, one branch entering the reservoir *e*, and the other being elongated and coiled, and extending as a charged-liquid outlet through the walls of the inner and outer casings, means for controlling the branch entering the reservoir, a flat-liquid outlet extending from the reservoir through the walls of the casings, and means outside the casing for controlling said liquid outlets, the spaces *t* and *r* holding ice in suitable proximity to the charged liquid outlet branch of the conduit, and to the bottom and sides of the flat-liquid reservoir, while the air space *u*² surrounds all the ice spaces and the flat-liquid reservoir.

In testimony whereof I have affixed my signature, in presence of two witnesses.

PATRICK J. FLYNN.

Witnesses:

P. W. PEZZETTI,
E. BATCHELDER.