

C. P. HOLMES.
Rotary Pumps.

No. 124,820.

Patented March 19, 1872.

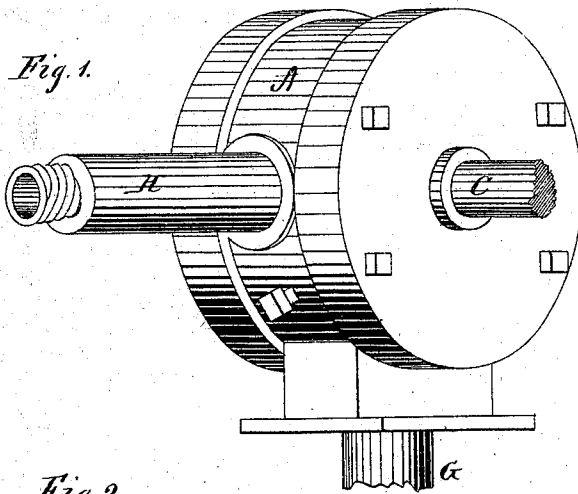


Fig. 2.

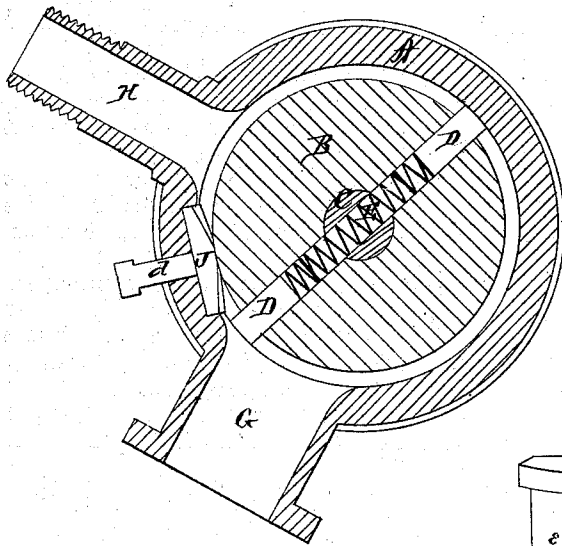


Fig. 3.

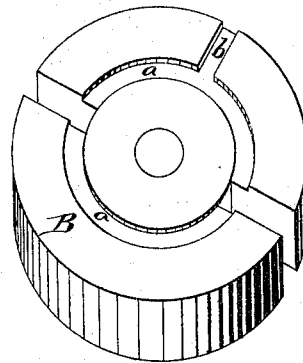
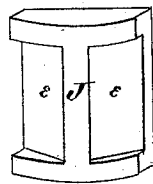


Fig. 4.



Witnesses:

Henry N. Miller
L. L. Ewert.

Inventor

Clark P. Holmes.
per *Miner & Mason*
Attorneys.

UNITED STATES PATENT OFFICE.

CLARK P. HOLMES, OF HAVANA, NEW YORK.

IMPROVEMENT IN ROTARY PUMPS.

Specification forming part of Letters Patent No. 124,820, dated March 19, 1872.

To all whom it may concern:

Be it known that I, CLARK P. HOLMES, of Havana, in the county of Schuyler and in the State of New York, have invented certain new and useful Improvements in Rotary Pump and Fire-Engine; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of a rotary pump and fire-engine, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a perspective view of my pump and engine. Fig. 2 is a section of the same. Fig. 3 is a perspective view of the hub or cylinder in the same, and Fig. 4 is a perspective view of a cam located inside of the shell.

A represents the outer shell of my pump, and B the interior hub or cylinder, through which the shaft C passes. The hub or cylinder B is made of sufficient size to leave a water-space between it and the shell A, and is also slotted at two opposite points to a suitable depth to receive and hold the valves D D in their proper position. These two slots are connected by a passage through the hub and the shaft, in which is placed a spring, E, which bears against the inner ends of both valves D D and holds them out against the rim or shell A. In each end of the hub or cylinder B is an annular recess, *a*, provided with a passage, *b*, leading to the outer circumference of the hub, for the purpose of venting the spaces occupied by the valves D when pressed down,

and also packing or preventing the water from passing across the ends of the hub or cylinder. G is the suction opening, and H the discharge opening of the shell. Between these two openings on the inside of the shell is secured a cam, J, by means of the screw *d*, for the purpose of pressing in the valves D D and making a continuous circle of the hub or cylinder, the valves sweeping in a true circle with the center, having no sliding motion while in labor. The cam J is provided with recesses *e e*, for the purpose of venting the space between the edge of the valve and the center of the cam, so that when the cylinder is revolved the force of water against the cam will not check or retard the operation of the pump, but will allow the waste water to pass through the recesses and pass out the outlet G.

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

1. The hub or cylinder B, provided at each end with an annular recess, *a*, and passage *b*, substantially as and for the purposes herein set forth.

2. The cam J, provided with the recesses *e e*, in combination with the cylinder B and its pistons D D, substantially as and for the purposes herein set forth.

3. The combination of the shell A with openings G H, hub B with recesses *a* and passages *b*, valves D, spring E, and cam J with recesses *e*, all constructed and arranged substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 18th day of January, 1872.

CLARK P. HOLMES.

Witnesses:

C. L. EVERT,
JOHN SMITH.