(No Model.)

D. CATARIEUS & A. S. CRABLE.

ADJUSTABLE GUARD RAIL FOR STREET CARS.

No. 468,454. Patented Feb. 9, 1892.

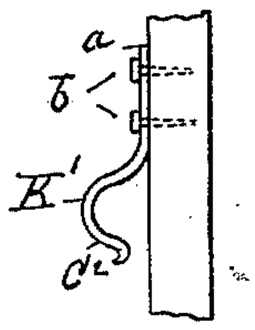


Fig 3

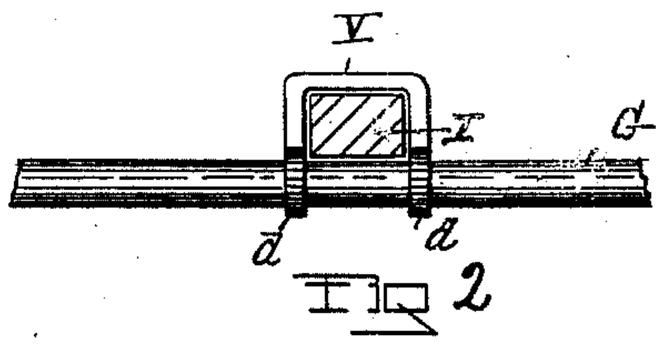
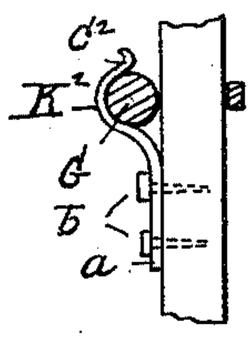


Fig 2



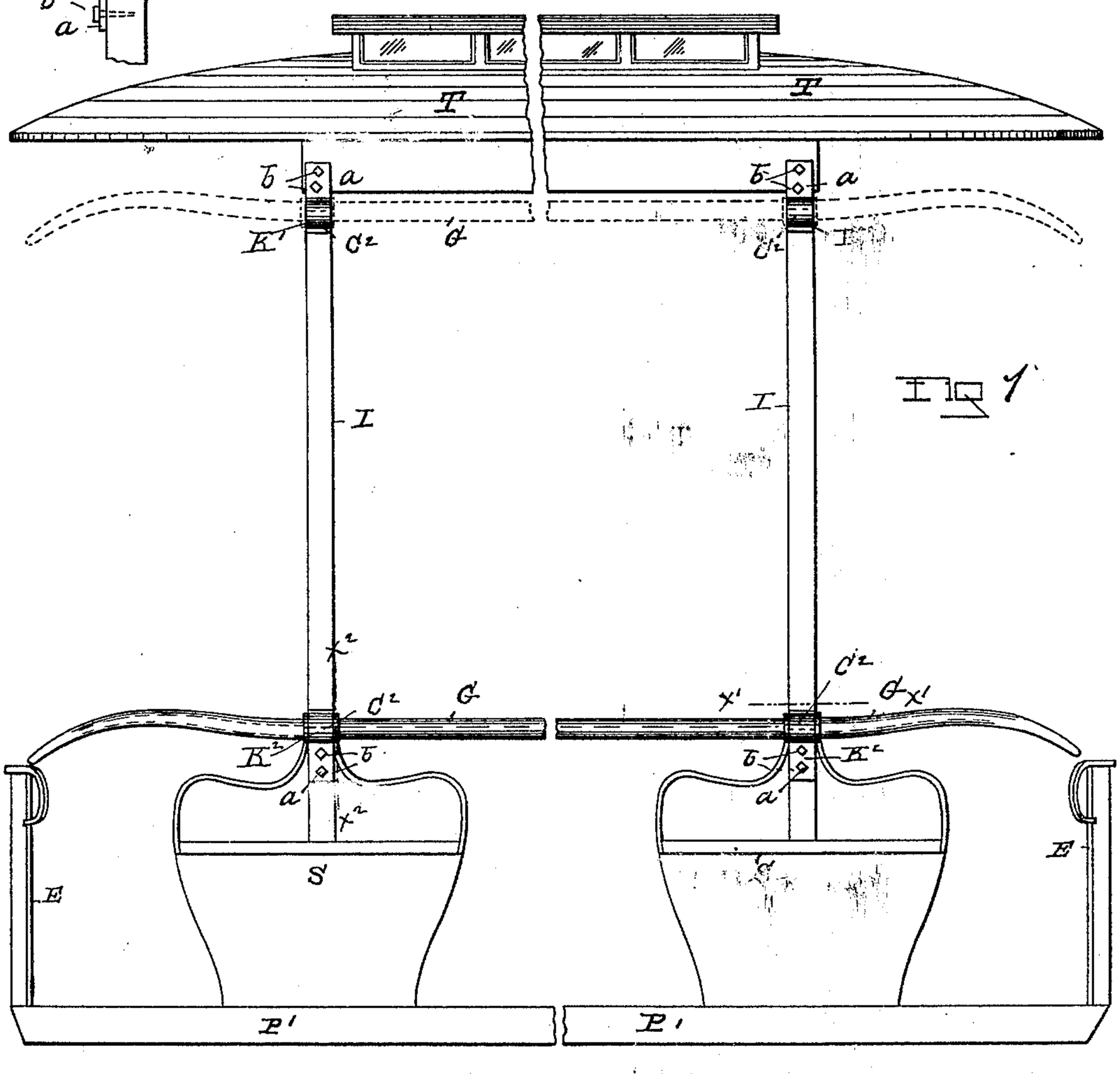


Fig 1

WITNESSES
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UNITED STATES PATENT OFFICE.

DANIEL CATARIEUS, OF BRUNSWICK, AND AUGUSTUS S. CRABLE, OF LANSINGBURG, NEW YORK.

ADJUSTABLE GUARD-RAIL FOR STREET-CARS.

SPECIFICATION forming part of Letters Patent No. 468,454, dated February 9, 1892.

Application filed July 3, 1890. Serial No. 357,606. (No model.)

To all whom it may concern:

Be it known that we, DANIEL CATARIEUS, of Brunswick, Rensselaer county, State of New York, and AUGUSTUS S. CRABLE, of Lansingburg, Rensselaer county, State of New York, have jointly invented a new and useful Adjustable Guard-Rail for Street-Cars, of which the following is a specification.

Our invention relates to an adjustable guard-rail for street-cars; and its object and purpose are the construction and arrangement of a device that may be secured to the car so as to prevent passengers from getting off therefrom upon that side of it which is next adjacent to a second track on which the cars are running in an opposite direction, and thereby to guard against accidents, with the device so constructed and arranged upon each side of the car that when not in use as a guard-rail it may be moved up out of position and secured.

Accompanying this specification to form a part of it there is a sheet of drawings containing three figures, illustrating our invention, with the same designation of parts by letter reference used in all of them.

In these illustrations, Figure 1 is a side elevation of a part of an open street-car with our invention shown as applied thereto, the car being shown as broken apart centrally to illustrate parts of the side, and ends with guard-rail shown as down and in position for use, with its position when raised up on that side of the car facing the view indicated by a dotted line. Fig. 2 is a top view of that part of the rail-guard at each side of one of the yokes which connects it to the car-posts, with one of the latter shown in section as embraced by the yoke with the sectional part of the post, taken on the line x' x' of Fig. 1. Fig. 3 is an edge elevation of one of the car-posts with one of the guard-rail clamps connected thereto at each end thereof with the post shown as broken apart near its transverse center, one of the clamps being shown as embracing the guard-rail, with the latter shown in section taken on the line x^2 x^2 of Fig. 1.

The several parts of the street-car thus illustrated, as well as those constituting our invention, are designated by letter reference, and the function of the parts are described as follows:

The letter P′ designates the car-platform; S, the seats arranged crosswise thereon; E, the end spatter or dash boards; I, the side posts which rest on the platform P′ and support the car-top T, all of which parts of a street-car are of the usual and well-known form.

The letter G designates a rail-guard, of which there is one arranged upon each side of the car.

The letters K′ and K² designate clamps that are arranged upon the outer face of the posts I, and the function of these clamps is to hold the guard-rail in position. The lower clamps K² are made to open upward, so that when the guard-rail is brought down into position for use and forced into the clamps, the guard-rail will be held in a position to prevent passengers getting off from that side of the car. The clamps K′ are arranged at the upper ends of the posts I, and are made to open downward, so that the guard-rail when not down for use may be passed up under the clamps to be held in position there until the moving direction of the car is reversed, and the guard-rail brought down to engage with the clamps K², as before described. These clamps are made of elastic metal, having one end secured to one of the posts I at *a* by means of bolts *b*, and therefrom extended outwardly in a curved vertical projection C², suitable to grasp and hold the guard-rail when forced in between said clamps and each of the posts I. Preferably all of the posts of the street-car are fitted with clamps, as are the end posts of the car shown in the drawings. The guard-rail G is preferably made to extend along the sides of the cars throughout their length.

The letter Y designate yokes that are each strapped to the guard-rail, as indicated at *d*, and so as to each embrace one of the posts I. These yokes serve as guides in which the guard-rail is moved up and down, and co-operate with the clamps to hold it in place, the function of the clamp being to retain the guard-rail in position when down to act as a guard or when raised. We do not limit our invention to the precise form of clamp shown

so long as it is made to perform the same function in substantially the same manner.

The apparatus thus constructed and arranged is operated as follows: When the car starts, on that side of the latter that is next to the adjacent track on which the cars run in an opposite direction the guard-rail is pulled down and forced into the lower clamp K^2, where it is in a position to prevent passengers from leaving the car upon that side. When the car makes its return trip on the other track, then the guard-rail which was down is raised and forced under the upper clamp, while the guard-rail upon the other side of the car is brought down into the lower clamps, as before described, on that side of the car that is next adjacent to the other track.

As thus made and arranged a very simple and useful guard-rail is adapted to be used in connection with street-cars, that prevents absent-minded persons from leaving the car upon that side which is dangerous.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. The combination, with a street-car, at each side thereof, of a guard-rail constructed with and connected thereto by guideways on which it can be moved up and down thereon and provided with clamps by which said guard-rail may be secured in a position to bar the side egress-passages of the car when down, and clamps to hold said guard-rail when raised above said side egress-passages, substantially in the manner as and for the purposes set forth.

2. The combination, with the side posts I, made with the clamp $K' K^2$, of the guard-rail G, made with the yokes Y, constructed and arranged to operate substantially in the manner as and for the purposes set forth.

3. The combination, with each of the sides of a street-car, of a guard-rail constructed to be moved into position to bar the side egress-passages of the car and to be moved up therefrom, substantially in the manner as and for the purposes set forth.

Signed at Troy, New York, this 13th day of June, 1890, and in the presence of the two witnesses whose names are hereto written.

DANIEL CATARIEUS.
AUGUSTUS S. CRABLE.

Witnesses:
CHARLES S. BRINTNALL,
HUGH ONEIL.