D. B. HISER.
Force-Pump.

No. 215,002. Patented May 6, 1879.

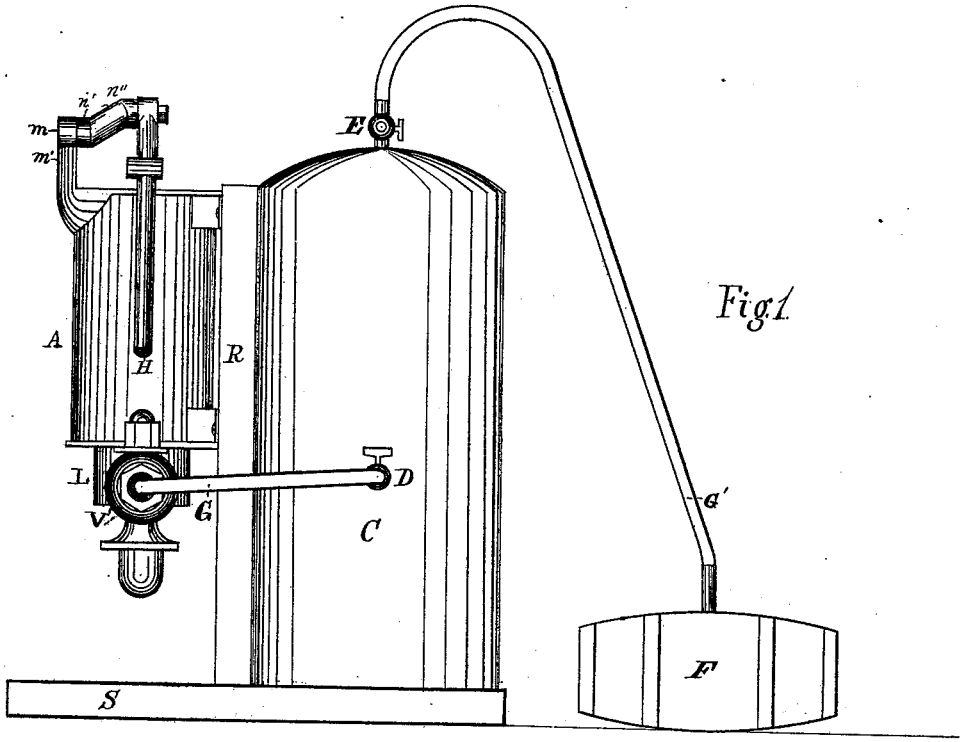

Fig. 1.

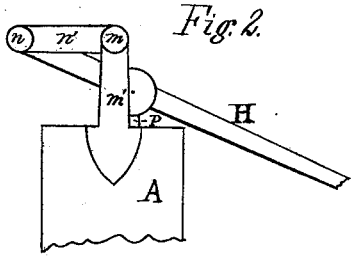

Fig. 2.

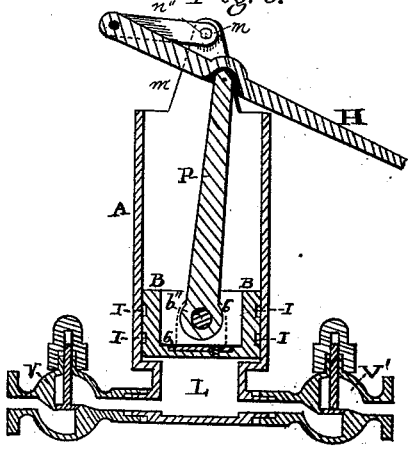

Fig. 3.

Attest:
E. S. Dawes
A. H. Dive.

Inventor:
Daniel B. Hiser

UNITED STATES PATENT OFFICE.

DANIEL B. HISER, OF WOOSTER, OHIO, ASSIGNOR OF ONE-HALF HIS RIGHT TO JOHN K. McBRIDE, OF SAME PLACE.

IMPROVEMENT IN FORCE-PUMPS.

Specification forming part of Letters Patent No. **215,002**, dated May 6, 1879; application filed August 2, 1877.

To all whom it may concern

Be it known that I, DANIEL B. HISER, of the city of Wooster, county of Wayne, and State of Ohio, have invented certain new and useful Improvements in Force-Pumps, of which the following is a specification.

This invention relates to the construction of force-pumps, as fully described hereinafter and shown.

In the accompanying drawings, making part of this specification, Figure 1 is an elevation of my apparatus. Fig. 2 is a partial elevation of a view taken at right angles to the view shown in Fig. 1, and is for the purpose of showing the preferable method of making the pump-handle. Fig. 3 is a vertical section of the pump through the axis of the handle.

A represent a single-acting air-pump, provided with any suitable plunger, as B. V is the inlet, and V′ the exhaust, valve of this pump. These valves are attached directly to a case containing a depressed chamber, L. They may be of any desired form; but I prefer the ordinary globe-valve. (Shown in Fig. 3.)

The plunger which I prefer consists, essentially, of a hollow cylinder, B, to whose bottom plate is attached a plate, b'. Ears b (shown by dotted lines in Fig. 3) are attached to the plate b', and the rod P is attached to said ears by means of a pin, b''. The periphery of the cylinder B is provided with annular channels, which are for the purpose of receiving packing. Rod P, at its upper end, is attached to handle H, by which it is operated.

A standard, m', is cast on the top of cylinder A, and an arm, n', fulcrumed to it at m. Arm n' is provided at the end n with a crank-arm, n'', to which is attached the handle H. The joint at m is so arranged that the end n of arm n' can be raised or lowered, thus regulating the possible amount of stroke of plunger B.

C is an air-tight tank, and is connected with the pump by means of tubing G, which is preferably rubber hose. A cock, D, opens and closes the connection between the pump and the tank. A tube, G′, flexible or otherwise, leads from the tank C to the keg F. This tube is opened and closed by cock E.

I prefer the general arrangement shown in Fig. 1—viz., the pump A, attached to upright R, which is secured to base S, and on this latter the tank C resting.

The method of operating my machine is as follows: Open cock D and close cock E, and work the pump until sufficient air has been forced into tank C to produce the required tension. Tube G′ is now attached to the keg F, which is filled, or partially filled, with beer, and cock E opened, thus subjecting the beer in the keg to a considerable pressure, which forces it out of the keg rapidly, and at the same time will keep it sweet during twenty or thirty days.

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

1. Plunger B, provided with annular grooves I, combined with plate b' and ears b, substantially as and for the purposes set forth.

2. The combination of standard m', arms n' and n'', and handle H, substantially as and for the purposes set forth.

DANIEL B. HISER.

In presence of—
GEORGE POWER,
JOHN VAN NOSTRAN.