

E. ROCHESTER.
ELECTRIC CAR FENDER.

No. 494,281.

Patented Mar. 28, 1893.

Fig. 1.

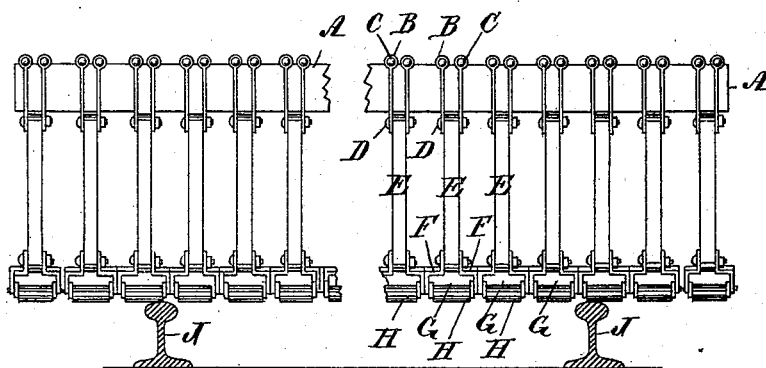
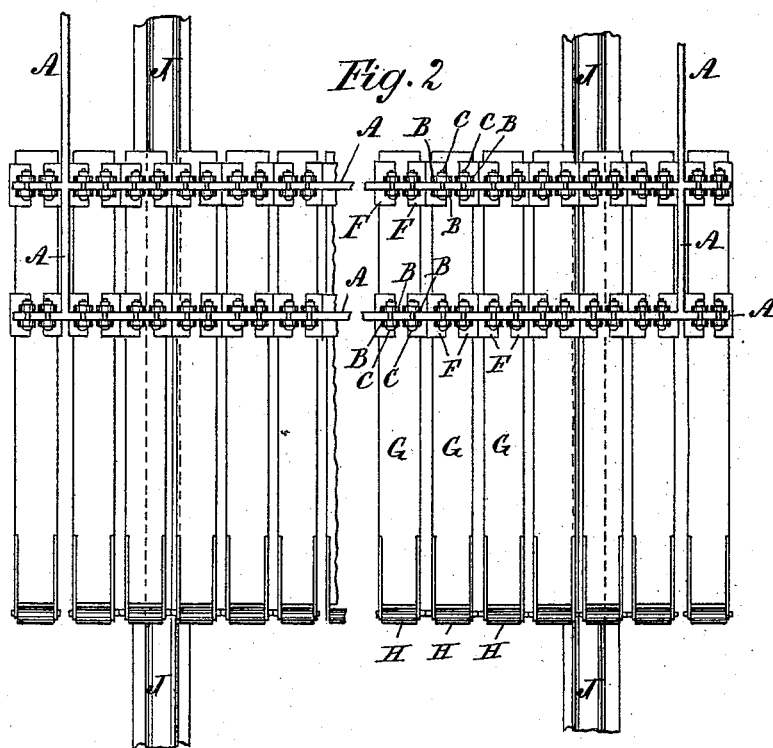


Fig. 2.



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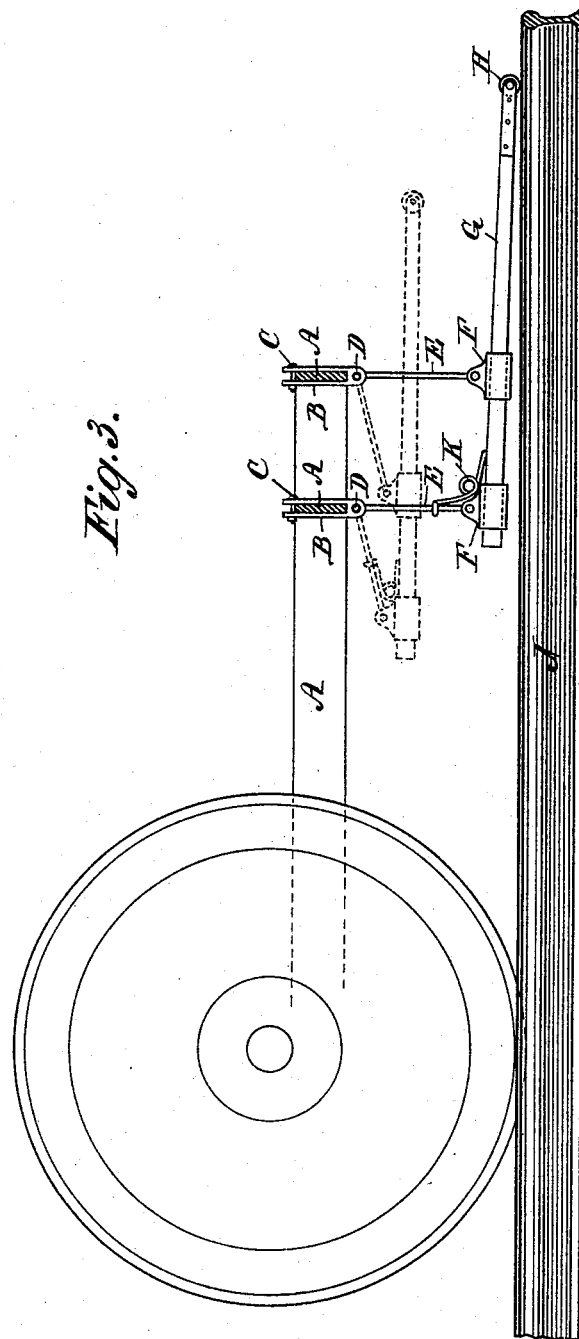
(No Model.)

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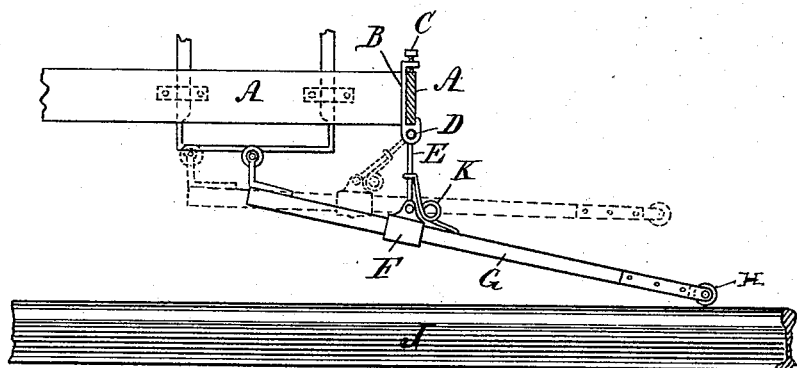
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Fig. 4.



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UNITED STATES PATENT OFFICE.

EDWIN ROCHESTER, OF OTTAWA, CANADA.

ELECTRIC-CAR FENDER.

SPECIFICATION forming part of Letters Patent No. 494,281, dated March 28, 1893.

Application filed October 18, 1892. Serial No. 449,236. (No model.)

To all whom it may concern:

Be it known that I, EDWIN ROCHESTER, of Ottawa, in the Province of Ontario, in the Dominion of Canada, have invented certain new and useful Improvements in Electric-Car Fenders; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

10 Figure 1, is a front elevation of my improved fender. Fig. 2, is a top view of the same. Fig. 3, is a section on line *xx* Fig. 2, and Fig. 4, is a side view of a fender of modified construction.

15 My invention has for its object to provide an electric street railway car with a fender, whereby a person knocked across the track will be picked up and carried safely, and the fender will yield when meeting an obstruction, to prevent injury.

20 My invention consists of a platform composed of fingers pivotally secured to hangers flexibly attached to the end of a car or frame, whereby more or less of said fingers swing 25 and yield to an obstruction, and rise to pass over the same when unable to remove it, as hereinafter set forth and claimed.

30 A, is a supporting frame secured horizontally by side bars to the body or truck of the car to project beyond the end of the car, and said side bars are connected by two parallel bars at and near the outer ends.

35 B, B, are U-shaped clips embracing the parallel bars of frame A, and said clips are clamped to said bars by bolts C, passing through the clips near the top, and preferably above the parallel bars, whereby said clips are connected in pairs by said bolts. Any desired number of clips are attached to 40 said bars, and the bars extend past the side bars, so as to be longer than the width of the car.

45 E, are suspension rods or hangers hung to said clips B, at their lower end by a bolt D, passing through said clip and hanger, whereby said hangers will vibrate in the direction of the path of the car, and the lower end of said hangers is connected pivotally to a socket or shoe F.

50 G, are fingers composing a flat inclined plat-

form projecting from the end of the car, and inclining downward, and each finger is held by passing through a socket or front shoe and a corresponding rear shoe or socket, pendent from the hanger. To give a yielding resistance to the fingers, one end of a coiled spring K, is secured to each finger, and the other end of the spring is looped around the hanger to permit the looped end to slide thereon. The springs by expansion depress the outer end of the fingers and restore them to position after yielding to a thrust, and said springs also allow the fingers to yield to a thrust when meeting an obstruction, as shown by dotted lines in Fig. 3, and also prevent the hangers swinging freely by the motion of the cars. The fore end of the fingers is provided with a roller H, to prevent the fingers sticking into an obstruction. The rollers liable to come in contact with the street rails J, are insulated by a tire of rubber, or by other means. When in a normal position, the hangers are about perpendicular and the platform of fingers then extend beyond the car and near the ground, so that the fingers first in contact with an obstruction will yield and rise and the other fingers which may afterward have contact will follow, thereby gradually diminishing the blow or force of impact, to prevent injury.

I claim as my invention—

1. The combination with a car of a projecting platform composed of a series of yielding fingers G, pivotally secured to hangers E, flexibly attached to the car or frame A, whereby 85 more or less of said fingers swing and the fingers hung thereto yield and rise when meeting an obstruction to diminish the impact, and pass over the obstruction when unable to remove it, to prevent injury.

2. The combination with a car, of a row of hangers E, suspended at the end of said car, and a platform composed of fingers G, attached to the lower end of said hangers and extending inclinedly below said car and forwardly 95 from the end, and springs at the intersection of said hangers and fingers, whereby said hangers swing and more or less of the fingers yield to an obstruction and rise, as set forth.

3. The combination with a car having a 100

frame A, secured thereto at the end, of a row or rows of hangers E, hung from said frame to swing in the direction of the path of the car, a platform composed of fingers G, supported by said hangers, said fingers projecting beyond the end of the car and inclining downwardly to near the ground, and springs K, interposed at the angle of intersection of said hangers and fingers, as set forth.

10 4. The combination with a car, of the frame A, crossing the end, clips B, B, secured to said frame, a row or rows of vibrating hangers E,

hung to the clips, a shoe or socket F, pivotally hung to the hangers, fingers G, composing a platform supported by said sockets or shoes, and provided with a roller H, at the outer end, and springs K, at the intersection of said hangers and fingers, substantially as set forth. 15

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Witnesses:

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