No. 615,090. Patented Nov. 29, 1898.

S. MYER & H. W. JOYCE.

DRAW-OFF LOCKING TAP.

(Application filed Apr. 26, 1898.)

(No Model.)

Fig. 1.

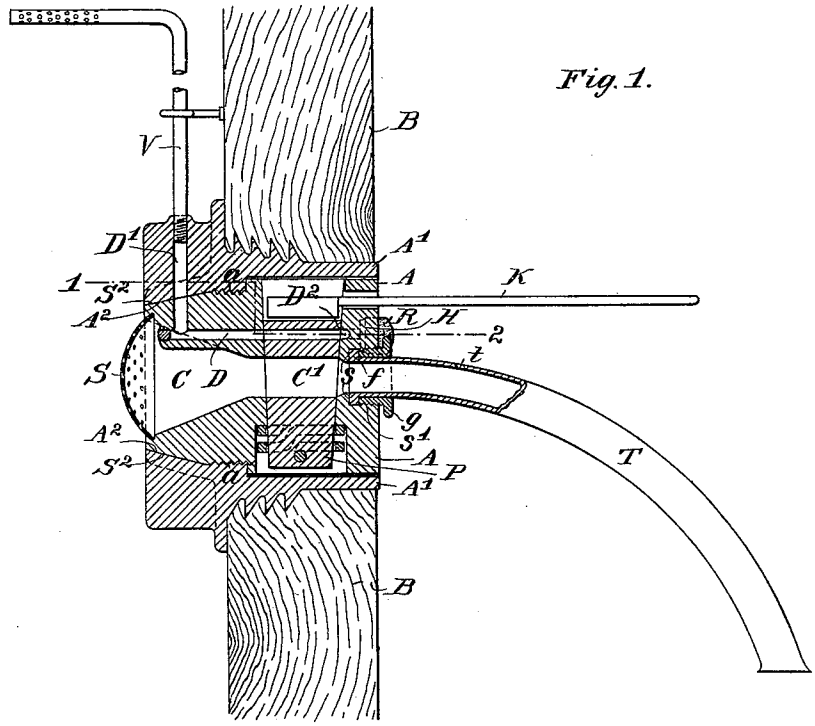


Fig. 3.

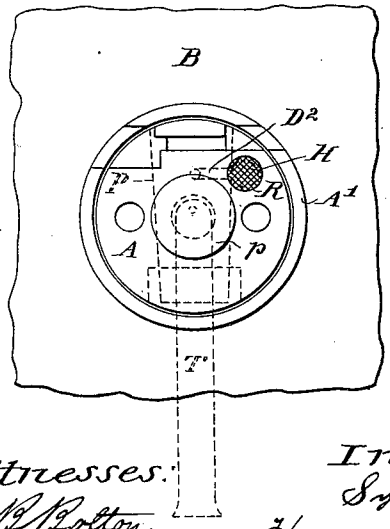


Fig. 2.

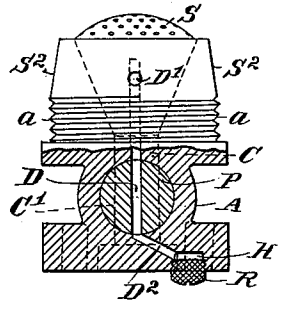
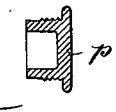


Fig. 4.



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UNITED STATES PATENT OFFICE.

SYDNEY MYER AND HORACE WILLIAM JOYCE, OF HEREFORD, ENGLAND; SAID MYER ASSIGNOR TO SAID JOYCE.

DRAW-OFF LOCKING-TAP.

SPECIFICATION forming part of Letters Patent No. 615,090, dated November 29, 1898.

Application filed April 26, 1898. Serial No. 678,890. (No model.)

To all whom it may concern:

Be it known that we, SYDNEY MYER and HORACE WILLIAM JOYCE, subjects of the Queen of Great Britain and Ireland, residing at Hop Market, Broad street, Hereford, England, have invented certain new and useful Improvements in Draw-Off Locking-Taps, of which the following is a specification.

This invention relates to certain improvements in draw-off locking-taps of the kind referred to in our former patent, No. 582,394, dated May 11, 1897, and has for its objects, first, to secure a perfectly-liquid-tight joint between the rear part of the body of such a tap and its bush, (which is screwed into the cask-head,) whereby leakage of the beer or other liquid through such joint or to the automatic air-venting duct traversing same is avoided; second, to provide an efficient arrangement whereby the spout of the tap can be turned to any position convenient for drawing off the beer or liquid after its attachment to the tap without liability to leakage, and, third, to provide means for use in combination with taps of this kind, especially when intended for use by beer retailers or bottlers, for liberating contained gases, whereby the beer may very simply be "dropped," when desired, without employing the old method of boring a hole in the bung and inserting a porous peg. The same arrangement is also specially useful with lager-beers which are forced from the cask by air-pressure, as hereinafter explained.

In order that our improvements may be readily understood, we will now describe same with reference to the accompanying drawings, in which—

Figure 1 is a vertical section, Fig. 2 a sectional plan on line 1 2, Fig. 1, and Fig. 3 a front elevation, of a draw-off locking-tap embodying our improvements. Fig. 4 is a longitudinal section through a stop-plug temporarily employed for the purpose of dropping the beer when required.

Like reference-letters refer to like parts in all the figures.

In the figures, A indicates the body of the tap with liquid-passage C. A′ is the bush for same, screwed into the cask-head B from inside, as shown.

P is the rotary plug controlling the tap with its liquid-passage C′ and key K.

D is the air vent or duct communicating, when the tap is fully open, with the internal gas-escape pipe V.

S is the strainer, and T the spout.

According to our first present improvement, instead of carrying the screw-threads *a*, by which the body A and bush A′ are secured together, back to the rear of the body and the bush, as described in our former patent, we form a plain conical surface S^2 at and about the rear end of the body A of the tap, and within the bush A′ we form a corresponding plain conical seating A^2 to receive the said plain part S^2. We locate the screw-threads *a* in front of these plain conical seatings S^2 A^2, so that when the tap-body A is screwed home into the bush A′ the two said conical surfaces will be forced into close contact, and thus insure a perfectly-liquid-tight joint. The lower end of the escape-pipe V is attached to the bush A′ above the said conical seatings, and communication is established with the air-duct D by means of the corresponding hole D′, formed through the bush A′ and the conical parts S^2 A^2. By this arrangement no liquid can pass outward from the cask either between the body of the tap and its bush or by way of the air-duct D. In order that the spout T may always be brought to the position most convenient for drawing off the contents, according to our present improvement we form at its rear end a collar or flange *f* and provide a loose-screwed thimble or gland *g*. To receive this in the front end of the liquid-passage C of the body A, we form a tapped enlargement *s*′, having at its base a seating *s*, corresponding to the flange *f*, and the two meeting surfaces may advantageously be ground together. When the spout is to be attached, the screwed thimble encircling the spout is simply screwed into the hole *s*′ until the spout-flange *f* is firmly pressed against the seating *s*, and thereby a liquid-tight joint is assured, and the spout T can readily be turned independently of the gland *g* to any position most convenient for drawing off and without liability to leakage.

A small hole is formed in the spout, as shown at *t*, to prevent beer "hanging" therein

and also when the tap is turned on to aerate or revive the liquid should it have become at all flat or "dead."

It is frequently found necessary by retailers and bottlers to "drop" beers in cask, and this operation is usually carried out by inserting in the bung of the cask a porous plug or spile, which allows the gas generated within to slowly escape and the liquid to "drop bright." To avoid this, according to our improvements we form in the tap-body, near the outer end of the air-duct D, a recess, such as R, of sufficient size to allow of the insertion of a suitable kind of porous plug, (shown at H.) With taps of usual size it is necessary to locate this recess R somewhat to one side of the center line of the tap in order to obtain sufficient space for the said plug. The inner part of the recess R is connected with the air-duct D in the main plug P when the latter is in its open position by means of a branch duct D^2. Ordinarily the ducts D and D^2 and the porous plug H serve for venting the cask. When the operation of "dropping" the beer is to be performed, a non-porous screwed stop-plug, such as *p*, Fig. 4, is inserted in the hole *s'* in place of the spout-fixing gland *g* above referred to. The inner end of this plug is preferably ground so that a liquid-tight joint is formed between it and the seat *s*, and thus no leakage of beer can occur. On turning the plug P to the open position, as in Fig. 2, the contained gas can escape down the internal pipe V and by the ducts D' D^2 to the porous plug H, through which it slowly percolates and escapes, so permitting the liquid to "drop" in an efficient and simple manner. The same arrangement (without the plug H) is specially applicable to lager-beer in cask, which is generally forced out by compressed air. To inject such compressed air, we utilize the recess R to receive the inlet end of the air-pipe from the compressed-air vessel, connecting same by a screwed thimble, as above set forth in reference to the spout attachment. The compressed air then, when the plug-duct D is open to the branch duct D^2, passes into the cask until the required pressure is attained.

Having now described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a draw-off locking-tap of the kind referred to the combination with the body the rotary plug and internal air-duct traversing both body and plug and external screw-threads and a plain conical surface at rear of same, of a bush having corresponding screw-threads for connecting the two and a corresponding plain surface beyond same, said conical surfaces coming in close contact and forming a liquid-tight joint when body is screwed home into bush, and an air-duct hole traversing both said conical surfaces and communicating with that of the tap-body substantially as and for the purposes described and illustrated.

2. In a draw-off locking-tap of the kind referred to the combination with the main liquor-passage having an enlargement at its front end and a seating at the base thereof, of a spout with flange on its rear end corresponding to said seating and a screwed thimble or gland, screwed into the said seating and bearing on the flange to hold the spout in place, as and for the purpose set forth.

3. The combination with a tap of the kind herein referred to of a supplementary air-duct such as D^2 terminating in a recess R adapted to receive a porous plug, or a compressed-air pipe, and a non-porous blocking-plug *p* for the hole *s'* in temporary substitution for the spout and its gland, for the respective purpose either of "dropping" beer when required or of injecting compressed air for forcing out lager-beer, substantially as above set forth.

4. The combination with a tap such as above referred to having an internal air-duct controlled by the rotary plug, of a branch air-duct D^2 terminating in a screwed recess such as R, adapted to receive the end of a compressed-air pipe for injecting compressed air for the purpose of forcing out lager-beer as and when required substantially as above described.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

SYDNEY MYER.
HORACE WILLIAM JOYCE.

Witnesses:
CHARLES B. BEDDOE,
JOSEPH THOMAS.