J. W. ECKMAN.

SAFETY RAILWAY-TRUCKS AND TRACK.

No. 194,899. Patented Sept. 4, 1877.

Fig. 1.

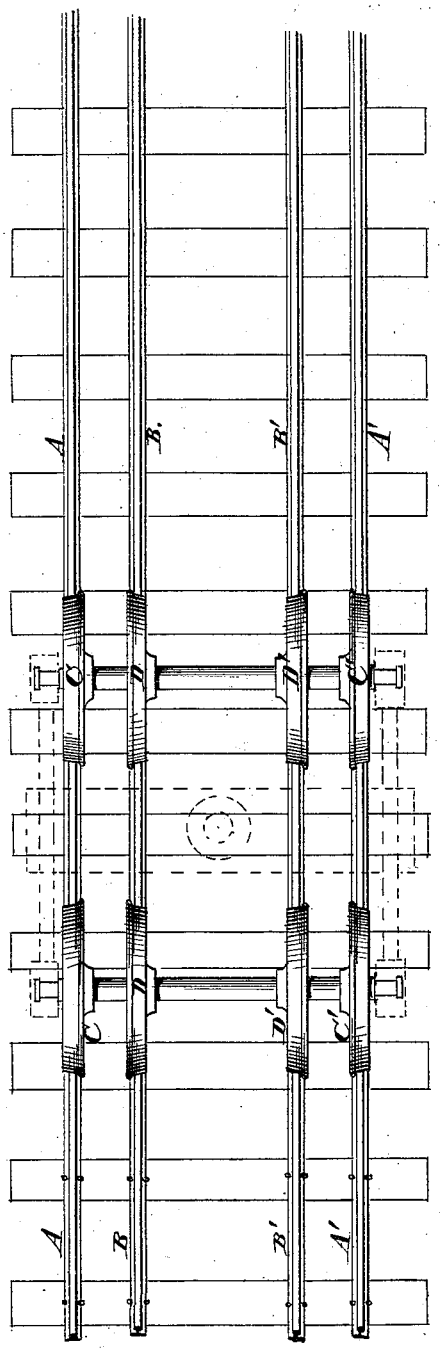


Fig. 3.

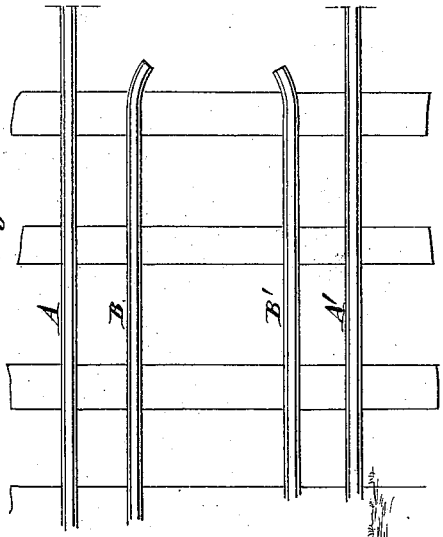
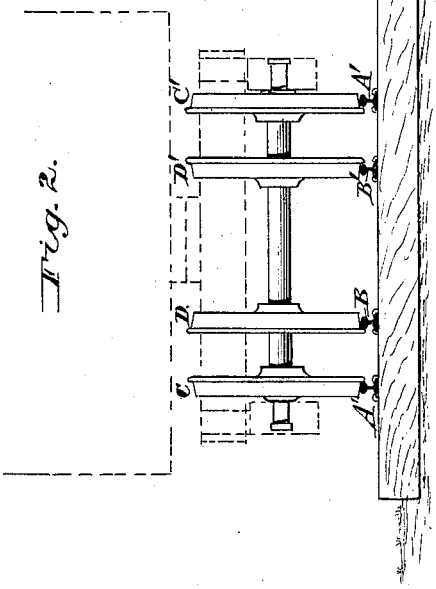


Fig. 2.



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UNITED STATES PATENT OFFICE.

JOHN W. ECKMAN, OF GREENFIELD, ILLINOIS.

IMPROVEMENT IN SAFETY RAILWAY TRUCK AND TRACK.

Specification forming part of Letters Patent No. **194,899**, dated September 4, 1877; application filed June 27, 1877.

To all whom it may concern:

Be it known that I, JOHN W. ECKMAN, of Greenfield, Green county, Illinois, have invented an Improvement in Safety Railroad Trucks and Tracks; and I do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of my invention; Fig. 2, a vertical section, and Fig. 3 a detailed view.

My invention relates to that class of devices, so desirable in this age of rapid railroad travel, which is intended to prevent or materially lessen railroad accidents occasioned by the breakage of an axle, fracture of a wheel, or displacement of a rail.

My invention consists in multiplying the rails of a railroad to at least four, and the wheels upon each axle to an equal number. I am aware that three rails and three wheels on an axle have been devised, but I make no claim to that number, as a middle rail, in case of an accident, would only balance the car, and it would be as likely to careen over upon the broken side as to remain upon the two remaining wheels or rails. In my device I have at least three-quarters of the support of the car intact, which is sufficient to cause the car to ride over any broken rail or proceed with a broken wheel or even axle.

In the drawings, A A′ represent the outside or ordinary rails of a railroad, and B B′ are the inside or safety rails. Apart from the advantages for safety in the inside or safety rails, they are of great benefit in tying the road together in clayey or loamy ground. In some cases the inside tracks may be used as a narrow-gage road when occasion may require. In addition to this, as the worn rails may be put inside and new rails outside, the expense or cost of the road is not very great with my improvement, and when there are four rails and four wheels to take the work of two, the four rails will outlast more than two sets of ordinary rails. The rails A B and A′ B′ may be laid at equal distances from each other, or they may be as shown in the drawing, or otherwise. C and C′ are the outer or ordinary wheels of a truck or car; and D D′, the auxiliary or safety wheels. The flanges of the wheels C C′ are, as usual, upon the inside, and the flanges of the wheels D D′ I prefer to have upon the outside, as shown, but they may be placed in any other position, or alternately inward and outward. My reason for preferring the flanges of the wheels D D′ on the outside is that in rounding a curve one wheel is pressed violently against the track, and the strain comes upon this side of the truck, but in the arrangement of the flanges shown the inner wheel would share the strain, and distribute it more evenly over the truck. In my device, upon switches, where the speed is always lessened, I dispense with the safety-rails, and turn the ends of said rails inward, as shown in Fig. 3, so that the flanges of the safety-wheels will be sure to take their position when the safety-rails are resumed beyond the switch.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

A railroad having four independent rails, and a like number of separate wheels upon each of the axles of the cars, with the flanges of the inner or safety wheels outside of the safety-rails, the whole constructed and arranged substantially as described.

The above specification of my said invention signed and witnessed at Washington this 27th day of June, A. D. 1877.

JOHN W. ECKMAN.

Witnesses:
C. M. PARKS,
JOHN ZIMMERMAN.