

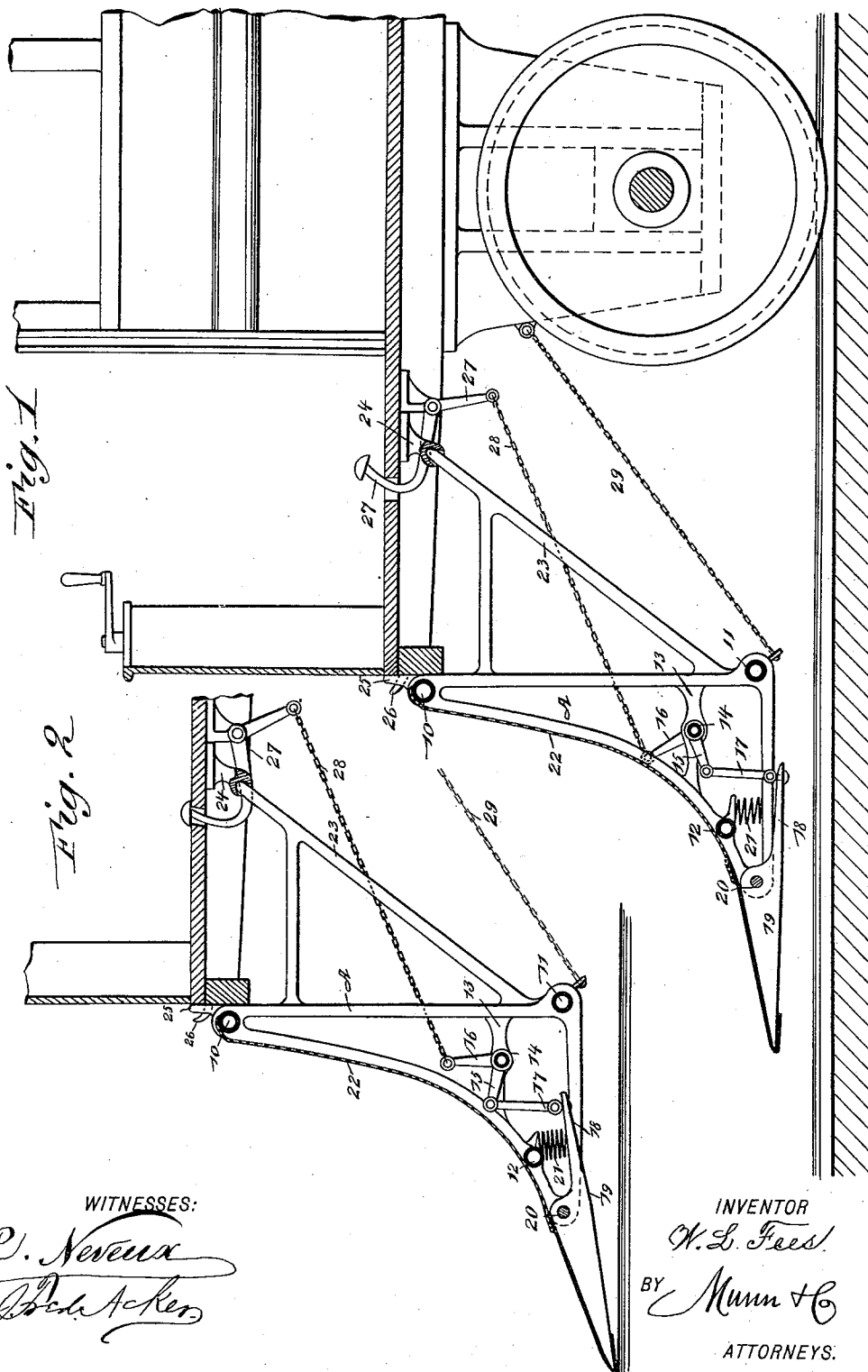
(No Model.)

2 Sheets—Sheet 1.

W. L. FEES.
CAR FENDER.

No. 532,951.

Patented Jan. 22, 1895.



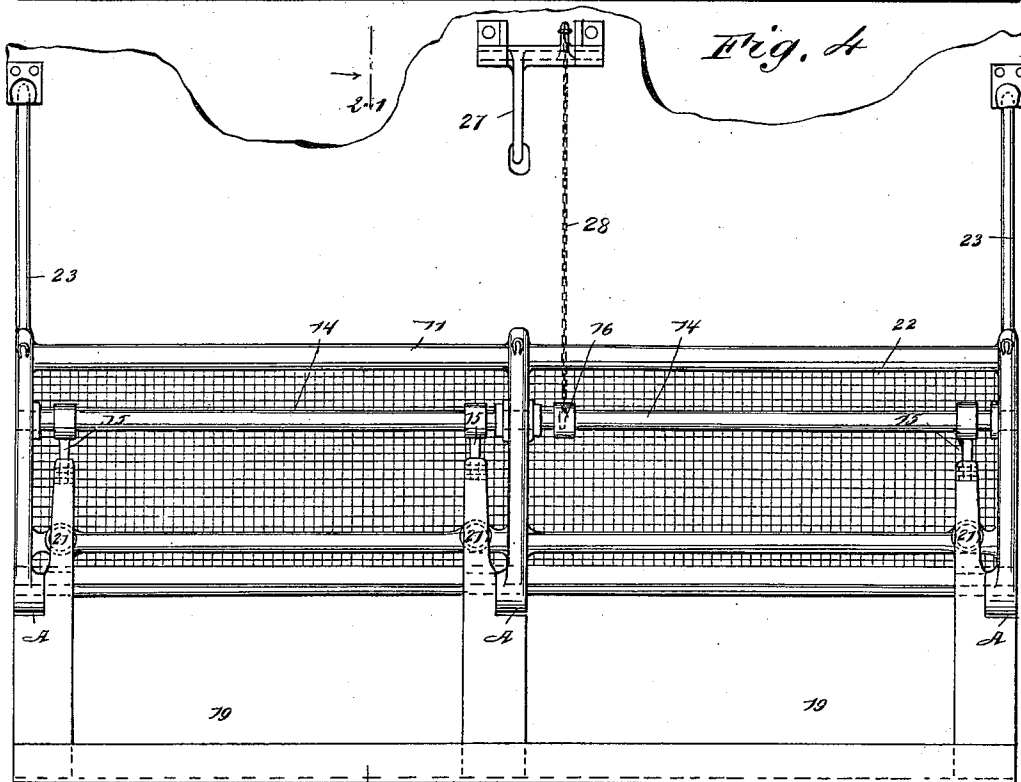
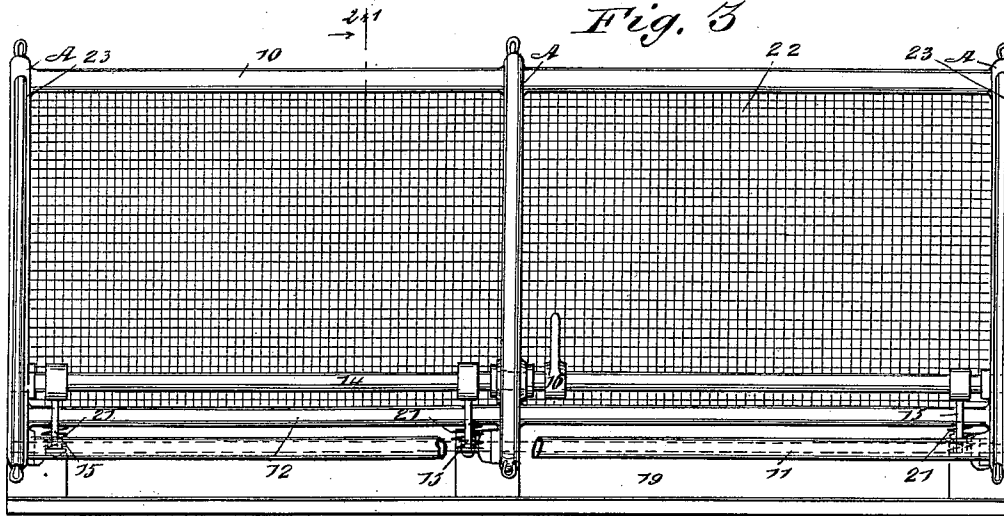
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WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM LEOPOLD FEES, OF AVONMORE, PENNSYLVANIA, ASSIGNOR TO
HIMSELF AND CHARLES ANDREW HILL, OF SAME PLACE.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 532,951, dated January 22, 1895.

Application filed September 1, 1894. Serial No. 521,929. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM LEOPOLD FEES, of Avonmore, in the county of Westmoreland and State of Pennsylvania, have invented a new and Improved Car-Fender, of which the following is a full, clear, and exact description.

My invention relates to an improvement in car fenders, especially adapted for application to cable, trolley, or other surface cars, and has for its object to provide a fender of simple, durable and economic construction, capable of being readily transferred from one end of the car to the other, and in which the shoe or take-up section of the fender, while normally lying above the plane of the track, may be brought downward to a level with the track so as to prevent an object passing beneath the fender, and insuring the object being picked up by the fender, the shoe of the fender returning to its normal position immediately upon being released.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a transverse section through the improved fender, illustrating the shoe in its normal position, and likewise a vertical section through the portion of the car to which the fender is attached. Fig. 2 is a similar section to Fig. 1, said views being taken practically on the lines 1—1 and 2—2 in Figs. 3 and 4, the shoe being illustrated in its lower or receiving position in Fig. 2. Fig. 3 is a rear elevation of the fender, and Fig. 4 is a bottom plan view of the same.

In carrying out the invention the body of the fender consists preferably of a series of brackets A, three being usually employed, one at each end and one at the center of the body. These brackets are substantially triangular, and are preferably so shaped that their rear members are vertical, their bottom portions straight, and their forward members more or less concave. These brackets are

connected at the top by a rod 10, preferably a tube, and are similarly connected at their rear bottom portions by a tube 11, while a tubular rod 12, connects the brackets at the lower portion of their forward or concaved surfaces.

The brackets are usually provided near their lower ends each with a cross bar 13, and in said cross bars a rock shaft 14 is fulcrumed. This rock shaft is provided with a number of arms 15 projected therefrom, ordinarily one near each bracket of the frame of the fender, the said arms being forwardly extended, as shown at Figs. 1 and 2, and likewise in Fig. 4. The rock shaft, at or near its center, is also provided with a crank arm 16, projecting normally in an upwardly direction, and the forwardly-extending arms 15 are connected by links 17 with rear extensions or lips 18, formed upon the shoe 19, the said shoe being pivoted at the forward lower portion of the frame by means of a pivot pin 20, or the equivalent thereof; and the shoe is normally held in a horizontal position as shown in Fig. 1, through the medium of springs 21, bearing against its rear offsets and against projections from the brackets. The upper portion of the shoe is more or less inclined, meeting and substantially conforming to the contour of the concavity of the forward face of the fender, the said face being constructed of a netting 22, or any equivalent material.

The end brackets A, and if desired the central bracket also, are provided with upwardly and rearwardly extending arms 23, attached thereto or formed integral therewith, and these arms at their upper ends are introduced into and made to fit snugly sockets 24, secured to the under side of the car body; and at proper intervals along the upper edge of the car fender, eyes 25 are produced, which receive studs 26 secured upon the car body, whereby the fender may be transferred readily from the front to the rear of the car as occasion may demand.

Preferably a foot lever 27, of an angular or elbow type is fulcrumed beneath the platform of the car, one end of the lever extending upward through the platform within easy reach of the foot of a motorman or gripman. The said lever is connected by a chain 28,

with the upwardly-extending crank arm 16 of the rock shaft 14, whereby upon depressing the lever, as shown in Fig. 2, the shoe is pressed downward and given a forward and downward inclination, being made to contact substantially with the track, insuring any object in the path of the fender riding up upon the latter, and the least possible amount of damage being sustained.

10 Brace chains or rods 29, are made to connect the rear lower portions of the brackets A of the frame, for example, with the pedestals of the car, as shown in Fig. 1.

The shoe 19 may be used as a snow plow, or a concaved plate may be attached to it for that purpose, and if desired, blocks or plates may be attached to the shoe and shaped to fit the track, for the purpose of cleaning the same in winter.

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

1. In a fender, a body section adapted for connection with a car, a shoe having pivotal connection with the lower part of the body, and means located to the rear of said body section whereby the shoe may be controlled from the platform of the car, as and for the purpose set forth.

30 2. In a fender, a body adapted for attachment to a car, provided with a pivoted and spring-controlled shoe normally held in a horizontal position and capable of being depressed in a downward direction, a lever operated from the platform of the car, and a connection between the lever and the shoe, whereby the latter is manipulated, said connection being located to the rear of said body as and for the purpose specified.

40 3. A car fender adapted for attachment to the body of a car, and provided with a spring-

controlled shoe pivotally connected with the body and capable of being depressed, a rock shaft mounted on the lower end of the body and having one arm connected with the said shoe, and a foot lever adapted to be fulcrumed upon the platform of the car, the said lever being connected with the other arm of said rock shaft, substantially as shown and described.

50 4. In a car fender, the combination, with a series of brackets, rods connecting the said brackets, forming a frame, and a concaved front formed upon said frame, of a shoe pivotally connected with the forward lower end of the frame, provided with rearward extensions, springs normally pressing downward upon said extensions and holding the shoe in a horizontal position, a rock shaft, a link and crank connection between the rock shaft and the shoe, a lever adapted to be fulcrumed upon the platform of the car, and a connection between the lever and rock shaft, whereby the latter is manipulated, as and for the purpose specified.

65 5. A car fender having eyes at the upper edge of its front portion and provided with braces which extend up diagonally rearward from the rear part thereof and are adapted to enter sockets provided on the car, in combination with hooks on the forward end of the car adapted to enter said eyes, and brackets mounted on the under side of the car in the rear of said hooks and provided in their under sides with recesses forming sockets to receive the extremities of said braces, substantially as set forth.

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Witnesses:

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