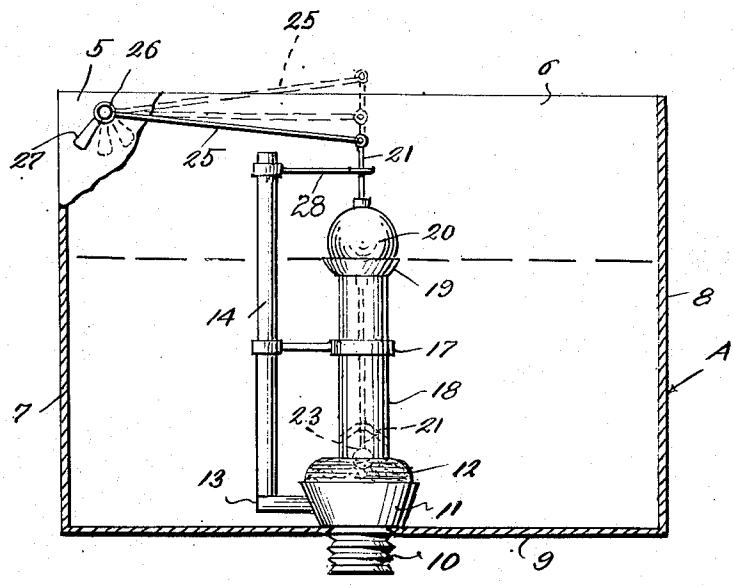
Aug. 28, 1956 G. H. LOYD 2,760,206

FLUSH TANK

Filed Dec. 9, 1953

Fig. 1.



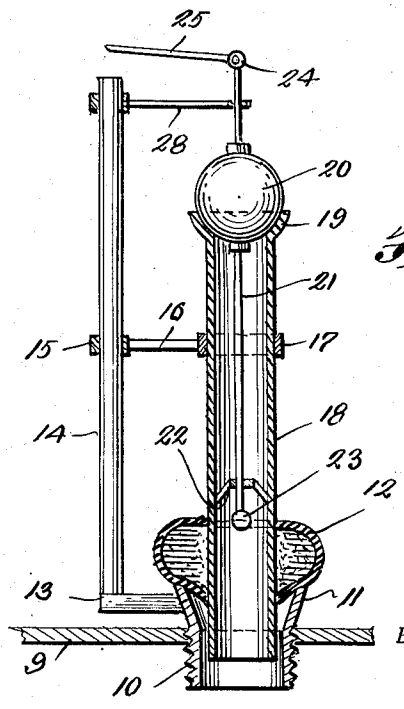


Fig. 2.

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FLUSH TANK

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1 Claim. (Cl. 4—57)

This invention relates to flush tanks and more particularly to a water control therefor.

Rural districts in particular employ septic tanks, because of the absence of sewerage systems and the contents of toilet bowls are flushed into these tanks and frequently with much more water than is necessary. From time to time these septic tanks must be pumped out. This requires considerable time in many cases and would be needless if the water used in flushing the toilet bowls could be controlled and minimized where only a limited amount of water was necessary, as when the bowl had merely been used for urination.

Therefore, it is an important object of the present invention to provide control means for the usual toilet flush tank, whereby a full amount of water can be used in flushing the bowl when the requirement demands, or in the instance where there is very little foreign matter to be flushed or simply urine to be flushed, a small amount of flush water is employed.

Another object of the invention is to provide means in conjunction with flush tanks for the conservation of water and also to save frequent pumping out of septic tanks.

Still another object of the invention is to provide a flush tank construction of the character stated which is of simple construction and capable of being manufactured and retailed at a low monetary figure.

These and various other objects and advantages of the invention will become apparent to the reader of the following description.

In the drawing:

Figure 1 is a fragmentary vertical sectional view through the improved flush tank showing the mechanism thereof in side elevation.

Figure 2 is an enlarged side elevational and vertical sectional view of the flush tank mechanism.

Referring to the drawing wherein like numerals designate like parts, it can be seen that reference character A denotes a flush tank having a front wall **5**, a rear wall **6**, end walls **7**, **8** and a bottom wall **9**.

Threadedly disposed through the bottom **9** is a fitting **10** to which the usual flush pipe (not shown) is attached. The upper portion of the fitting **10** is flared to provide a valve seat structure **11** upon which float **12** can rest and of course perform its valvular action.

In further carrying out the present invention, a bracket **13** extends over the valve seat **11** and has a post **14** rising therefrom. A collar **15** at a medial portion on the post **14** has an arm **16** extending laterally therefrom and this arm is provided with a ring **17** which serves as a guide for a vertically slidable tube **18**, this tube **18** being cupped at its upper end as at **19** to receive a ball float **20** fixed on a vertical rod **21**, this rod extending downwardly through

a guide spider **22** within the tube **18**, the lower end of the rod **21** being provided with a small head **23** which prevents the rod **21** from rising in the tube **18** above the spider **22**, the upper end of the rod **21** above the ball float **20** is pivotally connected as at **24** to an elongated arm **25** which is preferably connected to a crank on a shaft **26** journalled through the front wall **5** of the tank, the outer end being provided with a handle **27**.

A guide **28** is provided at the upper end of the post **14** for the upper portion of the rod **21**.

In the use and operation of this mechanism, it can be seen that by a short movement of the handle **27**, the ball **20** is lifted, inasmuch as it is affixed to the rod **21** and will allow only a certain volume of water to pass downwardly through the tube **18** and the outlet fitting **10** to flush the usual toilet bowl (not shown). When there is nothing much in the way of material in the bowl, such as liquid matter and particularly urine, only a small amount of water is necessary to flush the bowl. Thus water is conserved and a surplus water is not admitted to the septic tank. However, should full flush be desired the handle **27** should be moved counterclockwise to its full extent, thus causing the rod **21** to rise and the head **23** thereof to engage the spider guide **22**, thus lifting the tube **18** and removing the float **12** from the seat structure **11**, thus permitting the assembly to float as the entire contents of the tank passes downwardly through the fitting **10** to the bowl.

The amount of water liberated by lifting the upper valve or ball **20** can be one-quarter, one-third or as much as one-half of the content of the tank.

While the foregoing description sets forth the invention in specific terms, it is to be undesrtood that numerous changes in the shape, size and materials may be resorted to without departing from the spirit and scope of the invention as claimed hereinafter.

Having described the invention what is claimed as new is:

In a flush tank for toilet bowls, a tank having a bottom, a drain fitting extending through the bottom and having a valve seat at its inner end, a vertical water discharge tube, a vertical post carried by said fitting, a guide on the post through which the tube is slidable, a float at the lower portion of the tube adapted to rest upon said seat, a vertically movable rod slidable within the tube and provided with a head at its lower end portion, a stop in the tube for said head, a second valve seat at the upper end of the tube, a second float on the rod engageable with said second seat, a control handle, an elongated arm controlled by said handle, said arm being pivotally connected to the upper end of the rod, said arm being adapted to be moved upwardly by actuating the arm to lift the rod and remove the second float from its seat to permit a limited amount of water to pass through the tube and into the drain fitting, said rod being adapted to be lifted further so that the head of the rod can engage the stop to lift the tube and the first-mentioned float in order to permit the entire contents of the tank to pass out through the drain fitting.

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