(No Model.)

A. ELLIS.

SAFETY ATTACHMENT FOR CARS AND TRUCKS.

No. 485,918. Patented Nov. 8, 1892.

Fig. 1.

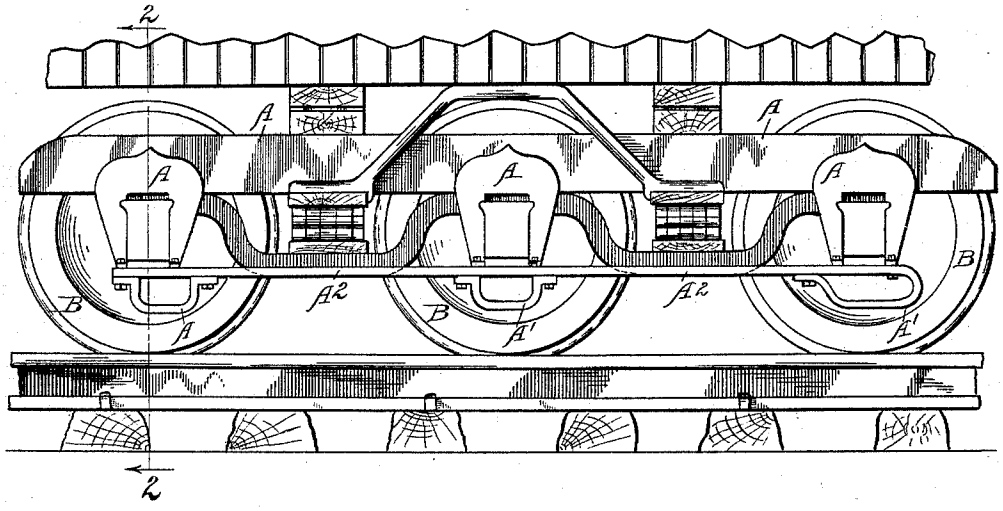


Fig. 2.

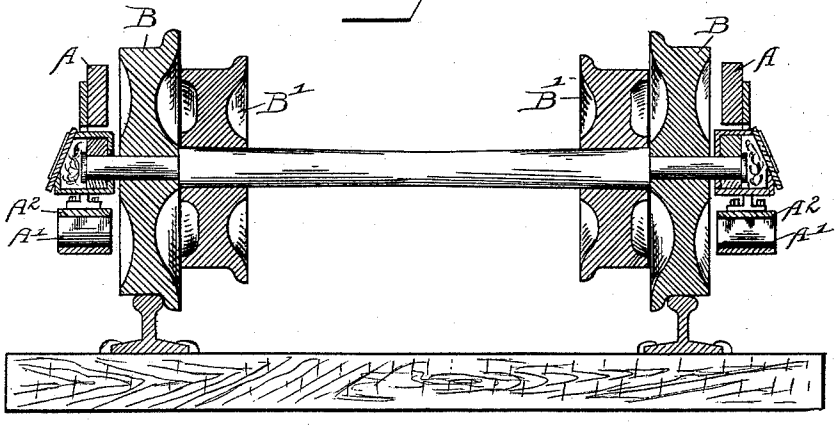
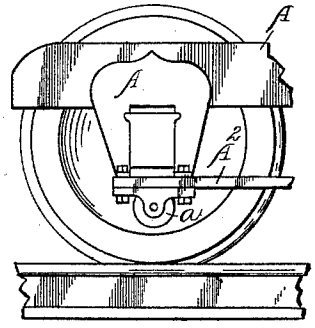


Fig. 3.



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UNITED STATES PATENT OFFICE.

AUGUSTIN ELLIS, OF BEDFORD, INDIANA.

SAFETY ATTACHMENT FOR CARS AND TRUCKS.

SPECIFICATION forming part of Letters Patent No. 485,918, dated November 8, 1892.

Application filed February 5, 1892. Serial No. 420,065. (No model.)

To all whom it may concern:

Be it known that I, AUGUSTIN ELLIS, a citizen of the United States, residing at Bedford, in the county of Lawrence and State of Indiana, have invented certain new and useful Improvements in Safety Attachments for Car-Trucks, of which the following is a specification.

As is well known, many of the most serious railway accidents are caused by an accidental derailment of one or more of the trucks under the cars composing the train. As soon as a truck becomes derailed its wheels bump along upon the cross-ties, the train being carried on by its momentum, the jerking and uneven motion usually causing the derailing of other trucks and cars, which finally leave the road-bed and overturn, resulting in great loss of life and property.

The object of my said invention is to provide an attachment to said trucks which will serve to engage the rails in the event of the derailment of a truck and support and guide said truck thereon with the wheels above the cross-ties until a stop can be effected, as will be hereinafter more fully described and claimed.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 represents a side view of a car-truck provided with my said invention; Fig. 2, a transverse vertical section through the same as seen when looking in the direction indicated by the arrows from the dotted line 2 2 in Fig. 1, and Fig. 3 a detail view illustrating a modified construction.

In said drawings the portions marked A represent the frame of the car-truck, and B its wheels. The frame A is or may be in general of any ordinary or desired construction and needs no special description herein. Under the outer end of each axle a shoe A′ is secured to portions of said frame of considerable width, with its inner edge in close proximity to the wheel and its face preferably a short distance above its periphery, so as to be as much out of the way as possible. Said shoes may be formed of a bar A^2, of suitable material, having the shoes formed therein by bending, as shown to the right in Fig. 1, or they may be separate pieces of suitably-formed metal, bolted or otherwise secured to the frame or the bar A^2, secured to the frame for the purpose of carrying them, as indicated in the middle and at the left of Fig. 1. It is immaterial, in so far as the purpose of my invention is concerned, as will be readily understood, how said shoes are constructed or attached to the frame, provided they are of suitable construction and arrangement to rest upon the rails in the event of the derailment of the wheels and support said wheels thereon above the cross-ties. I have also shown in Fig. 3 a small roller *a* substituted for one of said shoes, as it is obvious that rollers might be used instead of shoes, if preferred. I regard the construction having shoes upon the outer ends of the axles, however, as preferable for the reasons which will be presently stated. The wheels B are or may be of an ordinary or any desired form or construction, mounted upon suitable axles, as usual. Adjacent to their inner faces and firmly secured to the axle a second wheel or roller B′ is mounted, preferably somewhat smaller in diameter, with a wide face adapted to engage the rail should the main wheel on its side go over to the outside thereof. As will be seen, instead of this additional wheel a flange might be formed in piece with the main wheel as a substitute therefor. The construction and operation would, however, be substantially the same. It will also be seen that in lieu of the wheels B′, mounted upon the axle, the shoes A′, or the roller *a*, might be attached to the frame between and close to the inside of the wheels in a similar manner as they are shown attached to the outside.

The operation of said invention is as follows: Referring to Fig. 2, it will be seen that in the event the truck should leave the track to the right the wheels B′ on the right side of the truck would engage with the rail, while the opposite end of the truck would be supported on the other rail by the shoes A′. The distances from these surfaces to the edge of the flange of the main wheel being less than the height of the rail, said main wheels will be supported free from the cross-ties and the truck retained upon the track until a stop can be made and the truck replaced. The shoes A′, being upon the outside, will, be-

cause of the great friction between their surfaces and the rail, tend to draw said truck in the direction to replace it upon the track and possibly effect a replacement in the event the flange of the main wheel should strike any part—such as a joint or fish-plate or a guide purposely provided—upon which it could ride over the rail. In any event said shoes would operate to hold said main wheels close to the rails and prevent a complete derailment of the car, doing as little damage as possible.

While I have shown what I regard as the most desirable construction and arrangement, it is obvious that many modifications, such as above indicated and others, might be made without departing from my invention, which consists, broadly speaking, in providing a car-truck with attachments so located that upon the derailment of its wheels they will engage with the rails.

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

1. A safety attachment for car-trucks, which consists of a wheel or roller secured thereto and arranged upon one side of the truck-wheels, and a shoe or runner secured thereto and arranged upon the other side of the truck-wheels, whereby upon derailment said truck is drawn by the friction between said shoe and the ties toward the rails, substantially as set forth.

2. In a car-truck, the combination of the frame, the main wheels, the shoes secured to said frame under the outer ends of the axles, and secondary wheels mounted upon said axles in close proximity to the inner face of said main wheels, substantially as set forth.

3. In a car-truck, the combination of the frame, the wheels, and devices arranged in close proximity to and on each side of said wheels in position to support said truck upon the track when said wheels are off said track, substantially as set forth.

4. A safety attachment for car-trucks, consisting of shoes attached to the frame of the truck on the outside, and secondary wheels or flanges upon the inside of the main wheels, the bearing-faces of said shoes and said secondary wheels being a distance from the edge of the main-wheel flanges less than the height of said rail, substantially as set forth.

5. In a car-truck, the combination of the frame A, having a bar A^2 attached thereto under the outer ends of the axles, carrying shoes A′, and the secondary wheels B′, mounted upon said axles against the inner surface of the main wheels, all substantially as set forth, and for the purposes as set forth.

In witness whereof I have hereunto set my hand and seal, at Bedford, Indiana, this 30th day of January, A. D. 1892.

AUGUSTIN ELLIS. [L. S.]

Witnesses:
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