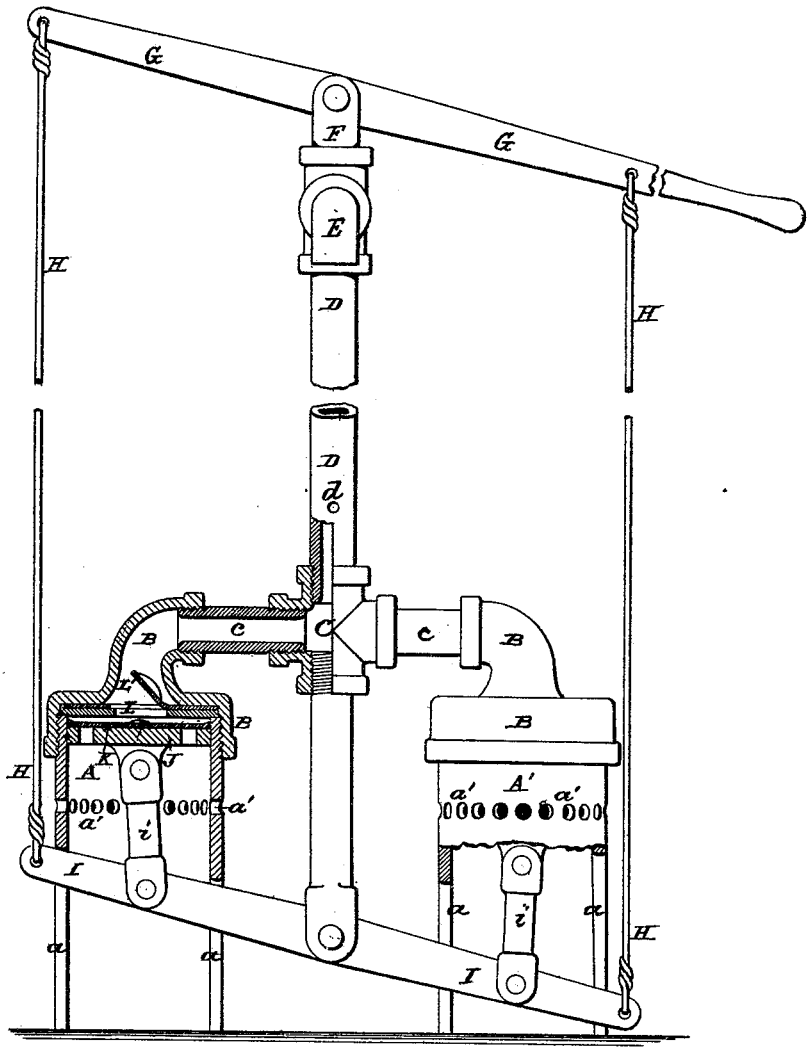
J. W. COLLET.

SUBMERGED-PUMP.

No. 181,144. Patented Aug. 15, 1876.



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UNITED STATES PATENT OFFICE.

JOHN W. COLLET, OF UPPER ALTON, ILLINOIS.

IMPROVEMENT IN SUBMERGED PUMPS.

Specification forming part of Letters Patent No. **181,144**, dated August 15, 1876; application filed June 27, 1876.

To all whom it may concern:

Be it known that I, JOHN W. COLLET, of Upper Alton, Madison county, State of Illinois, have invented a certain new and useful Improvement in Submerged Pumps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, making part of this specification.

My improvement, in its preferred form, consists of two pump-cylinders submerged in water, and whose upper ends are connected with a single discharge-pipe, which forms the column on whose top is fulcrumed the walking-beam, connected by rods or cords to a similar beam below, to which the pump-pistons are connected.

The water enters the part of the cylinders above the piston through holes in the sides of the cylinders, just above the level of the pistons when in their lowest positions.

The drawing is an elevation, with one of the duplicate pumps in section, and the other partly so.

A A′ are two pump-cylinders, similar to each other, and consequently a description of one will apply equally to the other. I propose to form these cylinders of gas-piping, and upon the top of each is a reducing-elbow, B, whose smaller end is connected to one arm of a cross, C, either directly or by the interposition of a small piece of piping, *c*. Into the upper arm of the cross C screws the upright pipe D, made of sufficient length to reach the top of the ground, or other sufficient height for the discharge of water, which takes place through a spout, E. At the top of the pipe D is a fulcrum-bearing, F, for the oscillating beam G. From the beam G descend rods or wires H, connected at the lower ends to the opposite ends of the beam I. This beam I has fulcrum-bearing between the cylinders A A′, and plays in slots *a* in the cylinders. *i i* are rods pivoted upon the parts of the lever within the cylinders, and to the upper end of each rod *i* is attached a pump-piston, J, to whose upper side is attached the disk-valve K, the attachment being made at the center, so as to allow the periphery of the valve to rise in the down-stroke of the piston, and to make tight packing against the cylinder when the piston rises.

The upper or check valve to each pump-cylinder A A′ may be of any suitable construction. As shown, it has a centrally-perforated seat-disk, L, and a leather flap-valve, L′, secured upon said disk by the pressure of the reducing-elbow upon its margin.

a′ are orifices through the cylinders A and A′, for the entrance of water into the space above the piston, the holes being located so as to be just above the piston when it is in its lower position, so that the water rushes in when the piston has reached this position.

d is an orifice for the escape of water from the pipe D, so as to avoid the danger of freezing up in winter, and warming of the water in the pipe in summer.

In a less perfect modification of my pump one of the cylinders, A or A′, may be dispensed with, and the connecting-rod H to the remaining pump-cylinder made rigid by increasing its diameter, so that the piston would be carried down by the descent of the beam G and the weight of the rod H.

I claim—

1. The submerged pump-cylinder A, provided with perforations *a′* near its upper end adapted to permit the water to enter above the piston when the piston is lowered, in combination with piston J and valve-disk K, as and for the purpose described.

2. The submerged pump-cylinders A A′, provided with perforations *a′* near their upper ends, in combination with piston J, valve-disk K, valves L L′, pipe D, beams I and G, and rods H, as and for the purpose set forth.

JOHN W. COLLET.

Witnesses:
SAML. KNIGHT,
ROBERT BURNS.