

JAMES HENRY BRUCE.

Ventilator for Railroad-Cars.

No. 127,559.

Patented June 4, 1872.

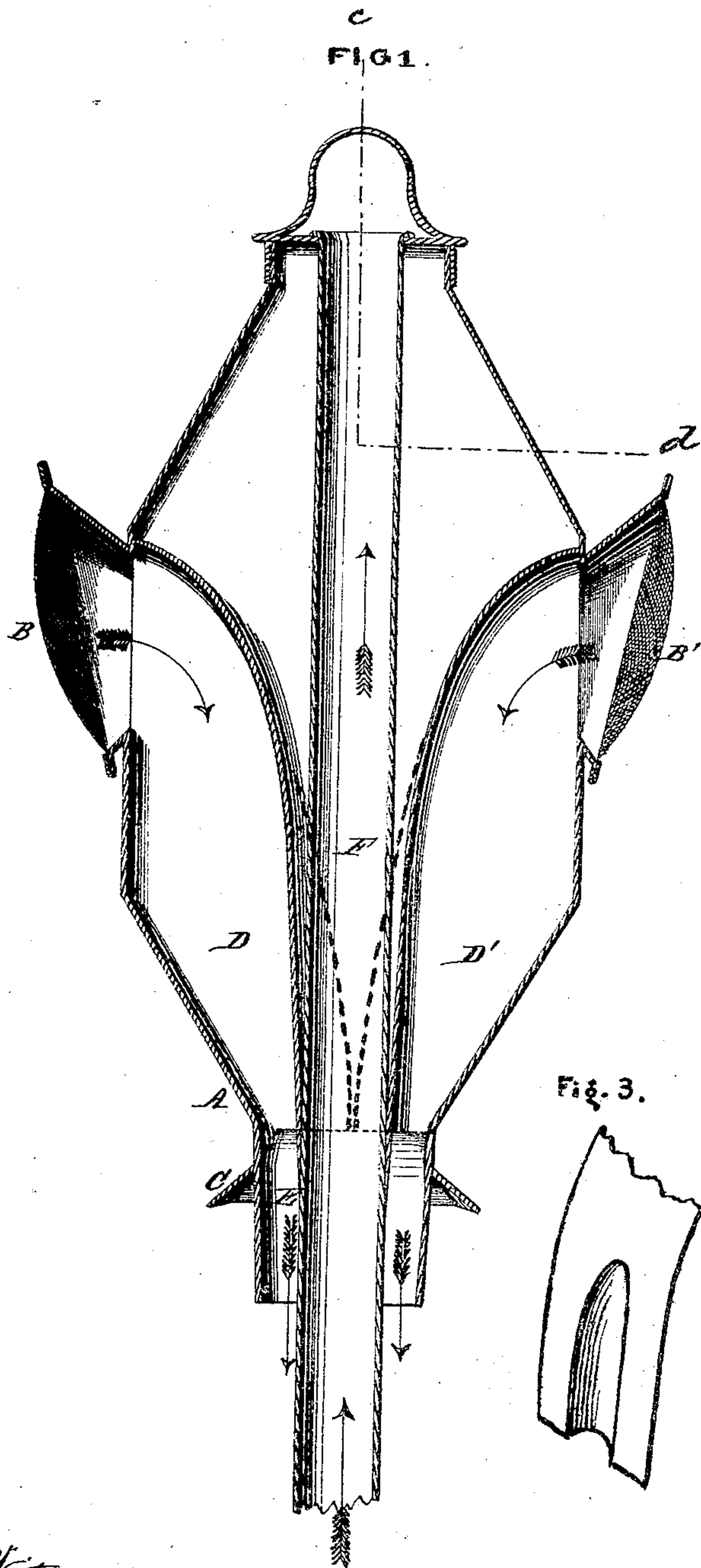
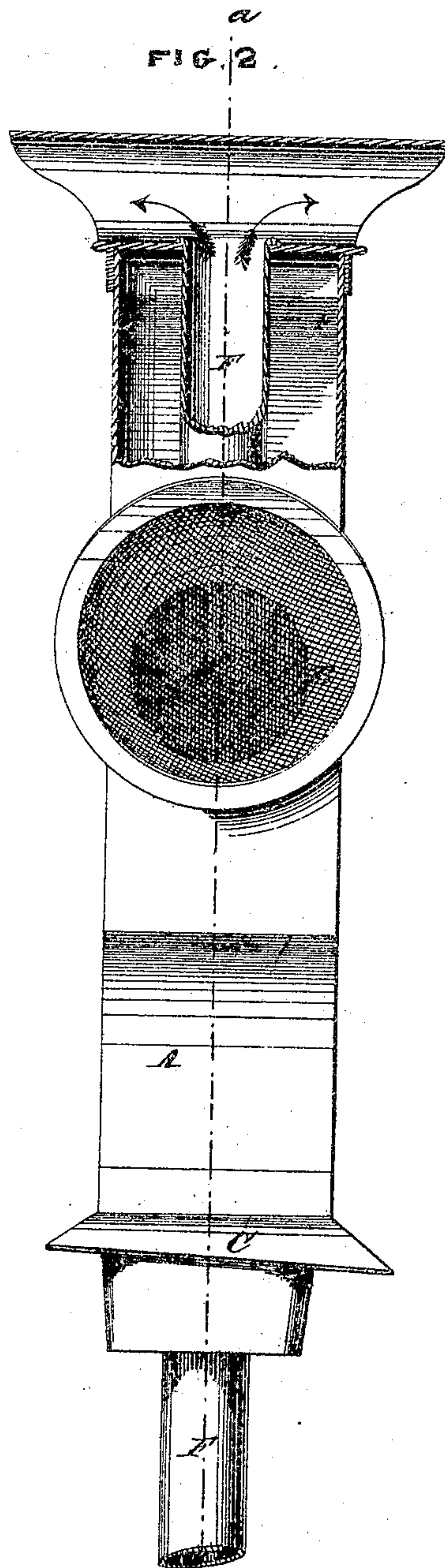


FIG. 3.



Witnesses:  
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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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