





# UNITED STATES PATENT OFFICE.

ALLEN R. GILMORE, OF ST. LOUIS COUNTY, MISSOURI.

## FLUSHING-TANK.

No. 912,665.

Specification of Letters Patent.

Patented Feb. 16, 1909.

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*To all whom it may concern:*

Be it known that I, ALLEN R. GILMORE, a citizen of the United States of America, residing in the county of St. Louis and State of Missouri, have invented certain new and useful Improvements in Flushing-Tanks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a water closet flushing tank and it has for its object the furnishing of means in connection with the float valve that controls the ingress of water into the flush pipe, whereby said valve is balanced when it is unseated in order that it will remain in an elevated position until the tank has been emptied in closet flushing action and will be permitted to return in a positive manner to its flush pipe controlling position as soon as the tank has become emptied.

Figure I is a vertical longitudinal section taken through my flushing tank. Fig. II is an enlarged top or plan view of the counterbalance lever that controls the flush valve and the operating lever located alongside of said first named lever. Fig. III is a cross section taken on line III—III, Fig. II. Fig. IV is an enlarged vertical section through the flush valve.

In the accompanying drawings, 1 designates a tank or cistern that may be of any desired construction.

2 is a flush pipe connection mounted in the tank 1 and provided interiorly of said tank with a valve seat member 3 through which water may be discharged into the flush pipe (not shown). The flush pipe connection is provided with a hollow lateral extension 4 to which is attached the vertical overflow pipe 5 that is provided at its upper end with a float valve 6.

A designates a flush valve that comprises a float 7 which is preferably of tubular form and provided with an open lower end and a valve seat member 8 surrounding said float, said valve seat member being preferably of rubber. The flush valve A is connected to a lift rod 9 that is operable in a guide 10 supported by the overflow pipe 5.

11 designates a counterbalance lever that is pivotally connected at its inner end to the upper end of the lift rod 9 and is provided at its outer end with a counterbalance 12. The counterbalance lever is pivotally supported intermediate of its ends by a bracket

13 secured to the tank 1. The counterbalance 12 is of such weight as to cause it to serve as a balance for the inner arm of the counterbalance lever 11, the lift rod 9 and the flush valve A, in order that when said flush valve is lifted from the valve seat member of the flush pipe connection, the parts will be evenly balanced and the flush valve will be approximately evenly balanced and will be supported by resting upon the water in the tank to descend again toward and to its seat as the water escapes from the tank through the flush pipe connection.

14 designates an operating lever to the outer arm of which a chain or other appliance may be attached for the operation of said lever. The operating lever is pivoted intermediate of its ends to the bracket 13 and it has a weighted inner arm 15, provided with a lug 16 which is located beneath the inner arm of the counterbalance lever 11. When the outer arm of the operating lever is lowered the inner weighted arm of said lever is elevated and acts through the medium of the lug 16 to elevate the inner arm of the counterbalance lever 11. As a result, the flush valve A is lifted from its seat and remains in a balanced position in the water that escapes from the tank through the flush pipe connection and flush pipe. Immediately upon the release of the operating lever its weighted inner arm descends and the counterbalance lever serves to sustain the flush valve until the water has escaped from the tank sufficiently to reach the flush valve, after which said flush valve gradually descends with the water to the valve seat member 3 of the flush pipe connection.

An important advantage in my flushing tank is that by the use of a counterbalance lever for the control of the flush valve I am enabled to use a very much more substantial flush valve and connection, such as the lifting rod, therefor than it is possible to use in the absence of such counterbalance lever.

I claim:

1. In a flushing tank, the combination of a flush pipe connection having a valve seat member, a float flush valve, a counterbalance lever having its inner arm connected to said flush valve and its outer arm provided with a counterbalance, and an operating lever having a weighted inner arm arranged for engagement with the inner arm of said counterbalance lever, substantially as set forth.

2. In a flushing tank, the combination of a

flush pipe connection having a valve seat member, a float flush valve, a counterbalance lever having its inner arm connected to said flush valve and its outer arm provided with a  
5 counterbalance, and an operating lever having a weighted inner arm provided with a lug arranged for engagement with the inner

arm of said counterbalance lever, substantially as set forth.

ALLEN R. GILMORE.

In the presence of—

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