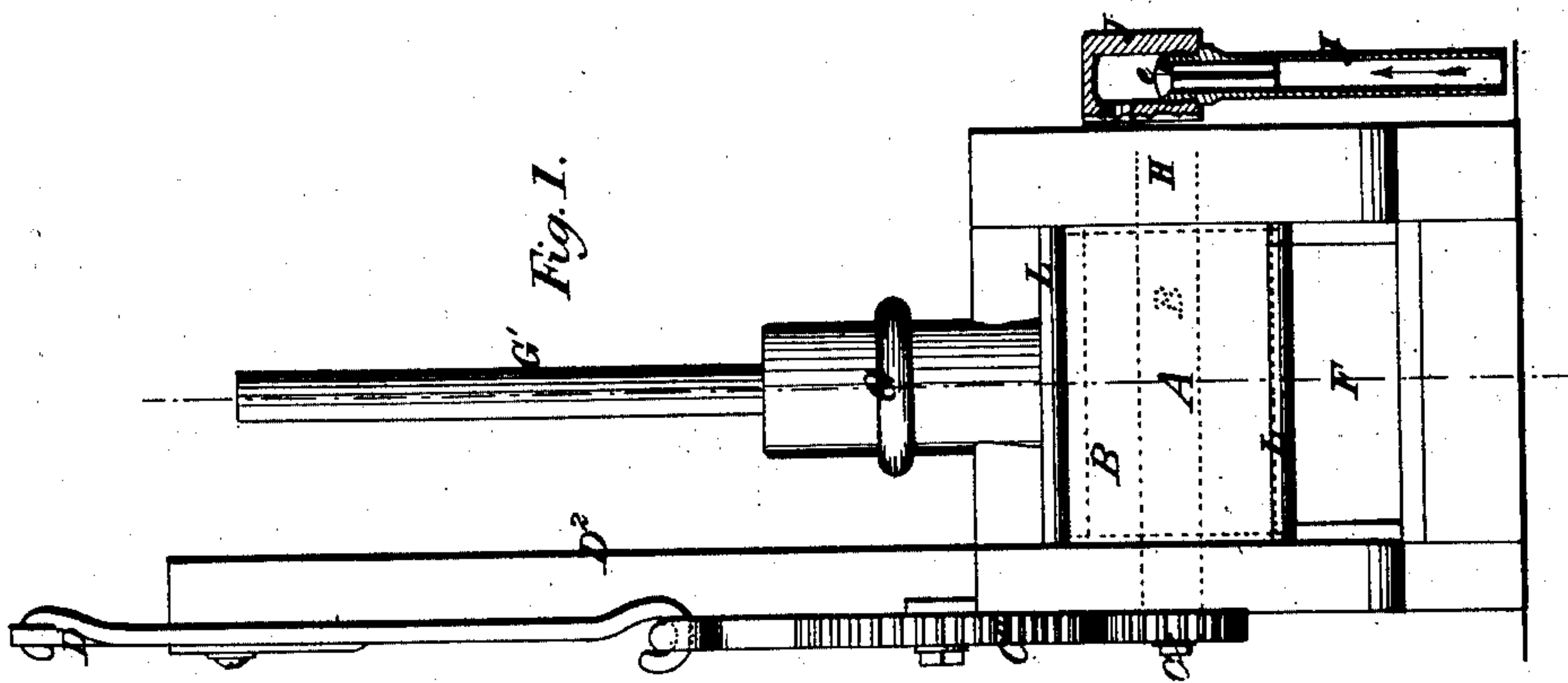
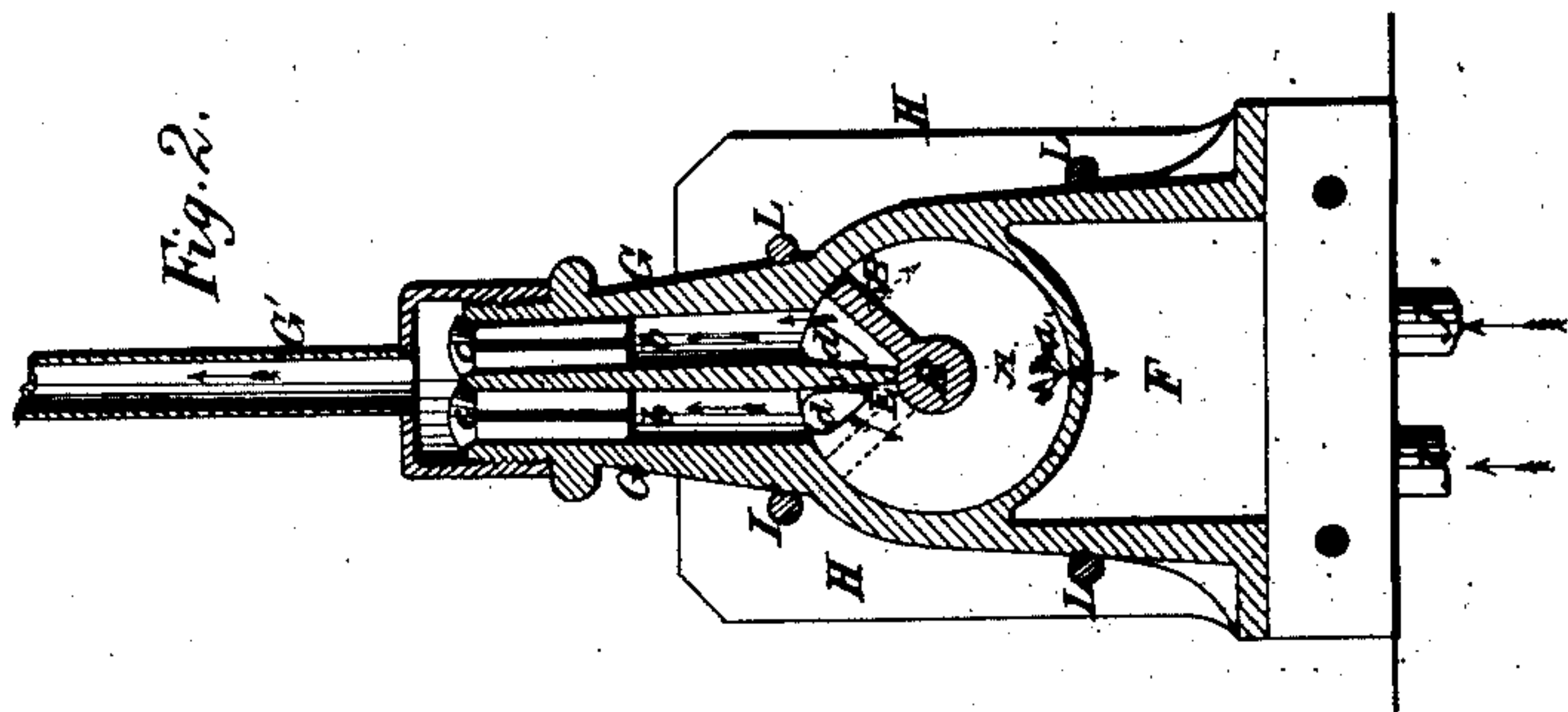


J. M. Stephenson,

Oscillating Pump,

Patented May 22, 1860.

Nº 28,417.



Witnesses,
J. W. Coombs
A. S. Spence

Inventor,
J. M. Stephenson
per Murray & Co.

UNITED STATES PATENT OFFICE.

J. M. STEPHENSON, OF ANDERSON, INDIANA.

PUMP.

Specification of Letters Patent No. 28,417, dated May 22, 1860.

To all whom it may concern:

Be it known that I, JAMES M. STEPHENSON, of Anderson, in the county of Madison and State of Indiana, have invented a new and useful Improved Force-Pump; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a side elevation of my improved pump showing one of the suction pipes in section and the plan of operating the pump. Fig. 2 is a transverse vertical section taken through Fig. 1, as indicated by the red line x, x , showing the pump barrel, piston, air chamber, eduction pipe, and valve openings communicating therewith. This view is represented as looking in the direction of the suction pipes.

Similar letters of reference indicate corresponding parts in both figures.

To enable those skilled in the art to fully understand my invention I will proceed to describe its construction and operation.

In the drawings, A represents the horizontal cylinder of the pump which is bored out with a true surface and through the center of which passes the stem, B, of a movable radius or piston B', Fig. 2, which is turned by a pinion C, Fig. 1, and a segment rack C', to which is connected a rod leading to the short arm of lever D, which has its fulcrum in an upright post, D².

E is a bridge or partition projecting down from the top of the cylinder, and which is packed closely along the stem of the piston so as to prevent water from escaping between it and the stem, still it allows the stem to turn freely. Below the pump cylinder, A, is a chamber, F, which communicates with the cylinder through a slot, a , extending from head to head of the cylinder.

G is a barrel, proceeding up from the top of the cylinders, with two water ways, b, b ,

through it, which lead up from each side of the partition, E, and open into one common discharge pipe, G', as clearly shown by Fig. 2, c, c , being valves which open upward and prevent the water from returning back into the pump cylinder when the piston is reversed.

In one of the heads of the pump or cylinder, and in that lettered H, are two orifices, d, d , Fig. 2, which lead to two suction pipes, J J, in each of which is seated a valve e , Fig. 1, opening upward and allowing water to enter each side of the partition, E, as the piston alternates. The opposite side of the cylinder is solid, and the stem, B, is to be well packed in both heads, and the parts are nicely and closely fitted and made water tight, and so as to work perfectly. The heads are secured to the cylinder and chamber, F, by bolts, L L.

From this description it will be seen that when the piston, B', is turned in either direction the water rushes in behind it, while it drives the water before it through one or the other of the pipes, d , and the sand, etc. drawn into the cylinder will, by virtue of its greater specific gravity, fall down through the slot, or opening in the cylinder, into the air-tight box or chamber, F, and the cylinder will thus be kept free of grit and sand, and the piston in good working order.

This pump is adapted to fire engine departments and for throwing hot as well as cold water.

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

The arrangement and combination of the separate chamber F, with the pump cylinder A, inlet orifices d, d , and pipes J, J, as and for the purpose herein shown and described.

JAS. M. STEPHENSON.

Witnesses:

R. V. ATHERTON,
J. C. HOLLENBACH.