

J. Clayton,

Pump Valve.

No. 94,078.

Patented Aug. 24, 1869.

Fig. 1

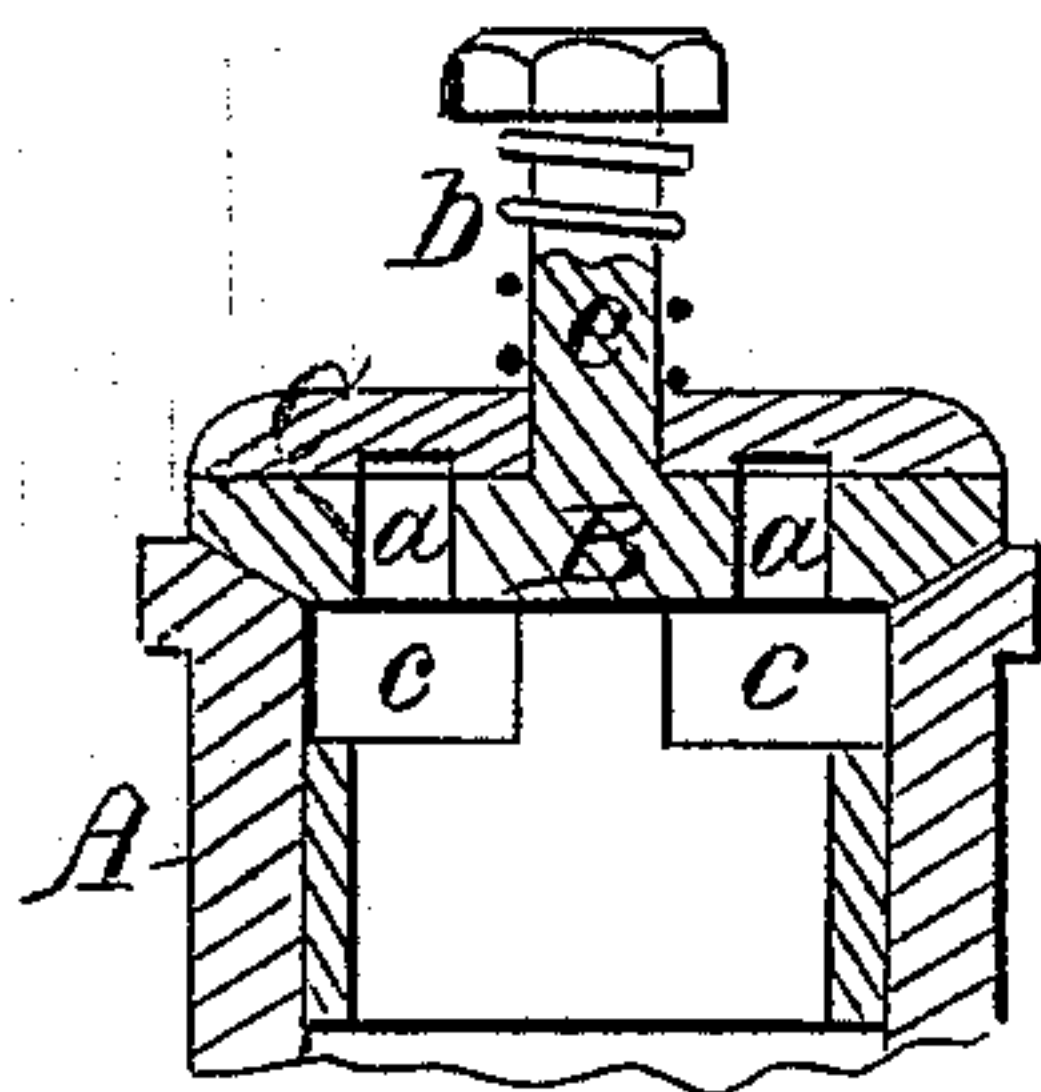


Fig. 2.

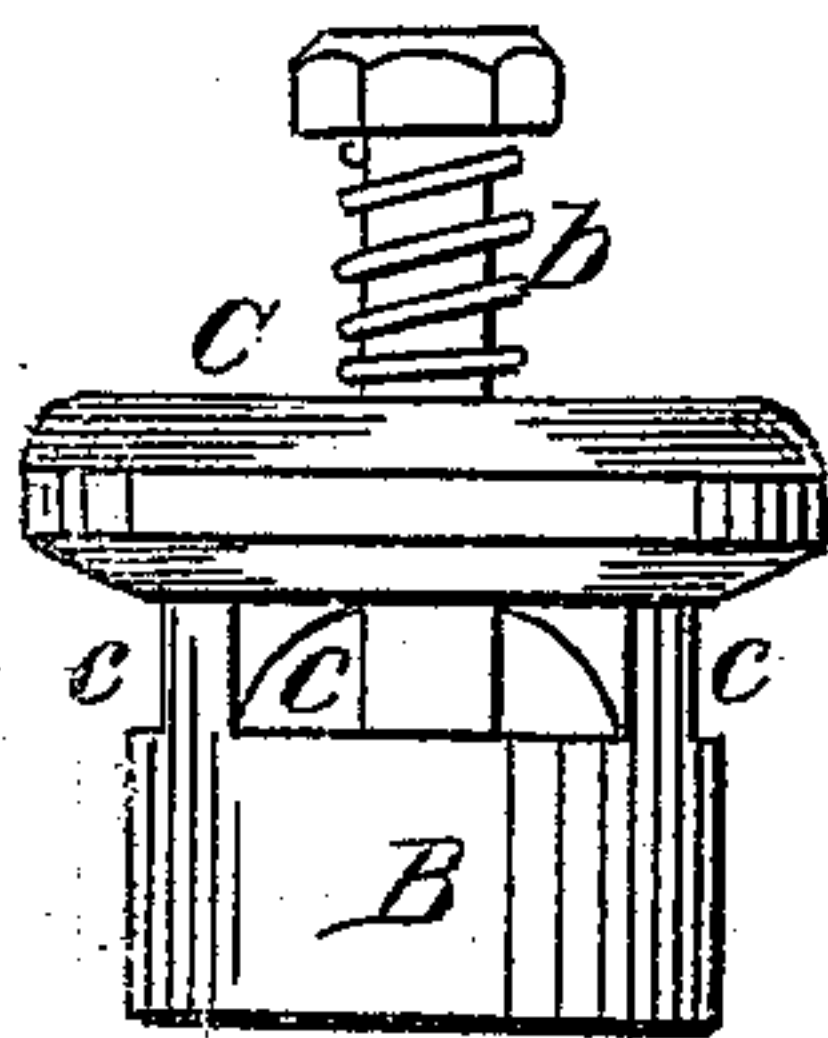
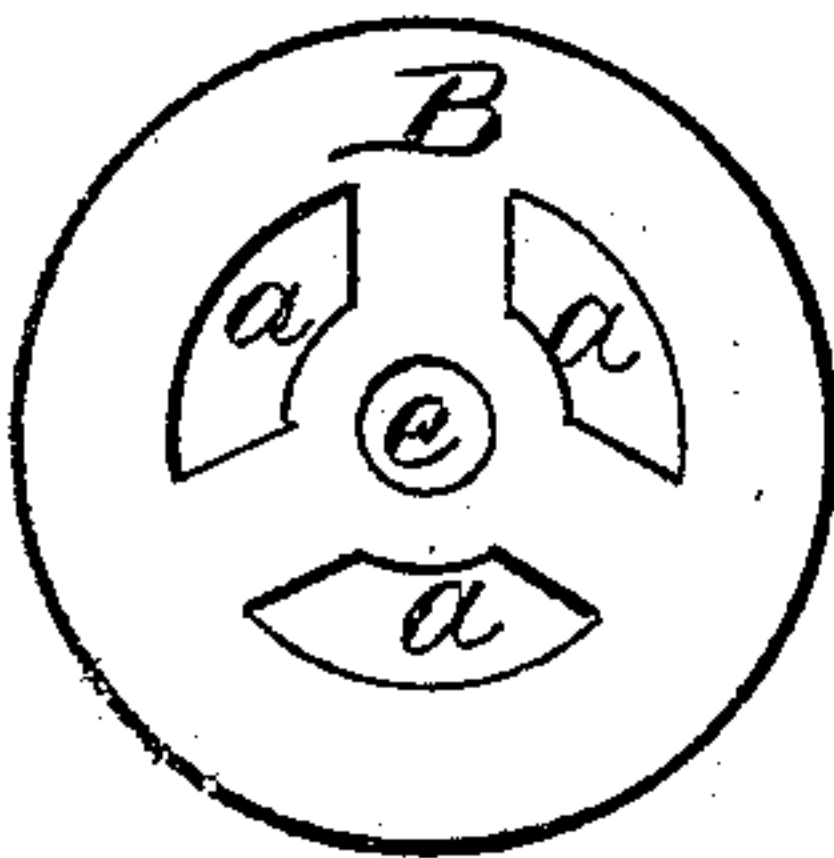


Fig. 3.



Witnesses
A. Sellers
A. Kramer

James Clayton

United States Patent Office.

JAMES CLAYTON, OF BROOKLYN, NEW YORK.

Letters Patent No. 94,078, dated August 24, 1869.

IMPROVEMENT IN VALVES FOR PUMPS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JAMES CLAYTON, of Brooklyn, in the county of Kings, and State of New York, have invented a new and improved Valve for Pumps and other purposes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a vertical section of a puppet-valve for a pump constructed according to my improvement.

Figure 2 is a view of the valve, without the seat; and

Figure 3 is a plan of the improved valve, with its cap removed.

Similar letters of reference indicate corresponding parts in the several figures.

This invention consists in a novel construction of valves for pumps and other purposes, with movable caps and ways through their heads, whereby provision is made for the passage of a greater quantity of water or other fluid than through a valve of the ordinary construction, the size of the valve and stroke of the piston being equal.

In order that others may be better enabled to understand the construction and operation of my invention, I will proceed to describe it, with reference to the drawings.

A is the valve-seat, having fitted to it the valve B, which is constructed after the usual manner of puppet-valve, except that besides the usual water-ways *c c*, in its sides below the head, it has additional water-ways *a a* through the head itself.

These water-ways are covered by a cap, C, which consists of a disk, having in its centre a hole which fits easily to a stem, *e*, projecting upward from the head of the valve, and fitting to a seat on the top of the head, in substantially the same manner as an ordinary valve fits to its seat.

A light spring, *b*, is coiled around the stem *e*, and secured in such manner above the cap C as to exert a tendency to close it.

When, by the action of the pump-piston, the water is drawn or forced through the valve, the cap C is lifted from its seat, on the head of the valve B, at the same time the said valve B is lifted from its seat A, and the water passes through the water-ways *a a*, in the valve-head, as well as through the water-ways *c c*, in the sides of the valve; and when the direction of the pump-piston is reversed, thereby causing the pressure on the opposite side of the valve to predominate, the cap C drops to its seat on the head of the valve, assisted by the coiled spring *b*, thereby covering the water-ways *a a*, while the valve B closes into its seat A, thereby closing the water-ways *c c*.

The movable cap and additional water-ways in the head provide for a more copious passage of water than is practicable, when only the usual water-ways *c c* are provided in the valve.

This improvement is applicable to valves for steam and all other fluids, and two or more caps may be applied, one upon another, to one valve, in which case all the caps but the top one will have ways *a a* through them to be opened and closed by the cap next above. The spring *b*, operating on the upper cap, or valve, causes it to close quickly, and prevents the loss of water that would result were they dependent upon gravity alone for such action.

What I claim as my invention, and desire to secure by Letters Patent, is—

The arrangement of the cap C and spring *b*, on the stem *e* of the valve B, in combination with the seat A, substantially as shown and described.

JAMES CLAYTON.

Witnesses:

A. LE CLERC,
A. KINNIER.