E. O. RICHARD.

CAR-BRAKE.

No. 182,476. Patented Sept. 19, 1876.

Fig. 1.

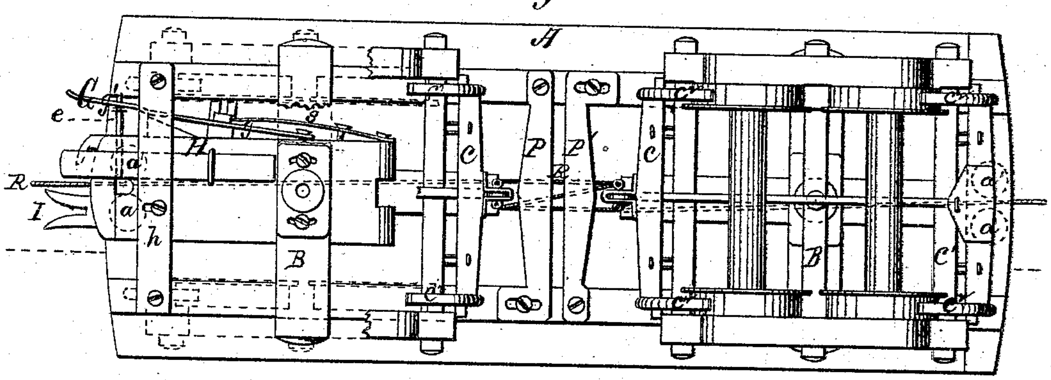
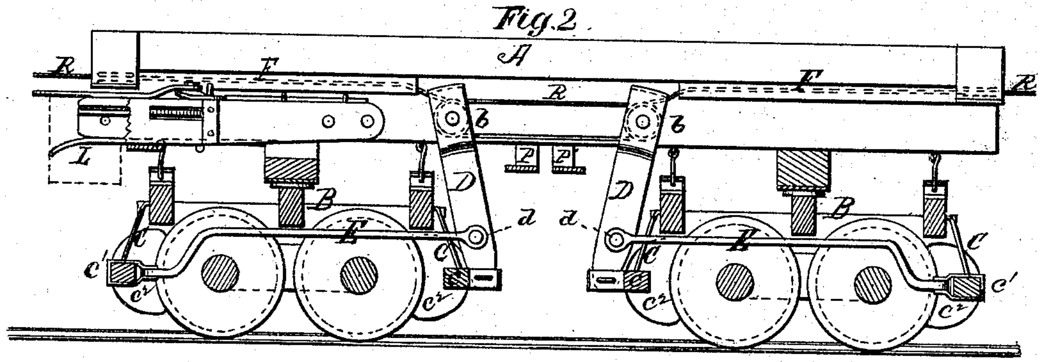


Fig. 2.



Witnesses:
Frank J. Masi
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UNITED STATES PATENT OFFICE.

EDMOND O. RICHARD, OF QUEBEC, QUEBEC, CANADA, ASSIGNOR OF PART OF HIS RIGHT TO JEAN E. RICHARD, OF COLUMBIA, SOUTH CAROLINA, AND JOSEPH C. RICHARD, OF QUEBEC, CANADA.

IMPROVEMENT IN CAR-BRAKES.

Specification forming part of Letters Patent No. **182,476**, dated September 19, 1876; application filed August 1, 1874.

To all whom it may concern:

Be it known that I, EDMOND O. RICHARD, of Quebec, in the Province of Quebec and Dominion of Canada, have invented a new and valuable Improvement in Automatic Car Brakes and Couplers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a plan view of my car-brake. Fig. 2 is a sectional view of the same.

This invention has relation to car-brakes for preventing railway collisions and other accidents liable to occur on account of cars jumping the track, for which Letters Patent were granted to me bearing date on the 23d September, 1873, and numbered 143,187; and the novelty consists in a single brake-branch, which operates the brake-levers, and is wound about a windlass on the engine or at the rear car with all the power due to the steam-head and momentum, whereby each car will be checked in succession from front to rear by the engine-man upon locomotive, and a speedy stoppage of the train secured.

It also consists in check-guides arranged transversely under the car between the front and rear truck, which, by means of a pivoted end, a slotted end, and a suitable clamp therefor, may be adjusted to or from the brake-levers, thereby increasing or diminishing the play of the said levers, and enabling me to regulate the degree of braking power applied to the car-wheels in accordance with the weight of the train.

In the annexed drawings, A designates the body of a railway-car, mounted upon trucks B B, in the usual well known manner. C C′ are hangers, to which are attached in any suitable manner shoe-bars c c^1, bearing upon each end brake-shoes c^2. D D′ designate levers having their fulcrums upon the shoe-bars c, and connected with the shoe-bars c^1 by means of rods E.

The upper ends of these levers are each provided with a double sheaf of pulleys, b b, through and over which is passed a brake-chain, R, passing thence to each end of the car in such a manner that when the said brake-chain is subjected to strain from either or both ends it will cause the levers to be drawn inward toward each other, causing the brake-shoes to be forcibly thrust against the peripheries of the wheels, and effectually braking the car; hence, if one of a number of cars similarly provided be thrown from the track, it having been uncoupled by a device hereinafter to be explained, and the whole number of chains previously connected the one with the other, and with a winding-drum upon the engine, the untracked car will, by its weight, act as an anchor, causing each individual brake to be applied, thereby effecting a speedy stoppage of the train.

The same effect will be produced by causing a winding-drum to which one end of the brake-chain has been attached to be actuated by the engine-driver. The winding-drum may even be located upon the rearmost car, and yet the efficiency of my improved brake be in no way impaired.

With a view to preventing the entanglement of the slack of the brake-chain in the running part of the truck, I have made use of chain-boxes F, which are rigidly secured to the bottom of the car, and through which the said brakes are passed on their way to each end thereof. They are then received between two grooved pulley-wheels, a' a, whereby they are accurately guided, and all friction is prevented.

With a view to preventing undue pressure of the brake-shoes upon the peripheries of the wheels, I have provided guides P P′, which are adjustable to or from the levers D D, and prevent them from exerting more pressure in braking a train than is required by the weight of the train, as

they prevent the said levers from being approximated the one toward the other beyond the point at which the said guides are adjusted.

What I claim as new, and desire to secure by Letters Patent, is—

The combination, with the levers D D, of the adjustable regulators P P, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

EDMOND O. RICHARD.

Witnesses:
GEORGE E. UPHAM,
H. C. HOLLINGSHEAD.