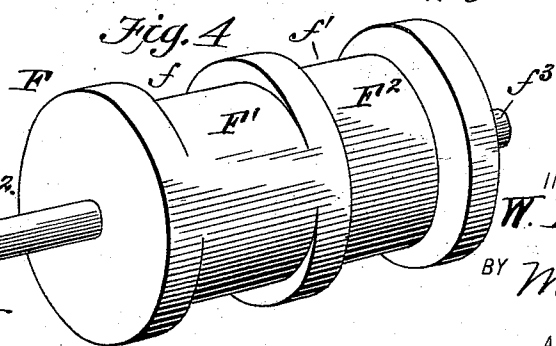
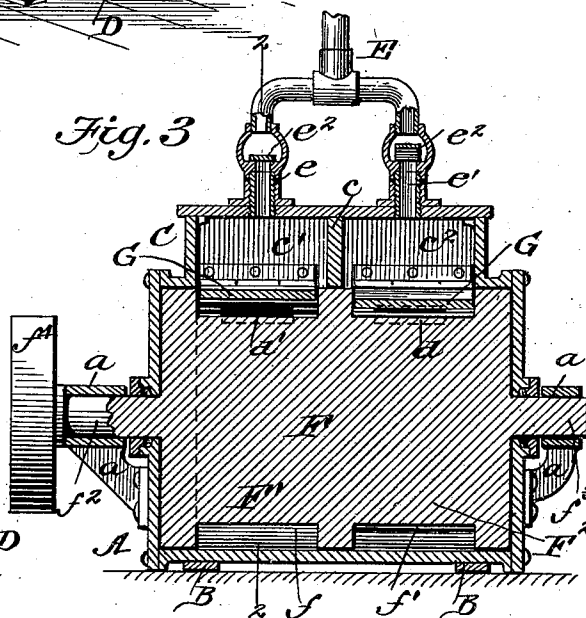
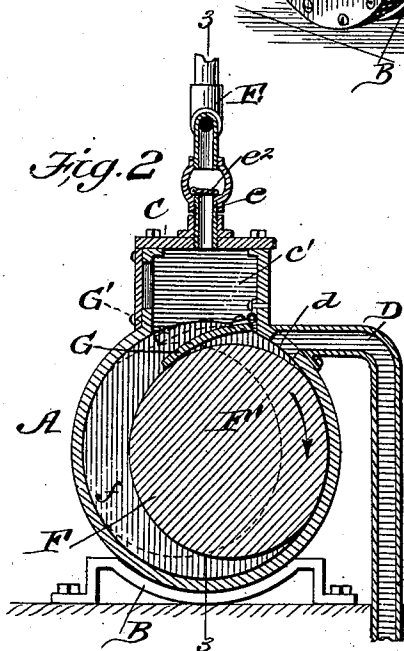
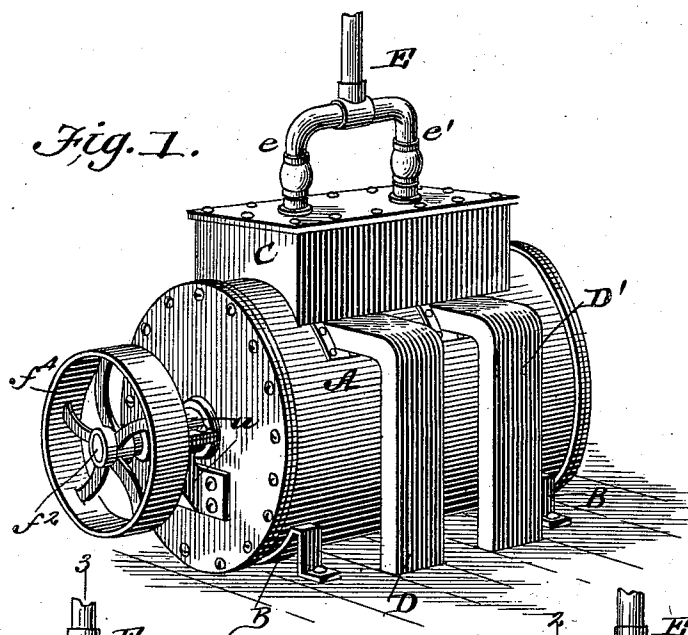


(No Model.)

W. P. KEELER.
PUMP.

No. 564,080.

Patented July 14, 1896.



WITNESSES:

W. H. Blouck
Chas. Wright

INVENTOR:

W. P. Keeler.

BY *Munn & Co.*

ATTORNEYS

UNITED STATES PATENT OFFICE.

WILLIAM P. KEELER, OF SPOKANE, WASHINGTON, ASSIGNOR OF ONE-THIRD
TO WILLIAM H. STOWELL AND CHARLES M. FASSETT, OF SAME PLACE.

PUMP.

SPECIFICATION forming part of Letters Patent No. 564,080, dated July 14, 1896.

Application filed July 17, 1895. Serial No. 556,251. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. KEELER, of Spokane, in the county of Spokane and State of Washington, have invented a new and useful Improvement in Pumps, of which the following is a specification.

My invention relates to improvements in that class of pumps provided with eccentrically mounted and rotating pistons; and it has for its object to provide a pump of the character indicated which is very simple, cheap, and effective.

The invention consists in the particular construction and arrangement of parts, as hereinafter fully described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference refer to corresponding parts in all the views.

Figure 1 is a perspective view of the improvement. Fig. 2 is a section on line 2 2 of Fig. 3. Fig. 3 is a section on line 3 3 of Fig. 2, and Fig. 4 is a perspective view of the pistons.

A is a cylindrical casing mounted upon a suitable base or support B, and C is a water-chest above the casing and divided by the partition *c* into two compartments *c'* and *c''*, communicating at the bottom with the said casing. Inlet-pipes D D' communicate with the upper part of the casing A through ports *d d'* in the casing adjacent to the chest C, and the compartments *c'* and *c''* of the chest are connected with the discharge-pipe E by the branch pipes *e* and *e'*, leading from the said compartments, respectively.

Within the casing A are mounted the eccentric and oppositely-arranged pistons F' and F'', which travel on the inner surface of the casing and alternately force the water out of the casing into the compartments of the chest, as hereinafter more fully explained.

As shown in the drawings, the pistons F' and F'' are formed by grooving the solid cylinder F, as shown at *f* and *f'*, to form two eccentrics, which are oppositely arranged with respect to each other. The cylinder F fits snugly in the casing A and virtually divides the casing into two compartments, one for each of the compartments of the chest C. From the ends of the cylinder project the

trunnions *f''* and *f'''*, which are mounted in the bearings *a* and *a'* of the casing. The trunnion *f''* is provided with a pulley *f''*, by means of which the cylinder can be operated. Within the casing A, at the upper part thereof and adjacent to the inlet-ports *d d'*, are hinged the valves G and G', whose free ends fit in the grooves *f* and *f'* and rest upon the pistons as they travel around in the casing, so that the water forced upward by the pistons is prevented from passing in rear of the said pistons and consequently will be forced by the pistons into the compartments of the chest C.

In order to prevent back pressure of the water in the discharge-pipe E while the pistons are passing the valves G and G', a check-valve *e''* is arranged in the said discharge-pipe.

The operation is as follows: Power being applied to the pistons to revolve them in the direction of the arrow, Fig. 2, the water will be drawn in through the inlet-pipes D D', and as the pistons continue to revolve in contact with the inner surface of the casing the water which had previously entered the casing and is in front of the pistons will be forced upward and out into the compartments of the chest C, and from thence out through the branch pipes *e* and *e'* into the discharge-pipe E. It will of course be understood that the pistons act alternately to force the water from the casing into its respective compartments of the chest, so that a continuous stream of water will be discharged by the pump.

While I have shown but two eccentrics, yet it is obvious that more may be employed if desired.

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

1. In a pump, the combination with a casing having, an inlet and outlet, of eccentric and oppositely-arranged pistons mounted to rotate in the casing, said pistons being integral and dividing the casing into compartments, and hinged valves resting upon the pistons, substantially as described.

2. In a pump, the combination with a casing having an inlet and outlet, of a cylinder mounted in the casing and formed with eccentric and oppositely-arranged pistons, said

cylinder fitting snugly in the casing and dividing it into compartments, and hinged valves resting upon the pistons, substantially as described.

5 3. In a pump, the combination with a casing having an inlet at one side near the top, and a chest divided into compartments, and communicating with the casing at the bottom, of a cylinder mounted in the casing and
10 formed with two eccentric and oppositely-arranged pistons, said cylinder fitting snugly in the casing and dividing it into two compartments one for each of the compartments of the chest, and hinged valves resting upon the
15 pistons, substantially as described.

4. In a pump, the combination with a casing having an inlet and discharge, of a solid revoluble cylinder fitting in the casing and provided with grooves forming two oppositely-arranged eccentric pistons, said cylinder
20 fitting snugly in the casing and dividing it into compartments, and valves resting upon the pistons, substantially as described.

5. In a pump, the combination with a casing, a chest above the casing and provided with two compartments, each communicating with the casing, a valved discharge-pipe connected with the said compartments, and inlet
25 pipes opening into the upper part of the casing, of a solid rotatable cylinder in the casing
30

and provided with grooves, forming two oppositely-arranged eccentric pistons, said cylinder fitting snugly in the casing and dividing it into two compartments, one for each of the compartments of the chest and valves
35 hinged to the upper part of the casing and having their free ends resting upon the pistons, substantially as described.

6. In a pump, the combination with a casing provided with inlet-pipes leading into the
40 upper part of the casing through the side thereof, a chest above the casing and provided with two compartments communicating with the casing, a valved discharge-pipe connected with each compartment of the chest,
45 of a solid cylinder mounted to revolve in the casing and provided with two annular grooves forming two oppositely-arranged pistons, said cylinder fitting snugly in the casing and dividing
50 it into two compartments, one for each compartment of the chest, and valves hinged to the upper part of the casing in front of and adjacent to the inlet-pipes, and having their free ends resting upon the pistons, substantially as herein shown and described.

WILLIAM P. KEELER.

Witnesses:

JOHN K. DOW,
W. G. ESTIP.