

J. S. CRARY.
Safety Shoe for Car Truck.

No. 106,258.

Patented Aug. 9, 1870.

Fig. 1.

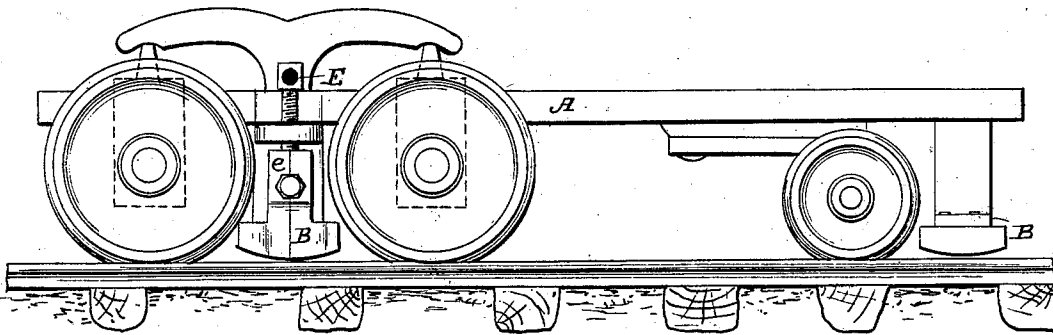


Fig. 2.

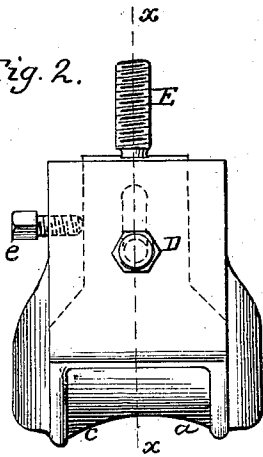


Fig. 3.

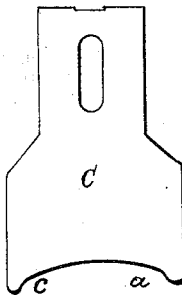
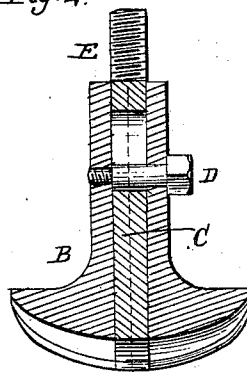


Fig. 4.



Witnesses:
L. Hailer
Thomas Taylor Jr.

Inventor:
J. S. Crary
by Dodge Munster
his atty.

UNITED STATES PATENT OFFICE.

JOHN S. CRARY, OF SALEM, NEW YORK.

IMPROVED SAFETY-SHOE FOR RAILWAY-CAR TRUCK.

Specification forming part of Letters Patent No. **106,258**, dated August 9, 1870.

To all whom it may concern:

Be it known that I, JOHN S. CRARY, of Salem, in the county of Washington and State of New York, have invented certain Improvements in Railroad-Cars, of which the following is a specification, reference being had to the accompanying drawing.

My invention consists in attaching to the truck or frame of a car or locomotive one or more pairs of safety-shoes of peculiar construction, to prevent accidents or injury in case the car is thrown off the rails, and to assist in replacing it, as hereinafter more fully explained.

Figure 1 is a side view of a car-truck with my improvement applied thereto. Figs. 2, 3, and 4 are views of the shoe detached, and more in detail.

My improvement is more especially intended for locomotives and tenders, though it may, if desired, be applied to other cars also.

In the drawing, A represents the frame or truck, which may be made in any suitable manner. To the sides of the truck, directly over the rail, I attach the safety-shoe B, which consists of a strong metallic standard widened transversely near its lower end, as shown in Figs. 2 and 4, its under surface being hollowed out transversely, as represented in Fig. 2, and having its front and rear edge rounded or curved upward from the center, as shown in Fig. 4.

The tread of the shoe should be about three times the width of the tread of the wheel, and its surface may be inclined equally each way from the center, though I prefer to make it as shown.

By an examination of Fig. 2 it will be observed that the portion of the under surface of the shoe marked *c*, extending from the outer flange or edge into the center, is considerably inclined, while the inner half (marked *a*) is of a form transversely corresponding to the tread of an ordinary car-wheel, the object of which will be hereinafter explained.

There is a mortise extending vertically through the body of the shoe B, in which is inserted a plate, C, this plate being provided with a slot near its upper end, through which a bolt, D, passes, as shown in Fig. 4, to hold the plate in place.

A set-screw, *e*, is inserted in the side of the body of the shoe, in such a position as to impinge upon or press against the edge of the plate C, to hold it up in the shoe and out of the way when not needed for use.

A large screw, E, is located directly over the upper end of the plate C, in such a position that when it is screwed down upon the upper end of the plate the latter will be forced down and caused to protrude below the bottom of the shoe.

With one or more pairs of these shoes attached to the truck the operation is as follows: In case the wheels near them leave the rails that end of the truck will at once tend to drop down, and in so doing the shoes will be brought to bear on the rails, the first effect of which will be to act as a brake to retard the forward motion of the car. At the same time the inclined surface *c* of the shoe on the opposite side will have a tendency to cause the car to slide back to its position on the track. When the car has ceased to move, the screws E are turned down, thereby forcing out the plates C at the bottom, the end of the truck being thereby raised and supported on the plates which rest on the rails. When thus supported the inclined surface *c* of the plate will tend to throw or cause the car to slide over to its position on the track as soon as the wheels are raised so that their flanges will clear the rails. When the car is replaced the plates C are raised to their original position in the shoe, and are secured in place by the set-screw *e*, as before.

It will be apparent that by locating the shoes but a little above the track, whenever they rest on the rails, the wheels near them will be held up, so as to prevent their coming in contact with the cross-ties or other parts of the superstructure, and by this means both the cars and the track will be saved from injury to a much greater extent than would otherwise be the case.

There may be any number of the shoes used, and they may be applied at any point on the truck, so they rest over the rails. The most appropriate location for them, however, would seem to be near the ends of the car, as shown in Fig. 1.

Having thus described my invention, what I claim is—

1. The shoe B, with its under surface, from the center outward, inclined, as shown at *c* and *a*, substantially as and for the purpose set forth.
2. The adjustable plate C, arranged to slide

vertically in the shoe, in combination with the screw E, when arranged to operate substantially as described.

JOHN S. CRARY.

Witnesses:

M. FAIRCHILD,
B. F. BANCROFT.