(No Model.)

L. M. KANAVEL.

Pump.

No. 234,583. Patented Nov. 16, 1880.

Fig. 1.

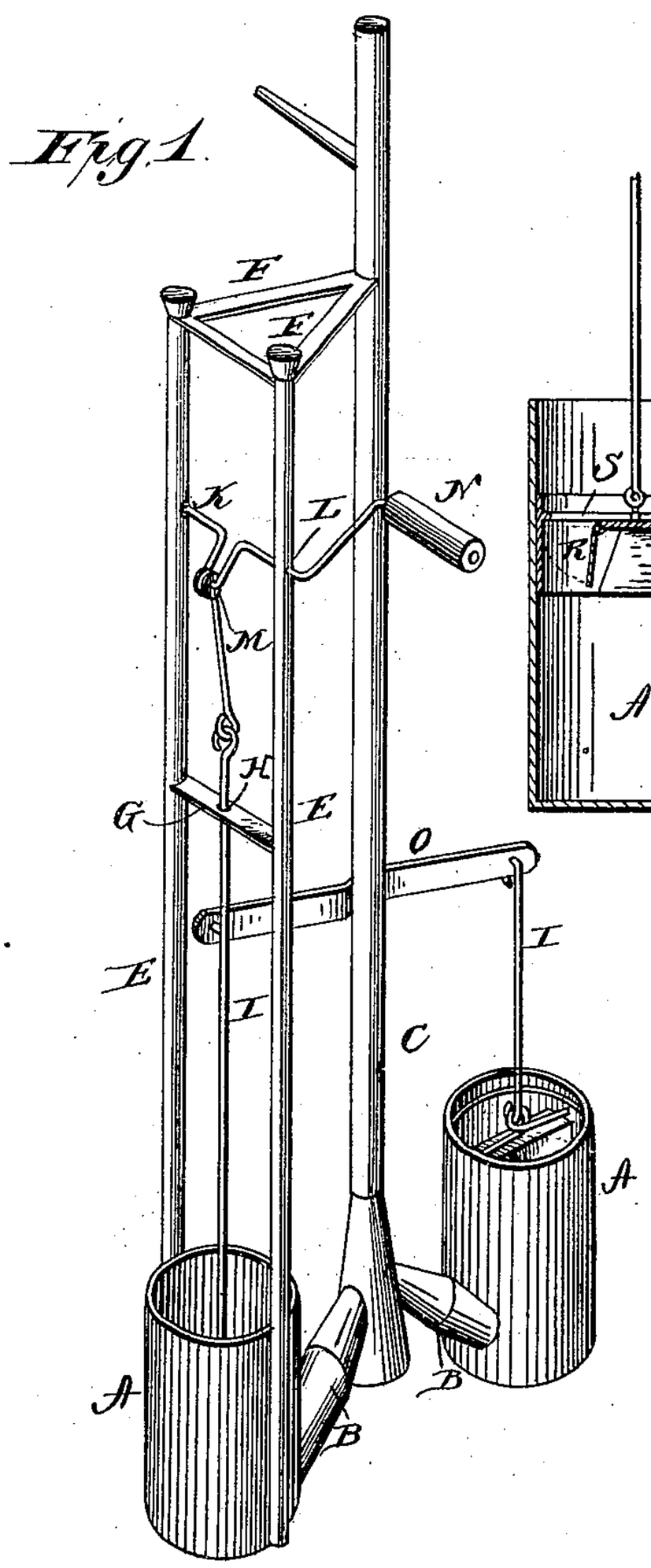


Fig. 2.

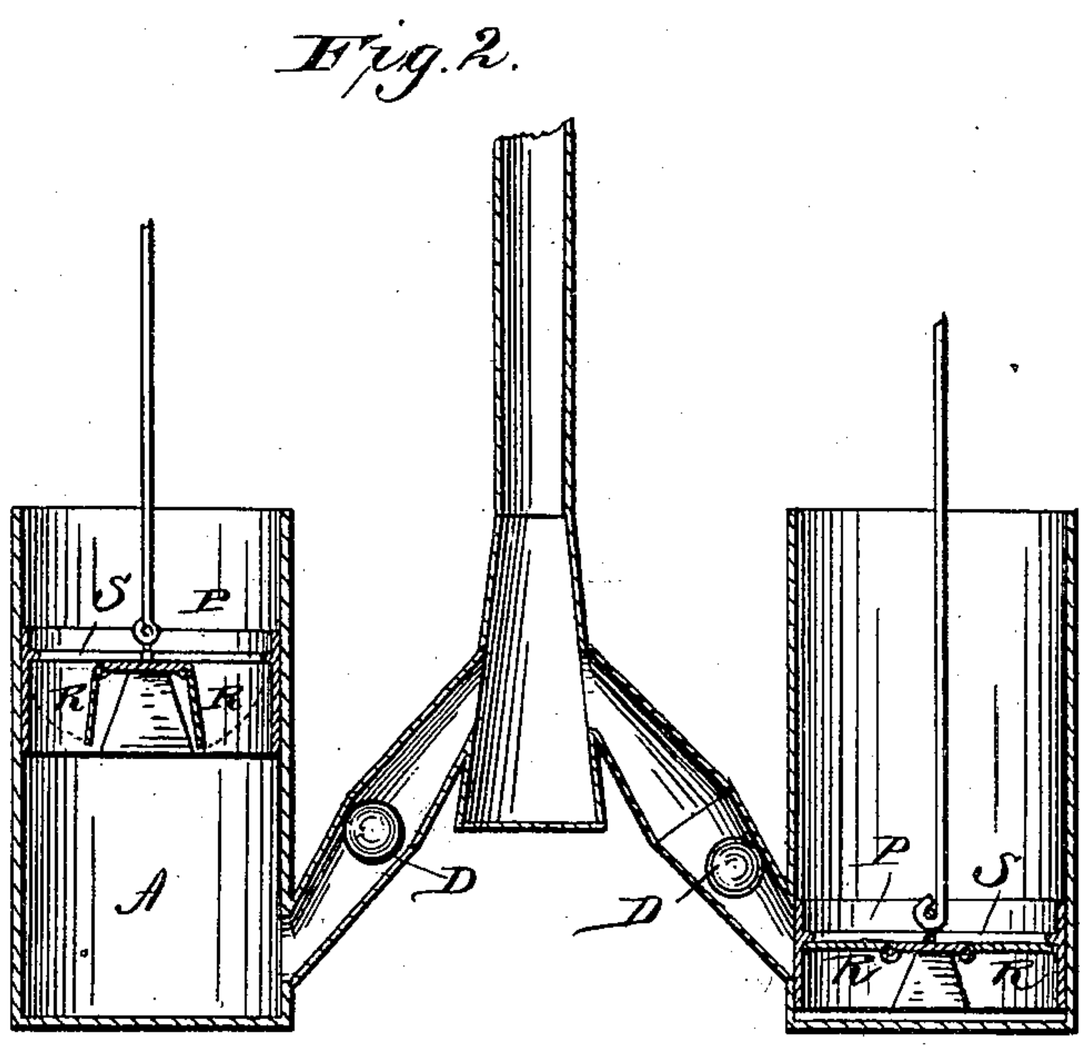
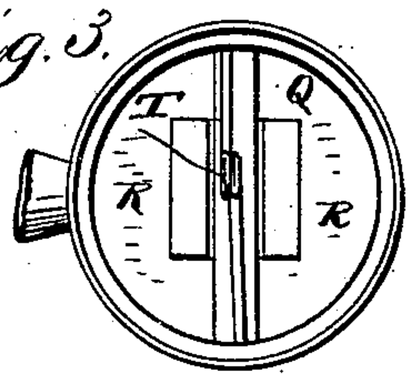


Fig. 3.



Witnesses.
F. L. Ourand
J. J. McCarthy.

Inventor.
L. M. Kanavel
By Alexander Thomson
Atty

UNITED STATES PATENT OFFICE.

LYMAN M. KANAVEL, OF NASHVILLE, OHIO.

PUMP.

SPECIFICATION forming part of Letters Patent No. 234,583, dated November 16, 1880.

Application filed September 6, 1880. (No model.)

To all whom it may concern:

Be it known that I, LYMAN M. KANAVEL, of Nashville, in the county of Holmes, and in the State of Ohio, have invented certain new and useful Improvements in Pumps; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

This invention relates to certain improvements in force-pumps; and it has for its object to provide a pump that will be cheap and simple in construction, efficient in operation, and which can be readily applied to any well or other water-supply. These objects I effect by means of the apparatus illustrated in the accompanying drawings, in which—

Figure 1 represents a perspective view of my pump entire. Fig. 2 represents a sectional view through the pump-cylinders, and Fig. 3 represents a top view of one of the pump-cylinders.

The letter A indicates two pump-cylinders, open at the tops and closed at their bottoms, the said cylinders being designed to be submerged in a well, cistern, or other water-supply. The said cylinders connect, by means of inclined pipes B, with a vertical discharge or educt pipe, C. The said pipes B are enlarged between their ends, and are provided with ball-valves D. To one of the cylinders are attached two uprights, E, which are connected at their upper ends to the tube C by means of braces F, and between the said two uprights is supported a cross-piece, G, having a guide-aperture, H, through which the piston-rod I of the pump passes.

The letter K indicates a crank-shaft journaled at L in the uprights, one crank of said shaft being connected with the piston-rod before mentioned by means of a link, M. The other crank or winch is provided with a handle, N, by which the shaft can be conveniently rotated. The piston-rod I before mentioned connects with another piston-rod, I, by means of a lever, O, fulcrumed to the tube C, so that the said piston-rods will operate their pistons in opposite directions.

The letter P indicates the pistons, which are located in the respective pump-cylinders. Said pistons consist of short cylinders open at both ends, the said cylinders being each provided with a cross-piece, Q, near the top, to which are hinged downwardly-opening flap-valves R. The said cylinders are also provided with annular shoulders S near their tops, forming seats for said valves. The piston-rods I are secured to loops T, secured to the respective cross-pieces of the pistons.

The operation of my invention will be readily understood from the above description and accompanying drawings without further explanation.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

The combination, in a pump, of the cylinders A, connecting-tubes B and their valves, educt-tube C, uprights E, crank K, guide-piece H, piston-rods I and their pistons, and lever O, all constructed and arranged substantially as and for the purposes specified.

In testimony that I claim the foregoing I have hereunto set my hand this 30th day of August, 1880.

L. M. KANAVEL.

Witnesses:
S. R. MELOTT,
S. B. SPENCER.