

R. Hitchcock, Car Ventilator.

N^o 67,877.

Patented Aug. 20. 1867.

Fig. 1

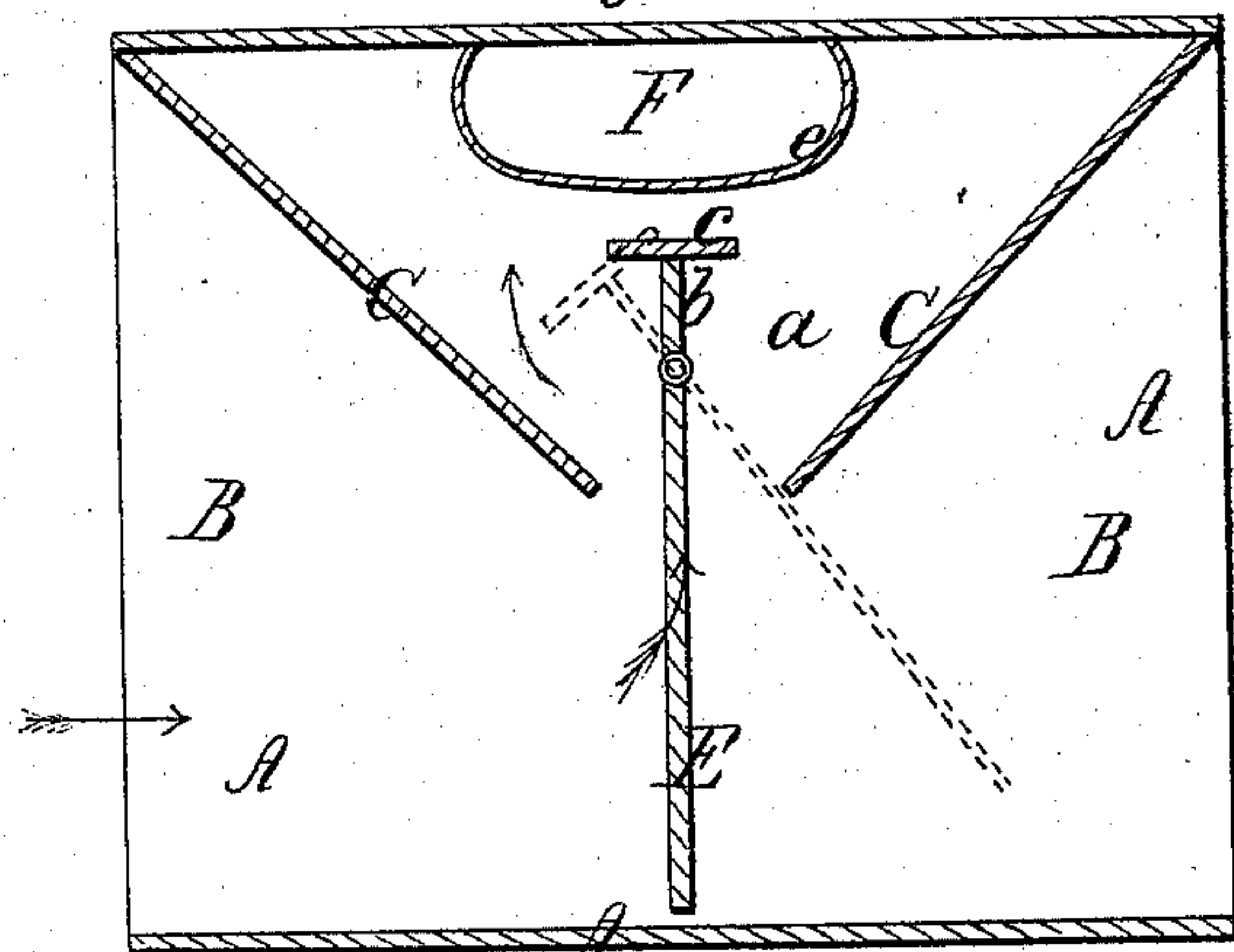
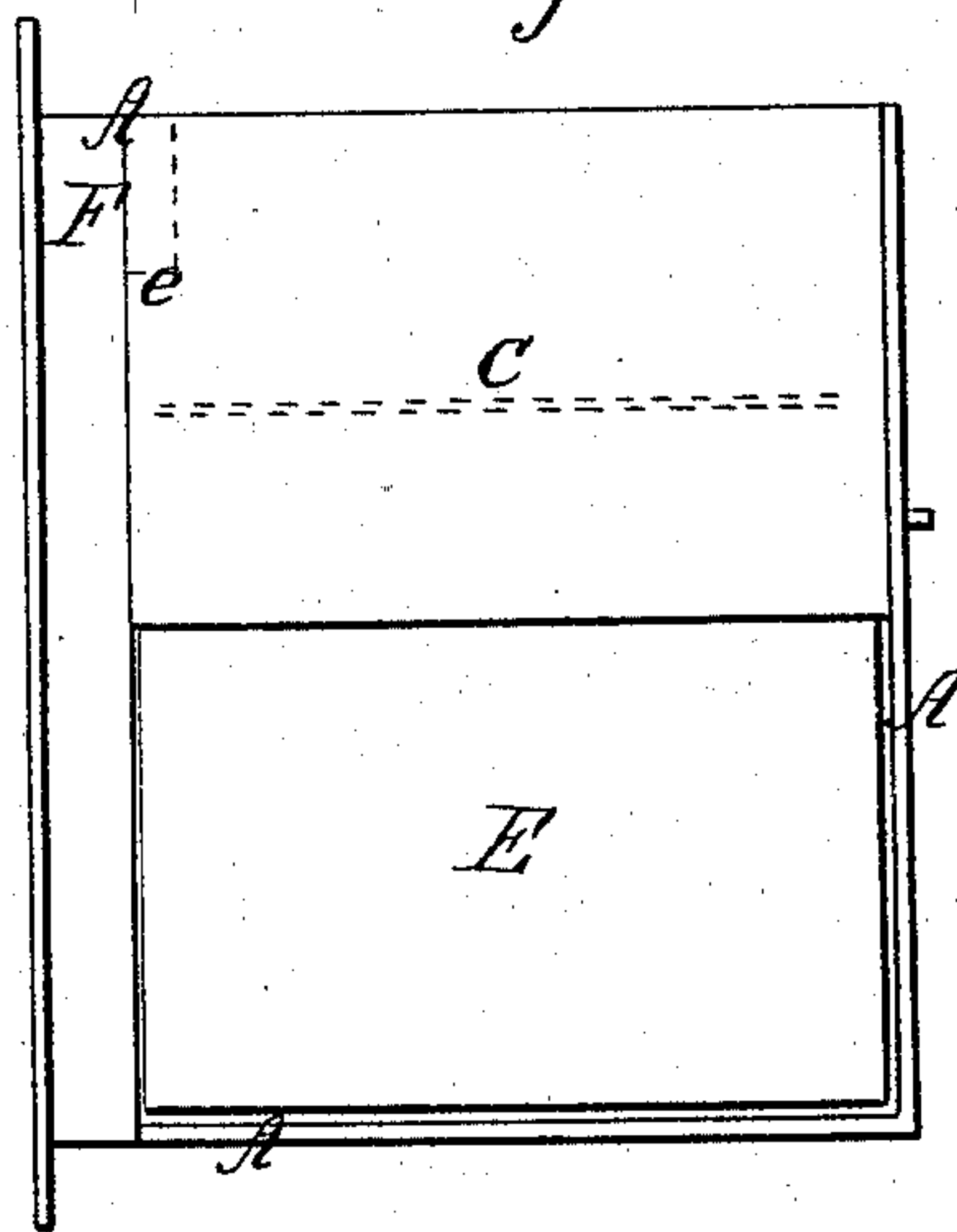


Fig. 2



Witnesses
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ROBERT HITCHCOCK, OF SPRINGFIELD, MASSACHUSETTS.

Letters Patent No. 67,877, dated August 20, 1867.

IMPROVEMENT IN CAR-VENTILATORS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, ROBERT HITCHCOCK, of Springfield, Hampden county, Commonwealth of Massachusetts, have invented certain new and useful Improvements in "Car-Ventilators;" and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon. In the drawings—

Figure 1 is a side section of my invention, and

Figure 2 a front view of the same.

My invention consists in forming a car-ventilator for the sides of cars, so arranged that the cinders and dust will not penetrate into the car while the current of fresh air is being forced through, but be warded off from the ventilator openings, and either caught by the same or allowed to pass on by. In order to accomplish this, I form my ventilator as I will now describe, referring to the figures.

The case A is made with a single thickness of sheet metal, or similar substance, and is formed so as to be placed on the side of the car, as shown in fig. 2. An opening at each end, the entire width of the case A at B and B', allows the air to enter at either side, according to the direction in which the car is moving. A funnel-shaped opening is made at each end by the pieces C and C', which extend downwards, converging towards each other, but leaving a space, *a*, between their lower edges, between which is suspended a valve, E, the axis of which is a little above the horizontal line of the lower edges of the converging pieces C and C'. This valve E hangs down nearly to the bottom of the case, and extends upwards above its axis a short distance at *b*, where the top is capped with a piece, *c*, projecting on both sides of the valve. In the side next the car, in the top of the case A, is the opening F for the air to pass through into the car. This opening has a flange, *e*, projecting all around its edge, serving as an additional preventive to the passage of cinders.

The operation of this is as follows: In fig. 1 we will suppose the car going in the direction indicated by the arrow. In this case the valve is blown back, as shown by red lines, throwing its top part forward. The air rushing through the opening B is forced up in front of the valve, following the course of the small arrows shown in the figure, while the cinders and other heavy foreign matter are deflected by the valve and pass out between the lower edge of the latter and the bottom of the case. Should any, by accident, get above the valve there would be very little possibility of their getting through the vent-hole into the car, owing to the tortuous route they would be compelled to follow. By this means I obtain a very simple and useful ventilator, and one that can be cheaply constructed. Various small alterations in proportions of parts may be made to suit summer and winter use without affecting the principle and general construction and arrangement of the whole.

Now, having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of the valve E, having the cap *c*, with the case A, having the pieces C and C' and vent-hole F, the whole being constructed and arranged substantially as herein described.

ROBERT HITCHCOCK.

Witnesses:

EDWARD H. HYDE,

R. F. HYDE.