(No Model.)

E. W. PHINNEY & E. E. ADAMS.

GUARD FOR OPEN STREET CARS.

No. 563,209. Patented June 30, 1896.

Fig. 1.

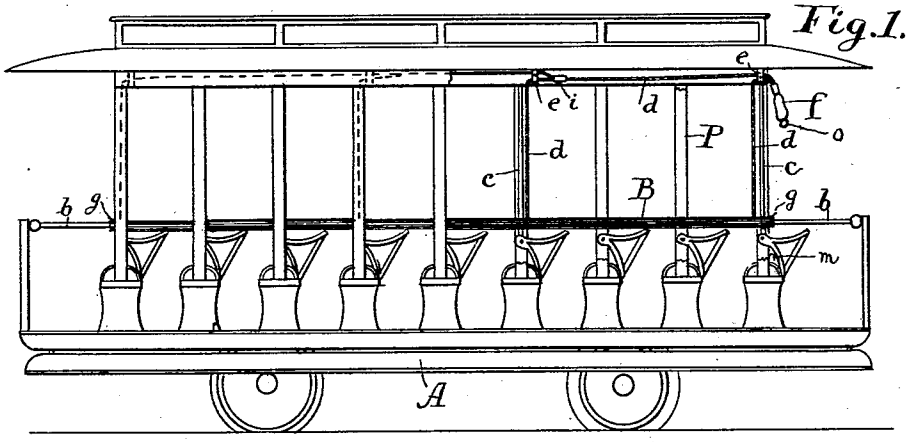


Fig. 2.

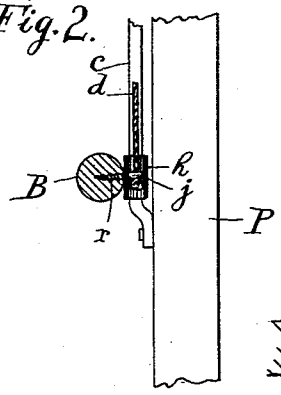


Fig. 3.

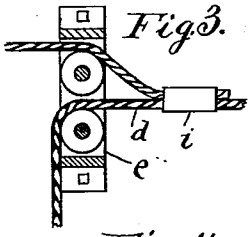
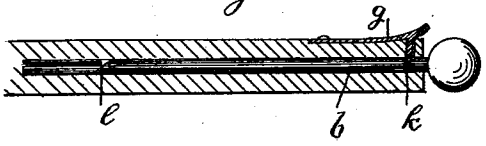


Fig. 4.



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their Atty

UNITED STATES PATENT OFFICE.

ETTA W. PHINNEY AND ELMER E. ADAMS, OF DEERING, MAINE; SAID PHINNEY ASSIGNOR TO MARY E. WHITNEY, OF SAME PLACE.

GUARD FOR OPEN STREET-CARS.

SPECIFICATION forming part of Letters Patent No. 563,209, dated June 30, 1896.

Application filed September 23, 1895. Serial No. 563,305. (No model.)

To all whom it may concern:

Be it known that we, ETTA W. PHINNEY and ELMER E. ADAMS, citizens of the United States, and residents of the city of Deering, in the county of Cumberland and State of Maine, have invented a certain new and useful Improvement in Guards for Open Street-Cars; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to a guard to be applied to open street-cars by means of which either side of the car can be closed to prevent passengers from alighting on that side.

Where street-cars are run on double tracks, particularly in the case of electric cars, there is great danger in stepping from the car on the side next the adjacent track, and some simple and effective means of preventing passengers from doing this has long been needed, but, so far as we are aware, none has come into general use.

The object of our invention is to construct an attachment to be applied to cars for the purpose of doing this work which shall be simple in design, readily applied to the car without the necessity of sending it to the repair-shop, and which shall be easily worked when in actual use.

We accordingly make use of a rail extending horizontally along the side of the car just inside of the posts, this rail being mounted on vertical guide-rods by means of sleeves fitting on said guide-rods and attached to the rail. The rail is raised and lowered by means of cords secured to it at intervals, and these cords run over pulleys at the top of the car, all of them connecting at the end of the car with an operating-handle, so that by the pull of the handle the rail is raised horizontally. Extensible ends are provided by which the rail may be extended across the front and rear platforms of the car.

In the accompanying drawings we have illustrated a car fitted with our new guard.

In the drawings, Figure 1 is a side elevation of the car, in which the guard is shown as applied to one side only, the posts at one end being shown as broken away to show the inside of the posts on the farther side of the car. Figs. 2, 3, and 4 are detail views of portions of our device.

A represents an open street-car of any ordinary construction, P being the side posts thereof.

Our guard is composed of a rail B, which extends along just inside of the posts at each side of the car. The rail may be of any suitable shape or material, although we prefer to use a round brass-covered pole, such a pole not being liable to warp, as an unprotected wooden pole or rail would be quite sure to do. The pole B is mounted in such a manner on the inside of the posts that it is capable of being moved vertically up and down. In order to accomplish this, we provide guide-rods *c*, which we secure on the inside of several of the posts, and on each rod *c* is a sleeve *h*, fitting loosely, so that it can run easily up and down. The sleeve *h* is secured to the rail B by a screw *r*, soldered or otherwise formed on the side of the sleeve and screwed on the inside of the rail before the sleeve is mounted on the guide-rod. The rail is raised and lowered by means of a cord *d*, (here shown as being secured by its lower end to an eye *j*,) which is formed on one side of the sleeve *h*. Each sleeve has a suspending-cord attached to it, and as many are used as is necessary to keep the pole or rail from bending when it is suspended by the cords. The upper ends of the several cords are run over pulleys *e*, placed at the top of the car. As here shown, we use double pulleys or those having two sheaves, one over the other.

The cord which comes up alongside of the post is led over the lower pulley, while the cord coming from the other pulleys is led over the upper one. The cords are all connected by clamps *i* and led along to the rear end of the car, where they are connected with an operating-handle *f*. An eye *o* is secured in the end of this handle and a hook *m* is provided on the lower end of the end post for fastening the handle when it is down and the rail is up.

The end of the rail proper does not extend across the platform at either end of the car,

but each end is provided with an extension-bar *b*, which fits in a socket in the end of the rail and is adapted to be pulled out and extended across the platform.

The extension-rod *b* is held in place in its inner and outer positions by a snap or latch *g*, which engages slots *k* and *l* at either end of the rod.

The operation of our device will be readily seen from its construction. When the car starts from the end of its route, the rail next to the adjacent track is lowered, so that passengers cannot get on or off without climbing over it, while the rail on the opposite side is raised to the top of the car, giving a free passage under it. When the rail is down, it can be used as a rest for the arms of the passengers, and it does not take up any room or limit the seating capacity of the car. Each rail is operated from the rear platform by the operating-handle placed at that point, or the cords may be so connected that it may be operated from either end of the car.

The guard is very simple in its construction and operation, it can be applied to street-cars as they are now built without interfering with any of the regular attachments, and it affords ample protection against passengers getting on and off from the wrong side of the car.

Instead of making use of the handle *f* to pull the cords, a reel may be used, and if desired this reel may be operated by electricity in the usual manner. The cords *d*, where they run along the top of the car, may be incased in any desired way, so that they will not be mistaken for the bell-ropes.

We claim—

1. A guard for open street-cars comprising a rail extending longitudinally along the side of the car and adjacent to the posts, guides attached to said side rail and sliding vertically on guide-rods secured to the side posts of the car, cords attached to the side rail and passing over double pulleys arranged at the tops of the side posts, and secured by clamps to each other, said cords terminating in an operating-rope provided with a handle.

2. A guard for open street-cars comprising a rail extending longitudinally along the side of the car and adjacent to the posts, guides attached to said side rail and sliding vertically on guide-rods secured to the side posts of the car, cords attached to the side rail and passing over double pulleys arranged at the tops of the side posts and secured by clamps to each other, said cords terminating in an operating-rope provided with a handle, and extension-rods working in the end of said side rail and adapted to be held in position by means of a spring-clamp, provided with a finger, said finger being designed to fit in a slot in the extension-rod.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses.

ETTA W. PHINNEY.
ELMER E. ADAMS.

Witnesses:
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