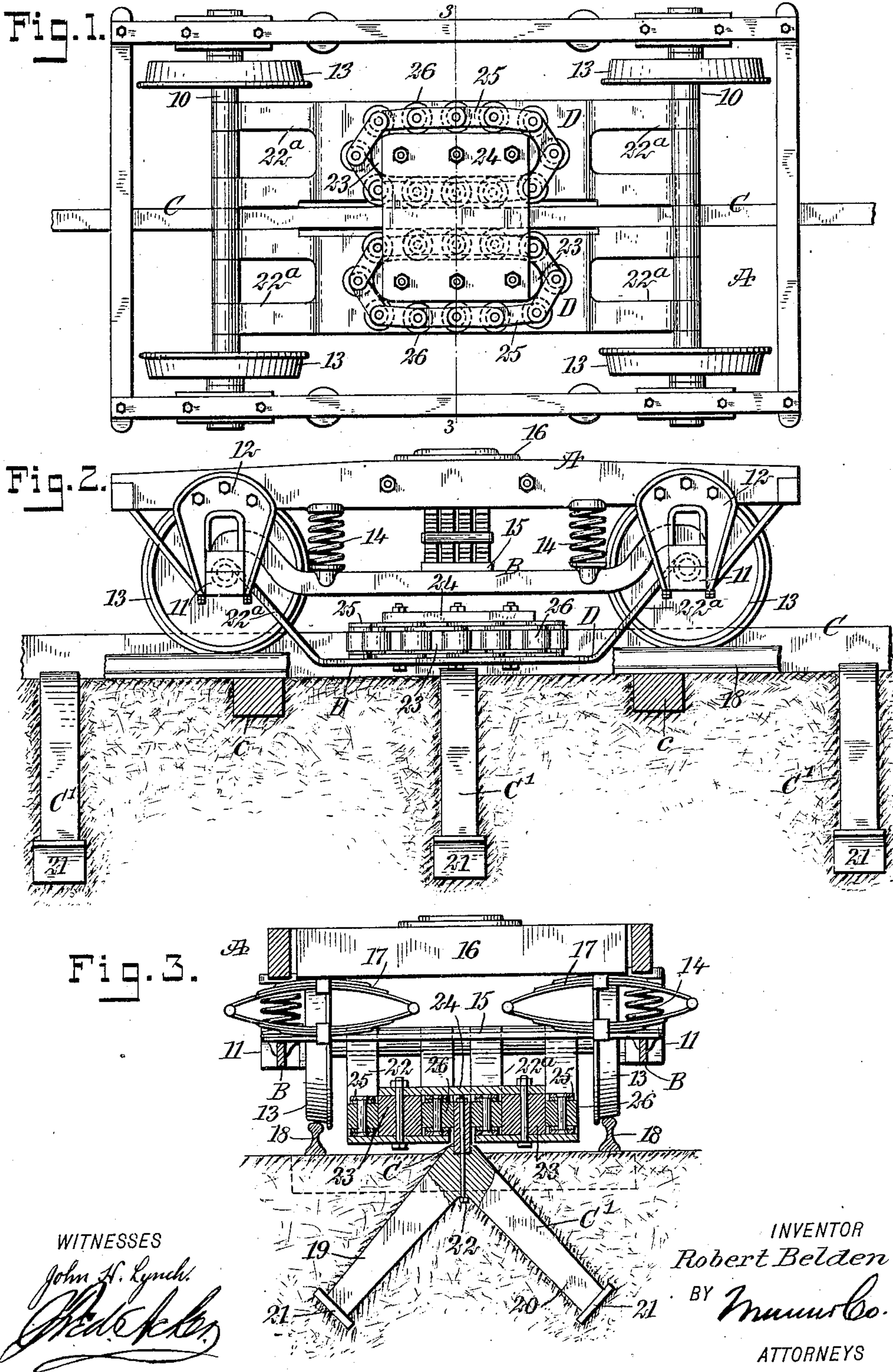


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SAFETY APPLIANCE FOR RAILWAY CARS.  
APPLICATION FILED JUNE 11, 1908.

917,525.

Patented Apr. 6, 1909.





# UNITED STATES PATENT OFFICE.

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## SAFETY APPLIANCE FOR RAILWAY-CARS.

No. 917,525.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed June 11, 1908. Serial No. 437,864.

*To all whom it may concern:*

Be it known that I, ROBERT BELDEN, a citizen of the United States, and a resident of Spanish Ranch, in the county of Plumas and State of California, have invented a new and useful Improvement in Safety Appliances for Railway-Cars, of which the following is a full, clear, and exact description.

The purpose of the invention is to provide a simple and reliable safety appliance for railway cars, or trains of cars, that will act to effectually prevent the cars leaving the track, particularly at abrupt curves, and will also serve to prevent the flanges of the car wheels from having undue frictional engagement with the rails.

It is also a purpose of the invention to provide an appliance of the character described constructed in two sections, one section being a fixture beneath a car and the other a fixture between the rails of the tracks.

The invention consists in the novel construction and combination of the several parts as will be hereinafter fully set forth and pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of a car truck having the improvement applied; Fig. 2 is a side view of the car truck and attached improvement, and a longitudinal section through a portion of the roadbed, illustrating the manner in which the section between the rails is anchored; and Fig. 3 is a vertical transverse section taken practically on the line 3—3 of Fig. 1.

A represents the frame of a car truck, which frame is provided with downwardly extending pedestals 12 in which the boxes 11 for the axles 10 have sliding movement, the said axles being provided with the usual flanged wheels 13. B represents the trusses that are located beneath the side members of the frame and extend from a forward to a rearward box 11, as is illustrated in Fig. 2, and springs 14 of the coiled type rest upon the trusses B and have bearing against the under faces of the sides of the truck. The usual plate 15 extends from one truss to the other, as is shown in Fig. 3, and above this plate a block 16 is located through which a king bolt is passed, and longitudinal springs 17 are located between the plate 15 and the

said block 16. All of the foregoing construction is of the ordinary type.

A stringer C is located centrally between the rails 18 of the track, extending longitudinally thereof, and the said stringer C is employed as a guide for the car passing over the track, the application being made in a manner to be hereinafter described. The stringer C which is continuous, may be made of metal, or it may be made from wood; in the latter event, however, it is provided with metal plates at its sides so that the body of the stringer will not become quickly worn in service. The stringer C is supported above the roadbed and rests upon the ties *c*, as is shown in Fig. 2, and it is held in position by means of anchoring devices C', which devices are buried in the ground for the major portion of their length and are located at desired intervals apart.

Each anchoring device C' comprises two members, 19 and 20, that diverge at their lower ends and extend downward, and the two members 19 and 20 of an anchoring device are brought together at their upper ends and are provided with a suitable socket at that point to receive the lower edge portion of the stringer C, as is illustrated in Fig. 3, the stringer being secured to the anchoring devices by means of bolts 22, or their equivalents, as is also shown in Fig. 3. Only the upper end portion of an anchoring device extends above the surface of the roadbed, as is shown in Fig. 3, and in order that these anchoring devices C' shall not work loose, plates 21 are secured at their lower end portions, that extend beyond the side faces and the longitudinal edges of the said members, as is also shown in Fig. 3.

The car truck is provided with auxiliary trusses D located below the main trusses B, but the auxiliary trusses D extend longitudinally of the truck, one at each side of its center, so that as the truck passes over the rails the stringer C will extend up between the auxiliary trusses D, as is shown in Figs. 1 and 2. These auxiliary trusses D are supported from the axles 10 by suitable arms 22<sup>a</sup>, or the equivalents thereof. At the central portion of each auxiliary truss D, a substantially oval block 23 is secured, extending longitudinally of said auxiliary trusses, as is particularly illustrated in Fig. 1, and these blocks 23 are preferably connected at their upper faces by a plate 24, and around each



block 23 an endless chain 25 is located, the said chain being provided with a series of friction rollers 26, and as the truck passes along the track the friction rollers at the inner stretches of the endless chain 25 engage with the stringer or guard rail C, and hold the truck in proper position on the track as effectually when rounding an abrupt curve as when traveling upon a straight stretch of track, and since these guide devices hold the truck in certain relation to the track, said guide devices prevent the flanges of the wheels of the truck from having undue bearing against the rails.

15 This device is exceedingly simple and is economic and readily applicable to any type of car, being particularly applicable to the trucks used upon ore carrying cars.

20 Having thus described my invention, I claim as new and desire to secure by Letters Patent,—

1. In safety appliances for railway cars, the combination with a fixed stringer adapted to be located between the rails of a track, of guide devices carried by the truck of a car engaging with opposite sides of the stringer said devices consisting of endless chains provided at spaced intervals with rollers for engaging the sides of the stringer.

30 2. In a safety appliance for railway cars, the combination with a stringer adapted to be located between the rails of a track, of a car truck and endless chain belts adapted to rotate thereon and arranged for engagement with opposite sides of the stringer.

35 3. In safety appliances for railway cars, the combination with a stringer located fixedly between the rails of a track, and means for securing the stringer in place, of a car

truck, opposing endless chain belts adapted for guided rotary movement, and means for supporting the said belt at the lower portion of the truck, and friction rollers carried by the said endless chain belts adapted for engagement with opposite faces of the stringer.

4. In safety appliances for railway cars, the combination with a stringer and means for securing the said stringer parallel with and between the rails of a track, of a car truck, trusses carried thereby, one at each side of its center, guide blocks located on said trusses, endless chain belts adapted to travel around said blocks, and friction rollers carried by the belts adapted for engagement with the opposite side faces of the stringer.

5. In safety appliances for railway cars, the combination with a stringer, an angular anchoring device therefor, the stringer being located parallel with and between the rails of the track, and offsets at the lower ends of the members of the said anchoring devices, of a car truck, trusses supported beneath the said truck, longitudinal and opposing guide blocks carried by the said trusses, endless chain belts mounted to travel around the guide blocks, and friction rollers at the inner stretches of the belts, being adapted for engagement with the opposing faces of the stringer.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ROBERT BELDEN.

Witnesses:

J. F. SPOONER,  
W. M. RICHARDS.