(No Model.)

W. L. POTTER.

SANITARY VENTILATOR.

No. 479,224. Patented July 19, 1892.

Fig. 1

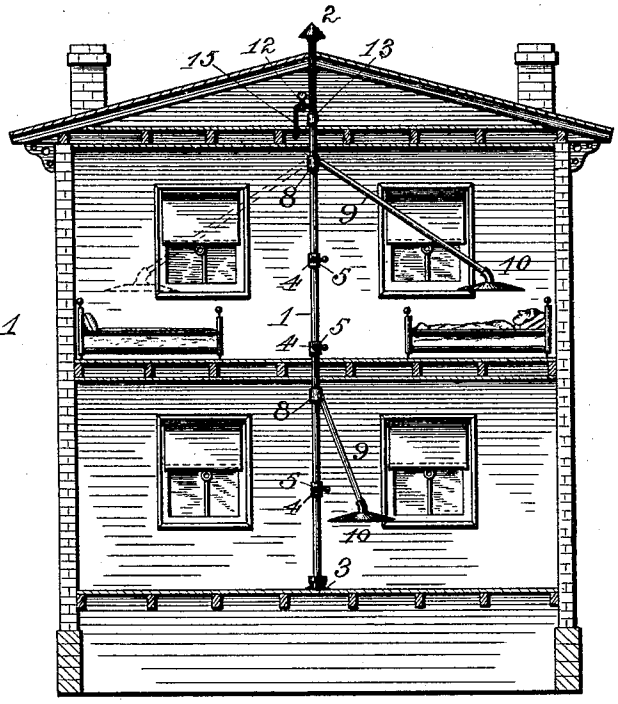


Fig. 2

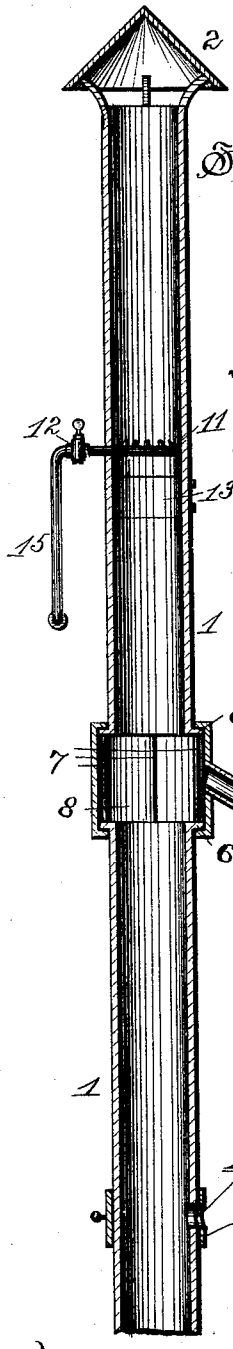


Fig. 3

Fig. 6

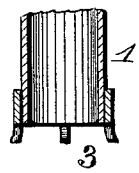


Fig. 4

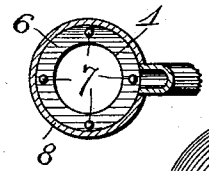
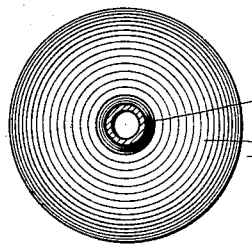


Fig. 5



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UNITED STATES PATENT OFFICE.

WILSON L. POTTER, OF HARTFORD, CONNECTICUT.

SANITARY VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 479,224, dated July 19, 1892.

Application filed November 4, 1891. Serial No. 410,859. (No model.)

To all whom it may concern:

Be it known that I, WILSON L. POTTER, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Sanitary Ventilators, of which the following is a full, clear, and exact specification.

This invention relates to the class of ventilators more particularly adapted for use in hospitals, houses, or apartments in which there is illness or disease.

The object of the invention is to provide a hygienic or sanitary ventilator, which may be placed in any room, apartment, or hospital-ward containing a sick person for drawing off and conveying away without a sensible draft all the carbonic-acid gas, effluvia, noisome exhalations, and polluted atmosphere contaminated by the disease, and destroying the bacillus, spores, animalculæ, microbes, and all forms of bacteria and disease-propagating germs, protecting the community at large from the danger of pestilential infection, and relieving the attendant physician, nurse, or friend from the hazard of catching contagious or infectious maladies and the enervating effects of the vitiated atmosphere, while at the same time relieving the patient and providing purer air for his respiration.

To this end the invention resides in a ventilator consisting of a draft-tube leading from a room or apartment to the outer atmosphere provided with means for producing a current of air, which will gently draw away and destroy the contaminating elements, and having leading-tubes which can be moved or adjusted to the most desirable position to receive and conduct the polluted air to the draft-tube, as more particularly hereinafter described, and pointed out in the claims.

Referring to the accompanying drawings, Figure 1 is a sectional view of a building provided with a ventilator. Fig. 2 is an enlarged section of a portion of the ventilator. Fig. 3 is a transverse section of the draft-tube at the draft-producing and germ-destroying burner. Fig. 4 is a section at the junction of a leading-tube with the draft-tube. Fig. 5 is a plan view of the mouth of the leading-tube, and Fig. 6 is a sectional view of the bottom of the draft-tube.

In the views, 1 indicates a tube of any desired material of any cross-sectional shape, preferably a thin, cheap, round metal tube, which is located near the wall or in the center of any room, apartment, or ward of a building or hospital, with one end passing upward through the roof or into a chimney, through the side wall, or out a window, as desirable or convenient, to the exterior of the building. This end is usually protected by a cap or cowl 2, while the lower end may be open and rest upon the legs 3 on the floor of a room or pass to a room below or into a cellar. Openings 4 for the passage of air are made through the draft-tube at various heights in a room and the tube provided with slides 5 for exposing or covering these openings. A portion of the draft-tube is cut away, preferably, near the top of the room in which it is placed. Each end, at the opening, is provided with a flange 6, and these flanges are joined by bolts or rods 7. Joining the ends of the tube where cut away and covering the opening is a sleeve 8, having rims for holding the flanges 6, upon which it rotates or swings around. Projecting at an angle from this sleeve and opening to the interior is a leading-tube 9, the outer end of which is preferably provided with an enlarged or bell mouth 10. As the sleeves are rotarily held to the draft-tube around the opening, these leading-tubes, with the bell-mouths, can be swung around to any desired position and still have an open passage into the draft-tube.

Near the top of the draft-tube is placed a burner 11, having a number of jets projecting toward the center of the tube. This burner is connected by a pipe 15 with any reservoir of fuel, either with the gas system of a building or a supply of oil or naphtha, which, when the cock 12 is opened, will flow to the jets, where it may be ignited and burned. The burner may be lighted in the draft-tube by applying a match to the jets through a hand-hole, closed by a door 13, or an electric or other lighter may be arranged and connected for such purpose. When the jets are burning, the heat produced causes a draft upward in the tube, drawing air in through the openings and leading-tubes. If only the leading-tubes are open, the draft through them will be considerable; but the draft through the lead-

ing-tubes may be moderated by moving the slides and opening the other passages for the ingress of air.

In a sick-room or ward of a hospital where there is a case of contagious or infectious disease one of the leading-tubes may be swung over the patient, so that all the noisome exhalations, effluvia, offensive odors, and contaminating or infectious bacteria, germs, and other impurities emanating from the disease will be drawn up from the patient through the leading-tubes to the draft-tube and caused to pass through the life-destroying flame, which produces the draft, so that instead of being diffused through the apartment and permeating all articles the germs are carried off and consumed by simple means. The current of air produced can be regulated so that there will be no direct draft or chilling of the patient; but all the carbonic acid and vitiated atmosphere is removed, relieving his respiration and aiding his recovery.

By the use of this ventilator, which conveys away the putrid exhalations, physicians, nurses, and friends can attend, treat, and care for a patient with contagious maladies without danger of contamination and without the sickening effects produced by a vitiated and polluted atmosphere, and as the germs are subjected to the heat of the flame at the burner and their life destroyed the vicinity is disinfected and the spread of disease avoided. A case of contagious disease may be treated near other cases without danger of infection when this ventilator is provided for the apartment.

The device is simple. It can be readily placed in any apartment and the swiveled leading-tubes easily swung into position above the victim of a dreaded disease, and at the same time the atmosphere in the room may be renewed by opening the small passages into the draft-tube. When it is not desired for use, the draft-producing flame is readily extinguished and the leading-tubes swung against the wall of the room; but of course the device may be employed in an apartment where there is no illness, if desired, for purifying the air without a sensible draft, and to remove sewer-gas, or in a public hall or school for general ventilation.

I claim as my invention—

In a sanitary ventilator, the combination of a vertical draft-tube passing from the interior to the exterior of a building, a burner located in said tube near the top, the leading-tube swiveled to the draft-tube below the burner and capable of complete rotation thereabout, and valve-controlled draft-openings in said draft-tube, located beneath the leading-tube, substantially as set forth.

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