

J. HANEY.

Improvement in Submerged Pumps.

No. 128,877.

Patented July 9, 1872.

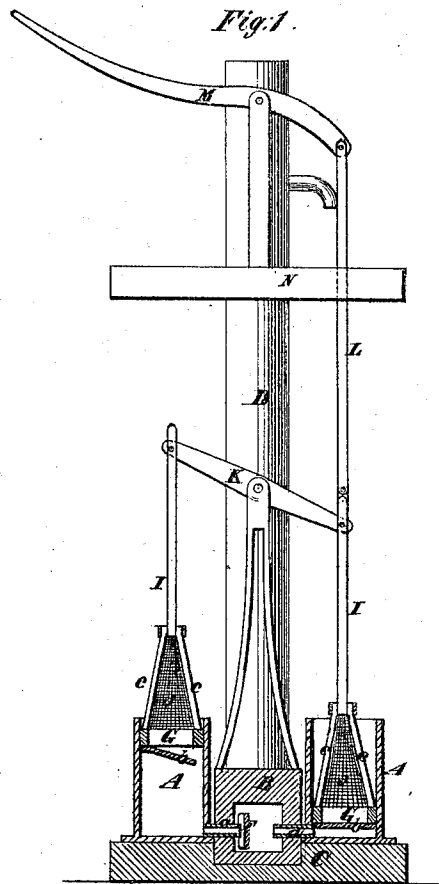
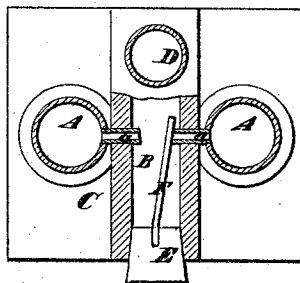


Fig. 2.



Witnesses:

Geo. H. Harnes
R. E. Harnes

for *Jonas Harnes*
Brown & Co.
Harnes

UNITED STATES PATENT OFFICE.

JONAS HANEY, OF YORKTOWN, INDIANA, ASSIGNOR TO HIMSELF AND BENJAMIN F. NEELY, OF SAME PLACE.

IMPROVEMENT IN SUBMERGED PUMPS.

Specification forming part of Letters Patent No. 128,877, dated July 9, 1872.

Specification of an Improved Pump, invented by JONAS HANEY, of Yorktown, in the county of Delaware and State of Indiana.

This invention consists in the combination of two open-topped cylinders fitted with plungers, having downwardly-opening valves, with a flap-valve so arranged within an intermediate valve-chest as to alternately shut off each cylinder from communication with the delivery-pipe while the pump is in operation, and to establish communication with it through both as soon as the operation of the pump ceases, and thereby to allow all water remaining in the pipe to run back, and so prevent its freezing in the pump.

In the accompanying drawing, Figure 1 is a central vertical section of the pump, and Fig. 2 is a horizontal section of the same.

Similar letters of reference indicate corresponding parts in both figures.

A A are two cylinders, which, with an intermediate valve-chest, B, are secured to a platform, C, below the water-level of the well or other place from which the water is to be pumped. These cylinders are open at the top, and near their bottoms are provided with pipes *a a* communicating with the valve-chest B. This may be made of wood or metal, and is represented as of rectangular form. With one of its ends the delivery-pipe D communicates, and its other end is fitted with a plug, E. This plug has attached to it a flap-valve, F, which is made of a strip of leather and plays between the ends of the passages or pipes *a a* of the cylinder A A. The cylinders are fitted with plungers or pistons G G, which are open, and have downwardly-opening flap-valves *b b* on their under sides. These pistons are connected with rods I by other rods, *c c*, and the space between these latter rods is covered by cages or screens J to keep all dirt from coming in contact with the valves and

obstructing them. The rods I I are connected with a beam, K, supported by a standard arranged on the valve-chest B. One end of the beam K is connected, by a rod, L, with an ordinary pump-handle lever, M, supported in a standard on an upper platform, N.

The operation of the pump is as follows: The working of the lever M effects the rising and descent of the pistons, and as either rises it produces a suction in its cylinder and draws the flap-valve F over to the end of its pipe *a* and closes it, and at the same time the water acting on the top of its piston opens its valve *b*, and rushes through and fills the cylinder. As this piston descends the other rises and draws the valve F over and closes its pipe *a*, and the descending piston, by acting on the water, closes its valve *b* and forces the water in its cylinder through the pipe *a* into the valve-chest B, and through it up the delivery-pipe D. The descending piston, by forcing the water through its cylinder against the valve F, always assists the rising piston to move the valve over to close the pipe *a* of its cylinder, and so shut off communication between it and the valve-chest. When the operation stops, the flap-valve F moves to the middle of the valve-chest B, and opens communication with both cylinders, so that all the water remaining in the delivery-pipe after pumping runs back through the valve-chest and cylinders.

Claim.

The combination, with the pistons G G, of the cages or screens J J, valves *b b* and F, all arranged as shown and described, for the purpose specified.

JONAS HANEY.

Witnesses:

JACOB SHIMER,
SYLVANUS HANK.