

(No Model.)

A. M. PERRY.
RAIL BRAKE.

No. 447,161.

Patented Feb. 24, 1891.

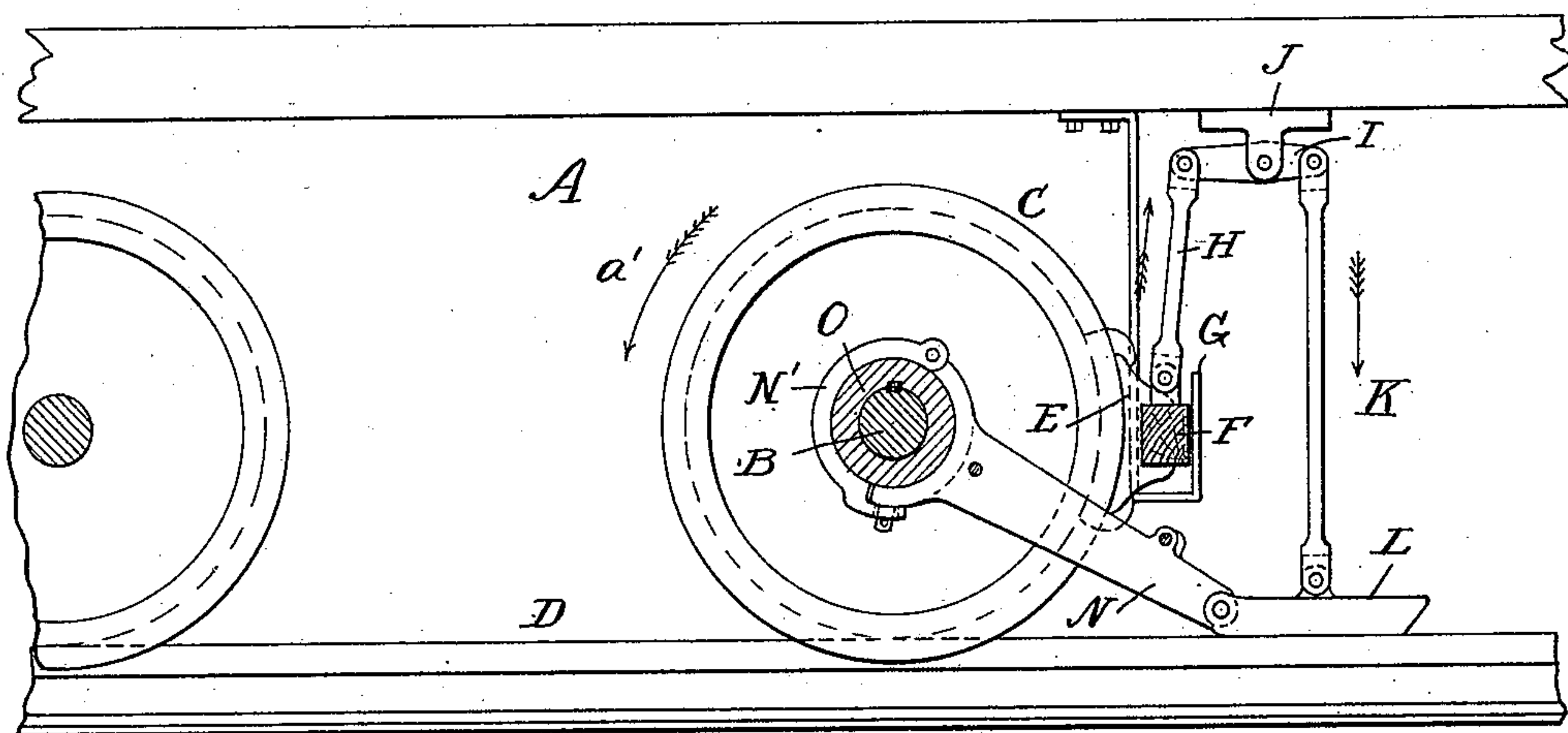
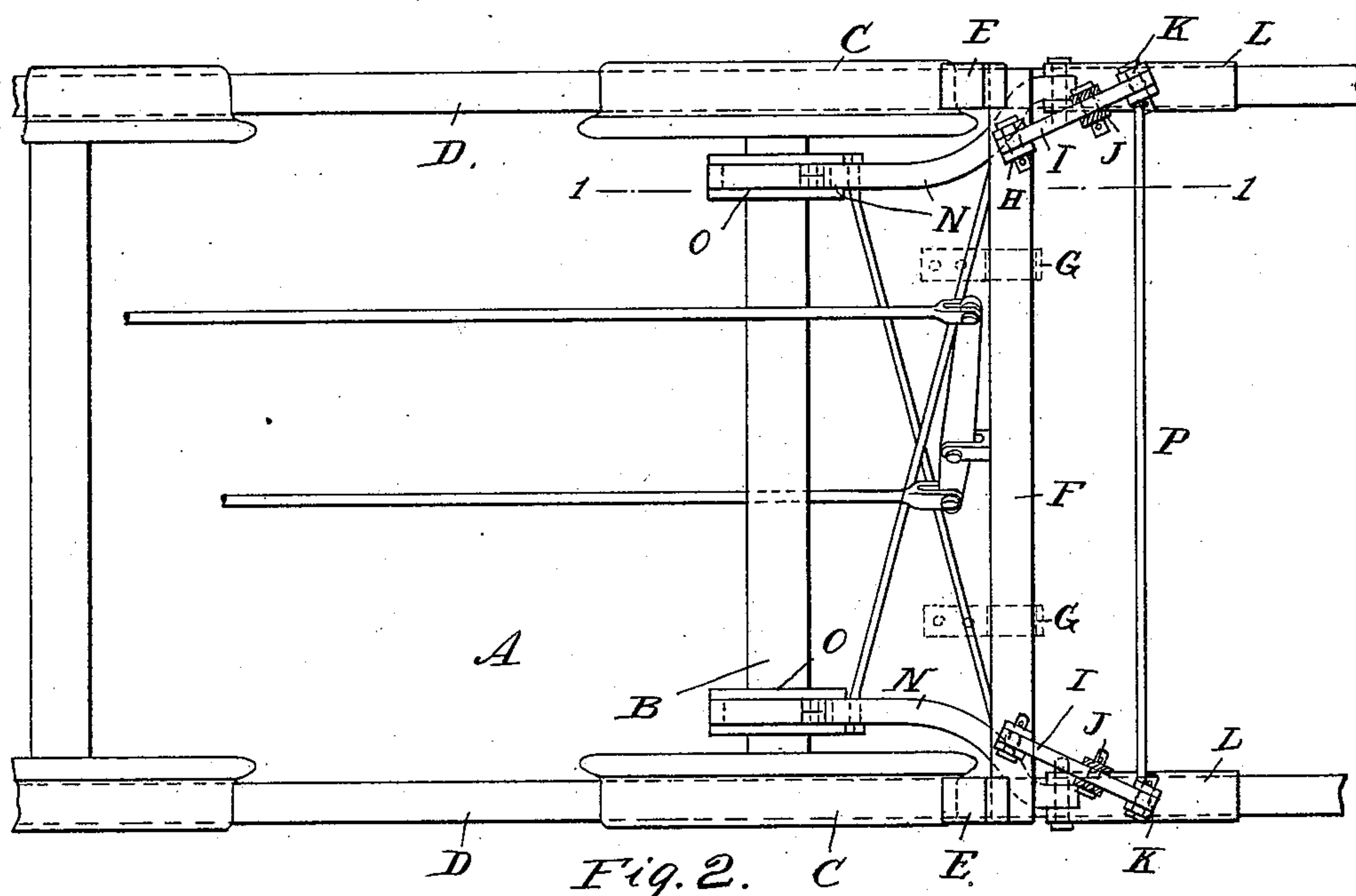


Fig. 1.



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RAIL-BRAKE.

SPECIFICATION forming part of Letters Patent No. 447,161, dated February 24, 1891.

Application filed June 2, 1890. Serial No. 354,012. (No model.)

To all whom it may concern:

Be it known that I, ALBERT M. PERRY, of Richmond, in the county of Henrico and State of Virginia, have invented a new and Improved Rail-Brake, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved rail-brake which is simple and durable in construction, very effective in operation, easily applied to all cars, and controlled by the ordinary brake mechanism.

The invention consists of an arm fulcrumed loosely on the car-axle and carrying a brake-shoe controlled from the ordinary brake mechanism.

The invention also consists in certain parts and details and combinations of the same, as will be described hereinafter, and then pointed out in the claims.

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

Figure 1 is a sectional side elevation of the improvement as applied on the line 1 1 of Fig. 2, and Fig. 2 is a plan view of the same with parts in section.

The car A, on which the rail-brake is applied, is provided with the usual brake-wheels C, secured on the axle B and mounted to travel on the rails D. The brake-wheels C are adapted to be braked by the ordinary brake-shoes E, secured on the brake-beam F and fitted to slide vertically in suitable bearings G, arranged on the under side of the car-truck. The brake-beam F is connected in the usual manner by levers or rods with suitable mechanism for operating the brake-beam by hand or power, as desired, and in the usual manner. Each end of the brake-beam F is pivotally connected by an upwardly-extending link H with a lever I, fulcrumed on a bracket J, secured to the under side of the car-body or on the truck of the car A.

The rear end of the lever I is pivotally connected by a link K with a rail-shoe L, adapted to fit onto the top of the rail E and pivotally connected with the end of the arm N, fulcrumed loosely on a collar O, secured on the axle B of the car A. In order to mount the arm N loosely on the collar O, it is preferably made with a hinged semicircular part N', so

as to conveniently place the fulcrum N onto the collar O. The hinged semicircular part N' is locked to the other part of the arm N by suitable means. A rod P connects the two oppositely-arranged brake-shoes L with each other, so as to hold the same in alignment with the rails D.

The operation is as follows: When the car A moves forward and the wheels turn in the direction of the arrow *a'* and the brake mechanism is applied so as to cause the brake-shoes E to come in contact with the wheels C, then the said brake-shoes by their frictional contact with the wheels C are moved upward, thus causing the brake-beam F to slide upward in the bearings G, whereby the links H exert an upward pressure on the levers I, so that their free ends swing downward, and by means of the links K press the shoes L firmly in contact with the tops of the rails D, thus braking the car. When the ordinary brake mechanism is thrown off, then the weight of the brake-beam F and its connections cause them to fall downward, thus raising the brake-shoes L off the rails D, the said brake-shoes L swinging upward with the arms N. This rail-brake can be supplied at a very small cost and fitted to all cars provided with the ordinary brake mechanism. It can be operated without any additional expense and is capable of stopping a train of cars in a much shorter time than any brake used at present or applied by ordinary methods, and the wear, instead of being on the wheel, as now, is on the rail, thus diminishing the wear on the wheels. As the wear is almost entirely on the rails, it is so distributed that it will hardly be perceptible, as is the case where the wear is all on the wheel. When the car A travels in an opposite direction, so that the wheels C turn in the inverse direction of the arrow *a'*, and the ordinary brake mechanism is applied, then the brake-shoe moves downward, thus raising the brake-shoes L from the rails. As the device is intended to be applied at each end of the car, the forward brake-shoes are raised off of the rails while the rear ones are applied, and vice versa on changing the direction of the cars.

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

1. In a rail-brake, the combination, with a brake mechanism, of an arm fulcrumed loosely on the car-axle, a shoe on the end of the said arm, and connections between the said shoe
5 and the brake mechanism, substantially as described.

2. A rail-brake comprising an arm fulcrumed loosely on the car-axle, a brake-shoe pivotally connected with the said arm, and
10 links and a lever connected with the said brake-shoe and adapted to be connected with the ordinary brake mechanism, substantially as shown and described.

3. In a rail-brake, the combination, with
15 the ordinary brake mechanism, of a link pivotally connected with the brake-beam of the said mechanism, a lever pivotally connected with the said link, a second link pivotally connected with the said lever, and a brake-
20 shoe held on the said second link and adapted to be placed in contact with the rail, substantially as shown and described.

4. In a rail-brake, the combination, with the ordinary brake mechanism, of a link piv-
25 otally connected with the brake-beam of the

said mechanism, a lever pivotally connected with the said link, a second link pivotally connected with the said lever, a brake-shoe held on the said second link and adapted to be pressed in contact with the rail, and an arm
30 pivotally connected with the said brake-shoe and loosely fulcrumed on the car-axle, substantially as shown and described.

5. In a rail-brake, the combination, with a collar adapted to be secured to one of the
35 axles, of an arm loosely fulcrumed on the said collar, a brake-shoe pivotally connected with the said arm and adapted to engage the top of the rail, a link pivotally connected with the said brake-shoe, a lever pivotally
40 connected with the said link, and a second link pivotally connected with the said lever and also pivotally connected with the brake-beam of the ordinary brake mechanism, substantially as shown and described.

ALBERT M. PERRY.

Witnesses:

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