

J. TREGONING & M. HASTINGS.
Pump Valve.

No. 201,468.

Patented March 19, 1878.

Fig. 1

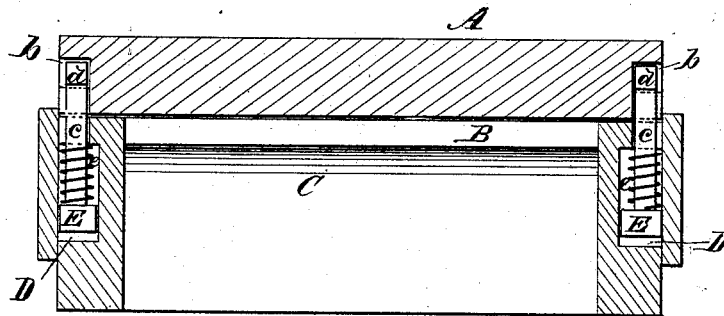
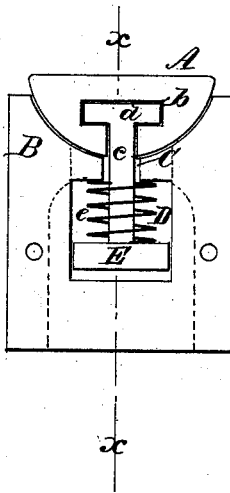


Fig. 2



WITNESSES:

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JOHN TREGONING AND MICHAEL HASTINGS, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN PUMP-VALVES.

Specification forming part of Letters Patent No. **201,468**, dated March 19, 1878; application filed August 24, 1877.

To all whom it may concern:

Be it known that we, JOHN TREGONING and MICHAEL HASTINGS, of Brooklyn, county of Kings, and State of New York, have invented a new and Improved Pump-Valve, of which the following is a specification:

Figure 1 is a longitudinal section of our improved valve, taken on line *x x* in Fig. 2. Fig. 2 is an end view of the valve and valve-seat.

Similar letters of reference indicate corresponding parts.

Our invention relates to valves employed in steam-pumps; and it consists in a semi-cylindrical valve fitted to a suitable valve-seat, and provided with recesses in each end for receiving a head formed on the rod of a small piston. A piston is connected with each end of the valve, and works in a chamber or cylinder formed at the end of the water-way in the valve-seat.

Referring to the drawing, A is a semi-cylindrical valve, having a T-shaped recess, *b*, formed in each end; and B is a valve-seat, having the water-way C, and having at each end chambers or cylinders D, in which are placed pistons E, whose rods *c* are provided with T-shaped heads *d*, that are fitted to the recesses *b* in the ends of the valve A.

Above the pistons E, around the rods *c*,

springs *e* are placed, which force the pistons downward. The pistons are not accurately fitted to their cylinders, sufficient space being left around them to permit of the escape of water from one side of the piston to the other.

The object of this device is to prevent the too rapid rise or fall of the valve, to prevent pounding and consequent undue wear, by employing water under the above piston E as a cushion for modifying the action of the valve.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The combination, with a pump-valve, of two pistons working in cylinders formed at the ends of the water-way in the valve-seat, substantially as shown and described.

2. The combination of the pistons E with the valve A and the valve-seat B, having formed in it cylinders or chambers D, substantially as shown and described.

JOHN TREGONING.

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Witnesses to signature of John Tregoning:
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