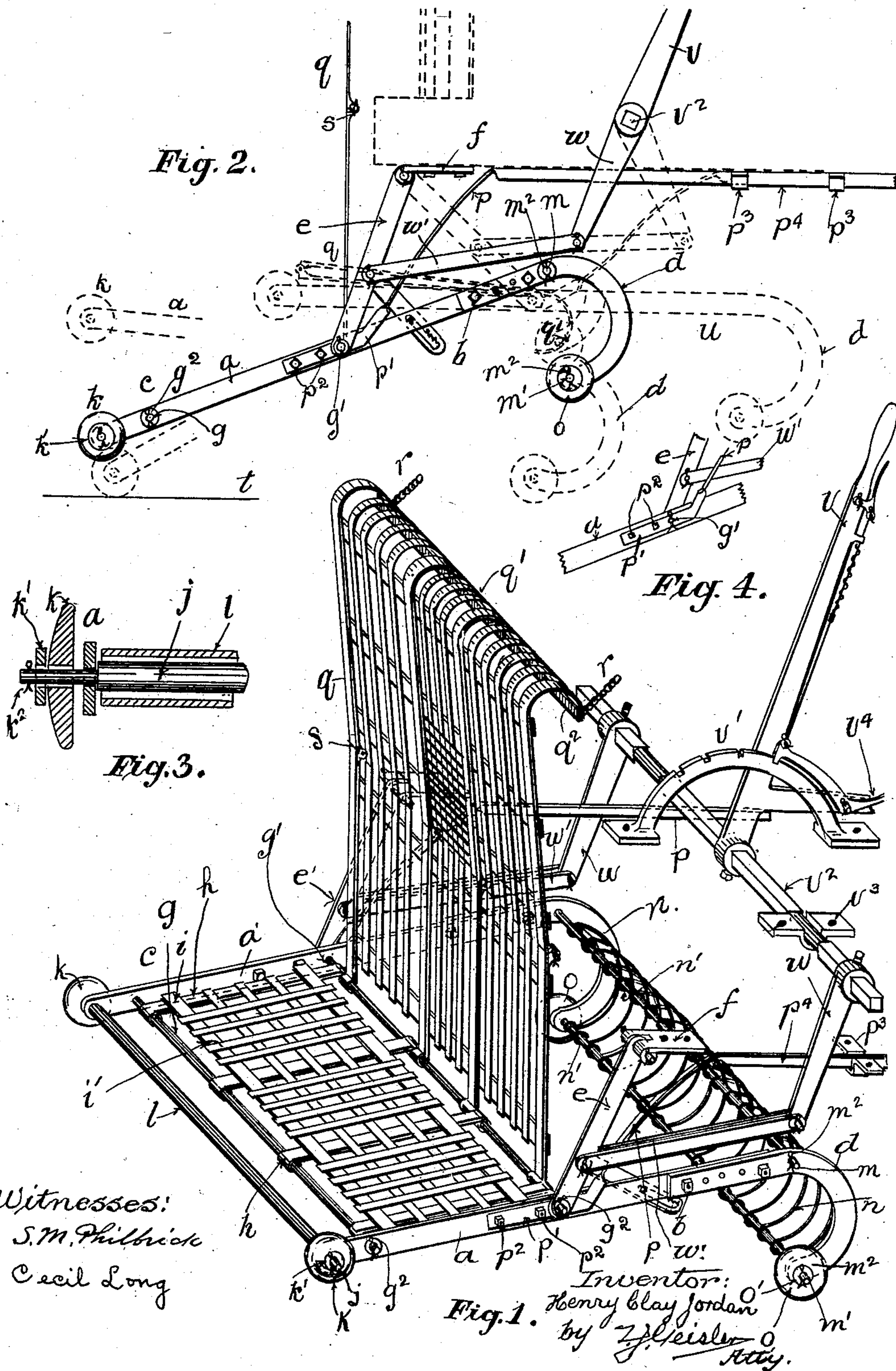


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AUTOMATIC CAR FENDER.
APPLICATION FILED DEC. 30, 1907.

912,574.

Patented Feb. 16, 1909.



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UNITED STATES PATENT OFFICE.

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AUTOMATIC CAR-FENDER.

No. 912,574.

Specification of Letters Patent.

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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 new and useful Improvement in Automatic Car-Fenders, of which the following is a specification, reference being had to the accompanying drawings as constituting a part thereof.

One of the imperfections and menaces of street-car fenders heretofore in use, is that there is constant apprehension of seriously injuring a person lying prone across the rails in front of the car, by reason of a projecting part of the fender riding over and pinning down an arm or leg, which has gotten under the same, while the main part of the body is being picked up by such projecting part of the fender.

My invention therefore has for its object to obtain a fender comprising a projecting catcher-carrier and a rearwardly disposed wheel-guard, both being parts of a common frame pivoted under the car-end and substantially poised in balance, so that the projecting catcher-carrier will tilt down on the slightest impact with a person run into, and as readily lift, to allow a person, lying prone across the rails to pass under the projecting catcher-carrier; the lifting of the latter simultaneously tilting the wheel guard-end, so as to bring that part close to the rails in front of the wheels. To hold the projecting catcher-carrier normally uplifted a short distance above the rails, I provide a spring or preferably springs; and my invention comprises also the other features hereinafter fully described and claimed.

In the drawings, Figure 1 is a perspective representation of my fender as it is applied to a car-end, the car-body itself, however, being omitted for convenience; Fig. 2 is a side elevation diagrammatically representing the operation of my fender; Fig. 3 is a sectional detail; and Fig. 4 shows a modified and by me preferred detail of construction.

Referring now to the reference characters in the respective views: The main frame of my fender comprises two bars *a*, *a'*, which may be of one-piece construction, or to enable the adjustment of said frame-members *a*, *a'*, to the different lengths of cars, they may be of two-piece construction, as the same are shown in the drawings, and are

rigidly bolted together by bolts *b*. The front projecting ends of the frame constitute the frame portion of what I term the catcher-carrier, *c*, of my fender, by reason of its function, which is to catch and carry the person run down on the road-bed; while the rear ends of said frame-members constitute the frame of the wheel-guard *d*. The frame-members *a*, *a'* are pivotally suspended by means of hangers *e*, *e'*, hingedly supported by plates *f*, fastened to the under side of the car-body. The catcher-carrier part of my fender is provided with transverse rods *g*, *g'*, on which are affixed longitudinally arranged straps *h*, and thereon are fastened a series of crossing closure-strips *i*, *i'*, the latter constituting the carrier bottom of said portion of the fender. The rods *g*, *g'* are more conveniently made removable and held in place by split-pins *g²*, so as to obtain cheapness of construction and facilitate repair.

In the front extremities of the frame-members *a*, *a'* is inserted a shouldered rod *j*, the projecting ends of which are journaled in said frame-members, and are provided with wheels *k*, and exterior thereof washers *k'*, the parts being secured in place by cotter-pins *k²*. The outer surface of the wheels *k* is preferably convexed, as shown in Fig. 3, so as to slip or climb freely over projections in the road-bed. On the rod *j*, between the members *a*, *a'*, is a roller *l*, the object of which is to facilitate the passing of the projecting or catcher-carrier part of my fender under or over the person run down.

The wheel-guard ends of the frame are curved downward, and provided with transversely arranged rods *m*, *m'*, inserted through perforations therefor provided, and secured in place by cotter-pins *m²*; and the space intermediate the rods *m*, *m'* is closed by a plurality of curved rods *n*, the extremities thereof being provided with eyes through which the rods *m*, *m'* are inserted, and being held against lateral displacement by intermediate tubular sections *n'*. Exterior of the frame-parts of the wheel-guard are rotatably mounted wheels *o*, and washers *o'*, on the exterior thereof. The wheels *k* and *o* are provided to facilitate the running over the road surface of either end of my fender, when depressed.

The frame of my fender, and the weight of the parts thereby carried, are so poised on

their pivoting rod g' that either end thereof may be depressed toward the road-bed by the slightest impact.

To hold my fender in its normal position, which is more clearly shown in Fig. 2, (in which t represents the rails) I provide retaining springs p , one on each side. Said springs are conveniently made of bars of spring-steel, formed at their lower ends p' , as convenient, to enable the same to be fastened to the frame-members a, a' by bolts p^2 . Said lower portions p' of the springs are attached at the exterior of the frame-members a, a' , so as to facilitate adjustment and repair, if necessary. In this connection it is well to observe that I prefer to arrange the hangers e, e' so as to be pivoted at their lower ends to the interior of the frame-members a, a' , as illustrated in Fig. 4, thereby leaving the lower ends of said springs p uncovered, and facilitating the repair or renewal thereof when required. The upper sections p^4 of said springs p are slidably held in guide-straps p^3 , secured under the car-body, so as to enable my fender to be thrown in its storage, or out of the way, position.

On the rod g' is supported the lower end of a folding apron q , supported at its upper end by suitable means r , fastened to the front end of the car, and the function thereof is to protect the person run down and caught on the catcher-carrier part of my fender striking against the car-sill, the front of the car, or the draw-head rest. As more readily observed from Fig. 1, said apron q comprises upper and lower sections, each made of a plurality of bars, and hinged together by a joint s , near their central portions, by any convenient means. The hinged-joint, however, being so constructed as to resist exterior pressure; in other words, being so arranged that the upper section of the folding apron q will fold inward only, as illustrated in dotted outline in Fig. 2. The head-end, q' , of the folding-apron is preferably made in curved form, as shown, and provided with a bar q^2 ; the object of this construction being to enable such head-end to be supported and spaced some distance in advance of the car-body.

When my fender is not in use, as in case of the car being stored, or where two cars are coupled end to end, the same is moved inward, as shown by the broken outline representations u in Fig. 2, by manipulating a lever v , operating over a notched quadrant v' ; said lever being rigidly affixed to a shaft v^2 , journaled in bearings v^3 , fastened under the car-body. At the ends of the shaft v^2 are rigidly mounted arms w , connected by links w' , with the pendent-hangers e, e' , supporting the fender frame. Thus, by the adjustment of the lever v , my fender may be projected to its active position or thrown back under the car, as illustrated in Fig. 2. And, further-

more, it is to be noted that the described means for projecting my fender are adapted to enable the adjustment of my fender as required by the particular construction of the car-body, and also to insure that my fender will safely pass over curves and obstructions in the road-bed. The lever v is also provided with a treadle v^4 , so that the same may be operated by the foot, if more convenient for the motorman so to do.

As will be observed from an inspection of the drawings, wherever practicable I make my joints by reduced rod ends inserted through perforations in the bars or members, and secure the parts by washers and cotter-pins or split-keys.

I claim:

1. The combination with a car, of hangers suspended therefrom, a frame pivoted substantially in equipoise at the lower ends of the hangers, a supporting closure on the forward end of the frame, said forward end projecting from the car and constituting a catcher-carrier, as specified, downwardly curved portions on the rear end of the frame, a closure therefor constituting a wheel-guard, a spring element arranged to hold the frame in its normal position, and means for holding the main frame-member in its normal position.

2. The combination with a car, of hangers pivotally suspended therefrom, a frame substantially in equipoise at the lower ends of the hangers, a supporting closure on the forward end of the frame, downwardly curved portions on the rear end of the frame, a closure therefor constituting a wheel-guard, a spring element slidable longitudinally under the car-body, and arranged to support the main frame in its normal position, a crank element and connections arranged to be operable to place the frame in its active and inactive positions.

3. The combination with a car, of hangers pivotally suspended therefrom, a frame pivoted substantially in equipoise at the lower ends of the hangers, a supporting closure on the forward end of the frame, downwardly curved portions on the rear end of the frame, a closure therefor constituting a wheel-guard, a spring element slidable longitudinally under the car-body, and arranged to support the main frame in its normal position, a crank element and connections arranged to be operable to place the frame in its active and inactive positions, surface-wheels at the forward and rearward extremities of the frame.

4. The combination with a car, of hangers pivotally suspended therefrom, main frame-members and a transverse rod, whereby the main frame-members are suspended substantially in equipoise from the lower ends of said hangers, a transverse stay rod at the forward ends of the main frame-members, a

supporting closure between said rods intermediate of the frame-member, downwardly curved portions on the rear ends of the frame-members, and a closure therefor constituting a wheel-guard, a spring element slidable longitudinally under the car-body, and arranged to support the main frame in its normal position, a crank element and connections arranged to be operable to place the frame in its active and inactive positions.

5. The combination with a car, of hangers pivotally suspended therefrom, main frame-members and a transverse rod, whereby the main frame-members are suspended substantially in equipoise from the lower ends of said hangers, a transverse stay rod at the forward ends of the main frame-members, a supporting closure between said rods intermediate of the frame-member, downwardly curved portions on the rear ends of the frame-members, and a closure therefor constituting a wheel-guard, a spring element slidable longitudinally under the car-body, and arranged to support the main frame in its normal position, a transversely arranged rockable shaft and connections between the same and said pendent hangers, whereby the rocking of the shaft moves the frame to its active and inactive positions.

6. In combination with a car, a fender comprising hangers pivotally suspended from the car, main frame-members and a transverse rod, whereby the main frame-members are suspended substantially in equipoise from the lower ends of said hangers, a transverse stay rod at the forward ends of the main frame-members, a supporting closure between said rods intermediate of the frame-member, downwardly curved portions on the rear ends of the frame-members, and a closure therefor constituting a wheel-guard, a spring element slidable longitudinally under the car-body, and arranged to support the main frame in its normal position, a transversely arranged rockable shaft and connections between the same and said pendent hangers, whereby the rocking of the shaft moves the frame to its active and inactive positions, an apron supported in alinement with the pivotal point of the main frame-members and arranged to project in front of the car.

7. In combination with a car, a fender comprising hangers pivotally suspended from the car, main frame-members and a transverse rod, whereby the main frame members are suspended substantially in equipoise from the lower ends of said hangers, a transverse stay rod at the forward ends of the main frame-members, a supporting closure between said rods intermediate of the frame-member, downwardly curved portions on the rear ends of the frame-members, and a closure therefor constituting a wheel-

guard, a spring element slidable longitudinally under the car-body, and arranged to support the main frame in its normal position, a transversely arranged rockable shaft and connections between the same and said pendent hangers, whereby the rocking of the shaft moves the frame to its active and inactive positions, an apron constructed of two sections, hinges joining the same together, adapted to resist impact against the outer face of the apron but allowing the upper section thereof to be folded inwardly against the inner face of the lower section, for the purpose specified, said apron being arranged to project in front of the car.

8. The combination with a car, of hangers pivotally suspended therefrom, main frame-members and a transverse rod, whereby the main frame members are suspended substantially in equipoise from the lower ends of said hangers, said main frame-members being constructed in two longitudinally adjustable sections, a transverse stay rod at the forward ends of the main frame-members, a supporting closure between said rods intermediate of the frame-member, downwardly curved portions on the rear ends of the frame-members, and a closure therefor constituting a wheel-guard, a spring element slidable longitudinally under the car-body, and arranged to support the main frame in its normal position, a crank element and connections arranged to be operable to place the frame in its active and inactive positions.

9. In combination with a car, a fender comprising hangers pivotally suspended from the car, main frame-members and a transverse rod, whereby the main frame members are suspended substantially in equipoise from the lower ends of said hangers, said main frame-members being constructed in two longitudinally adjustable sections, a transverse stay rod at the forward ends of the main frame-members, a supporting closure between said rods intermediate of the frame-member, downwardly curved portions on the rear ends of the frame-members, and a closure therefor constituting a wheel-guard, a spring element slidable longitudinally under the car-body, and arranged to support the main frame in its normal position, a transversely arranged rockable shaft and connections between the same and said pendent hangers, whereby the rocking of the shaft moves the frame to its active and inactive positions, an apron supported in alinement with the pivotal point of the main frame-members and arranged to project in front of the car.

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Witnesses:

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