G. & G. T. BENJAMIN & H. S. WESTON.

RAILWAY CAR.

No. 60,465. Patented Dec. 18, 1866.

Fig. 1

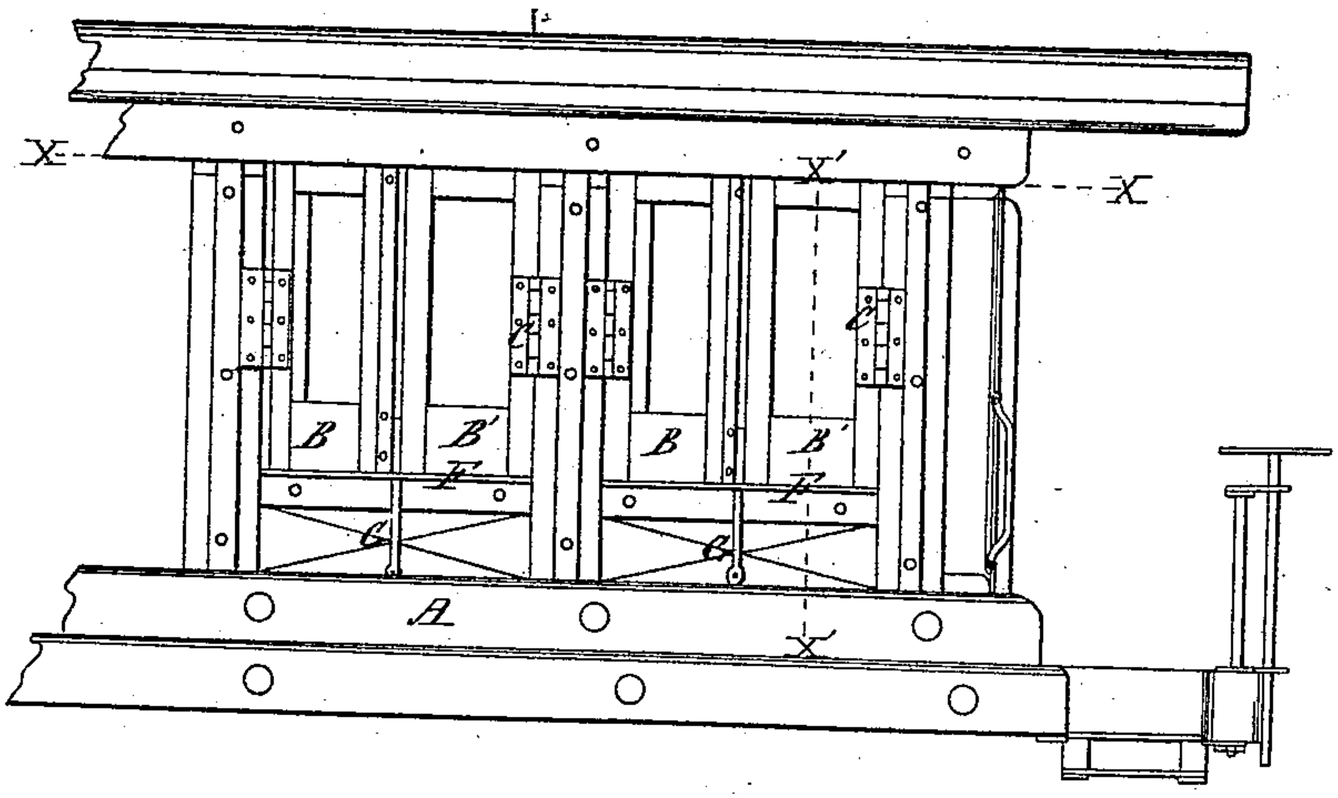


Fig. 2

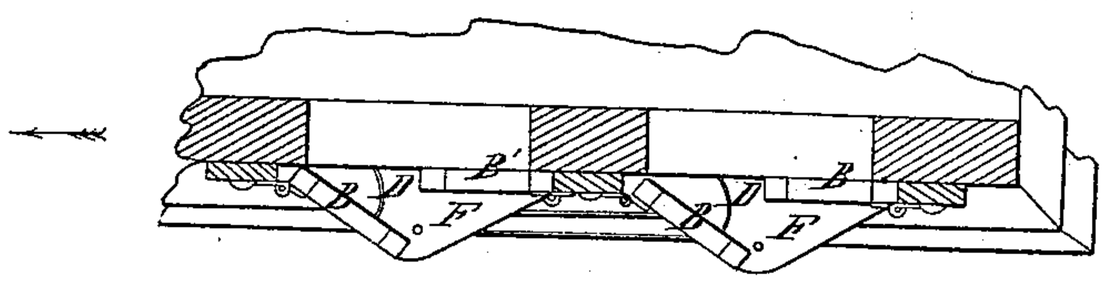
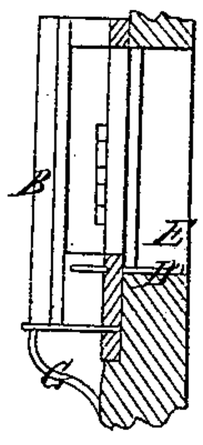


Fig. 3.



Witnesses.

W. H. Bennidge,

Frank Aden

Inventors.

G. Benjamin

G. T. Benjamin

H. S. Weston

United States Patent Office.

IMPROVED RAILWAY CAR.

G. AND G. T. BENJAMIN AND H. S. WESTON, OF MILLERSBURG, OHIO.

Letters Patent No. 60,465, *dated December* 18, 1866.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that we, G. and G. T. BENJAMIN, and H. S. WESTON, of Millersburg, in the county of Holmes, and State of Ohio, have invented certain new and useful improvements in Railroad Cars, for excluding dust and ventilating the same; and we do hereby declare that the following is a full and complete description of the construction and operation of the same, reference being had to the accompanying drawings, making part of this specification. Like letters refer to like parts in the several views.

Figure 1 is a section of railroad car.

Figure 2 is detached longitudinal section, in the direction of the dotted line $x\ x$.

Figure 3 is a detached vertical section, in the direction of the dotted lines $x'\ x'$.

A, fig. 1, is a section of railroad car. B B′ are the car windows, and are so hung by the hinges C to the frame as to permit of their being opened outward. D is a curved rod, one end of which is connected to the window and the other to the window-sill by a staple, E, through which it slides. The purpose of this rod is in order to prevent the windows from being opened beyond the edge of the deflector F, which is at an angle of about forty-five degrees to the side of the car. This deflector consists of a metallic plate, or other suitable material, and is placed immediately under the windows, the inner side resting upon the sill, and the other supported by a bracket, G. The sparks, smoke, and dust floating back, while the train is in motion, are prevented from drifting into the cars by the position of the window when open; this position is shown in fig. 2. We suppose the train is going in the direction of the arrow; the window B is open, as above stated, at an angle of forty-five degrees; the dust coming in a direct line with the train, strikes the open window at an obtuse angle, and is thereby deflected and thrown off away from the cars. At the same time the dust from the wheels is prevented from entering from below, by the deflector F, it being, as above stated, close under the bottom of the windows. As the dust escapes from under the deflector in the opposite direction from the progress of the train and ascends, it strikes against the next open window, and is thereby deflected and thrown off away from the train. And as each window is provided with the same arrangement, the dust, sparks, and smoke are, in consequence, wholly excluded. Should the train be moving in the opposite direction from that indicated, the window B is closed, and B′ is opened, which would be attended by the same results as that in the former case.

A full and complete ventilation of the car is not at all interrupted by this arrangement, for the space between the open and closed sections of the windows allows for the introduction of free currents of air for that purpose; nor does it in any way obstruct the sight of the passengers in looking from the cars.

What we claim as my improvement, and desire to secure by Letters Patent, is—

The double window B B′, the rod D, and deflector F, in combination with the car, as arranged in the manner and for the purpose herein set forth.

G. BENJAMIN,
G. T. BENJAMIN,
H. S. WESTON.

Witnesses:
W. H. BURRIDGE,
FRANK ALDEN.