Oct. 8, 1935. W. A. HENN 2,016,635

FLUSH TANK

Filed April 4, 1934

Fig. 1.

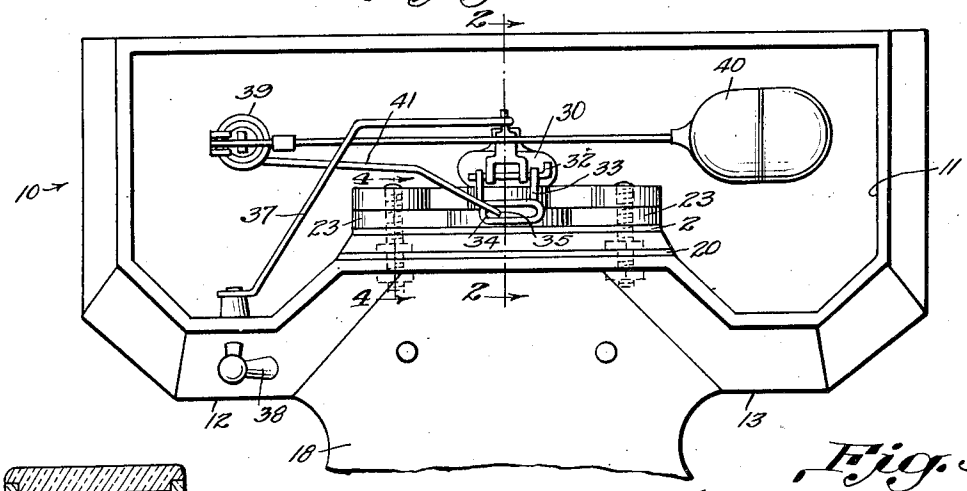



Fig. 3.

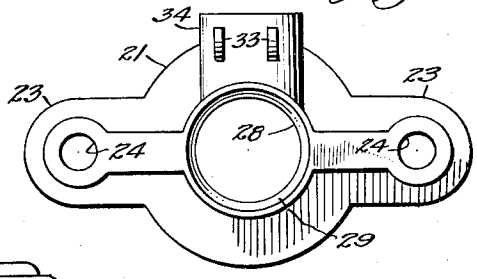



Fig. 2.

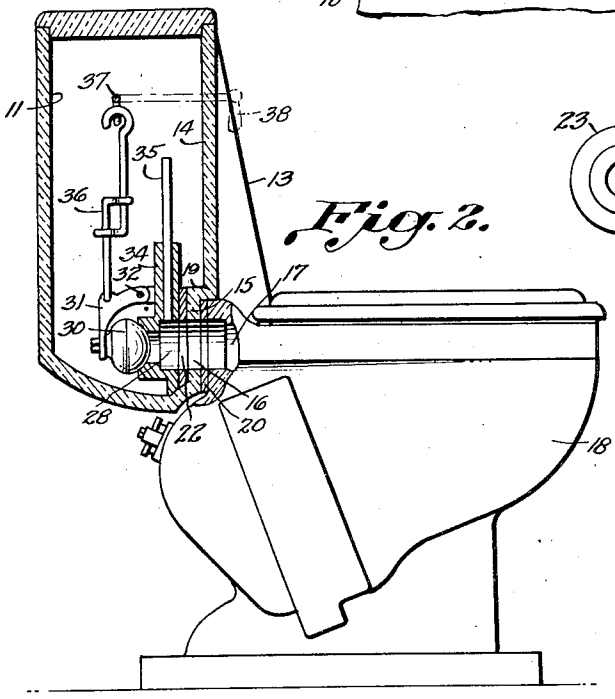



Fig. 4.

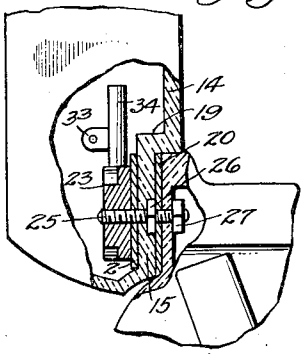
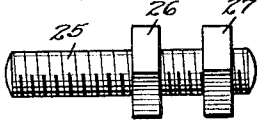



Fig. 5.




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# UNITED STATES PATENT OFFICE

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## FLUSH TANK

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Application April 4, 1934, Serial No. 718,997

7 Claims. (Cl. 4—13)

This invention relates to a flush tank for water closets and has for an object to provide an improved flush tank which will cooperate with a flush bowl so that the flush bowl will project a minimum distance from the wall behind the flush tank.

A further object of this invention is to provide a flush tank having a central recessed portion and two offset wings whereby the recessed portion may cooperate with the flush bowl allowing the flush bowl to occupy a minimum amount of floor space and be placed a minimum distance from the rear wall of the flush tank.

A further object of this invention is to provide an improved means of sealing the flushing bowl to the flush tank whereby the bowl and tank will have the appearance of being a single unitary construction very neat in appearance.

With the foregoing and other objects in view, as will hereinafter become apparent, this invention comprises the constructions, combinations and arrangements of parts hereinafter set forth, disclosed and shown on the accompanying drawing. In this drawing,

Figure 1 is a plan view of the flush tank with the cover plate removed,

Figure 2 is a sectional view taken approximately on the line 2—2 of Figure 1,

Figure 3 is a rear view of the collar,

Figure 4 is a sectional view taken approximately on the line 4—4 of Figure 1, and

Figure 5 is a side elevation of one of the stud bolts.

The flushing bowl 10 constituting this invention consists of a water box 11 having a pair of forwardly protruding wings 12 and 13 between which is placed a recessed wall 14. The recessed wall 14 has an offset wall 15 through which extends the outlet 16 leading to the inlet 17 of the toilet bowl 18. The particular details of this toilet bowl 18 are more particularly set forth and disclosed in a companion case executed of even date herewith by this applicant and filed concurrently herewith.

As will be observed the inlet 17 extends beneath the shoulder 19 of the offset 15 and a sealing gasket 20 is provided between the outlet 16 and the inlet 17. Within the box 11 a collar 21 holds a gasket 22 against the inside of the offset 15. The collar 21 is provided with a pair of wings 23 through which extends threaded apertures 24 to receive the studs 25. The studs 25 are threaded into these wings 23 and then project through suitable openings in the offset 15. These openings in the offset 15 are provided with countersunk wells so as to permit nuts 26 to be threaded thereon, holding the collar 21 tight against the gasket 22 and the inside of the offset wall 15.

The toilet bowl 18 is then placed with its inlet 17 against the offset 15 and is provided with suitable apertures to extend over the end of the studs 25. After being put in position with the gasket 20 therebetween, nuts 27 serve to draw the inlet 17 of bowl 18 tight against the offset 15 below the shoulder 19, making a very tight seal between the water box 11 and the toilet bowl 18, and at the same time making the combined water box 11 and toilet bowl 18 have the appearance of a single unitary construction.

The collar 21 is provided with a flushing aperture 28 leading to the outlet 16, and this aperture 28 terminates in a valve seat 29, against which the soft rubber ball valve 30 is adapted to seat and seal the same. The ball valve 30 is secured on the bell crank 31, the bell crank 31 being swiveled on a pin 32 extending therethrough and through a pair of lugs 33 on the back of an overflow conduit 34 leading to the aperture 28. This overflow conduit 34 is provided with an overflow pipe 35 for maintaining the water level in box 11 at the predetermined desired height.

In order to operate the valve 30 and flush the bowl the usual telescoping connecting arms 36 are adapted to be raised by the lever 37 operated by handle 38. A conventional inlet valve 39 is operated by the float 40 in the usual manner and is provided with the usual reseal pipe 41 leading to the overflow 35.

The novel features and the operation of this device will be apparent from the foregoing description. While the device has been shown and the structure described in detail, it is obvious that this is not to be considered limited to the exact form disclosed, and that changes may be made therein within the scope of what is claimed without departing from the spirit of the invention.

Having thus set forth and disclosed the nature of this invention, what is claimed is:

1. A water closet flush tank comprising a water box, a recessed vertical front wall on said water box at the center thereof, a shouldered offset located in said recessed front wall, a discharge outlet in said shouldered offset and a pair of protruding wings on either side of said recessed wall, said discharge outlet in said offset of said recessed wall being adapted to be connected to the toilet bowl, and said protruding wings increasing the capacity of said water box.

2. A flushing tank for water bowls including

a vertical front wall, a shouldered offset in said front wall, a water discharge outlet in said offset, a collar, a valve port through said collar, means for securing and sealing said collar with its valve port leading to the discharge opening through said wall, and a valve seat on said valve port.

3. A flushing tank for water bowls including a vertical front wall, a shouldered offset in said front wall, a water discharge outlet in said offset, a collar, a valve port through said collar, means for securing and sealing said collar with its valve port leading to the discharge opening through said wall, and a valve seat on said valve port, an overflow conduit projecting from said collar and connecting to said valve port.

4. A flushing tank for water bowls including a front wall, a water discharge outlet in said front wall, a collar, a valve port through said collar, means for securing and sealing said collar with its valve port leading to the discharge opening through said wall, a valve seat on said valve port, and means on said collar above said valve port pivotally supporting a ball valve adapted to close against said valve seat.

5. In a water closet flushing tank having a discharge outlet leading from the tank to the water closet; a valve supporting valve seat member, means for securing said valve seat member in the flushing tank, a valve port leading from said valve seat to the tank outlet, said securing means including a pair of oppositely extending wings threaded stud receiving means in said wings, and threaded studs extending through the flushing tank wall holding said valve seat member in proper position.

6. In a water closet flushing tank having a discharge outlet leading from the tank to the water closet; a valve supporting valve seat member, means for securing said valve seat member in the flushing tank, a valve port leading from said valve seat to the tank outlet, said securing means including a pair of oppositely extending wings, threaded stud receiving means in said wings, and threaded studs extending through the flushing tank wall holding said valve seat member in proper position, an overflow member projecting upwardly from said valve seat member, and lugs formed on said overflow member pivotally supporting a valve thereon adapted to seat against said valve seat.

7. In combination, a flushing tank and a toilet bowl, means for securing said flushing tank to said flushing bowl, said means including a collar member within said flushing tank, a gasket member between said collar member and said flushing tank, a second gasket member between said flushing tank and said toilet bowl, stud means threadedly secured in said collar member and extending through said flushing tank and said toilet bowl, nut means on said stud means drawing said collar member against said flushing tank, a second nut means on said same stud means securing said toilet bowl against said flushing tank, an outlet passage extending through said collar member, gasket means, flushing tank, into said toilet bowl, a valve seat on said discharge outlet of said collar member, and means on said collar member pivotally supporting a valve member adapted to close against said valve seat.

WILLIAM AUGUST HENN.