No. 647,507. Patented Apr. 17, 1900.

G. H. MOORE.

VENTILATOR FOR RAILWAY CARS.

(Application filed July 15, 1899.)

(No Model.)

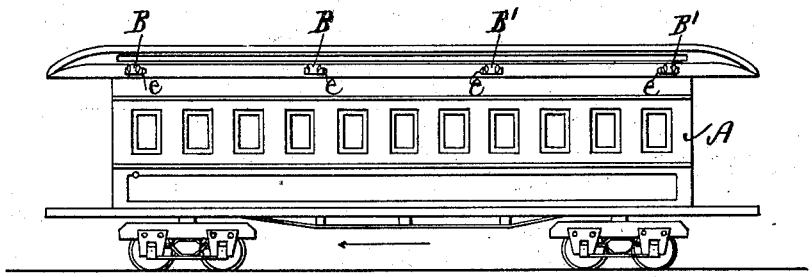

FIG. 1.

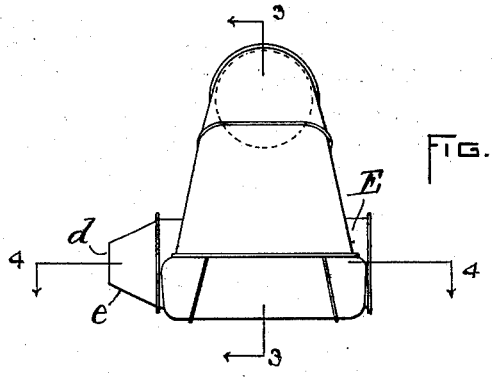

FIG. 2.

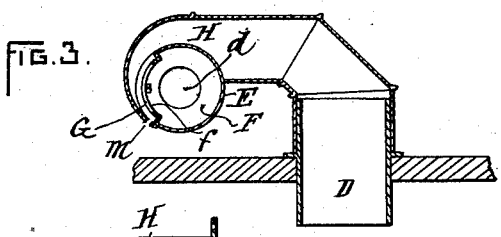

FIG. 3.

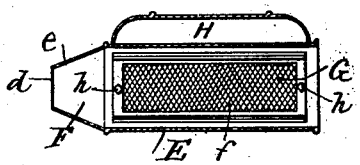

FIG. 4.

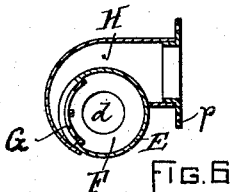

FIG. 6.

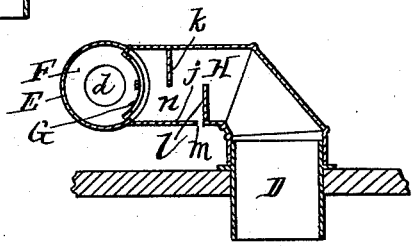

FIG. 5.

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GEORGE H. MOORE, OF NORWICH, CONNECTICUT, ASSIGNOR TO OSCAR S. GREENLEAF, OF SPRINGFIELD, MASSACHUSETTS.

VENTILATOR FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 647,507, dated April 17, 1900.

Application filed July 15, 1899. Serial No. 724,001. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. MOORE, a citizen of the United States, residing at Norwich, in the State of Connecticut, have invented a new and useful Improvement in Ventilators for Railway-Cars, of which the following is a specification.

The object of my invention is to provide an improved ventilator adapted for conducting air either into or out of the car, as desired, and also adapted for the prevention of the entrance of dust or cinders into the car with the entering air, and also for the prevention of the passage of water from the ventilator to the interior of the car.

In the accompanying drawings, Figure 1 represents a side elevation of a railway-car provided with my improved ventilator. Fig. 2 represents a top view of the ventilator. Fig. 3 represents a section taken in the line 3 3 of Fig. 2. Fig. 4 represents a section taken in the line 4 4 of Fig. 2. Fig. 5 represents a section similar to that shown in Fig. 3, showing a modification. Fig. 6 represents a section showing another form of attachment.

In the drawings, A represents the railway-car, and B B′ the ventilators, placed reversely upon the roof *c* and connected with the interior of the car, and in order to prevent the entrance of dust and cinders with the air passing through the ventilator into the car I provide a horizontal tube E, of any desired form of cross-section, the walls of which are drawn inward at one end to form a contracted aperture *d*, whereby the air may be compressed within the chamber F and caused to pass laterally through the meshes of the screen G into the passage H, which extends from the chamber F to the pipe or passage D, leading to the interior of the car. The outwardly-tapered end *e* of the tube E serves to allow the air to flow evenly through the chamber F without the formation of an eddy-current, which would tend to cause the retention of the cinders upon the screen G, the air being thus allowed to rush along the inner side *f* of the screen to sweep the dust and cinders therefrom, which is an important feature of my invention.

The air-passage H extends from the outer side of the tube E beyond the screen G and over the top of the said tube to the pipe D, whereby the rain-water, which in certain cases may be blown through the screen, will be prevented from passing over into the pipe D, and thence to the interior of the car, a small opening *m* being preferably provided for the escape of the water from the air-passage H. The screen G is made removable for the purpose of cleaning or repairing by the employment of the screws *h h*, which serve to attach the screen to the interior of the tube E.

As shown in the drawings, Fig. 1, the ventilators at the opposite ends of the car are reversed, so that as the car moves forward along the track the fresh air will be forced by the forward ventilators B into the car and the vitiated air drawn out by the rear ventilators B′, which in this case operate as vacuum-ventilators.

A modification of my invention is shown in Fig. 5, in which the screen G instead of being placed upon the side of the chamber F remote from the pipe D is placed upon the side nearest thereto, and instead of leading the air from the screen over the top of the tube to prevent the water which may be blown through the meshes of the screen from passing into the pipe D, and thence into the car, the transverse upper and lower partitions *k* and *l* may be so arranged that the water will be retained in the space *n* between the partition *l* and the screen G and be caused to flow out through the small perforation *m* in the floor *j*, and thus be prevented from passing into the car, the top of the partition *l*, which forms the highest portion of the bottom of the passage H, being at a higher level than that of the outlet-opening *m*.

Another form of construction is shown in Fig. 6, which shows a ventilator of the construction shown in Figs. 3 and 4, adapted for attachment to the side of the car by means of the attaching-flange *p*.

I claim as my invention—

1. In a car-ventilator, the combination of the tube having its axis arranged in the line of the movement of the car, and having an outwardly-tapered end forming a contracted aperture, and a lateral air-passage leading

from the cavity of the tube to the interior of the car, with the screen arranged between the cavity of the tube and the lateral air-passage, in the direction of the current of air through the tube, whereby the dust and cinders will be swept from the surface of the screen by the current of air, substantially as described.

2. In a car-ventilator, the combination of the tube having its axis arranged in the line of the movement of the car, and having an outwardly-tapered end forming a contracted aperture and a lateral opening at the side of the tube, with a screen arranged at said opening, and an air-passage leading from the screen to the interior of the car, and passing over the tube, whereby the water which passes through the screen will be prevented from entering the car with the incoming air, substantially as described.

3. In a car-ventilator, the combination of the tube having its axis arranged in the line of the movement of the car, and having an outwardly-tapered end forming a contracted aperture, with an air-passage extending laterally from the tube to the interior of the car, and having a portion of said passage elevated above the floor of the cavity of the tube, whereby the water blown into the lateral air-passage will be prevented from passing into the car, substantially as described.

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