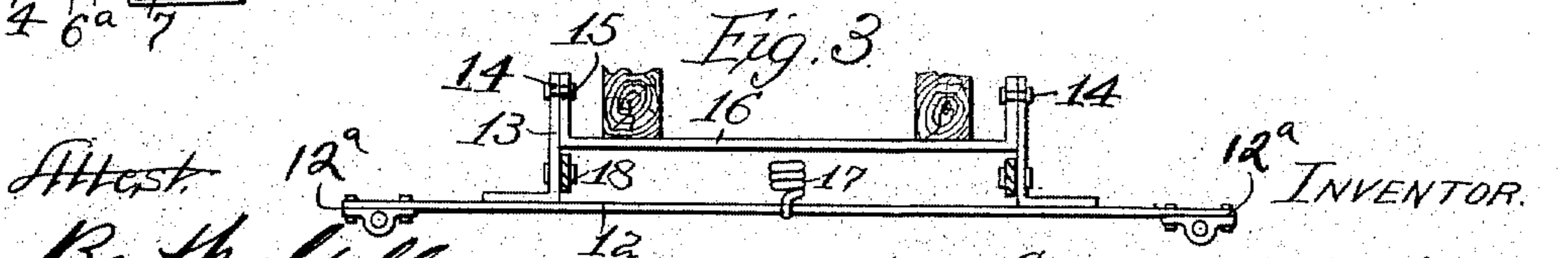
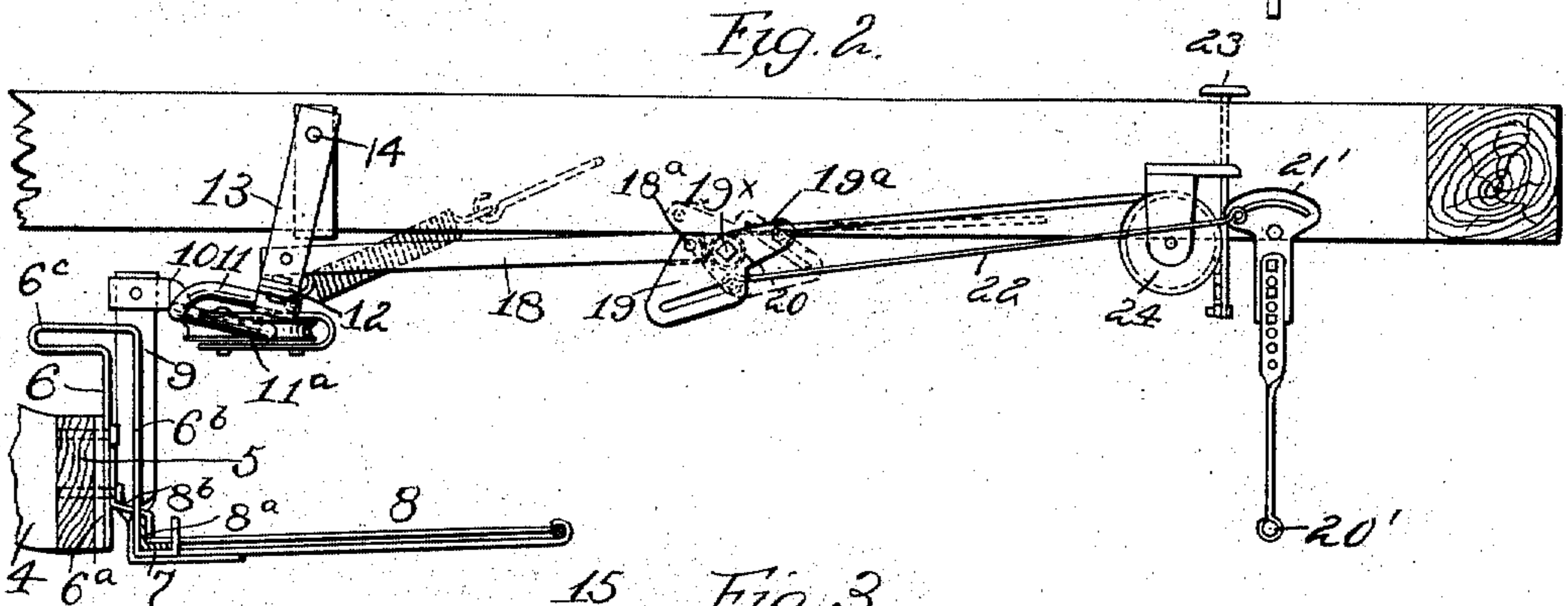
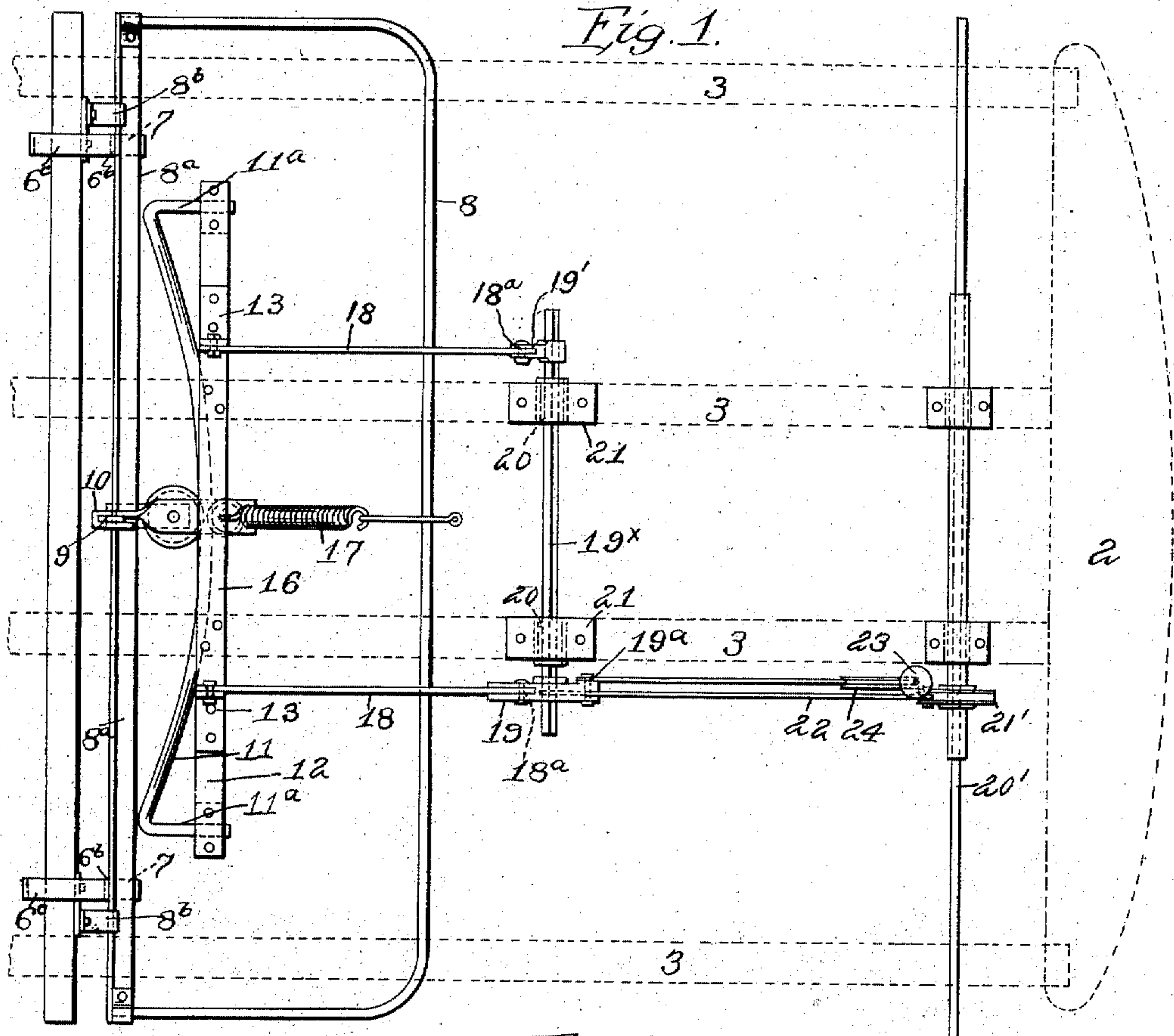


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LIFE GUARD FOR RAILWAY CARS.  
APPLICATION FILED AUG. 30, 1910.

985,541.

Patented Feb. 28, 1911.



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# UNITED STATES PATENT OFFICE.

GEORGE A. PARMENTER, OF CAMBRIDGE, MASSACHUSETTS.

LIFE-GUARD FOR RAILWAY-CARS.

985,541.

Specification of Letters Patent.

Patented Feb. 28, 1911.

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*To all whom it may concern:*

Be it known that I, GEORGE A. PARMENTER, citizen of the United States, residing at Cambridge, Massachusetts, have invented certain new and useful Improvements in Life-Guards for Railway-Cars, of which the following is a specification.

My present invention relates to improvements in fenders or life guards for street railway cars of the type known as trip and drop scoop, and particularly to those in which the pick up scoop or basket is carried by the truck while the trip frame or gate is carried by the car body. Such type of wheel guard is particularly advantageous in connection with the double truck or "swinging bogie" cars which are now coming almost exclusively into use.

The invention has among others for its objects to simplify the construction, to reduce the cost, to enable it to be more easily applied to the cars, to make it easy and certain in action, and of advantage in other respects as will hereinafter more fully appear.

The invention includes the novel features of construction and arrangement and combination of parts hereinafter described and particularly set forth in the appended claims.

An embodiment of my invention is illustrated in the accompanying drawings in which—

Figure 1 is a plan view of the fender or wheel guard with the sills of the car and the pilotboard of the truck shown to illustrate the manner of mounting the wheel guard upon the car; Fig. 2 is a side elevation of the same; and Fig. 3 is a detail view of the transverse bar and its supports.

Referring by reference characters to this drawing, the numeral 2 designates the car platform and 3 the sills.

The swiveled truck frame is indicated at 4, having the usual cross bar or pilot board 5, to which are secured hangers 6 provided with hooked or recessed portions 7 for receiving and supporting the rear cross bar 8<sup>a</sup> of the basket or scoop 8.

In order to relieve the scoop or basket as far as possible of shocks or jars due to passing over rail joints or rough tracks, I have devised a very simple form of spring hanger shown clearly in Fig. 2. This hanger is constructed from a spring bar doubled upon itself, one arm or member 6<sup>a</sup> of the doubled portion being bolted to the pilot

board, while the other arm or portion 6<sup>b</sup>, which is spaced therefrom, carries the hook or recess 7 before referred to. In order to secure additional cushion effect or resiliency in a vertical direction, the upper portion of the hanger is carried horizontally for a suitable distance as indicated at 6<sup>c</sup>. The rear bar 8<sup>a</sup> of the basket or scoop is retained in the recess in the hangers by the brackets 8<sup>b</sup>, also bolted to the pilot board.

Centrally of the basket or scoop and at the rear edge thereof is located a vertical arm 9 preferably of sheet metal with its lower end bent a quarter turn, and carried around the rear edge of the scoop, and beneath its lower face for a suitable distance, and to which it is suitably secured. Through this arm the scoop is normally held elevated and dropped when desired in the manner and by the means which will now be described.

To the upper end of the arm 9 is pivotally connected the rear end of a sheave carrying bracket 10, which is provided at its opposite end with pulleys or sheaves, or other anti-friction devices, which embrace between them a radial bar 11 which is curved on the arc of a circle which has for its center the pivotal axis of the truck. This bar has angularly turned ends 11<sup>a</sup> which are firmly seated in suitable holding clips or devices 12<sup>a</sup> on the ends of a transverse bar 12. This bar in turn is supported by L-shaped hangers 13 pivotally connected at their upper ends with the car body, as, for instance, by securing them by means of pivot or hinge bolts 14 to the angularly turned ends 15 of a cross bar 16 secured to the sills of the car.

A spring 17 extending between bar 12 and a suitable fixed point on the car platform, tends to throw the parts just described forward and quickly lower the scoop and hold it down, when not restrained by the following described mechanism: Pivotaly connected at their rear ends to the L-shaped hangers 13 are a pair of longitudinally disposed bars or links 18 which are pivotally connected at their front ends to the rocker plates or arms 19 and 19'. These plates or arms 19 and 19' are, in turn, carried by and at or near the ends of square shaft 19<sup>x</sup> mounted in bushings 20 turning in suitable bearings 21 secured to or carried by the sills of the car. The bars or links 18 have their front ends seated in recesses or bifurcations in the plates 19 and 19', and the relation of

the parts is such that when the members 19 and 19' are in the position shown in full lines in Fig. 2 the pivot 18<sup>a</sup> is slightly above a line extending between the squared shaft and the point of connection between the bars 18 and the L-shaped hangers. Further upward movement of the pivots 18<sup>a</sup> is prevented by the engagement of the lower edges of the bars with the bottoms of the recesses, so that in this position the bars or links 18 coact with the plates or arms 19 to form struts. As the plates or members are held, by the relation of the parts referred to, from further backward rotation, it will be seen that the scoop or basket will be held locked until the plates or members 19 and 19' are rotated to carry the pivots 18<sup>a</sup> down past the "dead center." This rocking is accomplished automatically by the trip frame 20' which has at its upper end a plate 21' provided with an elongated slot in which is slidably connected the front end of a rod 22, the rear end of which has a similar sliding connection with a slot in the plate or member 19.

The connection between the rod and plate 21' is normally at the rear end of the slot, so that while the gate or trip frame may be swung forwardly without affecting the tripping connections, the rearward movement of the trip frame will at once pull forward upon the rod 22.

As the connection between the rear end of rod 22 and plate 19 is normally with the front end of the slot, the forward pull of rod 22 will rock the plate and square shaft until the dead center is overcome, when spring 17 will pull forward the parts and instantly drop the scoop. As soon as the scoop has been dropped, however, the plate 19 assumes the position shown in dotted lines in Fig. 2, in which position the connection with the slot is such that free farther rearward movement is permitted to the trip frame or gate so as to enable it to readily ride over an object such as a prostrated person without injury thereto.

In order that the parts may be readily reset after they have been tripped, I provide a foot treadle 23 to the lower end of which is connected the one end of a flexible element, such as a chain or cable, which passes over a pulley 24 and is connected at its other end with an arm 19<sup>a</sup> on the plate 19.

Having thus described my invention what I claim is:

1. The combination with a car body and truck frame, of a drop scoop carried by the truck frame, a curved bar extending transversely of the car body and supported therefrom and capable of being bodily moved in a direction longitudinal of the car, a bracket connected with the scoop and having a part slidably embracing said curved bar, and

locking and releasing means connected with said curved bar, substantially as described.

2. The combination with a car body and truck frame, of a drop scoop carried by the truck frame, a curved bar extending transversely of the car body and supported therefrom and capable of being bodily moved in a direction longitudinal of the car, a bracket connected with the scoop and having a part slidably embracing said curved bar, one of said parts, to wit, the bracket and curved bar, being pivoted upon a horizontal axis to compensate for relative vertical movement between the truck and car body, substantially as described.

3. The combination with a car body and truck frame, of a drop scoop carried by the truck frame, a curved bar extending transversely of the car body and supported therefrom, and capable of being bodily moved in a direction longitudinal of the car, a centrally located arm or member connected with the scoop for holding it elevated, a bracket pivotally connected to said arm or member at its rear end, and having a sliding engagement with said curved bar at its opposite end, and locking and releasing means for controlling the longitudinal movement of said curved bar, substantially as described.

4. The combination with a car body and truck frame, of a drop scoop carried by the truck frame, a curved bar extending transversely of the car body and supported therefrom and capable of being bodily moved in a direction longitudinal of the car, a centrally located arm or member connected with the scoop for holding it elevated, a bracket pivotally connected to said arm or member at its rear end, a pair of rollers carried by said bracket and engaging opposite sides of said curved bar, and locking and releasing means for controlling the longitudinal movement of said curved bar.

5. The combination with a car body and truck frame, of a drop scoop carried by the truck, and having an upwardly extending part, a bracket pivotally connected to said upwardly extending part, a bar extending transversely beneath the car body and supported therefrom and capable of movement in a direction longitudinal of the car, a curved bar having its ends rigidly connected to said transversely extending bar, said bracket having a part slidably engaging said curved bar, and locking and releasing means for controlling the movement of said parts, substantially as described.

6. The combination with a car body and truck frame, of a bar extending transversely beneath the car body, arms pivotally connecting said bar and body, a spring acting on said bar, a curved bar rigidly connected at its ends to said transverse bar, a scoop pivotally supported from the truck and hav-

ing a part capable of vertical movement slidably engaging said curved bar, and locking and releasing means for said transverse bar, substantially as described.

5 7. The combination with a car body and truck frame, of a drop scoop, a part swung from the car body and interacting with a part carried by the scoop for holding the latter elevated, a rock shaft carried by the  
10 car body, a pair of bars or links connected at their rear ends with said part swung from the car body, an offset connection between the front ends of said pair of bars and the rock-shaft, and means for operating  
15 said rock shaft from one end thereof, substantially as described.

8. The combination with a car body and truck frame, of a drop scoop, a part swung from the car body and interacting with a  
20 part carried by the scoop, a rock shaft carried by the car body and having plates or arms at or near the ends thereof, bars or links connecting said plates or arms with the part swung from the car body, said bars  
25 or links coacting with said plates or arms when in one position to form struts, a trip frame or gate pivotally suspended from the front of the car body, and a connection between said trip frame and one of the bars,  
30 said connection having lost motion to permit further rearward movement of the gate when the strut has been broken, substantially as described.

9. The combination with a car body and  
35 truck frame, of a drop scoop, a part swung from the car body and interacting with a part carried by the scoop, a rock shaft carried by the car body and having plates or arms at or near the ends thereof, bars or  
40 links connecting said plates or arms with the part swung from the car body, said bars or links coacting with said plates or arms in one position to form struts, a trip frame or gate pivotally suspended from the front  
45 of the car body, and a rod connected at its forward end to a part carried by the trip frame above the pivot thereof and having

its rear end provided with a limited sliding connection with one of said plates, and being normally at the forward limit of said  
50 sliding movement.

10. The combination with a car body and truck frame, of a drop scoop, a part swung from the car body, and interacting with the  
55 part carried by the scoop, a rock shaft carried by the car body and having plates or arms on opposite sides of the center thereof, bars or links connecting said plates or arms with the part swung from the car body, said bars or links coacting with said plates  
60 or arms in one position to form struts, a trip frame pivotally suspended from the front of the car body and having an upwardly extending part provided with an elongated slot, one of said plates or mem-  
65 bers also having an elongated slot, and a rod having one end provided with a part bearing against the rear end of the slot of the trip frame and its other end provided with a part resting normally in the front end of  
70 the slot in said plate, substantially as described.

11. In combination with a car truck, a hanger comprising a bar of resilient metal doubled upon itself and having one arm  
75 secured to the truck and the other arm provided with a hook-shaped portion to form a pivotal support for the scoop, substantially as described.

12. A spring hanger for the baskets or  
80 scoops of wheel guards, comprising a bar of spring metal doubled upon itself and provided at the ends with means for attachment to a truck and to a scoop, a part of said doubled portion being turned hori-  
85 zontally or at right angles to the remaining portion, substantially as described.

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

GEORGE A. PARMENTER.

Witnesses:

JAMES M. SPEAR,  
EDWIN S. CLARKSON.