W. H. PETERSON.
Pump.

No. 207,891. Patented Sept. 10, 1878.

Fig. 1.

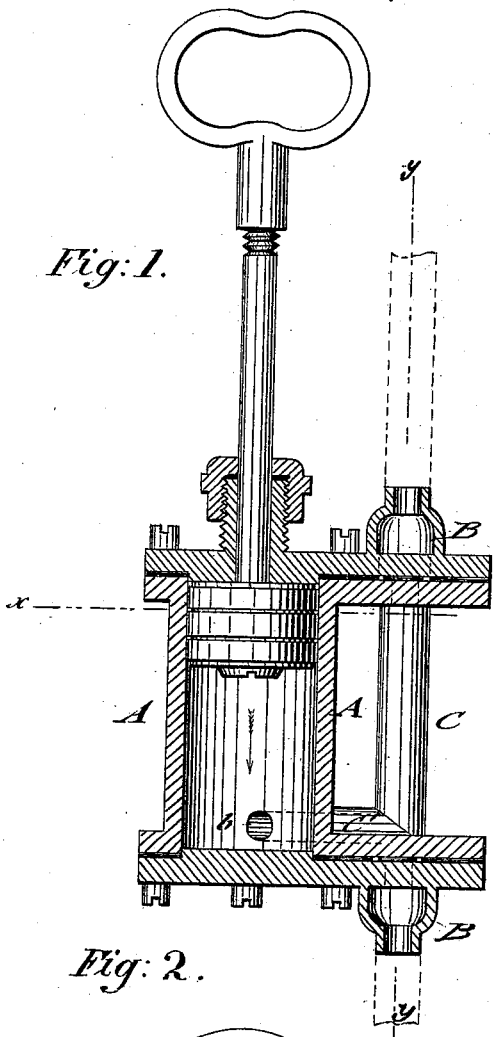


Fig. 2.

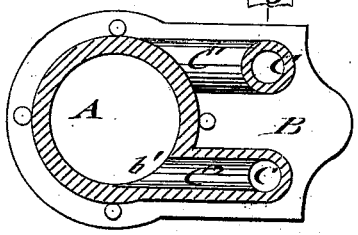
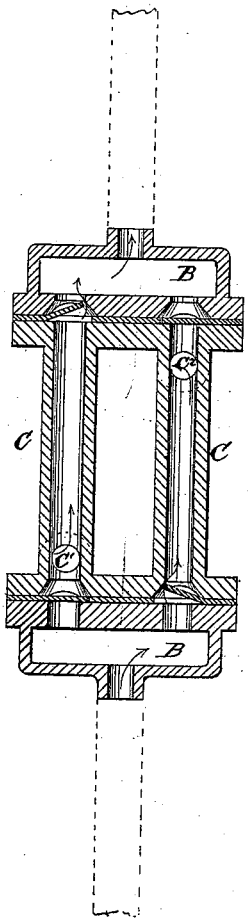


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WHLLIAM H. PETERSON, OF RICHMOND, INDIANA.

IMPROVEMENT IN PUMPS.

Specification forming part of Letters Patent No. **207,891**, dated September 10, 1878; application filed June 1, 1878.

To all whom it may concern:

Be it known that I, WILLIAM H. PETERSON, of Richmond, in the county of Wayne and State of Indiana, have invented a new and Improved Pump, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a vertical central section of my improved pump; Fig. 2, a horizontal section of the same on line *x x*, Fig. 1; and Fig. 3 is a vertical section.

Similar letters of reference indicate corresponding parts.

This invention relates to an improved double-acting force-pump, that is of simple and compact form, and adapted to be placed at any depth into the well, so as to make it non-freezing; and the invention consists of a pump-barrel, connected by horizontal bottom and top channels with vertical side pipes, that connect by valved bottom and top chambers with the suction and force pipe, so as to simultaneously draw in the water and expel it.

Referring to the drawing, A represents the pump-barrel, whose top and bottom heads are extended sidewise, and cast with chambers B, of which the bottom chamber connects centrally with the suction-pipe, while the top chamber connects with the force-pipe, that extends upward to the discharge-spout of the pump.

The top and bottom chambers are connected sidewise of the barrel by two vertical pipes, C, of which each pipe is arranged at the upper and lower ends with valves *a*, of any suitable construction and material. The side pipes C are secured to side extension-plates of the barrel, and the pump-heads are tightly packed and screwed to the side plates of the barrel. One of the pipes C is connected by a horizontal bottom channel, C^1, above the bottom valve with an opening, *b*, of the pump-barrel, while the other pipe connects by a horizontal top channel, C^2, with an opening, *b'*, below the top valve of the pipe, so that each stroke of the piston D draws in water through the suction-pipe and bottom chamber, and forces also water through the top chamber and top pipe. The downstroke of the piston draws water into the barrel through the suction-pipe, bottom chamber, side pipe, and horizontal top channel of latter, while it forces at the same time the water through the horizontal bottom channel, connecting-pipe, and top chamber into the conducting top pipe. The upstroke draws in the water through the suction-pipe, bottom chamber, and horizontal channel, while forcing it out through the top channel, top chamber, and top pipe. With either stroke of the piston a double action of the pump is obtained by the valved side pipes and chambers, and thereby a continuous stream of water kept up.

The pump may be placed at any desired depth, and freezing prevented by boring a hole into the top chamber above the top valves, and drain the water off from the pipe above.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

A pump having chambers B B, connected by vertical pipes C to one another, the lower centrally with suction and the upper with force pipe, one of the pipes C being connected by channel C^1 with opening *b* of barrel A, and the other by a channel, C^2, with an opening, *b'*, below top valve, as shown and described.

WILLIAM HENRY PETERSON.

Witnesses:

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