TOILET SEAT VENTILATION SYSTEM

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ABSTRACT

A toilet ventilation system which includes a toilet seat that defines an inlet and passage way that has a means for quick attachment to a manifold. The manifold is connected by a pipe to an exhaust vent located on the outside of the building. The pipe includes an exhaust fan that urges odorous gases collected at the toilet seat to be expelled at the exhaust vent.
TOILET SEAT VENTILATION SYSTEM

CROSS REFERENCE TO RELATED APPLICATIONS


FIELD OF THE INVENTION

[0002] The invention disclosed herein relates to toilets in general and more specifically to ventilation of the toilet area.

BACKGROUND OF THE INVENTION

[0003] Ventilation of the area surrounding the toilet is well known in the art. By way of example, most building codes require a ventilation exhaust fan or other means to remove the unpleasant odors surrounding the toilet by removing the entire air generally of the room. The inefficiency of vacating the air of the entire room instead of preventing the unpleasant odors from disseminating generally is easily appreciated.

[0004] Other systems exist that attempt to eliminate the unpleasant odors by collecting nearer the source of the unpleasant odors by collecting air near the toilet have been tried. They have been commercially unsuccessful because of the difficulty in collecting the air while necessarily avoiding the collection of water.

[0005] Yet another problem associated with the commercial failures to collect odors near the toilet seat is the difficulty to clean the toilet and seat area because the cumbersome nature of the venting system associated with the venting toilet seat. The existing art fails to provide a means to easily be removed to facilitate cleaning.

[0006] The present invention provides a novel toilet ventilation system that also provides a means to easily remove the toilet seat to allow improved and an easier cleaning of the area. The system includes a manifold which is attached to the toilet seat using one or more clips on each side of the manifold that engage catches on the toilet seat.

SUMMARY OF THE INVENTION

[0007] The present invention relates to a toilet ventilation system. The ventilation system includes a manifold which engages the toilet seat. The toilet seat is located in typical fashion immediate to and above the toilet bowl. The manifold communicates to a point of exhaust, typically to the exterior. The manifold incorporates several features including a means for quick connection to the toilet seat and a means that allows adjustment to facilitate installation on various sized toilet bowls.

DESCRIPTION OF THE DRAWINGS

[0008] FIG. 1 is the right side view of the toilet seat ventilation system;
[0009] FIG. 2 is a right side elevation of a cutaway view of the toilet seat on the toilet bowl;
[0010] FIG. 3 is a lower left side view of the manifold;
[0011] FIG. 4 is a left side elevation of the manifold with the sleeves slidable engaged in the manifold;
[0012] FIG. 5 is a lower left view of a sleeve;
[0013] FIG. 6 is a side view of a sleeve; and
[0014] FIG. 7 is a side elevation of a sleeve.

DESCRIPTION OF THE INVENTION

[0015] Referring to the drawings, the invention is a toilet ventilation system 10. FIG. 1 (the left and right side views are mirror images unless otherwise noted). The toilet ventilation system includes a toilet 12, a toilet seat 14 with at least one inlet duct 16, a manifold 18 with a means to removably connect to the toilet seat 14. FIG. 4, 20, the manifold communicates with an exhaust port 22 which allows collected gases and odors to be ventilated to the exterior by means of a pipe 24, the pipe includes an inline exhaust fan 26 that creates a pressure differential to draw the gases collected near the toilet and expel them through the exhaust port, the exhaust fan which is switchably 28 operated.

[0016] Referring to FIG. 2, the toilet seat 14 includes one of more inlet ducts 16 and defines a void 30 in the seat to allow gases to flow through the seat. The manifold, shown in FIG. 3 defines a passage way 32 that latches to the toilet seat via snap latches FIG. 4 20. The passage way in the manifold begins as a single opening 34 at the connection to the toilet seat and divides the airflow to two branches 36 that exit at the manifold exit ports 38.

[0017] Referring to FIGS. 3-7, the branches of the manifold 36 include sleeves 40 that slidably engage the manifold. The sleeves slidable connection allows the manifold to adjust in width to accommodate different size toilet bowls 12. Referring to FIG. 7, the sleeves incorporate a fluid flow prevention wall 42.

[0018] Referring to FIGS. 1 and 2, the manifold exit ports of the manifold are connected to two pipes 44 (the mirror imagine is not shown). The two pipes are joined together into a single pipe 24 by a T connection 46 that is commonly known in the art. The single pipe communicates to an exhaust port 22 located on the exterior of the building. The single pipe includes an inline ventilation fan 26 which creates a pressure differential that urges the gas collected at the toilet seat 14 to the exhaust port.

[0019] Referring now to FIG. 4, the manifold includes a snap latch 20 located on each side which allows the quick and easy disconnection from the toilet seat. This feature is an improvement over the prior art because it allows more convenient access to allow cleaning of the toilet and seat area.

[0020] The preferred embodiment of the invention has been disclosed, but it is merely illustrative of the principles of the invention. Persons of ordinary skill in the art will appreciate that other embodiments and modifications may be made without deviating from the scope of the disclosed invention.

What is claimed:

1. A toilet ventilation system comprising: a toilet, toilet seat with at least one inlet duct; a manifold with a means to removably connect to the toilet seat, the manifold communicates with an exhaust port which allows collected gases and odors to be ventilated by means of a pipe; the pipe includes an inline exhaust fan that creates a pressure differential to draw the gases collected near the toilet and expel them through the exhaust port, the exhaust fan is switchably operated.

2. The toilet ventilation system of claim 1 wherein the toilet seat includes one of more inlet ducts and defines a void in the seat to allow gases to flow through the seat.
3. The toilet ventilation system of claim 1 wherein the manifold defines a passage way that latches to the toilet seat via snap latches.

4. The toilet ventilation system of claim 3 wherein the manifold begins as a single opening at the connection to the toilet seat and divides the airflow to two branches that exit at the manifold exit ports.

5. The toilet ventilation system of claim 1 wherein the manifold defines a passage way that latches to the toilet seat via snap latches, with the manifold beginning as a single opening at the connection to the toilet seat and divides the airflow into two branches that exit at the manifold exit ports and the branches of the manifold include sleeves that slidably adjust.

6. The toilet ventilation system of claim 5 wherein the sleeves include a fluid flow prevention wall.

7. A toilet ventilation system comprising: a toilet, toilet seat with at least one inlet; a manifold with a snap latch on each side of the manifold to removably connect the manifold to the toilet seat, the manifold communicates with an exhaust port which allows collected gases and odors to be ventilated to the exterior by means of two pipes; the manifold has two sleeves that include a fluid flow prevention wall that interconnect between the manifold and the two pipes; the two pipes are joined to a single pipe that includes an inline exhaust fan that creates a pressure differential to draw the gases collected near the toilet and expel them through the exhaust port located on the exterior of the building, the exhaust fan is switchably operated;