E. RUEANE.

Railroad Car-Ventilator.

No. 165,180. Patented July 6, 1875.

Fig. 1

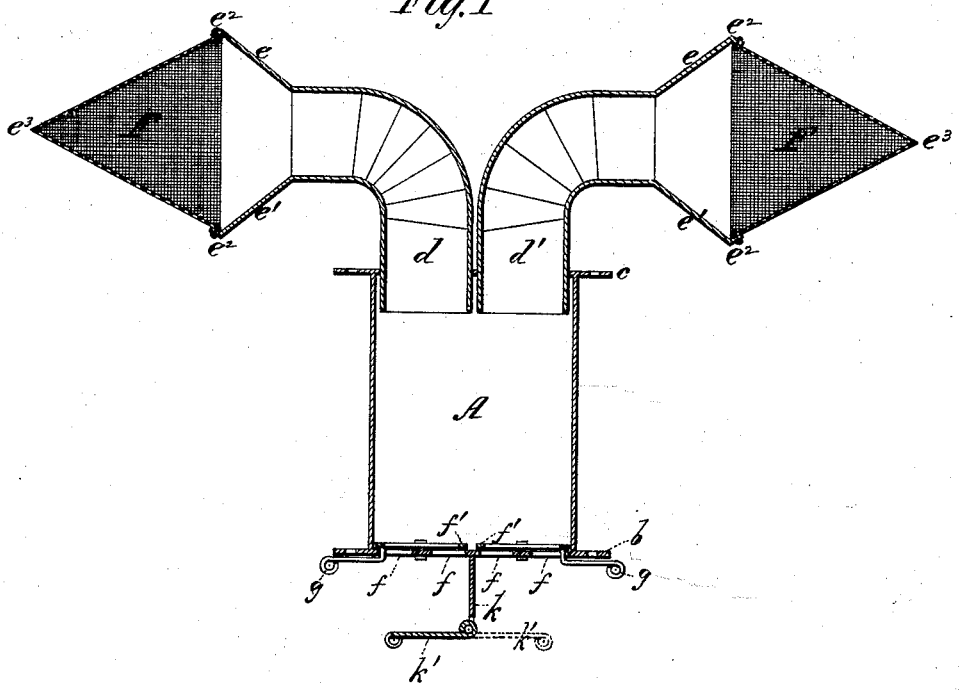
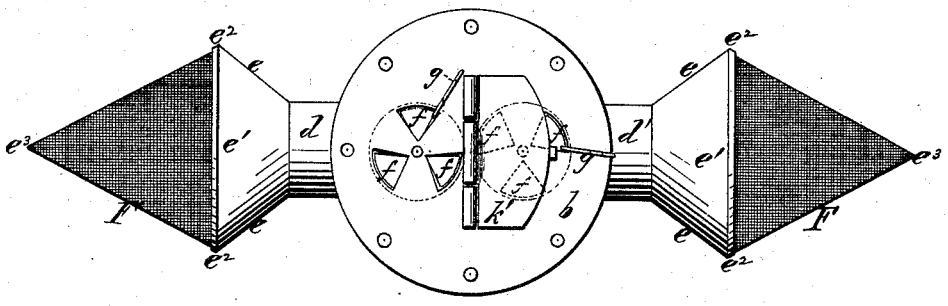


Fig. 2



Witnesses:
Jas. Martin Jr.
F. N. Campbell

Inventor:
Edward Rueane.
by
Mason, Fennick & Lawrence,
his Attorneys.

UNITED STATES PATENT OFFICE.

EDWARD RUEANE, OF RUTLAND, VERMONT.

IMPROVEMENT IN RAILROAD-CAR VENTILATORS.

Specification forming part of Letters Patent No. **165,180**, dated July 6, 1875; application filed May 28, 1875.

To all whom it may concern:

Be it known that I, EDWARD RUEANE, of Rutland, county of Rutland and State of Vermont, have invented a new and Improved Ventilator for Railroad-Cars; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a vertical central section of my improved ventilator, and Fig. 2 an inverted plan view.

Ventilators for railroad-cars as heretofore constructed have been more or less objectionable, owing to the fact that during a storm the rain is liable to beat into the car through the ventilator, and especially is this the case with that class of ventilators which project beyond the body of the car in order that the momentum of the train may more effectually force a current of air into the car. By my construction the objection referred to is obviated.

In Fig. 1 of the drawings, A indicates a cylinder of proper length to be inserted through the top of a railroad-car, and is of sufficient diameter to allow of the insertion of two tubes, *d* and *d'*, through openings in a disk, *c*, at the top of said cylinder, as shown in the figure. These tubes are curved, as shown, in opposite directions to each other, so that when the ventilator is applied to a car one of them will always face in the direction in which the car may be moving. The outer ends of these tubes, as at *e* e^1, are funnel-shaped, or so expanded as to gather a large volume of air when the car is in motion, and at the same time always present an inclined portion, as at e^1, which extends considerably forward and below the more contracted portion of the tube. At the end e^2 of the expanded portions of the tubes *d d'* a conical screen, F, is securely attached. This screen may be made of sheet metal, with fine perforations therein, or it may be of finely reticulated wire, and is intended to exclude dust and cinders from entering the cylinder A, and so be drawn into the car. The screen F, being made to converge on all sides to a point, as at e^3, will thus economize resistance in its passage through the air when the car is in motion. The air-tubes *d d'*, thus constructed with flaring or funnel-shaped ends, present the special advantage that in case of a rain-storm any water which enters the screen F will necessarily descend upon their under flaring portions e^1, and thence be discharged through the screen on the outside of the car at about the point e^2, instead of being carried into the car through the ventilator. The lower end of the cylinder A has a disk, *b*, applied to it, through which openings, as at *f*, are made. Circular plates, as at *f'*, are applied over the openings *f*, and are also made with corresponding openings, so that either a communication through them may be made for the passage of air from the cylinder A into the body of the car, or such air be excluded from entering the car, according as the circular plates *f'* are rotated to the right or left by their handles *g*, as indicated in the figures. Applied centrally of the disk or bottom *b* of the cylinder A is secured a plate, *k*, to which a plate, *k'*, is hinged, as clearly shown in the drawings. This plate *k'* acts as an air director and distributer for the air passing through the ventilator into the car, and, when turned up in the horizontal position shown, forces the air in a horizontal direction throughout the interior of the car above the heads of the passengers without subjecting them to a direct draft of air.

It will be seen that when the car is moving in any given direction the air may be distributed either toward the front or the rear of the car, simply by adjusting the air-distributer *k'* toward the front or rear, and opening the air-passages *f*, which are above it, while the others remain closed.

What I claim is—

In a ventilator for railroad-cars, a single air-director, *k'*, by which alone the air may be directed either to the front or rear of the car, in combination with the air-chamber A and openings *f*, and circular plates *f'*, for regulating the draft of air from said chamber, substantially as described.

EDWARD RUEANE.

Witnesses:

W. S. GUILFORD,

HENRY F. FIELD.