

Jan. 17, 1933.

J. H. BENNETT

1,894,846

TOILET BOWL

Filed Nov. 18, 1931

2 Sheets-Sheet 1

Fig. 1.

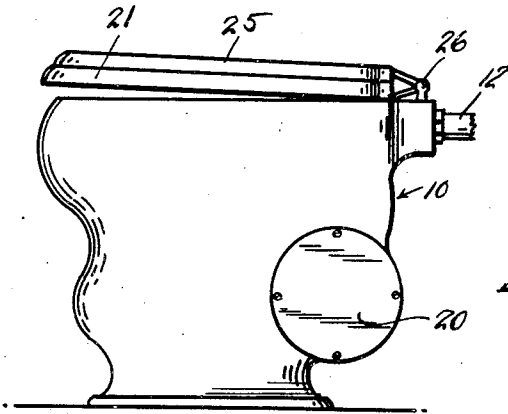


Fig. 4.

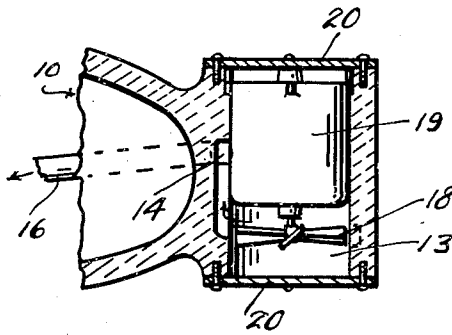


Fig. 2.

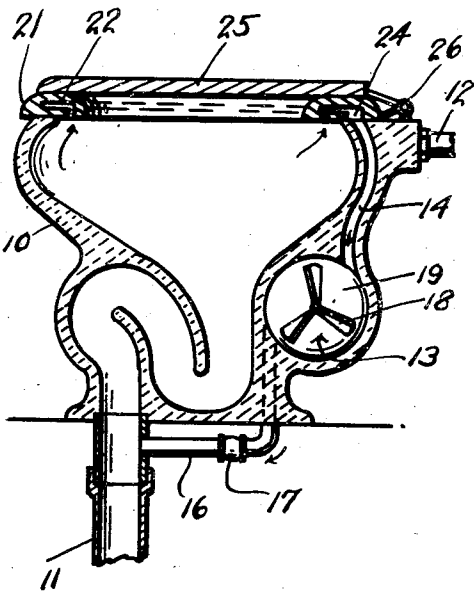


Fig. 3.

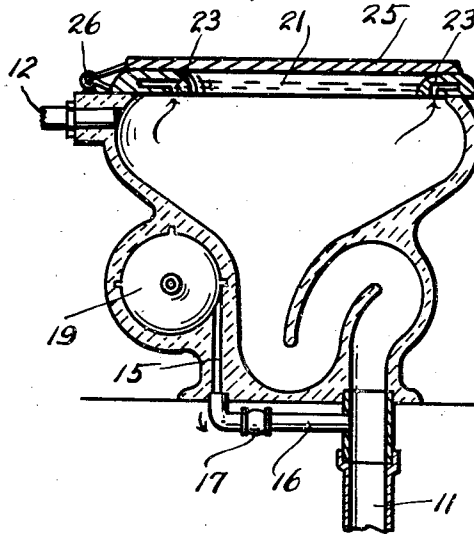
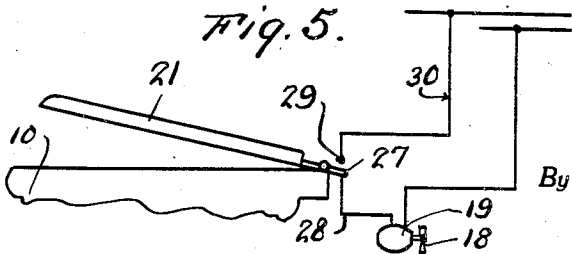


Fig. 5.



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Fig. 6.

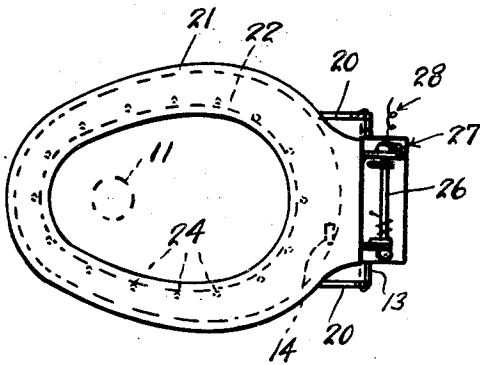


Fig. 7.

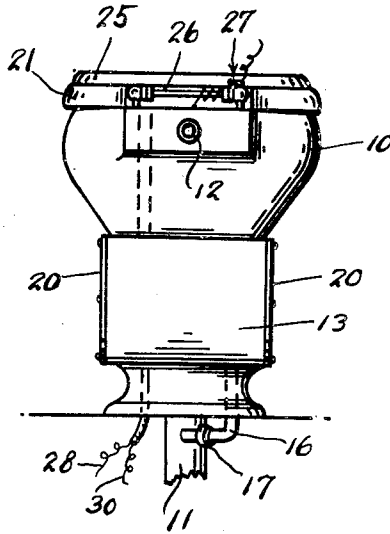


Fig. 8.

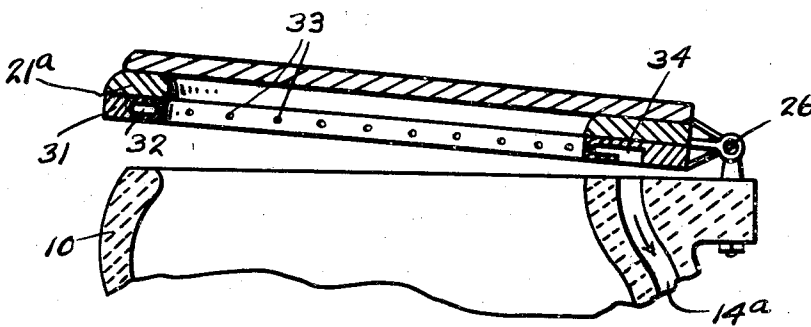
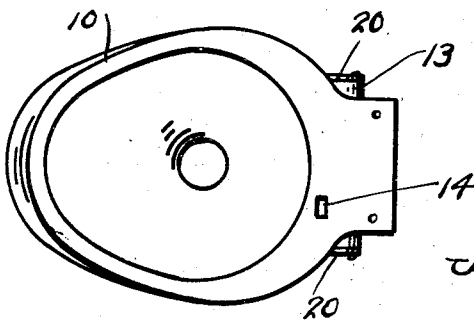


Fig. 9.



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UNITED STATES PATENT OFFICE

JAMES H. BENNETT, OF DETROIT, MICHIGAN, ASSIGNOR OF ONE-HALF TO EDWARD DONOVAN, OF DETROIT, MICHIGAN; MARY J. B. PENNOYER ADMINISTRATRIX OF SAID JAMES H. BENNETT, DECEASED

TOILET BOWL

Application filed November 18, 1931. Serial No. 575,885.

This invention relates to new and useful improvements in toilet bowls, the primary object of the invention is to provide means for dispensing with all after and undesirable odors.

It is therefore a salient feature of the invention to provide a toilet bowl which will be highly sanitary, and which at the same time will be inexpensive to construct, will consist of comparatively few parts, and which will otherwise be free as regards appearance, cost, and difficulty of installation now attendant by such toilet bowls as are now in use and are equipped to serve the same general purpose.

Other objects and advantages of the invention will become apparent from a study of the following description taken in connection with the accompanying drawings wherein:

Figure 1 is a side elevational view of a toilet bowl.

Figures 2 and 3 are vertical transverse sectional views therethrough.

Figure 4 is a fragmentary horizontal sectional view through that portion of the bowl equipped with a motor housing.

Figure 5 is a diagrammatic view illustrating a wiring system employed in accordance with the present invention.

Figure 6 is a top plan view of the bowl with the seat cover removed.

Figure 7 is a rear elevational view of the bowl.

Figure 8 is a fragmentary vertical sectional elevational view of a slightly modified form of the invention, and

Figure 9 is a top plan view of the bowl with the seat and cover therefor removed.

Referring more in detail to the drawings, it will be seen that the toilet bowl is designated generally by the reference character 10, the sewer pipe connected therewith by the reference character 11 and the feed pipe for flushing the bowl by the reference character 12.

It will be seen that the invention is employed with a conventional type of bowl, the structure of which is altered to the extent of providing in the rear wall of the bowl adja-

cent the base thereof, a transverse chamber 13 opened at its relatively opposite ends.

The chamber 13 is connected with the atmosphere through the medium of a passage 14 and extending upwardly through the rear wall of the bowl to the top or rim of the bowl as clearly suggested in Figures 2 and 9. Passage 14 constitutes an entrance passage for the chamber 13 and a vertical outlet passage 15 is provided for the chamber and the passage 15 extends downwardly to the base of the bowl and is connected to the sewer pipe 11 through the medium of a conduit pipe 16 within which is arranged a check valve 17 the purpose of which valve 17 is to eliminate the escape of gas when the fan 18 and the electric motor 19 which drives the fan are idle.

From a study of Figure 4 it will be seen that the motor 19 and the fan 18 driven thereby are housed within the chamber 13 and suitable closure plates 20 are provided for the open ends of the chamber.

In that form of the invention shown in Figures 1 to 7 inclusive, it will be seen that the toilet seat 21 in accordance with the present invention is provided with a circular chamber 22 which is in communication with the interior of the bowl 10 through the medium of a circular series of apertures 23 provided in the under face of the seat. The series of apertures 23 serve as inlets for the chamber 22; and a single outlet 24 is provided for the chamber and is adapted to register with the upper end of the passage 14 when the seat is in a position of rest on the top or rim of the bowl as clearly suggested in Figure 2.

The seat 21 together with the cover 25 therefor is hingedly mounted as at 26, a spring hinge being preferably provided and which hinge serves to normally retain the seat slightly out of engagement with the top or rim of the bowl.

As diagrammatically shown in Figure 5, a movable part of the hinge is provided with a contact 27 that is arranged in conjunction with the motor through the medium of a wire 28 by a pivotal contact 29 is suitably mounted so as to be engaged by the contact

27 when the seat 21 has been urged downwardly about its end into full contact with the top or rim of the bowl 10 to thereby close the circuit to the motor 19 resulting, as is apparent in an operation of the motor. Contact 29 is arranged in circuit with the motor 19 and a source of supply through the medium of a wire 30.

Thus it will be seen as long as the seat 21 is in full contact with the bowl 10 fan 18 will be caused to rotate with the result and as suggested by the arrows in Figures 2 and 3, the impure air will be drawn into the chamber 22 passing therefrom through the passage 14 and from the passage 14 through the chamber 13 and through outlet 15 and pipe 16 to the sewer pipe 11.

Thus it will be seen that provision is made for drawing off all foul odors, with the result that a sanitary condition is maintained in the vicinity of the toilet bowl.

In the form of the invention shown in Figure 8 it will be seen that instead of providing the seat 21a with a circular chamber, a conventional type of wood, metal or other seat may be employed and secured to the under face thereof is an annular member 31 provided with a chamber 32, and on its inner periphery the member 31 is provided with a series of relatively spaced apertures 33 constituting inlets for the chamber 32. A single outlet chamber 34 for the chamber 32 is provided in the bottom of the member 31 and is adapted to register with the upper end of the passage 14a as also clearly suggested in Figure 8.

Even though I have herein shown and described the preferred embodiments of the invention, it is to be understood that the same is susceptible of changes, modifications and improvements within the scope of the appended claim.

Having thus described my invention, what I claim as new is:

In combination with a toilet bowl and its outlet pipe, said bowl having a transverse chamber therein opening out through the sides of the bowl, closure means for the ends of said chamber, a motor driven fan in said chamber, said bowl having a conduit therein connecting the chamber with the drain pipe, and said bowl having a second conduit therein connecting the chamber with the upper edge of the bowl, a seat for the bowl having an annular passage therein, and ports connecting the passage with the interior of the bowl, and said seat having a second port therein connecting the annular passage with the upper end of the second conduit when the seat is resting on the bowl, and means for closing the circuit to the motor when the seat is occupied.

In testimony whereof I affix my signature.

JAMES H. BENNETT.