

(No Model.)

R. BUSTIN.
CAR FENDER.

No. 545,579.

Patented Sept. 3, 1895.

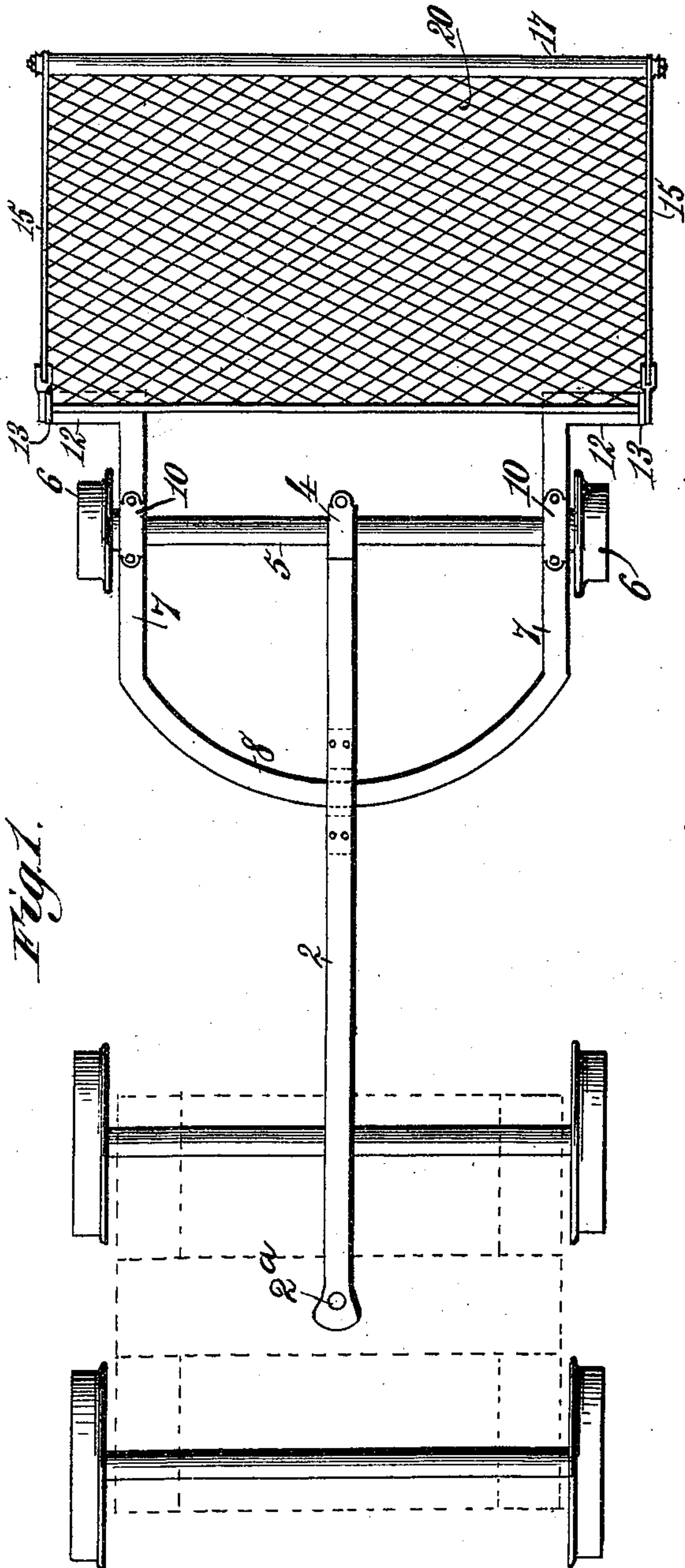


Fig. 1.

Witnesses:
Robert Everett,
G. W. Rea,

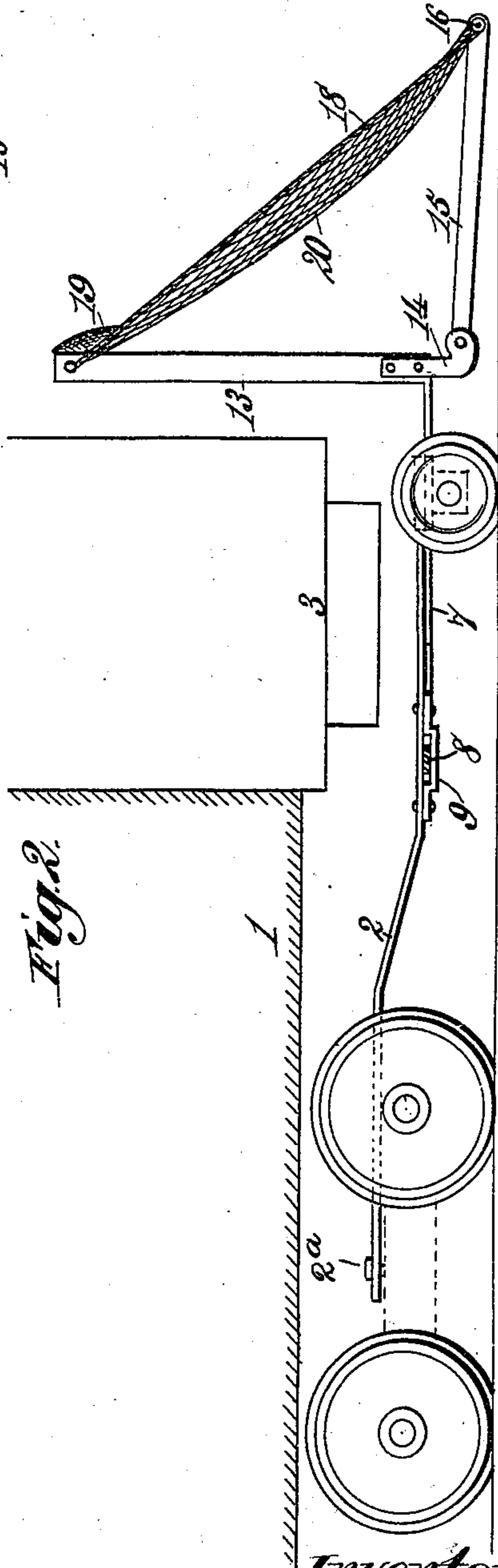


Fig. 2.

Inventor:
Robert Bustin.
By *James L. Norring,*
Atty.

UNITED STATES PATENT OFFICE.

ROBERT BUSTIN, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF TWO-THIRDS
TO WESLEY VANWART, OF FREDERICTON, AND JOHN R. McCONNELL,
OF MARYSVILLE, CANADA.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 545,579, dated September 3, 1895.

Application filed December 5, 1894. Serial No. 530,920. (No model.)

To all whom it may concern:

Be it known that I, ROBERT BUSTIN, a subject of the Queen of Great Britain, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Car-Fenders, of which the following is a specification.

This invention relates to safety attachments for railway-cars operated by cables, electric motors, or other power, and particularly to that class of safety attachments or car-fenders wherein a flexible net is arranged in an inclined position in advance of the car-platform for the purpose of picking up and carrying a person or object encountered on the road way or track.

The chief object of my present invention is to provide new and improved means for supporting the net-carrying frame in advance of the car-platform and enabling the net to be extended laterally some distance past the railway-rails for the better protection of persons or objects from the car-wheels and to insure removal of a person or object falling or lying in proximity to the sides of the tracks outside the rails.

To accomplish this object my invention consists in the combination, with a car, of a bar or beam pivoted to the car-truck and extending forward therefrom, an axle or shaft journaled in the front end of the bar or beam and having guide-wheels for traversing the railway-rails, a yoke-shaped frame provided with journal-boxes in which said axle or shaft is journaled, and having its front end portions extended laterally over the railway-rails, uprights or standards carried by the lateral extensions of the yoke-shaped frame, stretcher-bars connected with the lower ends of the standards or uprights, a rod or shaft connecting the front ends of the stretcher-bars and provided with an elastic buffer, and a net connected with said rod or shaft and with the upper ends of the standards or uprights.

The invention is illustrated by the accompanying drawings, in which—

Figure 1 is a detail plan view of sufficient of a car and car-fender or safety attachments to enable my invention to be clearly under-

stood, and Fig. 2 is a vertical sectional view 50 of the same.

In order to enable those skilled in the art to make and use my invention, I will now describe the same in detail, referring to the drawings, wherein—

The numeral 1 indicates the body of a street-railway car designed to be moved or propelled by a cable, electric energy, or other power, and which may be of any construction suitable for the conditions required, for which 55 reason further description of the car is not deemed essential. 60

The front car-truck is provided with a centrally-arranged longitudinal bar or beam 2, which extends forward to a point under the car-platform 3, and is provided at its front extremity with a journal-box 4, in which is journaled the axle or shaft 5 of guide-wheels 6. 65

The rear end of the bar or beam 2 is pivoted to the truck by a pivot 2^a, and the guide-wheels 6 traverse the railway-rails, so that the car is susceptible of traveling around very abrupt or short curves. In traversing abrupt or short curves it is very desirable to provide a safety attachment or car-fender which will guard the rails at such points, and to accomplish this in a very simple, efficient, and economical manner I provide the axle or shaft 5 with a yoke-shaped frame, preferably made of a single piece of metal or other suitable material, and composed of parallel side arms or members 7 and a curved portion or segment 8, which extends beneath the bar or beam 2, bears against the latter, and is held thereto by a bracket or loop 9, riveted, bolted, or otherwise attached to the bar or beam 2. The parallel arms or members 7 are provided with journal-boxes 10, in which the end portions of the axle or shaft 5 are mounted, and the front extremities of the arms or members 7 are extended laterally in opposite directions to form the right-angled arms 12, which project over and some distance past the railway-rails, and are located bodily in advance of the guide-wheels 6. 80 85 90 95

The laterally-extending arms 12 of the yoke-shaped frame are provided at their outer extremities with standards or uprights 13, hav-

ing at their lower ends attached brackets 14, to which are pivoted or otherwise secured the rear extremities of stretcher-bars 15. The front ends of the stretcher-bars 15 are connected by a rod 16, covered with rubber, as at 17, to provide a horizontal buffer of inherently elastic material. The ends of the rod 16 are connected by ropes, cables, or other flexible supports 18 with the upper ends of the standards 13, at which point the ropes or other flexible supports carry a cushion 19. The usual flexible netting 20 is supported at its upper end by the cushion 19 or otherwise, and at its lower end by the rubber-covered rod 16, the construction being such that when the stretcher-bars 15 lie in a horizontal position, or approximately so, the netting is held in a stretched condition, and if a person or object is encountered on the roadway the elastic buffer strikes the person or object, and such person or object is received and retained by the net.

The length of the rubber-covered rod or shaft 16 is such that its end portions project over and past the railway-rails, and by this construction, in connection with the laterally-extending arms 12 of the yoke-shaped frame, the netting is supported in such manner that it extends laterally some distance past the railway-rails to afford better protection and more effectually guard the car-wheels, while insuring the removal of a person or object falling or lying in proximity to the tracks outside the rails.

As the car traverses a curve, the yoke-shaped frame and bar 2 can move in the arc of a circle, and the axle or shaft 5 and guide-wheel 6 accommodate themselves to the curve, while the lateral extensions of the net or safety attachment will lie over the rails to serve as efficient safety-guards while the car traverses a curve.

The present invention provides a safety attachment or car-fender which is connected with the front car-truck and may be entirely disconnected from the front car-platform, so that the attachment or car-fender can readily traverse the rails, and is not in any manner affected by the vertical movements or vibrations of the car-body, while at the same time the net is properly supported where it extends laterally some distance past the railway-rails, all of which features are very advantageous in the class of car-fenders to which my invention relates.

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

The combination with a car, of a bar or beam pivoted to the car-truck and extending forward therefrom, an axle or shaft journaled in the front end of the bar or beam and having guide-wheels for traversing the railway rails, a yoke-shaped frame provided with journal boxes in which said axle or shaft is journaled, and having its front end portions extended laterally over the railway-rails, uprights or standards carried by the lateral extensions of the yoke-shaped frame, stretcher-bars connected with the lower ends of the standards or uprights, a rod or shaft connecting the front ends of the stretcher-bars and provided with an elastic buffer, and a net connected with said rod or shaft and with the upper ends of the standards or uprights, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ROBERT BUSTIN.

Witnesses:

ALEXANDER S. MURRAY,
GEO. L. WILSON.