No. 634,572. Patented Oct. 10, 1899.

A. CLARKE.

FLOAT FOR FLUSHING TANK VALVES.

(Application filed Oct. 27, 1898.)

(No Model.)

Fig. 1.

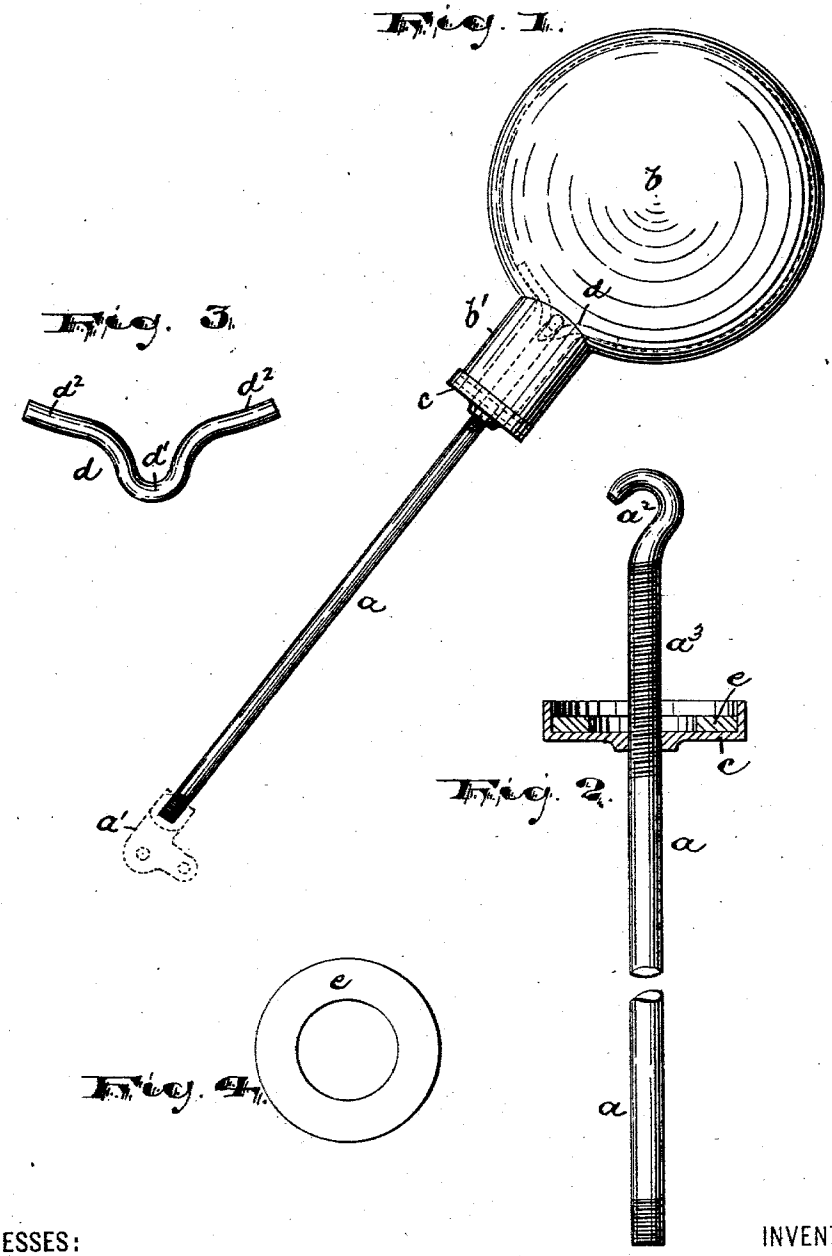


Fig. 3.

Fig. 2.

Fig. 4.

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FLOAT FOR FLUSHING-TANK VALVES.

SPECIFICATION forming part of Letters Patent No. 634,572, dated October 10, 1899.

Application filed October 27, 1898. Serial No. 694,653. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER CLARKE, a citizen of the United States, residing at the city of New York, borough of Brooklyn, and State of New York, have invented certain new and useful Improvements in Floats for Flushing-Tank Valves; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The objects of this invention are to reduce the cost of valve-operating floats for flush-tanks, &c.; to permit easy and convenient introduction of weights into said float, such as sand, for regulating the buoyancy thereof; to obtain with facility a perfectly-impervious joint where said float is attached to the rod connecting it to the valve of the water-supply pipe, and to secure other advantages and results, some of which may be hereinafter referred to in connection with the description of the working parts.

The invention consists in the improved valve-float for flushing-tanks, &c., and in the arrangements and combinations of parts, all substantially as will be hereinafter set forth and finally embraced in the clauses of the claim.

Referring to the accompanying drawings, in which like letters of reference indicate corresponding parts in each of the several views, Figure 1 is a side elevation of the improved float. Fig. 2 is a detail view of the hooked connecting-rod and the mouthpiece arranged thereon. Fig. 3 is a detail view of the inside stay adapted to be arranged within the bulb of the float to receive the hooked end of the connecting-rod, and Fig. 4 is a plan of a washer or packing employed to secure an impervious joint.

In said drawings, *a* indicates the connecting-rod adapted to be attached or coupled to a valve in any ordinary manner to effect an automatic opening and closing of said valve as the water in the flush-tank falls and rises. Said rod may be screwed upon the crank-lever *a'* (indicated in outline in Fig. 1) for operating the valve or may be attached to any other valve-operating device. At its extremity opposite its connection with the said crank-lever or other device the said rod *a* is hooked, as at a^2, and back from said hooked extremity said rod is threaded, as at a^3, to receive the perforated and threaded mouthpiece *c*.

The buoyant bulb *b* is cast of one integral piece of glass, with a neck and mouth *b'*, the bulb as a whole somewhat resembling an ordinary globular flask. Through said neck is inserted the hooked end of the connecting-rod *a*, which catches upon the inside stay *d*. Said stay is preferably a short piece of heavy wire bent into a **U** shape *d'* at its center, the **U**-bend serving to receive the hook and hold it in proper relation to the bulb. The **U**-bend enters the inner end of the mouth, while the extremities d^2 bear against the inside walls of the bulb back from said mouth, as indicated in outline in Fig. 1. Upon the threaded portion a^3 of the rod is arranged the mouthpiece *c*, which is preferably of cap-like form to fit over the end of the neck and protect the same and to receive the packing or washer *e*. The bearings for the stay are on the interior of the bulb, while the bearings for the mouthpiece *c* are at the outer end of the neck, and because of the extension of the neck the neck end bearings are removed a distance from the stay. Thus there is increased leverage between the mouthpiece and hook, tending to produce a firmer union of the rod and bulb than if the neck were dispensed with and an outside plate were placed against the body of the bulb. Furthermore, by employing a neck I am enabled to employ a cap which has a rim or flange e^2 fitting over the end of said neck more or less closely, and thus is prevented from moving laterally under pressure of the rod, all of which tends to a greater rigidity and firmness of connection. By turning the said cap *c*, which is threaded in correspondence with the rod *a*, upon the said rod *a*, against the end of the neck, the hook a^2 being caught upon the inside stay *d*, the bulb is held rigidly to the rod with great firmness and security, as will be evident, and yet the parts can be disconnected with great ease and quickness to permit

the introduction or removal of sand or other weighty matter to or from the bulb. The end of the neck serves as a seat for the packing lying against the mouthpiece, and the said packing serves to effect a joint through which water cannot pass.

Having thus described the invention, what I claim as new is—

1. The improved float for flushing-tank valves, comprising a hooked and threaded connecting-rod, a bulb, a stay inside of said bulb to receive the hooked end of the connecting-rod, and a threaded mouthpiece arranged on said rod and engaging the end of the neck, substantially as set forth.

2. The improved float for flushing-tank valves, comprising a bulb having an open neck, a bent stay arranged across the open mouth in said neck, a hooked connecting-rod, and a mouthpiece bearing against the outer end of said neck, substantially as set forth.

3. The improved float for flushing-tank valves, comprising a bulb having an open neck, a stay having its opposite ends bearing against the inside of said bulb and between said ends having a U-shaped bend turned into the mouth of said neck, a hooked rod catching the said stay at the U-shaped bend, and an outside mouthpiece holding the stay, rod and bulb in fixed relation, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 7th day of October, 1898.

ALEXANDER CLARKE.

Witnesses:

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