(No Model.) 2 Sheets—Sheet 1.

F. M. LA BOITEAUX.

BEER APPARATUS.

No. 479,190. Patented July 19, 1892.

Fig. 1.

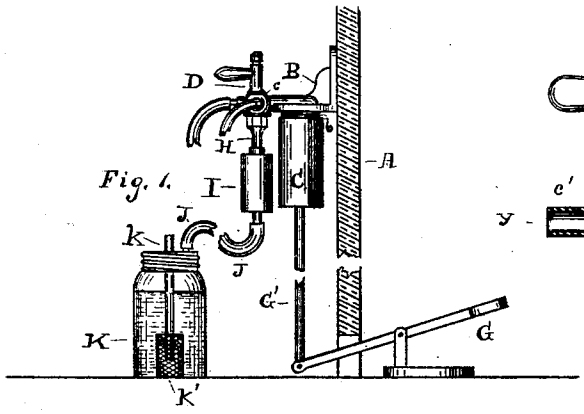


Fig. 5.

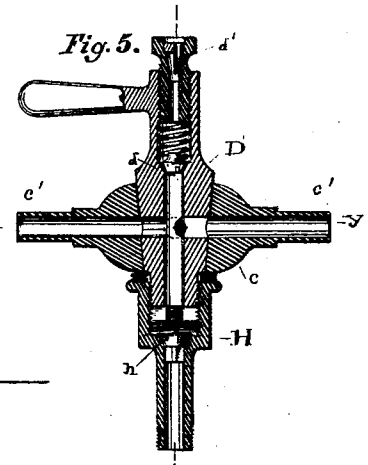


Fig. 2.

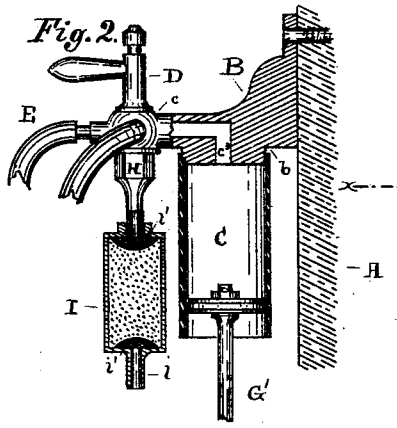


Fig. 6.

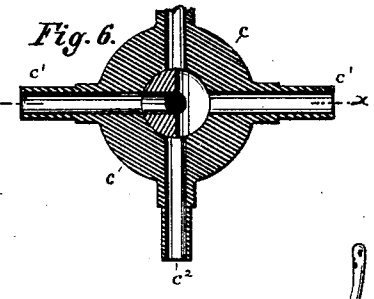


Fig. 3.

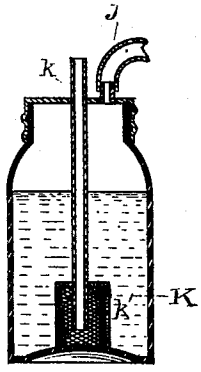
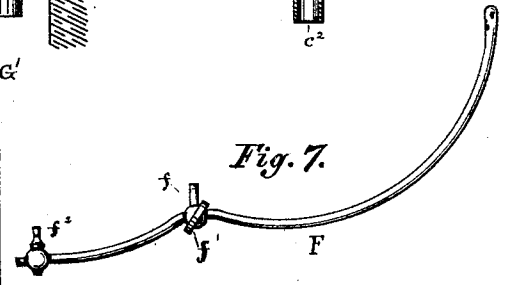


Fig. 7.



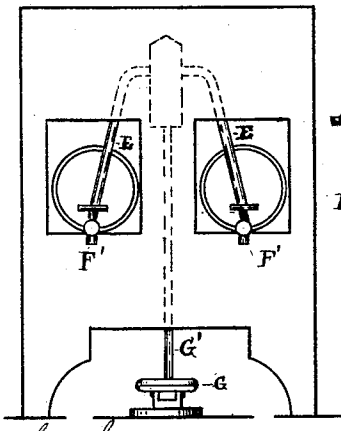


Fig. 4.

Witnesses

Mary L. Murray

David S. Oliver

Inventor

Frank M. La Boiteaux

By his Attorney Geo. J. Murray

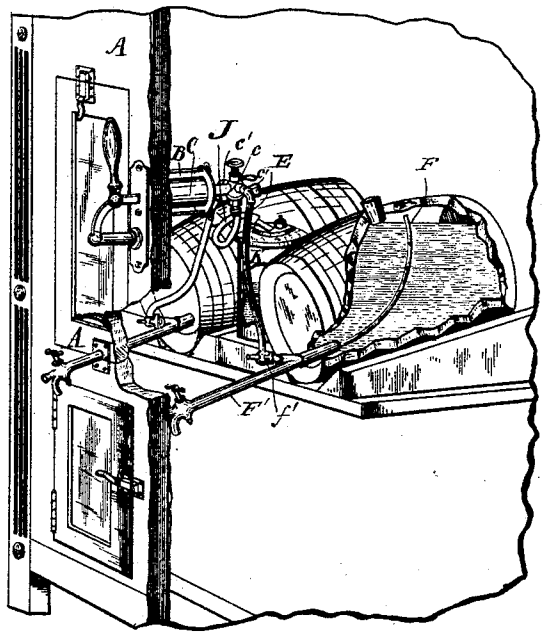
(No Model.) 2 Sheets—Sheet 2.

F. M. LA BOITEAUX.

BEER APPARATUS.

No. 479,190. Patented July 19, 1892.

FIG. 8.



Witnesses
Frank S. Davis.
Chas. Barnes

Inventor
Frank M. La Boiteaux
By his Attorney Geo. J. Murray

UNITED STATES PATENT OFFICE.

FRANK M. LA BOITEAUX, OF CINCINNATI, OHIO.

BEER APPARATUS.

SPECIFICATION forming part of Letters Patent No. 479,190, dated July 19, 1892.

Application filed January 3, 1887. Serial No. 223,329. (No model.)

To all whom it may concern:

Be it known that I, FRANK M. LA BOITEAUX, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Beer Apparatus, of which the following is a specification.

The object of my invention is an improved means for forcing beer from barrels, whereby the requisite amount of air is forced into the barrel to expel the liquid, the air being filtered and purified on its passage to the liquid in order to keep the same pure and fresh.

My invention is especially intended for use with the well-known Varwig vent-faucet, but may also be readily attached to any of the bung-ventils now in common use.

The invention will be first fully described in connection with the accompanying drawings, in which like parts are represented by similar reference-letters wherever they occur throughout the various views, and then particularly referred to and pointed out in the claims.

Figure 1 shows in broken vertical section the front of a beer-cooler, to the front of which is attached my improvement, which is shown in side elevation. Fig. 2 is an enlarged view of the upper portion of Fig. 1, but partly in elevation and partly in vertical section. Fig. 3 is an enlarged central vertical section of one of the filtering-vessels. Fig. 4 is a front elevation, on a diminished scale, of a beer-cooler with the doors or shutters removed. Fig. 5 is a central transverse section of the air-cock upon an enlarged scale, the section being taken through line $x\ x$, Fig. 6. Fig. 6 is a transverse section of the same, taken through the line $y\ y$ of Fig. 5. Fig. 7 is a side elevation of the ordinary sliding tube of the Varwig vent-faucet with an attachment for receiving one of the pipes from the air-pump. Fig. 8 is a view in perspective of a portion of an ice-chest, showing my invention applied for use. In this view portions are broken away to more clearly illustrate the application of my invention. The pump in this view is arranged in a horizontal position to be operated by a hand-lever instead of the treadle shown in Figs. 1, 2, and 4.

Referring first to the form shown in Figs. 1 to 7, inclusive, A represents the front of a beer-cooler, to the inside of which, opposite the vertical center, is secured a cast-metal bracket B, the under side of which has a circular extension *b*, on which is secured the upper end of the air-pump cylinder C. The bracket extends horizontally and terminates in a boss *c*, which is vertically perforated to receive the plug or cock D. The boss *c* has radial branches $c'\ c^2$ to receive the rubber tubes E, the opposite ends of which connect with the nipples *f* (see Fig. 7) of the sliding tubes F, which pass through the shanks of the faucets F′, Fig. 4. Two of the branches c' are perforated through to the central opening of the boss *c*, and the perforation in branch c^2 is extended across the opening and into the circular piece *b* to meet a vertical perforation c^3, which communicates with the cylinder C of the air-pump. The plug D is perforated and transversely grooved opposite the ports in boss *c*, so that by turning it the proper distance connection is opened with any one or more of the tubes E and the air-pump or the communication completely cut off, if desired.

The plug D is longitudinally perforated. The enlarged perforation in the upper portion is provided with a spring-loaded valve *d*, and above the spring is a perforated plug *d′*, which by screwing in or out regulates the tension of the valve-spring. In the upper end of the plug *d′* is an alarm reed or whistle, which sounds when the pressure of air is sufficient to raise the valve *d*, thus warning the attendant against forcing an excess of air into the barrels and when he may cease to use the treadle G, which operates the piston-rod G′ of the air-pump. In the drawings the treadle G is shown extending out in front of the beer-cooler; but it may be arranged in any convenient position. Below the boss *c* is a coupling H, in the enlarged upper portion of which is a downwardly-closing valve *h*. On the stem of this coupling is secured a vessel I, which has a stem *i* projecting down from it to receive a rubber tube J, the opposite end of which is secured over a nipple projecting up from the cup of the water-vessel K.

Within vessel I, opposite its upper and lower openings, are wire screens *i′*, and the vessel is filled with some filtering substance, through which the air must pass on its way to the

pump. Passing through the cap of the vessel K and extending down to near the bottom of the vessel is a tube *k*. The lower end of this tube is within an inverted cup of perforated metal or wire-gauze *k'*, which breaks the air into small jets in its passage to the water surrounding the cup, as well as freeing the air of some of its impurities.

The sliding faucet-tube, Fig. 7, differs in no respect from those now in common use, except that it has the nipple *f* and the two-way cock *f'*, which opens communication between the nipple and the inner valved end of the tube or cuts off this communication and leaves the venting of the barrel to be controlled by the cock f^2 and the internal valve at the opposite end of the tube. This faucet and its sliding tube is fully described in the Letters Patent No. 167,821, dated September 21, 1885, and is well known to all engaged in the line of business to which this invention relates.

The operation of the device is as follows: The faucet being inserted in the barrel or keg in the usual way, the tube E is slipped over the nipple *f* and the device is ready for use. When beer or ale is first tapped, if it is in the proper condition for use, the pressure of the gases is sufficient to expel the liquid from the faucet until the pressure is reduced by drawing the liquor. When it is found that the pressure in the barrel is insufficient to expel the liquor, the attendant forces air into the barrel by operating the treadle G until the requisite pressure is attained. It is desirable that no more air be forced into the barrel than just sufficient to expel the liquor. The alarm in the upper end of cock D notifies the attendant when he should cease using the air-pump. The air on its passage to the barrel is first drawn through the water in vessel *k* and freed from a great portion of its floating matter. It is further purified by passing through the vessel I before it is drawn into the pump, and thence forced into the barrel.

I have shown my device adapted for use with the common vent-faucet; but it is evident that the tubes E may be attached to the common bung-ventils, and it is also evident that my apparatus may be used for forcing the liquor from the cellar to the taps in place of the hydraulic air-compressers now in use. The only change required in the latter case would be the location of the pump or treadle for operating it. It would be but an inferior modification of my invention to dispense with one of the filtering-vessels I K.

Referring to Fig. 8, I have shown the pump-cylinder C attached to the inside of the ice-box in a horizontal position and the intermediate vessel I omitted. In this case the pump-piston is operated by a lever which is pivoted upon a stud projecting from a plate which is secured to the front of the ice-box. The operation of the device is the same as above described.

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

1. The combination, substantially as hereinbefore set forth, of the air-pump, its supporting-bracket, and cock for controlling the passage of air from the pump, the filtering-vessel I, connected to the supply-duct of the pump, and the filtering-vessel K, provided with tube *k*, wire cage *k'*, and tube J to connect the cap of the vessel K to the vessel I.

2. In a beer apparatus, substantially as hereinbefore set forth, the combination of the air-pump C and the cock D for controlling the discharge-duct, said cock being longitudinally perforated, with the spring-loaded valve *d* and plug *d'*, said plug being provided with an alarm, for the purpose set forth.

FRANK M. LA BOITEAUX.

Witnesses:
GEO. J. MURRAY,
MARY L. MURRAY.