J. STEPHENSON.

Street-Car.

No. 167,585. Patented Sept. 7, 1875.

FIG. I.

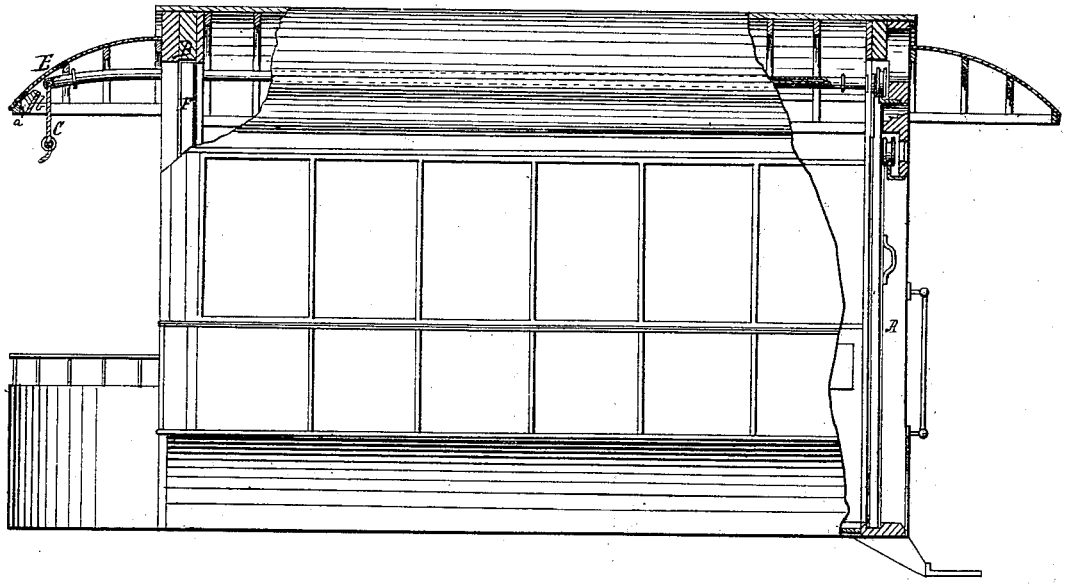


FIG. II.

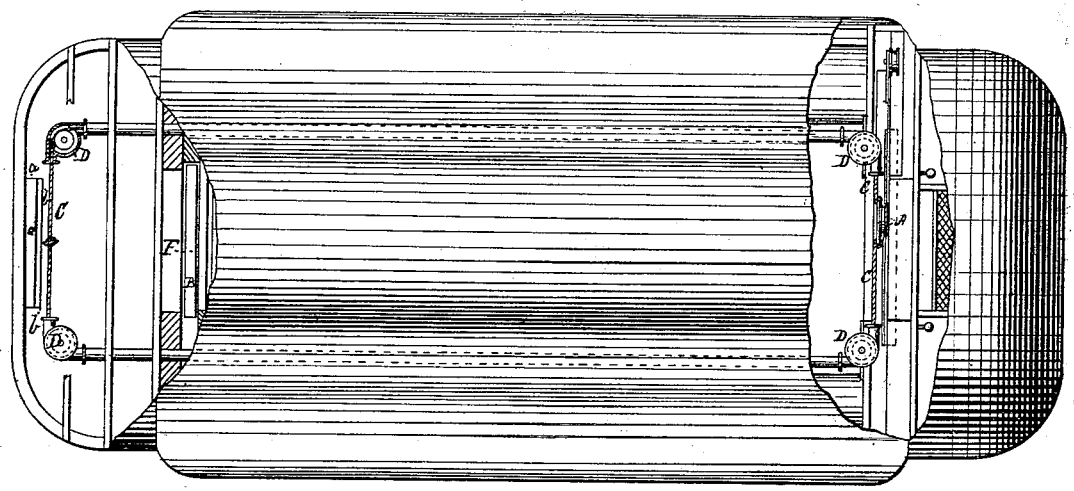
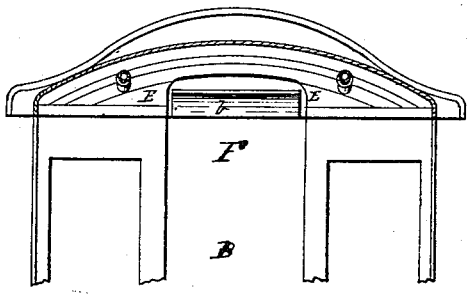


FIG. III.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN STEPHENSON, OF NEW YORK, N. Y.

IMPROVEMENT IN STREET-CARS.

Specification forming part of Letters Patent No. **167,585**, dated September 7, 1875; application filed August 7, 1874.

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, in which—

Figure 1 represents a side elevation of one of my improved cars, portions of the side and roof being broken off, and other parts shown in section to illustrate the details of the mechanism through which the driver operates the entrance-door. Fig. 2 represents a plan, portions of the roof and hoods being broken off. Fig. 3 represents a vertical transverse section of a portion of the upper part of the car, looking toward the front.

In running street-cars it has been found to be a serious source of trouble to have the driver continually turning around to ascertain when it is necessary to stop to permit passengers to enter or leave the car, as such constantly takes away his attention from his horses, and that frequently when it is most required.

To obviate this trouble is the object of my present improvement. My invention, for this purpose, consists in combining a mirror with the front hood of the car, it being so arranged in connection therewith, and with an opening in the front end of the car, as to give to the driver a clear view of the inside of the car and through the entrance-door of the latter, and that without the necessity of his having to turn around for such purposes, thereby enabling him, without withdrawing his attention from the horses, to see when it is necessary to stop, either to receive a passenger or to allow one to get out.

To enable others skilled in the art to make, construct, and use my improvement, I will now proceed to describe it in detail.

A suitable car having my improvement applied thereto is shown in the drawing, it, in this case, being applied to a car in which the entrance-door A, through suitable devices for the purpose, is placed under the immediate and sole control of the driver, and that in such manner as to enable him to open or close it at will; but this feature is not absolutely essential, as my improvement is equally applicable to a car in which the passengers themselves open or close the door, according as they desire to get in or out of the car, and over which the driver has no immediate control. But practical tests have demonstrated the desirableness of placing the door under the immediate control of the driver, that he may open and close it at will, to the exclusion of drunken and other disorderly persons.

Suitable devices for this purpose are shown in the drawing, consisting of an endless cord, C, passing around suitable pulleys D, the two ends of which are firmly attached to the entrance-door A, and which, for this purpose, is arranged to slide back and forth, according to the direction in which the cord is pulled. In most other respects the car may be of the usual construction, with the exception of the front bonnet or hood E, which, on its under and front side, at or near the middle, is provided with an angular block, *a*, to the front side of which the mirror *b* is secured in any suitable manner. This mirror is set at a small angle to a horizontal plane, so that its upper edge will project rearwardly beyond its lower edge, it being placed at such angle as will enable it, through the opening F in the front end of the car, to give the best view of the interior of the car, and through the glass windows of the entrance-door A.

If necessary or desirable, mirror *b* may, through a suitable frame, be so attached to the hood as to be adjusted to any required angle and height from the ground.

The opening F in the front end of the car it is deemed best to arrange in the front or driver's door B, as being more central and giving a better view of the inside of the car and of the passengers, and, if desired, may be left open in summer and covered with glass in winter.

The mirror *b*, thus combined with the bonnet or hood, and arranged with respect to the

opening F in the front end of the car, will enable the driver to see when it is necessary for him to open or close the door for the ingress or egress of passengers, and is at the same time entirely out of the way of the driver, and of danger of breakage.

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

The combination of a bonnet, E, provided with a mirror, *b*, with an opening, or an opening covered by a transparent medium, F, in the front end of a street-car, substantially as and for the purposes set forth.

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

JOHN STEPHENSON.

Witnesses:

WILLIAM J. WALKER,

JOHN SMITH.