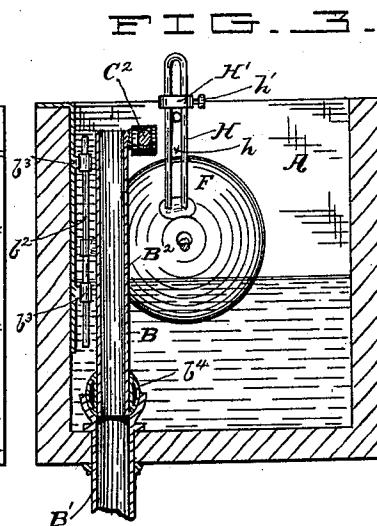
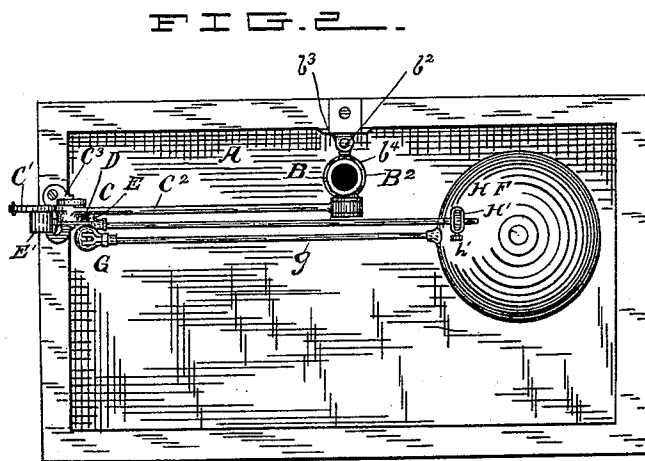
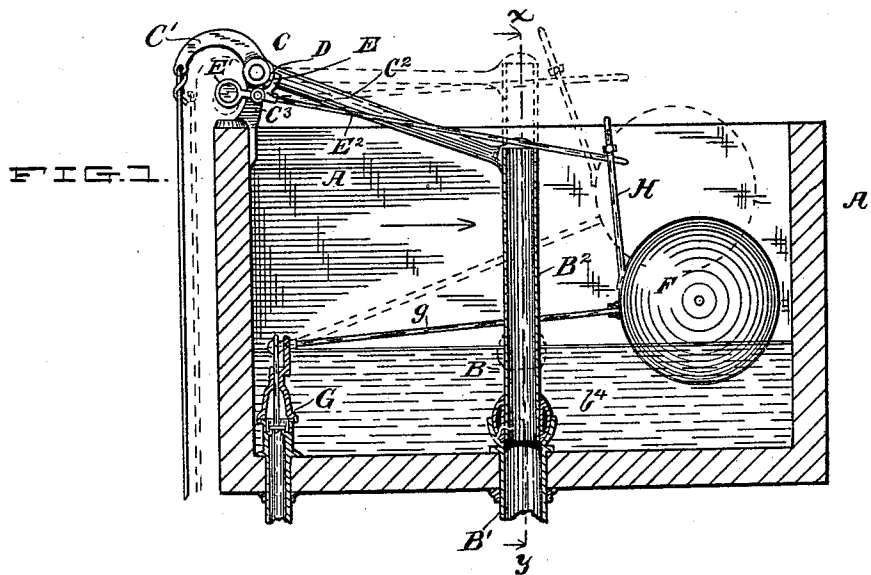


G. W. KEYSER.  
FLUSHING TANK.

Patented Sept. 29, 1891.



Witnesses.  
Fred S. Knodle  
Herter W. Fairis.

Inventor  
Geo. W. Keyser.

By his Attorney *Joseph A. McInturn*

# UNITED STATES PATENT OFFICE.

GEORGE W. KEYSER, OF INDIANAPOLIS, INDIANA.

## FLUSHING-TANK.

SPECIFICATION forming part of Letters Patent No. 460,536, dated September 29, 1891.

Application filed April 6, 1891. Serial No. 387,879. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE W. KEYSER, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Flushing-Tanks; 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.

This invention relates to improvements in flushing-tanks for water-closets; and it has for its objects, first, the construction of a flushing-tank in which the volume of discharge may be regulated by easy adjustment; second, to provide a flushing-tank that will be easy to operate and will continue to flow when started until the prescribed volume of water has been discharged; third, to provide a flushing-tank that will be noiseless in operation and will afford an ample and unobstructed outlet for the water during the entire discharge with an instantaneous and complete cut-off at the moment the prescribed volume has passed.

The invention consists in the novel features and combinations of parts, hereinafter fully described, and pointed out in the claims.

Referring to the accompanying drawings, Figure 1 represents a vertical sectional view of a flushing-tank constructed in accordance with this invention, the position of the parts being that immediately after a discharge of water from the tank, the dotted lines in this figure representing the positions of the parts just after the chain has been pulled by the operator and the discharge commenced. Fig. 2 is a top or plan view of the tank; and Fig. 3, a vertical section through the line  $xy$ , Fig. 1, looking in the direction of the arrow.

A represents the tank, which will be of usual construction; B, the outlet-pipe in two sections B' and B<sup>2</sup>. The section B' is stationary and connects the interior of the tank with the closet. It terminates on the inside near the bottom of the tank in a valve-seat  $b$ , which will preferably be conical or concave to insure a perfect register with the valve and secure a tight joint. The section B<sup>2</sup> is movable in a vertical direction, controlled by a slide-bar  $b^2$  fixed to the section B<sup>2</sup> and moving in the guides  $b^3$ , attached rigidly to the side of the tank. The

lower end of the tube B<sup>2</sup> is so constructed as to form a valve, by which the pipe B' will be closed when the section B<sup>2</sup> rests on the valve-seat  $b$ . A water-tight valve-joint will be secured, preferably by means of a spherical rubber packing  $b^4$ , on the end of the pipe B<sup>2</sup>. The upper end of the pipe B<sup>2</sup> is open and serves as an overflow in case from any cause an oversupply of water is admitted to the tank.

C is a lever having its fulcrum fixed to the side or end of the tank.

C' is the short arm of the lever, to which the chain for operating the mechanism of the tank is fastened, and C<sup>2</sup> the long arm pivotally connected at its end with the top of the pipe B<sup>2</sup>, as shown.

D is a projection or lug formed integral with the lever at a point approximately near the pivotal point, and is designed to be engaged by a pawl in order to lock the lever when the long arm is in a raised position.

E is the pawl here referred to. It is pivotally attached to the standard C<sup>3</sup>, and is thrown into locking contact with the lug D, preferably by the weighted extension E', although a spring or other device for automatically throwing the pawl into engagement may be used instead of a weight without departing from the spirit of this invention. The bar-extension E<sup>2</sup> is to throw the pawl out of engagement and unlock the lever C.

F is a float of well-known construction and is connected with the supply-valve G, also of known form, by the rod  $g$ .

H is a guide, which will be attached to the float F, either directly or indirectly, and has a vertical slot  $h$  therein, through which the end of the bar E<sup>2</sup> is projected, as shown in the drawings.

H' is a stop engaging the sides of the guide. It may be raised and lowered and secured at any point by the set-screw  $h'$ . By the descent of the float in emptying the tank the stop is so arranged that at a certain point it will press the bar E<sup>2</sup> down and unlock the lever C, thereby allowing the valve to close and checking the flow of water from the tank. By adjusting the position of the stop H' on the guide H it is plain that the amount of discharge may be regulated, and as the air at no time is allowed to enter the discharge-pipe a noiseless discharge is secured.

It is obvious that a float independent of the one that regulates the supply-valve might be introduced to actuate the pawl; and such a construction is not shown in the drawings because the function would be identical and the single float as effective and more economical; but it is not designed to limit this invention to either a single or a double float.

I claim—

- 10 1. In a flushing-tank, the outlet pipe B in two sections B' and B<sup>2</sup>, the upper section B<sup>2</sup> forming a valve and the lower section terminating at its upper end in a valve-seat to receive said valve and both sections together  
15 forming the overflow, and the lever C, fulcrumed to the wall of the tank and pivotally attached to the section B<sup>2</sup>, and by which said section may be raised, in combination with a pawl or catch E.
- 20 2. In a flushing-tank, the outlet-pipe B in two sections, the upper of which forms a valve and the lower section terminates at its upper

end in a valve-seat to receive said valve and both sections together forming the overflow for the tank, the lever C, fulcrumed to the wall of the tank and pivotally attached to the upper section so as to raise the section by moving the lever, and a pawl or catch pivotally attached and adapted by means of weights or springs to engage the lever C when the lever is raised and hold it in that position until the pawl is withdrawn from contact with the lever, in combination with a float having a catch fixed thereto to engage the pawl at any desired position of the float and throw the pawl out of contact with the lever, substantially as described, and for the purposes specified.

In testimony whereof I affix my signature in presence of two witnesses.

GEO. W. KEYSER.

Witnesses:

JOSEPH A. MINTURN,  
FRED S. KNODLE.