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VENTILATOR ATTACHMENT FOR WATER CLOSETS

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Fig. 1.

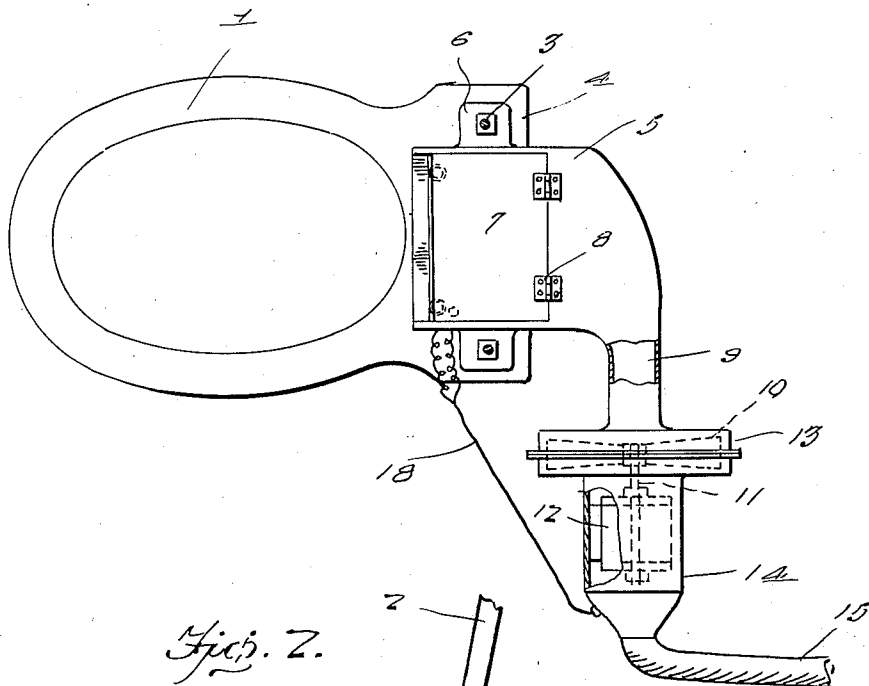
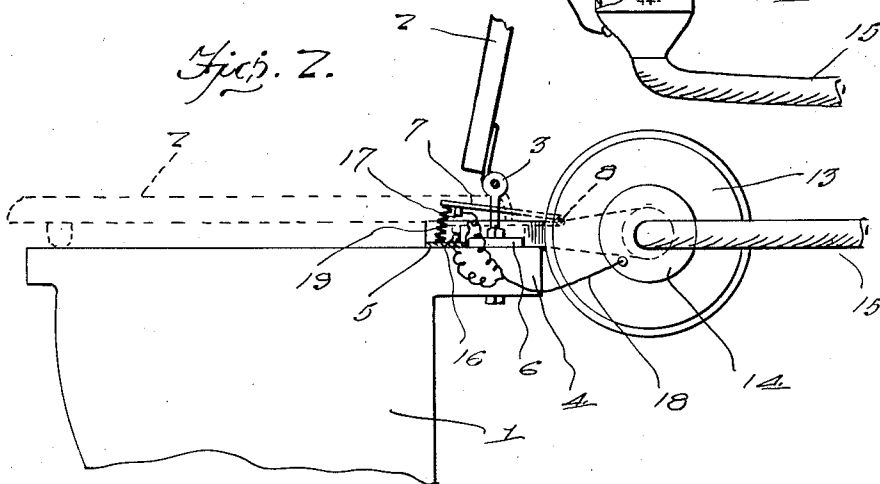


Fig. 2.



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VENTILATOR ATTACHMENT FOR WATER-CLOSETS.

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The present invention relates to improvements in ventilators and has reference more particularly to a device for use in connection with a water closet.

5 One of the important objects of the present invention is to provide a ventilator attachment of the above mentioned character which will withdraw the gases from a water-closet bowl but suction and discharge the same
10 through a suitable point outwardly from a house.

A further object of the invention is to provide a ventilator attachment of the above-mentioned character wherein means is provided for creating a suction in the air pipe
15 for removing impure gases from the water closet bowl, means being provided for normally rendering the suction fan-operating motor inoperative, additional means being
20 provided whereby the motor will be operated when the seat of the bowl is occupied.

A further and important object of the present invention is to provide a ventilator attachment for water closets of the above
25 mentioned character which will at all times be positive and efficient in its operation, the same being further simple in its construction, inexpensive, strong and durable and further well adapted for the purposes for which it
30 is designed.

Other objects and advantages of this invention will become apparent from the course of the following description.

In the accompanying drawing forming a
35 part of this specification and in which like numerals designate like parts throughout the same:

Figure 1 is a top plan view of my improved ventilator attachment showing the
40 same attached to a water closet bowl, the hinged seat being removed and the pintles for said seat being shown in section and

Figure 2 is a side elevation, parts of the device being shown in section.

45 In the drawing, wherein for the purpose of illustration is shown the preferred embodiment of my invention, the numeral 1 designates a water closet bowl of a conventional construction, the same having associated therewith the usual seat 2 which is
50 hinged at its rear end on the usual pintles 3 which extend through the rear flanged portion 4 of the water closet bowl in the manner well known in the art.

55 My improved ventilator attachment comprises an enlarged suction nozzle 5 which is

adapted for disposition on the flange portion 4 of a water closet bowl between the pintles 3 and for the purpose of rigidly securing the nozzle in position on the bowl, I provide the
60 attaching flanges 6 through which the pintles 3 extend in the manner clearly illustrated in Figure 1.

This nozzle is substantially flat and also rectangular and the forward inlet end thereof is disposed adjacent the inner peripheral
65 edge of the bowl at the rear end thereof in the manner as also clearly illustrated in Figure 1.

The top of this nozzle is cut away and arranged therein is the plate 7, the same being
70 hinged to the inner edge of the cut-away portion of the nozzle as at 8. The purpose of this hinged plate 7 will be hereinafter more fully described.

The nozzle 5 tapers gradually towards the rear end and terminates in the laterally disposed suction pipe 9 and communicating with the outer end of this pipe is a suction
75 fan 10 mounted on drive shaft 11 of a suitable motor 12. It is of course understood that a suitable housing or casing such as is shown in 13 is provided for the suction fan and also a suitable housing is provided for
80 the motor 12 as illustrated at 14.

Extending from the outer end of the motor housing 14 is the discharge air pipe 15 which leads out through the house or to any other
85 suitable point remote from the water closet. It is also to be understood that the fan casing 13 as well as the motor housing 14 are supported in any appropriate manner.

The motor 12 for controlling the operation of the suction fan 10 is controlled by a suitable circuit maker and breaker, the structure
90 which will now be more specifically described. A contact 16 is arranged in the bottom of the nozzle 5 adjacent the inlet end thereof and cooperating with said contact is a similar contact 17 arranged on the under
100 side of the hinged plate 7. It is of course to be understood that these contacts are electrically connected to the motor by suitable wiring such as is shown at 18.

The contacts are normally held out of engagement with each other so that the circuit to the motor is open through the medium of the expansible coil springs 19 which are interposed between the bottom of the
105 nozzle, the forward edge portion of the hinged plate 7.

The cover plate 7 is disposed beneath the

rear portion of the hinged seat 2 and normally when the seat is swung upwardly to the position shown in Figure 2, the springs 19 maintain the contacts spaced apart and the ventilator attachment is inoperative.

However, when the seat 2 is swung downwardly on the bowl, the rear portion of the seat will engage the hinged plate 7 and move the same downwardly against the tension of the springs 19 thus moving the contact 17 into engagement with the contact 16 whereby the circuit to the motor 4 will be closed and the suction fan 10 will be operated for creating a suction in the pipe 9 so that the gases and impurities may be drawn from the bowl 1 into the nozzle 5 and discharged out through the pipe 15. The suction fan 10 will operate as long as the contacts are in engagement with each other and as soon as the seat is swung upwardly, and out of engagement with the plate 7, the springs will automatically swing the hinged plate 7 upwardly so that the contact 17 is moved out of engagement with the contact 16 thus breaking the circuit to the motor.

It will be seen from the foregoing description that I have provided a highly novel yet simple ventilator attachment for a water closet bowl which is of such construction as to permit the same to be readily and easily installed without necessitating any material changes of the water closet bowl and will at all times be positive and efficient in its operation.

While I have shown the preferred embodiment of my invention, it is to be understood that various changes in the size, shape and arrangement of parts may be resorted to without departing from the spirit or sacrificing any of the advantages of the appended claims.

I claim:—

1. In combination a water closet bowl, and the usual hinged seat therefor, a suction nozzle supported on the rear portion of the bowl beneath the hinged seat, the top of the nozzle being open, a suction pipe extending from the nozzle, a motor operated suction fan arranged in said pipe, a movable member arranged in the open top of the nozzle, co-acting contacts carried by said mov-

able member and the suction nozzle respectively for closing the circuit to a motor for operating the suction fan when the seat is swung downwardly on the bowl and the movable member is moved downwardly, and a discharge pipe connected to the suction pipe.

2. In combination, a water closet bowl, and the usual hinged seat therefor, a suction nozzle supported on the rear portion of the bowl beneath the hinged seat, the top of the nozzle being open, a suction pipe extending from the nozzle, a motor operated suction fan arranged in said pipe, a movable member arranged in the open top of the nozzle, co-acting contacts carried by said movable member and the suction nozzle respectively for closing the circuit to a motor for operating the suction fan when the seat is swung downwardly on the bowl and the movable member is moved downwardly, a discharge pipe connected to the suction pipe, and means for normally holding the contacts out of engagement with each other when the seat is swung upwardly.

3. In combination with a water closet bowl, and the usual hinged seat therefor, a suction nozzle supported on the rear portion of the bowl, beneath the hinged seat, the top of the suction nozzle being open, a suction pipe extending from the nozzle, a motor operated suction fan arranged in said pipe, a discharge pipe communicating with said suction pipe, a hinged plate arranged in the open top of the nozzle, co-acting contacts carried by the nozzle and the hinged plate respectively, resilient means interposed between the bottom of the suction nozzle and the forward edge portion of the hinged plate for normally holding the plate in a raised position whereby the contacts are out of engagement with each other when the seat is swung to an upward position, said plate being adapted to move downwardly and cause the contacts to be in engagement with each other for closing the circuit to the motor when the seat is swung downwardly into engagement with the bowl.

In testimony whereof, I affix my signature.

FRANCIS M. DRAPER.