

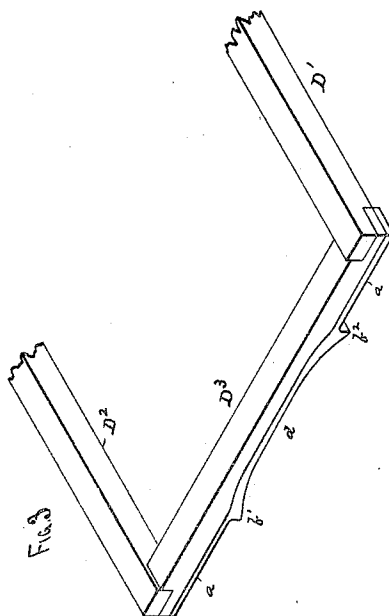
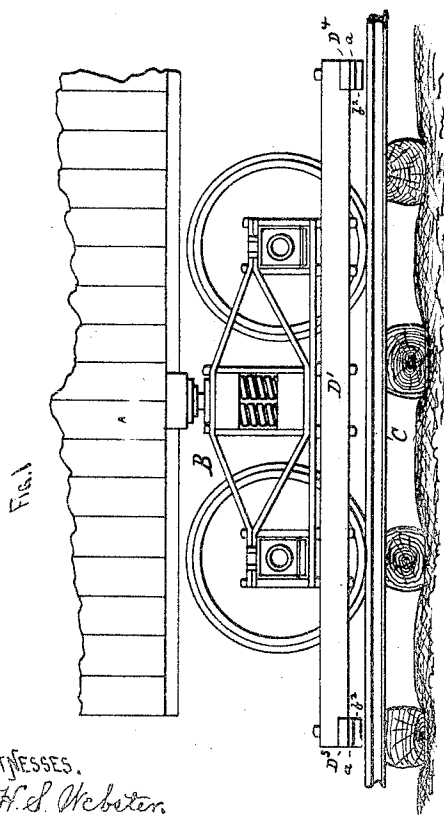
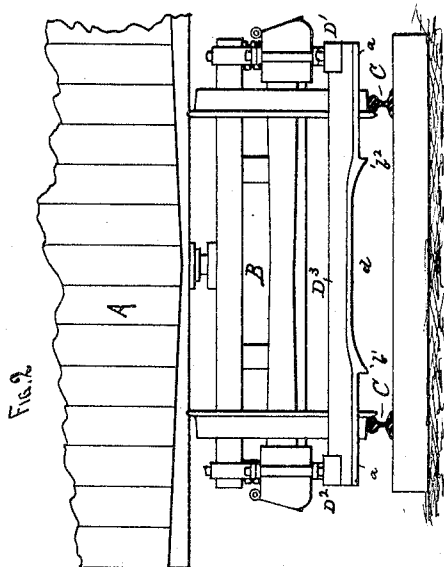
(No Model.)

H. LISTERUD.

SAFETY ATTACHMENT FOR RAILWAY CARS.

No. 308,909.

Patented Dec. 9, 1884.



WITNESSES.
H. S. Webster.
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UNITED STATES PATENT OFFICE.

HANS LISTERUD, OF SACRED HEART, MINNESOTA.

SAFETY ATTACHMENT FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 308,909, dated December 9, 1884.

Application filed August 5, 1884. (No model.)

To all whom it may concern:

Be it known that I, HANS LISTERUD, a subject of the King of Norway and Sweden, having declared my intention of becoming a citizen of the United States, and a resident of Sacred Heart, in the county of Renville, in the State of Minnesota, have invented certain new and useful Improvements in Safety Railroad-Car Attachments, of which the following specification is a full, clear, and exact description, reference being also had to the accompanying drawings, in which—

Figure 1 is a sideview, and Fig. 2 is an end view, of a railroad-car truck, showing my improvement attached thereto. Fig. 3 is a perspective view of a portion of the safety-frame detached.

A represents a portion of the frame of the car; B, one of the trucks, and C the rails of the track.

This device may be attached to any form of railroad-car; but for the purpose of illustration I have shown it attached to an ordinary freight-car truck.

My invention relates to that class of safety attachments consisting in securing an oblong frame formed of wood or metal, or partially of wood and partially of metal, beneath the frame of each of the trucks a short distance above the track, so that in event of the wheels leaving the track the frames will support the car and slide along the rails and prevent the wheels striking the ties, and at the same time serve as a brake to gradually stop the forward motion of the car.

My invention consists in certain improvements in the manner of constructing these combined safety and brake frames and in attachments thereto, whereby they are rendered more certain in their action.

D' D² are the side timbers of the safety-brake frames, firmly attached to the under side of the truck-frames outside the wheels, and connected across their ends by end cross-timbers, D³ D⁴. These timbers will be firmly and securely attached to the trucks B and to each other, and will be suitably braced and clamped to enable them to withstand the severe strains to which they must be subjected. The end timbers, D³ D⁴, will be shod on the under side with iron or steel shoes a, each shoe

being provided with downwardly-projecting lugs b' b², as shown. The lower sides of the outer ends of the shoes a will come just above the rails C, while the central parts are bent upward, as shown at d, so that the central part will be farther away from the ties and road-bed than the outer ends, to enable the shoes and frame to run over small elevations between the rails.

The distance between the rails C and shoes a, when the car-wheels are running upon the rails, is less than the height of the rails, so that if the wheels leave the rails the shoes a and frame D' D² D³ D⁴ will support the car upon the rails and prevent the flanges of the wheels from touching the ties, while at the same time the lugs b' b² will catch against the insides of the rails and prevent the shoes and brake-frame from running off sideways from the rails. By this arrangement the shoes and frame act as a brake to gradually check the speed of the car and bring it to a standstill without damage to the car or track.

The shoes a, with their lugs b' b², are a very important feature of my invention, as the former prevent wear upon the timbers D³ D⁴, and the latter serve to keep the frame and car upon the track. The curving upward of the central parts of the shoes is also an important feature, as the car is thus enabled to run over small projections, guard-rails, frogs, switches, &c., without striking them. The presence of the safety-brake frame thus does not interfere with the car any more than the ordinary brake-beams and shoes. The end timbers, D³ D⁴, will be far enough away from the wheels to leave room for the ordinary brake-shoes to be inserted between them.

Having described my invention and set forth its merits, what I claim is—

1. The combination, with a railroad-car truck, of side bars, D' D², attached to said truck outside of its wheels, end bars, D³ D⁴, connecting said side bars, and metallic shoes a a, secured underneath the end bars and extending the entire length of said bars, each shoe being provided with two downwardly-projecting lugs, b' b², which are situated over the road-bed between the rails when the car is in position, substantially as and for the purpose set forth.

2. The combination, with a railroad-car truck, of side bars, D' D², attached to said trucks outside of their wheels, end bars, D³ D⁴, connecting said side bars, and shoes *a*, provided with stops *b' b''*, attached to the under
5 side of said end bars, and with their central parts, *d*, curved upward, substantially as and for the purpose specified.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses. 10

HANS LISTERUD.

Witnesses:

HANS GRÖNNAUD,
PETER B. OLSON.