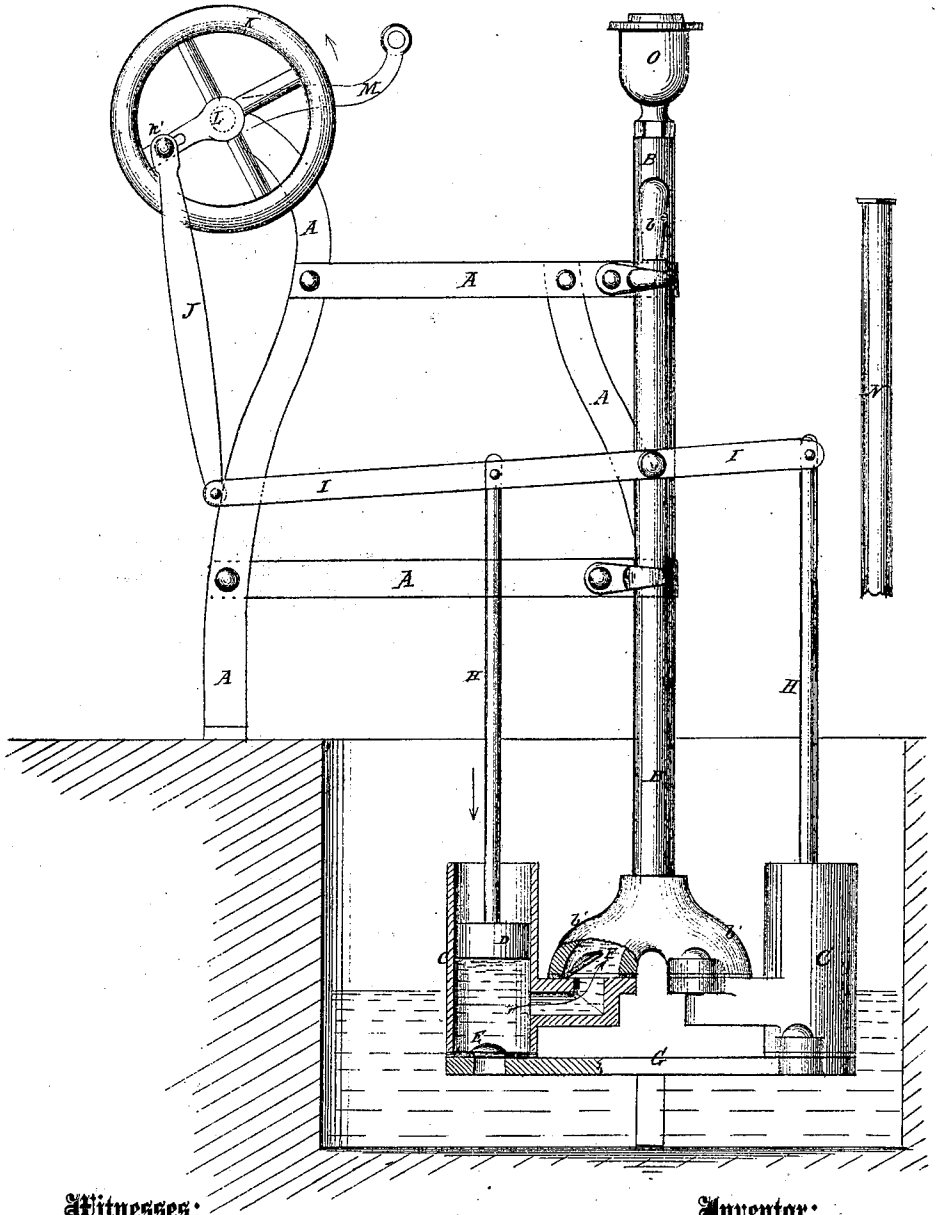
M. V. B. Rowley,

Pump.

No. 109057. Patented Nov. 8. 1870.



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MARTIN VAN BUREN ROWLEY, OF WORCESTER, NEW YORK.

Letters Patent No. 109,057, dated November 8, 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, MARTIN VAN BUREN ROWLEY, of Worcester, in the county of Otsego and State of New York, have invented a new and useful Improvement in Deep-Well Pumps; and I 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.

The figure is a side view of my improved pump, partly in section, to show the construction.

My invention has for its object to furnish an improved pump designed for use in deep wells and other situations where water is required to be raised to a greater height than it can be by pumps constructed in the ordinary manner; and

It consists in the construction and combination of the various parts of the pump, as hereinafter more fully described.

A is the frame, which should be made of such a length and breadth as to furnish a firm and stable support to the operating parts of the pump.

B is the pipe through which the water is raised, and the upper part of which is securely clamped to the side of the frame A at or near one end of said frame.

The pipe B extends down to near the bottom of the well or reservoir from which the water is to be raised, and, at its lower end, is divided into two branches, b', each of which is connected with a cylinder, C.

Each of the cylinders C is provided with a piston, D, as shown in the figure.

In the bottom or lower part of each cylinder C is formed a valve opening upward, and in each of the branches b' of the pipe B is placed a valve, F, also opening upward.

The lower ends of the cylinders C are held in their proper relative positions by being bolted to a connecting-plate, G.

The lower end of the apparatus may be supported and held away from the bottom of the well by a support attached to or connected with the middle part of the plate G.

A convenient way to do this is to use a stake with a sharp or broad lower end, according as the bottom of the well or reservoir may be hard or soft. This stake may be passed through a hole formed in the center of the plate G, and its upper end may rest in the crotch of the branched lower end of the pipe B.

The piston-rods H of the pistons D extend up above the mouth of the well or reservoir upon the opposite sides of the pipe B, and should be held in their proper relative positions by guides attached at suitable distances apart to said pipe B.

The upper ends of the piston-rods H are pivoted to the walking-beam or lever I, upon opposite sides of and equally distant from the pivoting point of said lever.

The lever I is pivoted to a support attached to the pipe B.

One end of the lever I is extended, and to it is pivoted the lower end of the connecting-rod J, the upper end of which is pivoted to the crank-pin K′ of the fly-wheel K.

The crank-pin K′ may be adjustably attached to the fly-wheel K, so that it may be secured closer to or farther from the center of said wheel K, according as it is desired to work the pump with a shorter or longer stroke.

The balance or fly-wheel K is attached to the end of the shaft L, which revolves in bearings in the frame A, and to its other end is attached a crank, M, by means of which the pump is operated.

The crank M may be made with two holes to receive the end of the shaft L, so that the said crank may be shortened or lengthened, according as more or less power is to be applied to the pump.

The upper end or part of the pipe B is provided with a discharge-spout, b^2, in the ordinary manner, to enable a hose, N, to be attached to it, to enable the pump to be used as a fire extinguisher or to conduct the water to any desired distance or receptacle.

The pipe B may also be provided with a branch-pipe to conduct the water to any desired distance, but in this case the said branch-pipe should be provided with a stop-cock, and the spout b^2 with a cap or plug, to enable the point of discharge of the water to be controlled at will.

The pipe B may have an air-chamber, O, attached to its upper end to insure its throwing a continuous stream, but this is not essential to the successful working of the pump.

Having thus described my invention,

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

The improved deep-well pump, consisting of frame A, pipe B, spout b^2, branches b^1, valve F, cylinder C, valves E, pistons D, rods H, beam I, rod J, fly-wheel K, shaft L, crank M, and chamber O, all constructed and relatively arranged, as and for the purpose described.

The above specification of my invention signed by me this 18th day of February, 1870.

MARTIN VAN BUREN ROWLEY.

Witnesses:

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