

D. E. FITZGERALD.
 DRY CLOSET.
 APPLICATION FILED SEPT. 16, 1910.

1,014,213.

Patented Jan. 9, 1912.

2 SHEETS—SHEET 1.

Fig. 1.

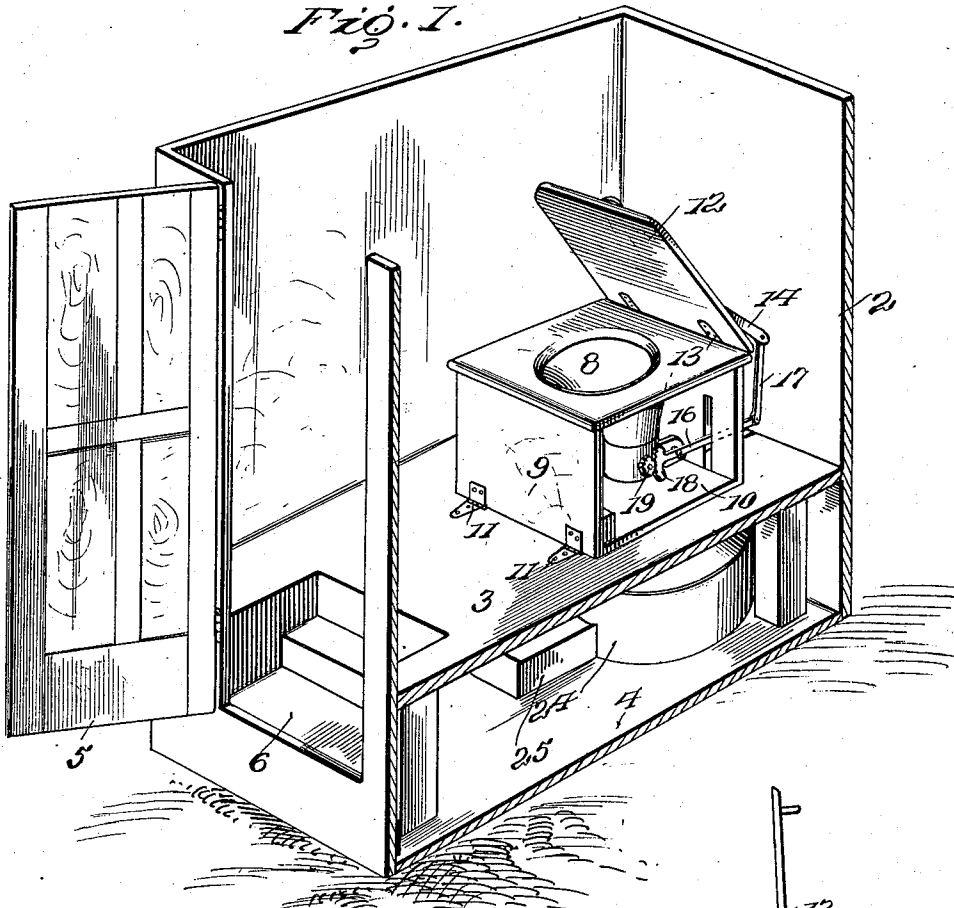


Fig. 3.

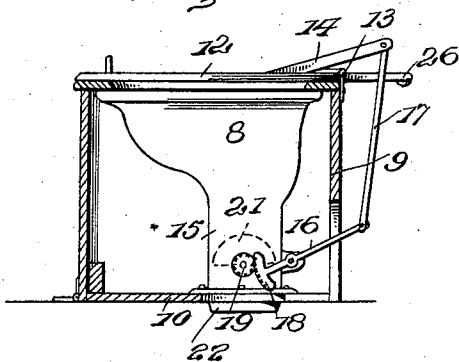
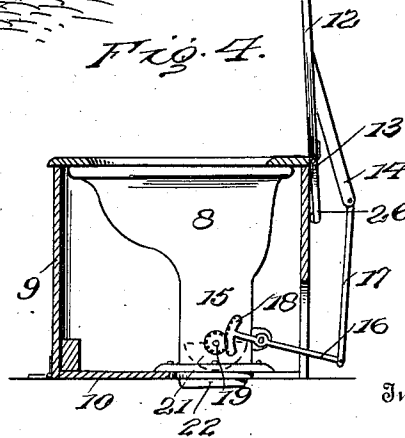


Fig. 4.



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2 SHEETS-SHEET 2.

Fig. 2.

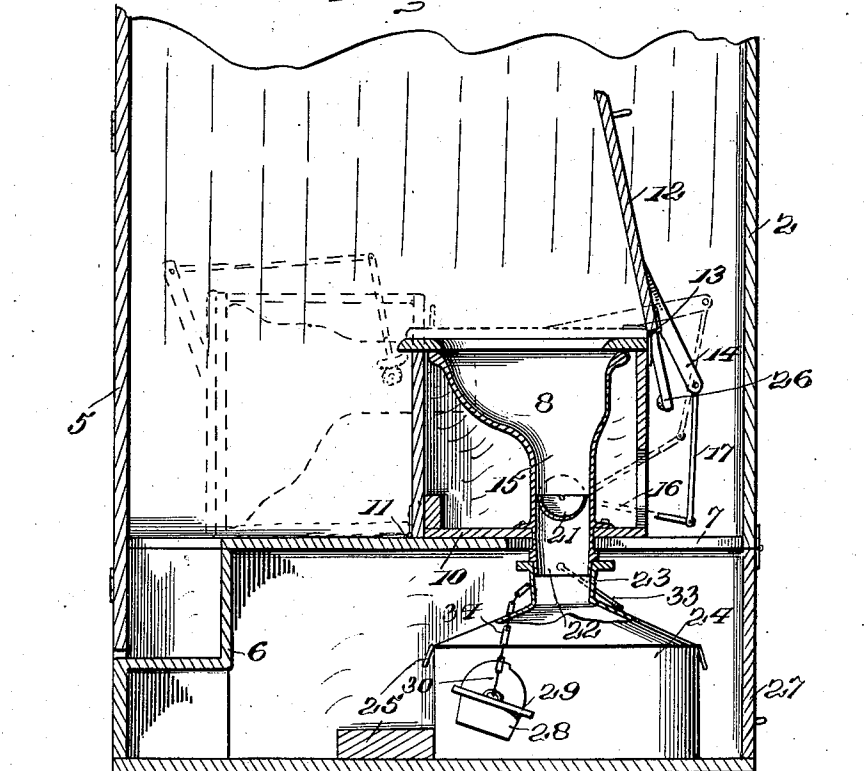


Fig. 5.

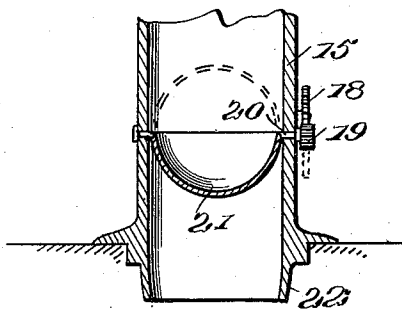
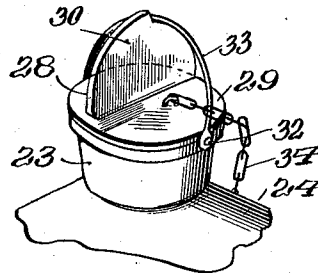


Fig. 6.



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UNITED STATES PATENT OFFICE.

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DRY CLOSET.

1,014,213.

Specification of Letters Patent.

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Application filed September 16, 1910. Serial No. 582,427.

To all whom it may concern:

Be it known that I, DANIEL E. FITZGERALD, citizen of the United States, residing at Shawnee, in the county of Pottawatomie and State of Oklahoma, have invented certain new and useful Improvements in Dry Closets, of which the following is a specification.

My invention relates to dry closets and the object of the invention is generally to provide a dry closet of an exceedingly convenient form which is peculiarly adapted to prevent the conveyance of disease by flies or other insects. The primary object of the invention is to provide a dry closet which is so sealed both when in use or when not in use that it is impossible for flies or other insects to visit the fecal or other matter contained in the receiver. Further, to provide a dry closet in which the receiver is normally sealed except at the moment of raising or lowering the lid.

A further object of the invention is to provide a bowl or hopper of the closet with a completely rotatable trap valve which is so connected with the seat cover that when the lid or cover is raised the trap valve is rotated from an inverted to a receiving position and in which it is returned to its inverted position when the lid is closed, the trap valve having such relative dimensions that when it is in its receiving or inverted position it will completely close the lower end of the hopper or bowl and thus completely cut off communication between the outer air and the receiver.

A still further object is to provide a construction of this kind with a bowl or hopper which is hinged to the floor or platform of the closet so that it may be raised out of its engagement with the neck of the receiver, thus permitting the receiver to be easily sealed and removed, and a new receiver to be put in place.

A still further object is to provide the receiver with a novel form of closure whereby the closure may be closed down tightly into the neck of the receiver to prevent the passage of any germs into the air when the receiver is removed.

Other objects of the invention will appear in the course of the following description.

For a full understanding of the invention and the merits thereof, and to acquire a

knowledge of the details of construction, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a perspective view of my improved closet, partly in section. Fig. 2 is a vertical section of the closet and the bowl. Fig. 3 is a section through the casing of the bowl showing the lid and trap in one position. Fig. 4 is a like view showing the lid and trap in another position. Fig. 5 is a fragmentary transverse vertical section of the neck of the bowl or hopper. Fig. 6 is a perspective view of the tank or receiver with the closure therefor locked in position.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawings, 2 designates a room, building, privy, or like structure preferably isolated and provided with a floor 3 which is raised above the ground line 4. This privy is provided with a door 5 and steps 6 upon which the door opens, these steps leading to the floor 3. The floor 3 is cut away as at 7 to provide a rearwardly extending relatively wide slot through which the neck of the receiver and the neck of the bowl or hopper extend, as will be later described.

The bowl or hopper 8 may be of any suitable construction and form, and may be supported in any suitable manner so that it has a hinged engagement with the floor, permitting the hopper or bowl to be turned downward to the position shown in dotted lines in Fig. 2, or turned upward to its normal position. As shown, the bowl or hopper 8 is inclosed within the box-like casing 9, provided with the base-piece 10, which base-piece is hinged at 11 to the floor, the hinges being disposed on each side of the slot 7. The other end of the base-piece 10 is free. The lid 12 is supported upon the upper end of the hopper or supported upon the frame 9. This lid is hinged at its rear end as at 13. Attached to the seat and projecting out therefrom is an arm 14, and pivoted in any suitable support upon the neck of the hopper 8 is a lever 16, which at its outer end is connected to the arm 14 by a pivoted link 17. The lever 16 is provided at its inner end with a sector gear 18 which engages with a pinion 19 on a trunnion 20

of the valve 21. This valve is circular in plan and is concavo convex. The valve is normally disposed in a horizontal plane transverse to the neck 15 and normally the concavo side of the valve is downward. When, however, the seat is elevated, the arm 14 will be depressed, depressing the lever 16 and causing the sector gear thereof to rotate the pinion 19 and thus rotate the trap valve 21 so as to turn it into a position where its concave side is upward.

The neck 15 of the bowl or hopper projects down below the floor 3 as at 22 and is slightly beveled on its outside face or is inwardly contracted so as to fit into the upwardly flared neck 23 of a receiver 24. This receiver preferably has the form of a tank or can having an inwardly contracted upper portion, provided with the upwardly and outwardly flared neck 23. The receiver 24 is located in a position immediately beneath the bowl and in order to permit the receiver to be placed in its proper registered position I provide the ground line or floor 4 with any suitable stop 25 against which the receiver normally abuts, this stop 25 being concave on one edge so as to conform to the curvature of the receiver. The lid or cover 12 is also provided with a downwardly projecting arm 26 which acts as a stop when the lid or cover is raised to prevent its movement to a vertical position, the arm 26 contacting with the rear face of the frame 9. It will be seen that the lid can not be held open unless the closet is in use.

In order to permit the receiver 24 to be removed, I provide the rear of the privy or outhouse with the door 27 which is hinged at its upper end so as to permit it to be moved upward to permit the receiver to be drawn out. The slot 7 permits the casing 9 to be raised or tilted over so as to disengage the lower end 22 of the bowl from the mouth of the container 24. If it were not for this slot it would be necessary for the person moving the container to enter the front of the privy and tilt the casing 9 up. By means of the slot 7, however, an implement may be readily inserted from the rear of the privy for this purpose. In order to secure this operation it is advisable that the slot be set in line with and rearwardly of the hinge 11. By hinging the casing 9 to the floor of the privy the bowl may be readily raised in such a position as to be easily cleaned, this position also permitting the trap to be easily cleaned. This receiver has the form of a circular tank the mouth of which is closed by a stopper 28 having beveled side faces adapted to fit the flared open mouth of the receiver. The face of the stopper has the outwardly projecting flange 29 and is also provided with the upwardly extending arcuate rib 30, this rib being formed with a tooth or stop at its middle.

Attached to the neck 23 of the receiver in any suitable manner as by the ears 32, is a locking bail 33, this bail being adapted to turn up into a vertical position and engage with the arcuate edge of the rib 30. It is to be noted that the arcuate edge of the rib 30 is not concentric to the pivotal axis in the bail 33 and hence as this bail is turned upward it engages with the arcuate edge and clamps the stopper securely in place. The stopper is provided with a flexible connection 34 whereby it is attached in any suitable manner to the receiver. While I have shown this receiver as being made of metal, I wish it distinctly understood that it may be made of other materials and have any other form beside that shown. It is essential, however, that the mouth of the receiver should be adapted to receive and fit snugly against the downwardly extending end of the neck 15 so that when the receiver is in position immediately beneath the bowl, there will be what is practically a sealed joint between the receiver and the bowl.

The advantages of my invention are as follows: It will be noted that at no time does the tank or container 24 communicate with the outside air for the reason that the trap valve 21 extends, in its normal position, transversely across the neck 15 and closes the same when the closet is being used. The trap valve also closes any passage of air through the neck 15. It is only at the instant that the trap valve is being rotated from its inverted to its receiving position, that any air can possibly pass. The closet is thus practically sealed at all times and is, therefore, odorless and there is no chance for any insect to pass into the container 24 and thus in contact with any fecal matter contained therein. No flies gather in or around the closet and the breeding of maggots is an impossibility.

It will be seen that the container or receiver 24 can be sealed by the insertion of the stopper immediately after it has been disconnected from the neck 15 and the receiver or tank can be moved at any time, day or night, without connecting the tank with the open air except at the instant when the stopper is being applied and, therefore, without any unpleasant odor arising therefrom.

Inasmuch as the tank is to be made of metal or some material which is not porous, no fecal refuse can soak into the ground and thus into wells.

While I might use a water connection to this closet, I have found in practice that it stays clean and uncontaminated without any necessity for water connection. Of course, quick lime, disinfecting material, or dry earth might be used in connection with this closet, although I have not found it necessary.

It will be obvious that where the apparatus is adopted the village or town in which it is used, by having a number of surplus containers 24, can collect these containers 5 from the closets at regular intervals and supply fresh containers thereto. These containers can be easily removed, placed upon carts and carried to any suitable dumping place where the contents can be burned or 10 otherwise treated.

The system thus devised is very much better than the bucket system which is ordinarily used in colonies for the cure of tuberculosis. Furthermore, this apparatus does 15 away with the necessity of digging additional vaults after the vault immediately beneath the closet has been filled up. This system is, therefore, much more economical in operation than other systems known to me 20 and may be relatively cheaply installed.

The system is particularly adapted for small towns and villages where a sewerage system has not been installed and where recourse must be had therefore, to cess pools 25 and dry closets.

Having thus described the invention, what is claimed as new is:

1. In a closet of the character described, a supporting platform, said platform being 30 provided with a slot, a container located beneath the platform and provided with an upwardly extending neck registering with the slot, and a bowl hinged to the platform forward of the slot and having a neck in 35 alinement with the slot and engaging the neck of the container to form an air tight joint therewith.

2. In a closet of the character described, an inclosing casing, a supporting platform

located within the casing, said platform being 40 provided with a slot extending from the rear edge of the platform toward the front thereof, a removable container located beneath the platform and provided with an upwardly extending neck registering with the 45 slot, a bowl hinged to the platform forward of the slot and having a neck in alinement with the slot to engage the neck of the container to form an air-tight joint therewith, the platform in front of the bowl having an 50 area sufficient to support the bowl when in its turned down position, the rear of the casing being provided with a door located beneath the platform, whereby the container may be removed. 55

3. In a closet of the character described, a supporting platform provided with a rearwardly extending slot, a container located 60 beneath the platform and provided with an upwardly extending neck registering with the slot, a bowl hinged to the platform forward of the slot and having a neck projecting down through said slot and into engagement with the neck of the container to 65 form a joint therewith, a cover closing the bowl, a valve located within the neck of the bowl and normally closing the same, and a connection between the cover and the valve whereby when the cover is raised the valve 70 is rotated to a receiving position and when the cover is lowered the valve is rotated to a discharging position.

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

DANIEL E. FITZGERALD. [L. S.]

Witnesses:

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C. F. LOY.