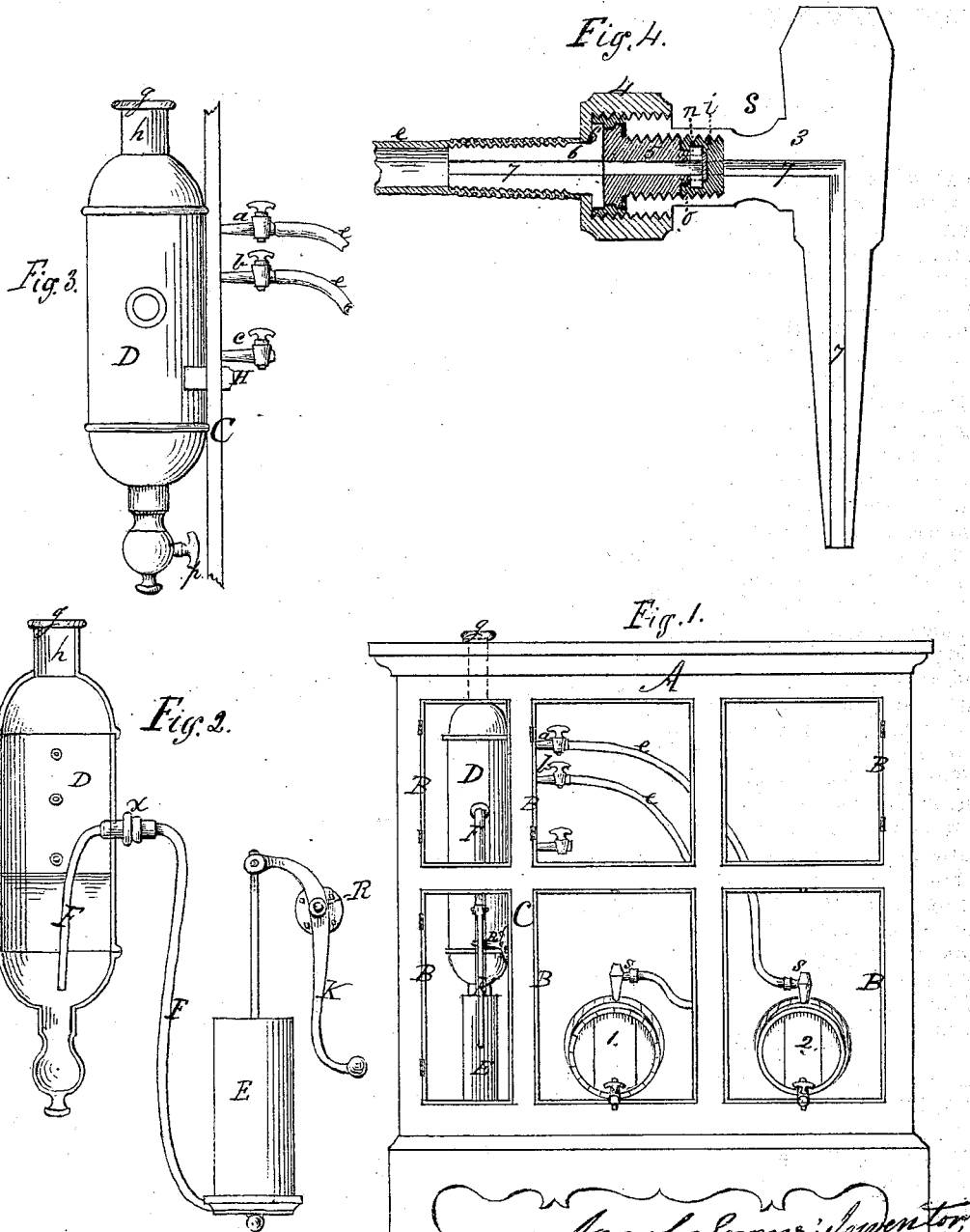


J. LORENZ.

Improvement in Apparatus for Preserving and Cooling Beer.

No. 115,072.

Patented May 23, 1871.



Witnesses
A. Emke
John Clark, Jr.

Jacob Lorenz, Inventor,
by his Atty. H. R. K. Beck

UNITED STATES PATENT OFFICE.

JACOB LORENZ, OF HAMILTON, OHIO.

IMPROVEMENT IN APPARATUS FOR PRESERVING AND COOLING BEER.

Specification forming part of Letters Patent No. 115,072, dated May 23, 1871.

To all whom it may concern:

Be it known that I, JACOB LORENZ, of Hamilton, in the county of Butler, in the State of Ohio, have invented a new and useful Improvement in Regulators for Beer; and I do hereby declare that the following is a full and exact description thereof, reference being made to the accompanying drawing and to the letters of reference marked thereon.

Figure 1 represents a front view of my beer-regulator, with the doors of the refrigerator in which it is placed removed. Fig. 2 represents a vertical section of the water-tank, with the force-pump and the connections. Fig. 3 represents the water-tank, with its faucets and parts of flexible hose which connect the tank with the beer-kegs. Fig. 4 represents a longitudinal section of the valve-spigot which connects the hose with the kegs.

My invention relates to the combination and arrangement of a self-acting valve-spigot with the apparatus for cooling and purifying the air forced into the beer-receptacle, as hereinafter set forth.

The well-known object of compressing air within the vessels which contain malt liquors is to retain the gas therein in a lively state while the liquor is being drawn off for use.

For convenience, I arrange my entire regulating apparatus within a suitable refrigerator, A, provided with doors B B. The water-tank D, in which ice and water are kept, is connected with an air-pump, E, by pipe F, which extends down near the bottom of tank D, and within it, so as to cause the air which is forced into the tank to commingle with the water and ice as it rises above the water-line W within the tank. By this process the air is cleansed from all impurities and cooled before passing through the conducting-pipes and valve-spigot to the beer-kegs. K denotes the pump-handle, *a b* stop-cocks, and *e* flexible hose. The fulcrum R of the pump-handle is secured to partition C, and the tank D is secured thereto by the bracket H. The coupling *x* serves to connect the two parts of pipe F. The valve-spigot is represented in section in Fig. 4, and its elastic valve will permit air to be forced into the kegs 1 2, but will prevent the air, gas, and liquor from escaping

through the faucet or spigot *s*, which is made in four parts, 3 4 5 6, with an orifice, 7, through which air may be forced into the kegs. The nipples 5 6 are provided with screw-threads. The flexible hose *e* is drawn over the nipple 6, and fastened thereon by being wound with thread, and the nipple is screwed into the chamber formed to receive it in part 3. The parts are held together by means of nut 4, with the flange 6' around the end of nipple 6 and the screw-thread upon the outer surface of part 3. The valve is made of a strip of India rubber, *i*, placed over the orifice 7 at the head or apex *n*, which occupies the open space at the inner end of the chamber of part 3. The elastic strip or valve *i* is secured in its place by threads or twine wound around its overlapping ends and the end of the nipple 5. The water within the tank D may be drawn off through the cock *p* as often as it becomes impure from the lodgment within it of the dust and impurities of the air which is passed through it; and a fresh supply of water and ice may be introduced through the mouth *h*, which is provided with a suitable screw-cap, *g*.

The stop-cocks *a b*, as well as the test-cock *c*, may be dispensed with, as the self-acting valve-spigots *s* will serve the purpose of preventing the contents within the kegs from becoming mixed with the water in the tank.

Having fully described my improved apparatus for regulating the condition of beer, I do not claim the use of an air-pump or air-reservoir, nor the combination of these devices with pipes provided with stop-cocks, as these are not a part of my invention; but

What I claim, and desire to secure by Letters Patent, is—

The self-acting valve-spigot represented in Fig. 4, in combination with the water-and-ice tank D, air-pump E, and pipes *e e* F, when the parts are constructed and arranged substantially as and for the purpose described.

In testimony whereof I have hereunto set my hand this 23d day of September, 1870.

JACOB LORENZ.

Witnesses:

H. P. K. PECK,
A. L. PECK.