J. STEPHENSON.

Street-Car Platform.

No. 161,569. Patented March 30, 1875.

FIG. I.

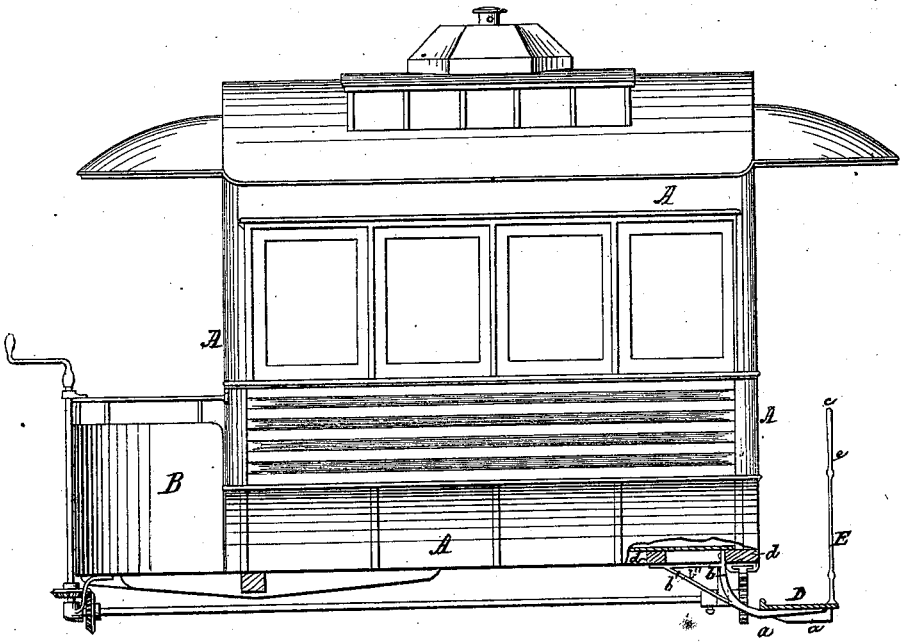
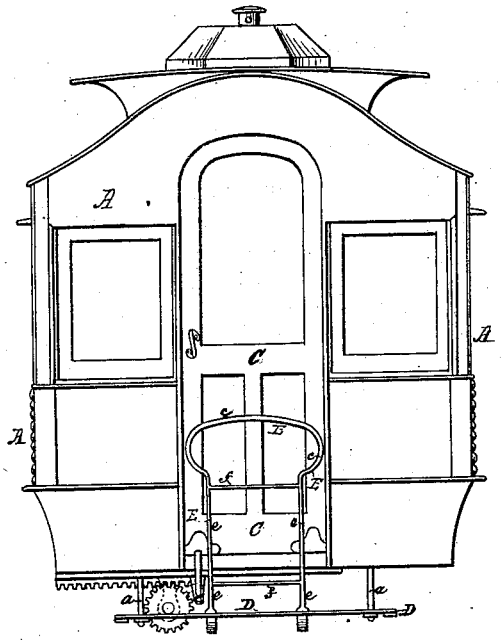


FIG. II.



WITNESSES:

D. G. Stuart

J. J. Knight

INVENTOR:

John Stephenson

per

D. Hannay

Atty.

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

JOHN STEPHENSON, OF NEW YORK, N. Y.

IMPROVEMENT IN STREET-CAR PLATFORMS.

Specification forming part of Letters Patent No. **161,569**, dated March 30, 1875; application filed March 2, 1875.

CASE G[1].

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 a certain new and Improved Car-Step Platform with Protecting Rail; 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 and partial section of a street-car having my improvements applied thereto, the running-gear being removed, and Fig. 2 a rear elevation of the same.

Street-cars operated without conductors are now coming extensively into use. Heretofore such cars were made with the boxed or omnibus step. Latterly, however, the small platform-step is coming into more general use.

These forms of step, as heretofore made, are objectionable, first, because they are devoid of the necessary handles or other appliances by which passengers can assist themselves in getting in and out of the car; secondly, because there is nothing to prevent the passengers from falling outward, by the premature starting of the car, in leaving it; and, thirdly, because the passengers in leaving the car often inadvertently step into the dirty horse-path, to obviate all of which is the object of my invention.

My invention for these purposes consists in providing the car with a platform-step, arranged at a point intermediate between the floor of the car and the ground, said step being made of a width just sufficient to form an easy passage-way to and from the car, and of a length (without extending all the way across the width of the car) just sufficient to enable the passenger to step easily beyond the rail and avoid the horse-path, and then providing the step thus made with a railing of any desired form on its outer edge, immediately opposite the doorway, and of about the same width as its opening, so that persons, whether in the act of leaving the car or standing unguardedly on the step, would be prevented from falling off the latter, and so that persons may also more readily assist themselves in leaving and entering.

To enable others skilled in the art to make, construct, and use my improvement, I will now proceed to describe its parts in detail, omitting a particular description of such parts of the car as are old and common to others.

The body A, and driver's platform B, may be made in any suitable form or manner, as my present improvement has no reference thereto, and may be provided with any suitable mechanism, by means of which the driver, while on his stand in front, can open or close the entrance door of the car at will.

The driver's platform may or may not be open at the sides; but for many reasons it is preferred to be closed, so that the passengers shall not find entrance to or exit from the car thereby, or in any other way save through the entrance-door proper in its rear end, that accidents may be prevented.

C represents the entrance-door, and D the platform-step leading thereto.

By reference to Fig. 2 it will be seen that such step is arranged and supported at a point intermediate between the line of the car-floor and the ground by means of supporting-brackets *a*, the rear end of each of which is forked and properly secured to the rear sills *d*. The forks *b* and *b'* of these brackets *a* render them stiff and strong, as the under one *b'* acts as a brace to the other. They are still further strengthened by a horizontal brace or stay, *b''*, which connects their upper ends.

As many of these brackets *a* may be used as may be considered necessary; but two, as a rule, are deemed sufficient.

On the outer edge of the step D is erected a short railing, E, immediately in front of the entrance-door C. Its upper side, *c*, if desired, may be curved, as shown in Fig. 2; or it may be made waved or straight, although the curved form is preferred.

In the drawings but two standards, *e*, are shown; but more may be used if found necessary. These standards are connected together by one or more cross-bars, *f*, to give them additional strength and rigidity.

As a rule, the bars *e e* and top-rail *c* will be made in one piece; but may be made in sepa-

rate pieces, if thought advisable. By confining the length of the railing E to about the width of the door, it will afford easy access to and egress from the car, while it gives the necessary security to the passenger, from possibility of falling outward, as he leaves the entrance-door of the latter. Moreover, the rail *c* gives all the assistance to the passengers necessary to enable them to make an easy entrance to and exit from the car, by its affording them the necessary handle by which to enable them to grasp it and help themselves.

The contour of the rail *c* and standards *e* for this purpose may be made of any suitable shape. The height of the railing must be made sufficiently great to protect the passengers on leaving or entering the car.

I am aware that platforms at the rear of the car provided with a railing near their verge have been long in use; but such platforms are necessarily accessible by a step or tread intervening between the platform and the ground. Such construction I disclaim, as my platform answers the double purpose of a step and platform.

In this case I do not claim the subject-matter claimed in cases G^2 and G^3.

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

The railing E, and platform-step D, in combination with the main body A of a street-car, the platform being below the level of the car-floor, 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:

WM. JOHN WALKER,

JOHN SMITH.