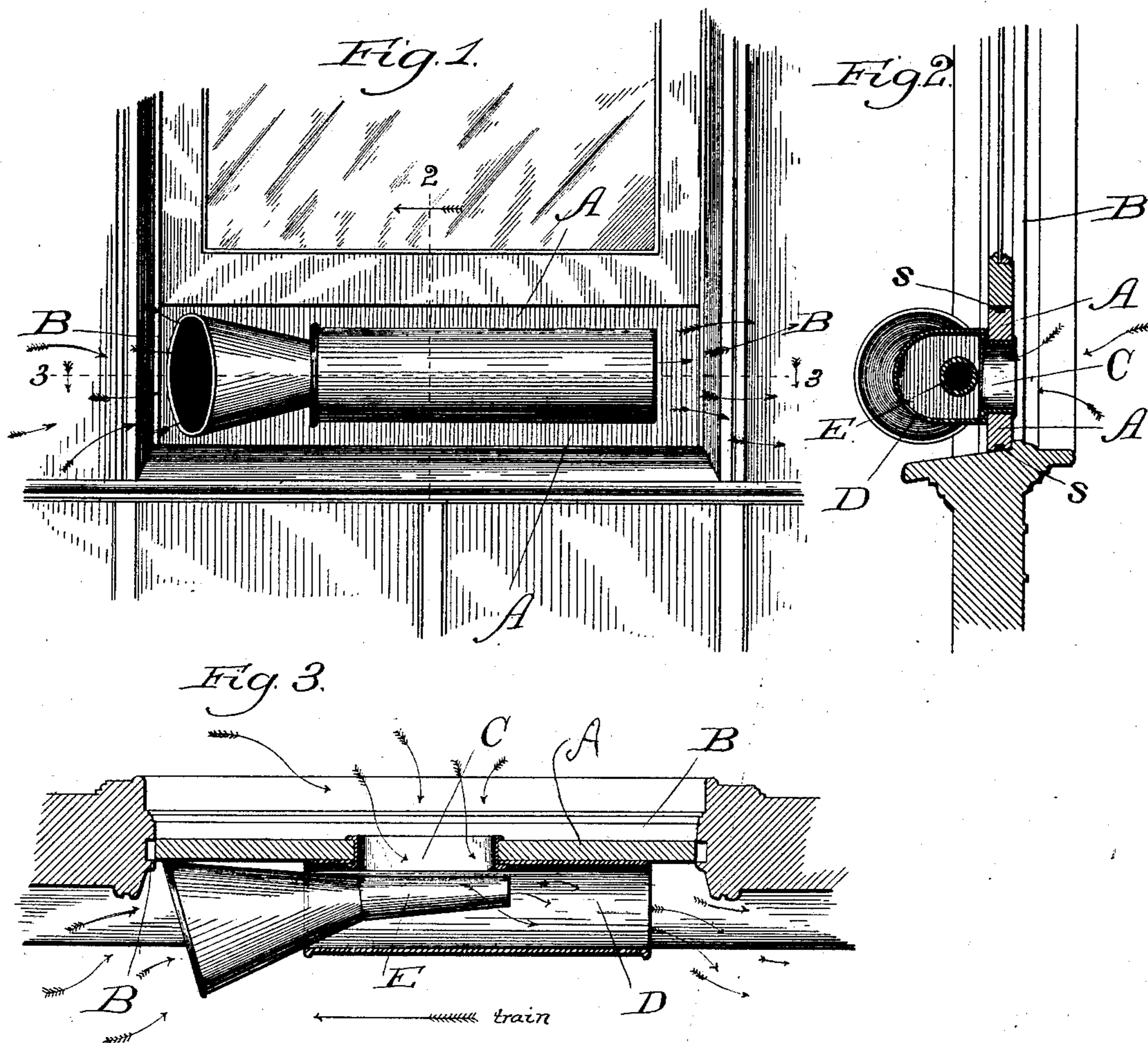


(No Model.)

H. E. JACOBS.
VENTILATOR FOR CARS.

No. 363,642.

Patented May 24, 1887.



Witnesses:
Chas. E. Gaylord.
J. W. Dyrenforth.

Inventor:
Henry E. Jacobs.
By Dyrenforth & Dyrenforth,
Attys.

UNITED STATES PATENT OFFICE.

HENRY E. JACOBS, OF FOND DU LAC, WISCONSIN.

VENTILATOR FOR CARS.

SPECIFICATION forming part of Letters Patent No. 363,642, dated May, 24, 1887.

Application filed July 26, 1886. Serial No. 209,058. (No model.)

To all whom it may concern:

Be it known that I, HENRY E. JACOBS, a citizen of the United States, residing at Fond du Lac, in the county of Fond du Lac and State of Wisconsin, have invented a certain new and Improved Ventilator for Car-Windows; and I hereby declare the following to be a full, clear, and exact description of the same.

My improvement relates to the class of ventilators used on railroad passenger-cars to exhaust the impure air from within the cars by the action of the current of external air, produced principally by the movement of the train, through a tube crossing an opening leading into the car, to draw therefrom the vitiated atmosphere by suction.

It is my object to provide a simple and inexpensive device for the purpose for application at the car-windows, and which shall be readily adjustable when required and as easily removed when not required.

To this end my invention consists in the general, as well as in the specific, construction of my improved ventilator, all as hereinafter fully set forth and claimed.

In the drawings, Figure 1 shows the external window portion of a railroad passenger-car provided with my improved ventilator; Fig. 2, a section of the same taken on the line 2 2 of Fig. 1 and viewed in the direction of the arrow; and Fig. 3, a similar view taken on the line 3 3 of Fig. 1 and viewed in the direction of the arrows.

A is a board or plate of a length to cause it to fit snugly between the sides of the sash of a car-window, B, and of any desired width, but preferably only sufficiently wide to carry on one surface the mechanism hereinafter described and to be admitted into the window-sash on raising the window part way, though higher than the width of the board, against the upper edge of which the window is lowered or supported. The board is provided with an opening, C, preferably in the form of a longitudinal slot, as shown, covered on one surface by a shield or split tube, D, secured at its edges to the board and open at one end.

E is a tube within the shield D, extending

lengthwise of the board across the opening C therein, slightly beyond one edge of the latter at one end, and flaring toward its opposite end, which extends beyond the shield D, closed around it at the extremity farthest from the edge of the opening C adjacent to the cylindrical end of the tube E.

The device is readily adjusted within the sash of a car-window, to cause the parts D and E to be outside and lengthwise of the car upon raising the window for the purpose, and causing it to have contact at its lower edge with the upper edge of the board A, to avoid an uncovered opening, which would admit dust, cinders, and other objectionable matter; and a close fit may be produced by providing rubber strips *s* upon the upper and lower edges of the board.

The device is always inserted into its operative position to permit the flaring mouth of the tube E to be the forward end to cause the motion of the train to produce air-suction through the tube from the flaring end, whereby the volume entering at the latter becomes compressed in its passage, and by its expansion on discharging at the cylindrical end of the tube D increases the suction-force which operates to exhaust impure air from the interior of the car, and thus ventilate it.

The device affords particular advantage in sleeping-cars for ventilating the sleeping-compartments, since it operates without producing any cold draft, and may thus be used while a compartment is occupied without inconvenience or injurious consequences to the occupant, and notwithstanding the absence of a screen as part of the device no objectionable matter can enter the car through the ventilator, owing to the construction, and manner of its action.

What I claim as new, and desire to secure by Letters Patent, is—

1. A removable car-window ventilator, comprising, in combination, a board or plate, A, having a shielded opening, C, and a tube, E, flaring toward one end, upon one side of the board A, and extending across the opening C, substantially as and for the purpose set forth.

2. A removable car-window ventilator,

comprising, in combination, a board or plate,
A, having an opening, C, a shield, D, secured
upon one side of the part A to cover the open-
ing therein and open at one end, and a tube,
5 E, extending across the opening C, within the
shield D, and flaring toward one end, which
extends beyond the corresponding end of the

shield, the whole being constructed and ar-
ranged to operate substantially as described.

HENRY E. JACOBS.

In presence of—

J. W. DYRENFORTH,
HENRY HUDSON.