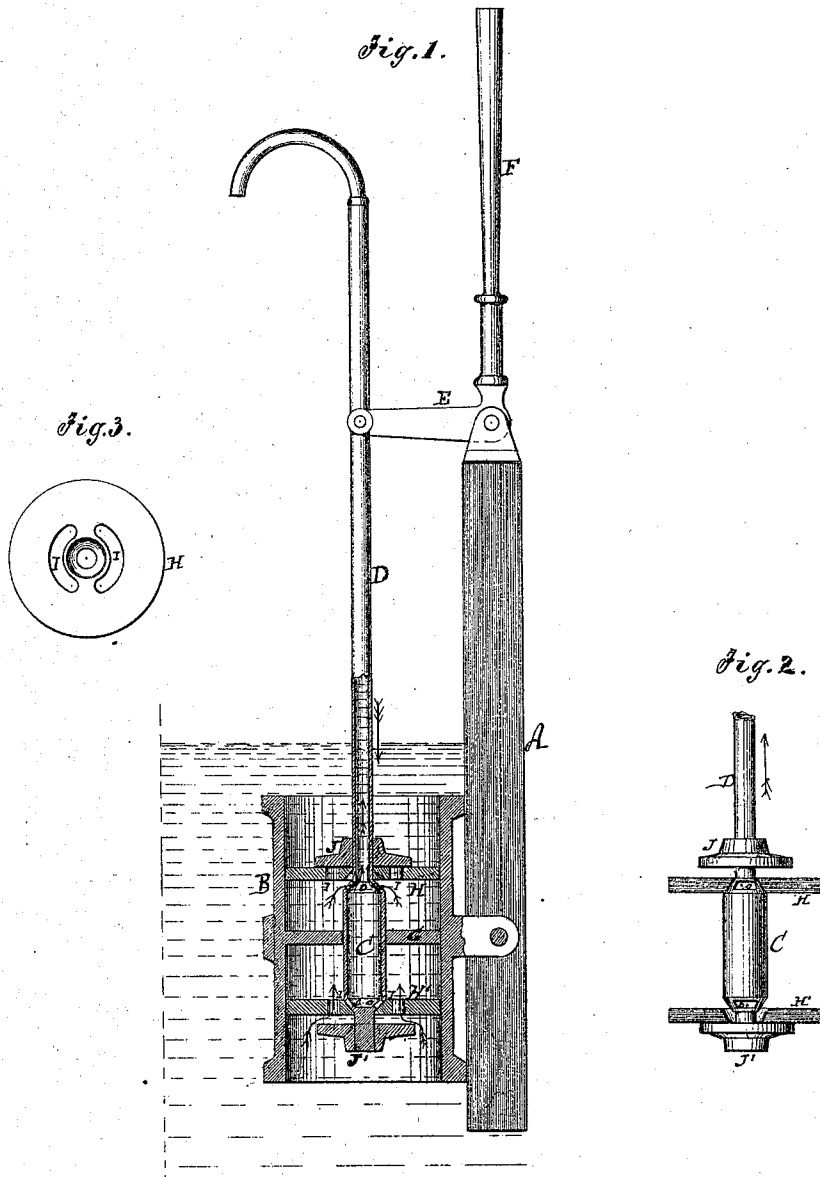


P. M. & O. Snell,

Pumph.

No. 106,226.

Patented Aug. 9. 1870.



Witnesses:

A. Bonneau & Co.

Wm. E. Brooks
#

Inventor:

P. M. & O. Snell
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Attorneys.

United States Patent Office.

PETER M. SNELL AND OSCAR SNELL, OF WILLIAMSBURG, OHIO.

Letters Patent No. 106,226, dated August 9, 1870.

IMPROVEMENT IN PUMPS.

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

To all whom it may concern:

Be it known that we, PETER M. SNELL and OSCAR SNELL, of Williamsburg, in the county of Clermont and State of Ohio, have invented a new and useful Improvement in Submerged Pumps; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to a new and useful improvement in that class of pumps which are submerged or operate under water, and consists in the construction and arrangement of parts hereinafter described.

In the accompanying drawing—

Figure 1 represents a sectional elevation of a pump submerged and constructed according to our invention.

Figure 2 is a detailed view of the piston and valves showing the ports.

Figure 3 is a view of one of the piston-plates.

Similar letters of reference indicate corresponding parts.

A is a standard, to which the pump-cylinder B is firmly attached.

B is the hollow piston, which is attached to the lower end of the discharge-tube D.

This tube is the piston-rod, and the power for operating the pump is applied thereto by means of the bell-crank E (which is pivoted to the standard A) and the lever F, which is connected with the upright arm of the bell-crank, as seen in the drawing.

G is a fixed partition in the cylinder B.

H H' are piston-plates, which have a sliding motion on the ends of the piston and pipe, and which move with the piston as the latter is forced up and down.

I represents orifices through these plates, which admit water between the piston plates and the partition G.

J J' are fixed heads, by which the piston-plates H

H', are moved, when water is forced into the piston C, and which, at the same time, close the orifices I.

As seen in fig. 1, the piston is being forced down, as indicated by the arrow. The downward movement has forced the plate H in contact with the head J, which closes the orifices I and opens the ports O into the piston, and forces water up the discharge-pipe D. At the other end of the piston the ports O are closed, and water is rushing through the orifices I, which water will be forced into the piston and up into the discharge-pipe when the motion of the piston is reversed.

There is, consequently, an alternate opening and closing of the orifices and ports as the pump is worked up and down by the lever.

It will be seen that this pump (as shown in the drawing) is a double-acting force-pump, but the arrangement is readily modified so as to make it a single acting pump.

This is a simple and durable pump, entirely free from frost in winter, and dependent upon no air-tight valves for its perfect action. Its advantages over the ordinary pumps in use are many, and must be obvious to all.

Having thus described our invention,

We claim as new and desire to secure by Letters Patent—

1. In combination with the cylinder B, the piston C, the piston-plates H H', the head J J', the discharge-pipe D, and the partition G, (through which the piston works,) arranged and operating substantially as and for the purposes herein shown and described.

2. The hollow piston C, provided with the ports I, and formed on or attached to the lower end of the discharge-pipe D, as shown and described.

PETER M. SNELL.
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Witnesses:

I. S. B. FRAZIER,
JAMES ASHTON,