H. Strater, Jr.

Globe Valve,

No. 46,727, Patented Mar. 7, 1865.

Fig. 2.

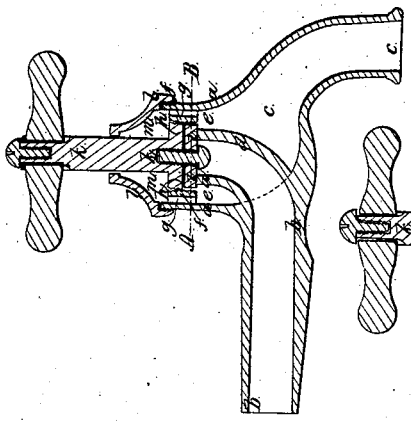


Fig. 4.

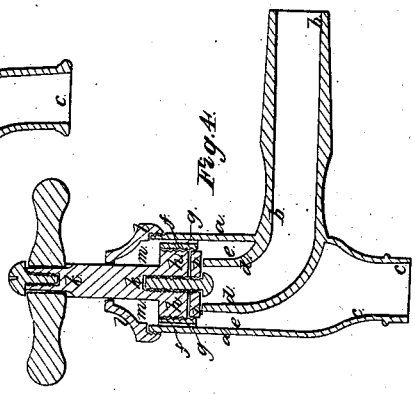


Fig. 6.

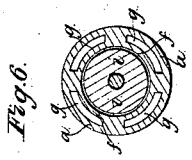


Fig. 5.

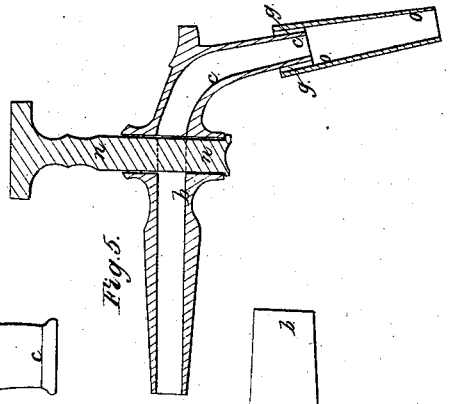


Fig. 1.

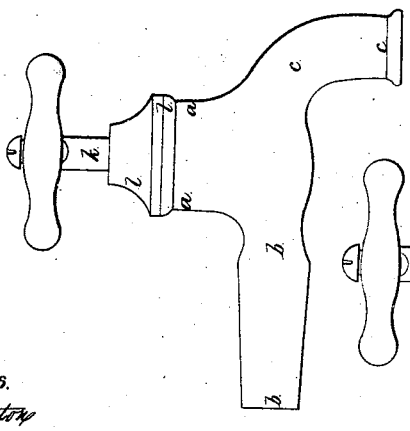
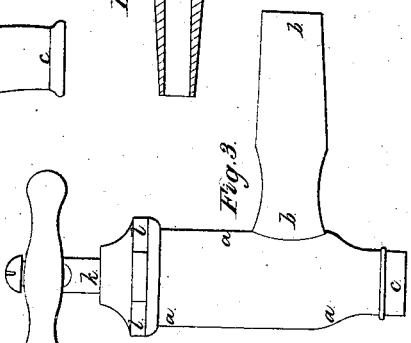


Fig. 3.



Witnesses.
Sam'l M. Burton
George W. Mann

Inventor.
Herman Strater Jr
by his Att'y
Judah Gavett

UNITED STATES PATENT OFFICE.

HERMAN STRATER, JR., OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN FAUCETS.

Specification forming part of Letters Patent No. 46,727, dated March 7, 1865.

To all whom it may concern:

Be it known that I, HERMAN STRATER, Jr., of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Faucets; and I do hereby declare that the following description, taken in connection with the accompanying plate of drawings, hereinafter referred to, forms a full and exact specification of the same, wherein I have set forth the nature and principles of my said improvements by which my invention may be distinguished from all others of a similar class, together with such parts as I claim and desire to have secured to me by Letters Patent.

The present invention relates to certain new and useful improvements in faucets contemplating two distinct features to be obtained, the first of which is to prevent leakage and the second to effect a commingling of air with liquids, more especially fermented ones, so as to produce ebullition.

My improvements consist in so forming and arranging air spaces or chambers with regard to the chamber or pipe through which the liquid is discharged that the downward passage of the latter creates a vacuum or partial vacuum in the faucet and causes air to rush into and through the said air spaces or chambers and mix with the liquid pasing out, the tendency, moreover, of this downward current of air being to check the upward pressure of the liquid and thus prevent leakage at the valve or screw-plug.

My improvements are represented in the accompanying plate of drawings, of which Figure 1 is an exterior view of my improved faucet. Fig. 2 is a central vertical longitudinal section of the same. Fig. 3 is a view of another form of faucet, and Fig. 4 is a central vertical longitudinal section of the same. Fig. 5 illustrates the principle of action in the several forms shown. Fig. 6 is a horizontal section taken in the plane of the line A B.

a a a in the drawings represent the main or outer tube of a faucet, connected with which is a supply tube or pipe, *b b*, and exit tube or pipe *c c*. The supply-tube *b b* extends upward some distance above its horizontal axis into the main tube *a a*, forming an extension-tube, *d d*, and leaving a chamber, *e e*, between the tube *d d* and the outer tube, *a a*. Within the outer tube, *a a*, and extending from near its top downward to the top of the extension-tube *d d*, is a ring, *f f*, so connected with the outer tube, *a a*, at different points as to form between it and the ring *f f* an annular air space or spaces or chambers *g g*. On the inner side of the ring *f f* a female screw-thread is cut. *h h* is a screw-plug or valve having a leather or other washer, *i i*, attached to its bottom and coming to a seat or bearing on the top of the extension-tube *d d*. It will be observed that the screw-plug *h h*, instead of working in the outer tube, *a a*, plays up and down in the screw-thread cut on the inside of the ring *f f*. The stem *k k* of the screw-plug *h h* turns loosely in a cap or top piece, *l l*, that screws over the top of the outer tube, *a a*.

From the foregoing description it will be observed that when the screw-plug or valve *h h* is raised-the water or other liquid passes up through and over the top of the extension-tube *d d*, into the chamber *e e*, and out through the exit or delivery pipe *c c*. The downward passage of the water through the chamber *e e* and exit-pipe *c c* creates a vacuum or partial vacuum in the same and causes a current of air, freely admitted to the chamber *m m*, to pass from the latter down through the air-spaces *g g* into the chamber *e e* and mingle with the liquid passing through the chamber *e e* and the exit-pipe *c c*, thus not only serving to counteract the tendency of the liquid to pass with any considerable degree of force upward between the threads of the screw-plug *h h* and those of the ring *f f*, and to draw downward through the air-spaces *g g*, what little liquid might so escape, but also to thoroughly mix the air and liquid together so as to cause agitation in the latter, which is often desirable in fermented liquors.

Having thus described my improvements, what I claim as my invention, and desire to have secured to me by Letters Patent, is—

1. The spaces or chambers to which air has free access around the tube through which

the liquid passes in such a manner that when a vacuum or partial vacuum is created in the chamber in which the said tube is located, by the downward current of the said liquid, the air and liquid will be commingled, substantially as specified.

2. The combination of the screw-plug *h h*, extension-tube *d d*, and air spaces or chambers *g g*, arranged and operating with regard to each other substantially as described.

HERMAN STRATER, JR.

Witnesses:

JOSEPH GAVETT,

SAML. M. BARTON.