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UNITED STATES PATENT OFFICE.

THOMAS DAVIES, OF TORONTO, CANADA.

STREET-CAR FENDER.

SPECIFICATION forming part of Letters Patent No. 516,266, dated March 13, 1894.

Application filed May 18, 1893. Serial No. 474,653. (No model.)

To all whom it may concern:

Be it known that I, THOMAS DAVIES, of the city of Toronto, in the county of York and Province of Ontario, Canada, have invented
5 a certain new and Improved Street-Car Fender, of which the following is a specification.

The object of the invention is to provide a simple device which will effectually prevent individuals or any obstruction from being
10 run over by the wheels of a street car, and it consists in the peculiar construction, arrangement and combinations of parts hereinafter more particularly described and then definitely claimed.

15 In the accompanying drawings—Figure 1, is a perspective end view of a car provided with my improved fender. Fig. 2, is an enlarged detail of the fender and rail scraper. Fig. 3, is an enlarged detail of the scraper.

20 In the drawings—A, is a plate preferably made partly of rubber or constructed in some other way so that it will not strike a person hard enough to do injury. The plate is set at an angle similar to an ordinary cow catcher
25 used on locomotives, and owing to that angle, there are two plates required, as indicated, and as these plates cannot fit close to each other at the apex of the angle, I provide at the inside end of each plate A, an adjustable cap or a projecting finger B, which fingers
30 overlie each other without being in contact so that the plates A, may move independent of each other notwithstanding the said fingers which practically close the space between the
35 said plates. Each end of each plate A, is connected to the bar C, which is pivoted on the pin D, projecting from the permanent guard E, or platform of the car.

F, is a spring connected to the bar C, at
40 one end and to the adjustable pin G, attached to the guard E, in such a manner that by the adjustment of a nut or other means, the tension on the spring F, may be increased or decreased as required to properly support the
45 plate A, at the required angle, which angle, is about forty-five degrees and is thus carried so that on striking an obstacle, the plate will be pushed down sufficiently close to the
50 ground to prevent the obstacle getting below the plate. A chain or chains H, is provided

for each plate A, acting against the tension of the spring F, and holding the plates at their proper angle. One or more springs H' are placed behind each plate A, for the purpose of acting as a spring buffer should the said plates
55 be pushed back against the guard E.

The operation of my device is as follows:—
In the event of any kind of obstruction being on the track, it will be struck by one of the plates A, the springs F, of the said plate yield-
60 ing so as to soften the blow. Should the weight of the obstacle be too heavy to permit the reaction of the spring, the plate A, struck by the obstacle is carried back till its spring
65 or springs H', come in contact with the guard E, when the combined strength of the two springs will generally be found sufficient to react and throw the obstacle out of the way of the car. Owing to the horizontal angle at
70 which the plates are carried, they are pushed close to the ground so as to effectually prevent anything passing under them. From this it will be seen that any person or obstacle falling on the track will be removed out
75 of the way by the action of the spring fender described.

With the view of keeping the rails clear of ice and other light obstructions, I provide a steel brush or metal scraper I, shaped to fit the top of the rail J, and connect it to one
80 end of the spring plate K. The other end of this spring plate has a sharpened pinion or pointed roller L, pivoted on it, as indicated, and designed to revolve when held in contact with the rail J, for the purpose of breaking
85 up any ice which may have formed on the rail, so that the scraper J, may easily remove it.

The spring plate K, is attached to the spring plate M, one end of it being permanently connected to the front plate of the guard E, and
90 its other end adjustably connected to the said guard and provided with adjusting nuts so that by moving it, the scraper I, and roller L, will be either pressed against the rail J, or raised clear of it.

What I claim as my invention is—

1. The angular plates A, supported by springs and held at an angle to each other, in combination with a cap or fingers B projecting from said plates, substantially as described. 100

2. The angular plates A, connected to the bars C, pivoted on the pins D, in combination with the springs F, and adjustable pins G, substantially as and for the purpose specified.
- 5 3. The angular plates A, provided with a cap or fingers B, connected to the bars C, pivoted on the pins D, in combination with the springs F, and H, and adjustable pins G, substantially as and for the purpose specified.
- 10 4. The angular plates A connected to the

bars C and held in a normal position by springs F, in combination with springs H' behind said plates, arranged to act as buffers when an obstacle is struck, substantially as described.

Toronto, April 24, 1893.

THOS. DAVIES.

In presence of—

A. M. NEFF,

J. EDW. MAYBEE.