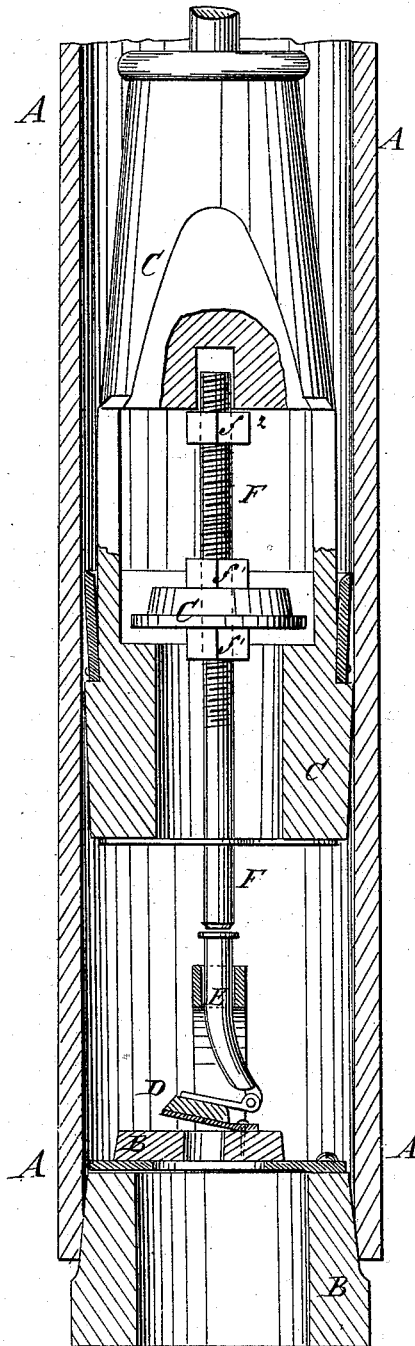


J. E. NALE.
Pump.

No. 219,503.

Patented Sept. 9, 1879.



WITNESSES:

Chas. Nida.
C. Sedgwick

INVENTOR:

BY *J. E. Nale*
Munn & Co.
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JESSE E. NALE, OF MERCHANTVILLE, NEW JERSEY.

IMPROVEMENT IN PUMPS.

Specification forming part of Letters Patent No. **219,503**, dated September 9, 1879; application filed August 4, 1879.

To all whom it may concern:

Be it known that I, JESSE E. NALE, of Merchantville, in the county of Camden and State of New Jersey, have invented a new and Improved Pump, of which the following is a specification.

The figure is a longitudinal section of a part of a pump to which my improvement has been applied.

The object of this invention is to furnish pumps which shall be so constructed that the water contained in the pump-barrel may be allowed to flow out, so that it cannot freeze in the said pump-barrel and injure the pump or prevent its working.

The invention consists in the combination of the small valve, the guide-rod, and the adjustable trip-rod, provided with the three nuts, with the stationary valve, and the movable valve of a pump, as hereinafter fully described.

A represents a pump-barrel, which may be made of any desired size and of any suitable material. B is the lower or stationary valve, and C is the upper or movable valve. In the lower valve, B, is formed a small valve, D, which is hinged to the said valve B, and to a part of which, projecting in the rear of its hinge, is hinged the lower end of a rod, E. The rod E is so shaped that it may pass up through a guide-hole in the bail of the said valve B and project above the said bail. The valve D may be made so heavy that it will raise the rod E and close itself when left free.

F is a rod that passes up through the center

of the movable valve C, and is secured to the said valve adjustably by two nuts, f^1 , screwed upon the said rod above and below the said valve C. The upper end of the rod F extends up into a guide-hole in the upper part of the valve C, to which the valve-rod is attached, and has a nut, f^2 , screwed upon it to strike against the said upper part, and thus limit the play of the said valve C.

With this construction the operator, when through pumping, by raising the pump-handle as high as he can, will force the lower end of the rod F down against the upper end of the rod E, which will open the valve D, and also the valve C, so that the water in the pump-barrel can all flow out of the pump-barrel back into the well, cistern, or other reservoir from which it was raised.

With this construction, also, by adjusting the nuts $f^1 f^1 f^2$, the rod F can be adjusted to take up the wear and to regulate the play of the valve C.

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

The combination of the small valve D, the guide-rod E, and the trip-rod F, provided with the nuts $f^1 f^1 f^2$, with the stationary valve B and the movable valve C of a pump, substantially as herein shown and described.

JESSE EVANS NALE.

Witnesses:

J. PAUL DIVER,
J. D. HERRIOTT.