(No Model.) 2 Sheets—Sheet 1.

J. C. WANDS.

RAILWAY CAR VENTILATOR.

No. 370,667. Patented Sept. 27, 1887.

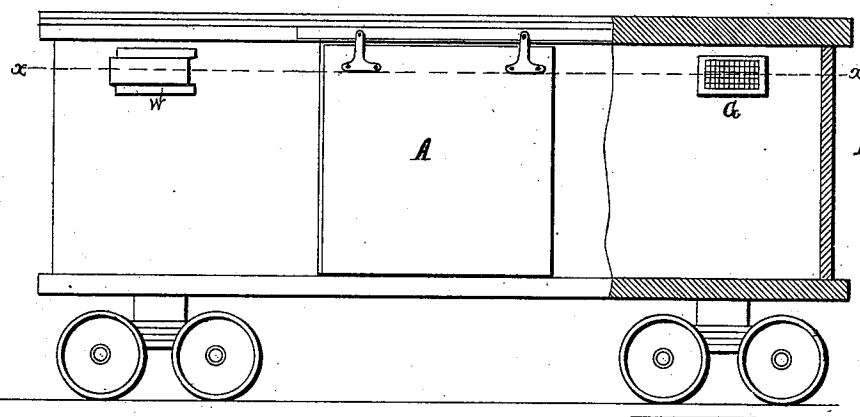


Fig 1

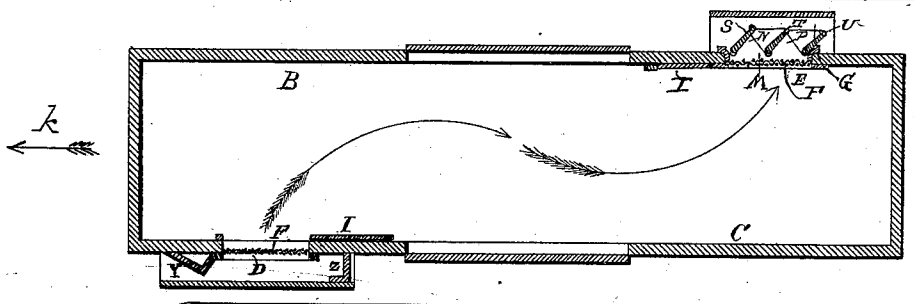


Fig 2

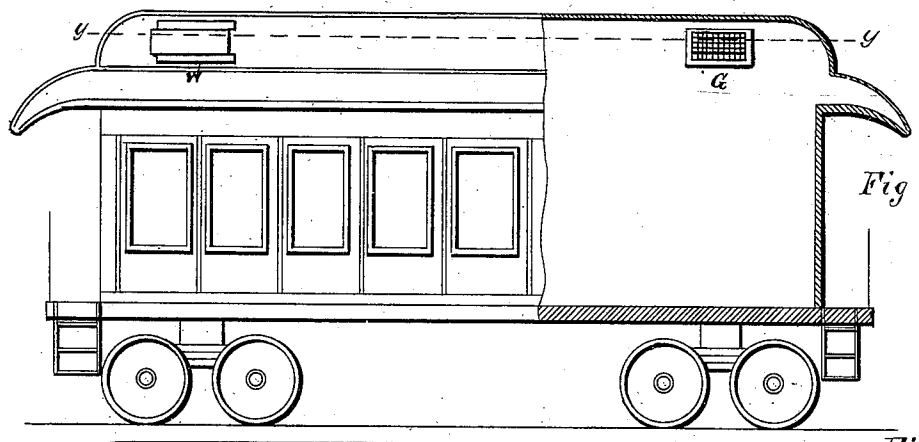


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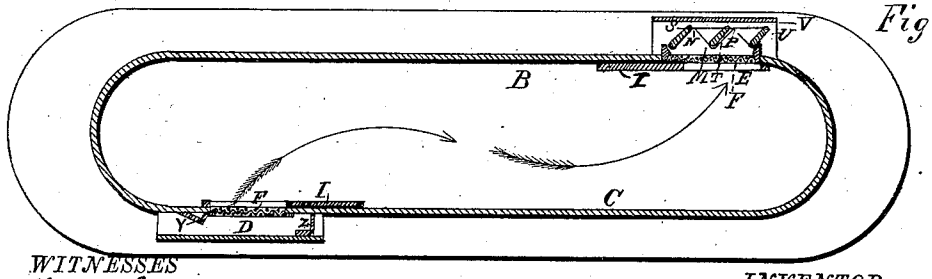


Fig 4

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(No Model.) 2 Sheets—Sheet 2.

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RAILWAY CAR VENTILATOR.

No. 370,667. Patented Sept. 27, 1887.

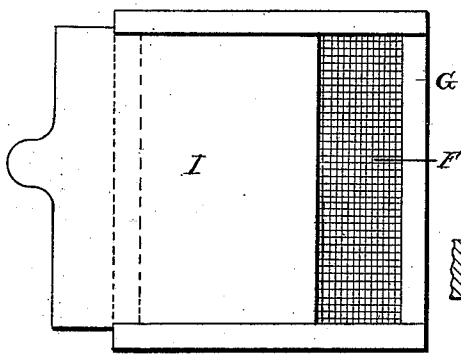


Fig 5

Fig 6

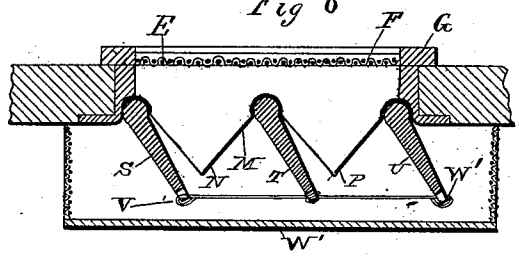


Fig 7

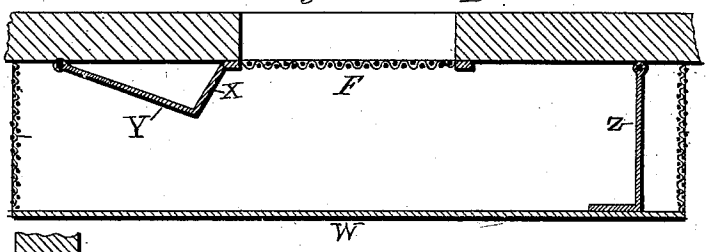


Fig 8

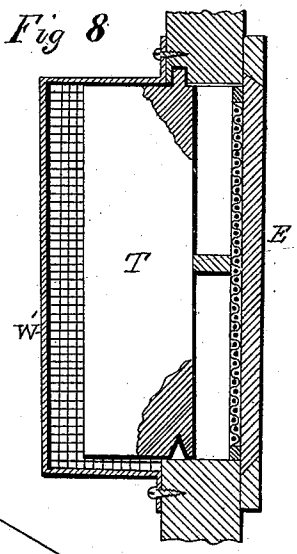


Fig 9

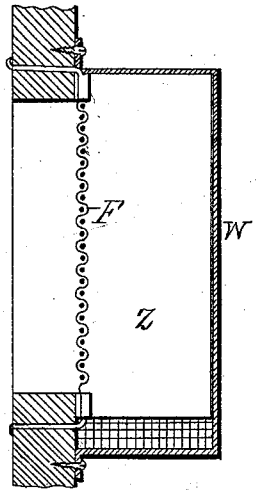
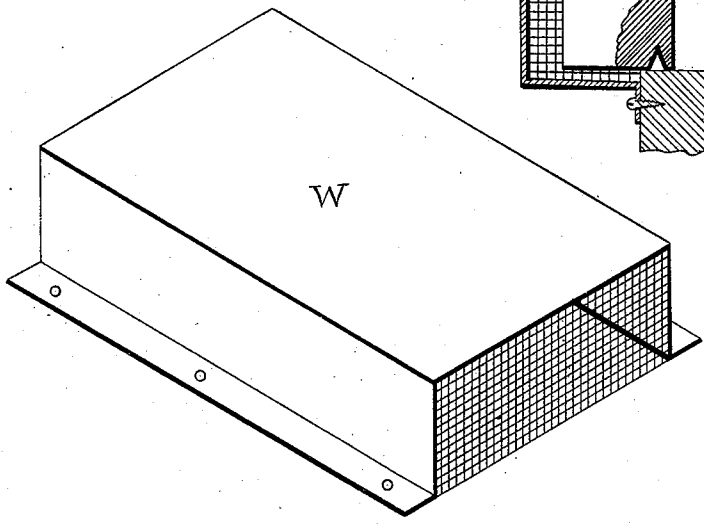


Fig 10



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UNITED STATES PATENT OFFICE.

JOHN C. WANDS, OF ST. LOUIS, MISSOURI.

RAILWAY-CAR VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 370,667, dated September 27, 1887.

Application filed March 9, 1887. Serial No. 230,273. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. WANDS, a citizen of the United States, and a resident of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Railway-Car Ventilators; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of side elevation of a freight-car, partly in section, my invention attached. Fig. 2 is a horizontal section through *x x*, Fig. 1. Fig. 3 is a side elevation of a passenger-coach, partly in section, with my invention attached. Fig. 4 is a horizontal section through *y y*, Fig. 3. Figs. 5, 6, 7, 8, 9, 10, are detail parts of my invention.

The invention relates to car-ventilators; and it consists in the construction and novel combination of parts, as hereinafter set forth.

Referring to the drawings by letter, A designates the body of the car, (in this case a freight-car,) and B and C the opposite walls of the same. The said walls are provided with openings respectively near the rear and front ends of the car, on opposite sides thereof, into which openings the frames E and D are let, the frame E having a wire screen, F, flush with the inner surface of the wall B, and the frame E having a similar screen flush with the outer surface of the wall C.

G G are frames secured over the inner sides of the ventilator-openings and having opposing grooves in their upper and lower rails to receive the upper and lower edges of the adjustable slides I, by means of which draft through the car is regulated.

The screens F are designed to exclude cinders and dust.

W is a casing secured to the side of the car C over the frame D, and having its ends open, or, if desired, covered with screens, as seen in Fig. 7.

Y and Z are vertical wings respectively hinged to the car-body on each side of the frame D, within the casing W, and each provided with an outer part, X, bent vertically on its inner part, and standing toward the ventilating-opening. The wings are narrower than the height of the casing, so that they have a sufficient amount of clearance-space below them to prevent dust, ashes, and such material from collecting in the casing W.

The frame E is provided with a central rail, M, having made upon it the triangular stops P N, between which stand the inner edges of the vertical wings S T U, journaled at their upper and lower ends in the corresponding rails of the frame E, and having their outer edges connected by the rod V, so that they all swing together and reverse together.

W is a casing secured to the wall B over the frame E and wings S T U, which frame is open at its front and rear ends; or, if preferred, the said ends can be covered with a screen.

The operation of the invention is as follows: When the car is moving in the direction indicated by the arrow *k*, Fig. 2, the blast created will close the wing Y till the ends of its parts X rest upon the side of the car, near the frame D, and the wing Z will be opened till its part X binds against the inner surface of the casing W, leaving the before-mentioned clearance-space below. The current of air will then flow into the car through the screen F of the frame D. At the other end of the car the blast will incline the wings S T U rearward in regard to the direction of the motion, and will create an exhaust between the wings, so as to draw the air out of the car. Thus a constant circulation from front to rear is established. When the motion of the car is reversed, the wings S T U will be inclined in the opposite direction, but will still exhaust from the car, while at the casing W the wing V will be opened out and the wing Z folded so as still to direct the air into the car. Thus the direction of the current will not be changed, being now practically from rear to front, the air in the car which moves therewith permitting this action.

Having described my invention, I claim—

1. The combination, with a car having an opening in each side near opposite ends, of an inlet-ventilator attached over one opening, constructed substantially as described, having wings Y Z, narrower than the height of the

casing W and provided at the bottom with the projections X, and an exhaust-ventilator attached to the opposite opening, having wings S T U, vertically arranged and swinging on journal and cup bearings in the frame E, substantially as specified.

2. In a car-ventilator, the combination, with the frame E, provided with the screen F, of the wings S T U, swinging on journal and cup bearings in said frame, and provided with the triangular stops N P, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

JNO. C. WANDS.

Witnesses:
J. G. ALEXANDER,
GEO. A. BANNANTINE.