(No Model.)

J. WALCHER.

PUMP.

No. 265,191. Patented Sept. 26, 1882.

Fig. 1.

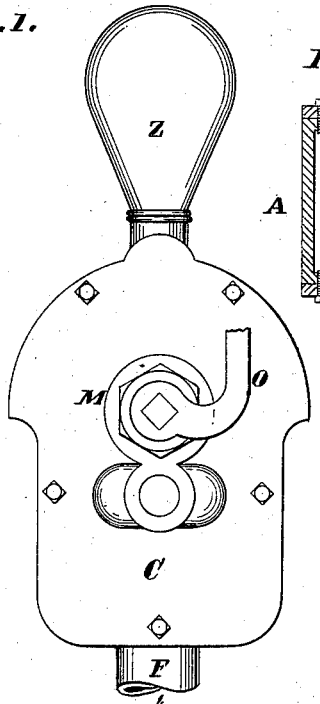


Fig. 5.

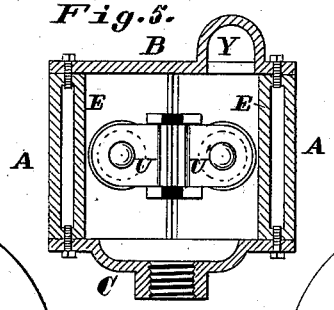


Fig. 2.

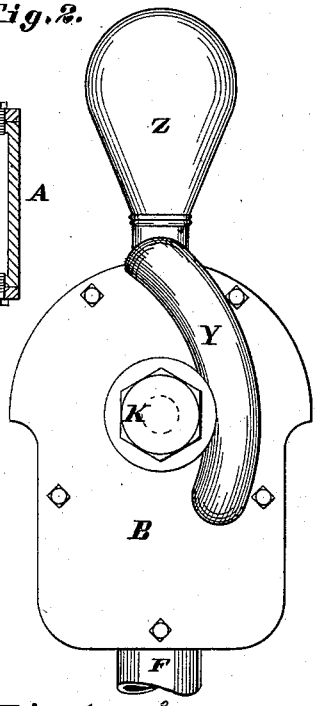


Fig. 6.

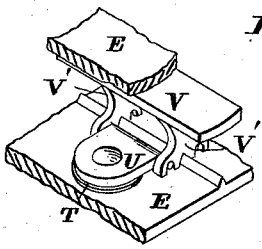


Fig. 3.

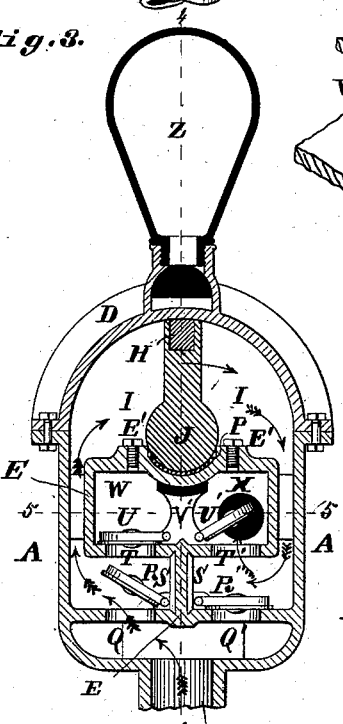


Fig. 4.

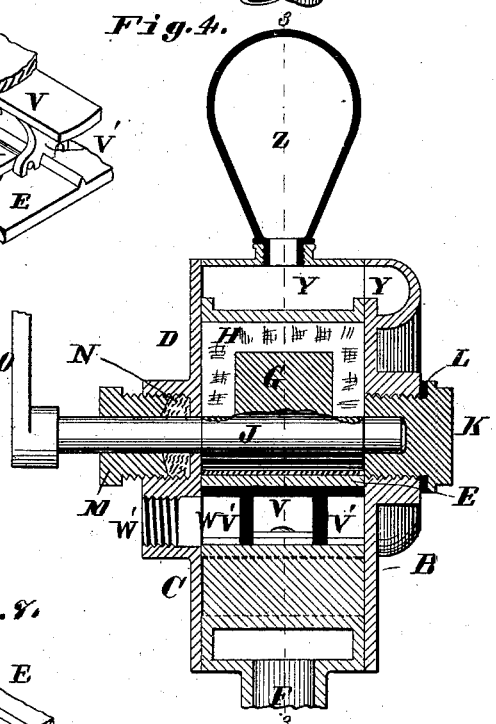
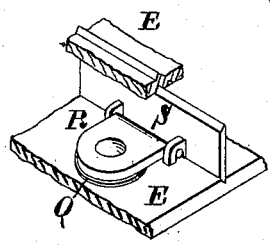


Fig. 7.



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UNITED STATES PATENT OFFICE.

JOHN WALCHER, OF ST. LOUIS, MISSOURI.

PUMP.

SPECIFICATION forming part of Letters Patent No. 265,191, dated September 26, 1882.

Application filed June 20, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN WALCHER, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Pumps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is a front view. Fig. 2 is a back view. Fig. 3 is a section on line 3 3, Fig. 4. Fig. 4 is a section on line 4 4, Fig. 3. Fig. 5 is a section on line 5 5, Fig. 3. Fig. 6 is an enlarged detail perspective view illustrating the manner of securing the upper valves in place, and Fig. 7 is a similar view illustrating the manner of securing the lower valves in place.

My invention relates to a pump having an oscillating piston; and my invention consists in the construction of the pump, as hereinafter described.

The body of the pump consists of sides A A, cast in one piece, a removable back, B, connected to the sides by suitable means, removable front C, connected to the sides, and removable top D, connected to the sides and to the front and back.

E is an inside shell, cast in one piece with the sides A.

F represents the water-inlet.

G is the oscillating piston, provided with a suitable packing, H, and working in a cylinder or chamber, I. The shaft J of the piston has a bearing at one end in a centered screw-plug, K, fitting in an opening of the back, B, and provided with a suitable gasket, L. The other end of the shaft is journaled in a plug, M, screwing into the front, C, and provided with a suitable packing, N.

O is a crank on the shaft for operating the piston. A packing, P, should be between the shaft of the piston and the shell E.

Q Q′ are lower water-openings in the shell, and they are provided with flap-valves R R′. These valves are secured, as shown in Fig. 7, to removable plates S S, which fit in grooves of the shell. Thus the valves can be easily removed for repairs, &c., by taking off the back or front.

T T′ are upper water-openings in the shell, and they are provided with flap-valves U U′, held in place by a removable plate, V, which has legs V′. The plate V is concave on its upper surface, so as to fit the convex surface of the shell below the piston. The legs of the plate are notched to receive a rib of the shell. (See Fig. 6.) The upper portion of the shell forms a water-chamber, W, above the valves U, which communicates by means of an opening, X, and channel Y with an ordinary water-chamber, Z.

W′ is the water-outlet communicating with the chamber W, and which would be provided with a suitable spout.

The shell E has openings, closed by screw-plugs E′ when the pump is in use, directly over the openings T T′ Q Q′, for the insertion of an instrument-stem when the top D is removed for fitting up the valve-seats.

The operation of the pump is as follows: The piston, being moved in the direction shown by the non-feathered arrow, forces the water before it, as shown by the arrows, down the channel between the shell and that side of the case, and up through the flap-valve opening T′ into the chamber W, from where it flows out of the pump. While the piston is being moved in this direction it draws water up through the valve-opening Q, through the channel between the shell and that side of the pump into the cylinder or chamber I. Then when the piston is moved to the other side it forces and draws water in the other directions, and so on.

I claim—

1. The combination of body A B C D, and piston G on shaft J with crank-shell E and valves R R′ U U′, all constructed substantially as shown and described.

2. The combination of body A B C D, having channel Y, openings X Q Q′, and shell E, having openings T T′, and plugs E′, the chamber Z, shaft J, piston G, centered plug K, journal-plug M, and valves R R′ and U U′, as set forth.

JOHN WALCHER.

Witnesses:

GEO. H. KNIGHT,

AUG. WEBER.