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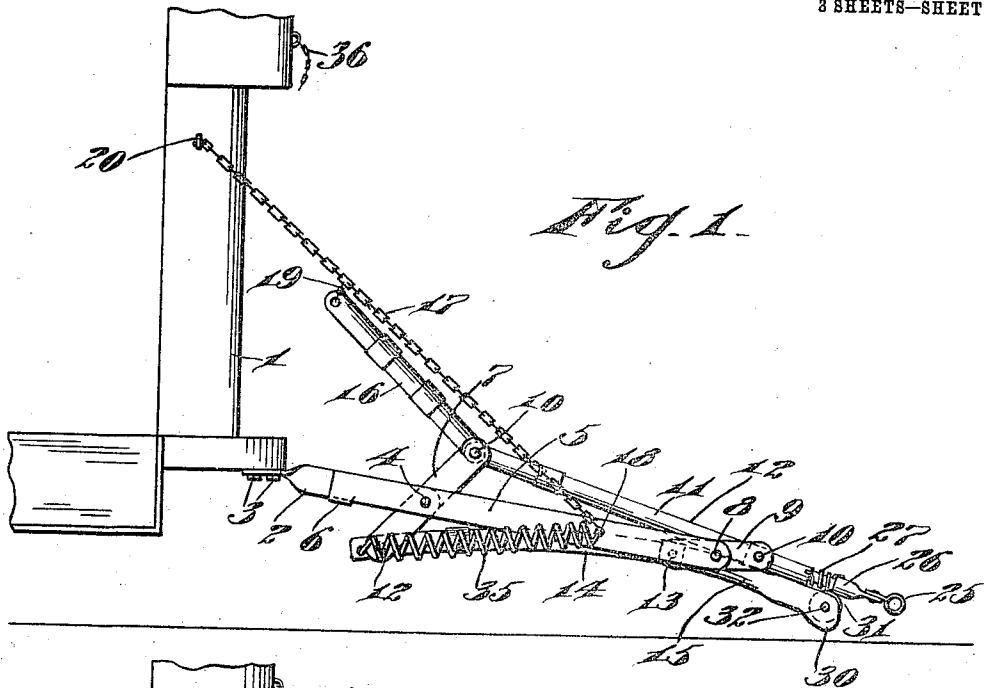
CAR FENDER.

APPLICATION FILED SEPT. 17, 1909.

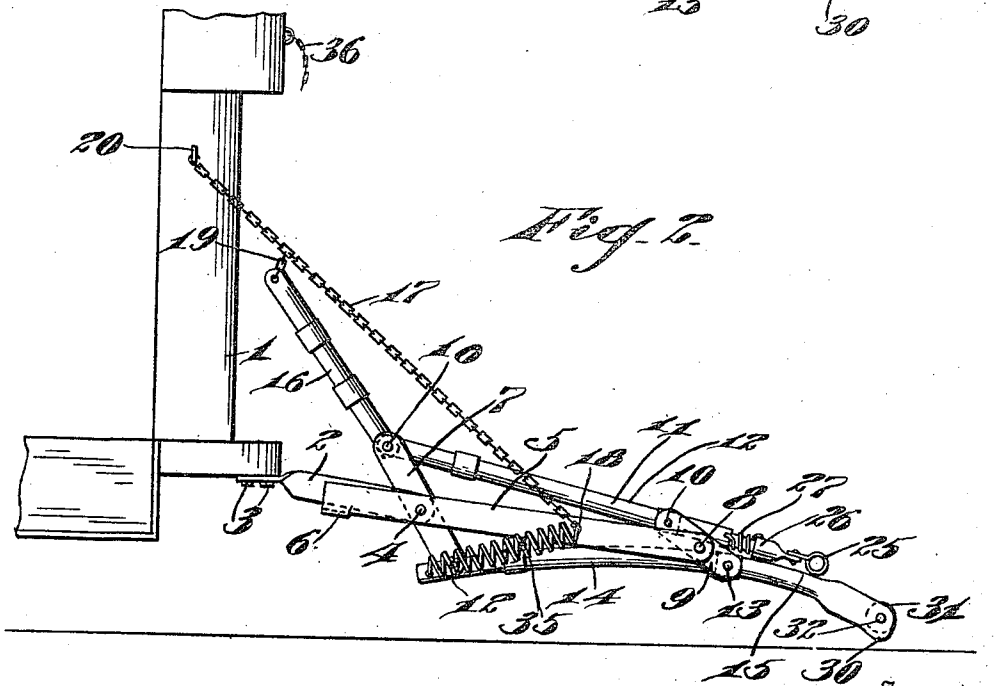
945,813.

Patented Jan. 11, 1910.

3 SHEETS—SHEET 1.



*Fig. 1.*



*Fig. 2.*

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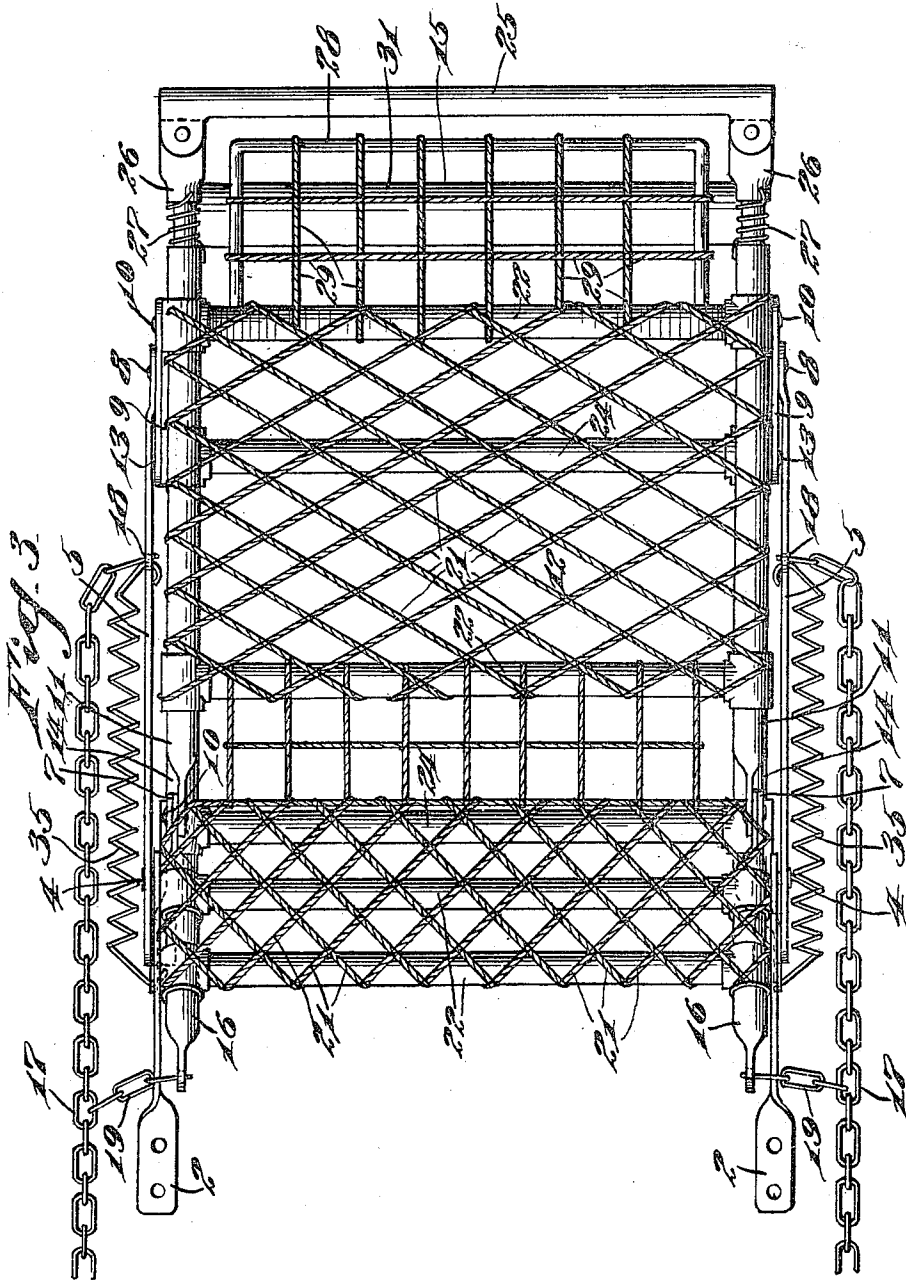
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3 SHEETS—SHEET 2.



Inventor

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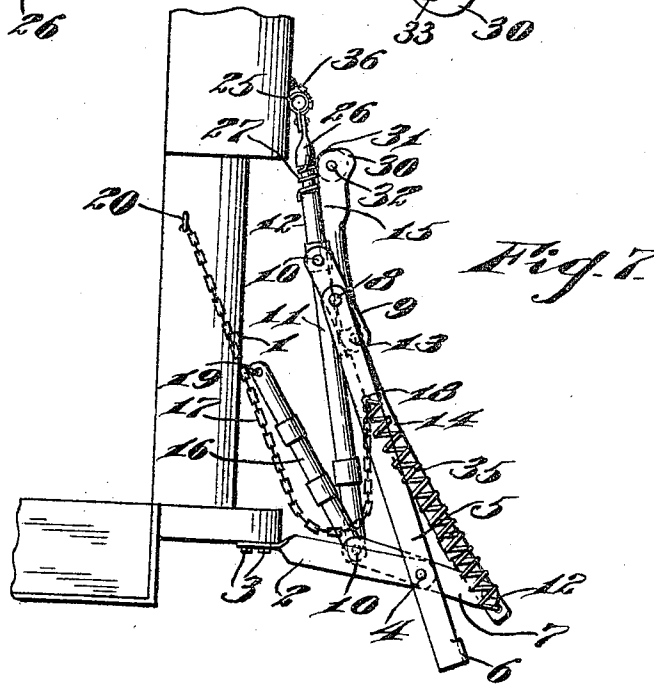
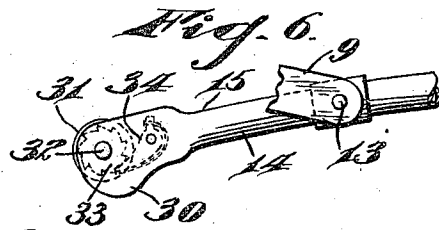
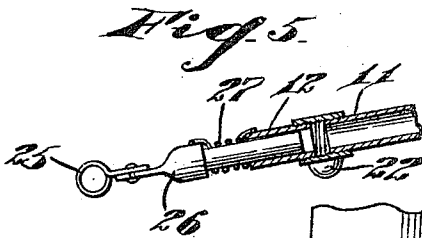
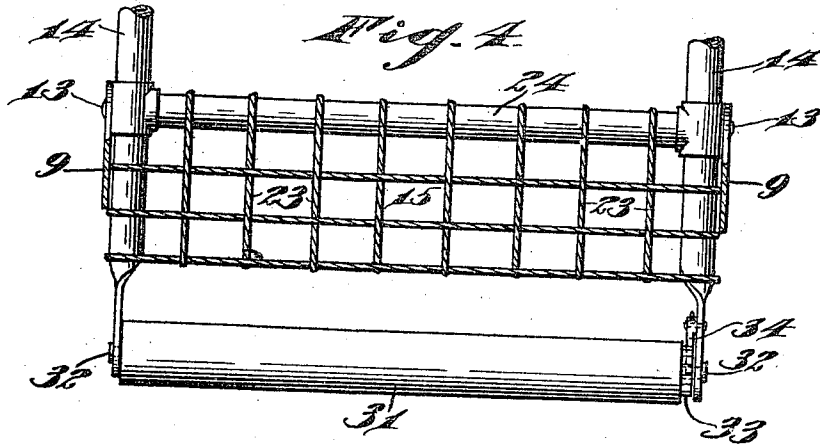
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3 SHEETS—SHEET 3.



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# UNITED STATES PATENT OFFICE.

OTTO J. SCHMITT, OF PHILADELPHIA, PENNSYLVANIA.

CAR-FENDER.

945,813.

Specification of Letters Patent.

Patented Jan. 11, 1910.

Application filed September 17, 1909. Serial No. 518,140.

*To all whom it may concern:*

Be it known that I, OTTO J. SCHMITT, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Car-Fenders, of which the following is a specification.

My invention relates to improvements in car fenders, the object of the invention being to provide a fender, which when it comes into contact with a person or object will operate to gently deposit the person or object upon the fender, and prevent any possibility of the fender passing over the person or object.

A further object is to provide a fender, comprising in effect two platforms, one above the other, the upper platform normally projecting out beyond the lower, but which when it strikes an object will move rearward, while the lower platform will move forwardly and downwardly, so as first to gently deposit the person or object upon the upper platform and second to absolutely prevent possibility of passing below the fender, the lower platform moving downward in close proximity to the ground, and serving to prevent such an occurrence.

With these and other objects in view, the invention consists in certain novel features of construction, and combinations and arrangements of parts as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings, Figure 1, is a view in side elevation illustrating my improvements in normal position. Fig. 2, is a similar view showing the parts in position after engagement with a person or object. Fig. 3, is a plan view of Fig. 1. Fig. 4, is a plan view of the forward end of the lower platform. Fig. 5, is a view in longitudinal section of one side member of the upper platform. Fig. 6, is a fragmentary view in side elevation showing the forward end of a side member of the lower platform slightly enlarged, and Fig. 7, is a view in side elevation showing the fender in folded or upright position.

1 represents the forward end of a car, to the bottom of which twisted bars 2 are secured by bolts 3, and these twisted bars are in turn pivotally connected by pivots 4 with bars 5, the latter having lips or lugs 6 at their inner ends to project below bars 2, and

normally hold the bars 5 in the position shown in Fig. 1. The pivots 4 also pass through the center of links 7, and pivots 8 at the forward ends of bars 5 pass through the center of links 9, said links 9 being shorter than links 7. The upper ends of links 7 and 9 are pivotally connected by means of pivots 10 with the side bars 11 of the upper platform 12, and the lower ends of the links 7 and 9 are pivotally connected by pivots 13 to the side bars 14 of lower platform 15.

The upper platform 12 at its rear end is provided with an extension 16, which latter is pivotally connected to the main portion of this platform by means of the pivots 10 above referred to, and is further supported by means of chains 17, which latter are connected at one end at openings 18 in bars 5, between their ends by links or chains 19 with the upper or rear ends of extension 16, and at their opposite ends with the car dashboard as shown at 20, to hold the extension 16 at a somewhat greater incline than the upper platform 12, so as to prevent any possibility of a person or object being rolled over the fender when caught.

The platform 12 and extension 16 may be made up in various ways, such for instance as shown most clearly in Fig. 3, in which a netting of rope 21 is employed to connect the side bars of the platform and extension, and transverse bars 22 strengthen the structure, said netting being so arranged as to facilitate the pivotal movement of the extension 16 and the platform 12 with relation to each other. The lower platform 15 is also provided at its forward end with a suitable rope netting 23, and the side bars 14 of this lower platform are connected by transverse rods 24.

The side bars 11 of the upper platform 12 are preferably of tubular form, and a cross bar 25 is secured to rods 26, and the latter telescoped in the ends of the side bars 11, and coiled springs 27 around the rods 26 are secured at their ends to the side bars 11 and rods 26 respectively, and provide cushions to relieve a person or object from the shock of contact. The space between the side bars 11 and cross bar 25 is preferably filled by a frame 28, and netting 29, which may of course be of various forms.

The side bars 14 of the lower platform 15 are provided at their forward ends with downwardly projecting enlargements 30, which serve to take the wear of any contact

with the ground, and keep a roller 31 off the ground. This roller 31 has rotary mounting by means of trunnions 32 in the forward ends of side bars 14, and is provided with a ratchet wheel 33, with which a spring pressed dog 34 is in contact. The teeth of the ratchet 33 are so arranged that the roller 31 can only turn in one direction, and that is upwardly and rearwardly, so as to bring a person or object upwardly or rearwardly on the fender, and not in the reverse direction, which would tend to ride the fender over the person or object.

Coiled springs 35 connect the rear ends of the side bars 14 with the bars 5 at the openings 18, which springs however, are of just the proper tension to change the position of parts from that shown in Fig. 1, to that shown in Fig. 2, when the forward end of the upper platform 12 strikes a person or object, but these springs are not strong enough of themselves to shift the position of parts, but when the parts are as in Fig. 1, the weight of the upper platform overcomes the tension of the springs sufficiently to hold the parts in this position, until a blow against an object, gives the upper platform a rearward movement, when the springs will complete the change of position.

In operation, the fender is normally as shown in Fig. 1. When the cross bar 25 strikes a person, the shock of contact is sufficient to give a rearward movement of the upper platform 12, and the springs 35 will then cause the upper platform to move rearwardly, while the lower platform will move downwardly and forwardly to the position shown in Fig. 2. This movement of the platforms will cause the fender to scoop up the person struck, and deposit him gently upon the upper platform, the roller 31 of the lower platform preventing any possibility of him passing below the fender, as the lower platform will move downwardly in the arc of a circle, so as to touch or almost touch the ground, and prevent any possibility of any object of any size passing below the platform. The fender therefore operates when striking a person to gently move rearward with the person, and prevent a hard blow against the fender when he falls thereon. The cross bar 25 being cushioned by springs 27 will not give a hard blow to the person, but will serve to drop sufficiently to deposit him upon the fender. If he should fall and be upon the ground when struck by the fender, the lower platform will serve to scoop him up, and he will be rolled gently upon the upper platform.

By this construction, it is quite impossible for the fender to pass over an object of any size, and the device is designed not only to pick up a person in standing position, but also one lying upon the track. When the fender is not in use, it may be folded as

shown in Fig. 7, when a chain or other suitable device 36 upon the car platform may hold the fender in this folded position.

Various slight changes might be made in the general form and arrangement of parts described without departing from my invention, and hence I do not restrict myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the claims.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a car fender, the combination with longitudinal bars, links pivotally supported between their ends on said bars, upper and lower platforms pivotally connected to said links, and springs connecting said bars with the rear ends of the lower platform.

2. In a car fender, the combination with parallel longitudinal bars, a pair of links pivotally connected between their ends to each of said bars, an upper platform pivotally connected to the upper ends of said links, a lower platform pivotally connected to the lower ends of said links, springs connected at one end to the bars between the links, and at their other ends to the lower platform adjacent its pivotal connection with the rear links, and said upper platform when projected forwardly being of a weight sufficient to overbalance the tension of said springs.

3. In a car fender, the combination with parallel longitudinal bars, a pair of links pivotally connected between their ends to each of said bars, an upper platform pivotally connected to the upper ends of said links, a lower platform pivotally connected to the lower ends of said links, springs connected at one end to the bars between the links, and at their other ends to the lower platform adjacent its pivotal connection with the rear links, and said upper platform when projected forwardly being of a weight sufficient to overbalance the tension of said springs, a cross bar at the forward end of the upper platform, and springs elastically cushioning said bar.

4. In a car fender, the combination with parallel longitudinal bars, a pair of links pivotally connected between their ends to each of said bars, an upper platform pivotally connected to the upper ends of said links, a lower platform pivotally connected to the lower ends of said links, springs connected at one end to the bars between the links, and at their other ends to the lower platform adjacent its pivotal connection with the rear links, and said upper platform when projected forwardly being of a weight sufficient to overbalance the tension of said springs, and a roller supported at the forward end of said lower platform.

5. In a car fender, the combination with parallel longitudinal bars, a pair of links pivotally connected between their ends to each of said bars, an upper platform pivotally connected to the upper ends of said links, a lower platform pivotally connected to the lower ends of said links, springs connected at one end to the bars between the links, and at their other ends to the lower platform adjacent its pivotal connection with the rear links, and said upper platform when projected forwardly being of a weight sufficient to overbalance the tension of said springs, a roller having rotary mounting at the forward end of the lower platform, a ratchet wheel secured to turn with said roller, a dog engaging said ratchet wheel, whereby said roller is permitted only an upward and rearward rotary movement.

6. In a car fender, the combination with parallel longitudinal bars, a pair of links pivotally connected between their ends to each of said bars, an upper platform pivotally connected to the upper ends of said links, a lower platform pivotally connected to the lower ends of said links, springs connected at one end to the bars between the links, and at their other ends to the lower platform adjacent its pivotal connection with the rear links, and said upper platform when projected forwardly being of a weight sufficient to overbalance the tension of said springs, an extension on said upper platform pivotally connected to the lower platform, chains adapted to be connected with the front end of a car, and at their forward ends to said first mentioned bars, and between their ends to the rear and upper ends of their extension.

7. In a car fender, the combination with an upper object receiving platform, a lower platform, bars supporting said platforms, and means so connecting the platforms that when the upper of said platforms engages an object the upper platform will move rearwardly, while the lower platform will move forwardly, of a car, bars secured to the car and pivotally secured to said first mentioned bars, lugs on said first mentioned bars projecting below the bars secured to the car, to hold the said first mentioned bars and the fender in normal position, and netting of flexible material upon said upper and lower platforms.

8. In a car fender, the combination with longitudinal bars, links pivotally supported between their ends on said bars, upper and lower platforms pivotally connected to said links, and springs connecting said bars with the rear ends of the lower platform of a car, bars secured to the car and pivotally secured to said first mentioned bars, lugs on said first mentioned bars projecting below the bars secured to the car, to hold the said first mentioned bars and the fender in normal position,

and netting of flexible material upon said upper and lower platforms.

9. In a car fender, the combination with parallel longitudinal bars, a pair of links pivotally connected between their ends to each of said bars, an upper platform pivotally connected to the upper ends of said links, a lower platform pivotally connected to the lower ends of said links, springs connected at one end to the bars between the links, and at their other ends to the lower platform adjacent its pivotal connection with the rear links, and said upper platform when projected forwardly being of a weight sufficient to overbalance the tension of said springs, of a car, bars secured to the car and pivotally secured to said first mentioned bars, lugs on said first mentioned bars projecting below the bars secured to the car, to hold the said first mentioned bars and the fender in normal position, and netting of flexible material upon said upper and lower platforms.

10. In a car fender, the combination with parallel longitudinal bars, a pair of links pivotally connected between their ends to each of said bars, an upper platform pivotally connected to the upper ends of said links, a lower platform pivotally connected to the lower ends of said links, springs connected at one end to the bars between the links, and at their other ends to the lower platform adjacent its pivotal connection with the rear links, and said upper platform when projected forwardly being of a weight sufficient to overbalance the tension of said springs, a cross bar at the forward end of the upper platform, and springs elastically cushioning said bar, of a car, bars secured to the car and pivotally secured to said first mentioned bars, lugs on said first mentioned bars projecting below the bars secured to the car, to hold the said first mentioned bars and the fender in normal position, and netting of flexible material upon said upper and lower platforms.

11. In a car fender, the combination with parallel longitudinal bars, a pair of links pivotally connected between their ends to each of said bars, an upper platform pivotally connected to the upper ends of said links, a lower platform pivotally connected to the lower ends of said links, springs connected at one end to the bars between the links, and at their other ends to the lower platform adjacent its pivotal connection with the rear links, and said upper platform when projected forwardly being of a weight sufficient to overbalance the tension of said springs, and a roller supported at the forward end of said lower platform, of a car, bars secured to the car and pivotally secured to said first mentioned bars, lugs on said first mentioned bars projecting below the bars secured to the car to hold the said first men-

tioned bars and the fender in normal position, and netting of flexible material upon said upper and lower platforms.

12. In a car fender, the combination with  
 5 parallel longitudinal bars, a pair of links  
 pivotally connected between their ends to  
 each of said bars, an upper platform piv-  
 otally connected to the upper ends of said  
 10 links, a lower platform pivotally connected  
 to the lower ends of said links, springs con-  
 nected at one end to the bars between the  
 links, and at their other ends to the lower  
 platform adjacent its pivotal connection  
 with the rear links, and said upper platform  
 15 when projected forwardly being of a weight  
 sufficient to overbalance the tension of said  
 springs, a roller having rotary mounting at  
 the forward end of the lower platform, a  
 ratchet wheel secured to turn with said  
 20 roller, a dog engaging said ratchet wheel,  
 whereby said roller is permitted only an  
 upward and rearward rotary movement, of  
 a car, bars secured to the car and pivotally  
 secured to said first mentioned bars, lugs on  
 25 said first mentioned bars projecting below  
 the bars and the fender in normal position,  
 and netting of flexible material upon said  
 upper and lower platforms.

13. In a car fender, the combination with  
 30 parallel longitudinal bars, a pair of links  
 pivotally connected between their ends to

each of said bars, an upper platform piv-  
 otally connected to the upper ends of said  
 links, a lower platform pivotally connected  
 to the lower ends of said links, springs con- 35  
 nected at one end to the bars between the  
 links, and at their other ends to the lower  
 platform adjacent its pivotal connection  
 with the rear links, and said upper plat-  
 form when projected forwardly being of a 40  
 weight sufficient to overbalance the tension  
 of said springs, an extension on said upper  
 platform pivotally connected to the lower  
 platform, chains adapted to be connected  
 with the front end of a car, and at their 45  
 forward ends to said first mentioned bars,  
 and between their ends to the rear and upper  
 ends of their extension, of a car, bars se-  
 cured to the car and pivotally secured to  
 said first mentioned bars, lugs on said first 50  
 mentioned bars projecting below the bars  
 secured to the car to hold the said first men-  
 tioned bars and the fender in normal posi-  
 tion, and netting of flexible material upon  
 said upper and lower platforms. 55

In testimony whereof I have signed my  
 name to this specification in the presence of  
 two subscribing witnesses.

OTTO J. SCHMITT.

Witnesses:

CONRAD SCHMITT,  
 J. A. L. MULHALL.