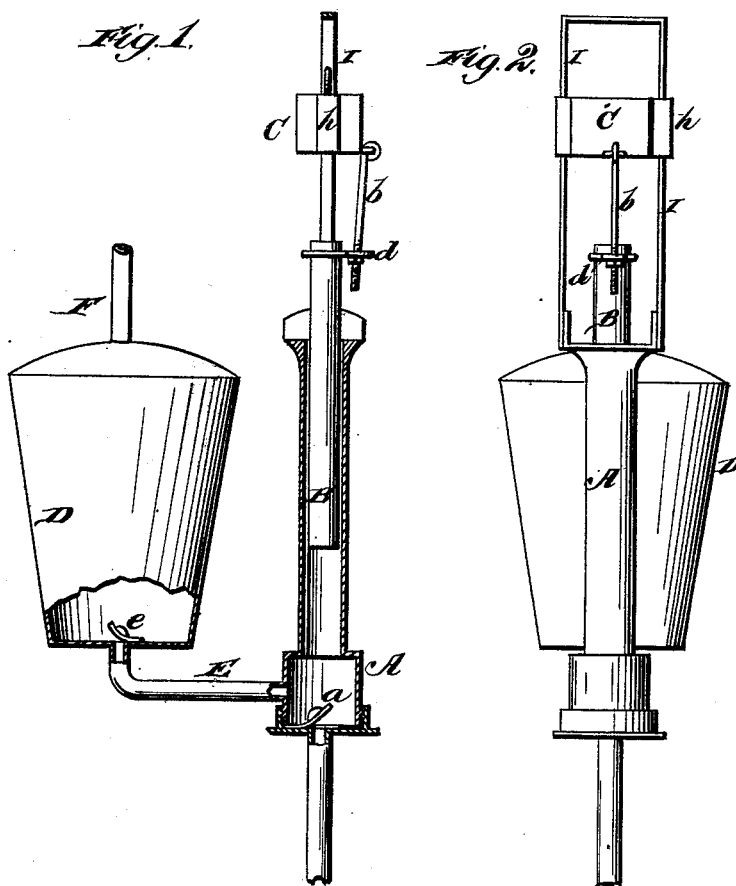


J. HOOVER.  
Pump.

No. 219,726.

Patented Sept. 16, 1879.



WITNESSES  
*Robert Everett*  
*James J. Sheehy*

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# UNITED STATES PATENT OFFICE.

JOHN HOOVER, OF CRAWFORDSVILLE, INDIANA.

## IMPROVEMENT IN PUMPS.

Specification forming part of Letters Patent No. **219,726**, dated September 16, 1879; application filed July 12, 1879.

### *To all whom it may concern:*

Be it known that I, JOHN HOOVER, of Crawfordsville, in the county of Montgomery and State of Indiana, have invented certain new and useful Improvements in Pumps; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal section of my pump, and Fig. 2 is a side-elevation view of the same.

This invention has relation to pumps; and consists in the improvements in the construction of the same hereinafter fully described, and particularly pointed out in the claims.

The annexed drawings, to which reference is made, fully illustrate my invention.

A represents a chamber or tube, in the bottom of which is a valve, *a*, for the admission of water. In this chamber is a piston, B, which is operated by a falling weight or drop, C, connected to the piston by a rod, *b*. This rod is attached to the weight, and passes and works up and down through an eye, *d*, on the piston, and should have a nut on its end for lengthening or shortening the same, so as to regulate the stroke.

The weight or drop C is to be operated by wind, water, steam, or other power.

A pipe, E, connects the chamber A with an air-chamber, D, having a valve, *e*, on the orifice of the pipe inside of the air-chamber, which is also provided with an exit-pipe, F.

The weight or drop C is constructed with suitable guides *h* on the sides, which pass over vertical guide rods or bars I, attached to the pump.

The drop being raised, the piston is drawn partly out of the chamber by the rod *b*, and the chamber is filled with water. The drop, being released, is permitted to fall, and strikes the upper end of the piston and drives the same into the chamber, and the valve *a* being closed by this action, the water is forced through the pipe E into the air-chamber, and is discharged through the exit-pipe.

I claim—

1. In a pump, a falling drop or weight operating by concussion upon the upper end of the piston, substantially as set forth.

2. The combination of the piston B, drop or weight C, having guides *h*, the rod *b*, eye *d*, and guide-rods I, substantially as herein set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOHN HOOVER.

Witnesses:

E. H. HILLS,  
JACOB JOEL.