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3,585,651

ODOR REMOVER FOR TOILETS

Filed Aug. 27, 1969

FIG. 1

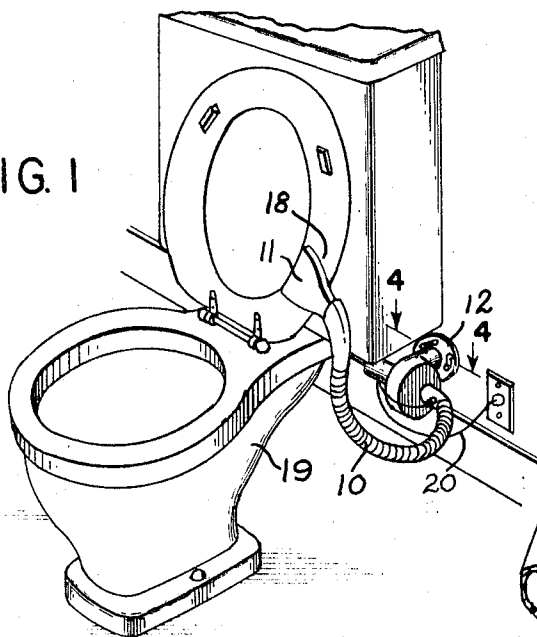


FIG. 2

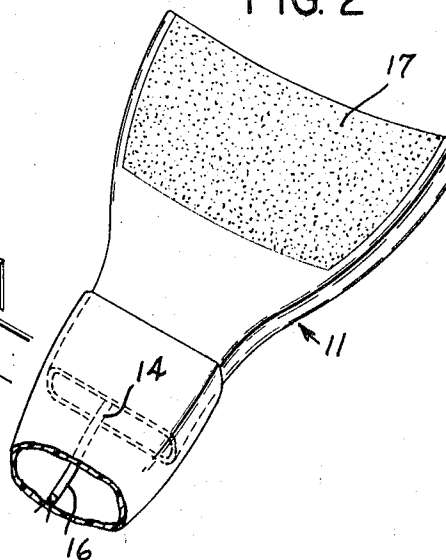


FIG. 3

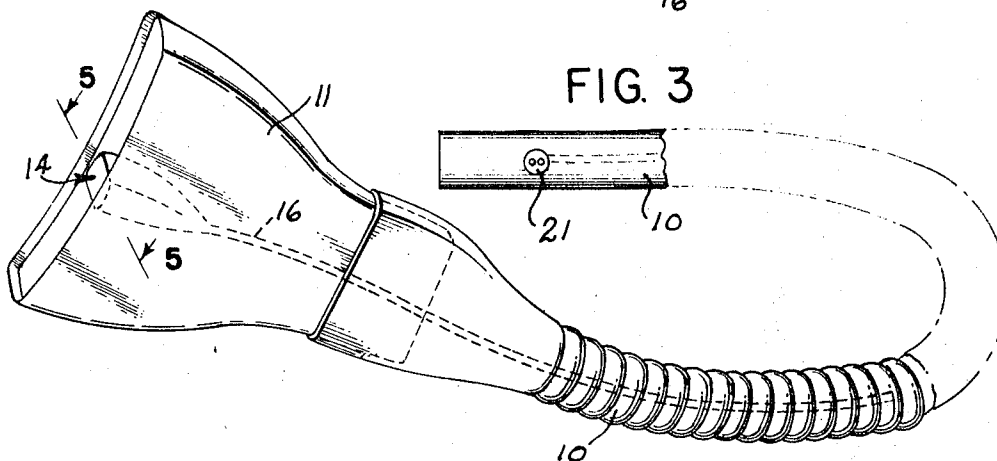


FIG. 4

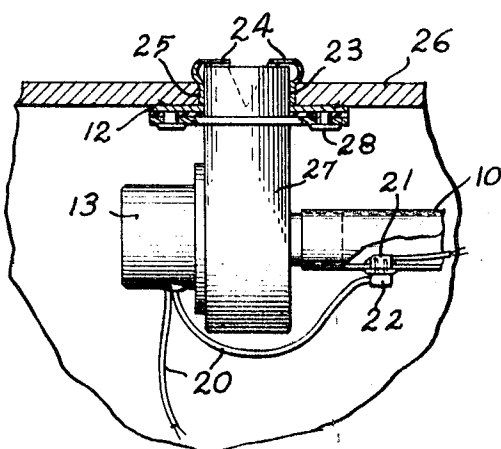


FIG. 5



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ODOR REMOVER FOR TOILETS

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4 Claims

ABSTRACT OF THE DISCLOSURE

A device for removing obnoxious odors from a toilet, such device including a hose with an inlet fitting connected to one end for attachment to the underside of the toilet seat near the rear and a discharge fitting at its opposite end for extending through a wall to an exterior air space and with a blower or fan operatively connected to such discharge fitting for producing suction through the hose for withdrawing air from the toilet bowl and discharging it beyond the wall, the inlet fitting having incorporated therein a resilient switch completely encased in plastic with embedded electric contacts adapted to be engaged by the weight of a person on the toilet seat to supply electric current to cause operation of the motor.

BACKGROUND OF THE INVENTION

(1) Field of the invention

The invention is in the field of ventilation, particularly of space occupied by humans where the purity of the air is important.

(2) Description of the prior art

Numerous devices for ventilation, including those for removing odors from bathrooms and toilets, have been employed. However, these have not been fully satisfactory for various reasons including that they were impractical, complicated, expensive, difficult to install, and were inefficient in operation.

SUMMARY OF THE INVENTION AND OBJECTS

The invention is an apparatus for attachment to be applied to the toilet bowl which will operate during use of the toilet to remove objectional or obnoxious odors, and it includes a flexible, accordion or bellows type extensible hose having a relatively thin, flat inlet fitting attached to one end adapted to be attached to the underside of a toilet seat and a discharge fitting of a character to extend through a wall to the exterior, and with a motor operated blower detachably connected to the discharge fitting for drawing air through the inlet fitting and discharging it through the discharge fitting to the exterior of the room in which the toilet is located, with an electric conduit extending from the motor through the hose to a resilient plastic encased switch in the inlet fitting. The contacts of the switch are moved into engagement to complete an electric circuit by the weight of a person sitting on the toilet seat.

It is an object of the invention to provide a simple, inexpensive, easily applicable and removable odor remover for toilets which automatically will quickly and efficiently remove obnoxious odors and leave the air clean and sanitary.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a perspective illustrating one application of the invention;

FIG. 2, a top perspective of an inlet fitting attached to one end of the hose;

FIG. 3, a bottom perspective of the same with the hose;

FIG. 4, a side elevation of the discharge fitting with the blower attached thereto; and

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FIG. 5, a longitudinal section through the inlet fitting and resilient switch on the line 5—5 of FIG. 2.

DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference to the drawing, the apparatus of the present invention comprises a flexible accordion or bellows type extensible hose 10 having an enlarged flattened inlet fitting 11 attached to one end of said hose and a discharge fitting 12 with a motor 13 attached to the opposite end of said hose. The inlet fitting 11 is provided with a resilient switch 14 having an internal cavity 14' incorporating spaced contacts 15 adapted to be brought together or engaged to complete an electrical circuit when compressed to supply electric current through conductors 16. Since the contacts are fully encased in the resilient plastic body of the switch, in order to bring them together weight is adapted to be applied, and to accomplish this the resilient switch 14 is mounted within the relatively thin inlet fitting 11. The inlet fitting is adapted to be attached in any desired manner, as for example, by an adhesive 17 to the undersurface of a toilet seat 18 located in the usual manner above a toilet bowl 19. The inlet fitting 11 is slightly thicker than the space between the seat 18 and the bowl 19 so that when a person sits upon the toilet seat 18, the weight of such person will compress the resilient switch and produce engagement of the contacts 15 to complete an electric circuit to the motor 13 by usual wiring 20. The conductors 16 may be concealed within the interior of the pipe 10 and terminate in a socket 21 adapted to receive a plug 22 for the conductors to the motor 13. A blower 27 driven by the motor 13 may be of any desired construction, as for example, squirrel-cage connected to the discharge fitting or motor mount 12 by fasteners 28. The discharge fitting 12 preferably has compressible arms 23 with outwardly extending fingers 24 so that when the fingers are compressed the arms can be inserted through an opening 25 in a wall 26 and the fingers will expand slightly on the remote side of the wall to help retain the fitting in place.

It will be understood that a relatively simple, practical foul air and odor removal device is provided which may be readily installed on a toilet which thereafter will function to remove obnoxious odors automatically with no attention from the user.

What is claimed is:

1. Apparatus for automatically removing foul air from a toilet bowl having a hinged seat, said apparatus comprising a flexible extensible hose, a flattened inlet fitting attached to one end of said hose and having a flexible wall portion, said inlet fitting being slightly larger than the space between the seat and the bowl of said toilet, a discharge fitting attached to the opposite end of said hose, attaching means for securing said inlet fitting flat against the under surface of said toilet seat, means for securing said discharge fitting in alignment with an opening in the wall of an enclosure in which the toilet is located, a motor operated blower operatively associated with said hose for producing flow of air therethrough and discharging air from said toilet through said wall, and a switch located in said inlet fitting adjacent said flexible wall portion and encased in resilient plastic, said switch having an internal cavity with exposed electrical contacts normally spaced apart but adapted to be moved together to complete an electric circuit by the weight of a person sitting on said toilet seat and compressing said inlet fitting.

2. The structure of claim 1 in which said attaching means for securing the inlet fitting to the toilet seat includes an adhesive.

3. The structure of claim 1 in which said flexible extensible hose is of a bellows type.

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4. The structure of claim 1 in which said electrical contacts are connected to said motor by electric conductors contained within said hose.

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