

T. RIVARD.
SAFETY ATTACHMENT FOR FREIGHT CARS.
APPLICATION FILED JUNE 28, 1912.

1,062,255.

Patented May 20, 1913.

Fig. 1

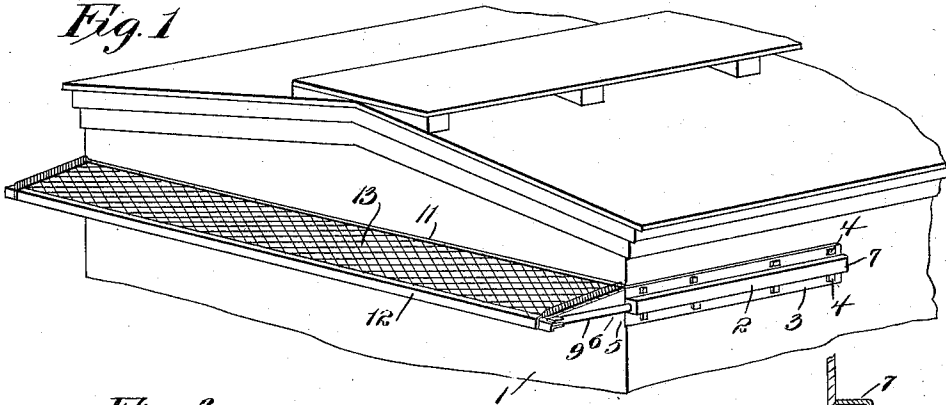


Fig. 3.

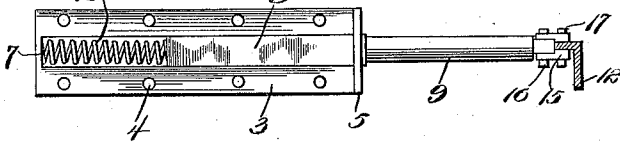


Fig. 2

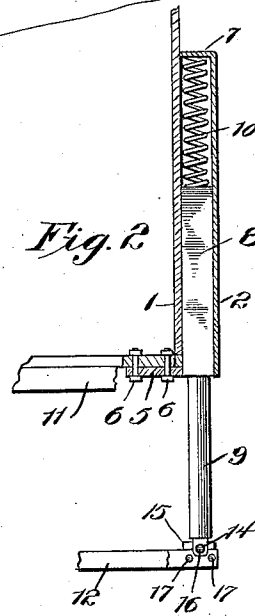


Fig. 4

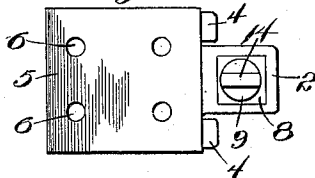


Fig. 5

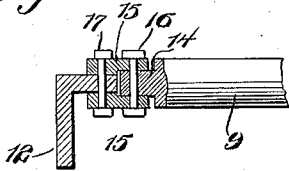
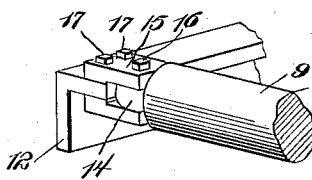


Fig. 6



Witnesses

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SAFETY ATTACHMENT FOR FREIGHT-CARS.

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To all whom it may concern:

Be it known that I, THEODORE RIVARD, a citizen of the United States, residing at Newport, in the county of Orleans and State of Vermont, have invented new and useful Improvements in Safety Attachments for Freight-Cars, of which the following is a specification.

This invention relates to a safety attachment for freight cars, to prevent trainmen from falling between adjacent cars, the object of the invention being to provide a guard which may be applied to the end of a box car, to prevent a trainman, who may lose his foot hold, from falling down between the car in question and the next adjacent car of the train.

A further object of the invention is to provide a guard which will automatically adjust itself to the distance between the cars when the train is rounding a curve, so as to close the space or opening between the cars.

A still further object of the invention is to provide a guard which is simple of construction, inexpensive of production, reliable and efficient of operation, and adapted for ready attachment to any ordinary box car.

The invention consists of the features of construction, combination and arrangement of parts, hereinafter fully described and claimed, reference being had to the accompanying drawings, in which:

Figure 1 is a perspective view of one end of a box car showing the application of the invention thereto. Fig. 2 is a sectional plan view of the same. Fig. 3 is a transverse section through one end of the guard and looking toward the inner side of the adjacent guide, with the parts removed from the car. Fig. 4 is an end view of one of the guides. Fig. 5 is a detail section showing the pivotal connection between the outer rail of the guard and one of the plunger rods. Fig. 6 is a detail view of one end of the outer rail of the guard and the adjacent ears applied thereto.

Referring to the drawing, 1 designates a box car of any ordinary construction, to the opposite sides of which are secured channeled guides 2, each formed of sheet metal or other suitable material and provided with flanges 3 for the passage of suitable fastenings 4 to secure it in position.

The outer ends of the guides lie flush with the end of the car and are provided with lat-

erally extending bracket plates 5 secured to the car by suitable fastening devices 6. The inner end of each guide is provided with a suitable end wall or closure 7. It will, of course, be understood that the parts of the guide above described may be formed of a single casting. Slidably mounted within the guides are plungers 8, which are provided with rods or stems 9 extending beyond the outer ends of the guides and the end wall of the car. These plungers are backed by coiled cushioning springs 10 arranged within the guides between said plungers and the walls or closures 7. Secured to the end of the car is a transverse angle metal inner bar or rail 11, which is suitably secured in position, and arranged in parallel relation to said inner bar or rail 11 is an outer angle metal bar or rail 12, to which bars is secured a body 13, composed of any suitable flexible material, such as a wire, chain or fabric netting.

The outer ends of the plungers 9 are reduced to form tongues 14 which fit between pairs of ears 15 arranged at the ends of the rail 12 and are pivotally connected thereto by pins 16 passing through said tongues and ears. The outer ends of the ears respectively overlie and underlie the horizontal flange of the rail 12 and are secured thereto by one or more pins or bolts 17 adapted to adjustably engage openings in the flange of the rail, whereby the distance between the pairs of ears may be varied within certain limits to adapt the netting for application to cars varying to some slight extent in width.

From the foregoing description, it will be seen that when the device is applied in position, a guard is provided which extends horizontally and transversely beyond the end of the car and is adapted to close the space between the same and the adjacent car, so as to prevent a trainman who may slip or lose his foot hold from falling through either car down between the cars. It will also be seen that the plungers and flexible net 13 permit the rail 12 to move inwardly, while the pivotal connections between said rail and plungers also permits the rail to assume different angular positions, so that the guard is rendered automatically adjustable to accommodate itself to the changes in the relationship of the adjoining ends of the cars when the cars are traveling upon straight and curved portions of the track,

during which adjusting motions the plungers may move to different degrees within the guides 2. The springs take up, absorb and cushion all shocks and jars which may
 5 be sustained by the rail 12 and also hold same projected to the extent permitted by the distance between the ends of the cars so as to always close the intervening space or gap for the prevention of accidents of
 10 the character described.

By the construction disclosed, a guard is provided which is light in weight and may be applied to any existing type of box car in a rigid and convenient manner. It will,
 15 of course, be understood that instead of the use of a single guard upon the front or rear end of a car to close the gap between the same and the adjacent car, each end of the car may be provided with a guard, in which
 20 event the rails 12 of the adjacent guards will be maintained in contact with each other by the springs so that the guards will mutually cooperate to close the gap.

It will, of course, be understood that the
 25 device is so arranged that it does not interfere with the operation of the brake staff or with the proper handling of the cars.

Having thus fully described the invention what is claimed as new is:

30 1. In a safety attachment for cars, the combination of a car body, flanged brackets

secured to the sides of the car body and provided with guideways, plungers movable in said guideways, and projecting beyond the
 35 ends of the car body, springs within the guideways and backing said plungers, an inner transverse bar secured to the end of the car body, an outer transverse bar pivotally connected with the outer ends of the
 40 plungers, and a flexible netting stretched between said bars.

2. In a safety attachment for cars, the combination of a car body, guides secured to the sides of the car body, plungers movable in said guides and projecting beyond
 45 the ends of the car body, springs within the guides and backing said plungers, an inner angle metal bar extending across and secured to the end of the car body, an outer
 50 angle metal bar arranged in parallel relation to said inner angle metal bar, a flexible netting stretched between and secured to said bars, and brackets upon the ends of the
 55 outer angle metal bar and pivotally connected with the projecting ends of the plunger.

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

THEODORE RIVARD.

Witnesses:

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 H. G. VINCENT.