

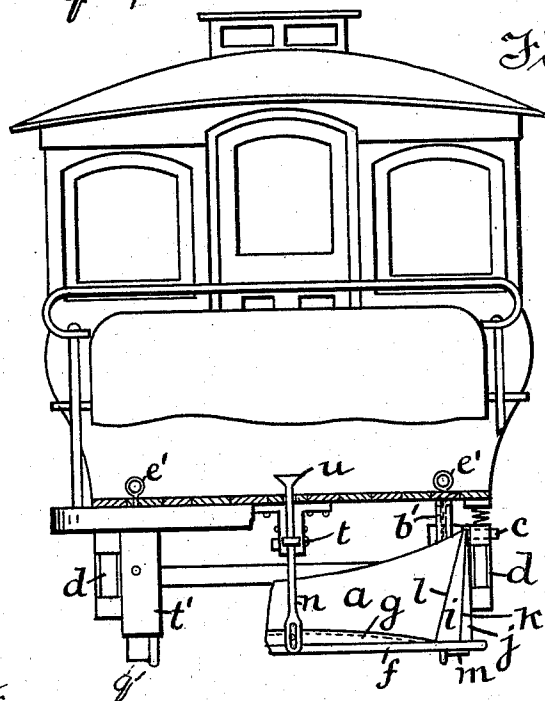
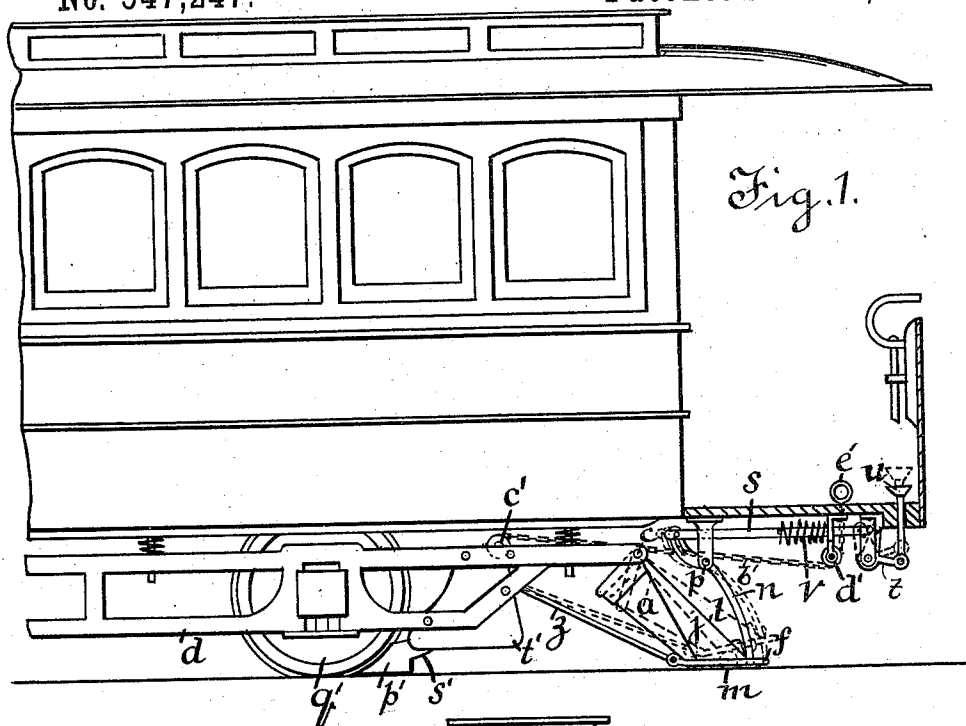
(No Model.)

2 Sheets—Sheet 1.

C. EIDMANN.
SAFETY GUARD FOR STREET CARS,

No. 547,247.

Patented Oct. 1, 1895.



Witnesses.
Jos. S. Lockwood
Ch. J. Longan

Inventor.
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(No Model.)

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Fig. 3.

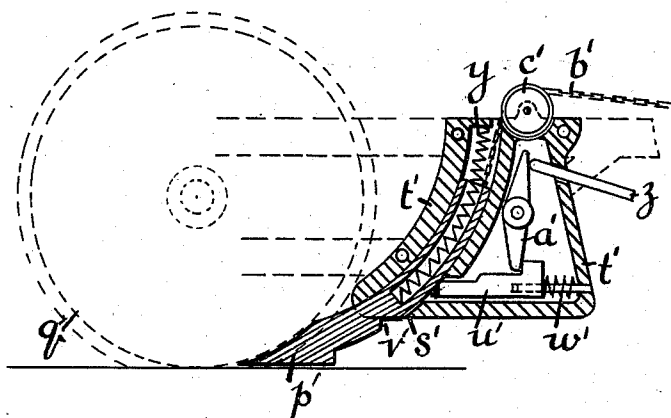


Fig. 4.

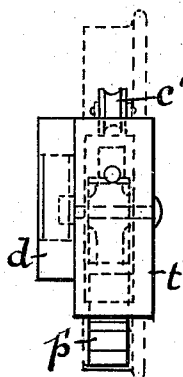


Fig. 5.

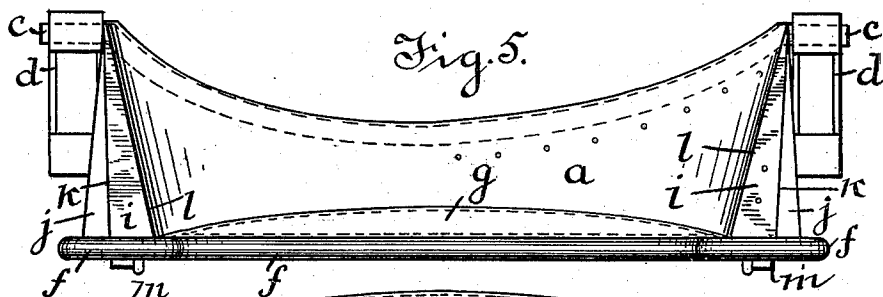


Fig. 6.

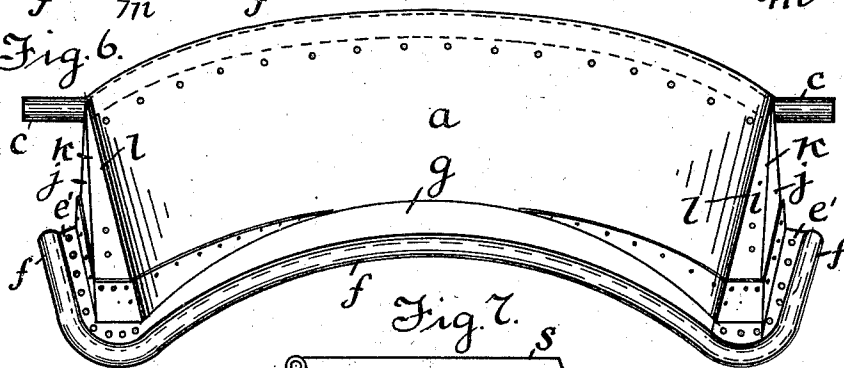
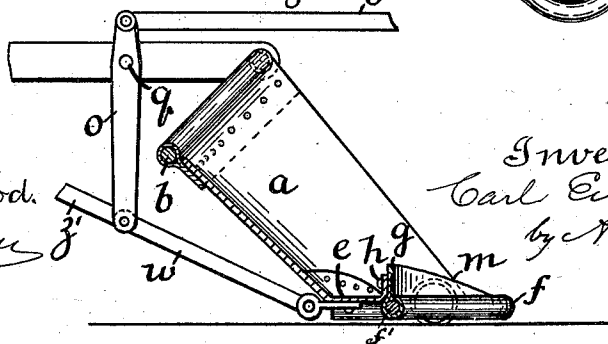


Fig. 7.



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UNITED STATES PATENT OFFICE.

CARL EIDMANN, OF BROOKLYN, NEW YORK.

SAFETY-GUARD FOR STREET-CARS.

SPECIFICATION forming part of Letters Patent No. 547,247, dated October 1, 1895.

Application filed April 4, 1895. Serial No. 544,373. (No model.)

To all whom it may concern:

Be it known that I, CARL EIDMANN, a subject of the Emperor of Germany, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Safety-Guards for Street-Cars, of which the following is a specification.

My invention relates to scoop fenders or guards for the protection of persons falling on the track in front of the cars; and it consists of improvements in the construction of the scoop and means for working it and in an emergency-brake attachment to be automatically actuated through the instrumentality of the scoop when it acts, as hereinafter described, reference being made to the accompanying drawings, in which—

Figure 1 is a side elevation of part of a car with my improved apparatus attached, the platform and dashboard being shown in sectional elevation and the normal position of the guard being indicated in dotted lines. Fig. 2 is a front elevation with the platform in transverse sectional elevation and with part of the guard broken out. Fig. 3 is a sectional elevation of the brake apparatus enlarged and in side view with one of the car-wheels and part of the truck in dotted lines. Fig. 4 is a front elevation of the brake apparatus represented in Fig. 3. Fig. 5 is a front elevation of the scoop and the side frame of the truck enlarged. Fig. 6 is a perspective view of the scoop as seen looking obliquely downward upon it from the front, and Fig. 7 is a section through the middle of the scoop.

I provide a scoop consisting of a concave body *a*, of sheet metal or any approved web of flexible material, as rubber, canvas, woven wire, or the like, having a supporting-bar *b* for its upper end curved in conformity with the concave shape of the body *a* and projecting at the extremities beyond the edges of the body suitably to form pivots *c*, which are mounted in bearings at the ends of the side frames *d* of the truck for the main support of the scoop and so that the scoop can swing up and down to allow the front end to drop low down on the roadway for use when required and for raising said end when not to be used.

The front and lower end of the body *a* has

a flat extension *e*, of sheet metal, in such angular relation to the body that it ranges horizontally, or thereabout, when the scoop is lowered for use, as in Figs. 1 and 7, and extends forward of the inclined concave body a short distance, its front edge being parallel with the body, or thereabout, and having a corded cushion *f*, of suitable soft material, as rubber, leather, or canvas, formed on a core *f'*, of rope or the like, and having an upwardly-extended web *g*, by which it is attached to the flange *h* of the extension *e* for connection with the body and for forming a cushion for protection from injury by said flange.

The side edges of the body *a* have front plates *i* and side plates *j*, of metal, stiffened by angles *k* and *l* and connecting the forward extension *e*, which is continued around these plates at *e'* with the top bar *b* for requisite rigidity at these extremities of the body. The cushion *f* also extends around the sides of the body as far as the plate *e'* extends. In the spaces partly surrounded by the body *a* and these plates *i* and *j* small wheels *m* are mounted suitably to rest and roll on the rails when the scoop is lowered and carry it slightly above the ground. The scoop is connected near its lower end with a lever *n* at the front or a lever *o* at the back, suitably pivoted on an intermediate fulcrum, as *p* or *q*, and at its upper end connected by a rod *s* with a bell-crank *t* under the front platform, with which a push-stud *u* is arranged, so that the motor-man can at any time thrust the front end of the scoop down to the working position by pressing on the push-stud with his foot.

The coiled spring *v* on the connecting-rod *s* raises the scoop to the position indicated by the dotted lines in Fig. 1, when the push-stud is relieved of pressure and maintains it thereat when not required for use. When the lever *o* is employed at the back of the scoop for raising it, a connecting-rod *w* may be employed between the lever and the scoop; but the lever may be extended for direct connection with the scoop, if desired. Together with this guard, and in addition to the ordinary brake, I provide an emergency-brake to be automatically set in action when the guard is set in action, said brake consisting of a choek *p'*, located in front of each wheel *q'*, suitably to be let fall on the rail and receive the wheel

on it, so as to stop the car quickly. In this example the chock is formed at the extremity of a staff s' , extending upward in a sideway in a stock t' , supported on the truck-frame and adapted to carry the chock slightly above the rail, in which position it is secured by a sliding keeper u' , which engages a notch v' in the staff when set in the normal position and is maintained in such engagement by a spring w' , and a spring y is applied to the staff s' for forcing it down quickly when released by the keeper.

For automatically releasing the keeper a push-rod z or z' is arranged in suitable relation to the scoop to be thrust backwardly by it when it is thrust down for use, which takes effect upon one arm of a rock-lever a' , whose other arm is in such engagement with the keeper u' as to force it back and release the chock. The rock-lever is preferably located in a chamber of the stock, which carries the staff of the chock, and said staff and its stock are preferably made in curved form; but they may be straight, if desired.

To raise the chock for restoring it to the normal position after use, a chain or cord b' is connected to the upper end of the staff and extended over suitable guide-pulleys c' and d' to a handpiece e' in suitable proximity to the motorman's position on the platform for his convenience in raising the chock. The keeper automatically engages the notch v' when so raised and secures the chock in the normal position.

I claim—

1. The combination with the car of the safety guard consisting of the scoop having the concave sloping body, the curved bar connected with the top of the body and having the pivotal extremities; the horizontal forward extension of the lower end of the body, and the cushioned front edge of said extension, said scoop pivoted in the truck and having means for normally supporting it above the track, and for lowering it thereto for use, and also having wheels for running

on the track when lowered substantially as described.

2. The combination with the car of the safety guard consisting of the scoop having the concave sloping body, the curved bar connected with the top of the body and having the pivotal extremities, the horizontal forward extension of the lower end of the body, the cushioned front edge of said extension and the front and side plates for stiffening the sides of the body, said scoop pivoted in the truck and having means for normally supporting it above the track and for lowering it thereto for use, and also having wheels for running on the track when lowered substantially as described.

3. The combination with the car of the safety guard consisting of the scoop having the concave sloping body, the curved bar connected with the top of the body and having the pivotal extremities, the horizontal forward extension of the lower end of the body, the cushioned front edge of said extension, and the lever, connecting rod, bell crank, push piece, arm, and retracting spring for actuating the scoop, said scoop being pivoted to the truck and having the wheels for running on the track when lowered substantially as described.

4. The combination with the car, of the scoop guard pivoted to the car and having means for lowering it for use, the sliding chock brake for the car wheels, keeper for holding the brake out of action, means for actuating the chock when released by the keeper, keeper actuating spring and rock lever, and means for actuating the rock lever by the scoop when lowered for use substantially as described.

Signed at New York city, in the county and State of New York, this 9th day of March, A. D. 1895.

CARL EIDMANN.

Witnesses:

W. J. MORGAN,
J. H. MORGAN.