Oct. 18, 1932. A. RONNING 1,883,406

VENTILATOR

Filed March 30, 1929

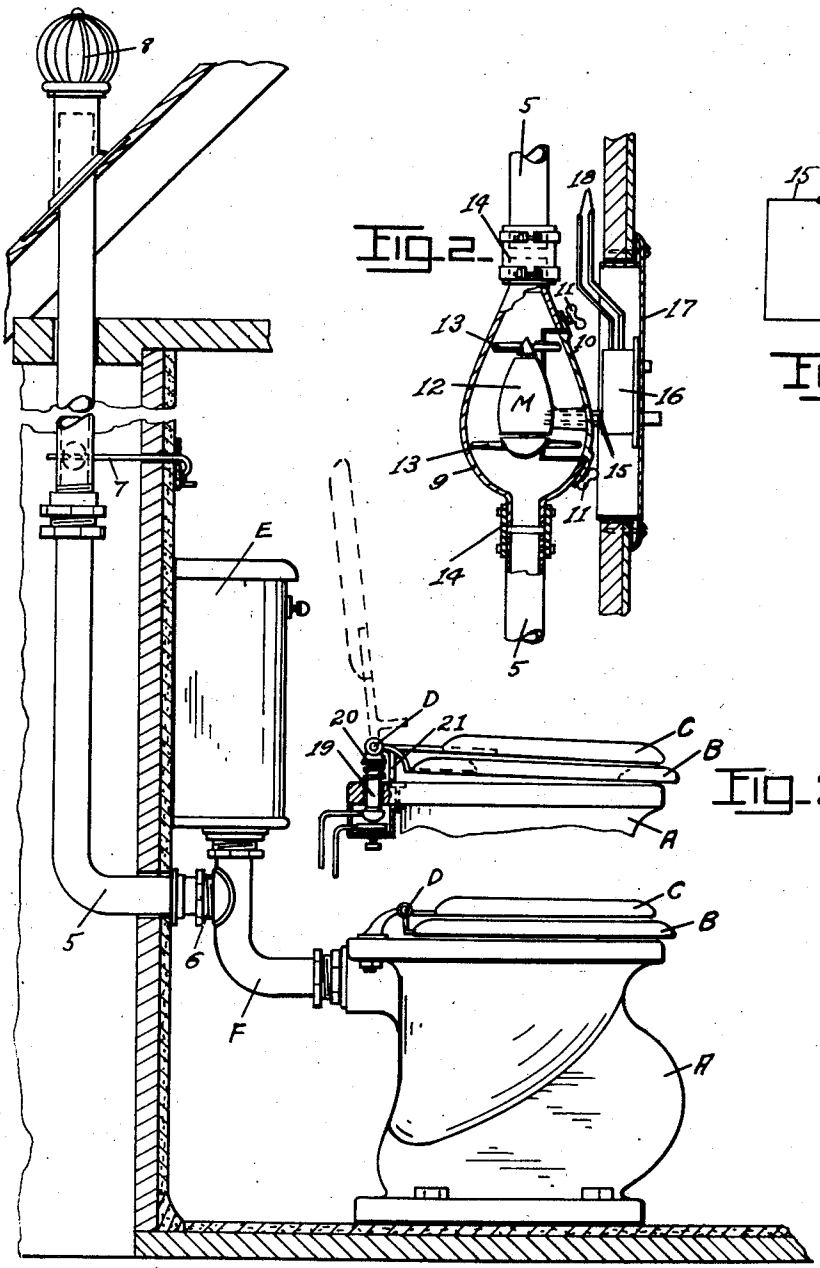

Fig. 1.

Fig. 2.

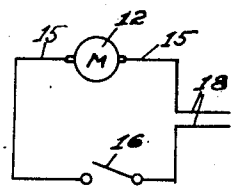

Fig. 4.

Fig. 3.

INVENTOR
Adolph Ronning
BY
Andrew C. Parker
ATTORNEY

Patented Oct. 18, 1932 1,883,406

UNITED STATES PATENT OFFICE

ADOLPH RONNING, OF MINNEAPOLIS, MINNESOTA

VENTILATOR

Application filed March 30, 1929. Serial No. 351,284.

This invention relates to ventilating devices for closet bowls and the primary object is to provide a simple, efficient, and practical mechanism for carrying off offensive odors before they are permitted to escape into the toilet room. A further object is to provide a ventilating flue in conjunction with the usual flush pipe connection for the bowl whereby the said pipe connection may be utilized for the double purpose of both flushing and ventilating, and thus render it unnecessary to provide the bowl proper with other or additional equipment for connecting the ventilating equipment. A further object is to provide a ventilator tube with an electrically operated fan or blower for creating the necessary ventilating current therethrough, and to insulate the tube or flue from vibrations of the fan motor so as to effect a quiet operation thereof. A further object is to provide a circuit connection for the fan motor including a switch that is automatically opened and closed by pressure on and off of the bowl seat whereby the fan will be operative to effect a forced ventilation only when the cover is opened and the seat is in use, but which will be inoperative when the cover is down, as when the bowl is not in use. A further object is to provide an improved and simple design of construction for the motor, fan, and fan housing, whereby the motor and fan may be readily removed for cleaning, oiling, or repair purposes. These and still other objects will be disclosed in the course of the following specification, reference being had to the accompanying drawing, in which:

Fig. 1 is a side elevation of a bowl, flush tank, and adjacent building parts, and showing my improved ventilating system as applied thereto.

Fig. 2 is a sectional detail elevation through a modified form of the device, showing the application of a motor and fan to the ventilator flue.

Fig. 3 is a detail elevation, partly in section, showing a switch connection to the bowl cover for automatically starting and stopping the fan motor.

Fig. 4 is a diagrammatic plan view of the circuit system employed with the fan motor.

Referring to the drawing more particularly and by reference characters, A designates any common and well known type of toilet bowl having a seat B and cover C, hingedly secured as at D, said bowl being connected to a water receptacle E by a flush pipe F, in the customary manner.

To my knowledge ventilating and deodorant devices heretofore applied to closet bowls have required the use of separate parts projecting into the bowl, or formed therein, which is objectionable chiefly because of the cost or because of the difficulty of so securing such parts that they will not be obstructive or in the way. To overcome these difficulties and at the same time to provide a simple and practical arrangement for ventilator communication with the bowl, I connect the lower end of the ventilator flue 5 directly to the flush pipe F, as at 6. Thus the flue 5 can in no way interfere with the function of the pipe F, and that pipe can in turn serve the double function above noted. The flue 5 has a damper 7, and extends with its upper end up through the ceiling of the building, where it may be provided, in its simplest form, with a wind rotated metal hood or cowl 8 to accelerate the updraft through the flue 5.

As shown in Fig. 2 the flue 5 is provided with an enlarged, pear shaped housing 9, having a cover 10 secured as by wing nuts 11. A small electric motor 12 is secured to the cover 10, and in turn carries a pair of propellers 13, which, when rotated, operate to create an updraft through the flue 5. It will be noted that the housing 9 is secured to the ends of the upper and lower flue sections 5 by hose connections 14 which are sufficiently flexible so that vibrations and noise of the

motor and fan will not be carried down or transmitted through the flue sections to the bowl. The circuit wires 15, to the motor 12, extend from a switch 16 of a switch plate 17, in turn secured over an opening in the adjacent wall of the building. The said wall opening is sufficiently large so that with the switch plate 17 detached the housing cover 9, together with the motor and fan assembly can be removed as a unit, through the opening, for cleaning and repair purposes. The motor 12 is of course provided with current through the switch 16, as by supply wires 18.

In the modification shown in Fig. 3, the seat and cover pivot D anchors on a pair of vertically slidable posts 19 that are held in yieldably raised positions, as by springs 20, but when depressed will act as a switch member to close a circuit through the motor. The cover C may be provided with a bracket rest 21, so that it will be impossible to close the switch 19 when the cover C is closed, which is a desirable feature especially when it may become necessary to use the cover C as an ordinary seat or support for other purposes.

It is understood that suitable modifications may be made in the structure as disclosed, provided such modifications come within the spirit and scope of the appended claims. Having now therefore fully illustrated and described my invention what I claim to be new and desire to protect by Letters Patent is:

1. The combination with a closet bowl having a seat ring and a cover therefor, of a depressible bearing member hingedly supporting the ring and cover, a ventilator for the bowl, means rendered operative by depression of the bearing member when pressure is applied to the seat ring to actuate the ventilator, and means carried by the cover to lock the bearing member in its normally raised or inactive position when the cover is closed.

2. The combination with a closet bowl having a seat ring and a cover therefor, of a depressible bearing member hingedly supporting the ring and cover, a ventilator for the bowl, means rendered operative by depression of the bearing member when pressure is applied to the seat ring to actuate the ventilator, and means rendered operative by closing the cover to lock the bearing member in its raised or inactve position.

3. The combination with a closet bowl having a seat ring and a cover therefor, of a motor actuated ventilator for the bowl, a circuit for the motor, a depressible member forming a hinge bearing for both the seat ring and the cover, a switch in the circuit arranged to be closed by depressing the bearing member, and means rendered operative by closing the cover to releasably lock the switch in its circuit opening position.

4. The combination with a closet bowl having a seat ring and a cover hinged with respect thereto, of a ventilator for the bowl, means rendered operative by exerting a pressure upon the seat ring to actuate the ventilator, and means rendered operative by lowering the cover to a horizontal position to render the ventilator actuating means inactive.

Signed at Minneapolis, in the county of Hennepin, and State of Minnesota, this 28th day of March 1929.

ADOLPH RONNING.