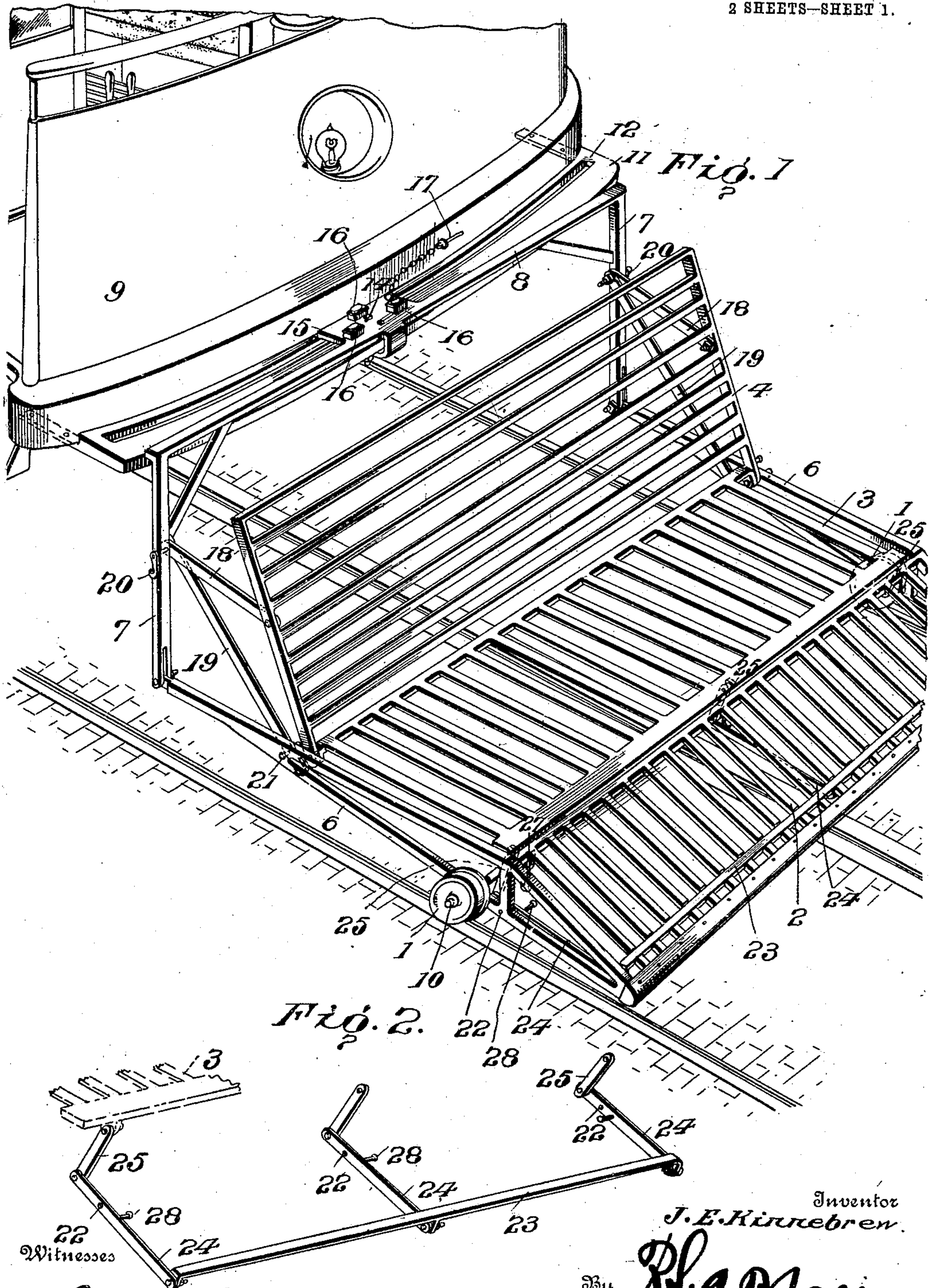


No. 842,559.

PATENTED JAN. 29, 1907.

J. E. KINNEBREW.  
CAR FENDER.  
APPLICATION FILED JUNE 6, 1906.

2 SHEETS—SHEET 1.



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Witnesses

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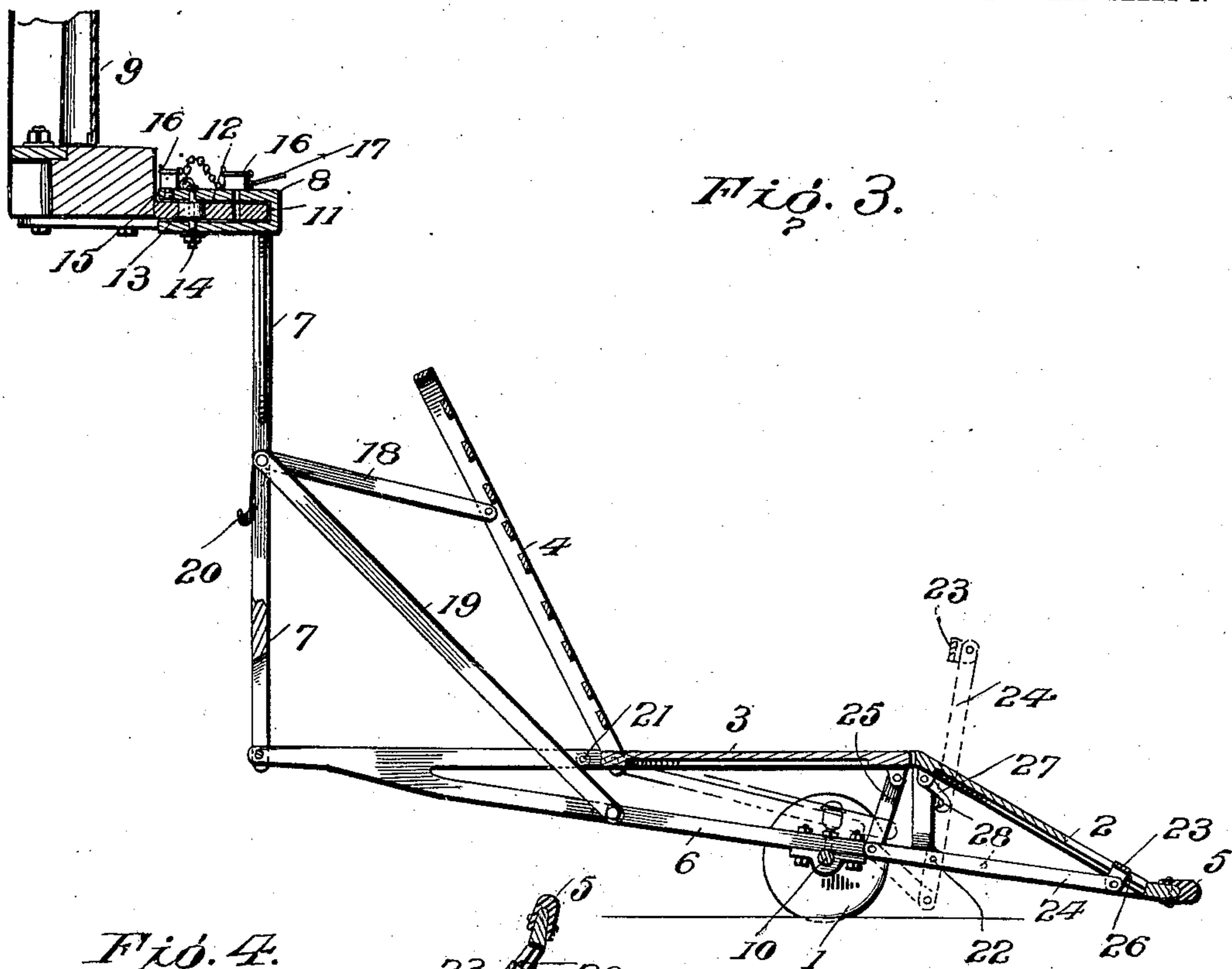


Fig. 4.

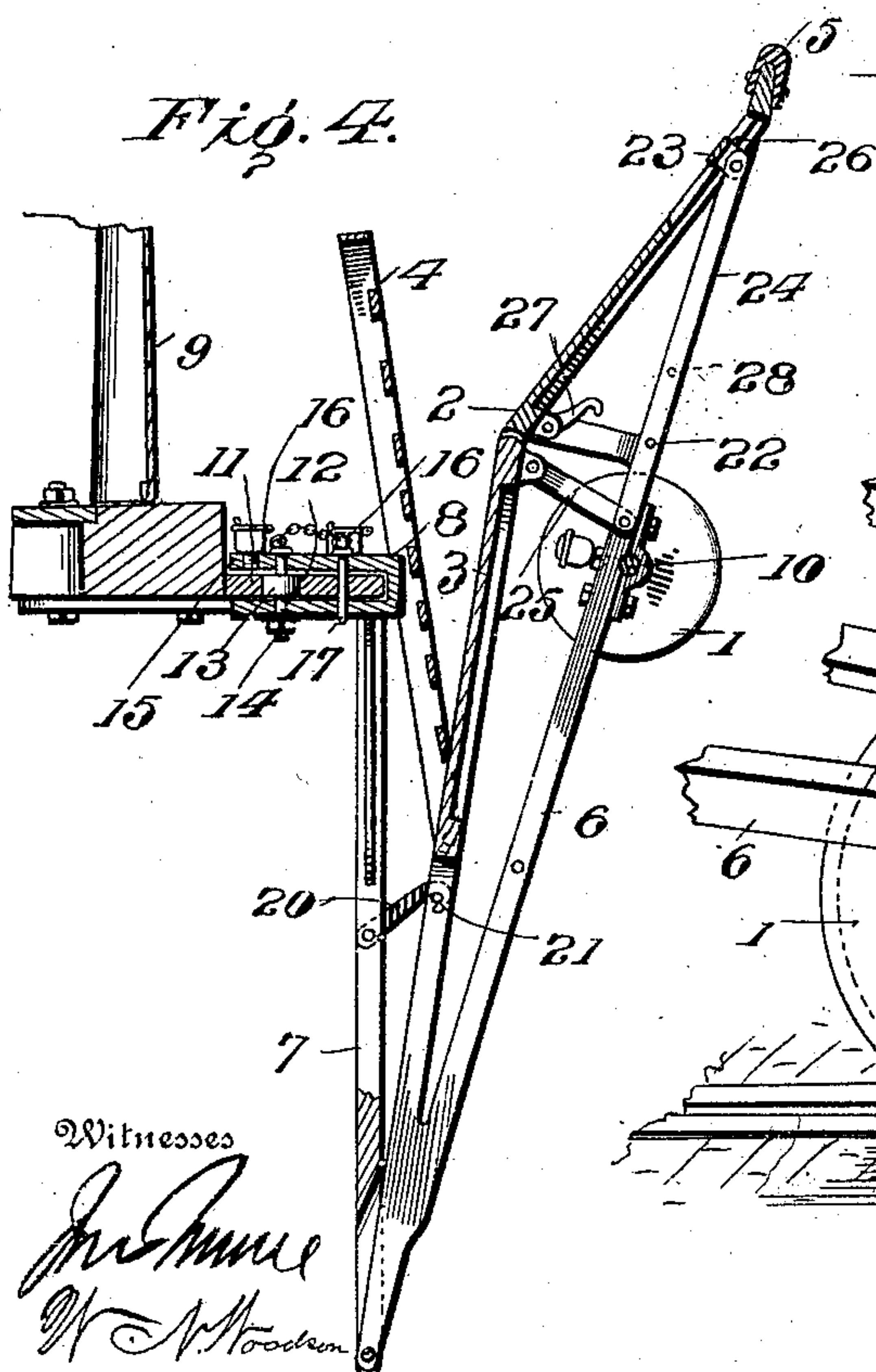
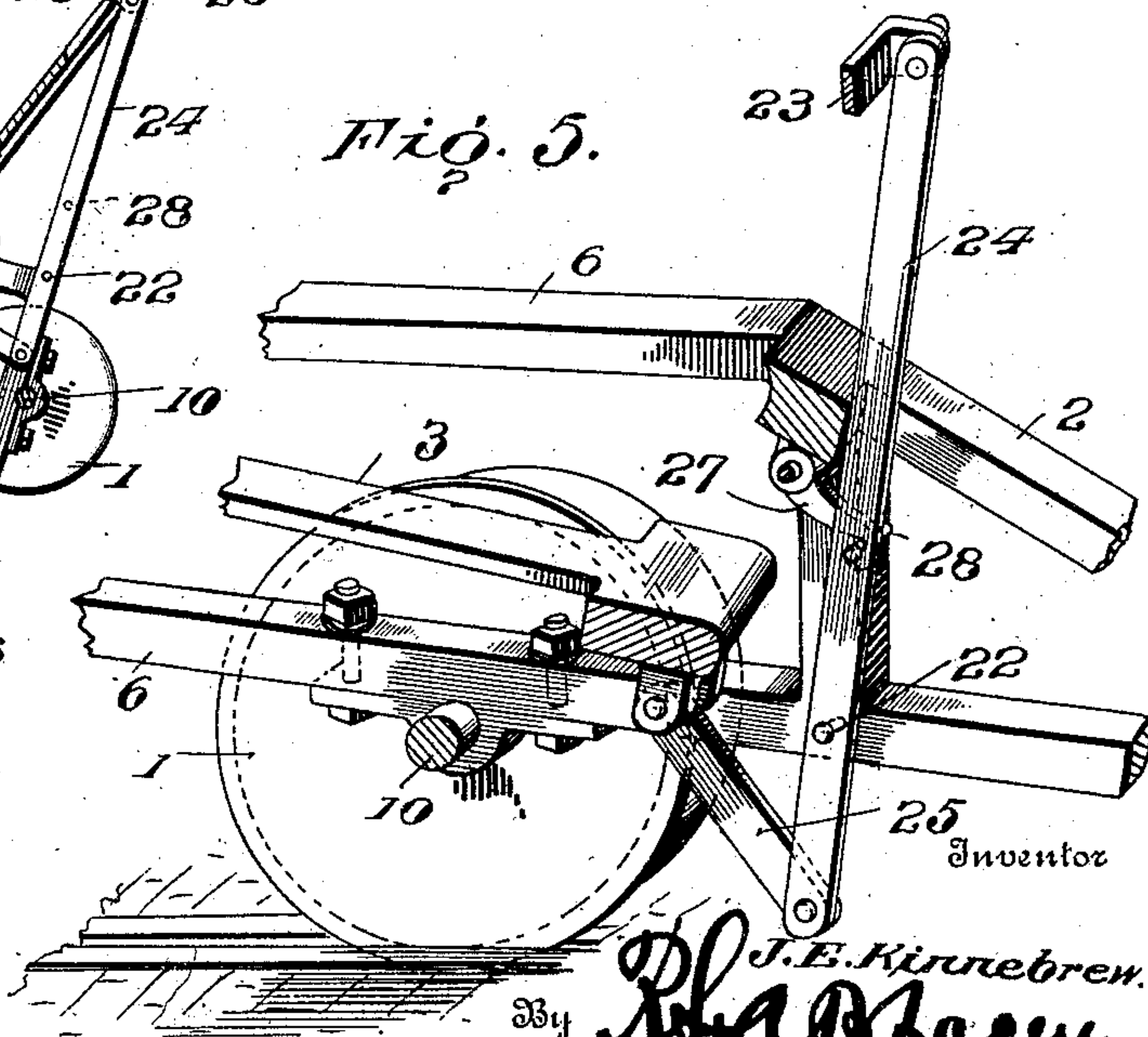


Fig. 5.



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# UNITED STATES PATENT OFFICE.

JAMES E. KINNEBREW, OF SHARPSBURG, PENNSYLVANIA.

## CAR-FENDER.

No. 842,559.

Specification of Letters Patent.

Patented Jan. 29, 1907.

Application filed June 6, 1906. Serial No. 320,468.

*To all whom it may concern:*

Be it known that I, JAMES E. KINNEBREW, a citizen of the United States, residing at Sharpsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Car-Fenders, of which the following is a specification.

This invention relates to apparatus for equipping vehicles to save life and prevent serious injury to persons happening in the way of and struck by such vehicles when in motion.

The invention is particularly adapted for street-cars which are mechanically propelled and is designed to be fitted to the end of the car and supported partly thereby and partly by the track through a truck.

The invention provides novel connecting means between the car and the fender, whereby the car is enabled to make short curves without throwing the fender too far to one side of the track, the connection sliding to admit of relative lateral play between the car and fender, whereby the latter remains about central of the track due to its being supported thereby at or near its front end.

The invention also provides for the retention of an object when falling upon the fender after being struck, thereby preventing the same being thrown in front of the car, either by a rebound or by a sudden stoppage of the car, as by a quick application of the brakes.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment is shown in the accompanying drawings, in which—

Figure 1 is a perspective view of the end of a car provided with a fender constructed in accordance with the invention. Fig. 2 is a detail perspective view of the guard for retaining an object upon the fender when received thereon after being struck. Fig. 3 is a longitudinal section of the fender and the front portion of a car, showing the means whereby the fender is attached to the car.

Fig. 4 is a view of the parts shown in Fig. 3, illustrating their relative position when the fender is folded so as to be out of the way. Fig. 5 is a detail perspective view of a portion of a side frame and the impact and object receiving sections, showing the latter depressed and the guard thrown up and illustrating more clearly the cooperating parts.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The fender has a transverse sliding connection at its rear with the car and is mounted near its forward end upon truck-wheels 1, which are adapted to travel upon the track. The fender proper comprises three sections 2, 3, and 4, the front section 2 receiving the impact when striking an object, the back section 4 forming a stop to limit the rearward movement of the object when falling upon the fender after being struck, and the intermediate section 3 receiving the person or object. The back section or stop 4 and the front or impact section 2 are relatively fixed, whereas the intermediate or receiving section 3 is pivoted or hinged at its rear end to admit of its front portion rising and falling. The several sections extend approximately the entire width of the track and car, so as to prevent a person or object from getting beneath the front wheels of the car when run down. The sections 2, 3, and 4 may be of any construction best adapted for the purpose in order to reduce the liability to injury when striking a person to the smallest amount possible, as well as provide a structure which will be reliable and durable and at the same time light and easy of manipulation. The front or impact section 2 inclines forwardly and downwardly and is provided along its front edge with a buffer 5, of rubber or other material, to prevent serious injury to a person when struck thereby. The intermediate or receiving section 3 occupies an approximately horizontal position, whereas the stop or back section 4 inclines rearwardly and upwardly.

Side frames 6 support the essential parts of the fender and have pivotal connection at their rear ends with the lower ends of hangers 7, pendent from a cross-bar 8, having transverse sliding connection with the front of the car 9. The truck-wheels 1 are mounted upon an axle 10, which is journaled in



bearings applied to the side frames 6 a short distance from their front ends.

The fender is adapted to tilt upon the axle 10, so as to elevate or lower the front end of the impact-section 2, so as to maintain a safe distance between said front end and the surface of the road-bed or tracks with the intent of preventing a person or object from passing beneath the fender when struck thereby.

By having the fender mounted upon the axle and front wheels it is obvious that when ascending a grade the front end of the car will approach the plane of the road-bed and depress the rear portion of the fender and correspondingly elevate the front portion of said fender, thereby preventing the same from coming in contact with the rails or road-bed. On the other hand, when descending a grade the forward end of the car is elevated and the rear end of the fender correspondingly raised and the front end of said fender depressed, thereby maintaining an approximately uniform distance between the front of the fender and the track to prevent a person or object from passing beneath the fender when struck and thrown down.

The fender being mounted near its front upon the track and having a sliding connection at its rear with the car to which it is attached maintains a nearly central position with reference to the track when passing around a short curve, thereby preventing throwing the fender too far to one side or the other of the track, which is objectionable, since it endangers life, limb, and property. The attaching means, as shown, embodies a plate or bar 11, which is secured to the car in any convenient and substantial way and is provided with a slot 12, in which operates a roller 13, mounted upon a pin or bolt 14, having connection with the cross-bar 8. A clip 15 embraces the top and bottom sides of the plate or bar 11, and its members are connected by the pin or bolt 14, upon which the anti-friction-roller 13 is mounted. The clip 15 slides transversely upon the plate or bar 11, and the wearing-surfaces between the members of the clip and the part 11 are adapted to be lubricated in any manner, as by means of oil supplied to cups 16, attached to the upper member of the clip 15. The clip may be connected or formed with the cross-bar 8, so as to move therewith and provide a simple, substantial, and effective connection between the parts 8 and 11.

When the fender is folded, as when not in use, it is held from transverse movement by means of a pin 17, which is adapted to be passed through openings formed in the clip and plate 11 in coincident relation.

The stop or back section 4 has pivotal connection at its lower end with the side frames 6 and is held in fixed position by means of braces 18, which are interposed between it and the hangers 7. Braces 19 are interposed

between the hangers 7 and the side pieces 6 to stiffen and strengthen the structure. When it is required to fold the fender, the braces 18 and 19 are disconnected from the respective parts 4 and 6, thereby admitting of the fender holding against the front of the car, as indicated most clearly in Fig. 4. Hooks 20, attached to the hangers 7, are adapted to engage pins 21 of the side pieces 6 and hold the fender folded. The pin 17 is placed in position so as to prevent lateral or transverse play of the fender when thus folded.

The intermediate or receiving section 3 is movable so as to be capable of rising and falling, whereby when a person or object is received thereon it descends under the weight, thereby admitting of the rear portion of the front or impact section 2 projecting above the section 3 and form a stop to prevent the person or object from being thrown from or rolling off the fender either by a rebound or by a sudden stoppage of the car, as when the brakes are quickly applied. To further increase the safety of the person or object, a guard is provided and is thrown upward and rearward simultaneously with the descent of the section 3, said guard being pivoted at 22 to the front portion of the framework or side pieces of the fender. By having the guard mounted so as to be thrown upward and rearward it will tend to catch a person or object and retain the same upon the fender, even though said person or object may receive a forward impetus calculated to displacement. The guard embodies a cross-bar 23 and pivoted arms 24, the latter being connected to the side frames 6 by pivot-fastenings 22 of any kind. Links 25 are pivotally connected at one end to the front portion of the pivoted section 3 and at the opposite end to the rear portion of the arms 24. The front ends of the arms 24 have pivotal connection with the cross-bar 23, thereby admitting of the latter adapting itself to the seat formed in the front portion of the section 2, whereby the cross-bar 23 may come about flush with the top side of the section 2, so as not to interfere with the action of the fender in picking up a person or object should the latter slide upon the section 2. The seat 26, formed near the front portion of the section 2, may be provided in any manner and is of such form with reference to the cross-bar 23 to snugly receive the same. The weight of the guard is relied upon to hold the intermediate or receiving section 3 in normal position, and when said section 3 receives additional weight it descends thereunder and throws the guard upward, as indicated by the dotted lines in Fig. 3. Suitable catches retain the guard in elevated position and consist of hooks 27 and pins 28, the latter being applied to the arms 24 and the former attached to the section 2 or convenient parts of the framework.



Having thus described the invention, what is claimed as new is—

1. In a car-fender, the combination of a plate or bar connected with the front portion of the car, a frame having transverse sliding connection with said plate and comprising a cross-bar and hangers, side frames having pivotal connection at their rear ends with the lower ends of said hangers, wheels supporting said side frames near their front ends and adapted to travel upon the track, and receiving-sections supported between said side frames and having movement independent thereof and movement therewith when folding the fender so as to be out of the way.

2. In a car-fender, the combination of a fixed impact-section and a movable receiving-section located in the rear of said impact-section and adapted to sink below the rear portion of said impact-section to admit of the latter providing a stop to retain the object landing upon said receiving-section and actuating the same.

3. In a car-fender, the combination of a fixed impact-section, a movable receiving-section, and a guard independent of the fixed and movable sections and normally supported by the impact-section and adapted to be projected upward upon depression of the movable section by the landing of an object thereon.

4. In a car-fender, the combination of an impact-section, a movable receiving-section, and a guard, the latter forming a counterbalance for the movable section to normally hold the same in a given position and adapted to be thrown upward when the movable section is depressed by the weight of the object received thereon.

5. In a car-fender, the combination of an impact-section, a movable section, and a pivoted guard normally supported by the

impact-section and in turn forming a counterbalance for the movable section to hold the same in a given position and adapted to be thrown upward when the movable section is depressed.

6. A car-fender comprising fixed front and back sections and a movable intermediate section.

7. A car-fender comprising an upwardly and rearwardly inclined impact-section, an upwardly and inwardly inclined back section, and an intermediate receiving-section pivoted at or near its rear end and adapted to rise and fall at its front end to admit of the rear portion of the front section forming a stop to prevent dislodgment of an object after landing upon the fender.

8. A car-fender comprising a plate or bar secured to the car or vehicle, a cross-bar having a transverse sliding connection with said plate, hangers pendent from said cross-bar, side frames having pivotal connection at their rear ends with the hangers, braces between the side frames and hangers, a front and intermediate and a back section carried by said side frames, the intermediate section being movable and the back section having pivotal connection with said frames, braces for normally holding the back section in fixed position, truck-wheels for supporting the front portion of the fender and adapted to travel upon the truck-rails, and a guard normally holding the intermediate section in given position and adapted to be actuated thereby when depressed.

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

JAMES E. KINNEBREW. [L. S.]

Witnesses:

R. H. BAGLEY,

WILLIAM KINNEBREW.