(No Model.)

J. H. & H. W. THAYER.

GUARD FOR RAILWAY CARS.

No. 554,898. Patented Feb. 18, 1896.

Fig. 1.

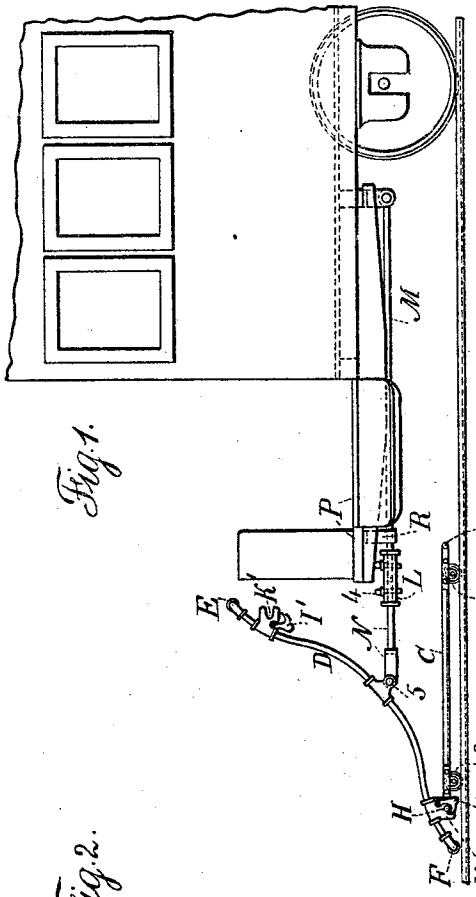


Fig. 3.

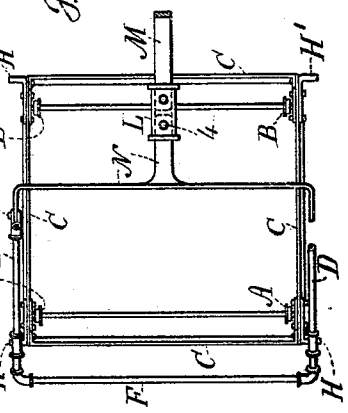
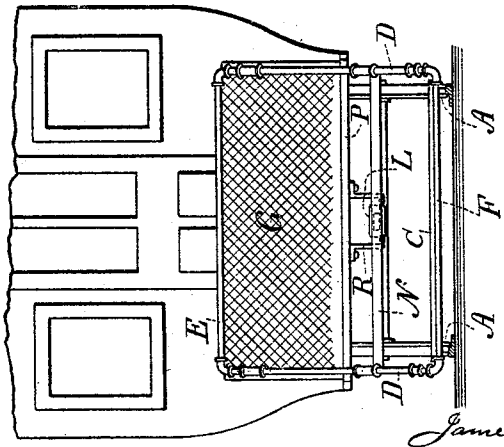


Fig. 2.



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UNITED STATES PATENT OFFICE.

JAMES H. THAYER AND HENRY W. THAYER, OF BROOKLYN, NEW YORK.

GUARD FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 554,898, dated February 18, 1896.

Application filed December 26, 1895. Serial No. 573,310. (No model.)

To all whom it may concern:

Be it known that we, JAMES H. THAYER and HENRY W. THAYER, citizens of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented an Improvement in Guards for Railway-Cars, of which the following is a specification.

The object of the present invention is to insure the guard of the car running under the person with whom it may come into contact and for keeping the guard itself from contact with the pavement regardless of the rise-and-fall motion to the car in traveling or the point to which it may be loaded down by the passengers on the car.

We make use of a truck-frame upon wheels, over which is placed the guard, and such guard is pivoted near its front edge to the truck-frame, and there is a push-bar extending from the front of the car to the frame of the guard, the parts being pivoted together at or near the middle portion of the guard. Hence the power to move the truck along is communicated through the frame of the guard from the push-bar, and when the forward edge of the guard meets with an obstruction the middle part of the guard is moved upwardly to a limited extent by the action of the push-bar throwing the front edge of the guard down closely into proximity to the surface of the pavement, and as the body falls upon the guard the reverse action takes place and the push-bar and guard are depressed, lifting up the front edge of the guard. By this means the risk of personal injury is very much reduced, and we also construct the guard in such a manner that it is easily detached from the draw-head of the car and connected to another car in the opposite direction, so as to avoid turning the truck around and passing it from one end of the car to the other when the direction of movement of the car is changed.

In the drawings, Figure 1 is a side view illustrating the present improvement. Fig. 2 is a front view with part of the netting or covering of the guard removed, and Fig. 3 is a plan of part of the guard-frame and of the truck.

The wheels A B with their axles are mounted in a light frame C, preferably of angle-iron, to form a truck, and the guard is made of the side bars or tubes, D, top bar, E, and bottom bar or tube, F, and any suitable netting of wire or fibrous material, as shown at G, is introduced within the frame formed of the bars or tubes D, E, and F.

The pivots H are upon the frame C, and the connections between the side bars, D, of the guard and the pivots H are preferably in the form of forks K passing over the pivots and latches or hooks I to catch under the pivots and hold the parts together, and it is advantageous to make these latches I drop and hold by gravity, so as to avoid the use of springs.

The draw-head L is of any desired character. In some cars the draw-heads are provided upon the ends of the draw-bars M at each end of the car; but where these draw-heads and draw-bars are not provided a special bar and socket end, similar to a draw-head, are to be provided, and into the draw-head L one end of the push-bar N is inserted and advantageously secured by a pin 4, and the outer part of the push-bar is pivoted at 5 to the guard and advantageously near the center of the same. We prefer to make the push-bar N as a fork or branch extending out so as to connect at its ends with the pivots 5, one on each of the side bars or tubes, D, of the guard-frame.

The draw-head L and draw-bar M are usually below the end of the platform represented at P and pass through a hanging loop R, in which a limited movement is allowed to the draw-bar laterally, and also for the same to rise and fall as the car may be moved up or down in traveling or in consequence of the weight carried by such car, and because of the guard being pushed by the bar N the truck is caused to travel upon the railway through the intervention of the guard itself, and if the forward end of the guard meets with an obstruction the guard will be swung upwardly and the pivot 5 raised until the draw-bar or draw-head is arrested in the upward movement by the platform or other part of the car, and as the pivot 5 thus rises the front bar or tube of the guard-frame will descend so as to underrun the person or object, and when such person or object falls upon

the guard the pivot 5 will again descend until the push-bar and draw-bar are arrested by the swinging loop R or other portion of the car. Hence the action will be to lift up the feet or legs of the person that may be run against as such person falls upon the guard, and in this manner the risk of personal injury is greatly lessened.

It is advantageous to make a second set of forks K′ near the opposite end of the guard with hooks I′ and to provide at the opposite end of the truck the pivots H′, so that when the push-bar is disconnected from the draw-head the guard may be swung upwardly upon the pivots H and the push-bar N swung downwardly upon the pivots 5, so as to stand in the opposite direction to the guard, and then the guard can be lowered to cause the forks K′ to engage the pivots H′ and the hooks I′ to hold the parts in position, the hooks I being disconnected from the other end of the truck either before or after the connection between K′ and H′, according to the particular shape of the guard, the object of changing the end connections between the truck and the guard being to adapt the guard to travel in the opposite direction; and it will be understood that in cases where the cars run along to the end, or nearly so, of the right-hand track and then are run back in the opposite direction upon the other track the fender and truck A B C may be disconnected from the car after it has been run in the opposite direction and upon the other track, and the guard so disconnected from that which now becomes the rear end of the car can be reversed, as before described, and left on the track in position to be connected to the front end of the next car that may come along behind it.

It will be understood that where only one set of hooks is provided on the guard and two sets of pivotal projections on the truck-frame the guard may be lifted off the truck and carried around and reconnected in the reverse direction to the truck-frame at the second set of pivots.

We claim as our invention—

1. The combination with a truck, of an inclined frame and a yielding guard therein, pivots for connecting the guard-frame to the truck, a push-bar connected to the car and pivots between the front end or ends of the push-bar and the middle portion of the guard-frame for giving motion to the truck that runs upon the track through the frame of the guard, substantially as set forth.

2. The combination with the draw-head upon a car, of a push-bar extending forward, pivots on its outer ends, an inclined guard-frame attached to the pivots and suitable yielding material within the frame, a truck and wheels and pivotal connections between the guard-frame and the front portion of the truck, substantially as set forth.

3. The combination with a guard-frame and guard, of a truck-frame and wheels to run upon the track, forks upon the guard-frame and pivotal projections upon the truck for removably connecting the truck and the guard frame, substantially as set forth.

4. The combination with a guard-frame and guard, of a truck-frame and wheels to run upon the track, forks and hooks upon the guard-frame and pivotal projections upon the truck for removably connecting the truck and the guard-frame, substantially as set forth.

5. The combination with a guard-frame and open-work guard, of a truck-frame and wheels to run upon the track, forks and hooks upon the guard-frame and pivotal projections upon the truck for removably connecting the truck and the guard-frame, a forked push-bar and pivots connecting the ends of the push-bar to the frame of the guard, substantially as set forth.

6. The combination with a truck-frame and wheels, of a guard-frame and guard, pivots upon the truck-frame near its ends and two sets of forks upon the guard-frame for allowing the connection and inclination of the guard to the frame to be reversed, substantially as set forth.

7. The combination with a truck-frame and wheels, of a guard-frame and guard, pivots upon the truck-frame near its ends and two sets of forks upon the guard-frame for allowing the connection and inclination of the guard to the frame to be reversed, a push-bar adapted to be connected to the car, and pivotal connections between the ends of the push-bar and the middle portions of the guard-frame, substantially as set forth.

Signed by us this 19th day of December, 1895.

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