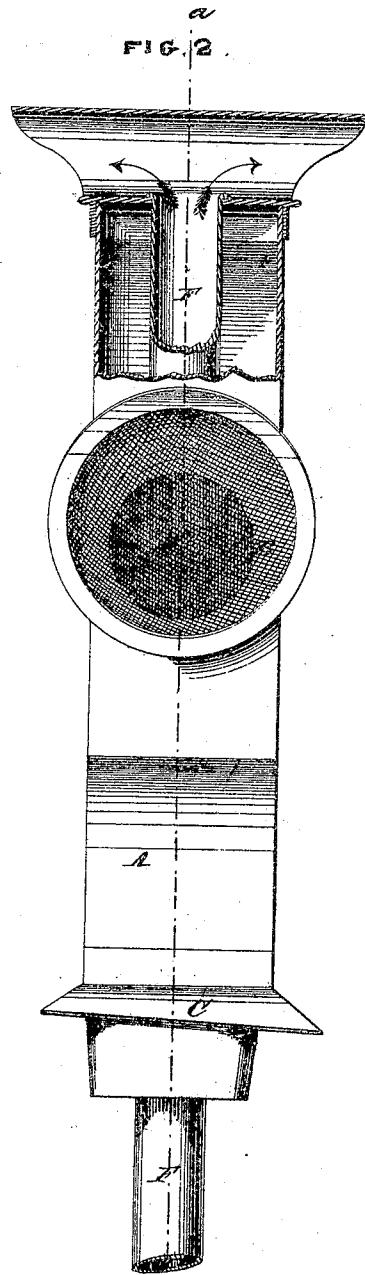
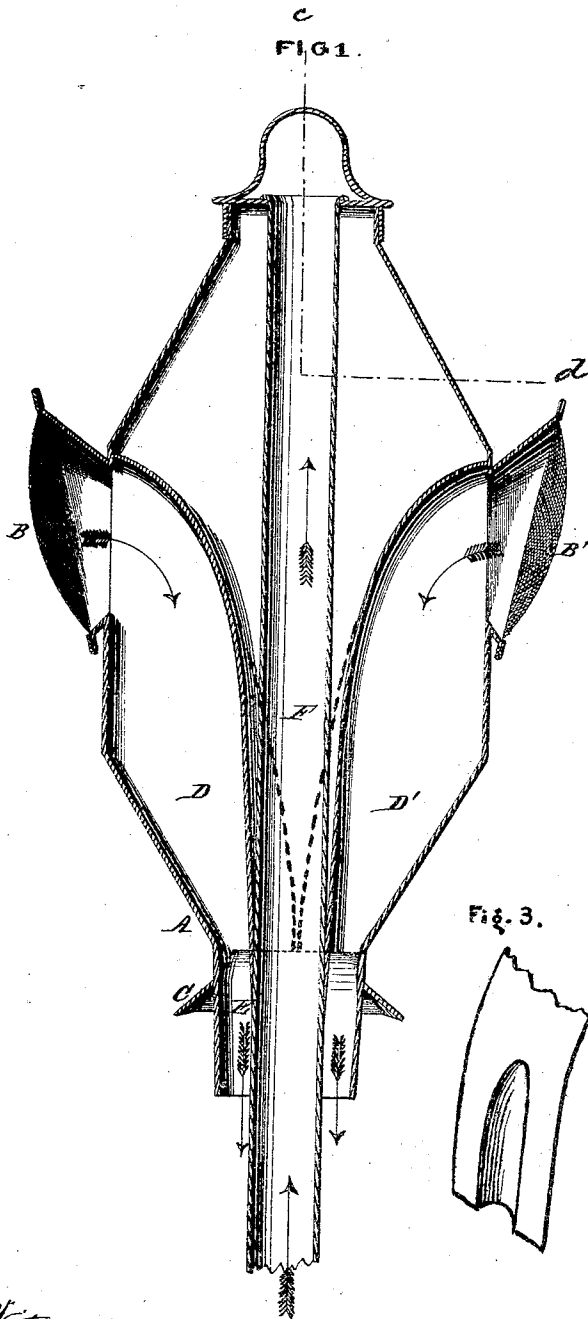


JAMES HENRY BRUCE.

Ventilator for Railroad-Cars.

No. 127,559.

Patented June 4, 1872.



Witnesses:  
J. L. Ewin  
Wm. H. Barrett

J. H. Bruce  
By *[Signature]*  
Attorney

# UNITED STATES PATENT OFFICE.

JAMES HENRY BRUCE, OF WYANDOTTE, KANSAS, ASSIGNOR OF ONE-HALF HIS RIGHT TO ALLISON B. BARTLETT AND JOHN K. HALE, OF SAME PLACE.

## IMPROVEMENT IN VENTILATORS FOR RAILROAD CARS.

Specification forming part of Letters Patent No. 127,559, dated June 4, 1872.

### SPECIFICATION.

I, JAMES HENRY BRUCE, of Wyandotte, in the county of Wyandotte and State of Kansas, have invented an Improved Ventilator for Railroad Cars, of which the following is a specification:

#### *Nature and Objects of the Invention.*

My invention relates to a ventilator for railroad cars, by which fresh air from without can be introduced into the car and foul air discharged therefrom while the car is moving in either direction.

#### *Description of the Accompanying Drawing.*

Figure 1 is a vertical central section in the plane of the line of motion of the car, indicated by the dotted line *a b*, Fig. 2. Fig. 2 is a partial front elevation and a partial vertical section at right angles to the former, the line of section being indicated by the dotted lines *c d*, Fig. 1. Fig. 3 is a small detached view, showing a modification of the lower part of one of the shields or air-deflectors.

#### *General Description.*

A is the outside casing of the structure, which is erected upon the roof of a railroad car with its mouths B B' presented fore and aft, so as to catch and collect the wind in one or the other, according to the direction of motion of the car. The flange C, near the foot of the structure, rests upon the car-roof, and, besides serving as a base, keeps the drip from penetrating the opening at which enter the down-cast and up-cast pipes E F. The mouths B B'

are covered with wire-cloth so as to exclude dust and flying bodies, while admitting pure air. D D' are the down-cast ducts to carry the air to the interior of the car. F is the up-cast pipe, within which the stove-pipe may be applied in cold weather, so that the smoke and gases of the stove will be discharged with the vitiated air. G is the cap or cowl upon the flue, and is detachable.

In warm weather, when the stove is disused, the structure described is used merely as a ventilator, when the down-cast pipes carry fresh air into the car and the up-cast pipe receives the foul air therefrom.

Should it be desired to use for the down-cast the whole interior space except that occupied by the pipe F, the shields may be shaped as in Fig. 3, so that they may lap upon the smoke-pipe F.

The structure is preferably made of galvanized sheet-iron.

#### *Claim.*

What I claim as new is—

The car-ventilator or jack herein described, consisting of the bell-shaped mouths B B', down-cast ducts D D', and up-cast pipe F, the latter being placed concentrically within the conducting-neck of the down-cast ducts, and all arranged to operate substantially as herein set forth.

J. H. BRUCE.

Witnesses:

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