

B. O. TILDEN.  
 FLUSH TANK OPERATING MECHANISM.  
 APPLICATION FILED FEB. 15, 1913.

1,061,705.

Patented May 13, 1913.

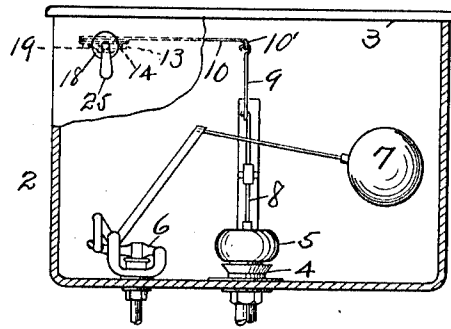


Fig. 1-

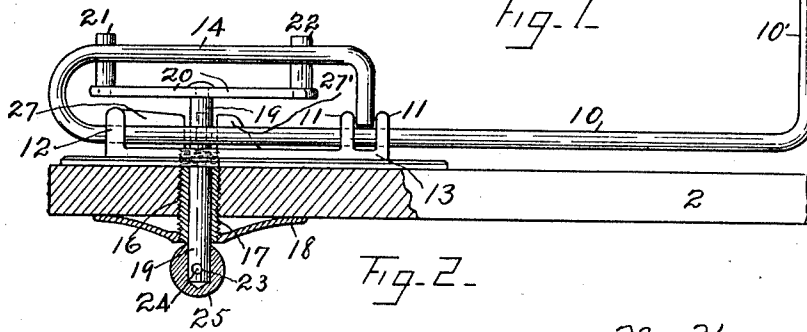


Fig. 2-

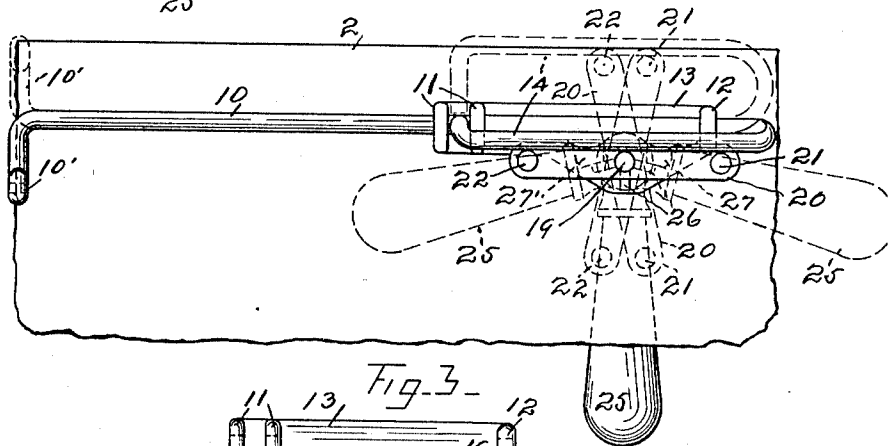


Fig. 3-

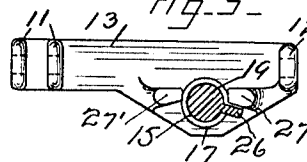


Fig. 4-



Fig. 5-

WITNESSES:  
*C. J. Woods*  
*O. L. Hummer*

INVENTOR.  
 BERTO. TILDEN.  
 BY *Harry DeMallone*  
 ATTORNEY.

# UNITED STATES PATENT OFFICE.

BERT O. TILDEN, OF NEW YORK, N. Y., ASSIGNOR TO AMERICAN SANITARY WORKS,  
OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

## FLUSH-TANK-OPERATING MECHANISM.

1,061,705.

Specification of Letters Patent.

Patented May 13, 1913.

Application filed February 15, 1913. Serial No. 748,534.

*To all whom it may concern:*

Be it known that I, BERT O. TILDEN, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Flush-Tank-Operating Mechanisms, of which the following is a specification.

This invention relates to improvements in means used in connection with water-closets, for the purpose of flushing the bowls thereof.

The object of the invention is to simplify and cheapen the construction and to lessen the number of parts commonly employed in connection with the flush tank operating mechanism.

In the following specification and claims will be found a detailed description of my invention, its operation and use, wherein reference is made to the accompanying drawing, which forms a part thereof, and in which—

Figure 1 is a front elevational view, partially in section, of a flush tank having my improved mechanism applied. Fig. 2 is an enlarged plan view, with portions broken away; showing the relative arrangement of the parts, when the operating handle is at rest, and the flush valve is closed. Fig. 3 is a rear elevation; showing by full and dotted lines, the arrangement and operation of the several parts of the mechanism. Fig. 4 is a rear face view of the bracket which supports certain of the operating parts. Fig. 5 is a bottom plan view of the bracket.

In the drawing, 2 represents the body of the flush tank, preferably of the "low-down" type, having a cover 3.

4 represents the seat of the flush valve, and 5 represents the said valve.

6 represents an inlet valve by which the water is supplied to the tank for flushing the bowl, and this valve is controlled by a ball-like float 7. The valve 5 is normally closed, and it is opened by means of lift rods 8 and 9, the latter rod connecting at its upper end to an arm 10' of a rocking lever 10, which is pivotally supported by a series of alined lugs 11 and 12 of a bracket 13, which is disposed at the inner side of the front wall of the tank. The lever 10 is preferably made out of a malleable rod, either brass or iron, and in applying said lever to the bracket 13, the rod is passed through suitable perforations in the lugs 11 and 12, and then bent

to form an elongated loop 14, the extreme end of the rod being brought into contact with the body of the lever between the lugs 11, for preventing longitudinal movement of the lever. The bracket 13 is perforated at 15, which perforation coincides with a similar perforation 16 formed in the front wall of the tank. The perforation 15 of the bracket is preferably threaded to receive the threaded inner end of a thimble or bushing 17 which pierces the tank, the outer end of the thimble being secured to an escutcheon 18. When the thimble, bracket and escutcheon are properly connected, the parts may be rigidly secured to the wall of the tank without other means.

19 represents a rock shaft which is inserted through and has its bearing in the thimble 17. The inner end of the shaft 19 is fitted with a transverse bar or double lever 20, arranged to provide oppositely pointing arms of substantially equal length extending at right angles to said shaft, the outer ends of said arms provided with studs or pins 21 and 22, both of which normally engage and support the loop 14 of the lever 10, when the operating parts are at rest, as while the flush valve 5 is closed. (See full lines in Figs. 1, 2 and 3.) The outer end of shaft 19 is provided with a threaded perforation 23 to receive a screw-threaded part 24 of a depending gravitative handle 25, by which shaft 19 and lever 10 are rocked for opening the flush valve 5. (See dotted lines in Fig. 3.) The arrangement of these last named parts is such that they all return to the rest position shown by the full lines in Figs. 1, 2 and 3, by gravity, after each operation. In order to limit the operative movements of the lever 10, shaft 19 and handle 25 to a distance sufficient to properly open the flush valve 5, I provide a stop-lug 26, which preferably is formed with the shaft 19, which is positioned near its inner end, and which is arranged to engage shoulders or projections 27 and 27', which are preferably formed on the inner face of the bracket 13, as best seen in Figs. 4 and 5. The stop 26 and the handle 25, when properly constructed and applied, also prevent the longitudinal movement of the shaft 19. The operation of the present device is extremely simple. When the user of the closet desires to flush the bowl, he grasps the handle 25 and swings it either to the right or

to the left, as shown by the dotted lines in Fig. 3. This swinging of the handle partially rotates the shaft 19, and the bar or double-lever 20 being rigid on the shaft, one or the other of the pins 21—22, lifts the loop 14 and thereby rocks the lever 10 in the direction for unseating the valve 5. Then when the operator lets go the handle 25, the handle and all of the other working parts are restored to the full line position, shown in the several views, by gravity.

It is obvious that some changes or modifications may be made in the parts of the mechanism, within the scope defined by the appended claims, without departing from the spirit of my invention.

Having thus described my invention, what I claim, is—

1. The combination with a flush tank and a flush valve therein, of a rocking lever, one end of said lever adapted to connect with said valve, the other end folded upon itself for forming an elongated loop, a bracket for supporting said lever, a shaft for operating said lever, one end of said shaft having a plurality of pins normally in engagement with said loop, one of said pins adapted when the shaft is rocked in opposite directions to remain in engagement with and to lift said loop and thereby tilt said lever in the direction for unseating said valve, means for limiting the rotary movement of said shaft, and means for manually rocking said shaft.

2. In a flush valve operating mechanism, a rocking valve lever having an arm at one end adapted to connect with the valve, the opposite end folded into a loop, a bracket for supporting said lever, said bracket having a plurality of alined perforated lugs for operatively supporting said lever, a rock shaft having at one end spaced pins normally in engagement with said loop, adapted when said shaft is rocked in opposite directions to lift said loop and thereby tilt said lever in the direction for opening the flush valve, a lug carried by said shaft and projections carried by said bracket adapted

for limiting the rocking movement of said shaft to less than a quarter turn, and a gravitative handle carried by the opposite end of said shaft for manually operating said shaft.

3. The combination with a flush tank and a flush valve therein, of a rocking lever, one end of said lever having an arm connecting with said valve, the other end comprising an elongated loop, a bracket to support said lever, said bracket mounted inside the tank and having a series of alined lugs each of which is perforated to receive and pivotally support said lever, two of said lugs being spaced sufficiently to receive a portion of said loop for preventing the longitudinal movement of said lever, a rock shaft, said shaft piercing the wall of the tank and also said bracket and having on its inner end a double-lever, said double-lever having spaced pins adapted to engage a portion of said loop, and means for rocking said shaft either to the right or to the left for effecting the tilting of said rocking lever and the unseating of said valve.

4. A flush valve operating mechanism, comprising a lever having one end connected with the flush valve, the opposite end formed into a loop, a bracket for pivotally supporting said lever, a rock shaft journaled in said bracket, one end of said shaft having spaced studs adapted to engage the underside of said loop, a handle carried by the other end of said shaft, said handle capable of being swung in opposite directions for rocking said shaft for effecting the tilting of said lever first by one, and then by the other of said studs, and a stop-lug carried by said shaft adapted for limiting the operative movements of said shaft and said lever.

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

BERT O. TILDEN.

Witnesses:

F. A. WILKIE,  
E. J. OUTRAM.