

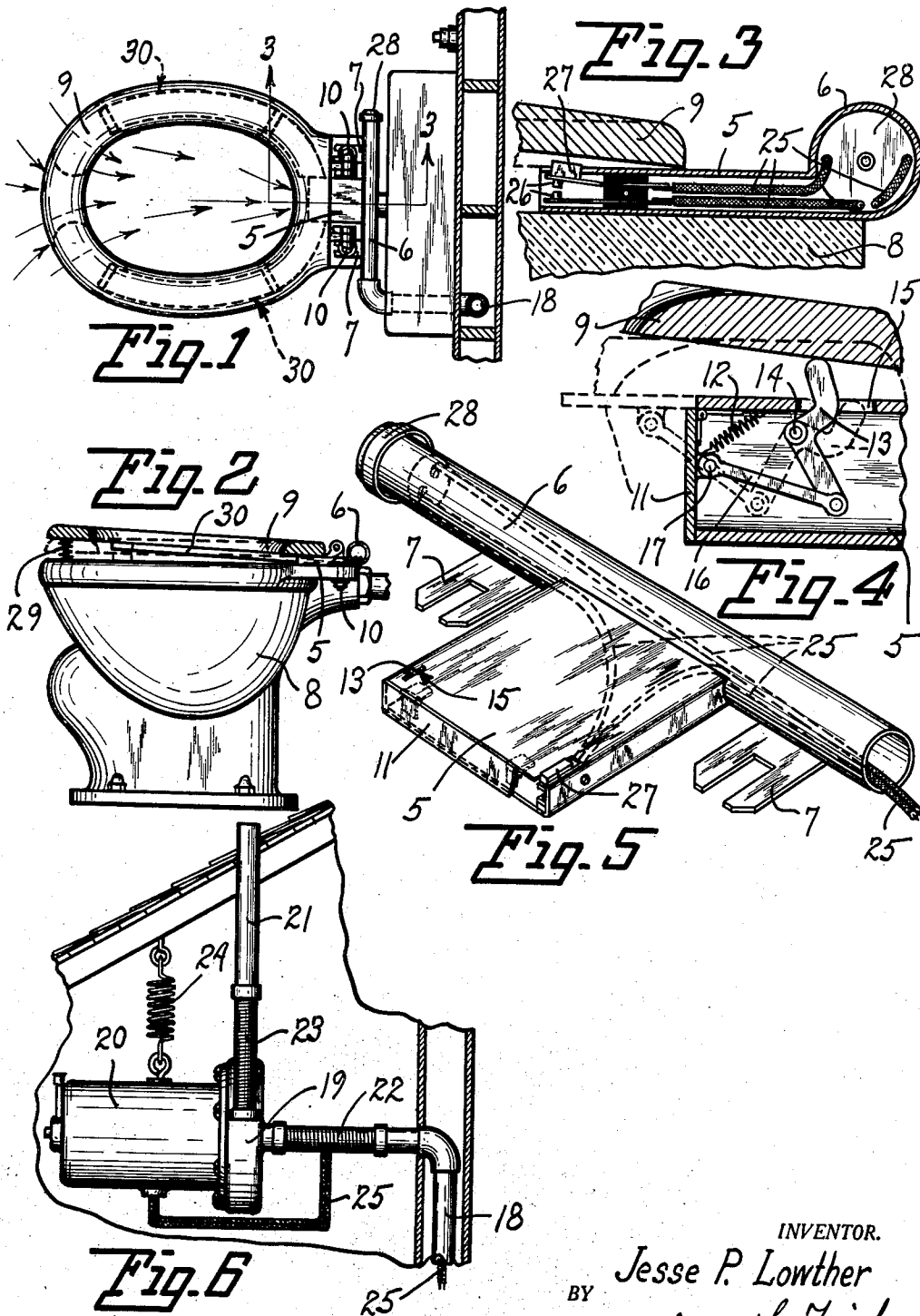
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FOUL AIR EXHAUSTER

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FOUL AIR EXHAUSTER

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My invention relates to foul air exhausters and the principal objects of the invention are to provide suction means for removing foul air from toilets and which means comprises a pipe system and a motor therefor with switch and lever means whereby the motor is kept running and the pipe system is retained open for removing the foul air throughout the time a person is seated on the toilet by the weight or pressure of the person and whereby said pipe system is closed and the motor is shut off automatically upon removal of the person from the toilet seat.

With the above and other objects in view which will appear as the description proceeds, the invention consists of the novel construction, adaptation, combination and arrangement of parts hereinafter described and claimed. These objects are accomplished by devices illustrated in the accompanying drawing; wherein:

Figure 1 is a top plan view showing the device attached to a toilet;

Fig. 2 is a view in side elevation of the same;

Fig. 3 is an enlarged view in vertical section taken substantially on a broken line 3, 3 of Fig. 1;

Fig. 4 is a detail view in vertical section showing the lever means for closing the casing;

Fig. 5 is a detail view in perspective of the device;

Fig. 6 is a view in side elevation of the motor and fan exhaust mounted in a sectional portion of a house.

Referring to the drawing throughout which like reference numerals indicate like parts, the numeral 5 designates a rectangular casing whose rear end is fixed to and in open communication with a tubular member 6 that is provided with a pair of slotted lugs 7. The device is installed between the rear portion of the toilet bowl 8 and the toilet seat 9 by sliding said lugs under the heads of the bolts 10 that ordinarily secure the hinges for the seat to the bowl as will be understood.

Referring to Fig. 4 of the drawing, the front end of the casing 5 is open and is provided with a hinged door 11 having a spring

12 which normally retains said door in the closed position. A bell crank 13 fulcrumed at 14 to an interior side of the casing has its upper arm deflected through a slot 15 in the top of said casing whereby it is engaged by the toilet seat 9. The lower arm of said bell crank has a link member 16 pivoted thereto and said member is pivoted to said door at 17. When pressure is applied to the toilet seat said door is swung to the open position as shown in dotted lines by said bell crank and link member, and when pressure is removed from the seat the door returns to its closed position.

One end of the tubular member 6 is connected to a pipe 18 that extends upwardly through the house walls to a connection with the fan portion 19 of a motor 20 and a discharge pipe 21 extends from said fan portion through the roof of the house or other building in which the device is installed as shown in Fig. 6. Rubber joints 22 and 23 are interposed in said pipes adjacent the motor and said motor is suspended from the roof by a spring 24 whereby noise and vibration of the motor is absorbed as will be understood.

Circuit wires 25 extend from the motor 20 through the pipe 18 and tube 6 to a connection with normally open spring switch terminals or contacts 26 that are mounted within the casing 5 as most clearly shown in Fig. 3. The upper one of said terminals is provided with a projection 27 extending through a slot in the top of said casing and arranged to be engaged by the toilet seat 9. Said circuit wires also connect with a closure switch 28 installed on the right hand end of the tube 6 and adapted to be manipulated by hand.

The front end of the toilet seat 9 is normally retained in a slightly raised position by a spring 29 as shown in Fig. 2, and, as shown in dotted lines in Fig. 1, side cushions 30 prevent pressure from entirely closing said seat down upon the top of the toilet bowl 8. When pressure is applied to said seat the aforesaid bell crank 13 opens the casing door 11 and the spring switch terminals 26 are closed by said seat. The motor 20 will then cause the fan 19 to continually

draw the air through and from the toilet, as shown by direction arrows in Fig. 1, through the casing 5, tube 6 and pipe 18 and discharge the air through the pipe 21.

It will thus be apparent that all foul air will be exhausted from the toilet and expelled through the roof of the house as long as pressure is applied to the toilet seat 9. The pressure is, of course, supplied by the weight of a person on the seat and while seated thereon the person may turn the motor 20 either off or on by means of the switch 28. Upon relieving the seat of such pressure the motor will be stopped immediately by the switch contacts 26 springing apart and the door 11 will drop down to the closed position thus preventing any return movement of foul air from the pipes into the room.

Having thus described my invention, it being understood that minor changes in the construction and arrangement of the apparatus may be resorted to without departing from the scope and spirit of the invention, what I claim and desire to secure by Letters Patent of the United States is:—

The combination with a toilet bowl and seat therefor of a foul air exhauster comprising a rectangular casing detachably installed between the rear portions of said bowl and seat, a tubular member fixed transversely to the rear end of said casing in open communication therewith, a door hinged to the front end of the casing, a spring adapted to retain said door in a normally closed position, a bell crank lever with its upper end disposed in engagement with the toilet seat, a link member connecting the lower end of the bell crank with said door whereby the door is opened when pressure is applied to the seat, a vent pipe connected to one end of the tubular member and extending upwardly to the open air, a motor, a fan for the motor interposed in the vent pipe whereby air is drawn from the toilet bowl and discharged through the vent pipe when the motor is running, circuit wires extending from a connection with the motor through the vent pipe, tubular member, and into the rectangular casing, a normally open spring contact switch connected to the terminals of the circuit wires within the rectangular casing and adapted to be closed by pressure upon the toilet seat, a switch adapted for manual operation mounted on an end of the tubular member and connected in circuit with the main circuit wires, and spring means for retaining the toilet seat in a normally raised position whereby the motor is shut off and the door of the rectangular casing in closed.

In testimony whereof I affix my signature.

JESSE P. LOWTHER.