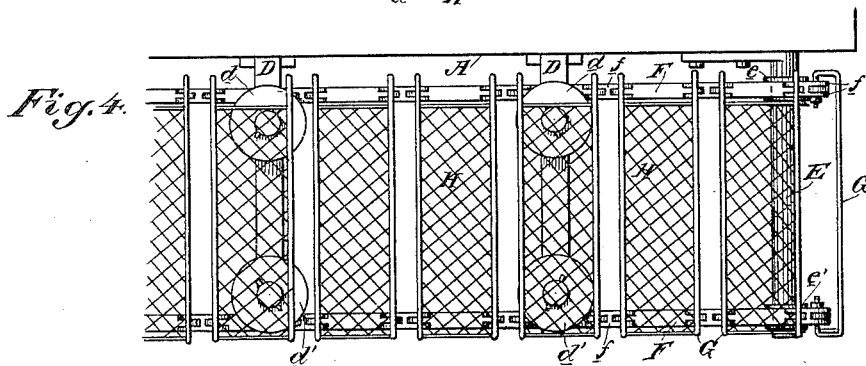
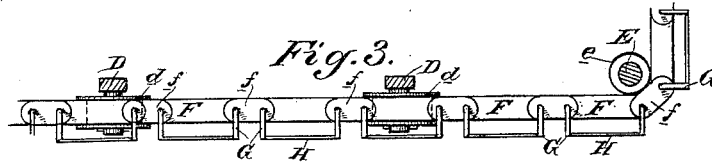
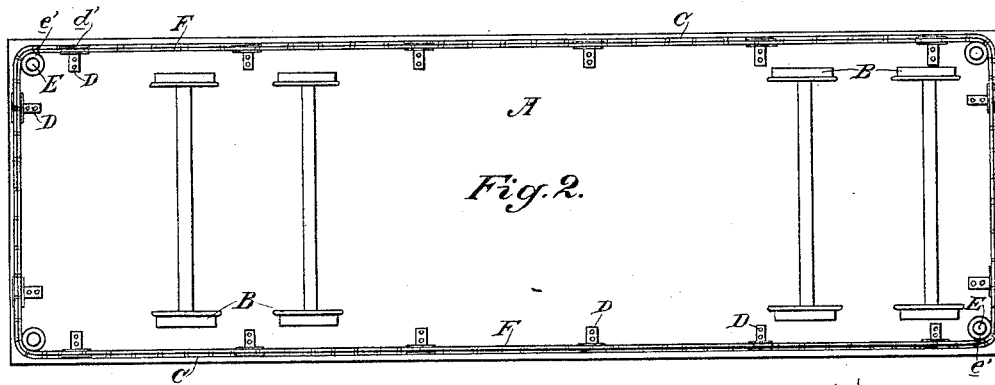
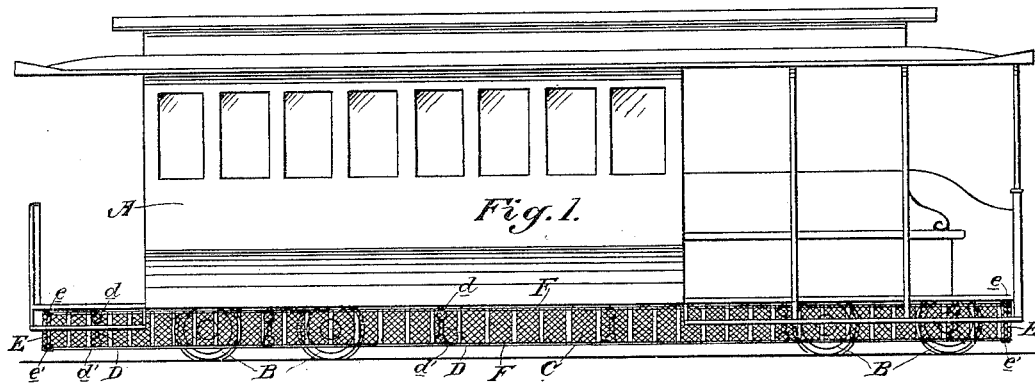


(No Model.)

L. J. DE PUY.
SAFETY GUARD FOR CARS.

No. 453,768.

Patented June 9, 1891.



Witnesses,
R. A. Nurse
H. C. Lee.

Inventor,
Louis J. De Puy
By Dewey & Co
attys

UNITED STATES PATENT OFFICE.

LOUIS J. DE PUY, OF PHOENIX, ARIZONA TERRITORY, ASSIGNOR OF ONE-HALF TO R. A. GRAY, OF COLUSA, CALIFORNIA.

SAFETY-GUARD FOR CARS.

SPECIFICATION forming part of Letters Patent No. 453,768, dated June 9, 1891.

Application filed October 20, 1890. Serial No. 368,721. (No model.)

To all whom it may concern:

Be it known that I, LOUIS J. DE PUY, a citizen of the United States, residing at Phoenix, Maricopa county, Territory of Arizona, have invented an Improvement in Safety-Guards for Cars; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to that class of safety-guards for cars in which fenders entirely surrounding the lower portion of the car and inclosing the wheel-space are employed.

My invention consists in the endless movable fender and in the details of its construction and arrangement, as will be hereinafter fully described, and specifically pointed out in the claims.

The object of my invention is to provide a simple, inexpensive, and effective safety-guard, which can be readily applied to any car.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a side elevation of a car, showing my safety-guard. Fig. 2 is a bottom view. Fig. 3 is a top view of a portion of the guard. Fig. 4 is a side view of same.

A represents a car mounted upon wheels B. C is my fender. This consists of an endless band or draper constructed of suitable material and passing around the entire lower portion of the car, so as to completely inclose the wheel-space. This fender is mounted upon suitable carrying-pulleys and is directed by suitable guide-pulleys, and is a movable one, the object of which will be presently described.

The construction of the fender and the manner of mounting it are as follows: Secured to the sides and ends of the car are brackets D, which carry an upper supporting-pulley *d* and a lower supporting-pulley *d'*, both of which are mounted vertically. Secured to the car at its corners and at other points of changes of direction are vertical shafts or bars E, which carry horizontal upper and lower directing or guiding pulleys *e* and *e'*, respectively.

F are endless chains or jointed rods, one above and one below, the sections or links of said rods or chains being connected by intermediate pivoted pieces *f*. The pivots of these

pieces are formed by the frame-bars G, between each pair of which is stretched the body of the fender, (here represented by the netting H,) though said body may be constructed of slats or in or of any other suitable manner or material. Each section of rod or chain thus carries a section of the fender and the whole constitutes an endless band or draper. The upper jointed rod or chain is carried on top of the upper carrying-pulleys *d*, and the lower rod or chain is carried under the lower carrying-pulleys *d'*, so that the whole fender is mounted upon rolling bearings and can have an endless traveling movement. The chains or rods are guided around the directing pulleys *e* and *e'* at changes of direction.

The operation of my guard is as follows: Normally the fender is in a state of rest, having no movement relatively to the car at all; but when it comes in contact with an obstructing body, said body being stationary or moving at a less speed than that of the car, it will readily be seen that the fender will be caused to have a movement lengthwise independent of the car by reason of its contact with the obstructing body and the movement of the car. If, therefore, for example, a body falls up against the side of the fender, it will thereby be moved on its pulleys while the car proceeds, and the body will soon find itself at the end of the car, where it will be free. Thus there will be no injury to the body, as it will not be pulled or rolled along.

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

1. A safety-guard for cars, consisting of an endless movable fender carried by the car and completely inclosing the wheel-space, substantially as herein described.

2. A safety-guard for cars, consisting of an endless movable fender passing entirely around the lower portion of the car and inclosing the wheel-space, said fender being mounted upon suitable carrying-pulleys and guided by suitable directing-pulleys, whereby it may be moved by contact with an obstructing body, substantially as herein described.

3. In a safety-guard for cars, the endless jointed and movable fender encircling the

lower portion of the car and inclosing the wheel-space, in combination with the vertical carrying-pulleys above and below, by which the fender is carried, and the horizontal directing-pulleys at changes of direction about which the fender is guided, substantially as herein described.

4. A safety-guard for cars, consisting of the endless jointed rods or chains, the sections of netting or other suitable material carried and secured to the sections of said rods or chains, the vertical carrying-pulleys carried by suitable brackets from the car and above and

below which the jointed rods or chains are carried, and the horizontal directing-pulleys at changes of direction around which the rods or chains are guided, the whole forming a fender capable of an endless movement and inclosing the wheel-space, substantially as herein described.

In witness whereof I have hereunto set my hand.

LOUIS J. DE PUY.

Witnesses:

S. H. NOURSE,
H. C. LEE.