

H. J. RUTTAN.  
 Improvement in Railroad Car Ventilators.  
 No. 123,513. Patented Feb. 6, 1872.

FIG 1

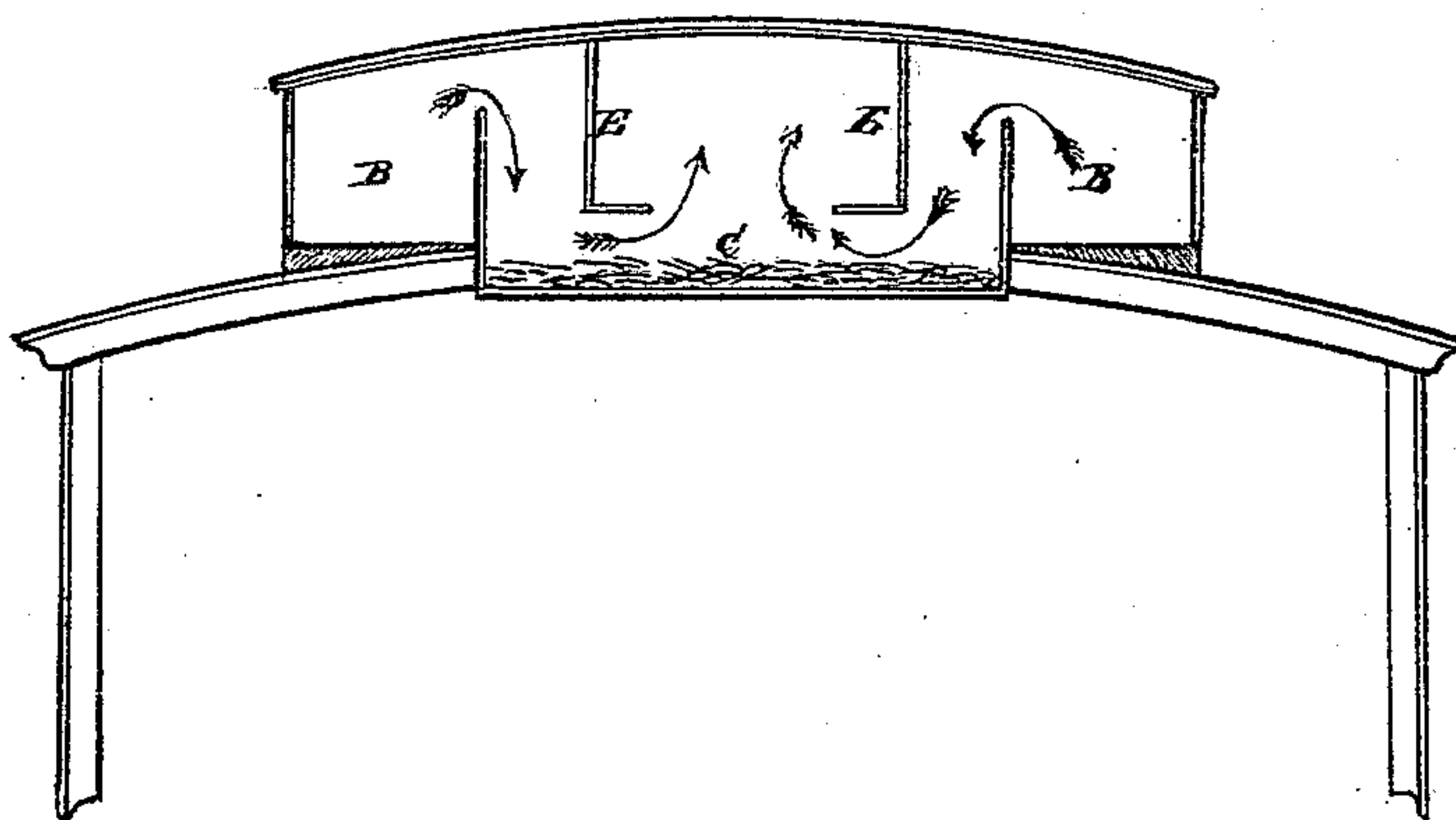
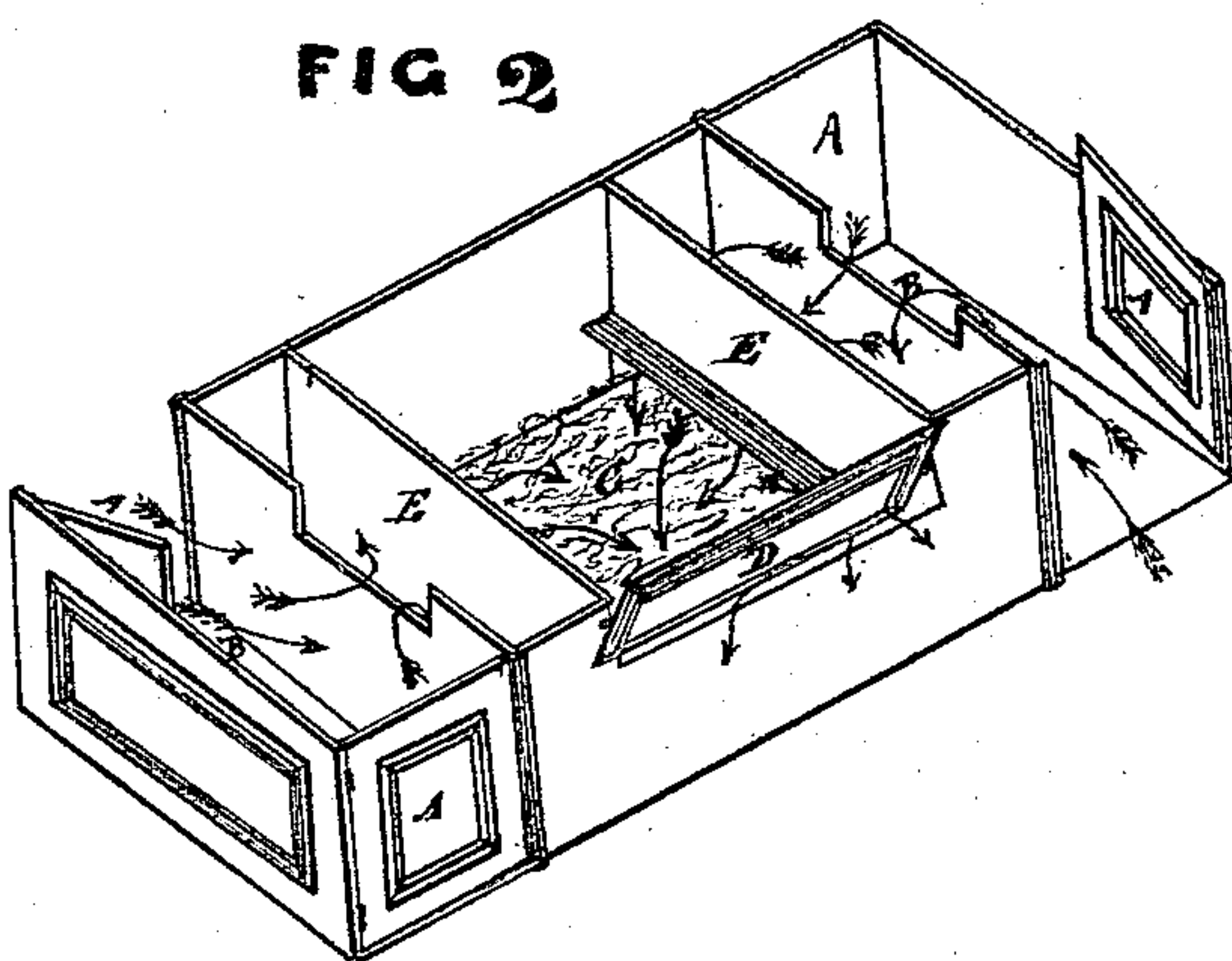


FIG 2



Witnesses

*E. M. Goodwin*  
*Geo. Goodwin*

Inventor

*H. J. Rutman*

# UNITED STATES PATENT OFFICE.

HENRY J. RUTTAN, OF COBOURG, CANADA.

## IMPROVEMENT IN RAILROAD-CAR VENTILATORS.

Specification forming part of Letters Patent No. 123,513, dated February 6, 1872.

### SPECIFICATION.

I, HENRY JONES RUTTAN, of the town of Cobourg, in the county of Northumberland, in the Province of Ontario and Dominion of Canada, esquire, have invented a certain Improvement in Car Ventilation, of which the following is a specification:

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

My ventilating apparatus is arranged with receiving air-caps placed on both sides of the ends of the double roof of the car in such a manner that they shall, by self-acting doors or valves, supply a large quantity of air to the passengers. This air, after entering the receiving-caps, is deflected by a partition into water-tanks, which tanks are fixed inside the double tops at the ends of the car, and consist of three separate compartments. The air from the two receiving-caps is forced to the bottom of said tanks (there being two inches of water in each tank) and comes up the middle of said tanks through an aperture left for that purpose, and so out into the car. The water-tanks are so made that all the air caught by the receiving-caps is forced down over water in the bottom of each tank, so as to deposit in it all the dust and cinders, causing the air to come out perfectly pure for the use of the passengers.

Figure 1, cross-section of top of car, with receiving-caps and water-tank; Fig. 2, isometric view of receiving-caps and water-tank.

A A, Fig. 2, doors of receiving-cap, hung with loose hinges, which will open and shut by the action of the air in whatever direction the car moves; B B, Figs. 1 and 2, receiving-

caps, made of sheet-iron with iron doors; C C, Figs. 1 and 2, water-tank made of copper, with its partition to deflect the air down over the water, which must be made to fit in the space at the ends of the double top, inside the car, and be fastened by common screws to the sides and end of raised roof; but it must not be more than eighteen inches wide, and only so long as to fit snugly between the two sides of the raised roof, and must be supplied with a waste-pipe placed three inches above the bottom of the tank, which prevents too much water remaining in the tank; also a foul-water pipe passing from the bottom of the tank outside the car, over or under the roof, to draw off the foul water with the dust and cinders; D, Fig. 2, revolving mirror set in a frame, and being in the aperture at the top of the water-tank inside the car, by which the air is let in or shut off.

#### *Claim.*

I claim as my invention—

The car-ventilator herein described, consisting of the loosely-hinged doors A A A A, adapted to open and close automatically by the action of the air, air-passages B B, deflecting plates E E, water-tank C, and opening provided with a pivoted door, D, (with or without a mirror,) for regulating the supply of air to the interior of the car, substantially as specified.

H. J. RUTTAN.

Witnesses:

G. M. GOODEVE,  
GEO. L. GOODEVE.