

J. STEPHENSON.  
Street-Car Body.

No. 161,570.

Patented March 30, 1875.

FIG. I.

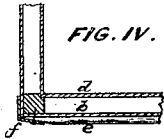
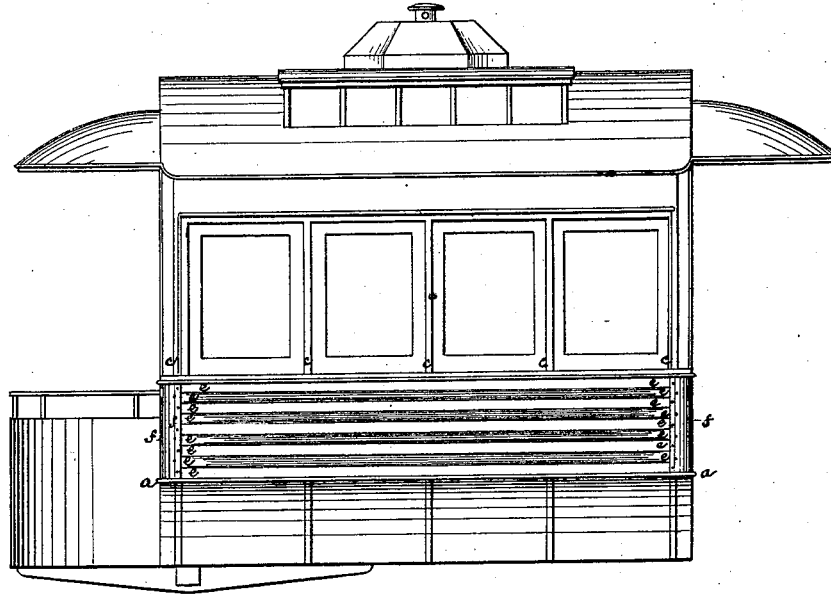


FIG. IV.

FIG. II.

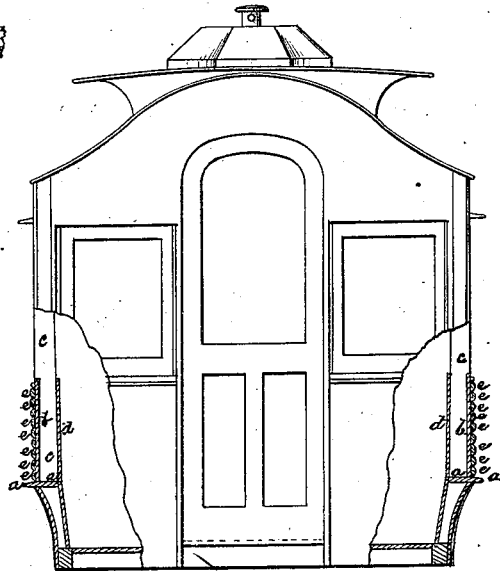
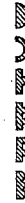


FIG. III.



WITNESSES:

*D. G. Stuart*  
*J. Knight*

INVENTOR:

*John Stephenson*  
per *D. Henny*  
*att.*

# UNITED STATES PATENT OFFICE.

JOHN STEPHENSON, OF NEW YORK, N. Y.

## IMPROVEMENT IN STREET-CAR BODIES.

Specification forming part of Letters Patent No. **161,570**, dated March 30, 1875; application filed March 2, 1875.

### CASE G<sup>2</sup>.

*To all whom it may concern:*

Be it known that I, JOHN STEPHENSON, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Street-Cars; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings and to the letters of reference marked thereon, which form a part of this specification.

Figure 1 represents a side elevation of the main body of a street-car having my improvement applied thereto; and Fig. 2, a rear elevation of the same, a portion being broken off to give a better illustration of the improvement. Fig. 3 represents different forms of the external ribs.

In the crowded thoroughfares of cities the external side panels, of cars are apt to be marred and broken by passing vehicles. Sometimes the contact between the two is so violent that in cars of ordinary construction the cart-shafts or stage-poles pass entirely through the sides of the car and injure the passengers within. The object of my invention is to render such accidents impossible, or in a measure impossible; and it consists in covering the side panels of the car with strips of very hard and tough wood or metal, the ends of which—they being tapered for the purpose—should be protected by metal plates secured to the side, or the side and ends, of the car.

To enable others skilled in the art to make, construct, and use my invention, I will now proceed to describe it in detail, omitting a particular description of such parts of a street-car and its construction as are old and unnecessary to a full understanding of this improvement.

The frame-work of the car may be made in the usual way, with the exception, perhaps, of the horizontal rails *a*, which are or may be made a little wider than usual to make provision for the increased thickness of the ordinary outer panel *b* of the car, caused by the application thereto of my improvement.

*c* represents the ordinary ribs of the body of a car, to which the ordinary inside panel *d* is applied in the usual way, as also the usual but plain outside panel *b*. To the latter panel, on the outside, I apply a series of ribs, *e*, of

plano-convex form, and of a number and width sufficient to cover the entire face of said panel from end to end of the car. These ribs may be made of very hard and tough wood, such as will neither splinter nor break easily; or they may be made of metal, such as brass or iron, the latter preferred. When made of metal they may be made either solid or hollow, as may be deemed most suitable; or, instead of making them in strips, a single plain sheet with external ribs or sections of such sheets of the width and length required may be used; or it may be suitably corrugated for the purpose. When made of metal the thickness need not necessarily be great; but as a rule, and for various reasons, it is preferred to cover the panel with strips instead of sheets of metal. The ends of these ribs *e* on their outer side are beveled or tapered, and each rib separately and independently secured to the panel *b* and ribs *c* of the car-body. When thus secured to the body, a metal plate, *f*, is then arranged over their ends, so as to cover and protect them, it in turn being suitably secured to the car-body. This plate *f* may be entirely confined to the side of the body; but I prefer to make it so as to turn around the end of the car, securing it then to the end as well as the side of the car. This not only secures and protects the ends of the ribs *e*, but strengthens and protects the angles of the car-body. The ribs *e* may be made of any suitable shape, but I prefer the curved form on their outer side.

With respect to panel *b*, while its use is desirable, yet it is not absolutely essential that it should be used to underlie the ribs *e*, although such construction would be inferior to the other.

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

1. Ribs *e*, in combination with a street car body, to form the external surface of its main side panels, substantially as set forth.
2. The combination of the ribs *e* and plates *f* with a car-body, substantially as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOHN STEPHENSON.

Witnesses:

WM. JOHN WALKER,  
JOHN SMITH.