J. Knoche,

Beer Faucet.

No. 101,602. Patented June 21. 1870.

FIG. 1.

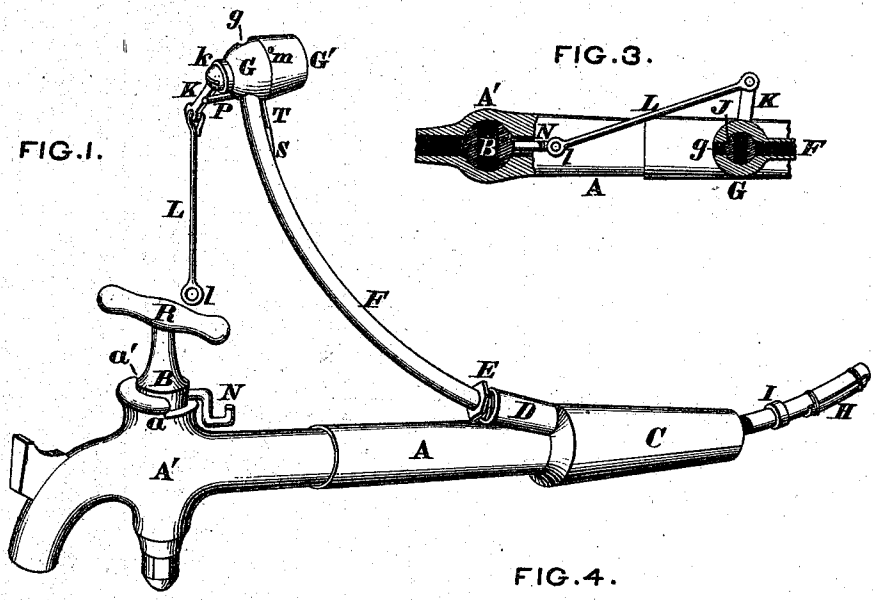


FIG. 3.

FIG. 4.

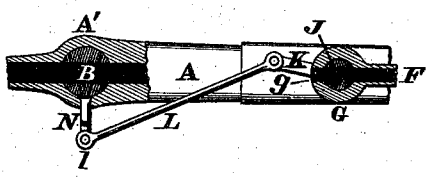


FIG. 2.

FIG. 5.

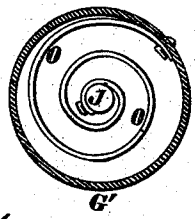
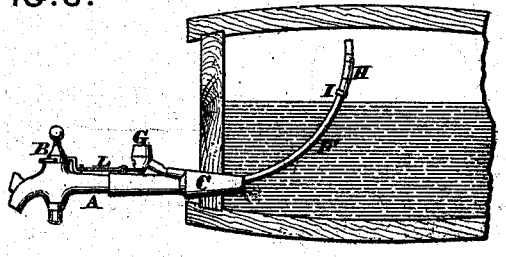


FIG. 6.



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UNITED STATES PATENT OFFICE.

JOHN KNOCHE, OF CINCINNATI, OHIO, ASSIGNOR TO HIMSELF AND HENRY VARWIG, OF SAME PLACE.

IMPROVEMENT IN FAUCETS.

Specification forming part of Letters Patent No. **104,602**, dated June 21, 1870.

I, JOHN KNOCHE, of Cincinnati, Hamilton county, Ohio, have invented a new and useful Beer-Faucet, of which the following is a specification:

Nature and Objects of my Invention.

This invention relates to a faucet which is to be employed for the purpose of drawing off beer, ale, and similar liquors from casks or barrels; and the first part of my improvement consists in providing the apparatus with a sliding duct or tube, which, when the faucet is inserted in its proper position, projects above the surface of the liquor, and allows a quantity of fresh air to flow into the barrel, cask, or other receptacle every time the faucet is opened without permitting any gas within the cask to escape, it being understood that the lower and outer end of said tube or duct communicates, through a suitable cock or valve, with the external air, which cock is opened and closed simultaneously with the plug of the faucet proper.

The second part of my improvement consists in the provision of a spring for the automatic closure of the air-cocks when disengaged from the faucet proper.

General Description with Reference to the Drawing.

Figure 1 is a perspective view of my improved beer-faucet in its proper condition for insertion into the barrel or cask, the air-duct being shown in its retracted position and the plug of the faucet closed. Fig. 2 is an axial section of the same, with the air-duct in its protruded position and its valve and the plug of the faucet opened. Fig. 3 is a plan of a portion of the apparatus, the valve of the air-duct and the plug of the faucet being closed and shown in section. Fig. 4 is a similar view, with the air-valve and faucet opened. Fig. 5 is a plan, showing the spring with which the automatic closure of the valve and plug is effected. Fig. 6 is a view, showing the manner in which my improved faucet is applied to a beer or ale cask.

A represents the barrel of a faucet, having the customary plug B and tapering portion C, for insertion in the barrel or cask. Projecting upwardly from the portion C of the barrel A, and toward the plug B, is a short cylinder, D, provided with a stuffing-box, E, which receives the curved and sliding air-duct F, whose inner end is closed, as at *f*, and whose outer end has attached to it a valve-chamber, G. This air-duct is pierced near its inner end with a series of apertures, *f'*, which are covered with a piece of india-rubber, oil-silk, or other elastic and impervious material, H.

I is a collar, which prevents the air-duct being detached from the faucet whenever said duct is retracted. The valve-chamber G is provided with a passage, *g*, that communicates with the interior of the air-duct whenever the valve J is opened, which is effected by means of arm K, connecting-rod L, and crank N, the latter being attached to the upper portion of the plug B of the faucet. The arm K is connected to valve J by screw *k*. The valve J is automatically closed by a volute spring, O, which is attached to the interior of the shell G' of chamber G, and also to the stem *j* of said valve. A pin, P, limits the closure of valve J.

The shell G' can be detached from chamber G by simply removing a screw, *m*. The upper portion of the hub A' of the faucet is provided with two shoulders, *a a'*, against one of which the crank N impinges whenever the plug B is opened by turning the handle R either to the right or left.

A swell, S, causes the duct F to bind snugly within the stuffing-box E, and a shoulder, T, limits the insertion of said duct into the stuffing-box.

Operation.

The faucet is inserted into the barrel in the following manner: The air-duct F is retracted until the collar I impinges against the inner end of the cylinder D, in which condition the closed end *f* of said tube is entirely concealed within the tapering portion C when the latter is inserted in the beer-barrel in the usual way—that is, by forcing in the cork with the end of the faucet, after which the air-duct may be pushed to its place.

As long as the beer is fresh, and under pressure equal to that of the atmosphere, the air-cock may remain disengaged, as in Fig. 1;

but when so much of the liquor has been drawn off as to reduce the pressure to equilibrium with the atmosphere, the eye *l* of the connecting rod or link L should be engaged with the crank N, as represented in Figs. 2 and 6.

When the handle R is turned so as to open the plug B of the faucet, the valve J is also opened, and, as the escape of liquor has a tendency to produce vacuum in the cask, the air instantly rushes through passage *g'*, valve J, and duct F *f'* to supply it.

When the desired amount of liquor has been drawn off, and the operator has ceased to grasp the handle R, the spring O immediately and simultaneously closes both plug B and valve J.

It will be seen that my improved faucet permits the proper quantity of air to enter the barrel at the exact moment when it is needed, and, as the air-duct is closed by two separate and distinct valves, H J, there is no possibility of the gas escaping. In some cases, however, the inner valve arrangement, *f'* H, may be omitted, if desired.

The valve J need not be connected to the plug B, so as to have a simultaneous movement therewith; but said valve J can be arranged so as to be opened and closed by hand at such intervals as the attendant may deem desirable.

Claims.

I claim as new and of my invention—

1. Providing a beer or other faucet with a sliding air duct or tube, F, whose outer end is furnished with an external valve, J, that has an independent or simultaneous movement with the plug B, for the object stated.

2. The sliding air-duct F, provided with an external cock, J, and an internal valve, *f* H, for the purpose set forth.

3. The combination, substantially as herein described, of the faucet A A' *a a'*, plug B, stuffing-box D E, sliding air-tube F, and its accessories *f* H G *g* J O, and actuating devices K. L, and N, for the object explained.

In testimony of which invention I hereunto set my hand.

JOHN KNOCHE.

Witnesses:

GEO. H. KNIGHT,

JAMES H. LAYMAN.