

Railroad-Car Ventilator.

Patented July 16, 1872.

Fig. 2.

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JOHN WRIGHT, OF RICHMOND, VIRGINIA.

IMPROVEMENT IN RAILROAD-CAR VENTILATORS.

Specification forming part of Letters Patent No. 129,201, dated July 16, 1872.

Specification describing an Improved Car-Ventilator, invented by JOHN WRIGHT, of Richmond, in the county of Henrico, State of Virginia.

In this improvement a flutter-wheel is attached to the side of the dome or elevated portion of the car-roof, and is so constructed as to run in the same direction by the action of the wind, the car moving in either direction. The flutter-wheel is hollow, and upon its axis is a vane-wheel, which revolves within a circular opening in the side of the dome and drives air out of the car. The ejected air passes through the center of the wheel.

In the drawing, Figure 1 is a side elevation of the dome and section of the flutter-wheel, looking in the direction of arrow 1, Fig. 2. Fig. 2 is a transverse vertical section through the car-roof, dome, and ventilator.

A is a portion of the car-roof, and B is a portion of the elevated central part of the roof known as the dome. On the side of the latter is a flutter-wheel, C, having floats or buckets *c c*, and fastened by spokes to an axis, D, which rotates in bearings in the cross-piece E and overhung brace F. On the axis D is a wheel, G, with obliquely-inclined vanes, and so placed as to rotate within the opening in the side of the dome when impelled by the rotation of the flutter-wheel. The buckets *c c* on the flutter-wheel are of such a shape as to partially cover each other, and the effect is that in whatever direction the car may be

moving the wheel will always rotate in a constant direction. In one direction of motion of the car the buckets, as they arrive at the upper position, will be effective; in the other direction of motion of the car the buckets in their lower position will be effective. The lips of the buckets so far lap over the bellies of the buckets following as to ward off the air from them, excepting when it blows in such a direction as to split open the edge of the lip. The arrow 2, Fig. 1, shows the direction of motion of the flutter-wheel. The arrows 3 3, Fig. 2, show the direction of motion of the outgoing air. The arrow 2, Fig. 2, shows the direction of rotation of the axis D. The flutter-wheel is annular, and its interior forms an exit-spout for the outgoing air as well as partial protection around the aperture in the dome.

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

1. The annular flutter-wheel encircling the opening and forming a duct for the outgoing air.
2. The combination of the vane-wheel G and the flutter-wheel C, constructed, as described, to run in a constant direction whichever way they may be moved.

JNO. WRIGHT.

Witnesses:

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JOHN C. SINLON.