(No Model.)

# H. J. ROHRBACK.

## SAFETY ATTACHMENT FOR CABLE CARS.

No. 316,831. Patented Apr. 28, 1885.

FIG. 1.

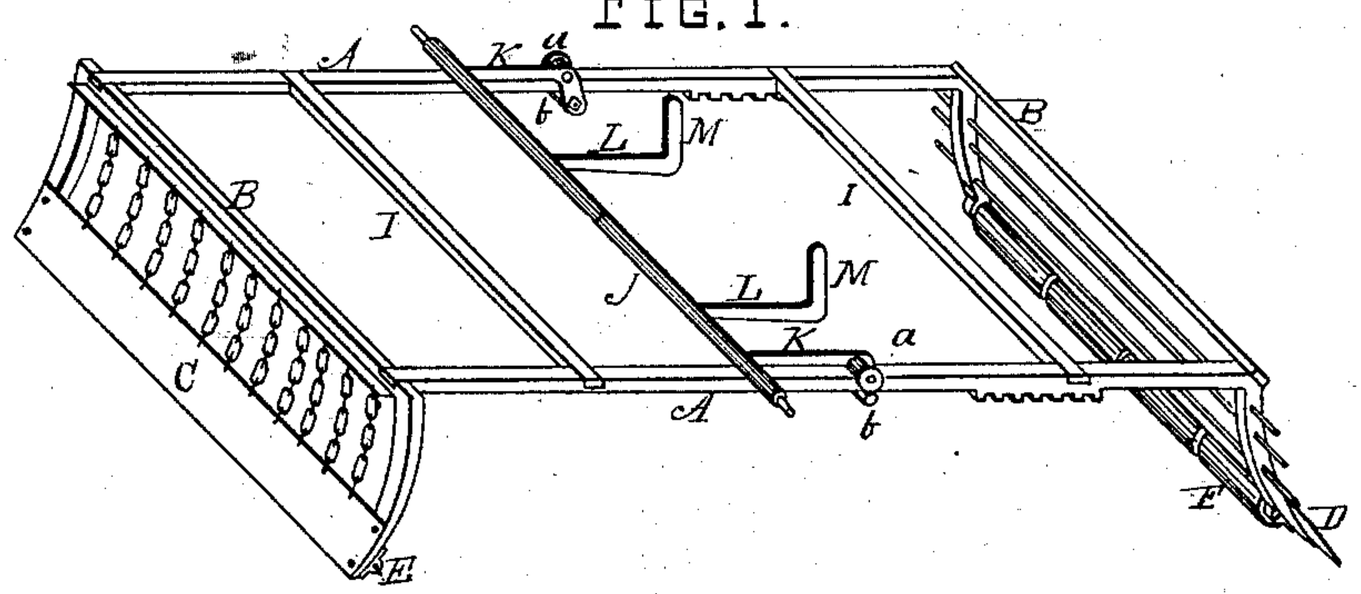



FIG. 2.

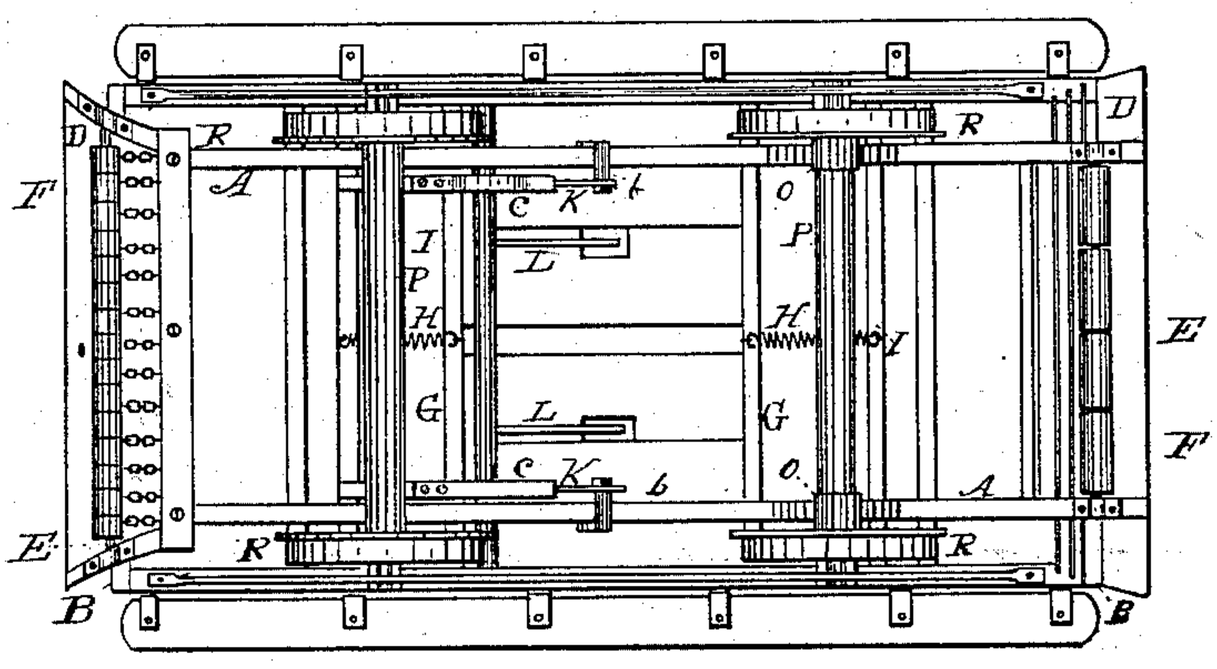
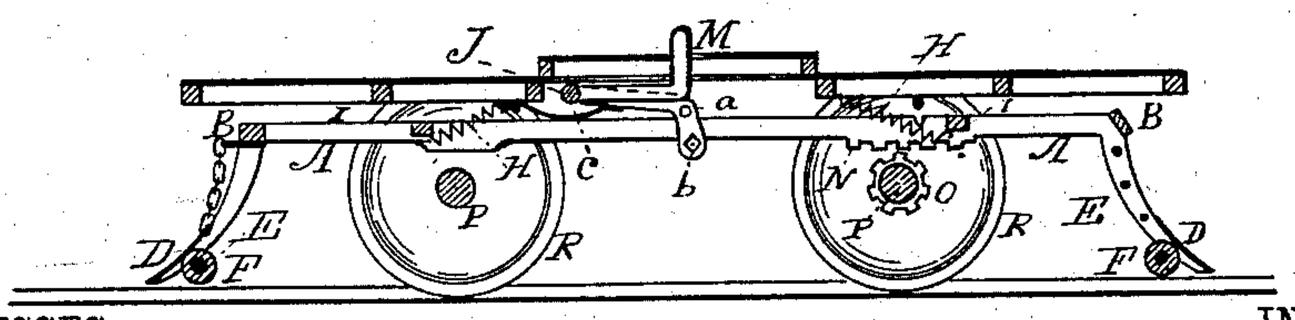



FIG. 3.

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HENRY J. ROHRBACK, OF CHICAGO, ILLINOIS.

## SAFETY ATTACHMENT FOR CABLE CARS.

SPECIFICATION forming part of Letters Patent No. 316,831, dated April 28, 1885.

Application filed December 29, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY J. ROHRBACK, a citizen of the United States, and a resident of Chicago, Illinois, have invented new and useful Improvements in Safety Attachments for Cable Cars, of which the following is a specification, reference being had to the accompanying drawings, illustrating the invention, like letters indicating similar parts on the different figures.

The purpose of the present invention is the providing of simpler and more effectual means for preventing people from being run over by cable cars. The means now employed consist of a guard suspended from the car-frame to a point as close to the track as it can with safety be run in all conditions of the roadway, which is not so close as to be serviceable in removing a person without the limbs or some portion of the clothing getting under the guard, and thereby preventing the person from being moved or carried by the pointed end of the guard from the place of greatest danger. At present the devices are intended to throw a person to the side of a car; but, as double tracks and double lines of cars are used, a person thrown to one side is very liable to be run over by the grip-car running in an opposite direction. The necessity of having some device or apparatus for attaching to cable cars running in thronged streets, to prevent accident to pedestrians, is assumed to be admitted by the public. Therefore the invention will be treated as useful as well as new. The guards on the cable-cars do not differ from the pilots or cow-catchers in front of locomotives, except that the guards extend along the sides of the cars, there being no means for elevating or depressing either of the devices when the cars or locomotive are in motion—that is, whatever means there may be for adjusting the height of the protections employed. Such means are not within the grasp of the drivers.

My invention consists of a double-ended guard, which is suspended from the frame-work of the grip-car, and which, by suitable mechanism under the control of the driver, can be lowered at will so closely to the track as to prevent a person caught by it from being drawn under it, and at the same time the guard can be thrown forward, so that the shock shall come wholly on the guard, which may be filled in with chains or elastic straps, which will largely relieve a person from the concussion. My theory is to keep the persons caught on the car till it can be stopped, instead of employing means for throwing them to one side, where they are liable to be run over.

Figure 1 is a perspective representation of the principal portion of the safety attachment removed from the car to give a clearer view of its construction; Fig. 2, an inverted plan of an ordinary grip-car with my safety attachment in proper position in relation thereto; Fig. 3, a longitudinal central sectional elevation of the grip-car and safety attachment.

A A B B represent a substantial frame, which I prefer to construct of metal, to fit in between the car-wheels and above their journals, and of such length as will bring the guards C D to about even with the ends of the car.

The guards C D are preferably made concave in front and filled in with chains, rods, or some elastic cords or straps, whereby a person brought in contact therewith will not be injured. It will be noticed that the ends of the guards are inclined outward, so as fully to cover the track, thereby rendering it impossible for a person caught in front of the grip-car to be run over by it.

Rods E are attached to the ends of the guards C D, and on them are placed a series of rollers, F, which are brought to and run on the roadway when the guard is brought down and forward for use, and is thus prevented from being caught by ordinary obstructions.

The sides A A of the frame are suspended from the timbers G G of the grip-car in part by means of coil-springs H, the lower ends of which are attached to cross-bars I I on the frame-pieces A, by which attachments it will be observed that the springs are considerably inclined; in fact, so much so that the springs hold the whole frame and guards evenly under the car.

Pivoted to the side timbers of the car is a rock-shaft, J, to which are affixed two arms, K, to the free ends of which pins or anti-friction rollers *b*, below the frame-pieces A A, and pins or rollers *a*, above the said pieces, are affixed to lower the frame, and the lower pins or rollers, by means of springs *c*, assist in holding the frame up when not required for use.

Arms L L are also rigidly attached to the shaft J, and their free ends M project up through the floor of the car in convenient position for the driver to put his foot thereon, as more clearly shown at Fig. 3. The effect of pressing down on the part M is to bring the racks N on the frame-pieces A down into mesh with the pinions O on the journals P of the car-wheels R, and as a result of such movement the frame and guards are moved forward in the direction the car is moving till the rack-slip gear and the forward guard remain in that forward position till the lever or arm L M are released.

My invention embraces the downward and forward movement of the guards, and it is evident that the same result can be accomplished by jointing the frame-pieces at their centers and employing a double set of arms to depress the section-frame. This construction is such that on reversing the car the guard at the opposite end of the car will perform precisely the same function.

Having thus described my invention, what I claim as my invention is—

1. In safety attachments for cable cars, the frame A A B B, supporting the double-ended guards C D, which are provided with rollers F on rods E, in combination with spring H *c*, and arms K and L M, as and for the purpose specified.

2. The double-ended guards C D, in combination with the frame provided with racks N, the gear or pinions O, and levers or arms K L M, and springs H *c*, substantially as specified and shown.

HENRY J. ROHRBACK.

Witnesses:
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