

J. H. Williamson,

Submerged Pump.

N^o 46,764.

Patented Mar. 7, 1865.

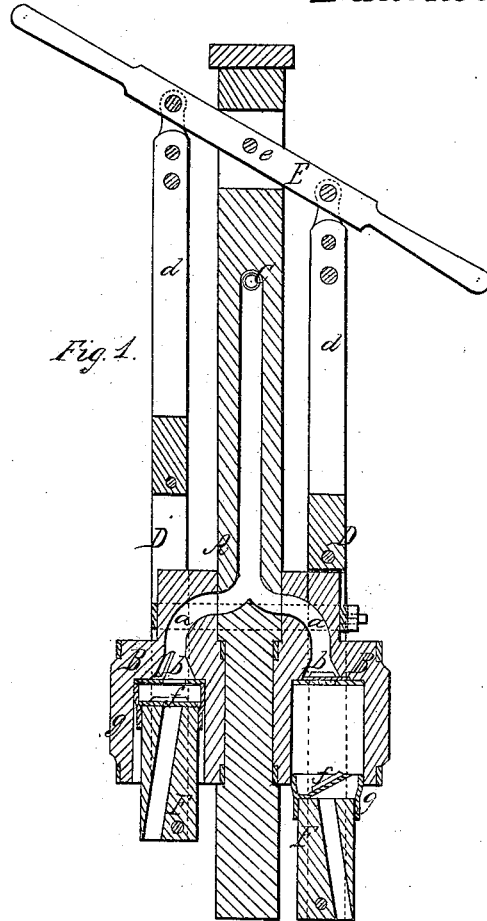


Fig. 1.

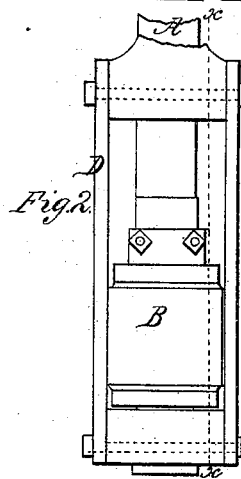


Fig. 2.

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UNITED STATES PATENT OFFICE.

J. H. WILLIAMSON, OF BRANCHVILLE, NEW JERSEY, ASSIGNOR TO HIMSELF
AND LEVI BEEMER, OF SAME PLACE.

IMPROVEMENT IN SUBMERGED PUMPS.

Specification forming part of Letters Patent No. 46,764, dated March 7, 1865.

To all whom it may concern:

Be it known that I, J. H. WILLIAMSON, of Branchville, in the county of Sussex and State of New Jersey, have invented a new and Improved Pump; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical section of my invention, taken in the line *x x*, Fig. 2; Fig. 2, a side view of a portion of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to a new and improved double-acting pump; and it consists in a novel arrangement of parts, hereinafter shown and described, whereby a very simple and economical pump is obtained, and one which may be kept in repair or proper working order by any one of ordinary ability.

A represents a vertical post or standard fitted in the well from which the water is to be drawn or elevated, the lower end of the post resting upon the bottom of the well. This post or standard A is tubular and has two pump-cylinders, B B, attached to it at two opposite sides and near its lower end, the upper parts of said cylinders communicating by means of passages *a a* with the interior of the post or standard A, the lower end of each passage *a* being provided with a valve, *b*, opening upward, and the upper end of the passage *c* in A communicating with a nozzle, C, through which the water is discharged.

D D represent two yokes which encompass the cylinders B B and are connected by rods *d d* to a brake, E, the fulcrum *e* of which is in the upper part of the post or standard, the rods *d d* being attached to said brake at opposite sides of the fulcrum *e*, as shown clearly in Fig.

1. The yokes D D are each provided with a piston, F, attached to their lower ends by rods *a'*, which form joints to admit of a lateral play of the yokes under the movement of brake E. These pistons are tubular, as shown in Fig. 1, and they work in the cylinders B, passing into their lower ends, each piston being provided with a valve, *f*, at its upper end, opening upward, and the upper ends of the pistons having a packing, *g*, around them.

The cylinders B B, it will be understood, are submerged, and by operating the brake E the yokes D D, and consequently the pistons F F, will be moved up and down, the pistons working simultaneously in opposite directions. As one piston, F, descends, its cylinder B is filled with water, the valve *b* above being kept closed by the pressure of water upon it caused by the upward movement of the other piston, which forces the water in its cylinder up into the standard A and out through the nozzle C, and as the pistons F rise and fall alternately it will be seen that a continuous stream of water will be forced from the nozzle C.

The arrangement is extremely simple and efficient. There are no parts liable to get out of repair, and when repairs are necessary they may be made by any one at all familiar with mechanics' tools.

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

The tubular post or standard A, with the two pump cylinders B B permanently attached, with valves *b* at their upper parts, in connection with the reciprocating yokes D D, provided with the tubular pistons F F, having valves *f* at their upper ends, all arranged to operate in the manner substantially as and for the purpose herein set forth.

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Witnesses:

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