Sept. 26, 1933. J. A. GEROME 1,928,483

DISINFECTING DEVICE

Filed Sept. 28, 1932

Fig. 1.

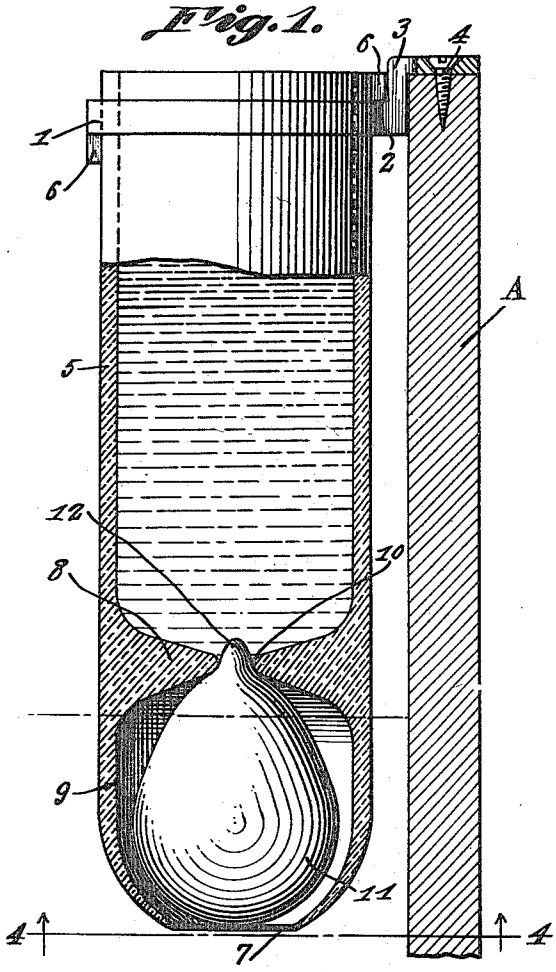


Fig. 2.

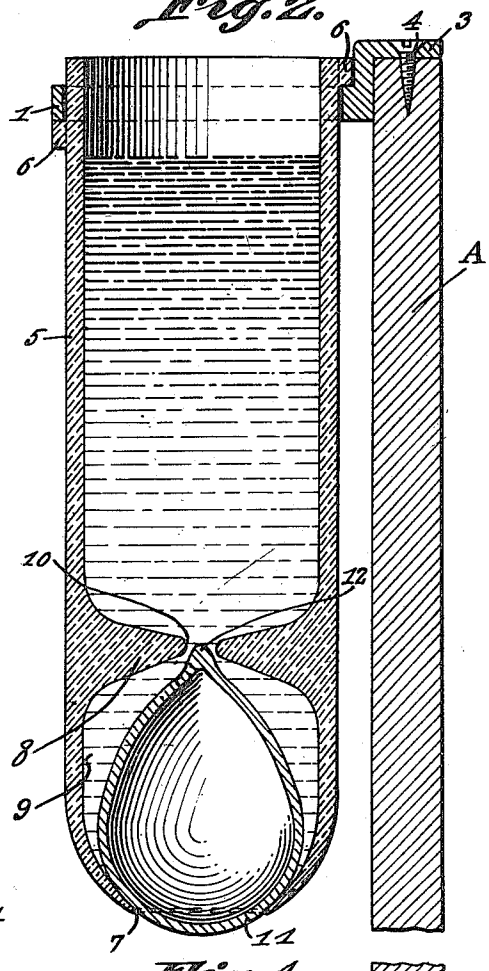


Fig. 3.

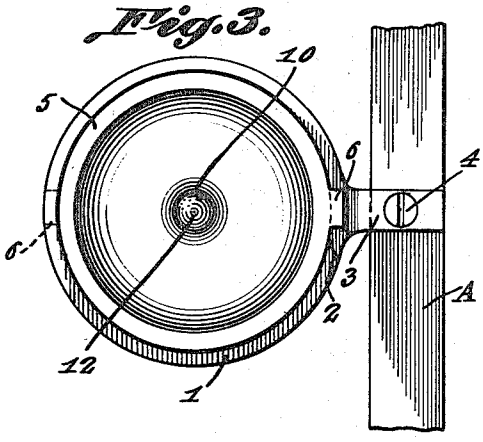
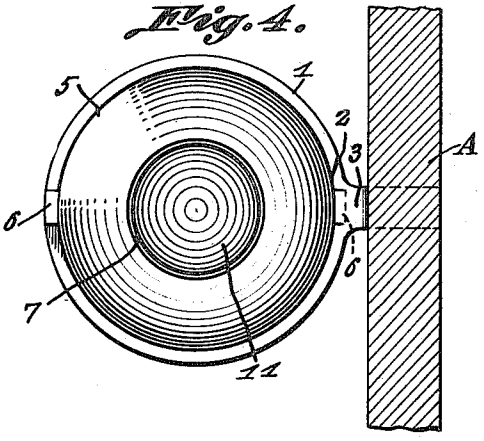


Fig. 4.



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DISINFECTING DEVICE

John A. Gerome, Kitchener, Ontario, Canada

Application September 28, 1932
Serial No. 635,292

3 Claims. (Cl. 4—228)

This invention relates to disinfecting devices and its general object is to provide a device of that character for use with water-closets and the like for automatically supplying a sufficient quantity of disinfecting material to the water prior to the time it is released for flushing the bowl, with the result the water will be completely impregnated with the material, therefore the bowl will not only be rinsed by the flushing water, but will be disinfected and retained in a sanitary condition with very little effort, as the device needs no attention other than filling it with the disinfecting material when the supply therein has become exhausted.

A further object of the invention is to provide a disinfecting device of the character set forth, that is simple in construction, easy to apply, inexpensive to manufacture and extremely efficient in operation and service.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawing and specifically pointed out in the appended claims.

In describing my invention in detail, reference will be had to the accompanying drawing wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is a view partly in section and illustrating my device applied in a flush tank, with the valve held in closed position by the water in the tank.

Figure 2 is a longitudinal sectional view illustrating the valve in open position.

Figure 3 is a top plan view.

Figure 4 is a sectional view taken approximately on line 4—4 of Figure 1, looking in the direction of the arrows.

Referring to the drawing in detail, the letter A indicates one wall of a flush tank for a toilet bowl or the like and my device is designed to be mounted within the flush tank through the instrumentality of suitable bracket means which I have illustrated as being a band 1 that is formed from resilient material and split as at 2 for a purpose which will be presently apparent. The band has formed therewith an angle bracket 3 which is provided with an opening to receive a screw or like securing means 4 for fixedly associating the band to the upper end of the wall A as clearly shown in Figures 1 and 2.

My device includes a container 5 which is of elongated cylindrical formation and is preferably provided with an open top, with lugs 6 extending outwardly from adjacent the top, one of which engages the upper surface of the band 1, while the other lug engages the under surface thereof, with the result the container is held against movement in either a downward or upward direction, as it will be obvious that the water within the flush tank may have a tendency to cause the container to rise in the event the contents thereof should become practically exhausted. The container is arranged in the band merely by springing the band apart and inserting the container therein as best shown in Figure 2.

The container is preferably formed from glass and is provided with a rounded bottom having an outlet opening 7 arranged centrally therein, and a partition 8 is arranged in the container a suitable distance above the bottom to provide a chamber 9. The partition has arranged centrally therein an opening 10, and it will be noted that the wall of the partition about the opening is shaped to provide a valve seat, and the rounded bottom provides a valve seat about the outlet opening 7.

Arranged in the chamber is a substantially oval shape ball valve 11 which is formed from rubber, and at its small end is provided a teat 12 which is normally arranged in the opening 10 as shown in Figure 2, so as to guide the valve to the position as shown in Figure 1. The valve is formed from rubber and of course is of the buoyant type as will be apparent upon inspection of Figures 1 and 2.

From the above description and disclosure of the drawing, it will be obvious that I have provided a disinfecting device primarily designed for use with the flush tanks or the like of water-closets, urinals, etc., and as the tank is being filled with water, it will be obvious that as the water rises it will lift the valve accordingly and cause the small end to close the opening 10, which is the normal position of the valve. However, when the tank is emptied, the valve will fall to the position as shown in Figure 2, and the base portion of the valve will close the outlet opening 7. When the valve is in the last mentioned position, the opening 10 is uncovered, with the result disinfecting material within the container will pass through the opening 10 into the chamber 9.

As the tank is again being filled with water, the valve will rise to the position as shown in Figure 1 and release the disinfecting material from the chamber 9, through the outlet opening 7, with the result the water within the flush tank will be impregnated with the disinfecting material prior

to each time the water is released from the tank, therefore it will be apparent that my device will cooperate with the flush tank in retaining a toilet bowl or the like in a clean and sanitary condition.

It is thought from the foregoing description that the advantages and novel features of my invention will be readily apparent.

I desire it to be understood that I may make changes in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claims.

What I claim is:—

1. A disinfecting device comprising a container to receive disinfecting material, means for mounting said container within a flush tank, a curved bottom for said container and being provided with an outlet opening, a partition arranged in said container and having an opening therein, said partition cooperating with the bottom to provide a chamber, and means in said chamber for controlling the openings.

2. A disinfecting device comprising a container of elongated cylindrical formation and having an open top and a closed bottom, the latter being provided with an opening, means for securing said container within a flush tank, a partition arranged in said container adjacent the bottom for cooperation with the latter to provide a chamber, said partition being provided with a centrally disposed opening, a buoyant valve arranged in said chamber for alternately opening and closing the openings, and means formed with said valve and arranged in the opening of the partition to retain and guide the valve with respect thereto.

3. A disinfecting device comprising an elongated cylindrical container having an open top and a rounded bottom, the latter being provided with an outlet opening, means for supporting the container within a flush tank and including a split ring, lugs formed with the container and engageable with the ring to hold the container against upward or downward movement, a partition arranged in said container adjacent to the bottom thereof and cooperating with the bottom to provide a chamber, said partition having a centrally disposed opening, a buoyant valve arranged in the chamber and adapted for alternately opening and closing the openings.

JOHN A. GEROME.