

J. W. HARDING & I. TOWELL.  
Safety-Guard for Cars.

2 Sheets—Sheet 1.

No. 199,974.

Patented Feb. 5, 1878.

Fig-1.

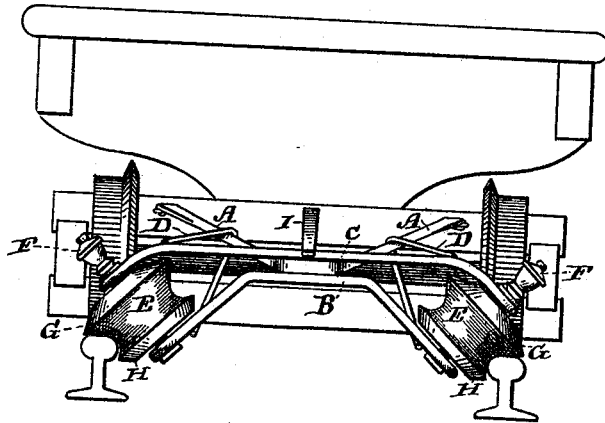
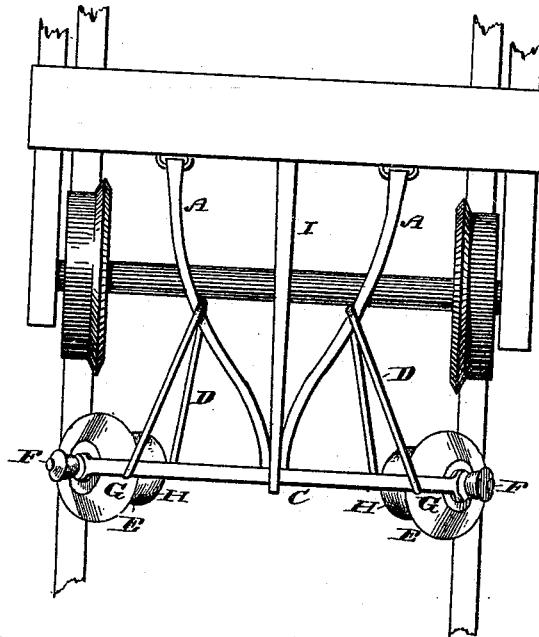


Fig. 2.



WITNESSES:

*Jas. F. Duhamel*  
*Albin M. Long*

INVENTORS:

*John W. Harding*  
*Isaac Towell*

PER

*A. J. Abbot*  
ATTORNEY.

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Fig. 3.

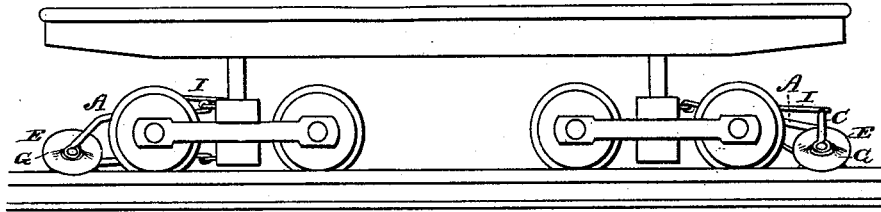


Fig. 4.

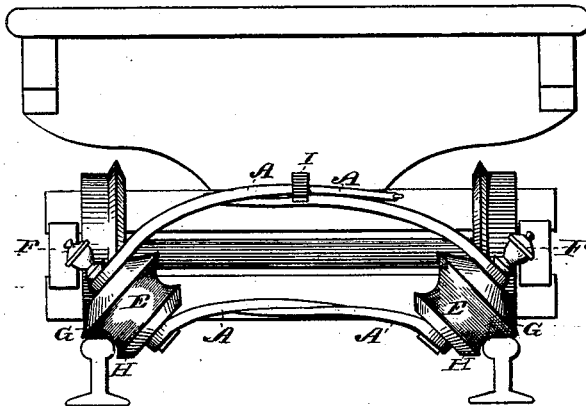
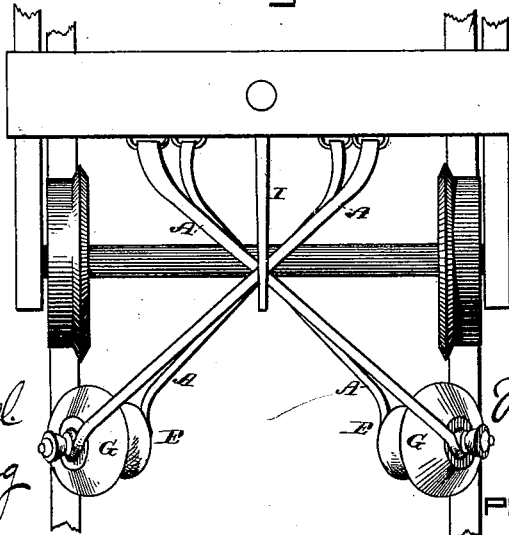


Fig. 5.



WITNESSES:

*Jan. F. DuHamel*  
*Albin M Long*

INVENTORS:

*John W. Harding*  
*Isaac Towell*

PER

*A. S. Holt*  
ATTORNEY.

# UNITED STATES PATENT OFFICE.

JOHN W. HARDING AND ISAAC TOWELL, OF COLUMBUS, TEXAS.

## IMPROVEMENT IN SAFETY-GUARDS FOR CARS.

Specification forming part of Letters Patent No. **199,974**, dated February 5, 1878; application filed November 23, 1877.

*To all whom it may concern:*

Be it known that we, J. W. HARDING and ISAAC TOWELL, of Columbus, in the county of Colorado and State of Texas, have invented certain new and useful Improvements in Safety-Guards for Cars; and we do hereby declare that the following is a full, clear, and exact description thereof.

This invention relates to certain improvements in that class of devices used to prevent the trucks of locomotives and cars from leaving the rail; and the invention consists in a device attached to the truck of a locomotive or car, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which our invention appertains to make and use the same, we will now proceed to describe its construction and arrangement, reference being had to the accompanying drawing, which forms a part of this specification, and in which—

Figure 1 is an end view, showing our device secured to a truck. Fig. 2 is a top view, with the platform of the car removed. Fig. 3 is a side elevation of a car, showing our device secured to both trucks. Fig. 4 is an end view, showing a different arrangement of arms for holding the rollers in position on the rails; and Fig. 5 is a top view of the same, with the platform of the car removed.

Our device is constructed substantially as follows: To the car-truck are hinged or otherwise suitably attached arms A, extending a suitable distance beyond the wheels, bearing in their operation the same relation to the truck that a tongue does to a wagon, and may be of any desired construction and arrangement. To the ends of these arms or tongue is secured what I denominate a "yoke," consisting of bars B C. This yoke may be made of any suitable material, and is securely held in its horizontal position by braces D, which give the required stiffness to resist any uneven strain at either end.

The object of this yoke is to carry two rollers, E, journaled to each end in such a man-

ner that they shall set at an angle of about forty-five degrees to the plane of the track, and are provided with oil-cups F, for lubricating purposes. These rollers are of a peculiar construction, having flanges G H, forming a groove around their periphery to receive the rails, as shown in Figs. 1 and 4.

The flange G extends over the top of the rail, and serves as a bearing-surface for the weight of the yoke and an ever-ready agent for the removal of obstructions from the rail upon which the roller travels.

The flange H extends downward on the inner side of the rail a sufficient distance and at the proper angle to cause the rollers always to adhere to the rail and resist any lateral pressure. The effect of this construction is to guide the forward end of the truck, thereby keeping the wheels in proper position on the track.

A spring, I, is so constructed and applied as to bear upon the yoke to hold the rollers to the rail in passing over frogs, cross-tracks, or the ends of rails, and resist the tendency to bound from the rails.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The rollers E, in combination with the yoke B C and arms A A, substantially as shown and described.

2. The combination of a truck with arms and rollers traveling in front of the wheels and upon the rails, substantially as shown and described.

3. The combination of a tongue consisting of arms and braces with rollers and spring, substantially as set forth.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

JOHN WALLER HARDING.  
ISAAC TOWELL.

Witnesses:

M. C. TAROIN,  
F. G. MAHON.