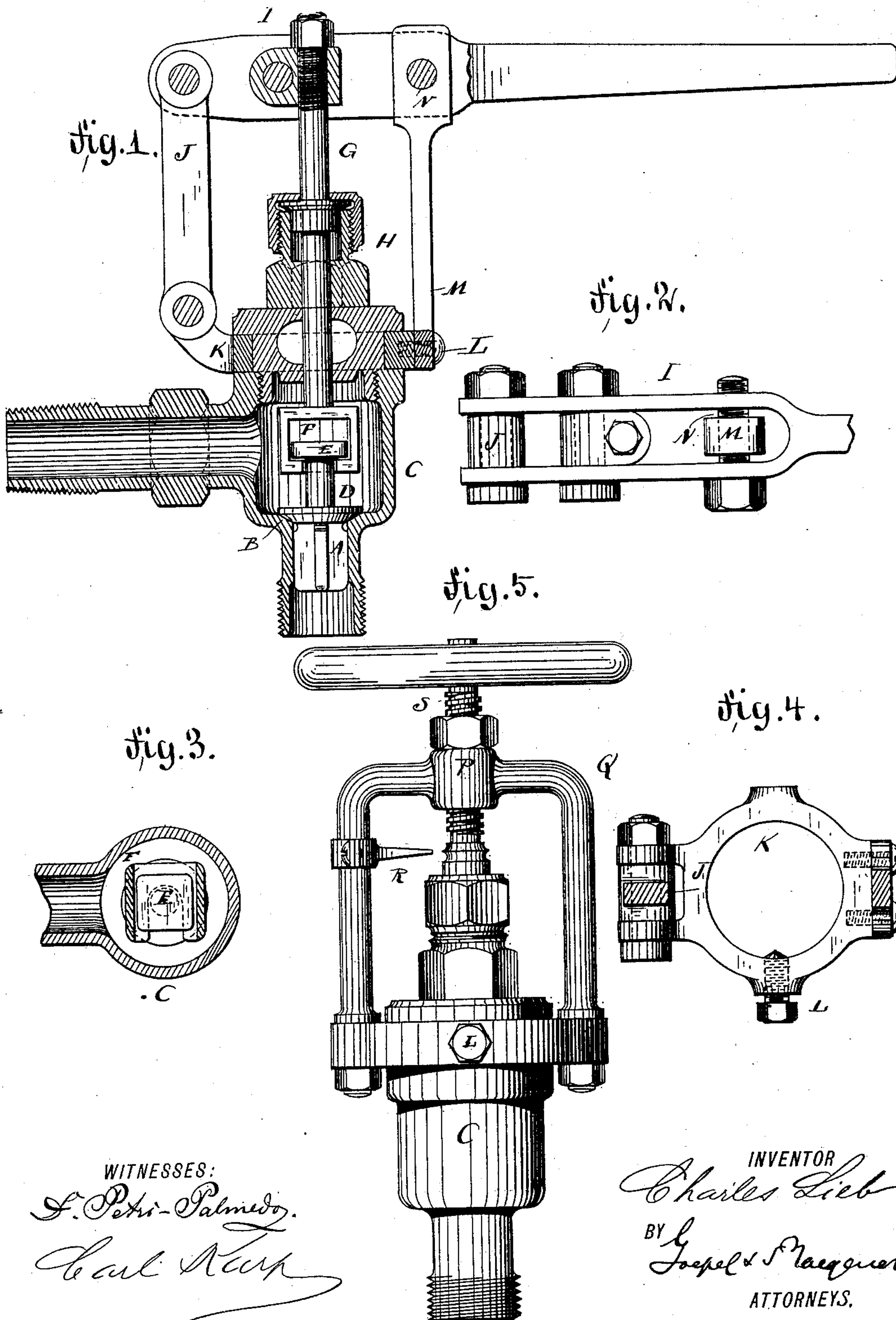


(No Model.)

C. LIEB.  
CHECK VALVE.

No. 362,166.

Patented May 3, 1887.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

CHARLES LIEB, OF WILMINGTON, DELAWARE.

## CHECK-VALVE.

SPECIFICATION forming part of Letters Patent No. 362,166, dated May 3, 1887.

Application filed October 1, 1886. Serial No. 215,047. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES LIEB, of Wilmington, in the county of New Castle, State of Delaware, have invented certain new and  
5 useful Improvements in Check-Valves, of which the following is a specification.

This invention consists in a puppet-valve provided at its upper end with a head in a  
10 vertically-movable box fastened on a stem guided in arms or supports on a ring mounted to turn on the casing, all as will be fully described and set forth hereinafter and finally be pointed out in the claim.

In the accompanying drawings, Figure 1  
15 represents a longitudinal sectional elevation of my improved valve. Fig. 2 is a plan view of one end of the lever. Fig. 3 is a sectional plan view through the valve-casing, showing the box inclosing the valve. Fig. 4 is a plan  
20 view, parts being in section. Fig. 5 is a side view of a modified construction of the valve.

Similar letters of reference indicate corresponding parts.

The puppet-valve A has its seat B formed  
25 by a shoulder of the casing C, said casing C having nozzles for attaching the inlet and outlet pipes. The valve-stem D, projecting from the top of the valve A, is provided with a head, E, of square shape, which is above the  
30 bottom piece of a square box, F, fastened to the lower end of a rod, G, passed through a stuffing-box, H, on the top of the valve-casing, the upper end of said rod being held in a lever, I, connected by a link, J, with an arm of  
35 a ring, K, surrounding the valve-casing, and provided with a screw, L, for locking it in place. Said ring is provided with a standard, M, through the upper end of which and through the lever I a bolt or pin, N, is passed.  
40 The bottom of the box F has a recess, through which the stem D can be passed.

In place of using the rod G, connected with the lever I, a screw-thread, S, can be formed on the upper end of the rod G, which screw  
45 is passed through a nut, P, on the U-shaped piece Q, having the ends of its shanks fastened to the ring K. One of the shanks of the forked piece is provided with a pointer, R, for indicating the position of the valve.

50 The operation is as follows: In case the valve becomes clogged or fastened on its seat by deposits from the water, rust, or incrustations, so that the valve becomes inoperative,

the bolt N is withdrawn and the lever I worked up and down, whereby the valve is  
55 raised from its seat. The screw L is loosened and the ring K is turned around the casing, whereby the rod G, box F, head E, and valve D are turned on their axis, causing the downwardly-projecting parts of the valve to scrape  
60 off the deposits or rust formed on the inside of the casing in which the downwardly-projecting parts of the valve work. The ring K is then brought back to the original position and the lever I raised and locked in place by  
65 means of the bolt N. The valve can work up and down, as the box is of sufficient height to admit such movement.

In the construction shown in Fig. 5 the box and valve are raised by turning the screw S  
70 by means of a suitable hand-wheel or cross-piece. The ring K is loosened and turned in the manner described. After the valve is cleared the screw S is screwed down. The pointer R on the forked piece Q is so adjusted  
75 that its point is in line with a certain fixed part of the screw when the valve is closed. When the valve is opened said certain fixed part will be above the point of the screw, and will thus show that the valve is opened by  
80 the relative position of the pointer and the end of the screw. The position of the valve is thus at all times clearly indicated.

The construction shown in Fig. 5 is specially applicable for larger valves, as the lever I would have to be made too long for such  
85 valves.

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

The combination, with a valve-casing, of a  
90 ring encircling said casing and adapted to be turned on the same, supports attached to said ring, a valve-rod mounted to move on said supports, a square box at the lower end of the rod and within the casing, said box having a  
95 recess in its bottom part, a puppet-valve having a square head located in said box, and a stem guided in the bottom recess of the box, substantially as set forth.

In testimony that I claim the foregoing as  
100 my invention I have signed my name in presence of two subscribing witnesses.

CHARLES LIEB.

Witnesses:

PAUL SCHOY,  
C. H. F. GROSS.