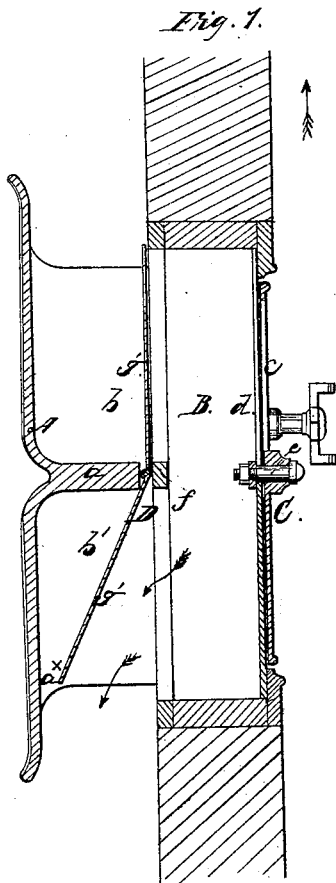
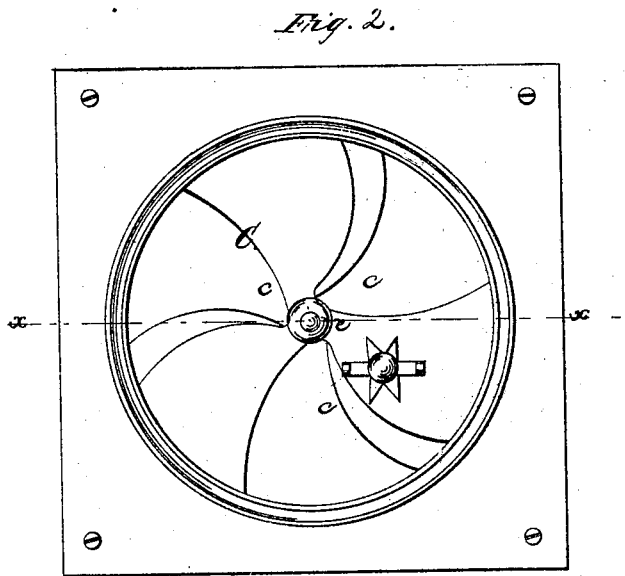


*A.P. Vining,*  
*Car Ventilator,*  
*Nº 50,522,                      Patented Oct. 17, 1865.*



*Witnesses:*  
*Theo. Fusch*  
*C. L. Coppliff*



*Inventor:*  
*A.P. Vining*  
*per Munn & Co*  
*attys*

# UNITED STATES PATENT OFFICE.

A. P. VINING, OF SCRANTON, PENNSYLVANIA.

## VENTILATION FOR RAILROAD-CARS.

Specification forming part of Letters Patent No. **50,522**, dated October 17, 1865; antedated October 11, 1865.

*To all whom it may concern:*

Be it known that I, A. P. VINING, of Scranton, in the county of Luzerne and State of Pennsylvania, have invented a new and Improved Ventilator; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a horizontal section of my invention, taken in the line *xx*, Fig. 2; Fig. 2, a face view of the register pertaining to the same.

Similar letters of reference indicate like parts.

This invention relates to a new and improved ventilator, designed more especially for railroad-cars; and it consists in a novel arrangement of the valve, as hereinafter fully shown and described, whereby the valve is rendered self-adjusting, requiring no manipulation whatever.

A represents what may be termed the "valve-box," open at both ends, and provided with a central transverse partition, *a*; and B represents what may be termed the "register-box," which communicates with both compartments *b b'* of the valve-box A.

C is the register, constructed with openings *c*, corresponding with openings *d* in the side of the box, to which the register-plate is attached. This plate is of circular form, and turns freely on a pivot, *e*, but other forms of register may be used.

The drawings are designed to represent the invention as adapted to a railroad-car, the register-box B being inserted in the side of the car, (shown in red, Fig. 1,) the valve-box A being at the other side.

D is the valve, which works centrally on pivots *f* at the junction of the valve and register-boxes, the pivots *f* being in line with the

partition *a*. This valve is composed of two flat or plane surfaces, *g g'*, one of which, *g*, is within the compartment *b* of the box A, and the other, *g'*, within the compartment *b'*. (See Fig. 1.) The two parts *g g'* of the valve are not in the same plane, but form an obtuse angle with each other, so that when one part is closed against the register-box B the other part will be out from it, as will be fully understood by referring to Fig. 1. The parts *g g'* of the valve when open do not come in contact with the outer side of the box A. A space, *a<sup>x</sup>*, is allowed between them in order to admit of the advent of air into the compartment of the box A behind the open part of the valve. By this arrangement the part of the valve which faces the direction in which the car is traveling or moving will be kept closed to prevent the admission of dust, sparks, &c., and the other part kept open, the foul air from the car passing through the register and out through the open part of the valve, as indicated by the red arrows. When the car is moved in the opposite direction the valve is adjusted by the action of the wind against the back of the forward open part and the rear part of the valve opens.

Thus it will be seen that an extremely simple self-adjusting valve is obtained for ventilators; and the invention is applicable to all purposes where a current of air can act upon the valve in order to adjust it.

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

The double valve D, composed of two obliquely-connected wings, *g g'*, pivoted centrally at *f*, and employed in combination with an external casing, A, of the construction specified.

A. P. VINING.

Witnesses:

G. W. KEAR,  
C. HARRISON.