(No Model.)

W. W. ROBINSON.

VENTILATOR.

No. 261,764. Patented July 25, 1882.

Fig. 1.

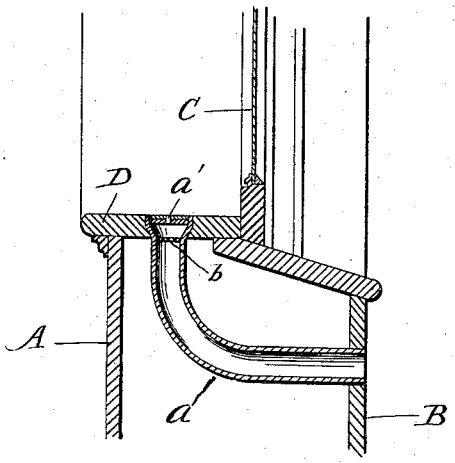
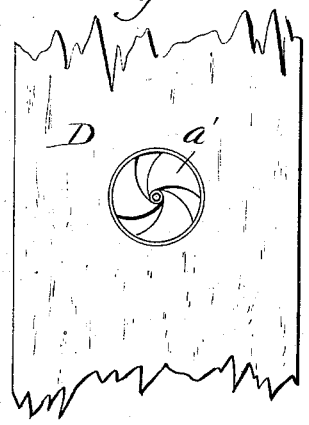


Fig. 2.



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UNITED STATES PATENT OFFICE.

WILLIAM W. ROBINSON, OF RIPON, WISCONSIN.

VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 261,764, dated July 25, 1882.

Application filed March 30, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. ROBINSON, of Ripon, in the county of Fond du Lac and State of Wisconsin, have invented certain new and useful Improvements in Ventilators, of which the following is a description that will enable others to understand and make use of the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, forming a part of this specification.

The object of this invention is to provide a simple and convenient device for supplying fresh air to the interior of various structures, being more especially intended for use in connection with railroad-cars, but it is adapted to be used in all places where a simple and convenient system of ventilators is required.

Figure 1 represents a transverse section of a portion of a car-structure embodying my improvement; Fig. 2, a top view of the inner cap of the window-sill.

Referring to the drawings, A represents the inside wall of the car, B the outside wall, C the window, and D the window-sill cap.

The ventilator consists of the curved tube *a*, which extends from the cap B, on the inside of the car, down underneath the window, passing through and coming flush with the outer wall of the same, as shown in Fig. 1 of the drawings. The inner end of the ventilator-tube comes flush with the top of the window-sill cap, and is made flaring or bell-mouthed for the reception of the regulating register or valve *a'*. The object of enlarging the inner end of the tube *a* is to have the combined openings in the register equal to or in excess of the area of the ventilator-tube.

Instead of the register shown, I may make use of a diaphragm hung on a pin in the center and having bearings in each side of the tube, so that the same may be rotated for the purpose of opening or closing the ventilator-passage, as may be required.

The register shown as a part of my device is, perhaps, the more desirable for car-ventilators, for the reason that the exact quantity of air required or admitted can be more easily regulated and a nicer finish and more ornamental appearance given to this part of the device.

In the tube *a*, and immediately below the register, is placed the wire-gauze diaphragm *b*, which serves the purpose of preventing the entrance of dust, cinders, &c., to the interior of the car. This diaphragm may be placed in the outer end of the tube, or more than one may be used, as practical working may require.

The curved form of ventilator-tube shown offers less obstruction to the current of air, and this form will be used in new structures; but in placing this device in cars, houses, &c., already constructed the ventilator-tube will or may be in two parts running at right angles to each other and connected by a suitably threaded elbow, into which the correspondingly-threaded ends of the two parts composing the ventilator-tube are inserted.

All travelers know how very annoying it is to have a window open in a car, not only on account of the entrance of smoke and cinders, but also for the reason that the occupants of the seat back of the open window get the full force of the air-currents. As is often the case, the window cannot be opened at all, and, there being no other means of ventilation, the air becomes very impure. By this arrangement I avoid all these objectionable features, and the exact quantity of air admitted is readily controlled by the occupant of a car-seat without annoying others or interfering with their comfort.

I am aware that ventilator-tubes have been made with a register upon the outer end and a screen upon the inner end to prevent the dust which passes through the register to the tube from passing into the compartment to be ventilated; but I am not aware that one end of the tubes has ever been enlarged and provided with a register placed in the top of said enlargement and having openings the sum of the areas of which is equal to the area of the exit-opening of the tubes, so that when the register is opened a volume of air equal to that which would be admitted if the enlargement and register had been omitted will have free access to said tube. Nor am I aware that dust screens or diaphragms have been placed immediately under the register, so that dust will not pass into the body of the tube, but will collect upon the upper surface of the screen or diaphragm, where it can readily be removed through the openings in the register, or by taking the latter from the tubes.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A ventilator-tube having one end enlarged, and a register placed at the top or inlet opening of said enlargement and having openings the sum of the areas of which is equal to the area of the exit-opening of the tube, for the purpose set forth.

2. In a ventilator-tube, the combination, with a register placed at one end, of a diaphragm or screen placed in the same end as and immediately under the register, for the purpose set forth.

3. In a ventilator-tube having its end enlarged, as described, the combination, with a register placed at the top of said enlargement, of a diaphragm or screen immediately below the register and at the bottom of said enlargement, for the purpose set forth.

WILLIAM W. ROBINSON.

Witnesses:
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