

(No Model.)

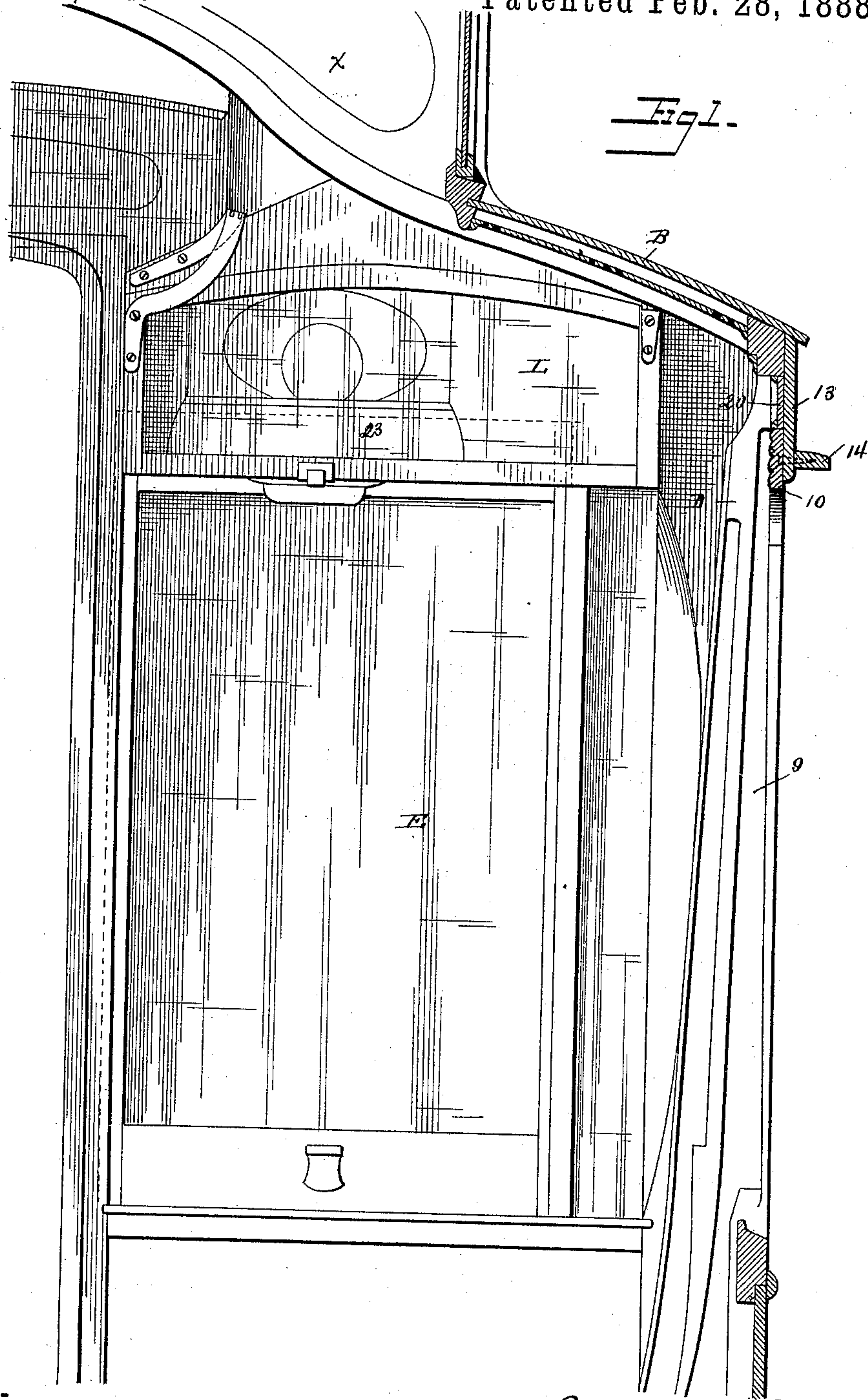
2 Sheets—Sheet 1.

J. STEPHENSON.

TRAM CAR SASH RAIL.

No. 378,471.

Patented Feb. 28, 1888.



Attest:

Geo. G. Hinkel, Jr.  
Sidney L. Johnson.

Inventor:

John Stephenson.  
by John & Freeman  
Atty.

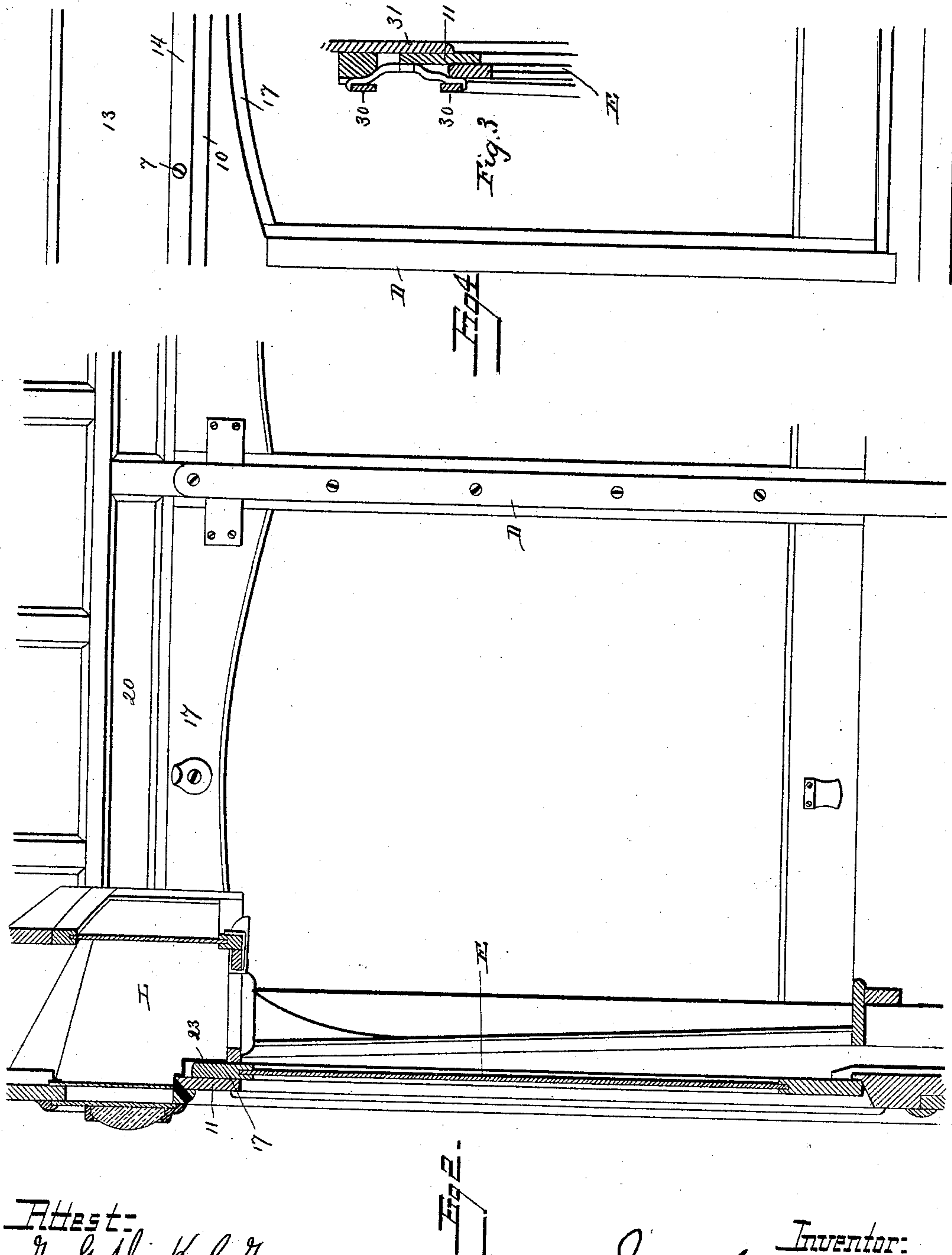
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Jno. G. Shute & Co.  
Sidney L. Johnson.

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Attys.



# UNITED STATES PATENT OFFICE.

JOHN STEPHENSON, OF NEW YORK, N. Y.

## TRAM-CAR SASH-RAIL.

SPECIFICATION forming part of Letters Patent No. 378,471, dated February 28, 1888.

Application filed June 9, 1887. Serial No. 240,840. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN STEPHENSON, a citizen of the United States, and a resident of the city, county, and State of New York, have  
5 invented certain new and useful Improvements in Tram-Car Sash-Rails, of which the following is a specification.

This invention, while generally relating to the construction of tram-cars, relates particularly to a structure enabling the field of vision in a car-body of the ordinary construction to be materially increased.

The drawings show so much of a tram-car as will aid in a ready understanding of the  
15 present invention, in which—

Figure 1 is a vertical cross-sectional elevation of a portion of one side of a car-body. Fig. 2 is a sectional elevation of the same, looking from the interior of the car, and taken on the line *x*. Fig. 3 is a like section taken  
20 through the car-body on the opposite side of the door, showing the manner the head-rail of the end window-sash escapes the door-sheave rails. Fig. 4 is an external view of a portion  
25 of the car, showing particularly one of the window-sashes.

Tram-cars with metal sashes remove about twenty per cent. of wood obstruction from the field of vision, affording comfort and pleasure  
30 to passengers. These may be increased by raising and obscuring the head-rails of the sashes behind the sub top rails, so that the sash head-rails and stiles are scarcely apparent. These advantages require different construction of the car-body; and this invention  
35 relates more particularly to obtaining more height of glass with as little change as possible in the general structure of the car. Therefore I take a car-body with the usual exterior, and preferably with metal sashes. I make the  
40 sub top rails, 10, of the body wide (deep) enough to cover the head-rails of the sashes when up in place, and extend the sash-runs 9 upward and downward sufficient to accommodate the  
45 increased length (height) of sash; also, the pillar-caps are lengthened in the same proportion as the height of sash is increased, and the upper ends of the pillars D modified to suit the lengthened pillar-caps. This arrangement  
50 narrows the inside head or ornament panel, 20, and changes the head of each side pillar, as also widens the sub top rails, 10, the inner faces of which are channel-molded, as shown.

The screws 7, for holding the drip-rails 14, have their heads countersunk and suitably  
55 finished.

Upward extension of the end sashes, E, requires that their head-rails 17 should pass up between the sheave-rails 30, which carry the  
60 car-door, and the end sub top rails, 11, of the body, thus necessitating a new construction of the door-hanging, which is not herein claimed; also, elevating the window-sashes brings a sash at each end of the car in contact with the  
65 lamp-house, because the head-rail 17 of the sash must pass up between the back wall, 13, of the lamp-house L and the end sub top rail, 11, thus requiring a different lamp-house, which is not claimed herein.

I claim—

1. A car-body with its sub top rails made  
70 wider, (deeper,) its sash-runs extended upward behind the widened sub top rail, obscuring the sash head-rail, the pillar-caps lengthened to accord with the new form of pillars, and the  
75 sash-runs extended downward to carry down the increased length of sash, as and for the purpose described.

2. A tram-car with its end window-sashes extending upward above the floor of the lamp-  
80 house between the rear wall of the lamp-house and the end sub top rail of the car-body, and the head-rail of the sash exposing a portion obscured to correspond in width with the  
85 metal side stiles, as and for the purpose described.

3. A tram-car with its end window-sashes extending upward between the door-carrying  
90 rail and the end sub top rail of the body, and the head-rail of the sash obscured, as and for the purpose described.

4. A tram-car with the head-rails of its window-sashes sliding up and obscured behind the  
95 sub top rail, the sub top rails channel-molded, and the drip-rails secured by screws inserted through the sub top rail, the heads of which are indented in said rail from contact with the sash-head, as and for the purpose described.

In testimony whereof I have signed my name to this specification in the presence of two sub-  
100 scribing witnesses.

JOHN STEPHENSON.

Witnesses:

S. A. STEPHENSON,  
JOS. B. STEPHENSON.