

(No Model.)

G. A. PARMENTER & C. S. GOODING.
LIFE GUARD FOR STREET CARS.

No. 523,683.

Patented July 31, 1894.

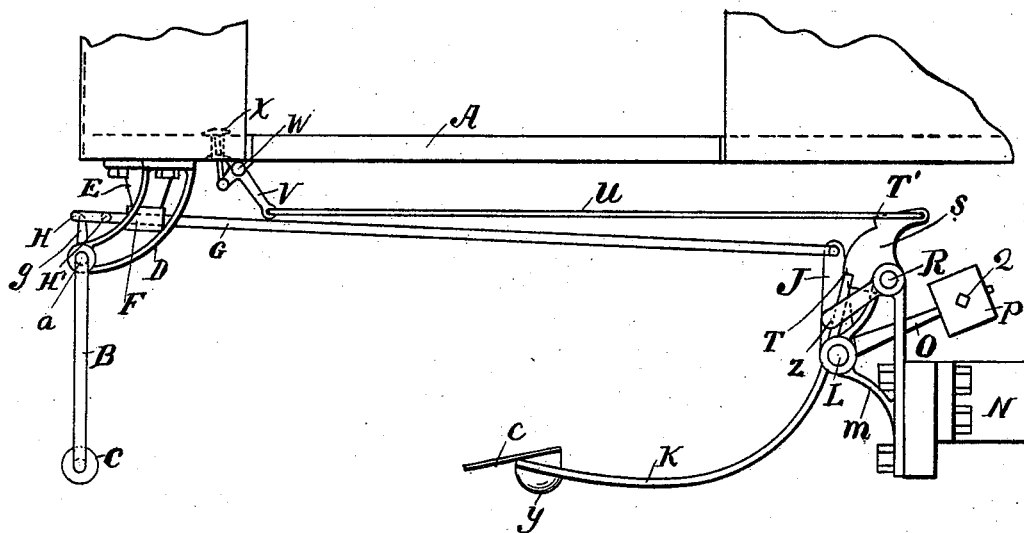


Fig. 1.

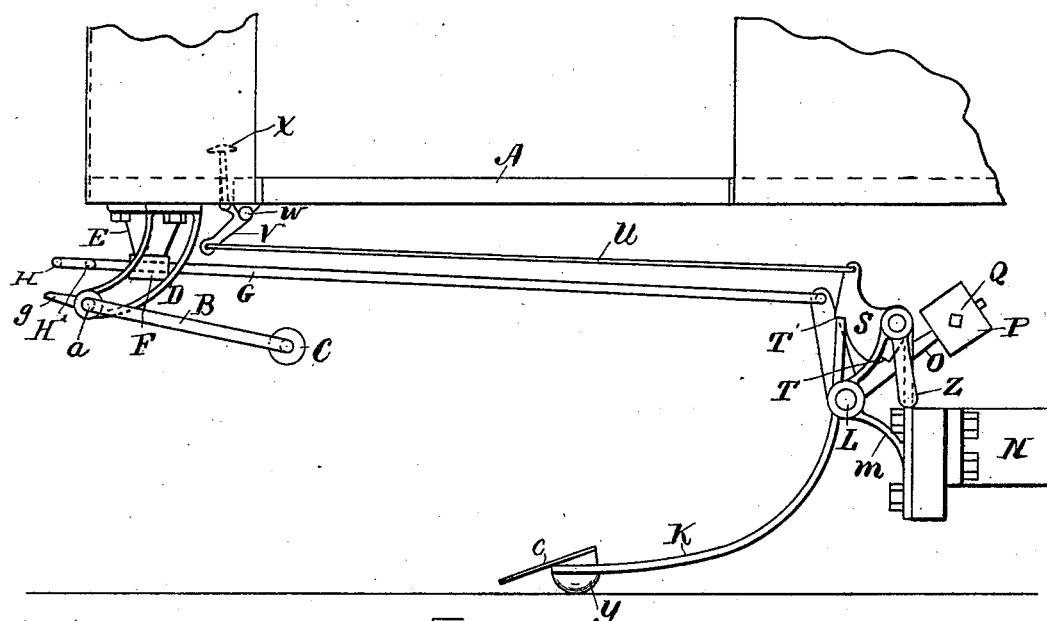


Fig-2.

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UNITED STATES PATENT OFFICE.

GEORGE A. PARMENTER, OF CAMBRIDGE, AND CHARLES S. GOODING, OF
BROOKLINE, MASSACHUSETTS, ASSIGNORS TO THE PARMENTER CAR
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LIFE-GUARD FOR STREET-CARS.

SPECIFICATION forming part of Letters Patent No. 523,683, dated July 31, 1894.

Application filed February 23, 1894. Serial No. 501,090. (No model.)

To all whom it may concern:

Be it known that we, GEORGE A. PARMENTER, residing at Cambridge, in the county of Middlesex, and CHARLES S. GOODING, residing at Brookline, in the county of Norfolk, State of Massachusetts, citizens of the United States, have invented certain new and useful Improvements in Life-Guards for Street-Cars, of which the following is a specification.

Our invention consists of improvements upon the invention described and claimed in Letters Patent issued to said Parmenter, numbered 489,716, and dated January 10, 1893, particularly in the means for firmly securing the life guard or fender in position after it has been set, and in the devices which connect the gate to the scoop or fender, and by which the movement of the former automatically operates the latter.

The advantages derived from these improvements consist first, in securing the fender when it is set, so that no shock or jar can accidentally release it; and, second, in causing the fender or scoop to be set by a pulling instead of a pushing motion, which in the latter case is liable to cripple the connecting rod. Third, in substituting for the connecting rod at the bottom of the gate and fender an overhead rod so as to entirely take it out of the way of any body or object on the road bed which is caught by the fender.

Figure 1. of the drawing is a side elevation of a portion of a street car and life guard with our improvements secured to it, and showing the life guard in its normal position. Fig. 2. is a side elevation of the same, showing the life guard set or depressed after an object has been struck by it.

A. is the floor or platform of a car.

B. is a rod which corresponds to the arms I.—I. shown in the drawings of said Letters Patent No. 489,716.

C. is the rod corresponding to the rod J. therein, the rod C. being covered with some soft material to relieve the force of a blow therefrom. A frame-work or gate similar to that composed of the arms I.—I. and the rod J. is composed of the rod C. and two arms like the arm B. pivoted to and freely swinging in the bracket D. secured to the under side of

the car. This gate is covered with a network or screen for the purpose of preventing any object from passing through it. Another bracket E. is secured to the under side of the car, in which is formed a square passage F. to receive the rod G. and to permit it to slide therein.

H. and H' are two studs welded or otherwise formed upon the rod G., between which an upper projection *g.* secured to a rod *a.* of the frame-work rests, when the gate is in a vertical position.

At its rear end the rod G. is pivoted to an upward extension J. of the scoop K. The scoop K. is secured to the rod L., which is pivoted in bearings formed in the bracket M. The bracket M. is bolted to the truck of the car. The arm O. secured to the rod L. extends backwardly and has a weight P. thereon, which is fastened at any desired position on the arm O. by means of the set screw Q.

Fastened to a shaft R., which turns in a bearing in the upper part of the bracket M., is a quadrant shaped stop S., having notches T. and T'. formed therein. Pivoted to this stop S. is a rod U., having its forward end pivoted in a lever V. having its fulcrum at W. and operated by means of a pedal X. having its shank extending through the bottom of the car.

Y. is a half round piece of metal welded or otherwise secured to the under side of the scoop K. at its end. A similar piece is provided at the opposite edge of the fender. These are for the purpose of enabling the edge of the scoop to slide readily over any obstruction and prevent it from catching thereon. Riveted to the edge of the scoop is a stiff strip —*c*— of rubber, leather, or some yielding material, to scrape along the track when the guard is set and to prevent any small object like the hand sliding beneath it.

The operation of our invention is as follows:—When the car is in motion and the rod C. comes in contact with any object upon the road-bed, the gate is swung backwardly a sufficient distance to clear the object. This causes the upper extension *g.* to slide the rod G. forward by impinging upon the stud H. until it reaches a point which enables it to

slip over the stud. This forward motion of the rod G. causes the scoop K. to be tilted and its lower end to be depressed until it comes in contact with the track. The parts are made of such dimensions that when the scoop K. is fully depressed the extension g. will slip over the stud H. on the rod G. and exert no further action on the scoop. As soon as the scoop K. is tilted sufficiently to pass the shoulder T. in the stop S., the stop falls behind the upper end of the scoop and brings a greater diameter of the stop between the scoop the farther it falls down behind it, so that the scoop is securely held at any point to which it is depressed, and cannot by any accident be jolted back into position. When it is depressed sufficiently so that the lower end reaches the road-bed the shoulder T. of the stop S. will rest on the top of the scoop. The fender will then be securely held in position, with its forward edge resting on the road-bed, and in a position to pass under any object lying on the track and prevent it from getting beneath the wheels of the car. To return the scoop to its normal position it is simply necessary to lift the stop S. by means of the handle Z. from behind the scoop, and then the weight, or counter-balance, P., on the arm O. will tilt the scoop K. back into its former position. The motorman may however accomplish this by means of the pedal X., lever V., and rod U. from the platform of the car. It is obvious that by pressing the pedal the stop will be raised until the shoulder T' reaches a point above the scoop, and the scoop by means of its counter-balance will fall into its normal position.

The construction by means of which the extension g. is permitted to slide off and disconnect from the rod G. at the moment when the scoop is in contact with the track, is an important one, as it gives perfect freedom of movement to the rod C. and its frame, so that an object of any size can pass under it without depressing the scoop beyond what is required.

The operation of a pulling motion upon the rod G. instead of a pushing motion against it, as is shown in the former patent, prevents a crippling of the connection between the gate and the scoop, which in practice is found to be a serious objection.

The positive action of the stop S. is essen-

tial in a practical life guard, as the release of the scoop after it has been set and before it reaches the object to be picked up, would be fatal in its consequences. With the ratchet shown in the former patent of said Parmenter there was a liability of its being thrown off by a tilting or jerking of the car. Such cannot be the case with the present stop shown in this patent. It has also been found in practice that some yielding edge is required for the front of the scoop to prevent it from catching on rough places in the road and bending. At the same time its edge must be sufficiently firm to prevent anything from sliding under it. A heavy rubber belting we have found to be practical, and I prefer it to any other material.

What we claim as our invention is—

1. A life guard for street cars consisting of the scoop K. pivoted so as to swing vertically, and having its forward edge several inches above the track in its normal position, combined with the rod G. connected to the scoop K. and supported in a bearing on the under side of the car, said rod having a stud or projection therein H., against which an upward extension g. of a pivoted gate or framework impinges, whereby the rod is pulled forward when the frame is swung backward, substantially as described.

2. A life guard for street cars consisting of a scoop pivoted to swing, combined with a mechanism for automatically depressing said scoop, and with a stop pivoted at a point behind the upper end of said scoop whereby the stop will fall behind said upper end of the fender when the lower end is depressed, thereby securely holding it in position when set, substantially as described.

3. A life guard for street cars consisting of a scoop pivoted to swing vertically combined with mechanism for automatically depressing it, and with a stop consisting of a quadrant S. having shoulders T.—T', substantially as described herein.

Dated this 20th day of February, A. D. 1894.

GEO. A. PARMENTER.
CHAS. S. GOODING.

Witnesses:

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