Ladner & Finlen,

Beer Pump.

NO. 104,742. Patented June 28. 1870.

FIG. 1.

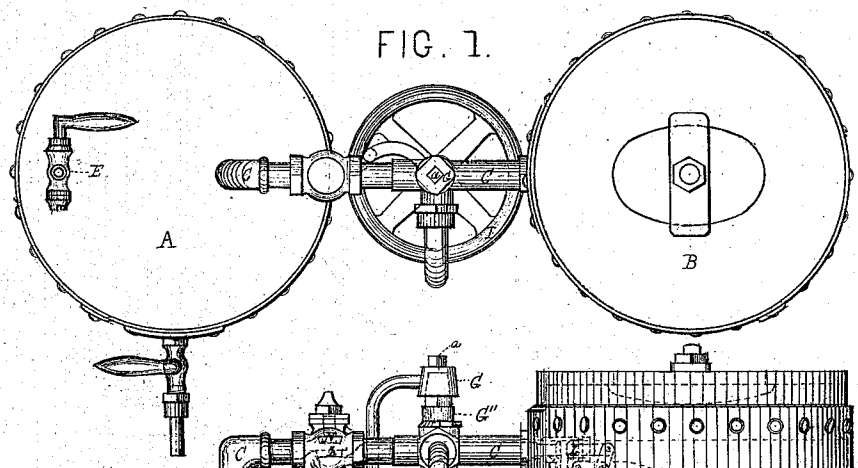
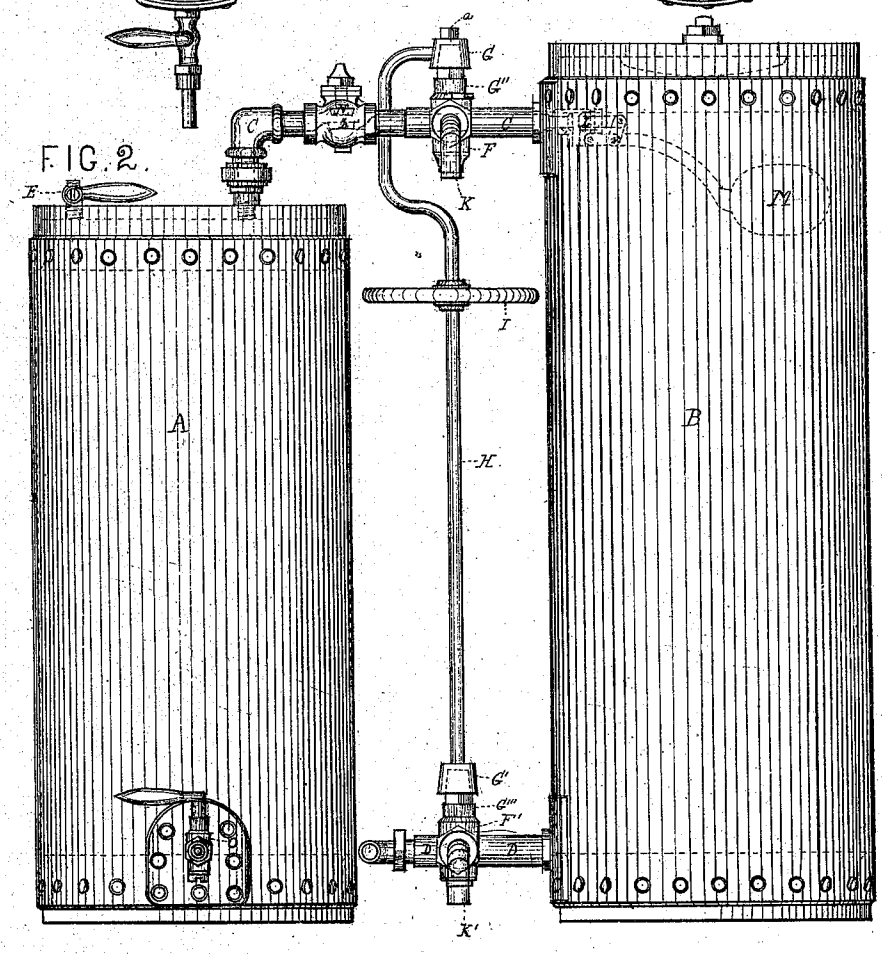


FIG. 2.



WITNESSES.

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United States Patent Office.

ALBERT H. LADNER AND THOMAS F. FENLIN, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 104,742, *dated June* 28, 1870.

IMPROVED APPARATUS FOR ELEVATING BEER.

The Schedule referred to in these Letters Patent and making part of the same

We, ALBERT H. LADNER and THOMAS F. FENLIN, of the city of Philadelphia and State of Pennsylvania, have invented certain Improvements in Elevating Beer, &c., for draughting, of which the following is a specification.

The apparatus consists of a water-cylinder, or other vessel, which is connected with the hydrant at its lower end by means of a pipe, and with the air-vessel by a pipe at the upper end, in such a manner that, when the water is turned on from the hydrant and partially fills the receiving vessel, the air contained in the water is forced into the air-vessel and through suitable pipes into the beer-barrels, and by its pressure forces the beer through the ordinary pipes to the bar-room.

When a sufficient amount of air is made available for the purpose, the communication with the hydrant is cut off.

The water and air-pipes are provided with cocks, for opening and closing them, as hereinafter described.

The water-receiving vessel is also provided with a float which operates a valve to close the mouth of the air-pipe, before the water has risen high enough to run into the air-vessel, to prevent the passage of the water to said vessel.

To enable others skilled in the art to which our improvement appertains to make and use our invention, we will now give a detailed description thereof.

Figure 1 is a plan view of the apparatus.

Figure 2 is a side elevation of the same.

Like letters in both figures indicate the same parts.

A is the air-vessel.

B is a water-vessel connected with the said air vessel by means of the pipe C at the upper end, and it connects with a hydrant, not shown in the drawing, by means of the pipe D.

A communication is opened between the air-vessel A and the beer-barrels by means of a pipe in connection with the faucet E, whereby the beer is forced through the ordinary pipes to the bar-room.

The air-pipe C and water-pipe D are provided with three-way cocks, F and F′, which are operated by the duplex keys G and G′, attached to the vertical rod H having a hand-wheel, I.

If it should be desirable to have the apparatus under the control of a person in the bar-room, to avoid the necessity of his going to the cellar or storage room to operate it, there may be a vertical rod with a socket at its lower end connected with the square lug *a* on the key G, the said rod being provided with a hand-wheel on its upper end for its manipulation.

When the water is to be turned into the vessel B from the hydrant, by turning the hand-wheel I in the direction of the arrow, the keys G″ and G‴ are brought into the position represented in the drawing, whereby there is a free opening of the pipes C and D. The solid side of the keys are, at this time, against the pipes K and K′, which are used for letting air into the vessel B at the upper end and the discharge of the water from the lower end of the vessel, when the said vessel has to be emptied.

By a reverse motion of the hand-wheel, the communication with the air-vessel A and hydrant is closed, and the communication with the pipes K and K′ is opened, the air passing into the vessel through the pipe K, assisting in the discharge of the water through the pipe K′.

For preventing the water flowing from the vessel B into the air-vessel A, when it rises as high at the mouth of the pipe C, there is a valve, L, provided with the float M. The valve remains open until the water rises into the upper part of the vessel B, as seen in full lines, but, when the water bears up the float, the valve closes, thus preventing the escape of water into the air-vessel.

The pipe C is provided with a valve, N, which is elevated from its seat, *b*, as seen in fig. 2, by the pressure of the air in the vessel B, so as to open the communication with the air-vessel A for the passage of the air into the same. When the pressure of air in the vessel B is removed, the valve falls down on its seat and prevents the return of air from the vessel A to the vessel B.

O is a blow-off cock to the vessel A.

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

1. The duplex keys G and G′ connected together by means of the rod H, when arranged and operating in relation to the cocks F and F′, substantially in the manner and for the purpose set forth.

2. The combination of the air-vessel A, water-vessel B, pipes C D K and K′, cock F and F′, valve L, and float M, all constructed, arranged, and operating in relation to each other, substantially in the manner and for the purpose specified.

In testimony that the above is our invention, we have hereunto set our hands and affixed our seals this 13th day of April, 1870.

ALBERT H. LADNER. [L. S.]
THOMAS. F. FENLIN. [L. S.]

Witnesses:
THOMAS J. BEWLEY,
WILLIAM S. TOLAND.