G. W. COOK.

Car Truck.

No. 51,698.

Patented Dec. 26, 1865.

Fig. 3

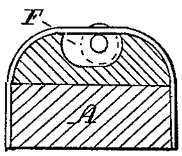


Fig. 2

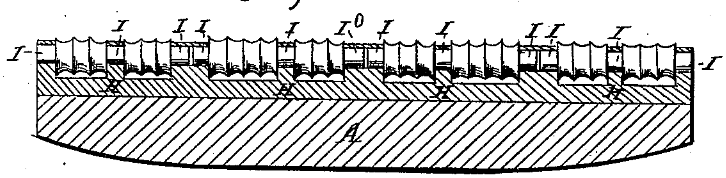
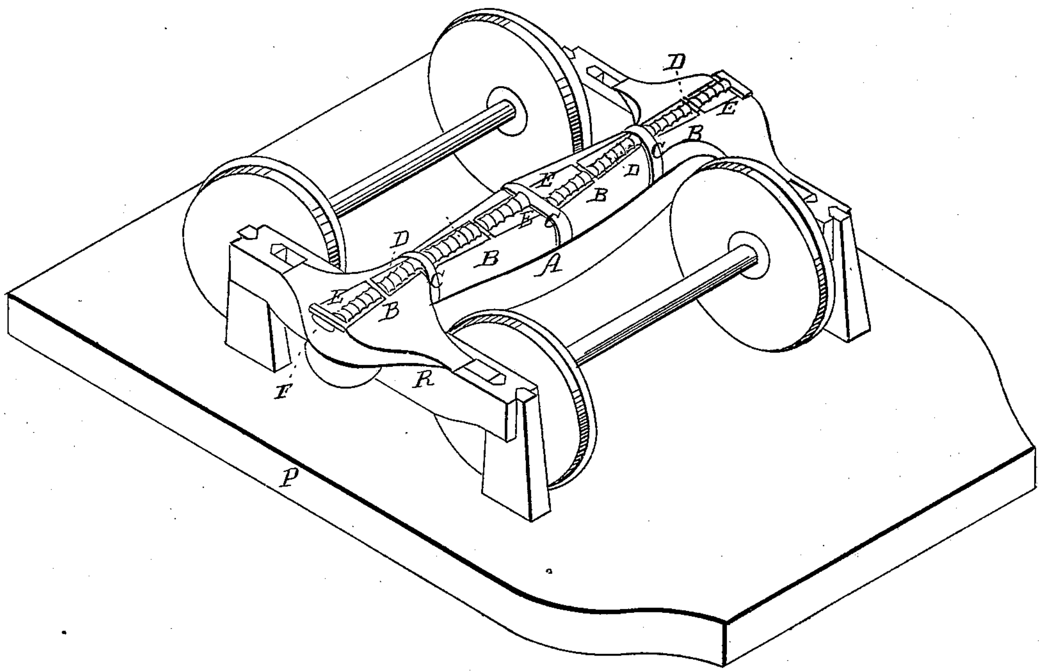


Fig. 1



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UNITED STATES PATENT OFFICE.

GEORGE W. COOK, OF ROCK ISLAND, ILLINOIS.

IMPROVEMENT IN RAILROAD-CARS.

Specification forming part of Letters Patent No. **51,698**, dated December 26, 1865.

To all whom it may concern:

Be it known that I, GEORGE W. COOK, of Rock Island, in the county of Rock Island and State of Illinois, have invented a new and useful Attachment to Railroad-Cars and Locomotives, to prevent the destruction of life and property when the car-wheels run off the rails; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of the invention consists in attaching underneath the car at each end four self-adjustable rollers, slightly elevated above the rails, which rollers, upon the car-wheels leaving the rails, will come in contact with the rails and immediately adjust themselves at a proper angle to incline and conduct the car directly back in the direction from which it came, thereby preventing the truck, or the wheels thereof, from coming in contact with the ground or ties, but keeping the body of the car directly over the track, the wheels either hugging the sides of the rails or rolling to their proper place.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation.

Figure 1 represents an isometrical perspective view of parts of an inverted car-truck with attachment; Fig. 2, longitudinal section of the attachment; Fig. 3, a cross-section of the attachment at the line O on Fig. 2.

I construct my cars on any of the known forms, and to those constructed without reference to the attachment I attach my improvement in any manner and to any part of the locomotive, car, or truck which is most practicable to produce the desired result.

There are cars at present in use which will show the manner in which I make my attachment. They are constructed with timbers between the truck-wheels on a line with the axle thereof, as shown at A in Fig. 1. I extend the length of this timber beyond the rails on each side of the track to a line taken up by the body of the car, as shown at P in Fig. 1. These timbers are fastened to iron bars or plates, which are attached to and connect the boxes on each side of the truck, as shown at R in Fig. 1. Underneath this timber I fasten, by means of bolts or otherwise, the boxing B, either in sections, as represented at B B B B in Fig. 1, joining each together by means of bands, as shown at *c c c*, or in one solid piece where strength requires it.

I make the boxing of cast-iron, or any other metallic substance, and of sufficient thickness so that when the rollers D D D D are placed in the slots E E E E, as shown at Fig. 1, the rollers will project about one-fourth of their thickness below the boxing, thereby guarding the rollers against any contact except that which tends to turn them around. I also make the boxing wide, for the purpose of getting the inclines from the edge of the slots to the top edge of the plates or boxing, in order that they may, in some instances, slide over obstructions, such as broken rails, &c.

At the outer ends of the two outside slots E E and the inner ends of the two inside slots E E, I make elongated and circular bearings to receive the rollers and permit the ends placed therein to play or swing from one side to the other, as shown at F in Figs. 1 and 3, thereby rendering the rollers self-adjustable as soon as they come in contact with the rails.

I make the rollers of wrought-iron or any other metallic substance, from four to five inches in diameter, or larger where strength is required. In order to prevent the rollers from sliding endwise when on the rails, I make shallow grooves with sharp ridges, as shown at Fig. 2.

The bands *c* are made of wrought-iron, and intended to keep both the boxing and the rollers to their places, and can extend around the timber, as shown at Fig. 3, and there fastened with bolts, or around the boxing, as shown at Fig. 1.

In order to use as small a roller as possible, I make one or more bearings on the boxing, between the ends of each roller, as shown at H H H H in Fig. 2. This bearing should be of less width than that of the top of the rail, to prevent the rails from dropping in the corresponding bearing of the roller. The rollers should be elevated about two inches above the rails when in working order, and

should not touch the boxing except at their points of bearing *i i i i i i i i i i i i*, as shown at Fig. 2.

What I claim as my invention, and desire to secure by Letters Patent, is—

The self-adjustable conducting-rollers D, in combination with their elongated boxing B, in which they play, when applied to railroad-cars and locomotives, for the purpose herein described and set forth.

GEORGE W. COOK.

Witnesses:

CHARLES BUFORD, Jr.,

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