

J. E. WARD.

CAR.

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Fig. 1.

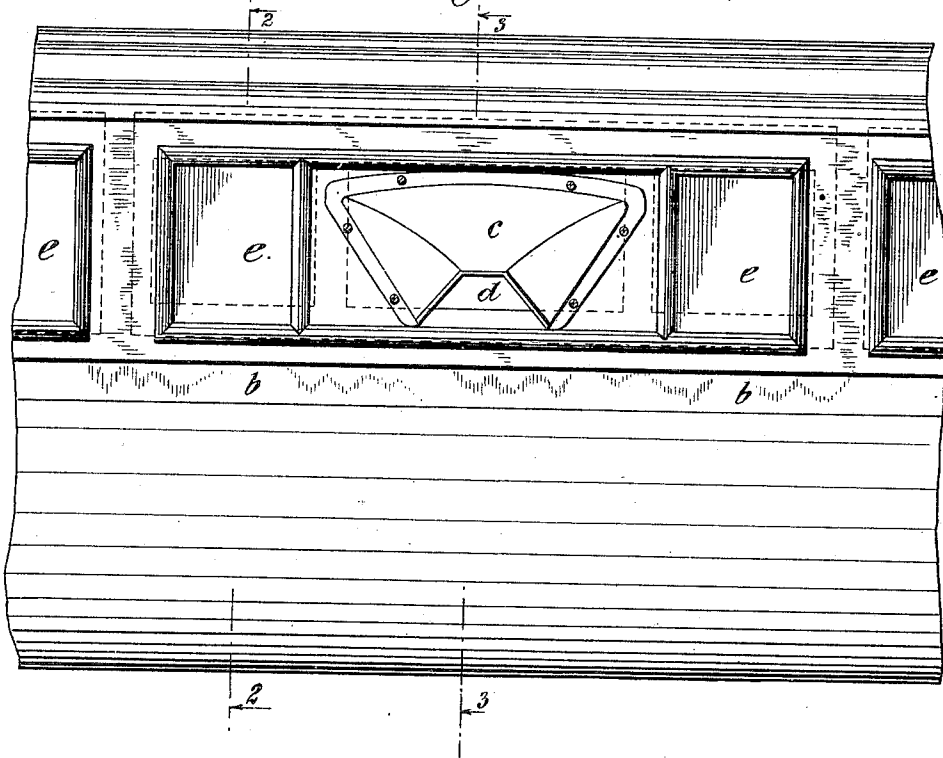


Fig. 2.

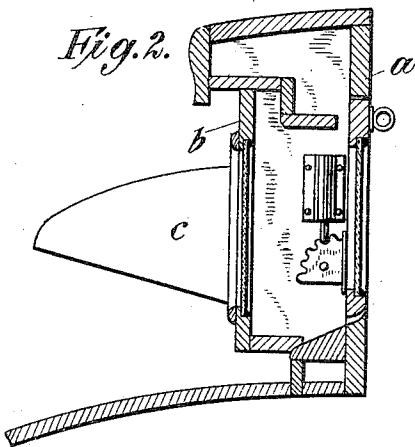
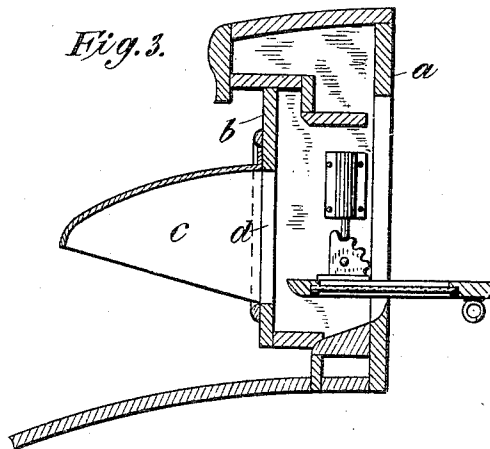


Fig. 3.



Witnesses  
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# UNITED STATES PATENT OFFICE.

JOHN E. WARD, OF NEW YORK, N. Y., ASSIGNOR TO WARD EQUIPMENT COMPANY, OF  
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CAR.

971,579.

Specification of Letters Patent.

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*To all whom it may concern:*

Be it known that I, JOHN E. WARD, a citizen of the United States, and a resident of the borough of Manhattan, of the city of New York, in the county and State of New York, have invented certain new and useful Improvements in Cars, of which the following is a specification, reference being had to the accompanying drawings, forming a part hereof.

The general object of the invention is to improve the construction of the roofs of railway cars and particularly the portions of the roofs which are employed for ventilating and lighting purposes. Railway cars, as constructed at the present time, are provided with upwardly projecting tops or roofs, the sides of which are substantially vertical and are supplied with ventilating means and generally with ventilating and lighting means. In many constructions, however, the ventilating means are either constructed or arranged as to completely obscure all of the light which might otherwise enter the car through the roof, or are provided with screens through which the light may primarily enter but which soon become clogged up with cinders and soot whereby they are rendered practically opaque to the passage of light. And in cases where the roof was paneled off and a ventilator fitted into each panel, no lighting openings were provided in the panels.

In accordance with the present improvements, the cars are arranged to be lighted as well as ventilated from the roof without any of the aforementioned objections, and the paneled roof is arranged to have a ventilator and one or more windows in each panel, the improvements thereby not only increasing the lighting effect but enhancing the attractiveness of the roof design as well.

Referring to the drawings in which a sufficient portion of a railway car has been shown to enable the improvements to be understood, Figure 1 is a view in side elevation of a portion of the roof of a railway car, and, Figs. 2 and 3 are sectional views taken respectively upon the planes indicated by the lines 2—2 and 3—3 in Fig. 1.

From Figs. 2 and 3, it will be seen that the roof projects from the top of the car in the usual manner and is provided with double vertical side walls *a* and *b*, the side walls *a* containing the drop sashes and the side walls

*b* constituting the outer or exterior portion of the roof to which the ventilators *c* are secured.

From Fig. 1 it will be seen that the exterior vertical sides of the roof *b* are divided into a plurality of panels which, as will be understood, extend along the car from end to end on each side thereof, and it will also be seen that each of these panels substantially registers with the corresponding drop sash which is arranged directly behind it, the dotted lines in Fig. 1 clearly showing the position of the drop sash.

In the present case a ventilating opening *d* is arranged in the center of each panel, and, as shown in the drawings, each opening is covered by any suitable form of ventilator, as *c*. The ends of each panel are provided with windows *e* through which it will always be possible for the light to flow and which cannot become clogged with dirt and cinders as in the case of a screen. It will be obvious, of course, that the windows and ventilating opening might be differently arranged in each panel, although the arrangement shown in the drawing gives a pleasing design.

It will thus be seen that light and air will both be delivered to each section to which corresponds a drop sash, the sash thus obviously controlling the air delivered through the ventilator and also, if it be made opaque, the amount of light delivered through the corresponding section of the roof. Generally speaking, the sash will be provided with windows, as shown, so as to let the light through at all times. It will be seen also that the improved construction makes an attractive design for the roof of a car.

I claim as my invention:

1. In a railway car, the combination with the roof, of a movable sash therein, a panel in the roof registering substantially with the movable sash and containing a ventilating opening and a window and a ventilating hood projecting outwardly from the panel and located over the opening in the same, said hood open from below.

2. In a railway car, the combination with the roof, of a plurality of drop sashes arranged therein, a ventilator centrally arranged with respect to each drop sash, and a window on each side of the ventilator and in front of the corresponding ends of the drop sash.

3. In a railway car, the combination with the roof, of a plurality of drop sashes arranged along the sides thereof, and a plurality of ventilators one arranged in front of the central portion of each drop sash, and a window arranged in front of each end portion of the drop sashes and on each side of the ventilators.
4. In a railway car, the combination with an upwardly projecting roof, of a plurality of movable sashes arranged therein, and a plurality of panels extending along the sides thereof, there being a panel corresponding to each movable sash, a ventilator centrally arranged with respect to each panel, and a window in each end of each panel.
5. In a railway car, the combination with

the roof, of a panel having a ventilating opening, movable sash or sashes capable of being positioned so as to permit the air which passes the ventilating opening to enter the car at one time and capable of being positioned so that the air which passes the ventilating opening cannot enter the car at another time, and a ventilating hood over the ventilating opening, said hood open on the lower side.

This specification signed and witnessed this 23rd day of December, A. D. 1909.

JOHN E. WARD.

Signed in the presence of—

G. McGRANN,  
LUCIUS E. VARNEY.