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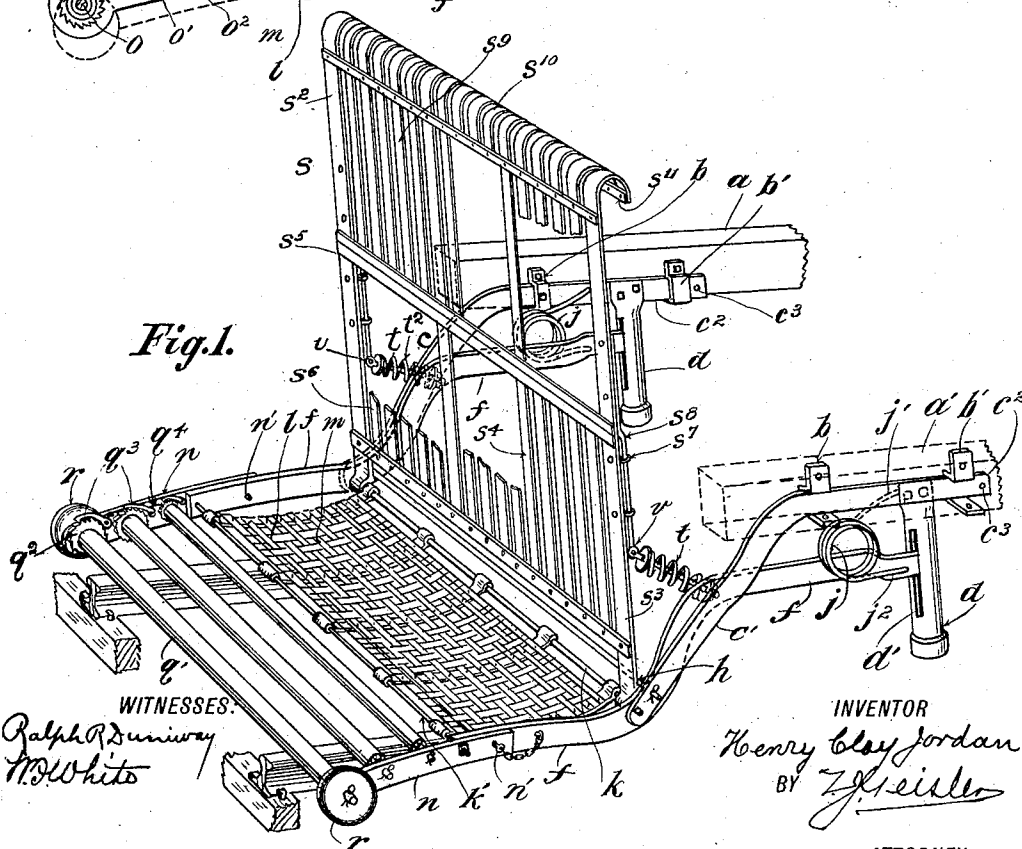
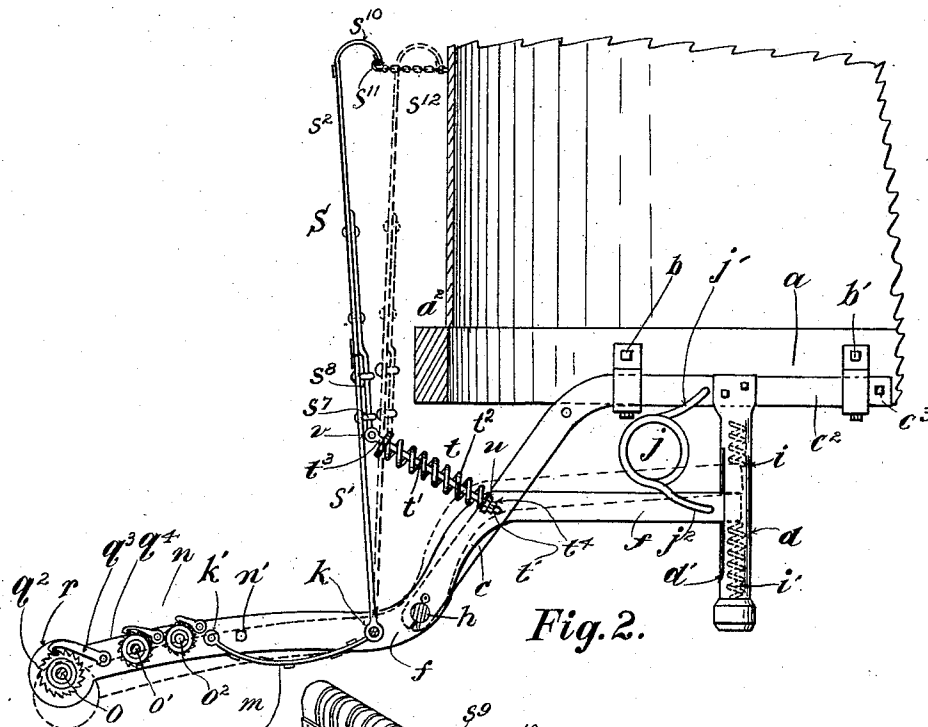
PATENTED OCT. 22, 1907.

H. C. JORDAN.

CAR FENDER.

APPLICATION FILED MAR. 4, 1907.

2 SHEETS—SHEET 1.



WITNESSES:

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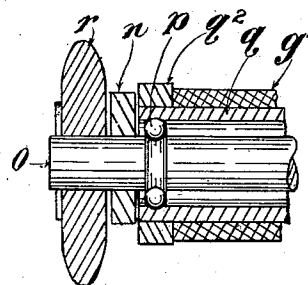
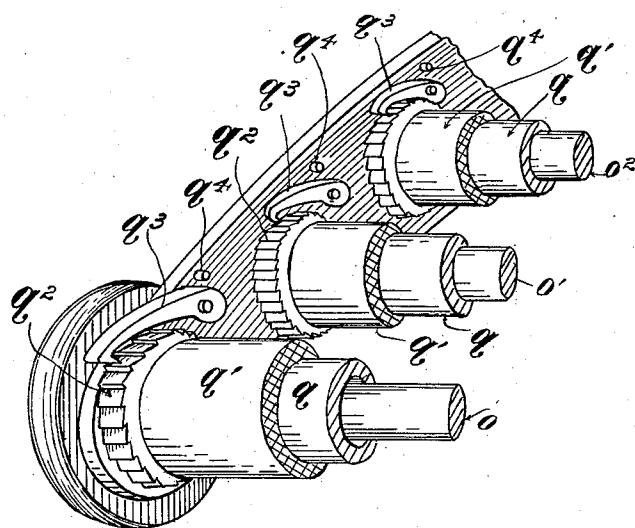
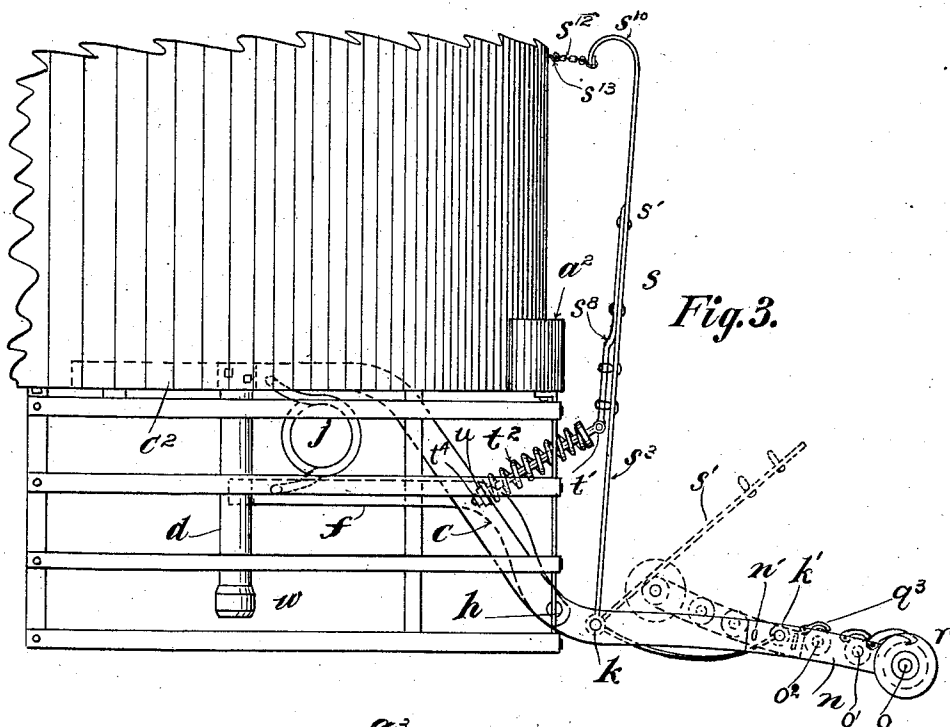


Fig. 4.

Fig. 5.

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UNITED STATES PATENT OFFICE.

HENRY CLAY JORDAN, OF PORTLAND, OREGON, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, OF ONE-FOURTH TO JOSEPH C. GRIFFITH, SEVEN-SIXTEENTHS TO JOHN WESLEY HURLEY, AND ONE-SIXTEENTH TO JAMES N. SUTTON, ALL OF PORTLAND, OREGON.

CAR-FENDER.

No. 869,183.

Specification of Letters Patent.

Patented Oct. 22, 1907.

Application filed March 4, 1907. Serial No. 360,579.

To all whom it may concern:

Be it known that I, HENRY CLAY JORDAN, a citizen of the United States, and a resident of Portland, in the county of Multnomah and State of Oregon, have invented a certain new and useful Improvement in Car-Fenders, of which the following is a specification, reference being had to the accompanying drawings as constituting a part thereof.

My invention has for its object to provide a car fender which shall be adapted to project some distance in front of the bumper or dash-board of the car and ride normally over the road bed, so as not to have contact therewith or with projections of the rails, but adapted to dip down close to the road surface the instant the projecting or outer end of the fender strikes a person, and being further arranged so that the momentum of the car will then operate the fender to pick up the person struck and move him up into the basket-like part of the fender, and there safely hold him until the car can be brought to a standstill.

Figure 1 is a perspective view of my fender, showing the same as attached to one of the ends of the car-sill, the parts being broken away so as to avoid covering the other parts back of the same; Fig. 2 is a longitudinal section of a car-end provided with my fender; this figure also showing in dotted outline the motion of the horizontal and vertical parts of my fender when operating to pick up a person; Fig. 3 is a side elevation of a car-end provided with my fender; also showing the location of the side guards; and Figs. 4 and 5 are details of construction, which will be more fully explained in the body of the specification.

To the inner sides, near the ends of the two longitudinal sills, a, a' , of the car body are secured a pair of box-brackets b, b' , removably holding a pair of carrier-arms, c, c' . To the horizontal members c^2 of the carrier-arms are affixed pendent tubular casings or guides d , made with slots d' , respectively, in which are inserted the inner ends of the rear members f of the fender frame; such members f being pivoted to the forward extremity of the carrier-arms by a rod h . To prevent the carrier-arms c slipping out of the box-brackets, b, b' , I provide the same with pins c^3 , as shown in Figs. 1 and 2. Above and below the ends of the frame members f , in the tubular casings d , are provided coil-springs, i, i' , so as to allow such ends ample play, at the same time holding the same normally in approximately horizontal position and free from vibration. The frame members f are furthermore controlled by a pair of coil-springs j , one of the members j' of which is made fast to the horizontal member c^2 of a carrier-arm c , and the other member j^2 being fastened to the inner end of the frame member f . The

function of the springs, j, j' , is to enable the adjustment of the fender so that the same will be normally clear of the tracks, and other obstructions in the road-bed, but that it will dip down into its active position upon having thrown thereon any given number of pounds.

In the forward end of the frame members f are provided transversely extending rods k, k' , to which are fastened a series of straps l , and to the latter are fastened interwoven bands m , the whole constituting a sort of a basket by which the object picked up by the fender is supported.

To the forward ends of the frame members f are pivoted by the rod k' arms n, n , which are locked into projecting position by means of removable pins n' . Affixed transversely between the front frame members n are a plurality of rods or axles o, o', o^2 (see detail Fig. 4). On each of the axles o, o', o^2 is rotatably mounted a tubes q , the ends of which tubes are supported by ball-bearings; see detail Fig. 5. The outer surface of the tubes q is covered with a resilient material q' , such as rubber hose. On one end of each of the outer tubes q is affixed a ratchet wheel q^2 , engaged by a dog q^3 , whereby the tubes q are prevented from rotating otherwise than upward and inward of the fender frame. The dogs q^3 are prevented from lifting too high by means of retaining pins q^4 . The object of controlling the rotation of the rollers q as mentioned is to prevent the person struck getting under the fender, and also to prevent the fender from passing over the person struck. In other words, each of the rollers q is adapted to revolve in one direction only, so that when my fender strikes a person, in front of a car, there would be no tendency of riding over him, but to the contrary said rollers having free rotation in the direction mentioned only, will have a tendency to pass under and pick up the person and roll him into the basket part of my fender; and for the two fold purpose of reducing the force of the blow struck by my fender upon the body picked up, and also to insure a friction surface which, in its contact with the clothes of a person will contribute to hold him on my fender; I encase the tubes q with woven fabric q' , which may consist of a woven material, or other material specially adapted to present a roughened surface, and having some inherent resiliency.

Exterior of the sides of the front ends of the fender-frame there are mounted on the extremities of the axle o , wheels r , which wheels normally are positioned clear of the surface of the road and the car tracks; but as soon as my fender is thrown into its active state, by a body falling upon the same, it is immediately depressed, and then said wheels run on the surface, and support the projecting front end of the fender in such a manner as

to bring the rollers q slightly above the upper surface of the rails, so that they may rotate as described. Without such provision, the front end of my fender, while carrying a body picked up, would drag over the car rails during the period the car continues to move forward. The front wheels r are made with conical exterior faces or convexed rims as shown in Fig. 5, so as to adapt the same to climb over a rail or other projections in the road surface. To prevent the person picked up by my fender being thrown against or struck by the car, I provide my fender with a vertically arranged cushion-frame S . The same is preferably made in two sections s' , s'' . The lower-section has vertical end-members s^3 , made with eyes at their lower ends by which they are hinged to the rod k ; this section further comprises vertical members s^4 , a top transverse member s^5 , and a series of vertical bars s^6 . The lower section s' of such cushion frame S removably supports the upper section s'' , for which purpose the outer members s^3 of the lower-section are made with eyes s^7 , in which are inserted the bolt-like members s^8 , the upper ends of which are riveted or otherwise fastened to the outer frame members of the upper section s'' . Said upper section further comprises a plurality of vertical bars s^9 , and the upper ends s^{10} of all the vertical bars of such upper section are turned in, as shown, so as to be adapted to strike against the front of the car and break the force of the blow sustained by a body falling against the cushion-frame. The turned-in ends s^{10} are connected with each other by a transverse bar s^{11} , to cause the upper section of the cushion-frame to move as a unit. The lower-ends of the sides of the cushion-frame S are supported by spring-controlled telescoping rods t , the function of which is to normally hold the cushion-frame away from the bumper a^2 .

Upon a body being thrown against the cushion-frame S , the telescoping-rods t will allow such cushion-frame some backward-motion, but not enough to allow the same to strike against the bumper. In short, the rods t serve to break the impact, and as soon as the pressure against the cushion-frame has been relieved they will operate to restore the cushion-frame to its normal position.

To limit the outward movement of the upper end of the cushion-frame the turned-in ends thereof are connected with the car body by chains s^{12} . The ends of the chains s^{12} are removably fastened to a hook s^{13} provided on the upper part of the breast of the car.

As shown more particularly in Fig. 2, the telescoping-rods t consist of a rod t' , having longitudinal movement in a perforated lug u , rigidly affixed to the frame-member f , and holding a coil-spring t^2 . The lower end of such coil-spring bears against such lug u and the upper ends thereof against a washer t^3 , and the upper ends of the rod t' are connected to the eyes at the bottom of the bolts s^8 . The movement of the springs t^2 is limited by nuts t^4 , and by the adjustment of the latter the relative position of the cushion-frame, with respect to the car-end, may be controlled, as desired.

The projecting lower, or horizontal portion of the fender-frame is adapted to be folded, as presently will be described, so as to make it more convenient to store a car, equipped with the device, in the car barn, and to be able to remove a part of the projecting frame-portion which, in the coupling of the two cars, end to end,

might be in the way. To accomplish such folding, all that is required is to remove the locking pins n' whereupon the forward members n of the fender-frame, can be folded back as shown by dotted outline in Fig. 3.

The cushion-frame S may be taken apart by disconnecting the chains s^{12} and removing the pins v connecting the telescoping-rods t with the lower-ends of the bolt-rods s^8 ; upon which the upper section of the cushion-frame may be lifted off, and the lower section s' thereof dropped forward, as shown in dotted outline in Fig. 3; thereby also facilitating the storing or coupling of cars provided with my fender.

It is to be noted that my perpendicular cushion-frame S is so arranged as to provide ample room for the motor-man to use the usual rod to move a switch. I also provide side-guards w , shown in Fig. 3, fastened to the car-sills and so arranged as to prevent a body falling against the side of the forward end of the car getting under my fender and the car wheels. The side-guards w are made in two pieces curved in front to follow the rounding of the breast of the car, but leaving ample space between them to accommodate the described main parts of my fender. It will also be noted that the horizontal projecting portion of my fender and the cushion-frame S may be removed as a whole by disconnecting the telescoping rods t , withdrawing the rod h , disconnecting the chains s^{12} and disconnecting the springs j from the frame members f . Or if it is desired to remove the entire fender, and all of its connecting parts as a whole, by disconnecting the chains s^{12} and removing the pins c^3 from the ends of the carrier-arms, the latter may be pulled out of the box-brackets b , b' , and by so doing my entire device is removed from the car.

The description of the manner of detaching my fender from a car also makes plain the convenient manner in which the same may be attached to a car, and also that it in no wise interferes with any of the appliances such as sand boxes, draw bar, brake-rods, fuse connections, gongs and other attachments affixed to the car ends.

I claim:

1. The combination with a car of carrier arms affixed to the sills thereof, a fender frame pivotally supported by the carrier-arms, said fender-frame being arranged to project forward of the car, a basket-like guard on said forward end, wheels on the front end of the fender-frame, means, connected to the inner ends of the fender-frame, adapted to normally hold the forward end thereof clear of the road surface, until a weight is thrown thereon, and means adapted to restrain the oscillation of the fender-frame on its axis.

2. The combination with a car of carrier-arms affixed to the sills thereof, hollow pendent guides on the ends of the carrier-arms and made with vertical slots, a fender-frame comprising longitudinal members pivotally supported by the carrier-arms, the rear ends of said frame-members being inserted in said slots of the pendent guides, wheels on the front end of the fender-frame, a basket-like guard carried by the forward end of the fender-frame, coil-springs in said pendent guides, above and below the inserted ends of said frame-members, whereby the vertical oscillation of the latter on their axis is restrained, and coil-springs connecting said inner ends of the frame-members to the carrier-arms and arranged to normally hold the forward end of the fender-frame clear of the road surface.

3. The combination with a car of carrier-arms affixed to the sills thereof, hollow pendent guides on the rear ends of the carrier-arms and made with vertical slots, a fender-frame comprising longitudinal members pivotally supported by the carrier-arms, the rear ends of said frame-members being inserted in said slots of the pendent guides,

and the forward end of the fender-frame projecting forward of the car, wheels on the front end of the fender-frame, a basket-like guard carried by said forward end, coil-springs in said pendent guides, above and below the inserted ends of said frame-members, whereby the vertical oscillation of the latter on their axis is restrained, and coil-springs connecting said inner ends of the frame-members with the carrier-arms and arranged to normally hold the forward end of the fender-frame clear of the road surface.

4. The combination with a car of carrier-arms affixed to the sills thereof, hollow pendent guides on the rear ends of the carrier-arms and made with vertical slots, a fender-frame comprising longitudinal members pivotally supported by the carrier-arms, the rear ends of said frame-members being inserted in said slots of the pendent guides, and the forward end of the fender-frame projecting forward of the car, wheels on the front end of the fender-frame, a basket-like guard carried by said forward end, coil-springs in said pendent guides, above and below the inserted ends of said frame-members, whereby the vertical oscillation of the latter on their axis is restrained, and coil-springs connecting said inner ends of the frame-members with the carrier-arms and arranged to normally hold the forward end of the fender-frame clear of the road surface, a series of axles transversely journaled in the front ends of the fender-frame, ball-bearings on the axle ends, tubular rollers supported at their ends on the ball-bearings, a resilient friction covering for the tubular rollers, and means restraining said rollers against rotation, otherwise than upward and inward.

5. The combination with a car of carrier-arms affixed to the sills thereof, hollow pendent guides on the rear ends of the carrier-arms and made with vertical slots, a fender-frame comprising longitudinal members pivotally supported by the carrier-arms, the rear ends of said frame-members being inserted in said slots of the pendent guides, and the forward end of the fender-frame projecting forward of the car, wheels on the front end of the fender-frame, a basket-like guard carried by said forward end, coil-springs in said pendent guides, above and below the inserted ends of said frame-members, whereby the vertical oscillation of the latter on their axis is restrained, coil-springs connecting said inner ends of the frame-members with the carrier-arms and arranged to normally hold the forward end of the fender-frame clear of the road surface, a series of axles transversely journaled in the front end of the fender-frame, ball-bearings on the axle ends, tubular rollers supported at their ends on the ball-bearings, a resilient friction covering for the tubular rollers, and means restraining said rollers against rotation, otherwise than upward and inward, the forward frame section in which said rollers are journaled, being jointed to the main frame so that the former may be folded back out of the way.

6. The combination with a car of carrier-arms affixed to the sills thereof, hollow pendent guides on the rear ends of the carrier-arms and made with vertical slots, a fender-frame comprising longitudinal members pivotally supported by the carrier-arms, the rear ends of said frame-members being inserted in said slots of the pendent guides, and the forward end of the fender-frame projecting forward of the car, wheels on the front end of the fender-frame, a basket-like guard carried by said forward end, coil-springs in said pendent guides, above and below the inserted ends of said frame-members, whereby the vertical oscillation of the latter on their axis is restrained, coil-springs connecting said inner ends of the frame-members with the carrier-arms and arranged to normally hold the forward end of the fender-frame clear of the road surface, a series of axles transversely journaled in the front end of the fender-frame, ball-bearings on the axle ends, tubular rollers supported at their ends on the ball-bearings, a resilient friction covering for the tubular rollers, and means restraining said rollers against rotation, otherwise than upward and inward, the forward frame section in which said rollers are journaled, being jointed to the main frame so that the former may be folded back out of the way, a vertical cushion-frame hinged to the main fender-frame rearward of said basket-like guard, telescoping spring-controlled rods arranged to normally hold the upper end of the cushion-frame away from the breast of the car, and connections between said upper ends of the cushion-frame and the car.

7. The combination with a car of carrier-arms affixed to the sills thereof, hollow pendent guides on the rear ends of the carrier-arms and made with vertical slots, a fender-frame comprising longitudinal members pivotally supported by the carrier-arms, the rear ends of said frame-members being inserted in said slots of the pendent guides, and the forward end of the fender-frame projecting forward of the car, wheels on the front end of the fender-frame, a basket-like guard carried by said forward end, coil-springs in said pendent guides, above and below the inserted ends of said frame-members, whereby the vertical oscillation of the latter on their axis is restrained, coil-springs connecting said inner ends of the frame-members with the carrier-arms and arranged to normally hold the forward end of the fender-frame clear of the road surface, a series of axles transversely journaled in the front end of the fender-frame, ball-bearings on the axle ends, tubular rollers supported at their ends on the ball-bearings, a resilient friction covering for the tubular rollers, and means restraining said rollers against rotation, otherwise than upward and inward, the forward frame-section in which said rollers are journaled, being jointed to the main frame so that the former may be folded back out of the way, a vertical cushion-frame hinged to the main fender-frame rearward of said basket-like guard, telescoping spring-controlled rods arranged to normally hold the upper end of the cushion-frame away from the breast of the car, said cushion-frame comprising a plurality of vertical bars, the upper ends of which are connected to each other and curved back in the form of a bow, and adapted to impinge upon the breast of the car, and connections between the latter and such curved bar ends.

8. The combination with a car of carrier-arms affixed to the sills thereof, hollow pendent guides on the rear ends of the carrier-arms and made with vertical slots, a fender-frame comprising longitudinal members pivotally supported by the carrier-arms, the rear ends of said frame-members being inserted in said slots of the pendent guides, and the forward end of the fender-frame projecting forward of the car, wheels on the front end of the fender-frame, a basket-like guard carried by said forward end, coil-springs in said pendent guides, above and below the inserted ends of said frame-members, whereby the vertical oscillation of the latter on their axis is restrained, and coil-springs connecting said inner ends of the frame-members with the carrier-arms and arranged to normally hold the forward end of the fender-frame clear of the road surface, a series of axles transversely journaled in the front ends of the fender-frame, ball-bearings on the axle ends, tubular rollers supported at their ends on the ball-bearings, a resilient friction covering for the tubular rollers, and means restraining said rollers against rotation, otherwise than upward and inward, a vertical cushion-frame hinged to the main fender-frame rearward of the basket-like guard, said cushion-frame comprising lower and upper sections, and the latter being removably supported by the lower section, and said cushion-frame further comprising a plurality of vertical bars, the upper ends of which are connected and curved back in the form of a bow and adapted to impinge upon the breast of the car, telescoping spring-controlled rods arranged to normally hold the cushion-frame away from the breast of the car, and connections between the latter and said curved bar ends.

9. A car fender comprising a longitudinally pivoting frame, the front end of which is inclined, a series of axles transversely journaled in such front end, ball-bearings on the axle ends, tubular rollers supported at their ends upon the ball-bearings, a resilient friction covering for the tubular rollers, means restraining said rollers against rotation, otherwise than upward and inward, means normally holding the front end of the fender above the road surface, but adapted to allow the same vertical movement upon impact, a basket-like guard rearward of the rollers, and wheels arranged to support the front end of the fender while holding a body.

10. A car fender comprising a longitudinally pivoting frame, the front end of which is inclined, a series of axles transversely journaled in such front end, ball-bearings on the axle ends, tubular rollers supported at their ends upon the ball-bearings, a resilient friction covering for the tubular rollers, means restraining said rollers against rotation, otherwise than upward and inward, means normally holding the front end of the fender above the road surface, but adapted to allow the same vertical movement upon impact, a basket-like guard rearward of the rollers, and wheels made with conical exterior faces and convexed rims, arranged to support the front end of the fender-frame while holding a body.

11. The combination with a car of carrier-arms affixed to the sills thereof, hollow pendent guides on the rear ends of the carrier-arms and made with vertical slots, a fender-frame comprising longitudinal members pivotally supported by the carrier-arms, the rear ends of said frame-members being inserted in said slots of the pendent guides, and the forward end of the fender-frame projecting forward of the car, wheels on the front-end of the fender-frame arranged to support the same while holding a body, said wheels being made with conical exterior faces and convexed rims, whereby the same are adapted to climb over projections on the road surface, a basket-like guard carried by said forward end of the fender, coil-springs in said pendent guides, above and below the inserted ends of said frame-members, whereby the vertical oscillation of the latter on their axis is restrained, coil-springs connecting said inner ends of the frame-members with the carrier-arms and arranged to normally hold the forward end of the fender-frame clear of the road surface, a series of axles transversely journaled in the front ends of the fender-frame, ball-bearings on the axle ends, tubular rollers supported at their ends on the ball-bearings, a resilient friction covering for the tubular rollers, means restraining said rollers against rotation, otherwise than upward and inward, a vertical cushion-frame hinged to the main fender-frame, rearward of the basket-like guard, said cushion-frame comprising lower and upper sections, and the latter being removably supported by the lower section, and said cushion-frame further comprising a plurality of vertical bars, the upper ends of which are connected and curved back in the form of a bow, thereby adapting the same to impinge upon the breast of the car, telescoping spring-controlled rods arranged to normally hold the cushion-frame away from the breast of the car, connections between the latter and said curved bar ends, and side guards affixed to the sides of the car and inclosing the

rear section of the pivoting fender-frame and the supports therefor.

12. The combination with a car of carrier-arms affixed to the sills thereof, hollow pendent guides on the rear ends of the carrier-arms and made with vertical slots, a transverse rod removably supported by the forward ends of the carrier-arms, a fender-frame comprising longitudinal members, pivoted on said rod of the carrier-arms, the rear ends of said frame-members being inserted in said slots of the pendent guides, and the forward end of the fender-frame projecting forward of the car, a frame section jointed to the forward end of the main fender-frame and arranged to be folded back, means normally holding such jointed frame-section in an inclined position, a series of axles transversely journaled in said jointed frame-section, ball-bearings on the axle ends, tubular rollers supported at their ends upon the ball-bearings, a resilient friction covering for the tubular rollers, means restraining said rollers against rotation, otherwise than upward and inward, wheels on the front end of the jointed section of the fender-frame, arranged to support the latter while holding a body, said wheels being made with conical exterior faces and convexed rims, whereby the same are adapted to climb over projections on the road surface, a basket-like guard carried by the forward end of the main fender-frame, coil-springs in said pendent guides, above and below the inserted ends of said frame-members, whereby the vertical oscillation of the latter on their axis is restrained, coil-springs connecting said inner ends of the frame-members with the carrier-arms and arranged to normally hold the forward end of the fender-frame clear of the road surface, a vertical cushion-frame hinged to said main fender-frame rearward of the basket-like guard, said cushion-frame comprising lower and upper sections, the latter being removably supported by the former, and said cushion-frame further comprising a plurality of vertical bars made of resilient material, the upper ends of which are connected and curved back in the form of a bow, thereby adapting the same to impinge upon the breast of the car, telescoping spring-controlled rods arranged to normally hold the cushion-frame away from the breast of the car, connections between the latter and said curved bar ends, and side guards affixed to the sides of the car and inclosing the rear section of the pivoting fender-frame and the supports therefor.

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