

(No Model.)

W. H. NEWELL.
TANK OR WATER VALVE.

No. 399,690.

Patented Mar. 19, 1889.

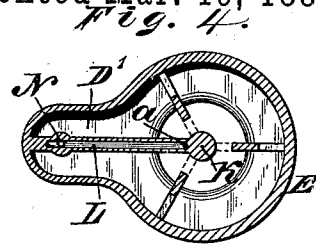
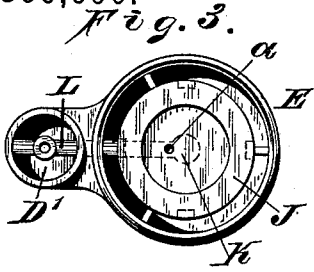


Fig. 1.

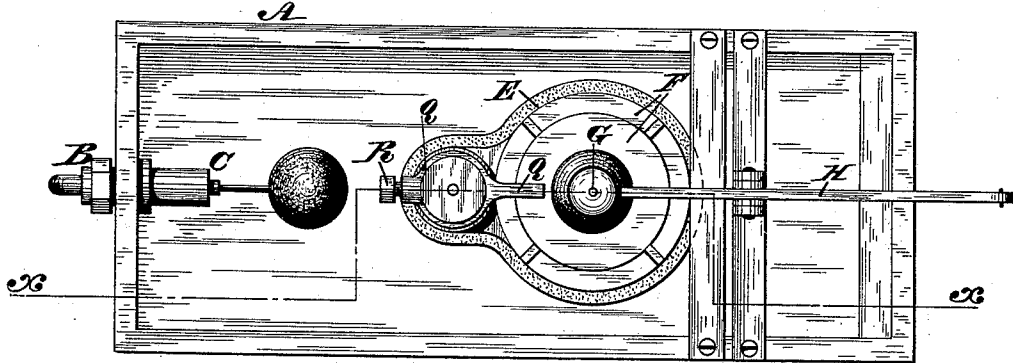
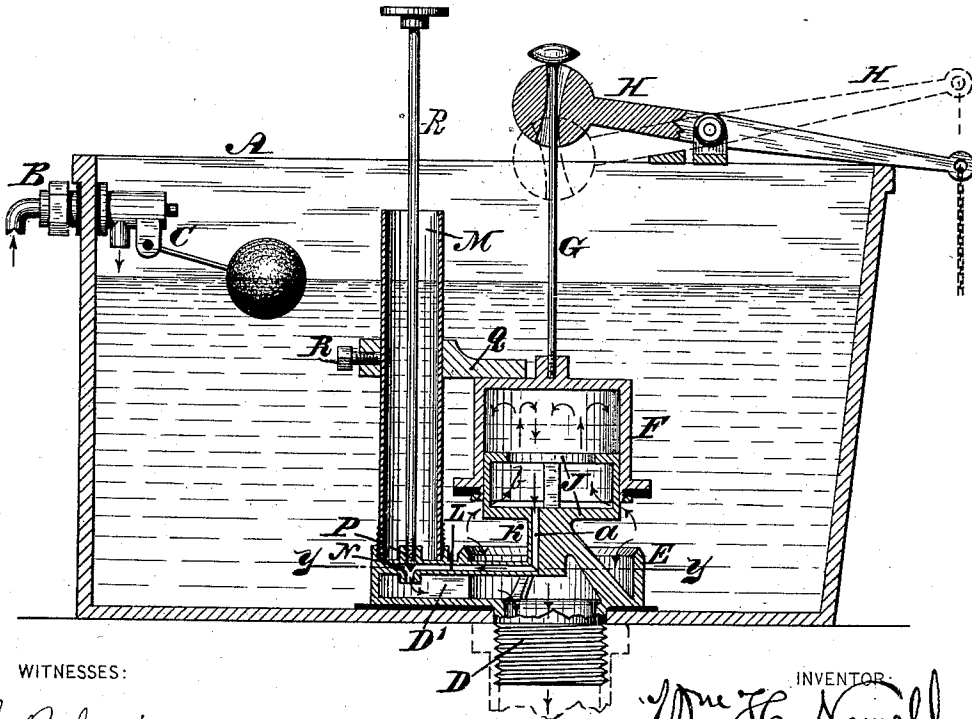


Fig. 2.



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WILLIAM H. NEWELL, OF PHILADELPHIA, PENNSYLVANIA.

TANK OR WATER VALVE.

SPECIFICATION forming part of Letters Patent No. 399,690, dated March 19, 1889.

Application filed December 3, 1887. Serial No. 256,864. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. NEWELL, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Tank or Water Valves, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a valve adapted to cause a variable discharge of water from a tank or reservoir and prevent the escape of sediment therefrom, the operation being hereinafter fully set forth.

Figure 1 represents a top or plan view of a valve and connected parts embodying my invention. Fig. 2 represents a vertical section thereof in line *x x*, Fig. 1. Fig. 3 represents a top or plan view of a detached portion thereof. Fig. 4 represents a horizontal section in line *y y*, Fig. 2.

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

Referring to the drawings, A represents a tank having an inlet or supply pipe, B, provided with a ball-valve, C, and an outlet or discharge pipe, D. Rising from the base of the tank and communicating with the discharge-pipe D is a valve-seat, E, the valve F whereof having attached to it the rod G, which is freely connected with the weighted end of the lever H, the latter being mounted on the said tank A, whereby the valve F may be raised and lowered and thereby uncover and cover the seat E, as the case may be, it being noticed that the seat E is of the form of an annulus, open at top and bottom, and the valve F is of the form of a cup or casing, closed at top and open at bottom, the under face of the valve having packing, whereby when the valve is lowered it may be tightly closed on its seat.

Rising from the seat E and entering the valve F is the stationary guiding-plunger J, which is of the form of an annulus open at top and bottom and supported on the seat E by means of a neck, K, which is cast with or otherwise secured to the seat E, said neck having a vertical passage or bore, *a*, which communicates at top with the chamber *b*, formed in the plunger J, and at bottom with the tube L, the latter extending horizontally and being in communication with the over-

flow-pipe M of the tank A, said pipe having at its base a valve-seat, N, which in the present case is formed on the tube L, the valve P thereof being at the lower end of the rod R, which extends through the overflow-pipe M and is accessible at the top of the tank, said tube L having its outlet at the valve N, which opens into the chamber D', the latter being in communication with the discharge-pipe D, and is a lateral extension of the valve-seat E, and is in communication with the interior thereof.

Movably fitted to the pipe M is an arm, Q, which is retained in position thereon by a screw, R, and adapted for adjusting the play of the valve F, it being seen that said valve is adapted to abut against said arm Q.

The operation is as follows: The tank is properly supplied with water, the valve F being lowered, covering the plunger J and resting on its seat E, whereby escape of the water is prevented through the pipe D. The valve P is opened to the required extent, whereby the same is in communication with the chamber of the valve F through the medium of the pipe L, passage *a*, and chamber *b*, and top opening of the plunger J. When it is desired to take water from the tank A, the lever H is operated, whereby the valve F is raised, thus uncovering the seat E and plunger J. Water now flows through the tank A from the seat E, and so reaches the discharge-pipe D. Water also enters the chamber *b* of the plunger J and reaches the interior of the valve F. The lever H is let go and the valve F seeks to return to its normal position. This, however, is controlled by the quantity of water in the said valve F, the discharge thereof being through the passage *a*, tube L, and valve N into the chamber D', and from thence into the pipe D, it being evident that the valve P may be adjusted to cause the rapid or slow discharge of the water from the valve F. In this manner the valve F may be made to close slowly, rapidly, or abruptly, as desired, its retardation in any degree being controlled or regulated by means of the valve N. The valve F in its descent covers the valve J and closes the seat E, thus preventing further escape of the water. As the seat E rises above the bottom of the tank A, sediment is retained below the top of said seat, and thus prevented

from escaping with the water when the valve F is raised or opened.

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

1. A tank having a valve-seat raised above the bottom thereof, an outlet, D, within said valve-seat, a guiding chambered plunger connected to said seat by the neck K and having an opening in the top, openings in the bottom, and an inner passage leading from the chamber thereof, the hollow valve F, closed at the top and adapted to cover said plunger when seated, the tube L, and chamber D', connecting said inner passage of plunger and said outlet D, said parts being combined substantially as described.

2. The combination of a tank having a valve-seat, with the outlet D leading from within said seat, with the stationary plunger J, connected to said valve-seat and having the chamber *b* in its upper part, with openings at top and bottom, the passage *a*, leading from said chamber and communicating with said outlet D, and a cup-shaped valve closed at top and open below, and adapted to closely encircle said plunger J and rest on said valve-seat, substantially as and for the purpose set forth.

3. The valve-seat with outlet-pipe D leading from within the same, the chambered guiding-plunger J, connected by the neck K

to said seat and having openings at top and bottom, the passage *a*, leading from the plunger-chamber, the chambered valve F, closed at the top and inclosing the plunger, the tube L, and chamber D', said parts being combined substantially as and for the purpose set forth.

4. A tank with valve-seat and outlet, the said valve-seat having connected therewith a guiding-plunger having an open top and bottom, and the chamber *b* and passage *a*, the valve F, the tube L, with valve-seat N, the valve P, connected to rod R, the overflow-tube M, with rod R therein, and the chamber D', leading from tube L to outlet D, said parts being combined substantially as and for the purpose set forth.

5. A tank with a raised valve-seat and an outlet leading from within said seat, a chambered plunger secured by a neck to said seat and having a passage leading from said chamber, a valve covering said plunger, mechanism, substantially as described, for raising and lowering said valve, a tube connected with said passage in said plunger and provided with an adjustable valve, and a chamber directly connecting said tube with the tank-outlet, said parts being combined substantially as described.

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Witnesses:

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