(No Model.)

J. H. FOX.

GATE FOR EXIT PASSAGES OF RAILWAY CARS.

No. 445,809. Patented Feb. 3, 1891.

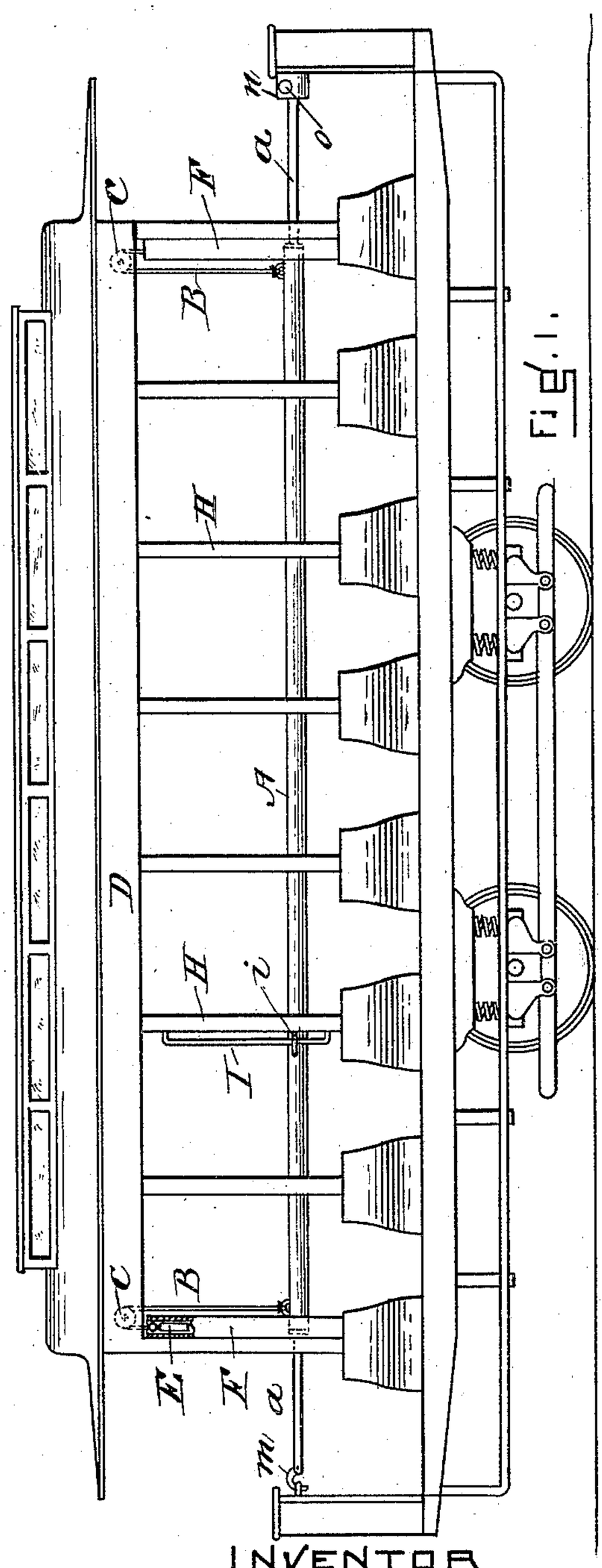

Fig. 1.

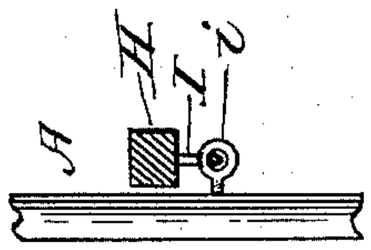

Fig. 4.

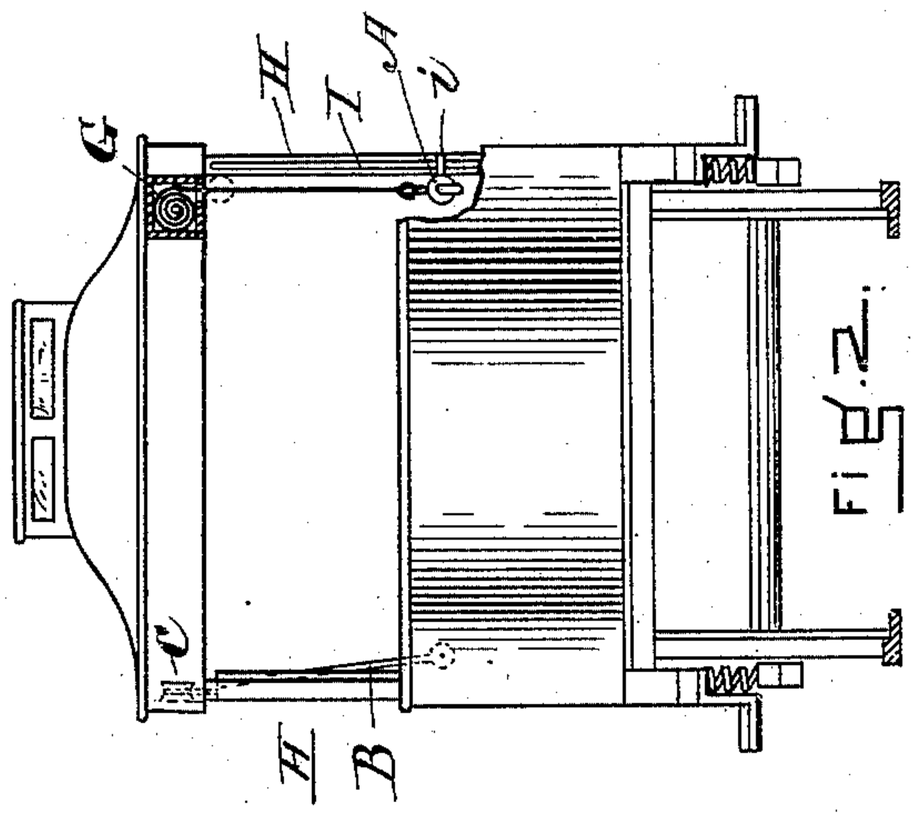

Fig. 2.

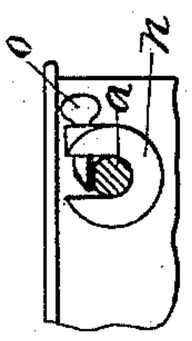

Fig. 5.

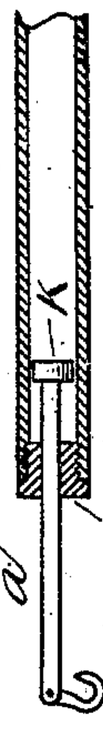

Fig. 3.

WITNESSES.

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GATE FOR EXIT-PASSAGES OF RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 445,809, dated February 3, 1891.

Application filed December 1, 1890. Serial No. 373,162. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. FOX, of Boston, in the county of Suffolk and Commonwealth of Massachusetts, have invented certain Improvements in the Construction of Gates or Guards for Exit-Passages of Railway-Cars, of which the following is a specification.

My invention relates to certain modifications of the improvements in gates or appliances to be attached to the sides of railway-cars to prevent passengers from getting off upon the side on which such gates are closed or placed in proper position, described and claimed in my application, Serial No. 361,907; and it consists of a bar or tube which extends, preferably, horizontally across the width of the openings or exit-passages at the steps of the car, and which is suspended by cords or chains attached thereto at each end or at other suitable intervals along its length, which cords extend upward to and over pulleys attached to the frame of the car above or near the top of said exit-passages. The other ends of said cords may be attached to counter-weights, which for convenience and safety should be inclosed in a box extending up at the side of the car, or such cords may pass around a sheave, to the axis of which one end of a helical or other suitable lifting-spring may be attached, the other end being made fast to a rigid portion of the car.

This invention is especially useful in guarding exit-openings of street-railway cars which are used during the summer season, commonly known as "open cars," having a number of openings along either side at which passengers enter or leave. When applied to such open cars, I prefer to place the guard-rail upon the inside of the roof-supporting posts and attach the pulley or sheave over which the supporting cord or chain passes upon the inside of the roof-frame, where also the box to contain the lifting-spring may be located, and when using the weight as counterpoise to the guard-rail the weight-box may be attached to one side of said posts at either end of the car.

In the drawings forming a part of this specification, Figure 1 is a side elevation of an open street-car with my improved guard-rail attached thereto. Fig. 2 is an end view of such car. Fig. 3 is an enlarged detail showing the manner of attaching the rod which is intended to guard the passage at either end of the car between the dasher and the last seat. Fig. 4 is a detail showing a plan view of a portion of the guard-rail with an eyebolt attached to it, which runs upon a guide-rod fastened upon the side of one of the roof-supporting posts, which is shown in section. Fig. 5 is a detail showing the socket and spring-latch, which may be used to hold the extensible portion of the guard-rail to the dasher.

Referring to the drawings, A is the guard-rail; B, the suspending cords or chains; C, the pulleys or sheaves attached to the upper portion D of the car, and over which the cord B runs, with a weight E attached to its other end, and F the box in which the weights run.

G, in Fig. 2, is the lifting-spring, which may be used in place of the weight E.

H are the roof-supporting posts of the car, and upon the sides of one or more of them I attach a guide-rod I, Figs. 1 and 4, upon which the eyebolt *i*, fastened to the guard-rail A, slides when the guard-rail is pushed up or pulled down.

In order that the portion of the guard-rail which is to extend across the openings at either end of the car between the last seat and the dasher may be readily and conveniently removed from a position which might inconvenience the driver or conductor when the guard-rail A is raised, I preferably make said guard-rail of a pipe or tube and insert at either end a rod *a*, Figs. 1 and 3. I make the rod *a* of smaller diameter than the diameter of the opening through the tube used as the guard-rail. I attach a shoulder *k* to the inner end of said rod and secure a plug *l* into the end of said tube with an opening through it of the same diameter as that of the rod *a*. Thus said rod *a* may be pushed into the guard-rail tube when that rail is to be raised to the top of the car, and may be drawn out from the end of the guard-rail tube when it is pulled down to the position shown in the drawings. I also attach to the outer end of the rod *a* either a hook or catch *m*, to engage with an eye or staple upon the dasher, or make a notch in the end of the rod and hold it in a

socket *n* by a latch *o*. The strength of the spring G and the size of the weights E should be sufficiently great to a little more than counterbalance the guard-rail, so that when released from the fastenings at the dasher it will rise to the top of the car without assistance from the conductor or driver. When drawn down to the position shown in the drawings, it will be held in place by the hooks or catches at the dasher, or hooks may be attached to one or more of the posts H to hold the rail down.

I claim—

1. In combination with the exit-passages of a railway-car, a gate or guard-rail sustained by flexible supports which extend over pulleys upon the car at the upper end of said passages, a catch or hook to hold the guard-rail in its protective position, and counter-weights or springs attached to said flexible supports to draw the guard-rail upward when released from the catch, substantially as described.

2. In combination with the exit-passages of a railway-car, a guard-rail provided with telescopic joints, and two or more sustaining-cords connected with said rail and with a counterpoise therefor, substantially as described.

3. In combination with the exit-passages of a railway-car, a gate or guard-rail provided with one or more extensible sections, guides attached to the side of the car to direct the guard-rail to and from its protective position, and a latch to secure the end of each extensible section to a rigid portion of the car, substantially as described.

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