

(No Model.)

J. P. DOYLE & C. W. STANLEY.

CAR VENTILATOR.

No. 321,346.

Patented June 30, 1885.

Fig. 1.

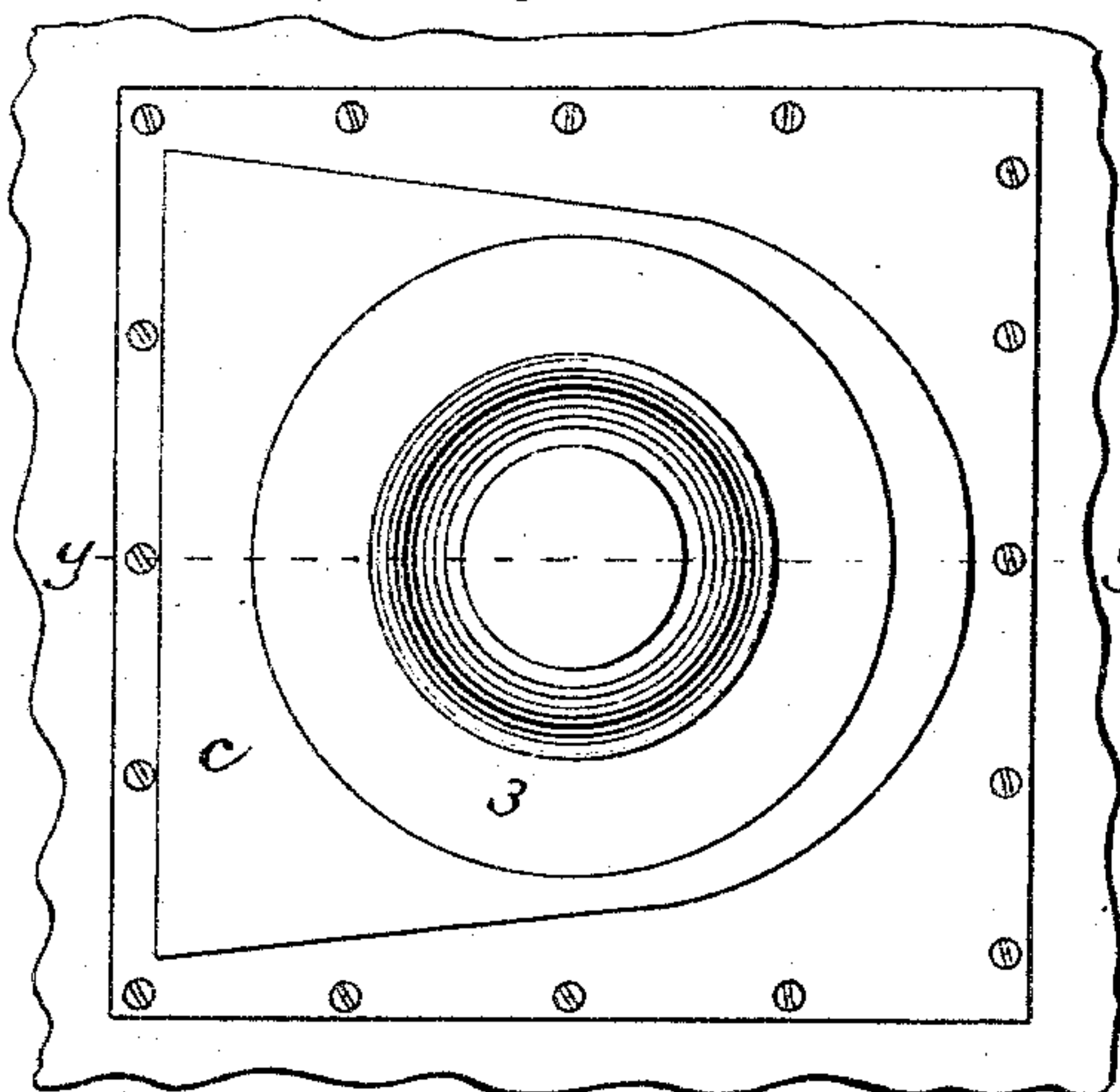


Fig. 3.

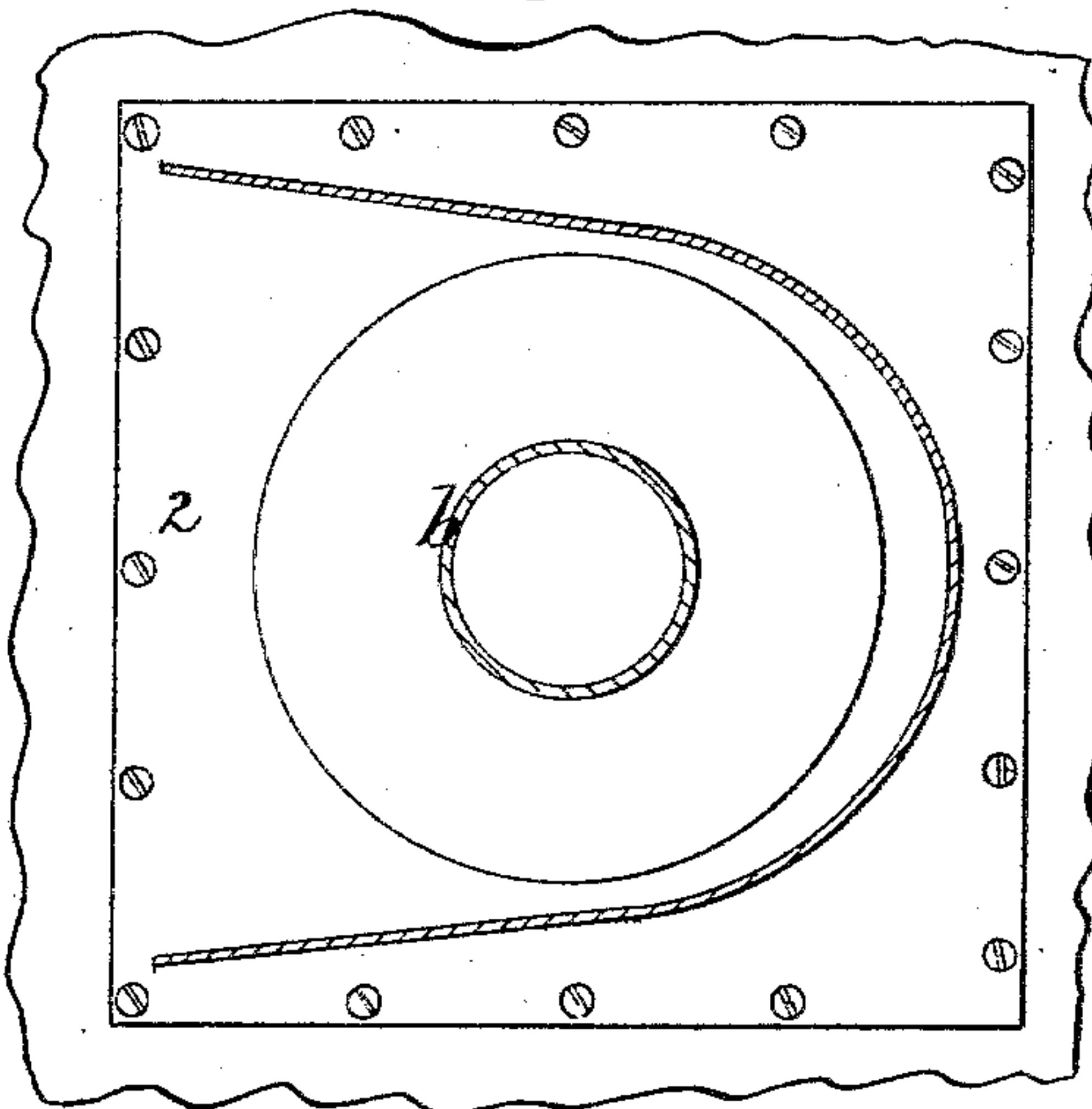


Fig. 2.

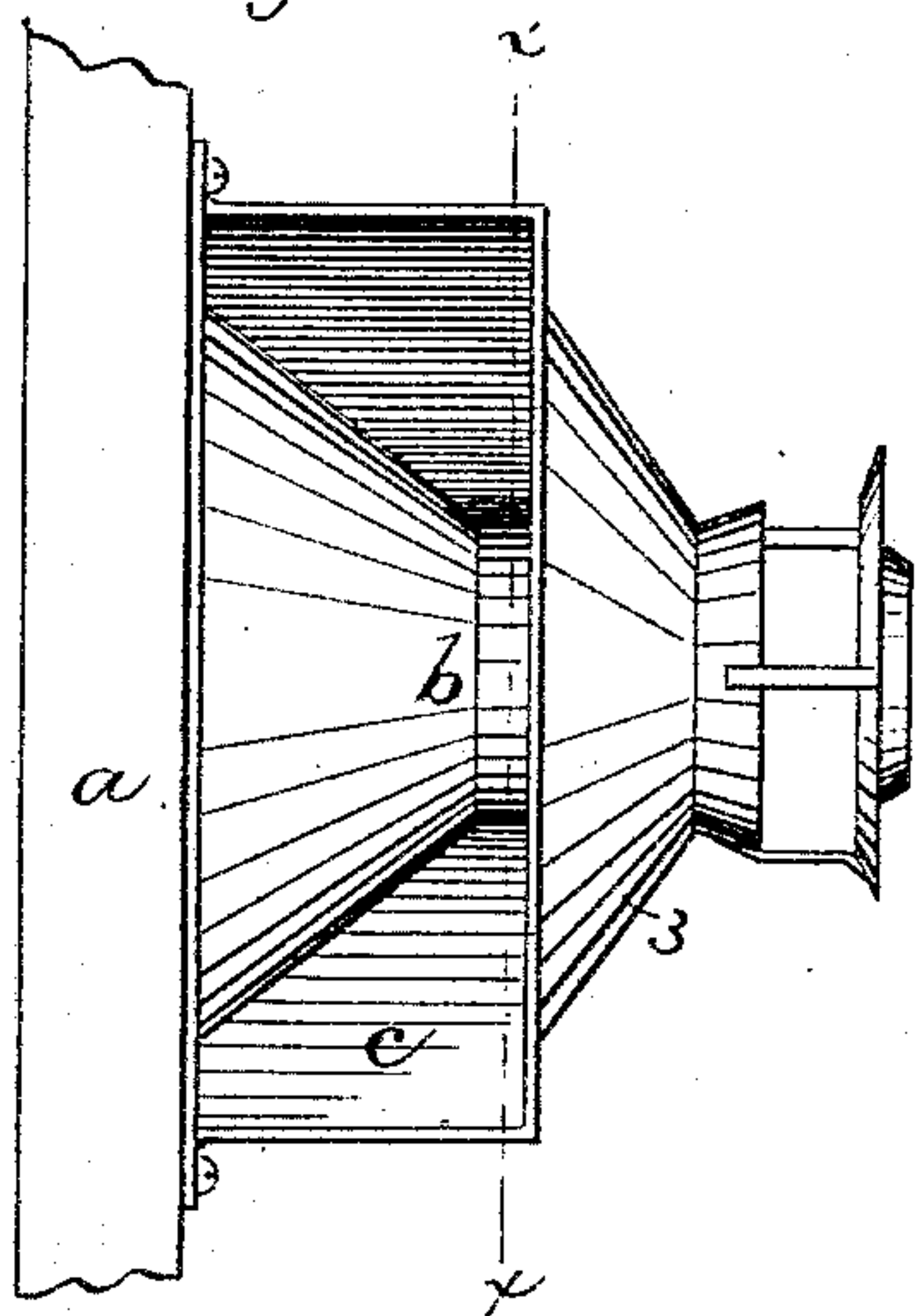


Fig. 4.

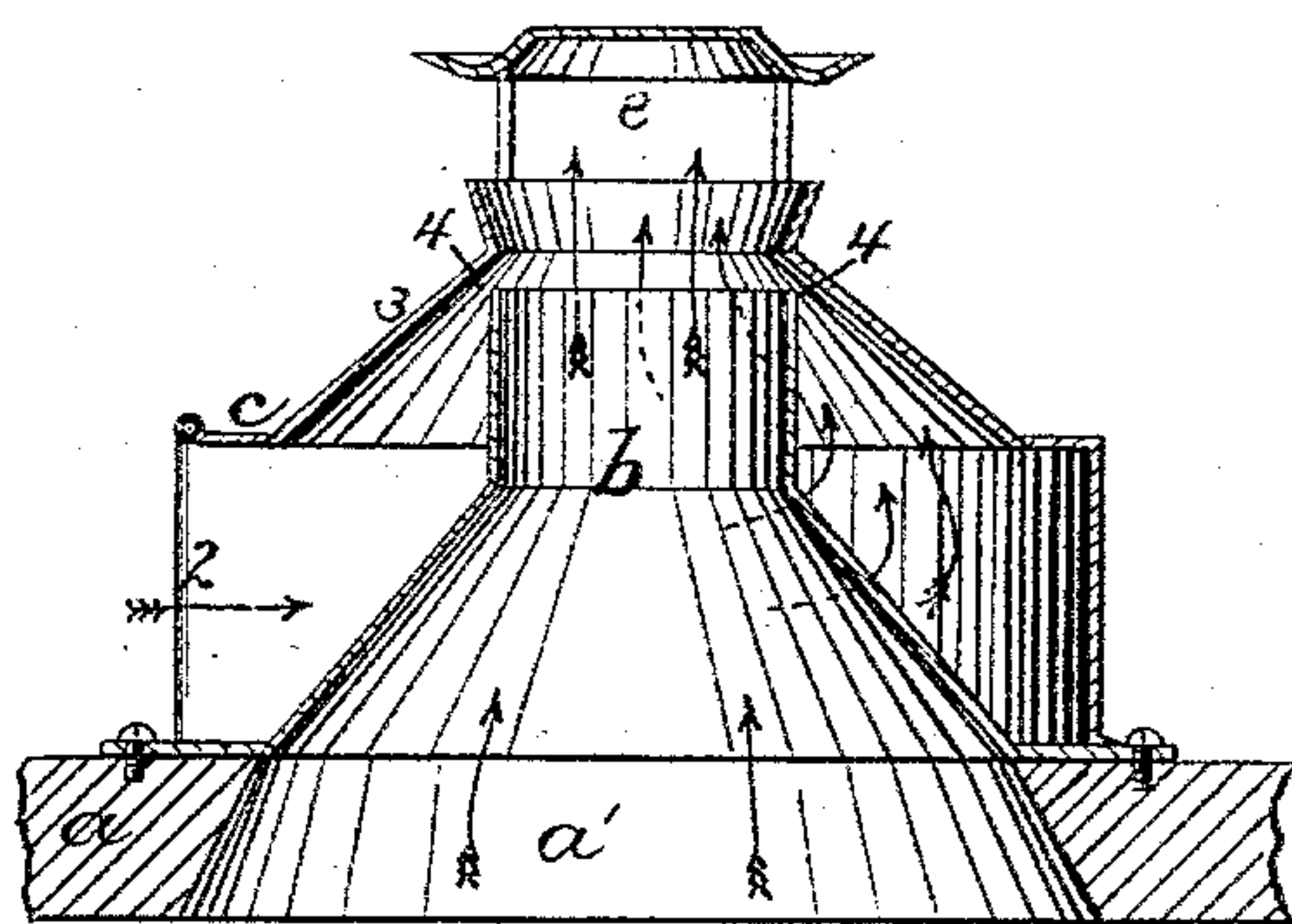
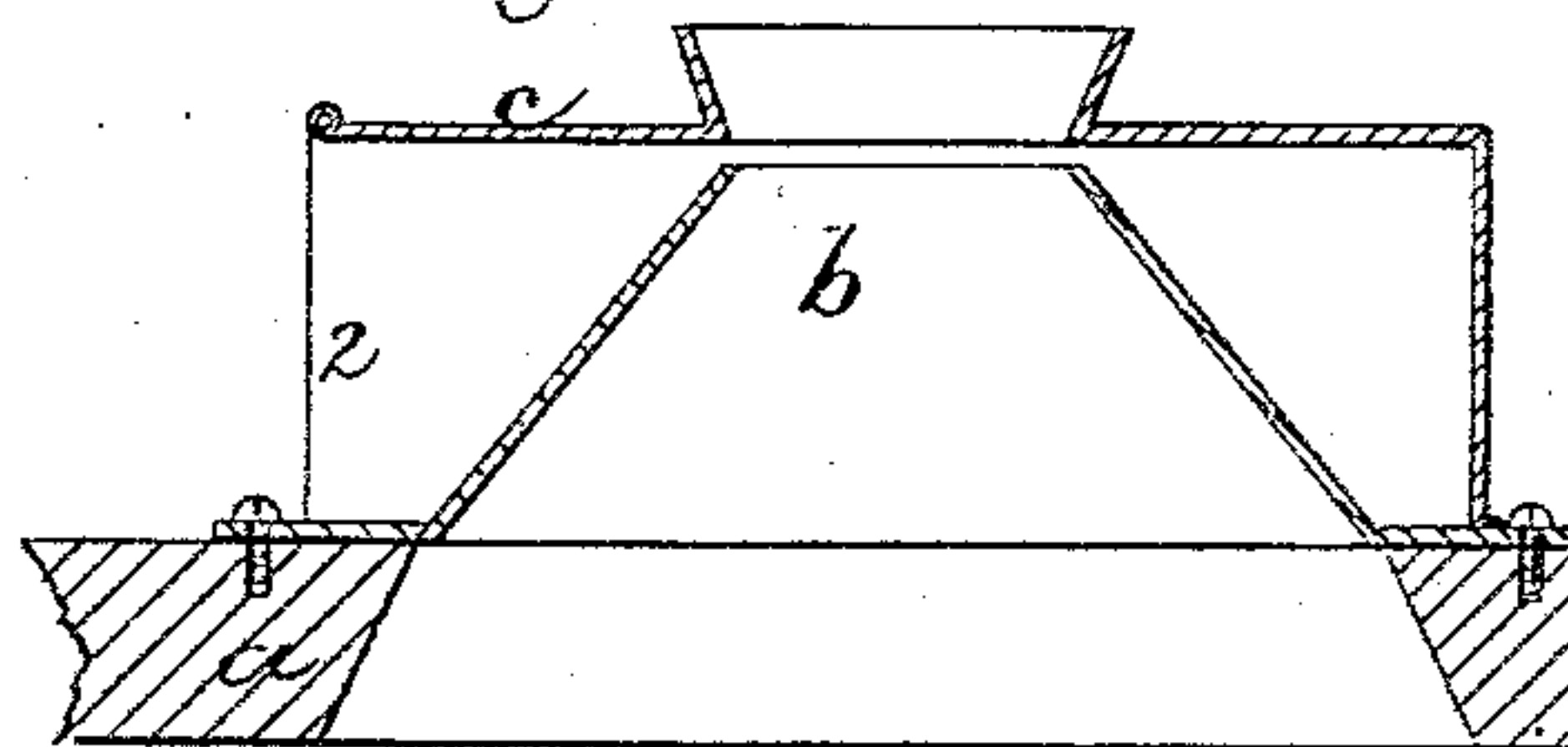


Fig. 5.



Witnesses
A. L. White
H. Brown.

Inventors.
J. P. Doyle.
C. W. Stanley
by night & day
attorneys

UNITED STATES PATENT OFFICE.

JOSEPH P. DOYLE, OF BOSTON, AND CHARLES W. STANLEY, OF MEDFORD,
MASSACHUSETTS.

CAR-VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 321,346, dated June 30, 1885.

Application filed April 14, 1884. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH P. DOYLE, of Boston, in the county of Suffolk, and CHARLES W. STANLEY, of Medford, in the county of Middlesex, both in the State of Massachusetts, have invented certain Improvements in Car-Ventilators, of which the following is a specification.

This invention has for its object to provide a simple and effective car-ventilator adapted to draw air outwardly from the car when it is in motion; and it consists in the improved construction which we will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents an elevation of the outer side of our improved ventilator. Fig. 2 represents a front elevation of the same. Fig. 3 represents a section on line *xx*, Fig. 2. Fig. 4 represents a section on line *yy*, Fig. 1. Fig. 5 represents a modification.

The same letters of reference indicate the same parts in all the figures.

In the drawings, *a* represents the side of the car or of the "monitor-top" thereof to which the ventilator is applied. The ventilator is composed of a funnel-shaped tube, *b*, communicating with the opening *a'* in the side *a*, and adapted to conduct air out of the car, as shown in Fig. 4, and a flaring hood or casing, *c*, surrounding said tube. The hood *c* is provided with an open mouth, 2, at its end toward the forward end of the car, and is closed at its rear end, which is curved to form a semi-annular space around the tube *b*, as shown. The outer side of the hood *c* has a funnel-shaped tube or offset, 3, which surrounds the tube *b*, and forms an annular space around said tube, which is gradually contracted, as shown in Fig. 4, the outer end or outlet of the tube 3 being separated from the outer end of the tube *b* by a narrow annular space or outlet, 4. When the car is in motion, the mouth 2 of the hood being toward the forward end of the car, air

rushes into the hood. As the hood has no outlet excepting the narrow annular space above described around the mouth of the tube *b*, the area of said space being very small compared to that of the mouth 2, it follows that the air will pass out through said annular space with considerable force, and will therefore induce an outward current of air through the tube *b*, as indicated by the arrows in Fig. 4, said current being sufficient to remove the vitiated air from the upper portion of the car.

A cap, *e*, may be placed over the outlet 4 to exclude rain, cinders, &c. It will be seen that our improved ventilator is very simple and inexpensive in construction, having no valves or moving parts.

We do not limit ourselves to the provision of the funnel-shaped tube 3 on the side of the hood. Said tube may be omitted, as shown in Fig. 5, the hood having only an orifice surrounding the outer end of the tube *b*. The improved ventilator may be used for steamboats and other moving vehicles, as well as cars.

We claim—

The combination, with a car or vehicle, of a hood secured to the roof thereof, said hood having a closed side, and a flaring mouth opposite said closed side, the flaring mouth formed by the extension of the casing proper, and a funnel-shaped tube inside said hood, the large end communicating with the interior of the car, and the smaller end extending upward into the casing, substantially as described.

In testimony whereof we have signed our names to this specification, in the presence of two subscribing witnesses, this 12th day of April, 1884.

JOSEPH P. DOYLE.
CHARLES W. STANLEY.

Witnesses:

C. F. BROWN,
A. L. WHITE.