(No Model.)

A. BARNES.

FENDER OR GUARD FOR CARS.

No. 589,153. Patented Aug. 31, 1897.

Fig. 1.

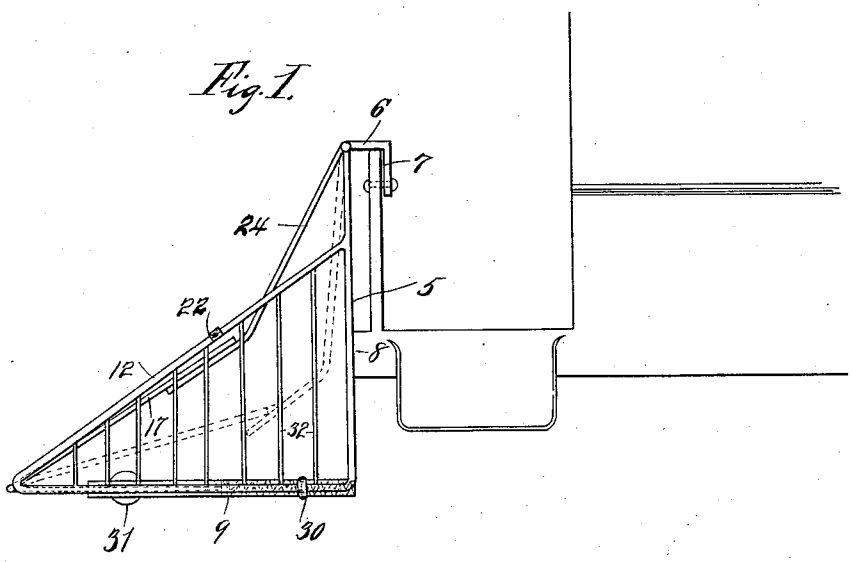


Fig. 2.

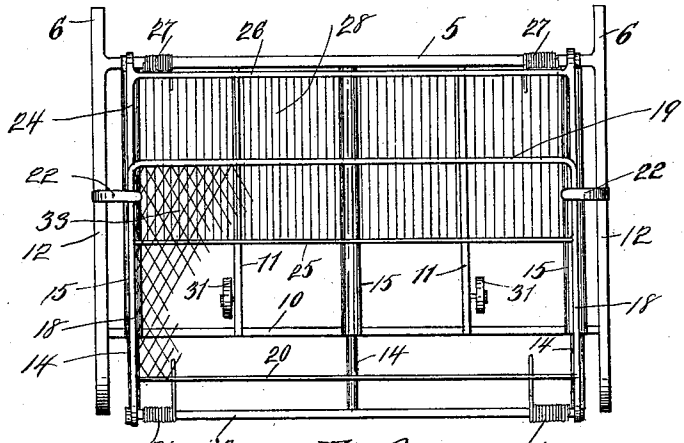
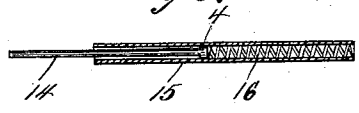


Fig. 3.



WITNESSES

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FENDER OR GUARD FOR CARS.

SPECIFICATION forming part of Letters Patent No. 589,153, dated August 31, 1897.

Application filed January 28, 1897. Serial No. 621,001. (No model.)

To all whom it may concern:

Be it known that I, ALBERT BARNES, a citizen of the Republic of Hawaii, residing at Honolulu, in the Island of Oahu, Hawaii, have invented certain new and useful Improvements in Fenders or Guards for Cars, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to fenders or guards for tramway-cars; and the object thereof is to provide an improved device of this class which is designed to prevent the passage of a person or object beneath the car and to prevent the serious and sometimes fatal results which frequently follow the striking of the person or object by a car while in motion.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a side view of my improved fender or guard and showing the same connected with a car, and Fig. 2 a plan view of the fender or guard detached from the car. Fig. 3 is a detail view in section.

In the practice of my invention I provide a fender or guard for tramway-cars which consists of a main frame which is composed of a back portion 5, at the upper side of which are arms 6, having downwardly-directed extensions 7, whereby the fender or guard is connected with the dashboard and the lower part of the back portion of the main frame abuts against the front of the platform, as shown at 8.

The back portion 5 of the fender or guard frame is provided with a forwardly-directed bottom portion which consists of side bars 9, a front cross-bar 10, and backwardly-directed bars 11, which are connected with the front cross-bar and with the bottom of the back portion 5 of the main frame, and said main frame is also provided with side frames which consist of diagonal rods or bars 12, which extend from near the top of the sides of the back portion 5 to the forward ends of the side rods 9 of the main frame and which are connected with the bottom side portions 9 of the main frame by rods 32. I also provide a buffer-frame which consists of a cross rod or bar 13 and backwardly-directed rods 14, which enter tubes 15, secured to the bottom of the main frame, and in said tubes are mounted springs 16, and the rods 14 are provided with heads 4, which bear on said springs, this portion of the construction being best shown in Fig. 3.

One of the springs 16 is shown in dotted lines in Fig. 1, and pivotally connected with the cross rod or bar 13 of the buffer-frame is a supplemental frame 17, which consists of side rods 18, which are adapted to swing on the cross rod or bar 13 of the buffer-frame and which are connected at their ends by a cross-rod 19 and adjacent to the rod or bar 13 of the buffer-frame by another cross-rod 20, and secured to the cross rod or bar 13 of the buffer-frame are springs 21, the free ends of which press against the under side of the rod 20 and hold said supplemental frame in the position shown in Fig. 1, and secured to the sides of the main frame are clamps 22, which prevent the springs 21 from raising said supplemental frame or the free end thereof too high.

Pivotally mounted on the top cross rod or bar of the main frame 5 is an auxiliary frame 23, which consists of side bars 24, the lower ends of which are connected by a cross rod or bar 25, and which are also connected by a cross rod or bar 26 at a short distance from the back of the main frame, and mounted on the rod or bar at the top of the back portion 5 of the main frame are springs 27, which hold said auxiliary frame 23 in the position shown in Fig. 1.

The body portion of the supplemental frame 17 is preferably composed of wire mesh, as shown at 33, and the body portion of the auxiliary frame 23 of horizontal wires or rods 28; but this construction is immaterial, and the body portion of the supplemental and auxiliary frames may be composed of any desired material.

When in their normal position, the supplemental and auxiliary frames 17 and 23 are held in the position shown in full lines in Fig. 1 by the springs 21 and 27, and if a person or object be struck by the car when in motion the buffer-frame will be driven backwardly against the operation of the springs 16 in the tubes 15, and said person or object will be thrown onto the supplemental frame 17, and said supplemental frame and the auxiliary

frame will be depressed into the position shown in dotted lines in Fig. 1, or lower, and such person or object will be held in the fender or guard, and the passage of such person or object beneath the car will thus be prevented. The danger of injuring a person struck in this manner is lessened by the yielding buffer-frame, as will be readily understood, and in practice I may also cover the cross rod or bar 13 of said buffer-frame with a tubular cushion composed of any desired material, and the upper cross rod or bar of the back portion of the main frame may also be similarly provided.

This device is simple in construction and operation and is well adapted to accomplish the result for which it is intended, and it will be apparent that my improved fender or guard may be disconnected from one end of the car and connected with the other whenever desired.

The tubes 15 are secured to the bottom of the main fender or guard frame in any desired manner, and the forward ends thereof rest on the cross rod or bar 10, which forms a part of said frame, and in order to secure the side tubes 15 to said frame I may employ clamps or bands 30, or said tubes may be brazed to said frame, if desired, and I also provide the bottom portion of the main frame with wheels or rollers 31, which are adapted to rest upon the ground when the fender or guard is depressed by an object or person falling thereon.

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

1. A fender or guard for tramway-cars, comprising a main frame, composed of a back portion, by which the fender or guard is connected with the car, a forwardly-directed bottom portion, tubes mounted on or secured to said bottom portion, springs located in said tubes, a buffer-frame provided with rods which enter said tubes, and bear on said springs, and a spring-supported supplemental frame pivotally connected with the forward part of said buffer-frame, and held in a backwardly and upwardly inclined position, and a spring-supported auxiliary frame pivotally connected with the upper portion of the main frame, and held in a downwardly and forwardly inclined position, the backwardly-directed free side of the supplemental frame resting on the forwardly-directed free side of the auxiliary frame, substantially as shown and described.

2. A fender or guard for tramway-cars, comprising a main frame, composed of a back portion, by which the fender or guard is connected with the car, a forwardly-directed bottom portion, tubes mounted on or secured to said bottom portion, springs located in said tubes, a buffer-frame provided with rods which enter said tubes, and bear on said springs, and a spring-supported supplemental frame pivotally connected with the forward part of said buffer-frame, and held in a backwardly and upwardly inclined position, and a spring-supported auxiliary frame pivotally connected with the upper portion of the main frame, and held in a downwardly and forwardly inclined position, the backwardly-directed free side of the supplemental frame resting on the forwardly-directed free side of the auxiliary frame, and said main frame being also provided with side frames between which the auxiliary and supplemental frames are adapted to be depressed, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 13th day of November, 1896.

ALBERT BARNES.

Witnesses:
L. C. ABLES,
H. P. WALTON.