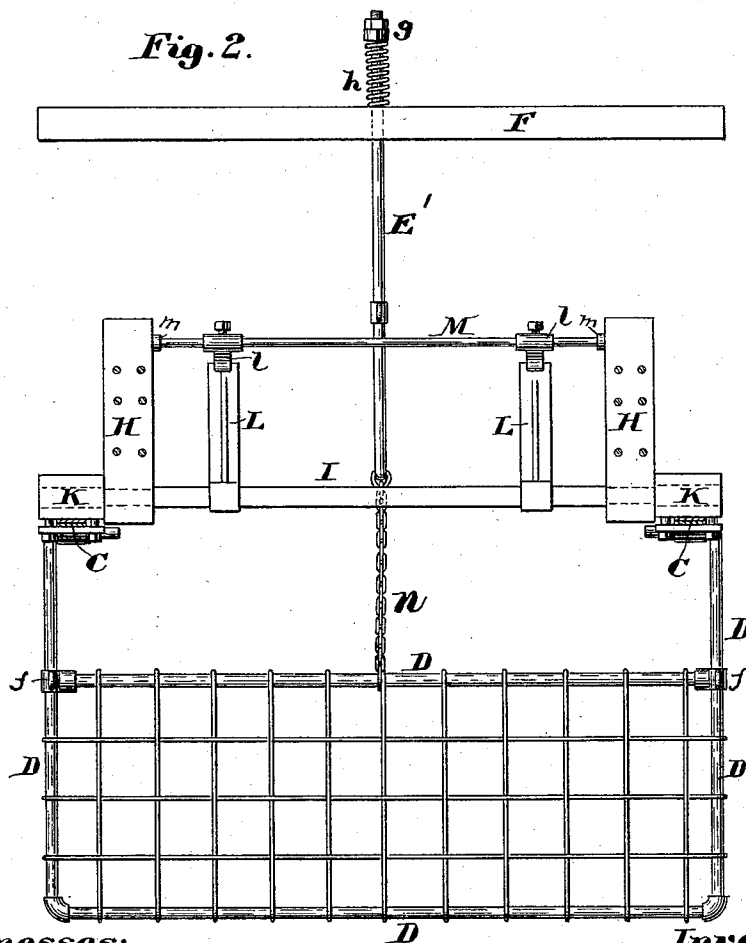
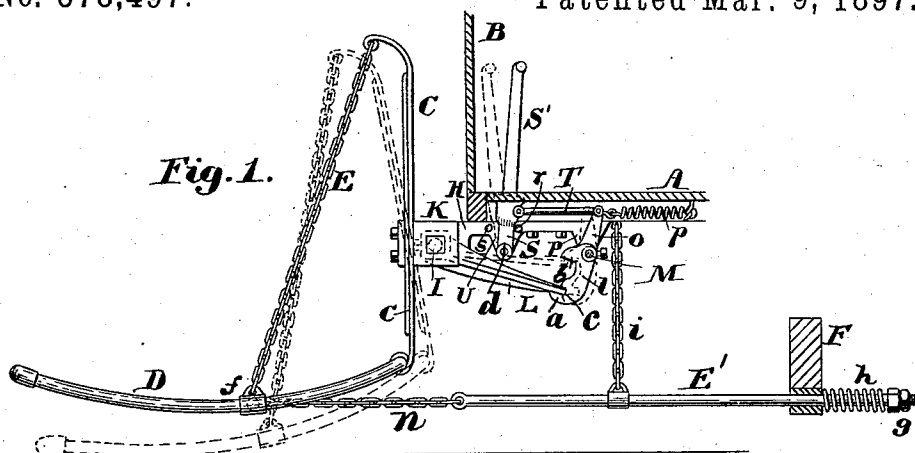


(No Model.)

G. A. PARMENTER.
LIFE GUARD FOR STREET CARS.

No. 578,497.

Patented Mar. 9, 1897.



Witnesses:
Walter E. Lombard.
Geo A Sewall

Inventor:
George A. Parmenter,
by N. C. Lombard, Atty.

UNITED STATES PATENT OFFICE.

GEORGE A. PARMENTER, OF CAMBRIDGE, MASSACHUSETTS.

LIFE-GUARD FOR STREET-CARS.

SPECIFICATION forming part of Letters Patent No. 578,497, dated March 9, 1897.

Application filed December 7, 1896. Serial No. 614,734. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. PARMENTER, of Cambridge, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Life-Guards for Street-Cars, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to life-guards for street-cars, and is an improvement upon the invention described in the Letters Patent No. 558,659, granted to me April 21, 1896; and it consists in certain novel features of construction, arrangement, and combination of parts, which will be readily understood by reference to the description of the accompanying drawings and to the claims hereto appended and in which my invention is clearly pointed out.

Figure 1 of the drawings is a central vertical section of a portion of the front car-platform with my improved life-guard applied thereto, and Fig. 2 is a plan of my improved life-guard with the car-platform removed in order the better to show the parts beneath the same.

In the drawings, A is the platform of a street-car.

B is the dashboard.

H H are two stands or hangers secured to the under side of the platform and projecting forward beyond the front end of said platform. I is a rocker-shaft mounted in bearings in the front ends of said stands and having firmly secured to each end thereof, outside of said stands H, a block K, to each of which is firmly clamped an elliptic spring C, which extends above and below said block.

D is the scoop, in the form of a rectangular frame, pivoted at its rear end to the lower ends of the springs C C and suspended from the upper ends of said springs by the chains E or other suitable flexible connection, the lower ends of which are connected to said scoop at *f*, as shown.

So far the parts are constructed and arranged substantially as in my prior patent before cited, except that the shaft I is a straight rocker-shaft in place of the crank-shaft shown and described in said prior patent.

L L are two radius-arms rigidly secured to the shaft I and extending to the rear thereof, as shown, and M is a rocker-shaft mounted

in bearings *m m* of the pendent arms P, forming parts of the stands H H, and said shaft M has firmly secured thereon the upwardly-projecting arm O and the pendent arms *ll*, provided on their forward sides with the forwardly-projecting lugs *a* and *b* and with the detents *c*, which engage the rear ends of the arms L L when the scoop D is raised into the position shown in full lines in Fig. 1 and lock the same in said raised position, said engagement being automatically effected by the tension of the spring *p*, connected at one end to the upper end of the arm O and at its other end to an eye set in the under side of the car, as shown.

The upper end of the arm O has pivoted thereto one end of the link T, the other end of which is pivoted to the socketed arm S, which is pivoted at *d* to the pendent stand U, secured to the under side of the car-platform and has removably set therein the lever S', as shown in Fig. 1, by which the motor-man can readily disengage the detents *c* of the tumbler-arms *ll* from the arms L L, and thus permit the action of gravity to cause the scoop D to fall to the ground.

With the exception of the change in the construction of the shaft I and the application of the arms L L thereto and the constructions of the tumbler-arms *ll* and operating-lever S S' all the parts hereinbefore described are constructed and operate substantially as in said prior patent before cited.

In the practical application and operation of the invention described in said prior patent it has been found that when applied to cars having only four wheels, and which are liable to a very considerable rocking motion in the direction of their lengths, the scoop D is liable to have imparted to it a greater vertical oscillation than is desirable, thereby endangering the effective operation of the life-guard. To obviate this objection or reduce it to a minimum is the object of my present invention, and to this end I mount the rod E' in a bearing in the pilot-board F, carried by the truck-frame, (not shown,) said rod extending to the rear of said pilot-board and provided at its rear end with a head, collar, or nut *g*, between which and said pilot-board said rod is surrounded by a spring *h*, the tension of which tends to move said rod to the

rear, said rod being so fitted to its bearing in said pilot-board as to be free to move endwise therein. The rod E' also extends forward from said pilot-board to a point a little to the rear of and below the pivotal connection of the scoop D to the lower ends of the springs C C, and has connected to its front end one end of a link or chain *n*, the other end of which is provided with a hook to engage the rear rod of the scoop-frame D, as shown in Fig. 2. The rod E' is further supported by the chain *i*, connected at one end thereto and at its other to the under side of the car-platform, as shown in Fig. 1.

The lugs *a* and *b* on the tumbler-arms *ll* serve, respectively, to limit the downward and upward movements of the rear end of the arms L L and thereby determine the extent of oscillation that can be imparted to the rocker-shaft I, as the movements of the tumbler-arms are so limited in both directions that the ends of the levers L L cannot pass below *a* or above *b*. This limitation is obtained by means of the stop-pins *r* and *s*, set in the stand U at the rear and in front, respectively, of the socket-arm S, or by any other suitable means.

The operation of my invention will be readily understood from the foregoing without further explanation here.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination of a rocker-shaft mounted in bearings on the end of a car; a pair of elliptic or leaf springs firmly secured to said rocker-shaft and projecting above and below the same; a fender or scoop pivoted to the lower ends of said springs and suspended by a suitable connection from their upper ends; a rearwardly-projecting arm rigidly secured upon said rocker-shaft; a second rocker-shaft

mounted in bearings beneath the car-platform; a tumbler-arm secured upon and pendent from said second rocker-shaft and provided with the lugs *a* and *b* and the detent *c*; means for normally holding said tumbler-arm in engagement with said rearwardly-projecting arm to hold the scoop in raised position; and means for tripping said tumbler-arm to permit the scoop to fall to the ground.

2. The combination of the rocker-shaft I; the leaf-springs C, C, secured to said shaft and projecting above and below the same with both the upper and lower ends thereof free to yield; the scoop D pivoted to the lower ends of said springs and suspended from the upper ends thereof and movable about its pivotal connection to said springs; means for locking said scoop in its normal raised position; means for disengaging said locking devices to permit said scoop to fall to the ground; and a yielding connection between the rear cross-rod of said scoop and the truck-frame.

3. The combination of the rocker-shaft I; the springs C, C; the scoop D; the suspension-chains E; the arm L; the rocker-shaft M; the tumbler-arm *l*; the arm O; the spring *p*; the link T; the lever S S'; the pilot-board F; the rod E' provided with a head or collar *g*; the spring *h*, and the flexible connection *n*, all constructed arranged and operating substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 4th day of December, A. D. 1896.

GEORGE A. PARMENTER.

Witnesses:

N. C. LOMBARD,

EDWARD H. SAVORY.