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LIFE GUARD FOR RAILWAY CARS.

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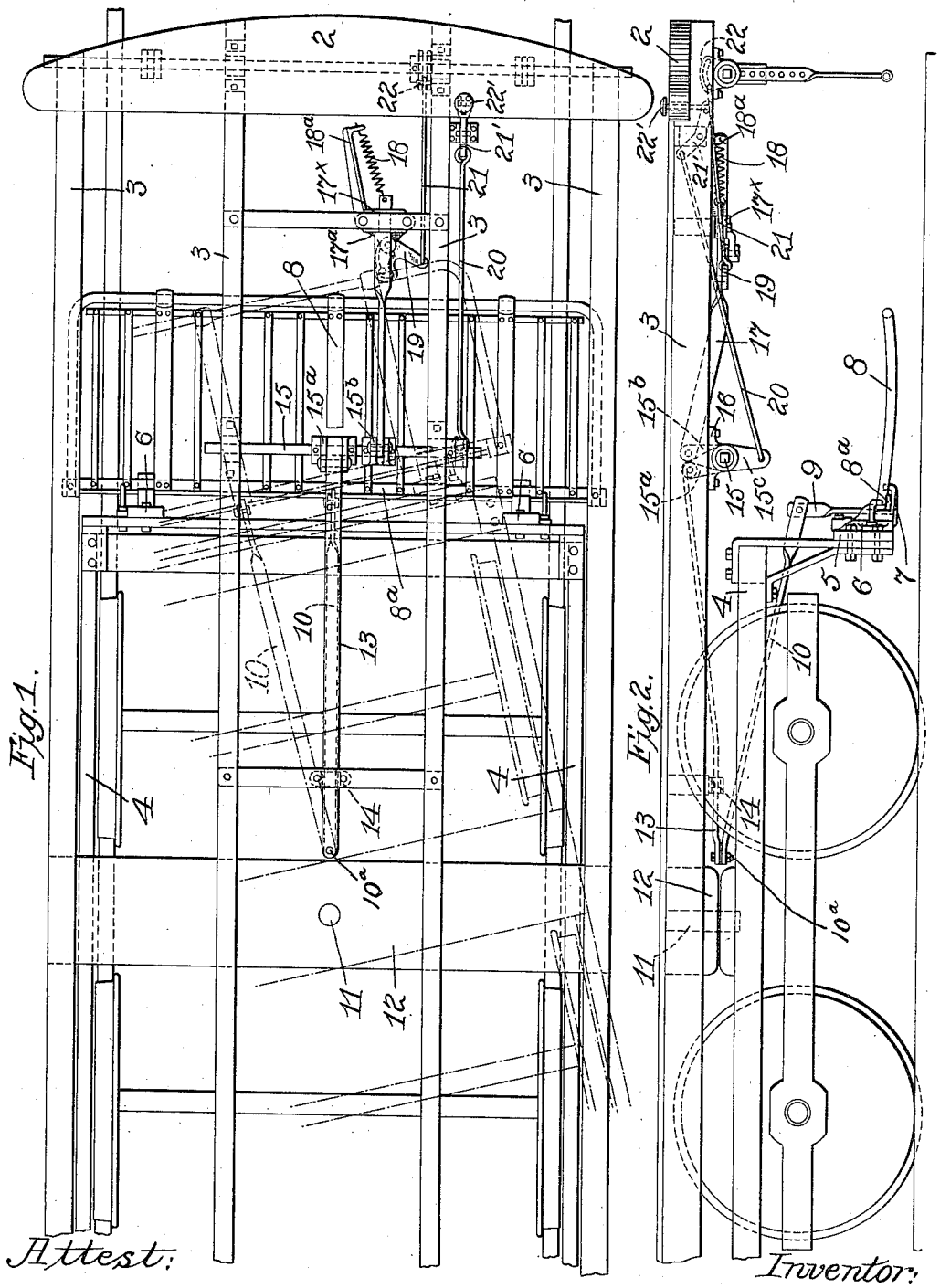

Fig. 1.

Fig. 2.

Attest:

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LIFE-GUARD FOR RAILWAY-CARS.

1,068,445. Specification of Letters Patent. Patented July 29, 1913.

Application filed August 19, 1912. Serial No. 715,869.

To all whom it may concern:

Be it known that I, GEORGE A. PARMENTER, citizen of the United States, residing at Boston, 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 life guards for railway cars of the type having swinging bogies or trucks, and belongs more particularly to the type of fender or wheel guard known as trip and drop scoop. In apparatus of this character it is very desirable that the scoop or pick-up should be carried by the truck frame in close proximity to the wheels, while the tripping mechanism should be carried at the front end of the car body. Such an arrangement requires some compensating mechanism to be interposed between the trip and scoop in order to maintain the parts in uniform operating position whether the car be upon a straight track or upon a curve, and a very satisfactory way of accomplishing this has been to interpose in the connections a curved bar, the curve of which is on an arc concentric with the axis of the truck. With some types of car, however, mechanism embodying a curved bar is difficult to apply, and the object of the present invention is to provide a simpler form of apparatus which will accomplish the same results of maintaining uniform operating connections, which may be more easily applied to all types of cars, and at much less cost.

I have also aimed to provide a construction in which there shall be less play or lost motion between the trip frame and the scoop, and which will be more durable in service.

With these and other objects in view, the invention comprises the novel features of construction and arrangement and combination of parts hereinafter described and particularly set forth in the appended claims.

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

Figure 1 is a plan view of a sufficient portion of a car platform and sills in outline to illustrate the application of the guard or fender thereto, and Fig. 2 is a side elevation thereof.

Referring by reference characters to this drawing, the numeral 2 designates the front portion of the car platform, and 3 the sills. The swivel truck frame is indicated at 4, having the usual cross bar or pilot board 5 provided with brackets or hangers 6 with hooked or recessed portions 7 in which the rear cross bar or member 8^a of the scoop or basket 8 is pivotally or rotatably seated. I prefer to use as the specific means of mounting the scoop the antivibrating hanger which is disclosed in detail in reissued Letters Patent of the United States No. 13,172, dated November 22, 1910. The scoop is provided approximately centrally thereof with an arm 9 rigidly connected to the said bar 8^a, and extending upwardly for a suitable distance. A bar 10 has its front end pivotally connected to the upper end of this arm 9, its rear end being carried back into as close proximity to the king bolt, which is indicated at 11, as conditions will permit.

The ordinary bolster plates are indicated at 12, and I have found by investigation that the bolster plate construction is such that I can carry the rear end of the bar 10 to within at least five inches of the king bolt.

To the rear end of the bar 10 is pivotally connected the rear end of a sliding bar 13, the rear portion of which is slidably supported in a bracket or guide 14. This bar 13 has sliding movement only, and it will be seen that when the said bar 13 is pushed back toward the king bolt, it will pull upon the bar 10 and elevate the scoop 8 through its connection with the arm 9, and will hold it elevated as long as the bar 13 is held against forward movement. When, however, the bar 13 is allowed to move forwardly under the action of the trip mechanism hereinafter described, the scoop will be allowed to drop. As the bar 10, however, is pivotally connected to the rear end of the bar 13 by the pivot bolt 10^a in close proximity to the king bolt or pivotal axis of the truck, it will readily be seen that as the truck swings with relation to the car body in rounding curves, the bar 10 will swing with it without appreciable effect upon the scoop.

Given conditions under which the pivot bolt 10^a could be brought in exact alinement with the king bolt, absolutely no rocking movement whatever would be imparted to the arm 9 and scoop 8 in rounding curves no matter how sharp, but practical conditions preclude bringing the bolt 10^a in axial alinement with the king bolt. With, however, the bolt 10^a in close proximity to the bolster plates, as indicated in the drawings, I have found from practical demonstration that there is no appreciable lifting of the scoop in rounding curves, the pivot bolt 10^a being so near to the pivotal axis of the truck as to preclude any appreciable effect upon the scoop. The position which the bar 10 assumes in rounding a curve is indicated in dotted lines in Fig. 1.

A convenient way of holding the bar 10 drawn rearwardly to hold the scoop elevated is to connect the forward end of the bar 13 to an arm 15^a carried by a shaft 15 journaled in suitable hangers or brackets 16 secured to the sills of the car. A second bar 17 has its rear end connected to a second arm 15^b fast on the shaft 15, this bar constituting a sliding locking bar and having its front end slidingly supported by a guide 17^x suitably carried from the car sills. The locking bar 17 has a laterally extending shoulder or offset 17^a which is designed to rest behind and engage a shoulder formed preferably by the edge of the guide, as indicated in Fig. 1, in which position the locking bar 17 will hold the arms 15^a and 15^b and bar 13 pressed back, and through the bar 10 and arm 9 maintain the scoop elevated and in the position shown in Fig. 2. In order to hold the bar 17 with its shoulder in locking engagement with the guide, I provide a spring 18 which has one end connected to the bar 17 and its other end connected to a suitable bracket 18^a, the spring extending diagonally so that it not only tends to swing the bar 17 toward the center of the car and bring and hold its shoulder into locking relation with the guide, but also when the bar is moved to disengage said shoulder tends to draw the bar forward and thus assist the action of gravity in causing the scoop to drop quickly. This specific locking mechanism is disclosed and claimed in the reissued Letters Patent #13,172 hereinbefore referred to, and further description thereof herein is deemed unnecessary other than to say that the locking bar 17 is moved laterally to disengage the shoulder by the cam lever 19, which is connected by rod or link 21 with an upwardly extending arm 22 carried by the hinge bar of the swinging trip frame, so that as the trip frame is swung rearwardly, the bell crank lever 19 will be rocked to impart lateral movement to the bar 17 to unlock the same. In order to re-set the scoop, I provide the bar 15 with a downwardly extending arm 15^c which is connected by rod 20 with one arm of a rocking lever 21′, the other arm of which carries a treadle 22′ extending up through the platform into convenient reach of the motorman.

Having thus described my invention what I claim is:

1. The combination with a car body and swivel truck frame, of a scoop pivotally supported by the truck frame, tripping means carried by the car body, and operating connections between said tripping means and scoop, said operating connections including a pivot in close proximity to the pivotal axis of the truck.

2. The combination with a car body and swivel truck frame, of a scoop pivotally supported from the truck frame, an operating bar extending from the scoop into proximity to the pivotal axis of the truck, a slidable bar supported by the car body and pivotally connected to the rear end of said first named bar, and operating mechanism carried by the car body for controlling the movement of said second bar.

3. The combination with a car body and swivel truck frame, of a life guard carried by the truck frame and capable of being raised and lowered, means carried by the car body for effecting the raising and lowering of said guard, said means including a pivotal connection in close proximity to the pivotal axis of the truck.

4. A life guard comprising a drop scoop, tripping means, a slidable bar operated from said tripping means, and a laterally swinging bar connected with said scoop and having its rear end pivotally connected to said sliding bar.

5. A life guard comprising a pivotally supported drop scoop having an upwardly extending arm, a bar extending rearward from said arm, a slidable bar pivotally connected to the rear end of said first named bar, means for holding said sliding bar in a retracted position to hold the scoop elevated, and means for releasing said bar.

6. The combination with a car body and swinging truck frame, of a drop scoop carried by the truck, an operating bar connected with the scoop at its front end and adapted to swing therewith in rounding curves, said bar extending backward toward the pivotal axis of the truck, and having its rear end supported from the car body to have longitudinal sliding movement in relation to the car body, and means operating on said bar for controlling the movements of the scoop.

7. The combination with a car body and swinging truck frame, of a scoop pivotally carried by the truck and having an upwardly extending arm, a bar connected at its front

end to said arm and extending back into proximity to the pivotal axis of the truck, a slidable bar having its rear end pivotally connected to the rear end of said first named bar, a guide carried by the car body supporting the rear end of said slidable bar, a rock shaft carried by the car body having an arm to which the front end of said slidable bar is connected, locking means for preventing rotation of said shaft, and tripping means for releasing said locking means.

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

GEORGE A. PARMENTER.

Witnesses:
HENRY HALEY,
JOSEPH HICKEY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."