H. GNOSILL.

Faucet.

No. 164,545. Patented June 15, 1875.

Fig. 1.

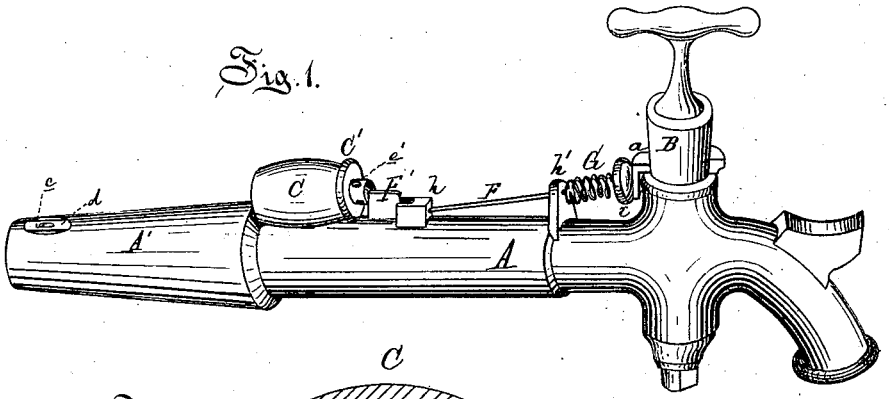


Fig. 4.

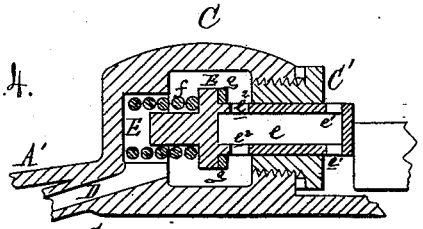


Fig. 2.

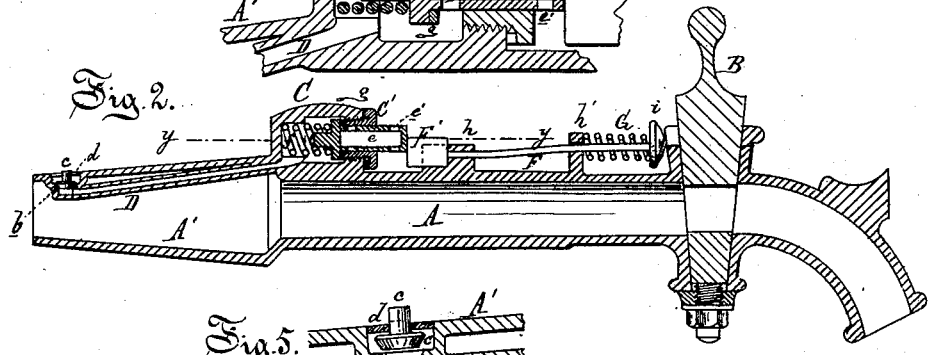


Fig. 5.

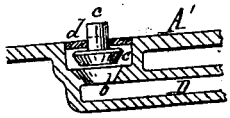
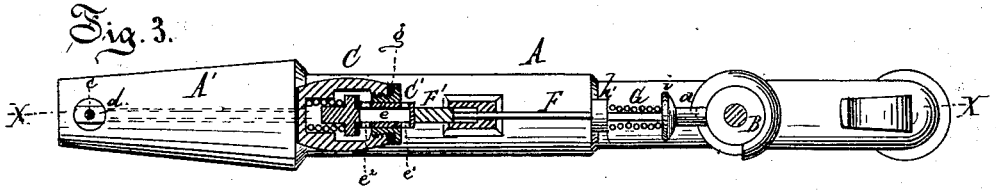


Fig. 3.



Witness:
Edward Barthel
Wm. Spalding

Inventor:
H. Gnosill
By Atty
Thos. S. Sprague

UNITED STATES PATENT OFFICE.

HENRY GNOSILL, OF DETROIT, MICHIGAN.

IMPROVEMENT IN FAUCETS.

Specification forming part of Letters Patent No. **164,545**, dated June 15, 1875; application filed May 4, 1875.

To all whom it may concern:

Be it known that I, HENRY GNOSILL, of Detroit, in the county of Wayne and State of Michigan, have invented an Improved Self-Venting Beer-Faucet, of which the following is a specification:

My invention has for its object to so construct a beer-faucet that it will secure an automatic admission of air into the cask to occupy the space of the liquor drawn therefrom. This being accomplished wholly during the act of discharge, and being commensurate therewith, the device permits the cask to remain tight, and its contents free from atmospheric contact at all times, save while beer is being drawn. The invention consists, mainly, in the combination of two valves and a tube or tubular passage cored in the butt of the faucet, the outer valve being actuated by the plug of the faucet, in the manner more fully hereinafter set forth.

Figure 1 is a perspective view of my improved faucet. Fig. 2 is a longitudinal vertical section taken at *x x* in Fig. 3, which is a plan of the faucet proper, and a horizontal section through the air-valve at *y y*. Fig. 4 is an enlarged vertical section of the air-valve and its case. Fig. 5 is a similar section of the check-valve.

In the drawing, A represents the body of the faucet, having a tapered butt, A′, to be driven into the cask, and is provided with the spigot or plug B, having on one side a pendent cam, *a*, which is turned to the rear in line with the faucet when the plug is turned to draw beer. C is a valve-case cast with and on top of the faucet, just in front of the butt A′. From the rear end of this case a tube, D, extends inside said butt, nearly to the extremity thereof, terminating in a valve-seat, *b*, opening upward through the butt, to receive a check-valve, *c*, whose stem plays in a bridge-piece, *d*, formed across the opening. C′ is a bushing screwed horizontally into the front end of the valve-case, and through it plays the hollow stem of a valve, E, which is seated against the inner end of said bushing by a spiral spring, *f*, placed between the valve and the back end of the case. The stem of the valve is hollowed to form a chamber, *e*, which at all times communicates with the external atmosphere through openings e^1, drilled in the outer end of said stems. At the inner part of the stem other apertures, e^2, are drilled, which are disclosed when the valve is pushed inwardly, as seen in Figs. 3 and 4.

The valve is faced by an annular rubber gasket, *g*, which can be easily replaced when worn out by unscrewing the bushing and removing the valve from the case.

F is a rod playing through bearings *h h′* on top of the faucet, with a rounded button-head, *i*, at its front end, and a vertical plate, F′, at its rear end, which plate has its rear end abutting against the outer end of the valve-stem.

The rear end of the bearing *h* is recessed to receive the front end of the plate and keep it in a vertical position while in it.

G is a spring spirally coiled on the rod between the front bearing *h′* and the head *i*, whose office is to draw forward the rod, and thus allow the valve E to seat itself. The rod is pushed to the rear by opening the plug, which turns the cam *a* to the rear and against the head of said rod, thereby opening the valve and admitting air to the interior of the case, and thence into the tube D.

So long as there is pressure in the cask (and the beer will flow) the pressure keeps the check-valve *c* seated; but as soon as there is a partial vacuum formed in the cask by withdrawing a portion of its contents the pressure of the atmosphere on the under side of the check-valve will lift it, when air will flow into the cask from the tube D, passing up through the beer until an equilibrium is established, when the valve will seat itself of its own weight.

When the plug is turned to close the faucet the air-valve will be seated by its spring, as it will then be relieved of the pressure of the rod.

When it is not desired to have the valve act by pushing back the rod far enough to permit the plate to pass out of its recess, the rod may be axially rotated to turn down the plate behind the end of the bearing, where it will remain until the valve is to be operated.

What I claim as my invention is—

1. The combination, with the faucet A A′,

of the valve-case C, air-valve E, consisting of the hollow stem *e*, having the openings e^1 e^2, opened by the faucet and closed by a spring, the tube D, and check-valve *c*, substantially as described and shown.

2. The combination, with the faucet A A′, of the air-valve E, having the spring *f*, tube D, check-valve *c*, plug B, having the cam *a*, and the rod F, having the head *i* and spring G, substantially as described and shown.

HENRY GNOSILL.

Witnesses:
H. F. EBERTS,
H. S. SPRAGUE.