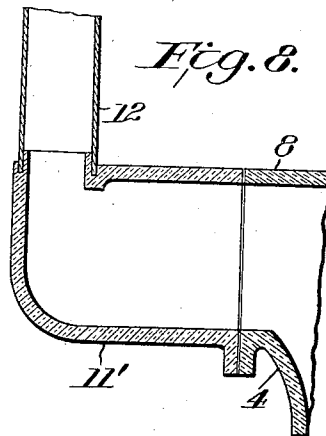
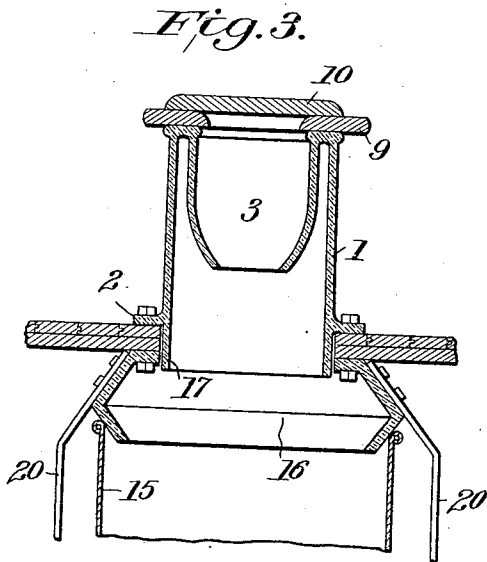
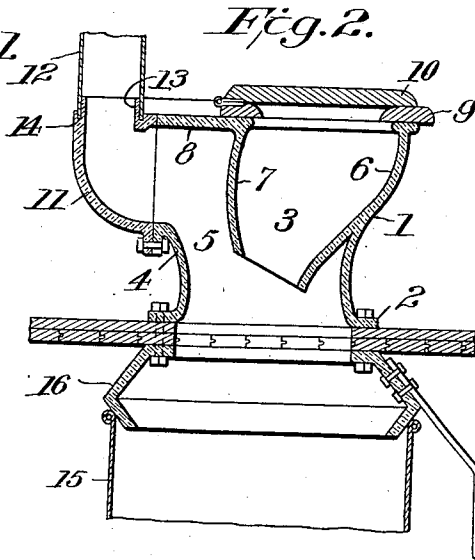
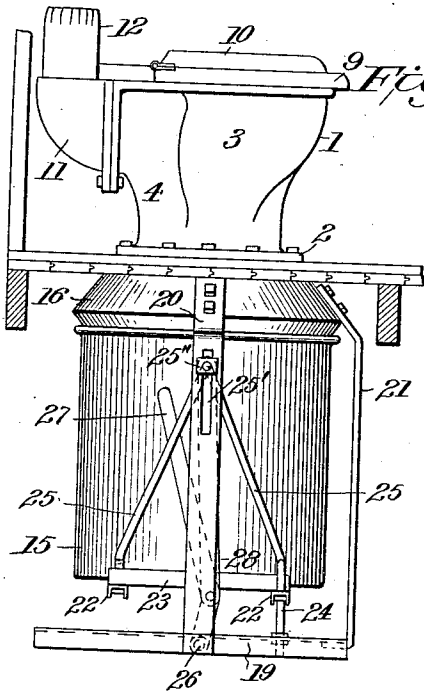


K. COWAN.
 ODORLESS SANITARY DRY CLOSET.
 APPLICATION FILED AUG. 20, 1912.

1,065,662.

Patented June 24, 1913.
 2 SHEETS-SHEET 1.



WITNESSES

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Fig. 4.

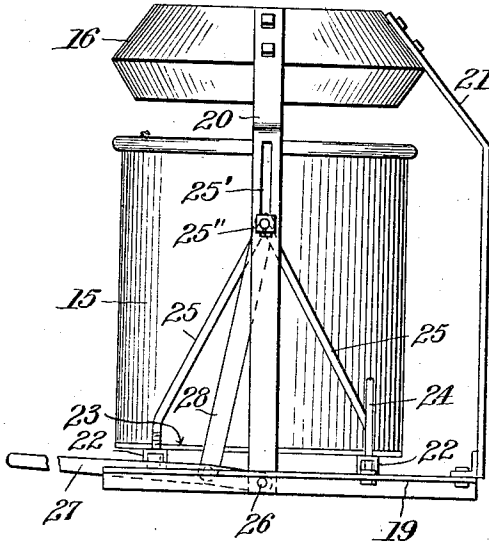


Fig. 5.

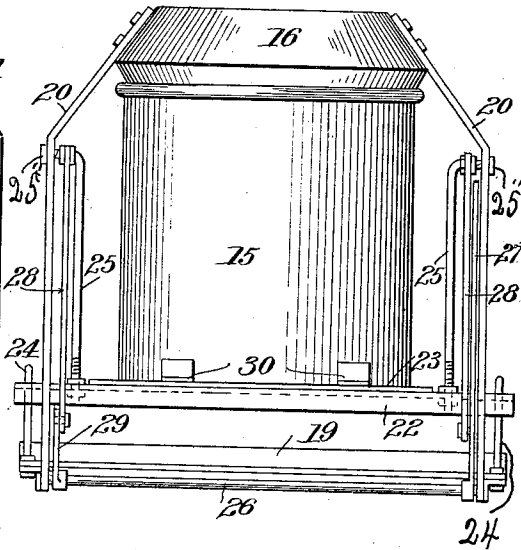


Fig. 6.

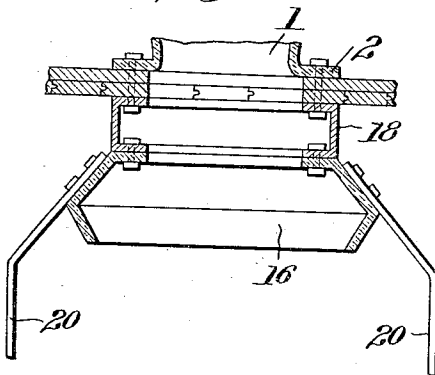
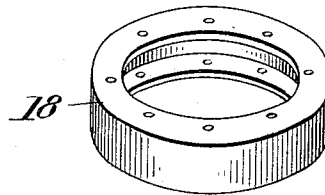


Fig. 7.



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UNITED STATES PATENT OFFICE.

KITT COWAN, OF FORT WORTH, TEXAS.

ODORLESS-SANITARY DRY CLOSET.

1,065,662.

Specification of Letters Patent.

Patented June 24, 1913.

Application filed August 20, 1912. Serial No. 716,010.

To all whom it may concern:

Be it known that I, KITT COWAN, a citizen of the United States, residing at Fort Worth, in the county of Tarrant and State of Texas, have invented certain new and useful Improvements in Odorless Sanitary Dry Closets, of which the following is a specification.

My invention relates to toilets, and more particularly to receptacles for ventilated seats which are adapted to constitute dry closets.

The objects are to provide devices of the character set forth, which will be odorless and sanitary and cleanly, and which are highly efficient for use in toilet rooms or closets, and to provide devices for easy and quick removal of all deposits from the receptacles; and for adapting the seats and receptacles to toilets of railway coaches. The advantages are that all odor of gas or fetid matter is taken entirely out of the building, and foul air that may be in a building will be taken through the closet seat, and sent away in the atmosphere above the building, the structure of the hopper forming not only a guide for whatever matter is to be deposited in the air tight vessel below, but also to guide the draft through the closet seat to the ventilator pipe. In view of legislation being passed in different States, and other legislation in process of formation, to the effect that railway companies will not be allowed to scatter the fetid matter any and every where over the tracks, this invention is particularly adapted for use in toilets of railway coaches, so that the matter can be dumped in specified places. Another advantage is that the toilet rooms will not have to be locked at railway stations in cities as at present, because the matter is stored and can be deposited at some designated place. Another advantage is the sanitary feature.

In order to set forth the advantages of my invention, it will be necessary to describe and illustrate a complete toilet apparatus.

The receptacles not only prevent any odor from entering the toilet room, but the ventilators will even take any foul atmosphere out of a toilet room, and send it away above the coach or building.

Other objects and advantages will be fully explained in the following description, and the invention will be more particularly pointed out in the claims.

Reference is had to the accompanying drawings, which form a part of this application.

Figure 1 is a side elevation of a toilet seat and the attachments thereto. Fig. 2 is a vertical section of the seat and hopper and ventilator, and a part of the air tight vessel. Fig. 3 is a vertical section of the hopper and seat and a portion of the depository vessel, at right angles to the section shown in Fig. 2, showing a slight variation in the juncture of the casing with the floor and the air tight vessel below. Fig. 4 is a side elevation of the air tight receptacle and the mechanism for elevating the receptacle. Fig. 5 is a side elevation of the same, taken at right angles to the view in Fig. 4. Fig. 6 is a closed vertical section similar to Fig. 2, but showing a variation in the means for coupling the air tight receptacle to the under side of the floor in a building. Fig. 7 is a perspective view of the coupling shown in Fig. 6. Fig. 8 is a detail view of a ventilator attachment, being a variation from the attachment shown in previous views, and being for the purpose of adapting the device to different structures and buildings.

Similar characters of reference are used to indicate the same parts throughout the several views.

The improved toilet device includes a casing 1, which is to be placed on the floor of a building. This casing has a horizontal flange 2, by which the casing is attached to the floor by suitable bolts. One advantage of this form of structure is that the casing may be placed in position on the floor and the outline marked from the inside and outside on the floor and the bolt holes also located, and then removed so that the holes can be made through the floor. The casing 1 has an interior hopper 3, which is preferably integral with the casing 1. The casing 1 is elongated at the upper and back part, for the purpose of forming a ventilator connection 4, and provides the ventilator throat 5. The hopper 3 is curved at 6, to make sufficient space within the front part of the hopper and is curved at 7, so that the deposit will not strike near the top of the hopper. By reason of the construction of the casing 1, a ledge 8 is formed at the back side and a seat 9 is hinged to the ledge 8, and a lid 10 is hinged to the seat 9. A ventilator coupling 11 is bolted to the rear part of the casing 1. The coupling 11, in

Fig. 1, has an upwardly projecting spout 13, over which a ventilator pipe 12 may be placed. Fig. 2 shows a slight variation in this spout, in that the spout 13 has a groove 14 around the base thereof for receiving the lower edge of the ventilator pipe.

Below the casing 1, and below the floor of the building, there is an air tight receptacle, that is, it is air tight except through the ventilator pipe. The structure above the floor is such that a draft will be drawn constantly through the seat, and the particular shape of the hopper 3 aids in forcing and directing the draft through the seat and out through the throat 5 and the pipe 12. This structure will prevent any odor at all from escaping from the closet seat or hopper in the toilet room or other similar room. A deposit receptacle or vessel 15 is mounted below the floor, and means are provided for making the vessel 15 air tight, except through the ventilator above described. A seal 16 is provided and bolted to the underside of the floor of the building, the bolts extending through the flanges 2 and down through the horizontal flange of the seal 16. In this manner, an absolutely air tight joint may be formed, because any suitable number of bolts and nuts may be provided to clamp the flange 2 and the seal 16 as tight as may be desired on the floor. Fig. 3 shows a slight variation in the sealing of the connection between the vessel 15 and the floor and casing 1. In Fig. 2, the casing 1 ends at the floor; in Fig. 3 the casing 1 is provided with an annular flange 17, which projects below the floor and within the seal 16. Provision is also made for increasing or lengthening the seal 16. As shown in Fig. 6, a double flanged ring 18 is bolted to the floor instead of the seal 16, and the seal 16 is bolted to the lower flange of the ring 18. This ring is to be made of different depths or heights, so that the structure can be adapted to different structures of buildings. A platform 19 is hung on the seal 16 by means of strips or hangers 20 on the sides, and a front hanger 21. These hangers are securely attached to the base 19, and to the seal 16, by suitable bolts. The platform 19 is thus stationary. The vessel 15 is mounted directly on a platform 23, and the platform 23 is mounted on channel bars 22. Provision is made for elevating and lowering the vessel 15, together with the platform 23, and channel bars 22, so that the channel bars 22 when let down will rest on the platform 19. The object of this provision is to provide means for emptying or cleansing the vessel or receptacle 15, and also forcing this vessel up against the seal 16 to form an air tight joint with the seal 16. The platform 19 may consist of bars or a solid floor. The guide rods 24 are attached by bolts and nuts to platform 19,

and project up through the channel bars 22 and floor 23 next to the front of the device, for the purpose of causing the platform to move in a vertical direction, so that the vessel 15 will not swing out of position. The object of this is to make the vessel 15 rise vertically upward, so that when it comes in contact with the seal 16 an air tight joint is made. Bridle rods 25 are threaded at the lower ends and attached to the channel bars 22 by nuts above the floor 23 and below the channel bars 22, so that the bridle rods will be adjustable vertically. The bridle rods are welded together at the upper ends and threaded and bent horizontally, to project loosely through the hangers 20, the hangers 20 having slots 25' for the vertical movement of the bridle rods. Nuts 25'' are used to prevent displacement of the bridle rods. A rocker shaft 26 is journaled in the platform 19. A lever 27 is fulcrumed on the shaft 26. A link bar 28 is pivotally connected to the lever 27 and at the upper end has a hole to receive the bent portion of the bridle rod; the link rod being thus loosely hung on the bridle rod makes a pivotal connection. On the other side of the vessel, there is the same construction, except that instead of a full length lever, a short lever 29 answers the purpose of lifting the platform 23. Fig. 1 shows the receptacle raised up in the sealed position; Fig. 4 shows the vessel 15 lowered for the purpose of removal or cleansing or emptying. The link rods 28 and the lever 27 thus serve to elevate and lower the receptacle 15, and the guide rods 24 prevent a displacement of the vessel 15 in its vertical movement. In order to properly place the vessel 15 on the platform 23, upstanding lugs or guides 30 are attached to the platform 23, so that in replacing the vessel 15 on the platform, it will be in the precise position desired when shoved back against the lugs or guides 30.

The air currents will come downward through the hopper, thoroughly scavenging the same, and result in perfectly sanitary conditions. It will be noted that I permit both the solid and the liquid excrements to fall into the same receptacle as I have found that this tends to suppress odors and this object may be further carried out by the occasional sprinkling of the mixture with lime or other suitable digestive or disinfectant agent.

It will be seen that I have provided an exceedingly sanitary, simple and convenient dry closet arrangement, which may be readily adapted to all places not provided with a sewerage system, and it is thought that the many advantages of my invention will be readily appreciated by those conversant with such matters.

What I claim, is,—

1. In a dry closet, a movable receptacle

and means for supporting said receptacle consisting of a hanger having upper and lower annular interior flanges, a double cone-shaped sealing connection having an
 5 annular interior flange attached to the lower flange of said hanger, a platform and strips attached to said platform and to the upper cone-shape of said sealing connection, and means operatively connected to said plat-
 10 form and to said strips for causing said receptacle to engage the lower cone-shape of said sealing connection.

2. In a dry closet, a movable receptacle, a hanger having a horizontal flange for at-
 15 taching to a support and having a funnel shaped lower end, a fixed platform and hanger bars attached to said platform and to said hanger, a movable platform resting on said fixed platform, said bars having
 20 vertical slots therein, levers having a fulcrum in said fixed platform, link bars pivotally connected to said levers, bridle rods connected to said movable platform and projecting through said link bars at their
 25 upper ends and through the slots in said hanger bars, and nuts for preventing displacement of said bridle rods.

3. In a dry closet, a movable receptacle, a sealing hanger and means for support-
 30 ing the same, a fixed platform and hanger bars attached thereto and to said sealing hanger and having vertical slots therein, said sealing hanger having a funnel shaped lower end, a movable platform adapted to
 35 rest on said fixed platform, a fulcrum bar journaled in said fixed platform, levers engaging said fulcrum bar, link bars pivotally connected with said levers and projecting upwardly and having holes through
 40 their upper ends, bridle rods engaging said movable platform and extended upwardly and projected through said link bars and through said hanger bars, and nuts for preventing the displacement of said bridle rods.

45 4. In a dry closet provided with a movable receptacle, means for supporting and

lowering and elevating said receptacle consisting of a fixed platform, a fixed sealing connection above said platform, hanger bars attached to said platform and to said seal-
 50 ing connection, a movable platform adapted to rest on said fixed platform and to support said receptacle, a fulcrum bar journaled in said fixed platform, levers engaging said fulcrum bar, link bars pivot-
 55 ally connected to said levers and projecting upwardly, bridle rods attached to said movable platform and extended upwardly and projecting through said link bars and through said hanger bars, said hanger bars
 60 having vertical slots for the movement of said bridle rods, and nuts for preventing displacement of said bridle rods.

5. In a dry closet provided with a movable receptacle, means for supporting and
 65 raising and lowering said receptacle consisting of a fixed platform, a fixed sealing connection above said receptacle, hanger bars attached to said fixed platform and to said sealing connection, a movable plat-
 70 form adapted to rest on said fixed platform and to support said receptacle, vertical guide rods fixed in said fixed platform and projecting up through said movable plat-
 75 form, a fulcrum bar journaled in said fixed platform, levers engaging said fulcrum bar, link bars pivotally connected to said levers and projecting upwardly, bridle rods at-
 80 tached to said movable platform and extended upwardly and then bent and projected through said link bars and through said hanger bars, said hanger bars having vertical slots for the movement of said bridle rods, and nuts for preventing the
 85 displacement of said bridle rods.

In testimony whereof, I set my hand in the presence of two witnesses, this 22nd day of July, 1912.

KITT COWAN.

Witnesses:

A. L. JACKSON,
 J. W. STITT.