

(No Model.)

F. H. PARADICE.

SERVICE OR WATER TANK FOR WATER CLOSETS.

No. 392,359.

Patented Nov. 6, 1888.

Fig. 1.

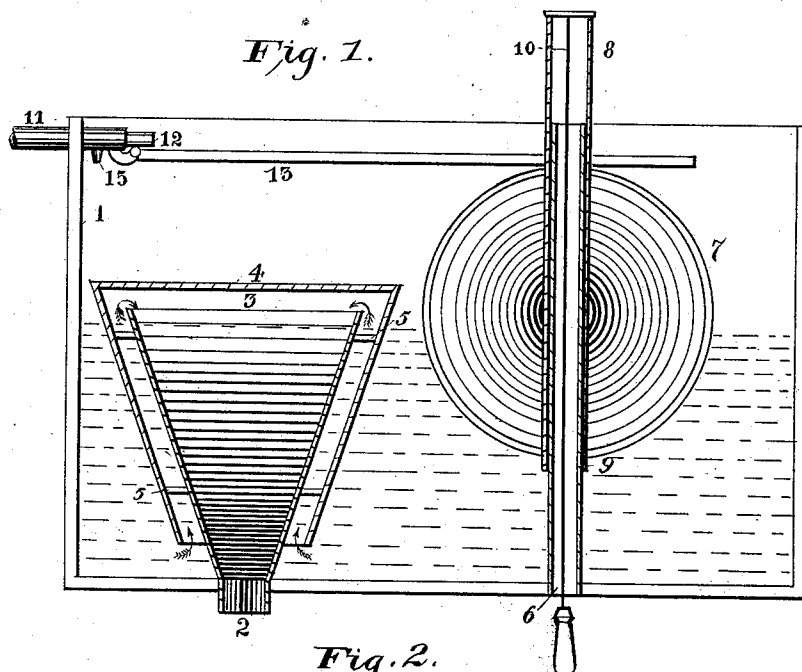
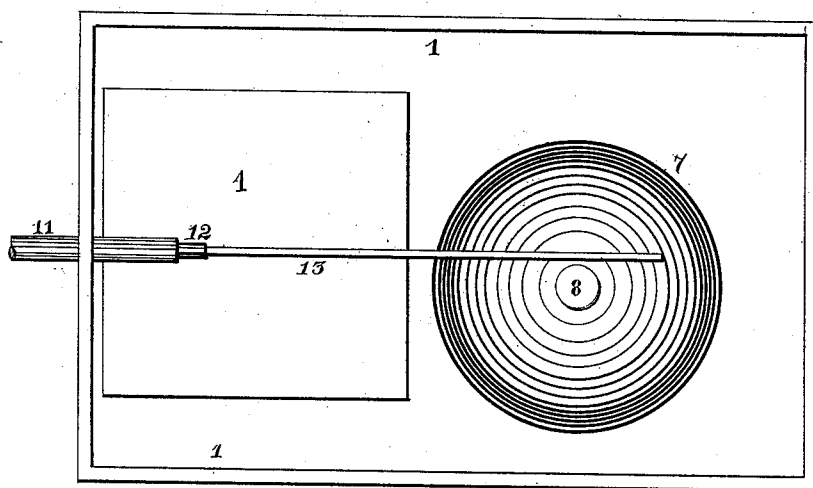


Fig. 2.



WITNESSES:

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SERVICE OR WATER TANK FOR WATER-CLOSETS.

SPECIFICATION forming part of Letters Patent No. 392,359, dated November 6, 1888.

Application filed November 25, 1887. Serial No. 256,150. (No model.)

To all whom it may concern:

Be it known that I, FRANK H. PARADICE, a subject of the Queen of Great Britain, but a resident of Denver, in the county of Arapahoe and State of Colorado, have invented a new and useful Service or Water Tank for Water-Closets, of which the following is a specification, reference being had to the accompanying drawings, forming part hereof.

My invention relates to that class of service or water tanks for flushing closets, bowls, &c., in which a siphon is used to effect the discharge of the flushing-stream; and its objects are to furnish a tank having a siphon-discharge easily thrown, when desired, into certain and speedy operation and with necessary force, of simple construction, durable, and reliable, to which ends it consists in the features more particularly hereinafter set forth and claimed.

In the drawings is illustrated a tank embodying my invention, in which drawings—

Figure 1 is a vertical longitudinal section of such a tank, and Fig. 2 a top or plan view thereof.

In the figures, the reference-numeral 1 indicates the service or supply tank, from which leads a discharge-pipe, 2, for conveying the water from the tank to the article to be flushed. This discharge-pipe 2 forms in effect the longer limb of a siphon, and it extends within the tank as an enlarged extension, 3, whose upper edge is just above the line at which it is desired to normally maintain the water-level within the tank. This enlarged end may be of the shape of a funnel or of an inverted pyramid, the latter being the form herein illustrated, the sides gradually inclining inwardly until the regular diameter or size of discharge 2 is reached. Surrounding this enlarged portion 3, and with walls or sides concentric or parallel thereto, is a cap, 4, supported from 3 by arms or lugs 5. It extends almost to the floor of the tank and forms the shorter limb or member of a siphon composed of it and pipe 2, with enlargement 3. The greatest enlargement of 3 relatively to the normal size of 2 is such that a small overflow around the entire upper edge of 3 shall be sufficient, flowing down and converging in 2 to fill 2, so as to instantly start the siphonage, and that with considerable force.

Passing vertically through the tank is a tube, 6, upon which is seated a displacement-float, 7. This seating is by means of a tube, 9, passing through an axis of the float and carried some little distance beyond its upper limit. To this extended end of tube 9, or to a cap or brace secured thereto, is attached a pull cord or chain depending therefrom through tube 6, so that the displacement-float 7 may readily be pulled down into the body of the water in the tank, raising the water-level sufficiently to instantly start the siphon 2 3 4 into operation.

11 is an ordinary service or supply pipe having a vent or nozzle, 15, for conducting water into the tank, and an ordinary valve, 12, controlled and operated by the lever 13. This lever is attached to the float 7, or to its tube 9, so as to move therewith, and the parts are so adjusted that the float 7 shall cause the closure of the valve when the water is at the desired normal level, the float causing the opening of such valve whenever it is pulled down to cause the displacement of water to start the siphon into operation.

This construction forms a very effective, reliable, and speedily-operating tank, the size of the float and the surface of the water being such relatively to each other that a very little more than normal submergence of the float starts the siphonage. A direct pull on the float is secured, avoiding any extra lever for that purpose, and the one float is made to do the double duty of starting the siphonage and controlling the inlet-valve.

The peculiar construction of the siphon insures economy and ease of construction and durability, as well as reliability.

Having thus described my invention, what I claim is—

1. The combination, in a flushing-tank, of a siphon having the upper end of its longer limb made as a funnel or an inverted pyramid whose walls flare outwardly uniformly from the bottom or near the bottom of the tank to the top of the limb, and having its shorter limb with walls parallel or concentric thereto and supported by arms therefrom, a tube extending vertically through the tank, a displacement-float attached to a second tube seated upon the vertical tube, a pull cord or chain depending through the vertical tube, an inlet-

valve, and a rod connecting such valve and the float, substantially as set forth.

2. The combination, in a flushing-tank, of a siphon consisting of tube 2, with the enlarged end 3, whose sides or walls flare uniformly outward from the base or near the base of the tank, a cap, 4, having sides or walls concentric thereto and supported therefrom by arms or braces 5, a tube, 6, extending vertically through the tank, a tube, 9, sliding thereon, a displacement-float, 7, secured upon 9, cord 10, depending through tube 6, and inlet-valve 12 and rod 13, connecting 12 and 7, substantially as set forth.

3. The combination, in a flushing-tank, of a siphon having the upper end of its longer limb made as a funnel or an inverted pyramid

whose walls flare outwardly uniformly from the bottom or from near the bottom of the tank to the top of the limb, and having its shorter limb made with sides or walls concentric or parallel thereto, and supported by arms or braces attached to both the longer and the shorter limb, a tube extending vertically through the tank, a displacement-float seated thereon, and means for manipulating the float, substantially as set forth.

In testimony whereof I have hereunto affixed my signature, in the presence of two witnesses, this 3d day of November, A. D. 1887.

FRANK H. PARADICE.

Witnesses:

J. P. RATIGAN,

Z. F. WILBER.