F. K. STEVES & H. BREDERLOW.

Beer-Faucets.

No. 158,326. Patented Dec. 29, 1874.

FIG. 1.

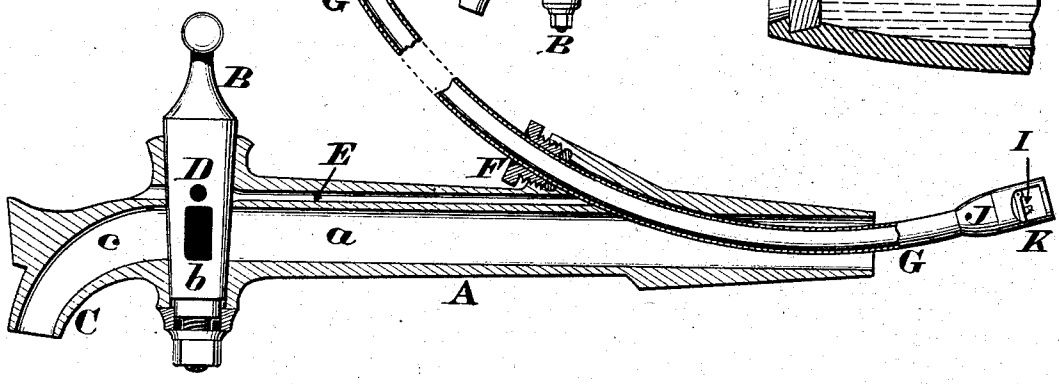


FIG. 3.

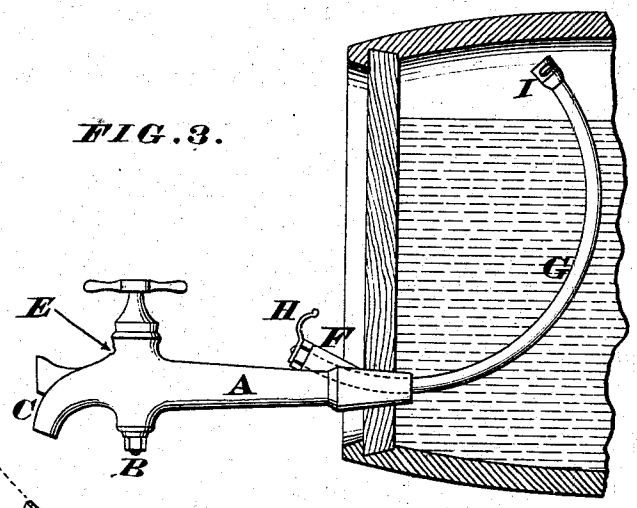


FIG. 2.

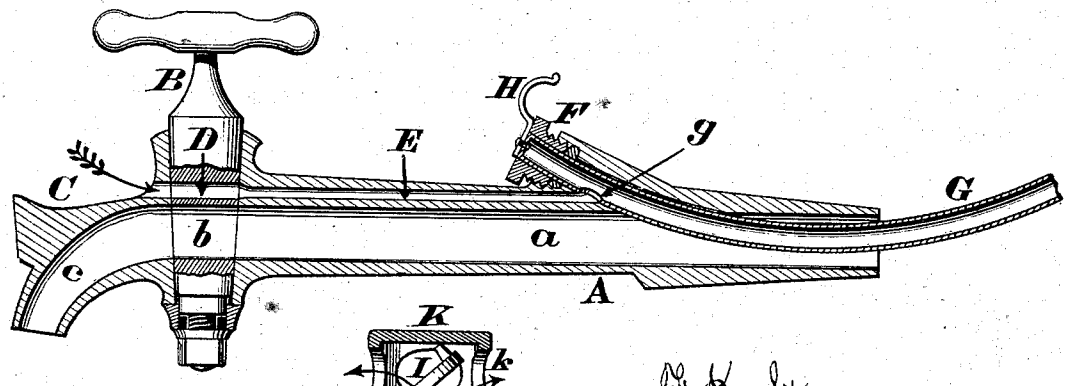
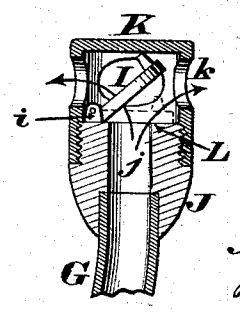


FIG. 4.



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FRANK K. STEVES AND HERMANN BREDERLOW, OF CINCINNATI, OHIO.

IMPROVEMENT IN BEER-FAUCETS.

Specification forming part of Letters Patent No. **158,326**, dated December 29, 1874; application filed December 3, 1874.

To all whom it may concern:

Be it known that we, FRANK K. STEVES and HERMANN BREDERLOW, both of Cincinnati, Hamilton county, Ohio, have invented certain new and useful Improvements in Beer-Faucets, of which the following is a specification:

This invention relates to that class of faucets which are provided with a device for automatically admitting fresh air above the beer or other liquor contained in the barrel or other vessel under tap, so as to take the place of that which is drawn off, and thus preserve sufficient pressure; and our improvement consists in constructing these faucets in such a manner as to simplify them and cheapen their production, while, at the same time, they are not liable to leak and become otherwise deranged.

In the accompanying drawings, illustrating our improved faucet, Figure 1 is a vertical section through the device, the curved air-tube being retracted and the plug shown rotated, so as to exclude air from the longitudinal channel of the faucet. Fig. 2 is another vertical section of the device, with the plug rotated far enough to admit air into the longitudinal channel of the faucet, and the air-tube shown in its extended position, but with the discharging end of the same broken away. Fig. 3 is a vertical section, showing the faucet applied to a keg or other receptacle for containing liquor; and Fig. 4 is a vertical section through the valve at the discharging end of air-tube.

Of the above illustrations, Fig. 3 is drawn on a reduced scale, while Fig. 4 is drawn on an enlarged scale, with reference to the other views of the faucet.

In common with all devices of a similar character, our faucet consists essentially of a barrel, A, rotating plug B, and nozzle C, which may severally be of the represented or any other approved form. The barrel is provided with an axial bore, *a*, which allows the contents of the keg or other receptacle to flow out through exit *c* of the nozzle whenever the plug is rotated so as to bring its port *b* in line with said bore *a* and exit *c*, as represented in Fig. 2. Located above the customary port *b*, and parallel therewith, is a small aperture, D, which runs completely through the plug B, as seen in Fig. 2; and when the plug is brought to the position shown in this illustration said aperture communicates with a channel, E, that extends longitudinally of the barrel A. It is preferred to locate this channel along the upper side of barrel A, and as near the bore *a* as can be done without coming in actual contact with the latter; but said channel may be located either at the bottom or at one side of the barrel, if desired, or it may traverse a tube wholly external to the faucet. This channel is carried back a little in rear of the stuffing-box F, which is traversed by a curved air-tube, G, having at one end a hook or ring, H, while its other end carries an outwardly-opening or delivery valve, I. This tube may have any suitable curvature imparted to it, and it should be long enough to insure its delivery-valve projecting some distance above the surface of the liquor in the keg or barrel, as shown in Fig. 3. The aforesaid tube is pierced near its outer or hooked end with an aperture, *g*, which, when the tube is inserted in the barrel, communicates with the delivery end of channel E, as seen in Fig. 2. The delivery-valve I is applied to the inner end of air-tube G in the following manner: Brazed or otherwise secured to the end of this tube is a head, J, having an axial opening, *j*, through it, and being provided with a flat face, L, that serves as a seat for the valve I, the latter being hinged to said head at *i*. Screwed to this head is a cage or guard, K, that is perforated at *k*, so as to allow air to escape freely from the valve I, while at the same time this guard prevents said valve opening too far, as shown more clearly in Fig. 4.

Our faucet is applied to the beer-keg and operated in the following manner: The air-tube G is first retracted and the plug B brought to the position shown in Fig. 1, after which the faucet is inserted in the keg in the customary way. This having been done, the tube G is shoved in as far as the hook H will allow, thereby bringing the discharge-valve I above the surface of the beer or other liquor in the keg. This act brings the orifice *g* of said tube in communication with the inner end of channel E; but it is evident no air can now enter said channel or tube, on account of the plug B of the faucet being in its closed condition. As soon, however, as the plug is turned far enough to open the faucet and permit the beer to escape, the aperture D of said plug is brought in line

with the channel E, and, owing to the partial vacuum produced in the keg by the escape of its contents, air is at once drawn through aperture D, channel E, orifice *g*, tube G, and valve I, and discharged above the surface of the liquor. This inflowing current of fresh air continues as long as the faucet is opened; but the moment the faucet is closed the supply of air is shut off, on account of the aperture D of the plug being then turned at right angles to the channel E. The entrance of air to the keg and also the escape of gas from the same are prevented not only by the shutting off of the faucet, but also by the action of delivery-valve I, which is forced down to its seat by the pressure of the gas.

The automatic admission of air to the keg while the faucet is opened and the automatic cutting off of the supply of air by the closure of said faucet prevent the beer becoming flat or stale, and on this account there is less loss incurred by the retailer of such liquor than when the interior of the cask has a permanent communication with the external air. The guard L prevents the valve K being injured when the faucet is first applied to the keg, and on this account our device is more durable than those faucets whose delivery-valves consist of a rubber diaphragm secured to the end of the tube. These rubber valves are liable to be slipped off in the hurry attendant upon the insertion of the faucet, and they are also more or less injured by contact with the liquor.

As previously stated, the channel E may extend through a tube wholly external to the barrel A; but the described arrangement is preferred on account of its not detracting from the symmetrical appearance of the faucet. This channel, being formed in the barrel with a core, is readily cast, and requires no dressing or finishing whatever.

We do not propose to confine ourselves to the exact form of discharging-valve herein described, as it is evident any other approved style of valve will answer the purpose, provided it is inclosed with a suitable cage.

We are aware that it has been proposed to make the spigot or rotating plug effective for introducing air into the barrel by means of a port in said spigot communicating with the air-inlet. We are also aware that faucets have been provided with a slidable air-inlet, which has been made to occupy the heel of the faucet, so as not to require a distinct perforation in the barrel. We therefore do not claim these features, separately considered.

We claim as our invention—

In combination with the faucet A *a c*, rotating plug B *b*, and sliding air-tube G *g*, the aperture D and channel E, substantially as herein described, and for the purpose stated.

In testimony of which invention we hereunto set our hands.

FRANK K. STEVES.
HERMANN BREDERLOW.

Attest:
GEO. H. KNIGHT,
JAMES H. LAYMAN.