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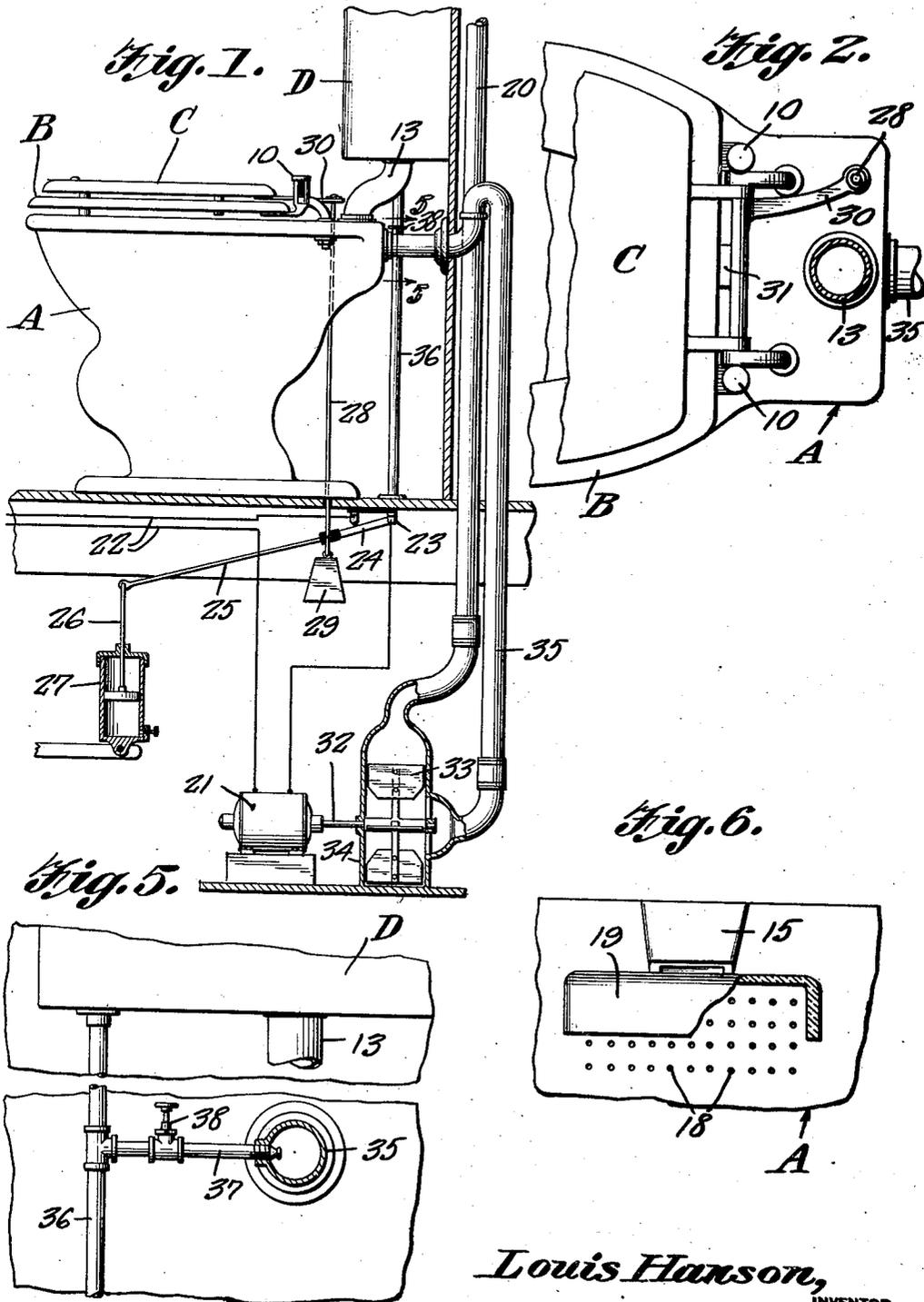
L. HANSON

1,885,715

VENTILATING LAVATORY BOWL

Filed Sept. 25, 1931

2 Sheets-Sheet 1



WITNESS: *P. Hickey*

Louis Hanson,
INVENTOR
BY *Victor J. Evans*
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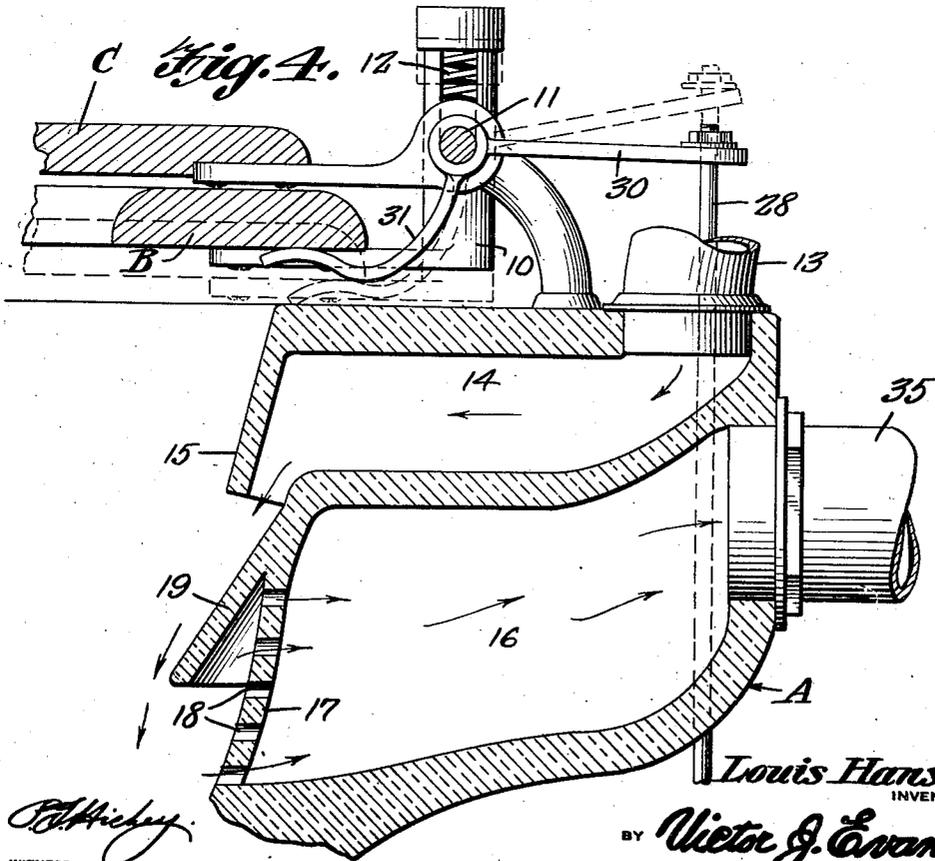
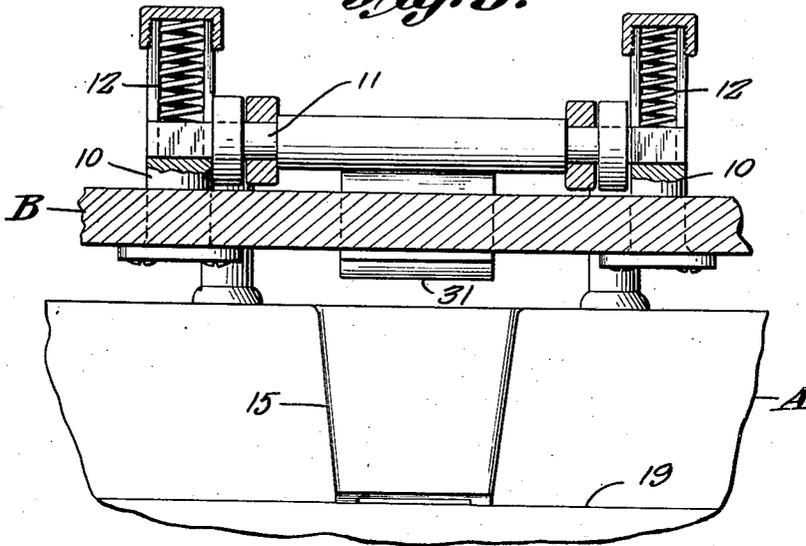
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Fig. 3.



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UNITED STATES PATENT OFFICE

LOUIS HANSON, OF SPOKANE, WASHINGTON

VENTILATING LAVATORY BOWL

Application filed September 25, 1931. Serial No. 565,182.

The invention relates to a ventilating lavatory bowl and more especially to a ventilator attachment for water closets.

The primary object of the invention is the provision of an attachment of this character wherein the bowl can be properly ventilated for a determined time after occupancy so as to render it thoroughly sanitary and odorless.

Another object of the invention is the provision of an attachment of this character, wherein the construction thereof is such as to be automatically operated so as to render the bowl odorless and also to maintain it clean, thereby assuring sanitation to a lavatory or the like.

A further object of the invention is the provision of an attachment of this character which is extremely simple in construction, thoroughly reliable and efficient in its operation, automatic in its action, strong, durable, and inexpensive to manufacture and install.

With these and other objects in view, the invention consists in the features of construction, combination and arrangement of parts as will be hereinafter more fully described in detail, illustrated in the accompanying drawings, which disclose the preferred embodiment of the invention, and pointed out in the claims hereunto appended.

In the accompanying drawings:—

Figure 1 is a side elevation of a lavatory bowl and adjunct parts thereof, showing the ventilating attachment constructed in accordance with the invention applied thereto, portions of the same being in section.

Figure 2 is a fragmentary top plan view.

Figure 3 is a fragmentary vertical transverse sectional view.

Figure 4 is an enlarged fragmentary vertical longitudinal sectional view.

Figure 5 is a sectional view on the line 5—5 of Figure 1 looking in the direction of the arrows.

Figure 6 is a fragmentary elevation partly in section looking toward the rear portion of the bowl.

Similar reference characters indicate corresponding parts throughout the several views in the drawings.

Referring to the drawings in detail, A designates generally a lavatory or closet bowl of any standard construction, B the swinging seat thereof, C the cover and D the flushing tank for said bowl. The seat B carries yieldable hangers 10 connected with the pivot pintle 11 for the cover C so that said seat B can be swung from horizontal to vertical position or vice versa and is normally lifted when in a horizontal position from the top edge of the bowl A under the action of springs 12 in the hangers 10 for a purpose presently described. The flushing tank D has the water inlet pipe connection 13 with the bowl, the latter being formed with a spout 14 internally thereof with a depending lip 15 to direct the water from the pipe 13 and spout 14 downwardly in the bowl A, the latter being flushed in conformity with standard types of bowls. Immediately beneath the spout 14 and formed in the bowl A is a ventilating trap 16, the wall 17 thereof confronting the path of the water from the spout 14 being perforated at 18 and overhanging this perforated wall 17 is a guard or baffle 19 as clearly shown in Figure 4 of the drawings, the trap 16 being in communication with a vent pipe 20 which extends vertically to without the inclosure constituting the lavatory so that odors can pass from the bowl A through the trap 16 and be discharged through the vent pipe 20 to the atmosphere in a manner presently described.

At a suitable location away from the bowl A preferably beneath the floor of the lavatory or within a cellar of a house or other inclosure is an electric motor 21 connected with the current feed wires 22 forming a circuit thereto and this circuit includes a normally open switch 23, the blade 24 of which through the extension 25 is connected with the piston 26 within a cylinder 27 of an air operated check device, the latter being connected with a weight rod 28 carrying a weight 29 at its free end. This rod 28 is engaged with a lifter lever 30 fulcrumed upon the pivot pintle 11 and is formed with a rocker extension 31, the latter being disposed beneath and against the under face of the seat B so that when the latter is occupied the lever 30 will be moved upwardly, thereby pulling upon the rod 28 against the resistance of the weight 29 and

the connection of this rod 28 with the extension 25 causes the automatic closing of the blade 24 of the switch 23 and thereby closing the circuit to the motor 21 for its operation. When the seat B becomes unoccupied the latter raises a limited degree and the checking device including the cylinder 27 and the piston 26 retards the opening movement of the blade 24 of the switch 23 allowing said switch to open slowly for a purpose presently described.

The motor shaft 32 has connected therewith a centrifugal fan or blower 33 housed within a casing 34, the latter at its periphery communicating with the vent pipe 20 while communicating with the center of the casing 34 is the pipe 35 which opens into the trap 16 and in this manner the latter is in communication with the vent pipe 20. Thus it will be seen that when the motor 21 is operated the fan 33 will be driven so as to draw through the trap 16 on the bowl A all odors and deliver the same to the pipe 20 whence they will be discharged to the atmosphere thereby rendering the bowl A thoroughly sanitary and odorless.

Extending from the water supply pipe 36 to the flushing tank D is a branch spray pipe 37 which opens into the pipe 35 close to the trap 16 and this branch spray pipe 37 is provided with a hand operated cut-off valve 38 so that on the opening of the valve water can be delivered to the pipe 35 and be conveyed into the trap 16 for the cleaning of the same and also its perforated wall 18 thereby preventing any possibility of choking or clogging of the trap. The trap 16 is above the water line in the bowl A so that it will freely circulate within the said bowl when the fan 33 is operating.

It will be observed that when the seat B is depressed the lever 30 is moved upwardly thereby pulling upon the rod 35 against the weight 29 thus closing the blade 24 of the switch 23 and starting the motor 21 as the circuit thereto is closed and simultaneously the fan 33 is driven for extracting odors from within the bowl. On unoccupancy of the seat B the check device including the cylinder 27 and piston 26 will cause the slow opening of the switch 23 to stop the motor 21 after a determined time of unoccupancy of the seat for thorough ventilation of the bowl as will be clearly obvious.

What is claimed is:—

1. The combination with a closet bowl having a vent and water supply chambers, of a movable seat for said bowl, a lead from said vent, a fluid control check, lever connections between the check and seat, a motor circuit control switch associated with the connections, resistance means associated with the connections between the check and seat and a fan within the lead and operated by the

motor on the closing of its circuit by the switch.

2. The combination with a closet bowl having a vent and water supply chambers, of a movable seat for said bowl, a lead from said vent, a fluid control check, lever connections between the check and seat, a motor circuit control switch associated with the connections, a fan within the lead and operated by the motor on the closing of its circuit by the switch, and a resistance weight carried by the connections between the check and seat.

In testimony whereof I affix my signature.

LOUIS HANSON.

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