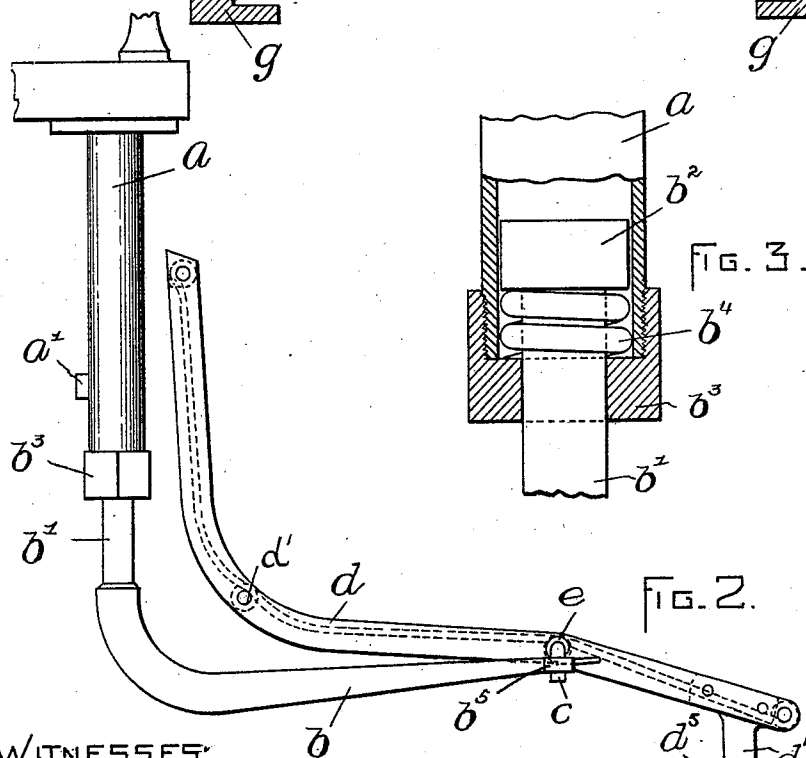
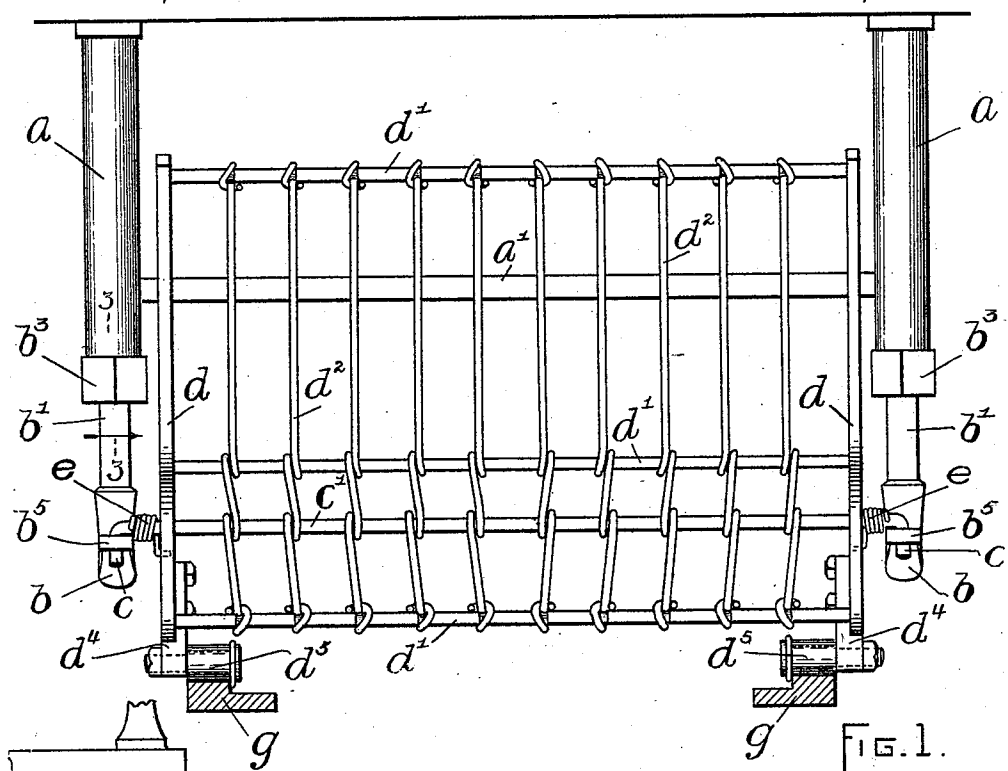


M. W. LYDON.
LIFE GUARD FOR STREET CARS.

Patented Nov. 20, 1894.



WITNESSES:

A. S. Hanson
Parkett Sawb

INVENTOR:

 M. W. Lydon
by
Wright, Brown & Roszley,
Atty.

UNITED STATES PATENT OFFICE.

MARTIN W. LYDON, OF NORTH ANDOVER, MASSACHUSETTS.

LIFE-GUARD FOR STREET-CARS.

SPECIFICATION forming part of Letters Patent No. 529,657, dated November 20, 1894.

Application filed December 4, 1893. Renewed October 24, 1894. Serial No. 526,902. (No model.)

To all whom it may concern:

Be it known that I, MARTIN W. LYDON, of North Andover, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Life-Guards for Street-Cars, of which the following is a specification.

The object of this invention is to provide a life-guard for street-cars, which will maintain its position over the track-bed while the car is going around curves. In that style of guard rigidly connected with the car, when the car strikes a curve, the guard is projected out considerably to one side, and in this position affords little protection. Moreover, when the track passes close to a curb, the guard is liable to strike the curb. It is to overcome these difficulties that I have devised my improvement, which consists in the novel structure recited in the appended claims and specifically described in the following specification.

The accompanying drawings illustrate a construction for carrying out the invention. Figure 1 shows a front view of the guard. Fig. 2 shows a side elevation. Fig. 3 shows a detail section, on line 3—3 of Fig. 1.

The same letters of reference indicate the same parts in all the figures.

In the drawings: The letter *a* designates tubular sockets, which are fastened to the under side of the bottom of the car, and braced by a connecting-bar *a'*. Horizontally-extending side-arms *b* are formed with vertically-extending round shanks *b'*, which extend into the sockets *a*, and are provided with heads *b²*, between which and nuts *b³* on the ends of the sockets, cushioning springs *b⁴* are interposed. The arms *b* have enlargements *b⁵* at their outer ends, with circular holes, which receive down-turned ends *c* of a rod *c'* which extends between the arms. This rod is thus pivotally connected with the side-arms and detachable therefrom. A cradle is supported on the said rod, and comprises curved side-bars *d*, pivotally mounted on said rod intermediate of their ends, cross-bars *d'* connecting said side-bars and extending parallel with each other, and longitudinal wire rods *d²* fastened around the cross-bars *d'* and rod *c'*, as shown. The side-bars *d* carry bearings *d⁴* at their front ends, and flanged rollers *d⁵*

are supported in said bearings and are designed to travel upon the track-rails *g* and be guided thereby. Springs *e*, coiled around the cross-rod *c'* and fastened to the same and to the side-bars of the cradle, serve to hold the rollers *d⁵* down upon the track rails. These springs also serve to cushion the shock of a body falling into the rear part of the cradle.

It will be seen that, with the construction described, the guard will be guided by the track-rails, and in going around curves will maintain its position over the track-bed.

The cradle extends upward at its rear part, so as to catch a body which may be struck and thrown back.

Sockets *a* and arms *b* will be provided at each end of the car; and, when the car is to reverse its direction of travel, the cradle is detached from the side-arm by simply lifting the down-turned ends of the cross-rod *c'* out of their bearings, and fitted to the arms at the other end of the car.

The arms *b* may be turned around to a position underneath the car and out of the way, when not in use.

An advantage of my improved form of guard is that the cradle is carried closer to the ground than heretofore, which renders the device more effective as a protection.

It is evident the invention may be carried out by other means than here shown, and hence is not limited in this respect.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A life-guard for street-cars comprising in its construction side-supporting arms separately pivoted to the car so as to swing horizontally, and a cradle pivotally connected with said arms.

2. A life-guard for street-cars comprising in its construction horizontally swinging supports on the car, and a cradle pivotally and separably connected with said supports.

3. A life-guard for street-cars comprising in its construction side supporting arms pivotally connected with the car and having sockets, and a cradle having a bar with downturned ends to engage said sockets.

4. A life-guard for street-cars, comprising in its construction a pair of side-arms pivotally supported in sockets depending from the

car, and a cradle supported by said side-arms and pivotally connected therewith, said cradle carrying flanged rollers adapted to engage the track-rails.

- 5 5. A life-guard for street-cars, comprising in its construction a pair of side-arms pivotally supported in sockets depending from the car, a cross-bar or rod pivotally connected with said arms, and a cradle pivotally
10 mounted on said cross-bar intermediate of its ends and its forward end spring-actuated

downward and carrying rollers adapted to engage the track-rails.

In testimony whereof I have signed my name to this specification, in the presence of 15 two subscribing witnesses, this 1st day of September, A. D. 1893.

MARTIN W. LYDON.

Witnesses:

JOHN P. T. MAHONEY,
WILLIAM H. KEEGAN.