(No Model.)

J. H. WALTON.

APPARATUS FOR DRAWING EFFERVESCING FLUIDS.

No. 405,135. Patented June 11, 1889.

Fig. 1.

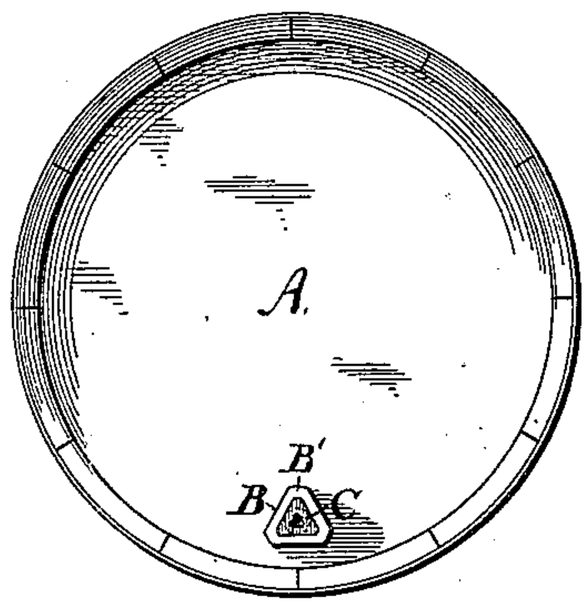


Fig. 2.

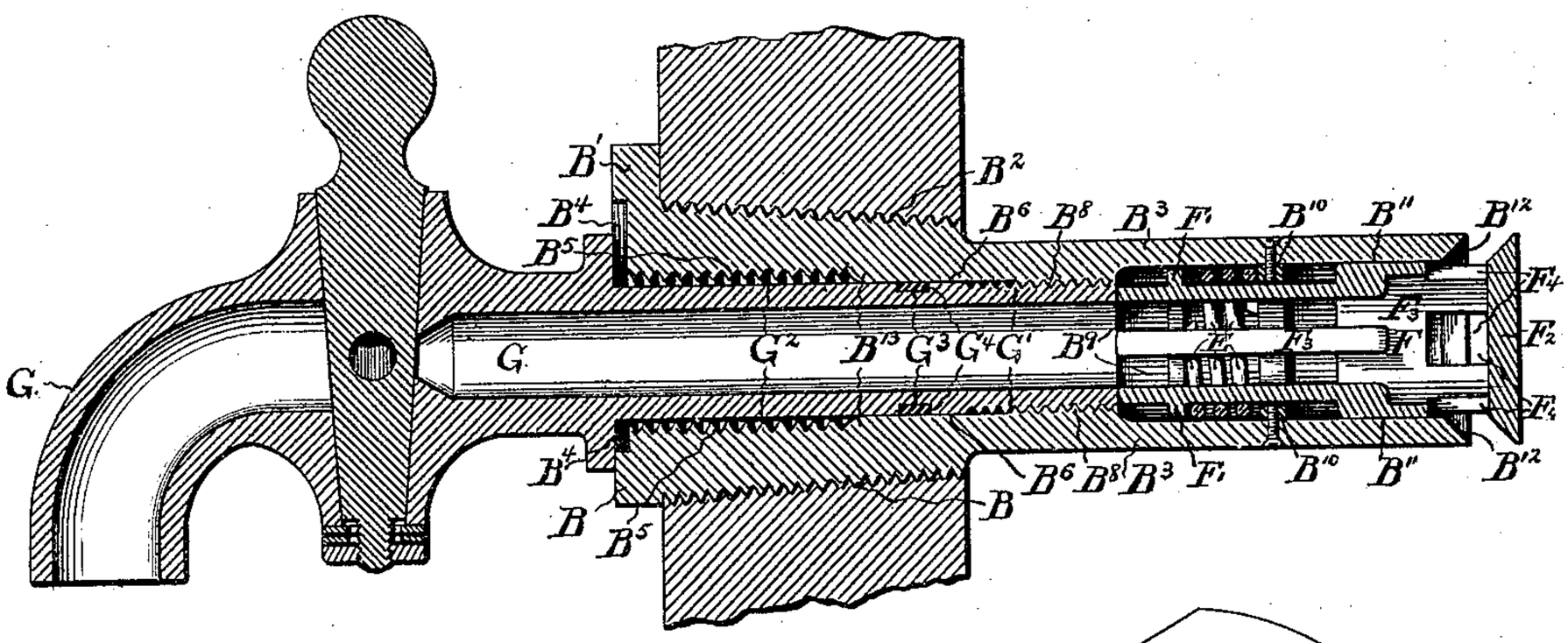


Fig. 4.

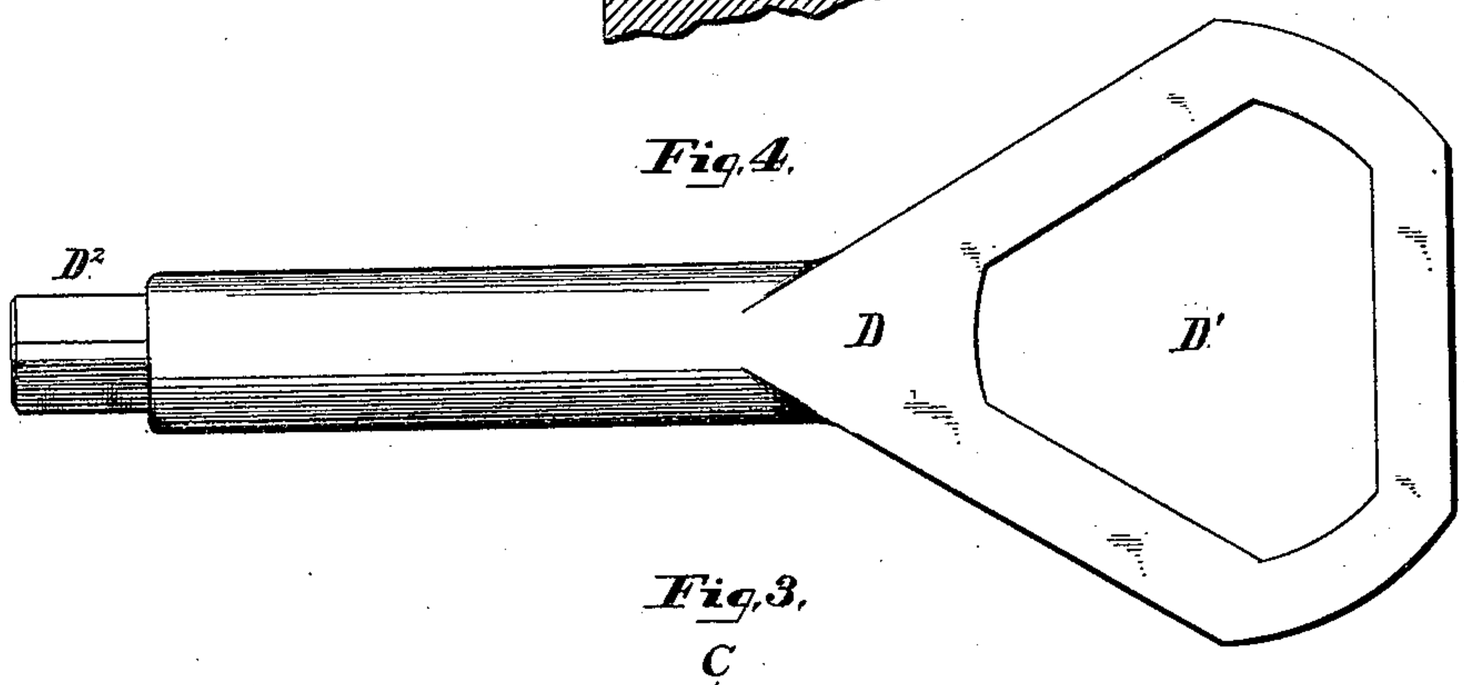
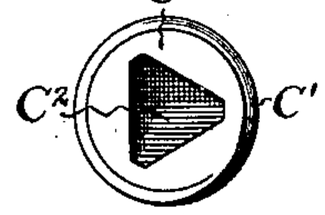


Fig. 3.



WITNESSES:

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APPARATUS FOR DRAWING EFFERVESCING FLUIDS.

SPECIFICATION forming part of Letters Patent No. 405,135, dated June 11, 1889.

Application filed December 27, 1886, Serial No. 222,719. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH H. WALTON, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Apparatus for Drawing Effervescing Fluids; and I do hereby declare the following to be a sufficiently full, clear, and exact description thereof as to enable others skilled in the art to make and use the said invention.

This invention relates to the drawing of liquors containing gas and effervescing,—such as ale, beer, and other fermented or aerated beverages—and has for its object the convenience of insertion of the drawing cock or connection, the avoidance of waste, the prevention of surreptitious opening and closing of casks, and the preserving of the casks in clean condition when empty.

To effect these several desiderata, the nature of this invention may be briefly stated to consist of a bushing inserted in the cask-head and provided with an automatically-closing valve and tubular approach thereto, adapted to fit a cock, which, while it opens by merely screwing it in, does not permit any escape of fluid until it is in fluid-tight connection, and when the cock is detached closes automatically and is adapted to fit a stopper not easily removed without a suitable key, and susceptible of sealing, so as to have proof of having been opened. In connection with the above, this invention also embraces a form of cock adapted to be used in the bushing, and details of construction of the plug and bushing, as hereinafter more fully will appear.

I will now proceed to particularly describe the said invention, referring, in so doing, to the drawings annexed and the letters of reference marked thereon.

Figure 1 shows the end of a cask with the invention applied and sealed; Fig. 2, an enlarged lengthwise section of a portion of a cask-head and the drawing apparatus inserted and in position for use. Fig. 3 shows a detached view of the plug, and Fig. 4 a view of the wrench used for inserting the apparatus in casks and removing the plug.

The same letters of reference apply to the same parts in the several figures.

A represents a cask-head; B a bushing having a flange B′, adapted to fit the wrench D in the large aperture D′; B^2, a tapering threaded portion adapted to screw into the cask-head A; B^3, a hollow cylindric extension projecting through the cask-head A inwardly. In the front or face of the bushing B is a shallow depression B^4 of angular form, or some other than circular form, adapted to receive a seal. Back of the depression B^4 in the bushing B is an internal screw-thread B^5, adapted to receive and fit the external screw-thread C′ on the plug C. The center of the plug C is provided with an angular cavity C^2, fitting upon the end D^2 of the wrench D.

Beyond the screw-thread B^5 is a smooth-bored portion B^6 of the tubular extension B^3, the entrance to which is tapering, and the part B^6 is cylindric, next a female screw-thread B^8, of less diameter than the cylindric bore B^6, is formed, beyond which is a cylindric cavity B^9, containing a spiral spring E, resting against a shoulder B^{10} at one end and at the other end upon the shoulder F′ on the tail of a valve F, which is guided in a cylindric bore B^{11}, and has a head F^2, fitting in a seat B^{12}, in the end of the tubular extension B^3 of the bushing B. The guide F^3 of the valve F is preferably made hollow, with apertures F^4 under the head F^2, so that any foreign substances accidentally entering the valve can be removed.

G is a stop-cock having a screw thread G′ formed on the end fitting the female screw B^8, and a cylindric portion G^2, grooved at G^3 and provided in such groove with a packing G^4, fitting fluid-tight in the cylindric bore B^6. The cock G may be of any of the usual constructions, but is preferably made of such shape as to answer as a wrench or handle in screwing the cock into the bushing B.

The operation of this invention is as follows: the bushing B being screwed into the head A of the cask, as shown in Figs. 1 and 2, by means of the wrench D, the cask is filled through the bung-hole and closed. The valve F being examined and found to be fluid-tight, the plug C is screwed into the screw B^5 by the small end D^2 of the wrench D, and when the cask is to be transported may be sealed by affixing a fusible or resinous seal in the cavity B^4. When the fluid is to be used, the

seal is broken, the plug C unscrewed, and the cock G inserted. The screw G′ engages in the threaded part B^8 of the bushing B and draws the packing G^4 in the groove G^3 into the cylindric bore B^6, where it fits fluid-tight. By screwing the cock G farther into the bushing B the end of the cock G forces the valve F open, the spring E being at the same time compressed, and fluid can then be drawn through the cock G. When the cask is emptied, the cock G is unscrewed, the spring E reacts and closes the valve F, and the plug C is again inserted, thus preventing the entrance of air to the cask and precluding acetic fermentation or access of insects or foreign substances.

I am aware that beer-tapping devices have been made wherein valves fitted in screw-threaded bushings were opened inwardly into casks by the insertion of screw-threaded faucets into the bushings. These devices differ from my invention in obstructing the passage for fluid by the valve guiding and operating mechanisms and in not providing facilities for sealing the cask, and are hereby disclaimed; but what I claim is—

In combination with an apparatus for drawing effervescing fluids from casks, the bushing B, the extension B^3, having the smooth-bored portion B^6, the stop-cock G, having the groove G^3, the hollow valve-guide F^3, having apertures F^4, and the valve F, all constructed and adapted to afford an unobstructed central channel, substantially as described and shown.

JOSEPH H. WALTON.

Witnesses:
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