

H. E. Wolcott,

2. Sheets, Sheet 1.

Pump.

No. 110,182.

Patented Dec. 13. 1870.

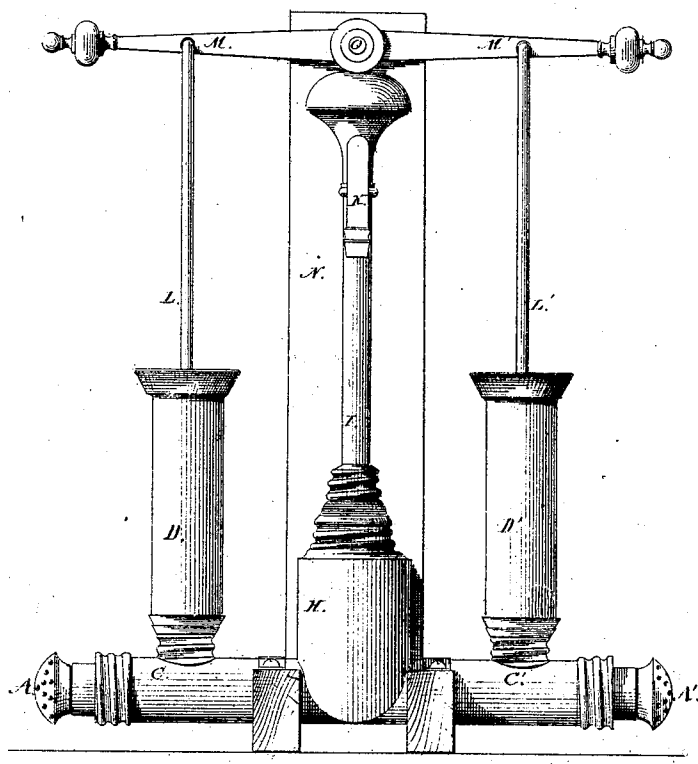


fig. 1.

Witnesses;
Margaret Wolcott
Charlotte Murray

Inventor;
H. E. Wolcott
Inventor

H. E. Walcott,

2, Streets, Street 2.

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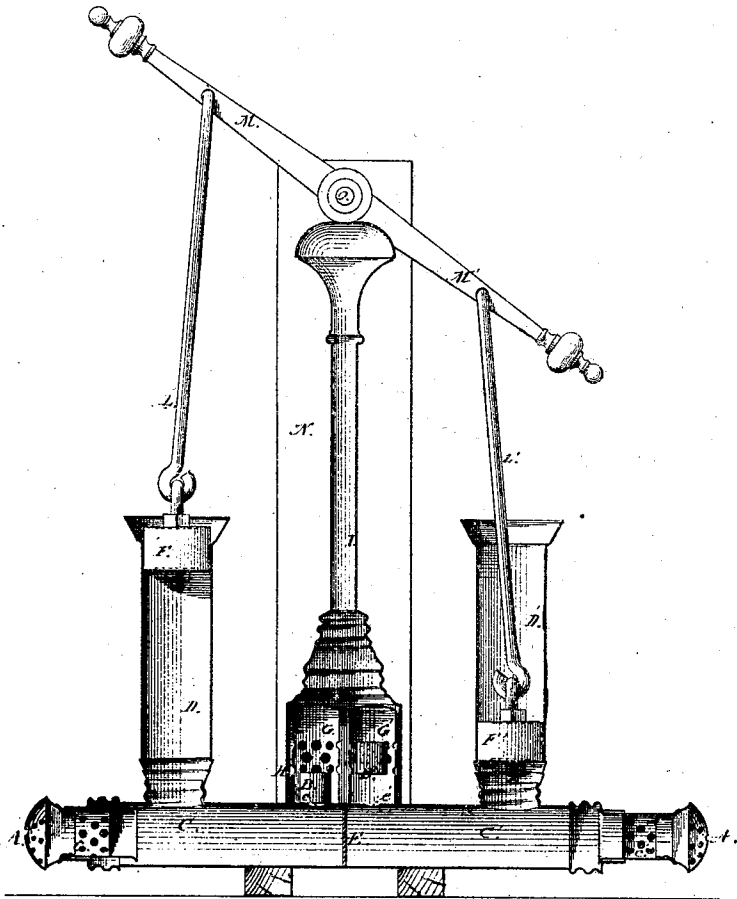


fig. 2.

United States Patent Office.

HENRY E. WOLCOTT, OF ELBRIDGE, NEW YORK, ASSIGNOR OF TWO-THIRDS OF HIS RIGHT TO RUSSELL B. WHEELER AND EZEKIEL B. HOYT.

Letters Patent No. 110,182, dated December 13, 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 I, HENRY E. WOLCOTT, of the town of Elbridge, in the county of Onondaga and State of New York, have invented a new and useful Submerged Force-Pump, for forcing and raising water from wells, cisterns, and reservoirs; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, in which—

Figure 1 is a front elevation.

Figure 2 is a vertical section through cylinders.

My invention consists of a double-acting pump for raising and forcing water from wells, cisterns, or reservoirs.

In constructing my pump I use a cylinder, C C', to either end of which I attach valves A A', of the form shown in the drawing, having perforated heads, which may be either plain or convex, forming strainers to prevent sediment or other foreign substances from passing into the cylinders and clogging them.

These valves are provided with cylinders, closed at the ends, and perforated to allow the water to pass into the cylinder C C', when a vacuum is produced. Valve-cylinders are lettered c c'.

To cylinder C C' are attached two other cylinders, D D', in which move vertically the India-rubber pistons F F'.

The cylinder C C' is divided at E by the partition shown in fig. 2, which separates the cylinder into two distinct chambers.

The cylinder C C' is surmounted by the chamber H, in which is contained two small cylinders, G G', closed at the top and having each block-tin valves, which close by their own weight the holes e e'. The valves are lettered B B'.

To the chamber H is attached a metal tube, I, to convey the water upward and thence out through the spout K.

The cylinders G G' have their convex surfaces perforated to allow the fluid to pass into the chamber H. The piston-cylinders D D' are left open at the top and flared at their mouths, to give facility in cleaning,

and to allow the pistons to drop into their places unobstructed.

The rods L L' are attached to the pistons by means of screw-bolts formed at the ends of the rods, with plates or washers on either sides of the pistons F F'. These bolts serve to compress the pistons vertically, and expand them laterally when tightened, forming thereby a self-packing.

The arms M M', to which are attached the piston-rods L L', are balanced at the point O, and serve as levers to operate the pump.

The pump is operated as follows:

The cylinder C C' being submerged, and the arms M M' being at rest, while the valves A A' and B B' are closed, I apply the power to the arms and lift the piston F. A vacuum being produced in the chamber C, the water is allowed to pass through the perforated cap in the valve A; thence through the perforated valve-cylinder c to the chamber C and the piston-cylinder D.

The power being now reversed, the piston F is forced downward, the valve A by the force of the water is thrown out and closed, as seen at A', fig. 2. The same force of water lifts the valve B and is allowed to pass through the holes in the cylinder G to the chamber H, and thence through the tube I and out of the spout K.

The power being applied to the arm M' gives the same result on the other side of the-partition E, and thereby a double action is gained.

I do not claim to have invented anything new in the system of raising and forcing water or fluids.

What I claim as my invention, and in which I desire to be secured by Letters Patent, is—

1. The valves A A', constructed as described, for the purpose set forth.
2. The valves A A', pipes C C', tin-block valves B B', flaring-mouth cylinders D and D', and chambers G G', combined and arranged to operate substantially as set forth.

Witnesses:

HENRY E. WOLCOTT.

EDW. W. DONN,

A. MOORE.