

E. A. TUTTLE.
Car-Ventilator.

No. 208,349.

Patented Sept. 24, 1878.

Fig. 1

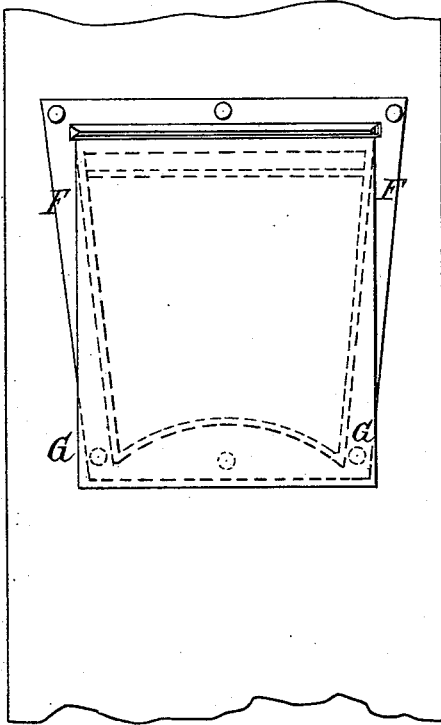


Fig. 2.

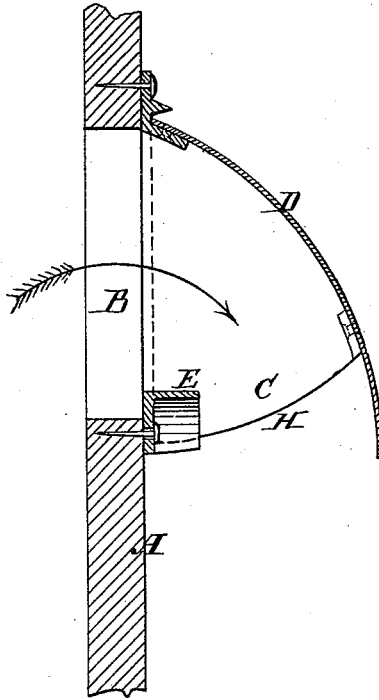
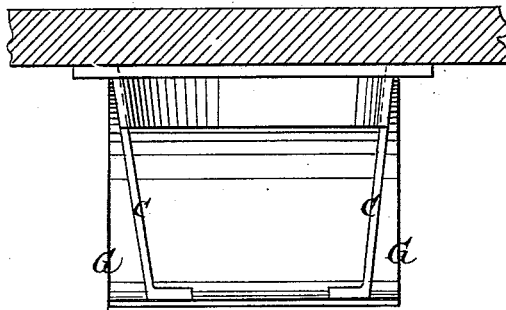


Fig. 3.



WITNESSES

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EDWARD A. TUTTLE, OF NEW YORK, N. Y., ASSIGNOR TO THE TUTTLE & BAILEY MANUFACTURING COMPANY.

IMPROVEMENT IN CAR-VENTILATORS.

Specification forming part of Letters Patent No. 208,349, dated September 24, 1878; application filed April 8, 1878.

To all whom it may concern:

Be it known that I, EDWARD A. TUTTLE, a resident of the city of New York, in the county and State of New York, have invented new and useful Improvements in Car-Ventilators, of which the following is a specification:

My invention relates to the ventilating-hood commonly attached to the outside of a car to induce currents from inside outward by the action of the outer currents of air on it; and it consists of certain peculiarities in the shape and construction of the same specially adapted for the ventilators located on the side of the car, and rendering it much more efficient than the common ventilators, all as hereinafter more fully described.

Figure 1 is a front elevation of a ventilator constructed according to my invention. Fig. 2 is a sectional elevation, and Fig. 3 is a plan of the same inverted.

A represents the side of the car, having an opening, B, through which the air is to be made to escape by the ventilating-hood, which consists of the side plates, C, cover D, bottom E, and the base F, the said sides, cover, and bottom piece surrounding the opening B, for the escape of the air, and the sides and the cover being essentially for inducing the outward flow by the action of the outside currents on them, and the bottom being more particularly for a check against air, dust, &c., that may be blown directly against the side of the car from flowing into the car as readily as they otherwise would; but it also facilitates, to some extent, the flow of the escaping current.

The essential feature of the invention is the downwardly-converging arrangement of the sides C, conjoined with the downwardly-inclined cover D, whereby the exterior currents of air, striking against said sides C, are deflected downwardly at the same time that the outgoing current is similarly deflected by the cover, so that the influence of the former currents is added to and accelerates the latter, instead of being equally deflected upward, outward, and downward, as when the sides of the ventilators are vertical, which rather obstructs than assists the outflowing current.

The projections of the cover (seen at G, Figs. 1 and 3) beyond the sides C, parallel with the side of the car, is another feature of the invention, which is also a means of accelerating the draft through the opening B, and in the downward direction, said projections being additional to the downwardly-converging sides as a means of still further preventing the lateral escape of the external air from the sides C.

The sides C are made to terminate at the lower end in a line ascending from the side of the car to the junction with the cover, (see H, Fig. 2,) and thereby deflect the outgoing current from the side of the car, and thus effect more rapid escape than would be if it were discharged directly down along the side of the car.

The guard E, located at the bottom of the opening for the escaping air, stops and throws down dust, cinders, &c., that may chance to be blown directly against the side of the car, and which would thence pass into the car except for such guard.

It should be stated that the object of having both sides of the ventilator alike is to render it alike operative for running in either direction.

It will be noted that the improved ventilator is a good protector for the opening from the weather, both the cover and sides being extended below the opening. It is also very simple and cheap.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, in a car-ventilator, of downwardly-converging sides C and a downwardly-inclined cover, D, on a base, F, adapted to be attached to the side of a car, substantially as described.

2. The combination, with the downwardly-converging sides C and downwardly-inclined cover D, of marginal projections G of said cover, projecting beyond the sides parallel with or in the direction of the sides of the car, substantially as described.

3. The combination, with the downwardly-inclined cover D, of the downwardly-converging sides C, having the lower ends inclined

upward from the side of the car to their junction with the cover, substantially as described.

4. The combination, with the sides C and cover D, of a ventilator adapted to apply to the side of a car, of the horizontally-projecting guard-deflector E, located at the bottom of the opening for the escape of the air and

between the sides C, substantially as described.

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Witnesses:

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