

Car Brake.

Patented Sept. 26, 1848.

UNITED STATES PATENT OFFICE.

JOHN B. ELLINWOOD, OF HILLSBOROUGH, NEW HAMPSHIRE.

BRAKE FOR CARS.

Specification of Letters Patent No. 5,807, dated September 26, 1848.

To all whom it may concern:

Be it known that I, JOHN B. ELLINWOOD, of Hillsborough, in the county of Hillsborough and State of New Hampshire, have invented a new and useful Improvement in Railway-Cars, whereby a retrograde movement of them may be either checked or arrested, whether on a level or inclined plane; and I do hereby declare that the same is fully described and represented in the following specification and accompanying drawings, letters, figures, and references thereof.

Of the said drawings Figure 1 denotes a side elevation of a car having my improvement applied to it. Fig. 2 is a vertical central and longitudinal section of it. Fig. 3 is a plan of the whole as it would appear if the car was turned bottom upward.

In the said drawings A represents the body of the carriage and B, B', B', the wheels thereof, C, C, being the axles of the said wheels. Between the two sets of wheels I place the contrivance which constitutes my invention.

D, D', are two long levers or bars which are arranged parallel to one another and upon a horizontal shaft or axle E, which is supported in position and above the track by two wheels F, F', which are made to roll and rest upon the rails of the track. The said levers D, D', are connected together by any suitable number of transverse rods or bars G, H, I, K, and to the front end and inner side of each lever a wedge L or L' is affixed as seen in the drawings, the said wedge being made to rest directly over the rail and adjacent to it, while at the same time its upper side is directly under the tread of the wheel. Each of the journals of the axle E is inserted in one of two long horizontal slots M made in side or vertical cheeks N, O, which are connected together by cross bars P, Q, bolted to the car body. The slot of one of the cheeks is seen at M, in Fig. 1, the other slot being similarly made through the other cheek.

The front end of each lever D or D' is prevented by a chain N' from swaying laterally so as to throw its wedge off the rail below it. The chain also, owing to the inertia or back drag of the levers, lifts the

wedges above the rails when the car is advancing on the track.

O' is a hook jointed to the lower end of a lever P, whose fulcrum is at Q'. The said hook is made to clasp the rear rod G of the levers and is sustained near its front end by a staple R, through which it plays. The lever P' has a spring S affixed to it and made to bear against the end of the car as seen in the drawings, the same being for the purpose of keeping the hook far enough forward so as not to impede the advance of the wedges and their levers or carriage when they are in operation on the wheels. When it is desirable to draw the wedges back from out of action against the wheels and to there keep them, the upper end of the lever should be moved toward the car to such extent as to cause the hook to drag the wedges and levers backward to the extent of their motion. When this is done the lever may be confined in position by a shackle or loop or any other proper contrivance.

It is well known that frightful and serious accidents have often occurred in consequence of one or more cars, when a train was in the act of ascending a steep grade, becoming detached from the others, and running backward or down the plane or incline with a constantly increasing velocity. The particular object of my improvement is to prevent such a retrogradation of any one or more of the cars.

As soon as a car is detached and commences a retrograde movement the back drag of the levers or lever carriage on the chains N', N', ceases and the wedges drop down upon the rails. The friction of the wedges on the rails retards the retrogradation of the wedges and causes the forward wheels to roll upon them, so as to press them down with the whole weight of the forward part of the carriage and thereby so suddenly and greatly increase the friction as to immediately arrest the back movement of the car.

I lay no claim to a wedge or obstacle placed under and in rear of a wheel to keep it from rolling down an inclined plane, but

That which I do claim is—

The above described manner in which I adapt the wedges to both of the wheels

against which they act, or in other words, I claim the combination of the wedge carriage (composed of the levers and sustaining wheels and other parts substantially as above specified) with the car and its wheels, and the friction wedges or their equivalents, the whole being constructed and made to operate together essentially as above explained.

In testimony whereof I have hereto set my signature this seventh day of March, 10 A. D. 1848.

JOHN B. ELLINWOOD.

Witnesses:

CATHARINE STEELE,
DANIEL STEELE.