(No Model.)

T. C. RICE.

STREET CAR FENDER.

No. 524,734. Patented Aug. 21, 1894.

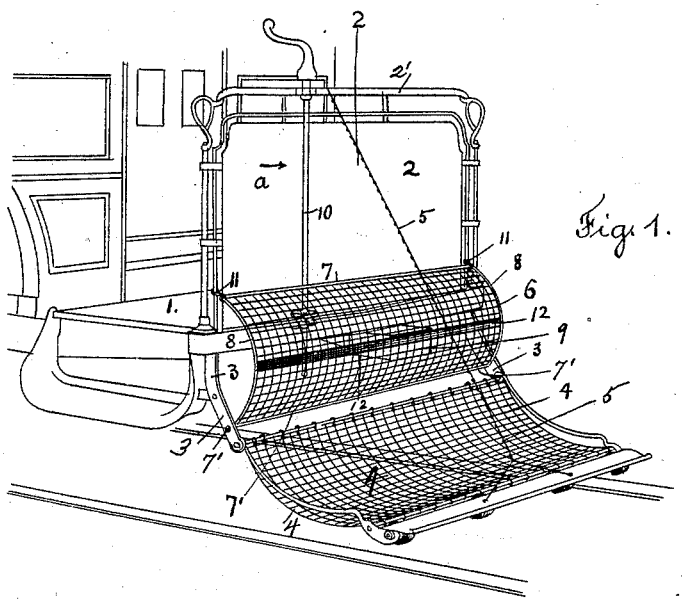

Fig. 1.

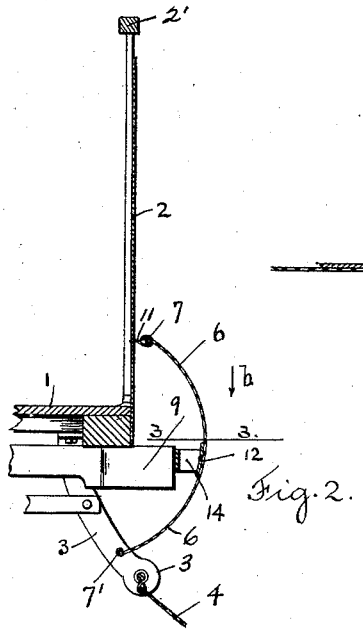

Fig. 2.

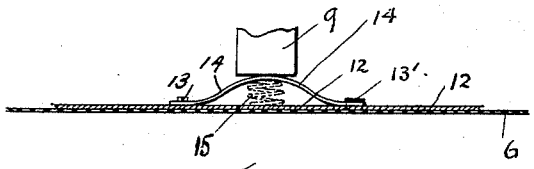

Fig. 3.

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UNITED STATES PATENT OFFICE.

THOMAS C. RICE, OF WORCESTER, MASSACHUSETTS.

STREET-CAR FENDER.

SPECIFICATION forming part of Letters Patent No. 524,734, dated August 21, 1894.

Application filed November 18, 1893. Serial No. 491,328. (No model.)

To all whom it may concern:

Be it known that I, THOMAS C. RICE, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Street-Car Fenders or Shields; and I do hereby declare that the following is a full, clear, and exact description thereof, which, in connection with the drawings making a part of this specification, will enable others skilled in the art to which my invention belongs to make and use the same.

My invention relates to a street car fender, or shield, adapted to be attached to the end of the platform of a car in an upright position, to co-operate with the fender which projects from the end of the car, over the road bed.

The object of my invention is to provide a shield attachment, adapted to be secured on the end of a street car, which will extend in an upright position in front of the buffer, and the lower end of the brake rod, and other projecting parts of the car, to prevent persons striking against the buffer, &c., and being injured thereby, in case they are struck and thrown on to the projecting car fender, attached to the car.

My invention consists in certain novel features of construction and operation of my shield attachment, and in combining therewith one or more springs or their equivalent, to produce resistance, and adapted to bear against the projecting end of the buffer, or other projecting portion of the car, so as to furnish a cushion surface, for an object to strike against, which will receive the blow without yielding sufficiently to allow the object to come in contact with the buffer or other projecting portions of the car, to be injured thereby.

I have shown in the drawings my shield, combined with the street car fender of my invention, shown and described in my Letters Patent No. 494,165, of March 28, 1893, but it will be understood that my shield attachment may be combined with any other form of street car fender, as it is designed to be made entirely separate from the ordinary car fender, and combined with and attached to the end of the car independently of said fender.

Referring to the drawings:—Figure 1 is a perspective end view of the platform of a street car, provided with my shield attachment, and also my patented car fender referred to. Fig. 2 is a central vertical section through the end of the platform and the shield attachment, taken on line 2, 2, Fig. 1, looking in the direction of arrow *a*, same figure, and Fig. 3 is a horizontal sectional detail taken on line 3, 3, Fig. 2, looking in the direction of arrow *b*, same figure. Figs. 2 and 3 are shown on an enlarged scale.

In the accompanying drawings, 1 is the end platform of a car, 2 the dasher, and 3 two hangers rigidly secured at their upper ends, preferably under the front edge or sill of the platform 1. In the lower ends of the hangers 3 is in this instance pivotally supported the car fender 4, to which is connected a supporting chain 5, which extends over the top of the guard rail 2′ on the dasher 2.

All of the above parts are substantially of the same construction as set forth in my said patent.

My shield attachment 6, which extends in an upright position at the inner edge of the car fender 4, and is attached to the end of the car, consists preferably of a rectangular iron rod frame, consisting of the top and bottom rods, 7, and 7′, and the two side rods 8, which support a cushion surface, consisting of a wire netting, or other material, attached to said frame, which is preferably about two feet or more wide, and about the length of the width of the car front. The lower rod 7′ of the shield 6 is in this instance pivotally supported on the hangers 3, so that shield 6 may be moved on its pivot support, and dropped down to rest on the fender 4 for any purpose.

The two side rods 8 of the shield 6 are bowed or curved outwardly, to make the shield convex in vertical cross section, see Fig. 2, so as to extend over the buffer 9, the lower end of the brake rod 10, and other projecting parts on the front of the car, and the upper corners of said shield are connected tightly to the iron standards at each end of the dasher 2 by hooks 11, or otherwise.

Attached to the inner side of the shield 6, along the central portion thereof, is a reinforcing strip or plate 12, preferably of spring

steel, of a length preferably equal to the length of the shield. At the rear of the strip 12, and supported thereon is an elliptical flat spring 14 convexing toward the dasher 2, and adapted to engage or bear against the buffer 9, or other most prominent part of the car front. The spring 14 is preferably bolted at one end, by a bolt 13, to the strip 12, and supported at its other end in a clip 13′, shown in section in Fig. 3, to slide in said clip.

In lieu of the elliptical spring 14, a spiral spring 15, as shown by dotted lines, Fig. 3, or other resistance device, may be used for the purpose of furnishing resistance to any blow on the shield.

By reason of the convex shape of the shield the lower edge will extend slightly under the front end of the platform, 1, and within and above the inner edge of the fender 4, and the upper edge will extend close to the dasher 2, with the central portion extending over the projecting end of the buffer 9, and other projecting parts of the car.

By reason of the spring 14 bearing against the end of the buffer 9, or other projecting part of the car, the shield 6 will be held away from the buffer, and thus prevent any object, thrown against the shield, coming in contact with the buffer, or other projecting portions of the car, to receive injury therefrom.

By making the shield attachment separately from the car fender proper, and independently of the operation thereof, the car fender can be raised or lowered for any purpose, independently of the shield 6, which is always in position ready to furnish a cushion surface for an object, falling on the car fender, to strike against, without injury thereto.

My shield attachment can be readily attached to, or removed from any ordinary street car, without reference to any fender with which the car may be provided.

It will be understood that the details of construction of my shield attachment may be varied somewhat from what is shown and described if desired, and the same may be adapted to be attached to the end of any street car, and used in connection with any car fender.

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

1. A shield attachment for a street car, adapted to be attached to and extend in an upright position at the end of the car, and consisting of a wire netting or cushion surface, curved or bowed outwardly, and provided with a spring or resistance device upon its inner surface to engage the buffer, or other projecting part of the car, for the purpose stated, substantially as set forth.

2. A shield attachment for a street car, adapted to be pivotally attached at its lower end, and extend in an upright position at the end of the car, and consisting of a rectangular frame, having convex or outwardly bowed ends, and provided with a wire netting, or other cushion surface, said cushion surface having a reinforcing strip, along the central portion thereof, provided with a spring, or resistance device, adapted to bear against the buffer, or other projecting part of the car, for the purpose stated, substantially as shown and described.

3. The combination with a street car, of a shield attachment, adapted to be attached to, and extend in an upright position at the end of the car, and consisting of a rectangular frame provided with a wire netting, or other cushion surface, convex or outwardly bowed in vertical cross section, and provided with a reinforcing strip carrying a spring, or resistance device, adapted to bear against the buffer, or other projecting part of the car, for the purpose stated, substantially as set forth.

4. The combination with a street car, of a shield attachment, pivotally supported at its lower end, and adapted to extend in an upright position, and be attached to the end of the car independently of the fender on the car, the said shield attachment consisting of a rectangular frame provided with a wire netting, or cushion surface, and convex or outwardly bowed in vertical cross section, and having a reinforcing strip along the central part thereof, carrying a spring, or resistance device, adapted to bear against the buffer, or other projecting part of the car, for the purpose stated, substantially as set forth.

5. The combination with a street car, of a shield attachment, pivotally supported at its lower end, and adapted to extend in an upright position, and be attached to the end of the car, and raised or lowered on its pivot support independently of the fender with which the car is provided, said shield attachment consisting of a convex or outwardly bowed rectangular frame, provided with a wire netting, or other cushion surface, having a reinforcing strip provided with a spring, or resistance device, to bear against the buffer, or other projecting part of the car, for the purpose stated, substantially as shown and described.

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