

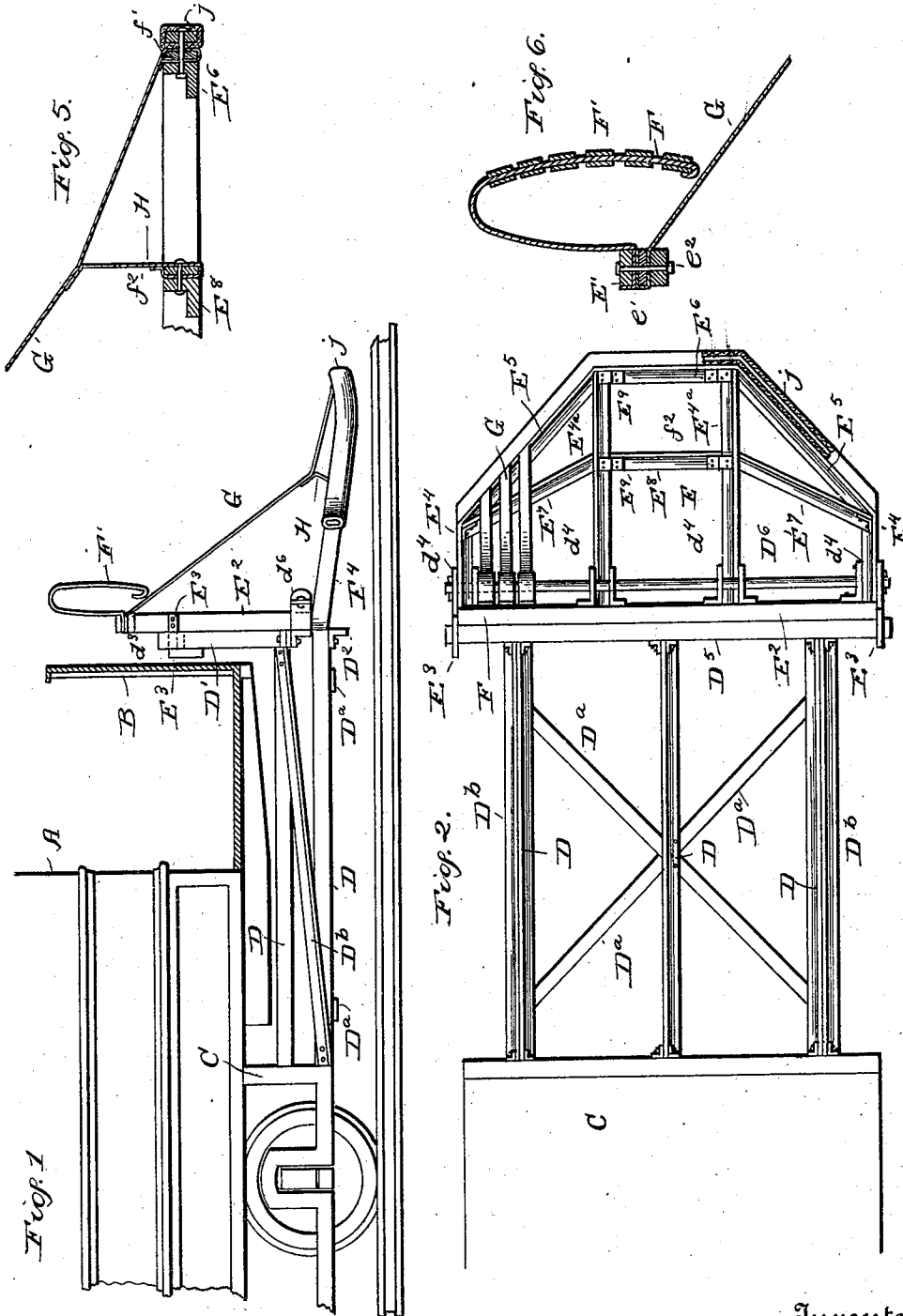
(No Model.)

2 Sheets—Sheet 1.

P. McMENAMIN.  
CAR FENDER.

No. 557,145.

Patented Mar. 31, 1896.



Witnesses  
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Inventor  
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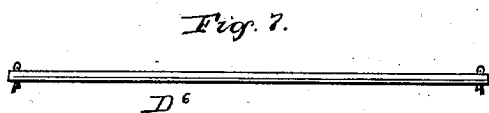
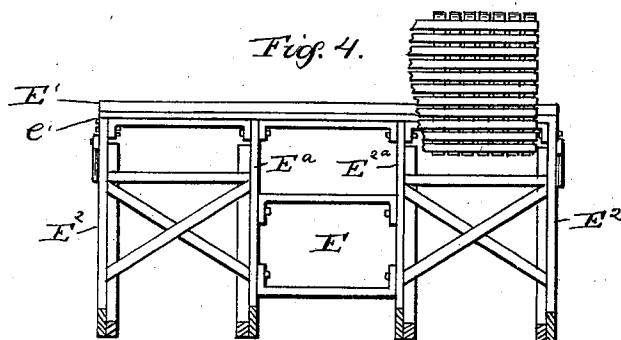
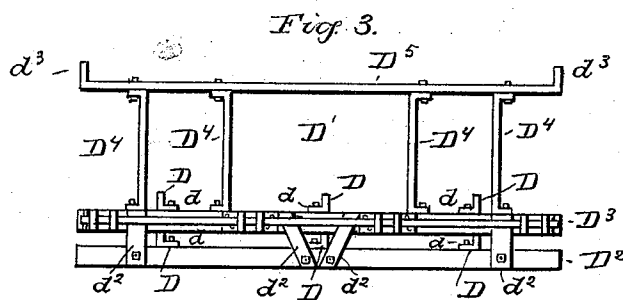
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# UNITED STATES PATENT OFFICE.

PETER McMENAMIN, OF JERSEY CITY, NEW JERSEY.

## CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 557,145, dated March 31, 1896.

Application filed April 26, 1895. Serial No. 547,234. (No model.)

*To all whom it may concern:*

Be it known that I, PETER McMENAMIN, a citizen of the United States, residing at Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Car-Fenders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to car-fenders, and more particularly to that class of street-car fenders which have a cushioned device or net spread in front of the car.

My object is to provide a fender of this description which shall constantly maintain a uniform distance from the tracks independently of the rocking movement or endwise pitch of the car-body; also, to provide better means for cushioning the fender; also, to provide a light detachable fender and supporting-frame for the same rigidly attached to the truck and projecting at each end of the car; also, to provide a novel form of fender of this class which shall be better adapted to meet the requirements of a crowded street.

In the accompanying drawings, forming a part of this specification, Figure 1 is a side elevation showing my car-fender and its supporting-frame attached to a car-truck. Fig. 2 is a top plan view of the car-fender and supporting-frame attached to a car-truck, the car-body being removed. Fig. 3 is a front elevation of the frame for supporting the fender. Fig. 4 is a front elevation of the vertical portion of the fender-frame broken away. Figs. 5, 6, and 7 are detail views.

Referring more particularly to the drawings, A denotes the car-body, B the dashboard, and C the car-truck.

D denotes longitudinal iron supports attached at their inner ends to the car-truck, and extend forwardly under the car body and platform and project in front of the dashboard. Said supports are angular in shape, six in number, and arranged at equal distances apart where the construction of the coupling or other attachments under the car-floor will permit; otherwise they may be arranged at unequal distances.

D<sup>a</sup> denotes diagonal braces secured to the

under side of supports D, as shown in Fig. 2, and D<sup>b</sup> denotes side braces secured to the inner end of the lower and to the outer end of the upper supports D, as shown in Fig. 1, upon each side.

D' denotes an upright frame rigidly bolted to the supports D, and form with said supports a suspending-frame, to which the fender proper is detachably connected.

The drawings show but one end of a car provided with the fender-supporting frame, as it is deemed unnecessary to show the same in duplicate attached to each end of a car-truck. The frame D', as shown in Fig. 3, consists of two parallel transverse bars D<sup>2</sup> D<sup>3</sup>, angular in shape and bolted to the supports D by the nuts  $\bar{d}$ , the bar D<sup>3</sup> bearing on the lower supports D. Said bars are held in parallel relation and braced together by short braces  $\bar{d}^2$ . D<sup>4</sup> denotes four upright supports forming part of said frame D' and have their ends bent at right angles and rigidly secured to the upper side of the bar D<sup>3</sup> and to the under side of a transverse supporting-rail D<sup>5</sup> having its ends bent upwardly, forming lugs  $\bar{d}^3$ .

$\bar{d}^4$  denotes a series of lugs, the intermediate ones being formed of short angle-irons, and the end ones are formed by one of said angle-irons and the outwardly-bent ends of the bar D<sup>3</sup>, as shown in Fig. 2. Said lugs are perforated to receive a long bolt D<sup>6</sup>, (shown detached in Fig. 7,) and serves, as hereinafter described, to form a detachable connection for the fender.

E denotes the fender-frame, the upright portion of which consists of four upright angular pieces E<sup>a</sup> E<sup>a</sup> E<sup>a</sup> E<sup>2a</sup> supporting two horizontal bars E' e'. Said uprights are held together by diagonal and transverse braces and secured by bolts, as shown in Fig. 4. The horizontal bars E' e' are secured together and braced in position to the upper portion of the fender-frame by bolts e<sup>2</sup>. (Shown in Fig. 6.) The upright side pieces E<sup>2</sup> E<sup>2</sup> are provided with hangers E<sup>3</sup> E<sup>3</sup>, which hook over the rail D<sup>5</sup> and fit snugly between the lugs  $\bar{d}^3$   $\bar{d}^3$ .

E<sup>4</sup> E<sup>4</sup> E<sup>4a</sup> E<sup>4a</sup> denote four outwardly-projecting arms of the fender-frame, angular in shape and formed integral with the said four upright arms and inclined downwardly therefrom until they reach a point near the outer

end of the fender, where they are bent upwardly. The side arms  $E^4 E^4$  extend only a short distance, where they are joined to two diagonal pieces  $E^5 E^5$  at each side of the fender or formed integral therewith. Said pieces are bent upwardly near their outer ends, giving an upward inclination at the outer end of the fender, as shown in Fig. 1.

$E^6$  denotes the end piece of the fender-frame, joined to the outer ends of the diagonal pieces.

$E^7 E^7$  denote two diagonal braces secured to the side pieces  $E^4 E^4$  at their inner ends and to a transverse brace at their outer ends.  $E^8$  denotes the transverse brace connecting said diagonal braces, and  $E^9$  denote irons securing the braces and arms together.

$F$  denotes a series of upright flat steel springs extending across the top of the fender the entire width of the same and clamped under the bar  $E$  and between it and the bar  $e'$ , as shown in section in Fig. 6. Said springs project above said bar and are bowed forwardly and downwardly, their free ends being rounded or bent inwardly and impinging upon a series of longitudinal strips, as hereinafter described.  $F'$  denotes a series of transverse strips, of rubber, canvas, leather, or other material, secured to said springs in close proximity upon the outer bowed side, forming, together with said springs, a yielding cushion and serving to prevent contact of a person with the upper part of the dashboard and fender-frame or its supporting-frame.

$G$  denotes a series of longitudinal strips, of rubber or other suitable material, having their inner ends doubled around said bar  $e'$ , as shown in Fig. 6, and sewed or otherwise fastened to the body of the strips and clamped under the bar  $E'$  by suitable bolts and nuts passing through said slat and bar. The outer ends of said strips are likewise secured to the outer diagonal sides and straight end piece by slats  $f' f' f'$ . Said strips are about two and a half inches wide and are arranged about a half-inch apart. They are attached independently of each other by their ends only, having no side support, the effect of which is that the strips which receive the weight of the person will yield thereto, break the fall, and shield the person from contact with the dashboard, fender-frame, or its supporting-frame. Again, as said strips are attached without side support they are allowed to yield further and conform more readily to the impact of the person.

$H$  denotes a series of short vertical strips secured at their lower ends around slats  $f^2 f^2$  and fastened in a manner similar to the strips  $G$  and bolted to the braces  $E^7 E^7$  and  $E^8$ , as shown in Fig. 5. The upper ends of the strip  $H$  are sewed or otherwise secured to the strips  $G$  and stretch them taut, forming at the outer end and sides of the fender a cushioned seat, but chiefly serving to depress the strips  $G$  and form a shelf-like por-

tion at the sides and end of the fender which would intercept a person rolling off.

$j$  denotes rubber tubing through which the diagonal pieces  $E^5 E^5$  and end piece  $E^6$  are threaded. Said tubing is provided with slits to admit the passage of the bolts uniting the slats  $f' f' f'$  to said pieces. The edges of the slits are closed over the bolts and thus cushion the same.

To attach the fender to its supporting-frame, the hangers  $E^3$  are first hooked over the rail  $D^5$  of said frame between the lugs  $d^3 d^3$ . Then the lower ends of the upright pieces of the fender-frame are placed in the lugs  $d^4$ . The bolt  $D^6$  is then threaded through the perforations in said lugs and secured in position by keys  $d^6$ . To detach the fender, it is only necessary to detach the bolt from said lugs and lift the fender upward until the hangers clear the rail. It will be seen from the plan view of my fender shown in Fig. 2 that I avoid sharp angles and make the projecting part of the frame in obtuse angles. The outer end piece is made sufficiently wide to hold a person, or, should it trip him, to throw the body back at the central portion of the fender. The diagonal sides would either move a prostrate body to one side or receive it at the side of the fender on the strips  $G$ . Said end piece and diagonal sides approach close to the pavement and rails, and would either pick up a person or move him to one side.

Another advantage of the diagonal sides is to prevent the fender projecting too near the inside rail of the next track, or in tripping a person or striking a vehicle in rounding a curve, and it also allows the rear sides of the fender to extend to the outer sides of the car-steps, and lessen the liability of the outer end of the fender striking persons passing closely in front of the car.

It is evident that the cushion, formed of the springs  $F$  and strips  $F'$ , which projects above the strips  $G$ , enables me to decrease the height and weight of the fender and fender-support, and moreover allows the strips  $G$  to be given less slant or incline without exposing the top of the dashboard or extending the fender further outwardly.

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

1. In a car-fender, the combination of the fender-frame, consisting of the upright portion having vertical side pieces provided with rearwardly-extending hangers and united by transverse braces, outwardly-projecting side arms formed integral, the diagonal side pieces connected thereto, and the straight end piece connected to said diagonal pieces, substantially as shown and described.

2. In a detachable car-fender, the combination of the fender-support consisting of longitudinal bars attached to the car-truck and a vertical portion secured to said bars and projecting in front of the car, and a fen-

der having hangers adapted to be hooked to said vertical portion at the top and means for securing said fender to the lower end of said fender-support, substantially as shown and described.

3. The combination with a car-fender, of a cushioning device consisting of a series of longitudinal strips of yielding material secured independently of each other by their ends to the inner and outer ends and diagonal sides of the fender-frame, and having also secured near their outer ends a series of taut vertical strips, substantially as, and for the purposes, described.

4. In a car-fender, a receding cushioning device consisting of a series of upright springs attached by their inner ends to the fender-frame and bowed outwardly and downwardly, their outer ends being free and their outer portions connected together by a series of transverse strips, substantially as shown and described.

5. In a car-fender, the combination of the fender-frame, the longitudinal strips G, and the cushioning device adapted to project above said strips and consisting of a series of bowed springs interlaced by a series of transverse strips of yielding material, substantially as shown and described.

6. In a detachable car-fender the combination of the supporting-frame, the fender-frame, the longitudinal strips G, and the receding cushioning device consisting of a series of upright springs bowed outwardly and downwardly projecting above said fender-frame connected together and their lower free ends impinging against the strips G substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

PETER McMENAMIN.

Witnesses:

FRANK HEYER,  
JOHN T. MELLOR.