J. STEPHENSON.

Signaling-Device for Street-Cars.

No. 161,568. Patented March 30, 1875.

FIG. I.

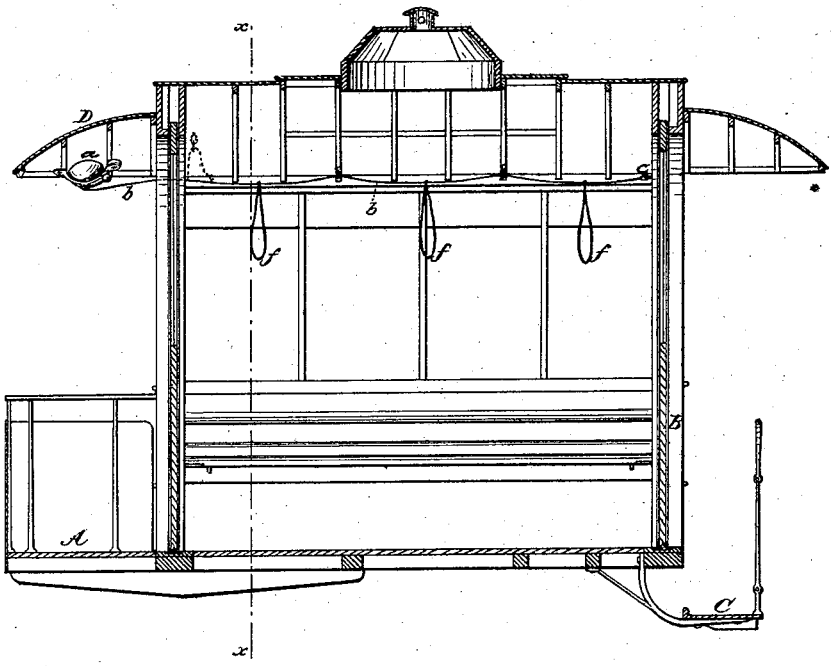
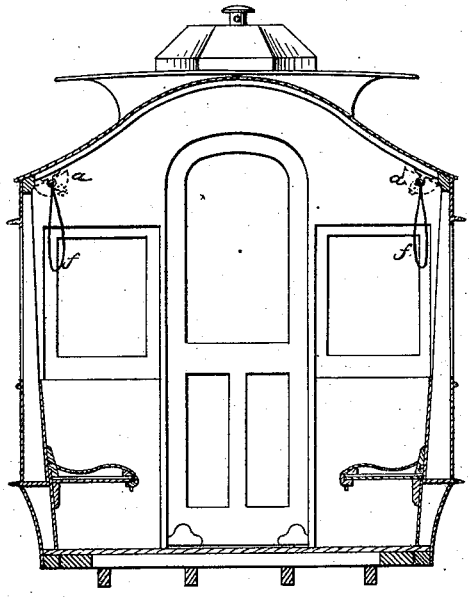


FIG. II.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN STEPHENSON, OF NEW YORK, N. Y.

IMPROVEMENT IN SIGNALING DEVICES FOR STREET-CARS.

Specification forming part of Letters Patent No. **161,568**, dated March 30, 1875; application filed March 2, 1875.

CASE G[6].

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 vertical longitudinal section of a car-body having my improvement applied thereto, and Fig. 2 a vertical transverse section of same as taken through the line *x x* of Fig. 1.

The prevalence of street-cars managed by the driver, without the aid of a conductor, makes it necessary that every possible facility should be provided for him as well as the passengers.

The ordinary street-car has a signal-bell located at each end, with a bell-strap attached thereto, which runs centrally along the ridge or highest part of the ceiling. This strap, as thus located, is inaccessible to many passengers.

My improvement is intended to remedy this trouble, and consists in a new combination and arrangement with a street-car of bells or gongs and of the cords or straps which operate them, whereby passengers can, without rising from their seats, signal to the driver. This is of primary importance to invalids, ladies, and children, and that more especially when the car is crowded.

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 description of such parts of a street-car as is non-essential to a full understanding of the improvement.

My improvement is applicable to any kind of street-car, whether operated by a driver alone, or by a driver and conductor. In this case it is represented in connection with a street-car intended to be operated by the driver alone, that is to say, with a car having a single driver's platform, A, and to which access is had by the passengers through an entrance or door, B, arranged in the rear, by a platform-step, C, leading thereto. At each end of the car is arranged a bonnet or hood for protection from the weather, and which may or may not be made independent of and detachable from the main body of the car. To the frame or rafters of the front bonnet D (the one over the driver's platform) is arranged a bell or gong, *a*, at each side or angle of the front end of the car, to the lever end of the hammer of each of which is attached one end of a bell-cord, *b*, the other end, *c*, of each of which is secured to the inner side of the rear wall of the car, the cords being respectively led along the lower margin of the ceiling, one on each side, as shown in Fig. 2. From these bell-cords *b*, pendants or "pulls" *f*, are suspended at suitable intervals apart and within easy reach of the seated passengers, so that they, without rising from their seats, can, at will, communicate with the driver.

Where the car is provided with two driver's platforms, one at each end of the car, then the bonnet of each end may, if desired, be provided at its sides with a bell or gong connected with a bell-strap and pulls, arranged in the manner described; but it is not considered absolutely necessary to do so, as the gongs could be heard by him sufficiently distinctly from the rear, and thus serve the purpose of a signal without arranging a double set for that purpose. Where, however, such is desired, the corresponding ends of the bell-cord may be attached to the respective bells in the usual way. The cord being made somewhat longer than would be required for a single bell, a couple of rings may then be fastened to the upper side of the bell-cord, one near each end of the car, immediately adjoining the opening in the end of the car, through which the cord is made to pass. A hook is then secured to the roof or to the ends of the car, to which the strap may be hooked, according to the end of the car which the driver is using. As, for example, the driver being on his platform, the bell-cord is hooked to that end of the car, which at that time, forms the rear, and when he changes his platform, that end is then unhooked and the other end hooked up, and so on. This ar-

rangement prevents the use of two gongs at one and the same time for making a single signal, but little trouble being exercised in making the change. Such plan is illustrated in dotted lines in Fig. 1, the cord being shown as looped up.

Again, a single bell or gong may be used with two independent hammers, to each of which the end of one of the two cords may be respectively secured.

Having thus described my invention, what I claim as new is—

In a street-car, two bell-cords, each provided with a system of pull-straps, and arranged in such manner as to pass along the lower margin of the roof on the opposite sides of the car, and connect directly with a signal bell or gong attached to the outside of the driver's end of the car, substantially as and for the purposes set forth.

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

JOHN STEPHENSON.

Witnesses:

WM. JOHN WALKER,

JOHN SMITH.