E. Barlow,

Oscillating Pump.

No. 5,462. Patented Feb. 29, 1848.

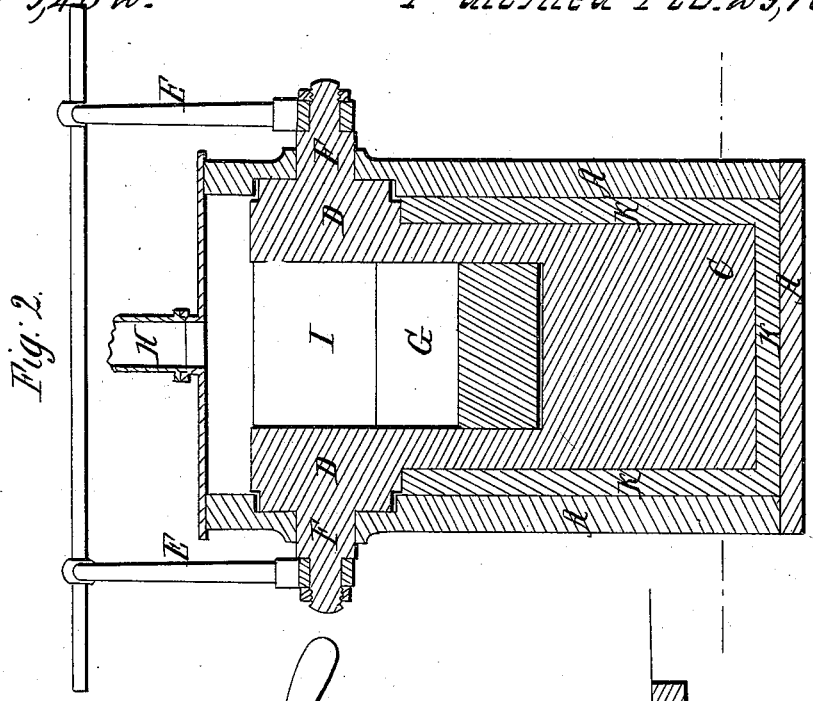

Fig. 2.

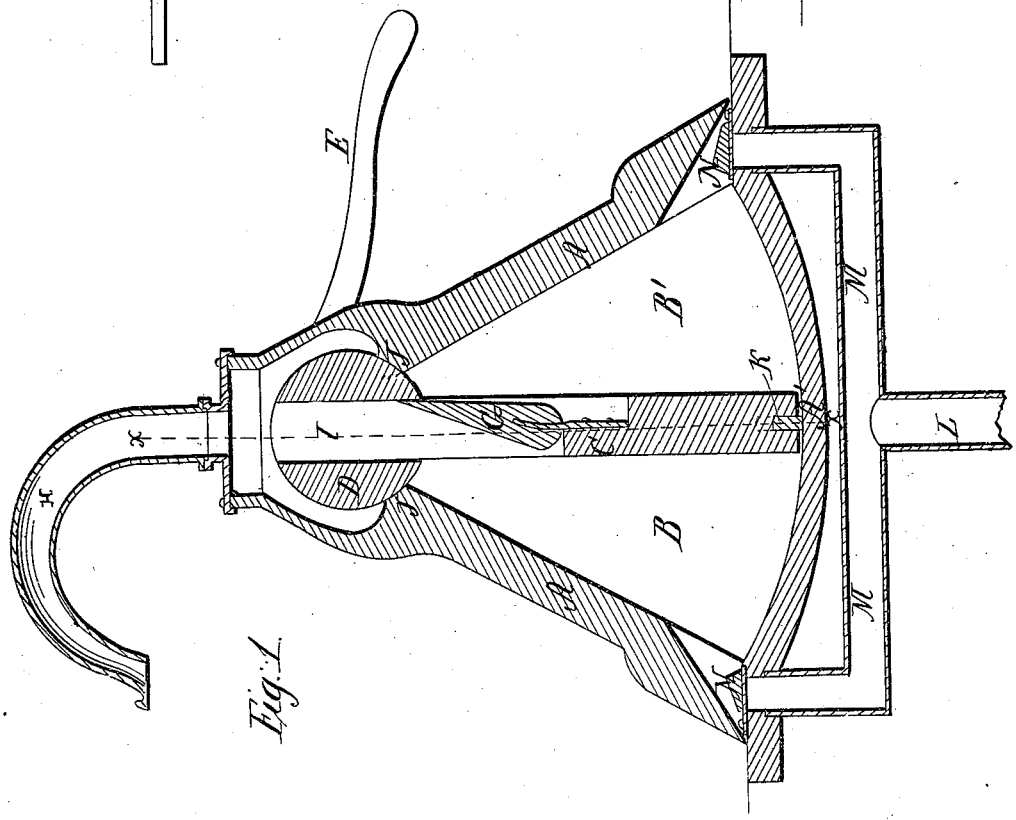

Fig. 1.

UNITED STATES PATENT OFFICE.

ELISHA BARLOW, OF MARIETTA, OHIO.

PUMP.

Specification of Letters Patent No. 5,462, dated February 29, 1848.

To all whom it may concern:

Be it known that I, ELISHA BARLOW, of Marietta, in the county of Washington, in the State of Ohio, have made a new and useful Improvement in the Manner of Constructing Sucking and Forcing Pumps for the Raising of Water; and I do hereby declare that the following is a full and exact description thereof.

My pump consists of an outside case that is nearly triangular, and that contains within it a chamber of nearly the same form. The piston consists of a rectangular plate, hung on pivots at its upper end, and made to vibrate in the segment of a circle, by means of a brake in the ordinary way.

Figure 1, of the accompanying drawing is a vertical section of my pump through its middle in the plane of its parallel sides. A, A, A′, are the inclined sides and segmental bottom thereof. B, B′, is one of the flat plates, constituting the parallel sides between which the rectangular piston C, C, is to vibrate. The distance of these plates from each other does not bear any necessary proportion, to the distance of the inclined sides A, A, or the general size of the pump. D, is a cylindrical shaft to which the rectangular valve C, is made fast, and on the gudgeons of which it vibrates; E, E, is a brake or handle, by which the piston may be vibrated.

Fig. 2, is a vertical section through the pump in the line *x*, *x* of Fig. 1. F, F, are the gudgeons upon which the piston C, is made to vibrate. The peculiarity of this piston consists in the manner of causing the clack valve G, to perform the office of a double valve, serving to force the water that has been admitted on either side of the piston to pass up to the discharge pipe H, through the mortise, or opening I, which forms a water way in the cylinder D; and at the same time to operate as a sucking pump on the opposite side. This cylinder D, is made to fit closely to the case at the points J, J, where it may, if desired be secured by packing. I sometimes form the valve C, C, of two plates embracing between them the packing K, rendering the valve water tight at its lower edges and sides, or it may be secured in other ways.

The operation of this pump is as follows, L, is a descending main, leading into the well or reservoir, and furnished with a valve, in the usual way. M, M, are lateral pipes leading therefrom into the chamber, on each side of the vibrating piston, and furnished with valves at N, N. The point or end of the clack valve G, is received within the mortise I, and if the water is being raised into the chamber on the side B′, it will occupy the position in which it is represented in Fig. 1, and the water on the opposite side will be forced up through the opening I, and into the discharge pipe H.

This pump may be readily converted into a stationary fire pump of great power; and this has been actually effected. For this purpose the brake E, Fig. 2, is to be made to fit on to both the gudgeons of the cylinder D, and may be made to ship and unship; the brake in this case may consist of several bars like those in use on fire engines. The addition of an air vessel will under these circumstances be readily made by obvious means.

Having thus fully described the manner in which I construct my improved sucking and forcing pump, I do not make claim to anything in the general construction of said pump as new; but

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

The particular manner herein set forth of arranging the clack valve G, so that it shall serve equally to operate, simultaneously, in the sucking, or raising the water, filling that section of the chamber from which it is moving, and forcing the water up from the opposite side of said chamber, as herein fully made known.

ELISHA BARLOW.

Witnesses:

THOS. P. JONES,

LEM WILLIAMS.