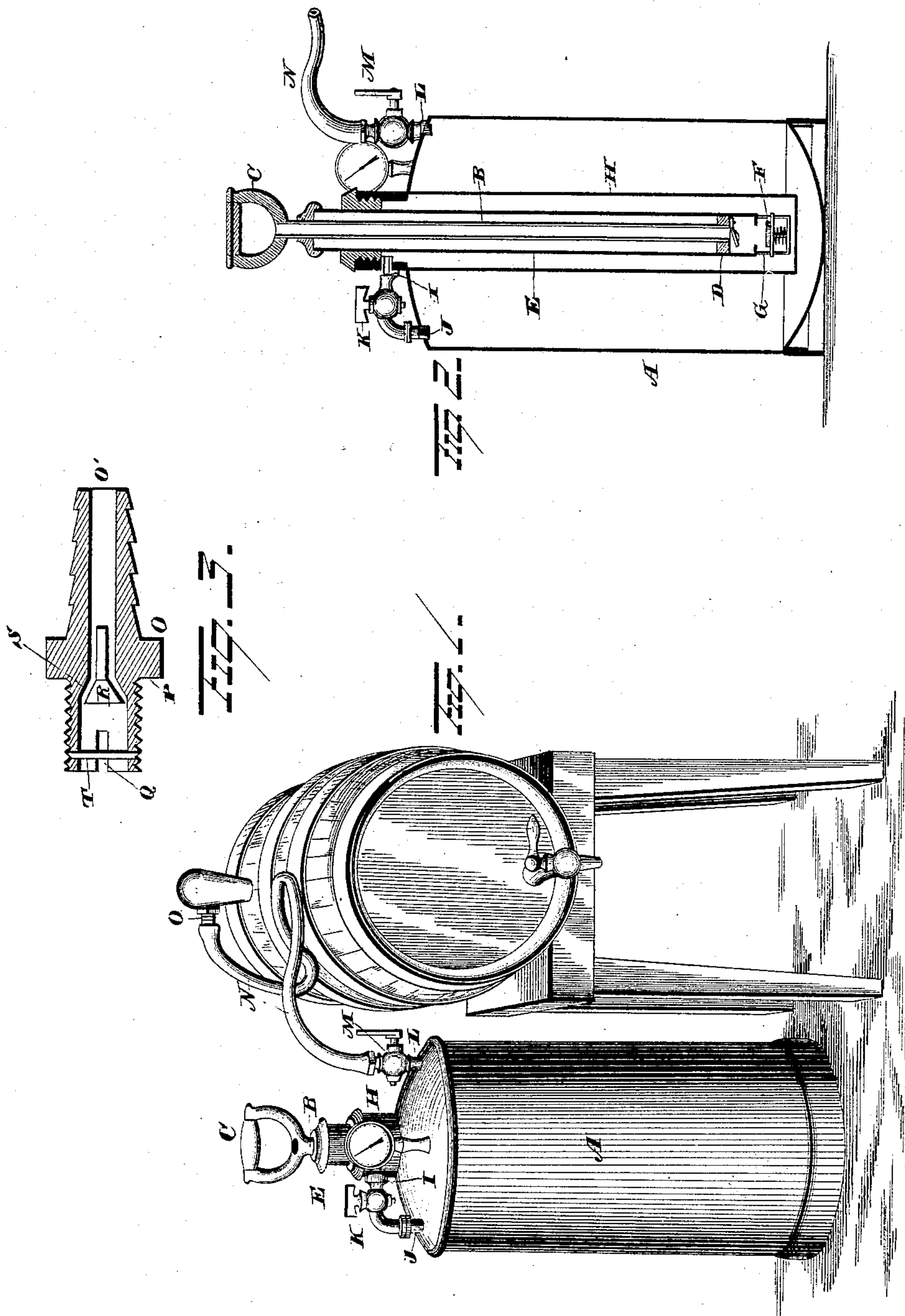


(No Model.)

F. E. SNYDER.
BEER FORCING PUMP.

No. 322,073.

Patented July 14, 1885.



WITNESSES
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UNITED STATES PATENT OFFICE

FRANK EDWARD SNYDER, OF MASSILLON, OHIO.

BEER-FORCING PUMP.

SPECIFICATION forming part of Letters Patent No. 322,073, dated July 14, 1885.

Application filed January 21, 1885. (No model.)

To all whom it may concern:

Be it known that I, FRANK EDWARD SNYDER, of Massillon, in the county of Stark and State of Ohio, have invented certain new and
5 useful Improvements in Force-Pumps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the
10 same.

My invention relates to an improvement in pumps, the object of the same being to provide improved means whereby beer and other beverages may be conveniently forced to any
15 desired point. A further object is to provide a portable pump of the above character which shall be simple and economical in construction and durable and efficient in use; and with these ends in view my invention consists in certain
20 details in construction and combinations of parts, as will be hereinafter fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of my improvement. Fig. 2 is a sectional view of the same; and Fig. 3
25 is a sectional view of the hose-coupler.

A represents a sheet-metal vessel provided on its top or superior surface with a central opening in which is secured a hollow piston or
30 plunger rod, B, provided at its upper end with the handle C, by means of which it is operated, and at its lower end with the valved piston D. This piston and rod work in the barrel or cylinder E, which latter is open at its lower
35 end, and is provided with the upwardly-closing spring-pressed valve F. This valve F is grooved on opposite sides, so as to enable it to rest in and be guided by the stirrup G, which latter is secured to the lower end of the
40 barrel E. As the piston-rod B is drawn upward the valve on the under side of the piston G opens downward and allows the air to rush down through the hollow piston-rod into the interior of the barrel. While the rod is mov-
45 ing upward the spring-pressed valve F is closed, and prevents the escape of the compressed air already confined in the can; but as soon as the piston-rod is forced downward the valve on the lower side of the piston closes
50 and the valve F opens and allows the air to escape into the air-compartment H after it leaves the air-pump already described. This

compartment or chamber is slightly larger than the pump-barrel and communicates with the interior of the vessel A by means of the
55 pipe I, which is attached to the chamber H and connects with the vessel A by means of the opening J, in which it is secured by means of detachable coupling of any preferred construction. The pipe I is provided with the
60 cock K, by means of which the valve F is relieved and the possibility of the air escaping is avoided.

L is an air-discharge pipe rigidly secured to the top of the vessel and provided with the
65 stop-cock M, by means of which the air is cut off or turned on. A rubber or other flexible pipe, N, is connected to the upper end of this discharge-pipe for directing the air into a cask or other receptacle, which may be located
70 wherever desired. The hose N is secured to the hose-coupler O at the small end O' in any manner that will render the same air-tight. The opposite end of the coupler is screw-
75 threaded, and back of the screw-threads is provided with the annular shoulder P. The extreme end of the coupler is provided with the recesses Q.

The coupler is provided with the ball-valve R, which may be of any desired material, and
80 is adapted to rest against the shoulder S formed within the opening, thus forming an air-tight valve. The ball is prevented from escaping by means of the cross-rod T.

The coupling is secured to a cask or other
85 receptacle by means of the screw-threaded end, which may be secured to a bung-hole, or the same can be attached to a bung and the same driven into a barrel, thus affording a complete air-tight joint.
90

By using my method of coupling it is im-
possible for the beer or other beverage to back into the pipe, as the ball-coupling will render the same air-tight when pressure is brought thereon.
95

When it is desired to use my improved pump, the stop-cocks are opened and the piston is moved up and down and the air passes through the hollow piston-rod and piston into the barrel or chamber E, and from thence into
100 the air chamber or compartment H, and from there it enters through the pipe I into the vessel A, where it is compressed. After a sufficient quantity of air has been forced into the

interior of the vessel the stop-cock M is turned on and the compressed air passes into a barrel or other receptacle, and the liquid therein is forced with great pressure in any desired direction.

For the purpose of ascertaining the amount of pressure in the pump an air-gage may be connected therewith.

My device is simple and economical in construction, and durable and efficient in use.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a vessel and a discharge-pipe connected therewith, of an air-chamber, closed at its lower end and located partly within said vessel and terminating above the same, a pipe located outside of the vessel and connecting it with the air-chamber, a stop-cock for closing communication between

the vessel and air-chamber, and an air-pump, the barrel of which extends downwardly into the air-chamber, substantially as set forth.

2. The combination, with a vessel having a discharge-pipe and an air-chamber located within said vessel and extending upwardly above the same, and a pipe connecting the air-chamber and vessel and provided with a stop-cock, of a pump-barrel removably secured within said chamber, and a hollow piston-rod through which air is forced into the interior of the chamber, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

FRANK EDWARD SNYDER.

Witnesses:

EUGENE G. WILLIAMS,
J. C. LOWE.