(No Model.)

M. L. McGUIRE.

WATER CLOSET.

No. 569,383. Patented Oct. 13, 1896.

Fig. 1.

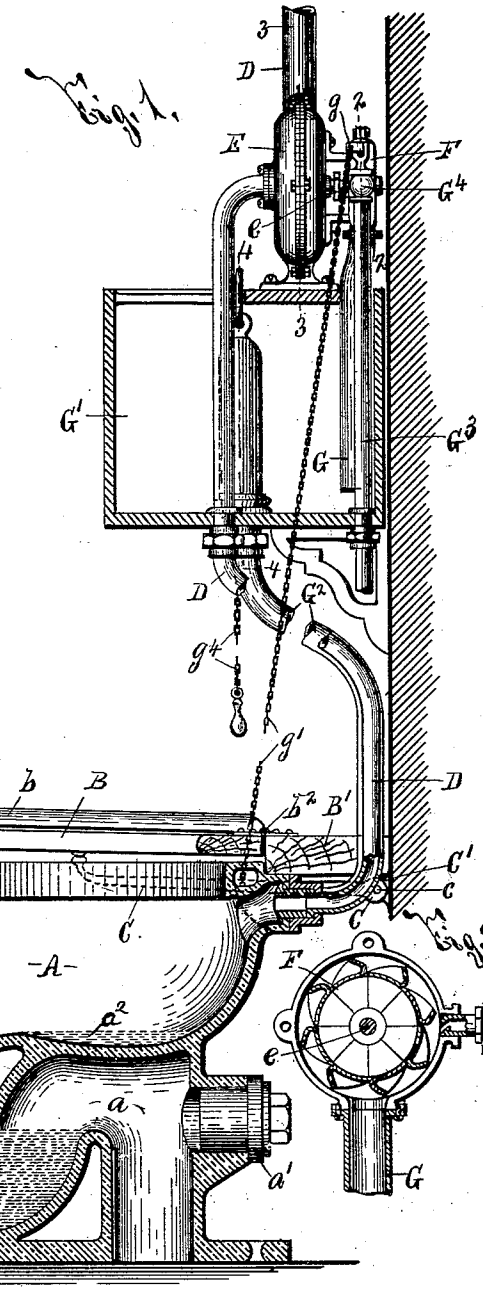

Fig. 4.

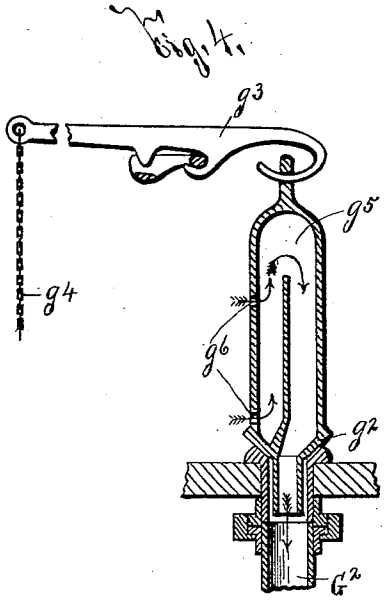

Fig. 3.

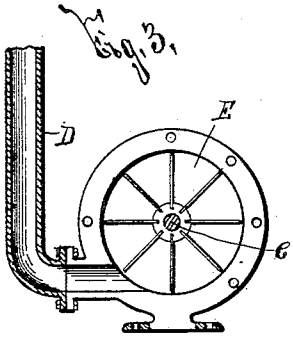

Fig. 2.

WITNESSES:
C. C. Chase,
E. A. Weisburg.

INVENTOR
Michael L. McGuire.

BY
Keyes, Wilkinson & Parsons
ATTORNEYS.

UNITED STATES PATENT OFFICE.

MICHAEL L. McGUIRE, OF SYRACUSE, NEW YORK.

WATER-CLOSET.

SPECIFICATION forming part of Letters Patent No. 569,383, dated October 13, 1896.

Application filed September 14, 1894. Serial No. 522,991. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL L. McGUIRE, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Water-Closets, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to improvements in water-closets, and has for its object the production of a simple and practical device for reducing to a minimum all liability of the escape of odors, effluvia, &c., into the room containing the closet, especially during its use, and the consequent inconvenience, annoyance, and unhealthfulness incidental to the use of water-closets; and to this end it consists in the detail construction and arrangement of the component parts, all as hereinafter more particularly described, and pointed out in the claims.

In describing this invention reference is had to the accompanying drawings, forming a part of this specification, in which like letters indicate corresponding parts in all the views.

Figure 1 is an elevation, partly in section, of a water-closet constructed in accordance with my invention. Fig. 2 is a vertical sectional view, taken on line 2 2, Fig. 1, illustrating the motor and adjacent portions of the water-feed pipe and the pipe discharging into the flushing-tank. Fig. 3 is a similar sectional view, taken on line 3 3, Fig. 1, illustrating the air-fan and the exit end or section of the uptake air-pipe; and Fig. 4 is a detail sectional view, taken on line 4 4, Fig. 1, of the outlet-valve and the overflow of the flushing-tank.

As is well known, houses and many other buildings are provided with water-closets, and, even though the best of plumbing is used in connecting the same, there is more or less escape of unpleasant and harmful odors and effluvia, especially during the use of the closet. My invention is so constructed as to reduce to a minimum, if not absolutely prevent, such a result.

A is a closet-bowl, which may be of any desirable form, size, and construction, and is here shown as provided with the usual outlet-passage *a*, suitably curved for forming a water seal. The bowl A is also shown as provided with a removable cap a' for permitting entrance to the passage *a*.

Directly above the bowl A is a suitable seat B, which may also be of any desirable form, size, and construction, and is here shown as consisting of upper and lower sections b b', secured by hinges b^2 to a suitable support B'. The form of seat here illustrated is arranged normally above its position assumed when in use, the lower face of the section b' being indicated as slightly above the top edge of the bowl A. The free end of a suitable lever C is arranged directly beneath the seat-section b', and its opposite end is pivoted at *c* to a support C', and this lever C is actuated by a suitable spring or other means (not illustrated) to hold the seat B in its normal position.

D is an uptake air-pipe suitably connected to the bowl A above its water-line a^3, being here illustrated as opening from the rear of its upper portion. The pipe D, which may be connected to a series of bowls A, extends upwardly to any desired altitude, and preferably discharges into the open air. It is connected to a suitable fan E for creating an outgoing current therein, and, if desired, its exit end or section may be formed of greater diameter than the remaining portion thereof. The fan E is formed with a revoluble shaft *e*, having one end projecting beyond its casing, and is of any desirable form, size, and construction, unnecessary to herein illustrate or describe, it being understood that as the shaft *e* is revolved the fan is actuated to produce an outgoing current within the uptake air-pipe D.

The revolution of the shaft *e* of the fan E is preferably effected by a motor F, which may also be of any desirable form, size, and construction. As here illustrated, the motor F is arranged at one side of the fan E, and is connected so as to be operated by the flow of the water for flushing the closet. I have here shown the motor F as secured to the projecting end of the shaft *e* and as connected to a pipe G, discharging within a flushing-tank G', connected by a water-conducting pipe G^2 to the bowl A.

The water is conducted to the motor F by a feed-pipe G^3, provided with a valve G^4 for normally closing said pipe. Suitable means are utilized for opening and closing the valve

and permitting the flow from the pipe G^3 to the motor F, and thence through the pipe G into the tank G'. I have here illustrated the valve G as provided with a lever g, suitably connected to its valve-piece, (not illustrated,) and a connection g' interposed between said lever g and the seat-supporting lever C. Consequently when the seat is forced to its position assumed when in use the valve G^4 is opened, and the flow of the water from the feed-pipe G^2 immediately operates the motor F and actuates the fan E, thereby creating an outgoing current within the uptake air-pipe D and withdrawing the air from the top of the bowl A, together with all odors, effluvia, &c., discharged thereinto by the user.

The tank G' is provided with an outlet-valve g^2 of any desirable form, size, and construction for permitting the discharge of the water through the pipe G^2, and this valve g^2 is connected to suitable actuating means, here illustrated as a pivoted lever g^3 and a depending cord or operating-piece g^4, the free end of which hangs in convenient access of the user of the closet. The flow of water into the tank G' continues automatically and constantly during the depression of the seat B, and the water accumulated therein is discharged manually at the will of the user, either before or after the seat B assumes its normal position. All danger of overflow of the tank G' is obviated by a suitable overflow through the valve g^2 into the pipe G^2, consisting, preferably, of a U-shaped chamber g^5 in the valve g^2, having its central portion elevated, and one extremity provided with inlets g^6 and its other extremity discharging into the pipe G^2.

The operation of my invention will be readily perceived upon reference to the foregoing description and the accompanying drawings, and it will be apparent that during the use of the closet the air and the accompanying odors, effluvia, &c., are withdrawn from the upper portion of the bowl, and all escape thereof and the consequent inconvenience, annoyance, and unhealthfulness incidental to the use of the closet reduced to a minimum. It is evident, however, that my invention is not limited to any particular construction of bowl, seat, fan, motor, or flush-tank.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a water-closet bowl, a tank, a conducting-pipe leading thence to the bowl for flushing the same, a feed-pipe leading to the tank, a valve therein for controlling the flow of water to the tank, a movable seat, and connections between the latter and said valve for holding such valve open while the seat is depressed; of an uptake air-pipe connected with the bowl above its water-line and leading to the open air, a fan in this pipe, and a water-motor in the feed-pipe between the valve and tank for driving the fan, as and for the purpose set forth.

2. The combination with a water-closet bowl, a tank, a conducting-pipe leading thence to the bowl for flushing the same, a manually-operated valve in said pipe, an automatic overflow through this valve, a feed-pipe leading to said tank, a valve therein, a movable seat, and connections between the latter and said feed-valve for holding this valve continuously open while the seat is depressed; of an uptake air-pipe connected with the bowl and leading to the open air, a fan in this pipe, and a water-motor in the feed-pipe between the feed-valve and tank for driving the fan, as and for the purpose set forth.

In testimony whereof I have hereunto signed my name, in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 31st day of August, 1894.

MICHAEL L. McGUIRE.

Witnesses:
CLARK H. NORTON,
E. A. WEISBURG.