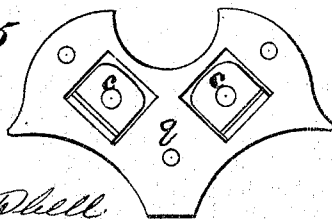
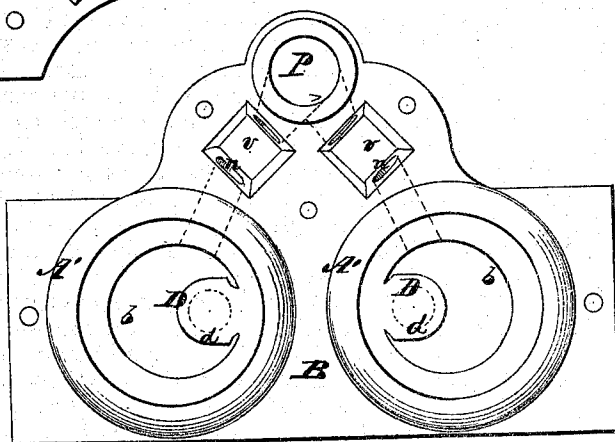
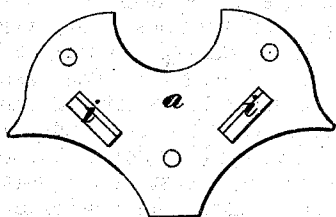
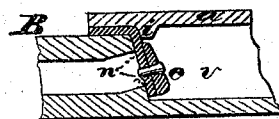
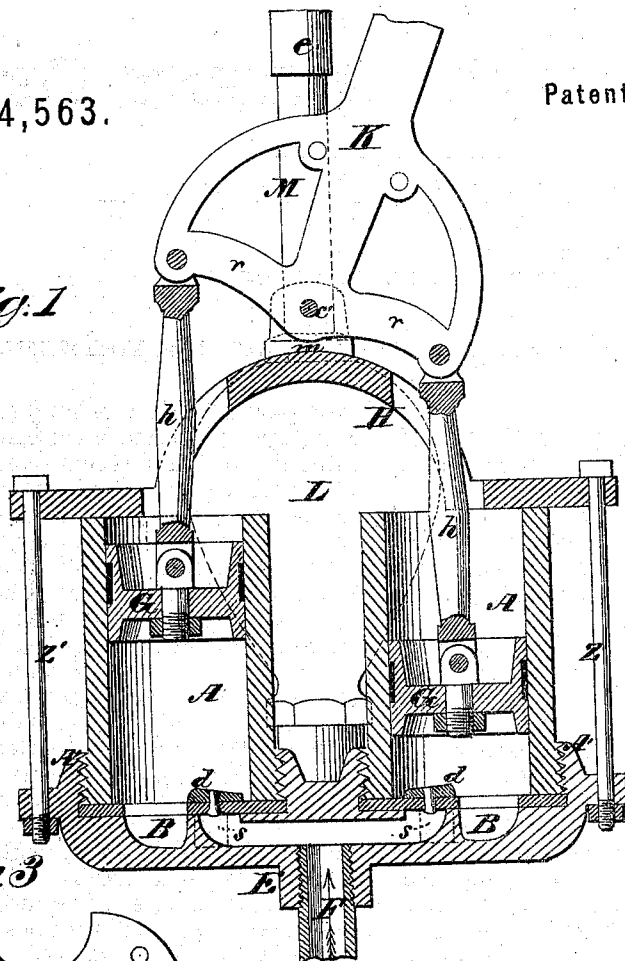


Pumps.

Patented March 12, 1872.



Witnesses.
R. T. Campbell.
J. T. Campbell.

Inventor
Patsick Foley
by
Maur. Redwick & Lauen

UNITED STATES PATENT OFFICE.

PATRICK FOLEY, OF ADAMS, NEW YORK.

IMPROVEMENT IN PUMPS.

Specification forming part of Letters Patent No. 124,563, dated March 12, 1872.

To all whom it may concern:

Be it known that I, PATRICK FOLEY, of Adams, in the county of Jefferson and State of New York, have invented a new and valuable Improvement in Pumps; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a section taken vertically through the cylinders and pump-base. Fig. 2 is a plan view of the base of the pump. Figs. 3, 4, and 5 are details.

Similar letters of reference indicate corresponding parts in the several figures.

My invention relates to pumps; and consists mainly in the construction and novel arrangement of devices, whereby a force and suction pump is made to produce a continuous and equable flow of water.

By means of this pump water can be easily drawn from cisterns or wells and forced, if necessary, into the upper stories of houses. It is a double-action pump, and may be described as follows:

The letters A A of the drawing designate the two cylinders or piston-chambers. They are cast separately, and are open at each end. A screw-thread is formed on the lower end of each cylinder, and they are fastened into flanges A' A' rising from the base B by screwing them into the two circular openings *b b* in the top of the base, as shown in Fig. 1. The base B is made hollow, and contains the four valves of the pump. The inlet-valves *d d* are seated on top of the shoulders D D, which may be inclined or horizontal. E represents the receiving-pipe, into which the conducting-pipe F is screwed. *c c* represent the outlet-valves, which hang nearly vertically against their seats *n n*, shown in Figs. 2 and 4. In Fig. 5 *q* represents the leather piece to which the valves are attached, and which forms the packing between the upper surface of the bed or base B and the plate *a*. G G are plungers, packed suitably, and attached by the pitman *h h* to the arms of the lever K, by which the pump is operated. H designates a casting, which forms a cover to the cylinders, and from which project the legs *m*, forming a support for the fulcrum-pin *c'* of the lever. L designates an air-chamber, the lower end of which is screwed into the opening P in the base B. From the

lower part of this air-chamber the pipe M passes upward through the orifice in the top of this chamber, and is connected by a tie-ring, *e'*, to another pipe, not shown in the drawing. This latter pipe may terminate in a spout or nozzle, and a branch pipe may be connected to it for the attachment of a hose for conveying water to the upper stories of buildings.

In operating this pump, the upright lever K is worked from side to side, raising and depressing the plungers alternately. Water is admitted by the opening E and valves *d d* and forced through valves *c c* into the air-chamber L, and thence through the outlet-pipe M wherever desired. The flow of water through pipe M is continuous and equable, this effect being produced by the double action of the plungers in the cylinders A A, aided by the elastic force of air in the air-chamber L. The water entering by the main inlet E is received into the forked conduit *s s* cast in the base, and covered by the plate *a*. The handle K is braced at the bottom by the curved bars *r r*. The base is fastened to the casting H, covering the tops of the cylinders A A, by the bolts and nuts Z' Z'. The valves *c c* are bent downward, and kept in position by lugs *i i* cast on the plate *a*, and are arranged to force the leather flaps downward over the valve-seats *n n*.

I do not claim a pump such as is shown and described in the patent of W. H. Davis, dated July 19, 1859. I do not claim the invention of the cylinders A A or of the levers by which the pistons and valves are actuated, or of any peculiar arrangement of the valves, levers, and pistons; but—

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The force-pump herein described, having removable cylinders A A, connecting-plate H, pistons G G, air-chamber L, forked conduits *s s*, cap *a* provided with lugs *i i*, leather piece *q*, and valves *c*, when the same are constructed, arranged, and combined substantially as described.

2. In combination with the valve-seats *n n* and the leather plate *q* bearing the valve-blocks *c c*, the plate *a* provided with lugs *i i*, constructed and arranged to operate substantially as described.

Witnesses: PATRICK FOLEY.

A. J. ARMSTRONG,
C. H. SPRAGUE.