

UNITED STATES PATENT OFFICE.

MAURICE FRANCIS CROTTY, OF POUGHKEEPSIE, NEW YORK.

COMBINED BRAKE-SHOE AND WHEEL-GUARD.

SPECIFICATION forming part of Letters Patent No. 587,648, dated August 3, 1897.

Application filed October 9, 1896. Serial No. 608,394. (No model.)

To all whom it may concern:

Be it known that I, MAURICE FRANCIS CROTTY, a citizen of the United States, and a resident of Poughkeepsie, county of Dutchess, and State of New York, have invented certain new and useful Improvements in a Combined Brake-Shoe and Wheel-Guard, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to an improved brake for trolley, cable, or other street-railway cars, the object thereof being to provide a means for effectually and instantaneously stopping or braking a car when the same is traveling on a downgrade, the invention being especially applicable in the case of a runaway car. The device is inexpensive, simple in construction, and easily operated, and it can be attached to a car of any ordinary construction without interfering with the common brake mechanism thereof.

The invention will be hereinafter fully described, and specifically set forth in the annexed claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation of the end of a car, showing my improved device attached thereto; and Figs. 2 and 3 are respectively an edge and a plan view of the shoe.

In the practice of my invention my brake-shoe comprises a cross-plate A and two rearwardly-extended shoes B, which said shoes have flanges *b* projected therefrom for lateral engagement with the tread of a suitable rail *l*.

The device is secured to the truck of a car by means of swinging links C, which are secured to the truck by pivots *c*. These said links engage at their lower ends with upwardly-projecting bearings B', which form, preferably, an integral part of the plate A, and the oppositely-located links are connected by means of a rod *b'*.

As a means for maintaining the shoe in an inoperative position, as illustrated by full lines in Fig. 1 of the drawings, a loop *b*² is extended upwardly from the plate A. This said loop engages with a swinging hook D, which is normally maintained in a forward position

by means of a plate-spring D'. The said plate-spring has a bearing *d* located upon the bottom of the car.

As a means for operating and throwing the hook out of engagement with the loop *b*² I provide a rod E, which is pivotally connected at its inner end to the hook D. The outer end of this said rod is pivoted to the lower end of a lever F, which said lever is fulcrumed at F' to the platform of the car.

In the operation of the device when it is desired to instantly brake or stop the car the lever F will be pressed forwardly in the direction of the arrow 2, whereby the hook D will be carried rearwardly until it passes out of engagement with the loop *b*², whereby the shoe will drop by gravity and engage with the rails, and the forward motion of the car will cause the wheels to ride upwardly upon the projections B, as illustrated by dotted lines in Fig. 1 of the drawings, whereby the said wheels will be blocked and the car stopped, even though it may be traveling on a steep downgrade.

I do not confine myself to the specific details of mere mechanical construction as described and shown, as it is obvious that under the scope of my invention I am entitled to slight variations of structural detail.

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

1. A brake comprising a swinging cross-plate having two rearwardly-extending shoes provided on their under surfaces near their inner edges with flanges adapted when in use to grip the inner surface of the rail, bearings on swinging cross-plate, provided with eyes, dependent links pivotally secured to the car-truck frame, and means for connecting the said links to the swinging cross-plate, consisting of a rod passing through the links and through the eyes in the bearings on the swinging plate, and means for holding the brake-shoes from the track comprising a loop on the swinging cross-plate, adapted to be engaged by a hook pivotally secured to the car-body.

2. A brake comprising a swinging cross-plate having two rearwardly-extending shoes provided on their under surfaces near their inner edges with flanges adapted when in use to grip the inner surface of the rail, bearings

on said swinging cross-plate, provided with eyes, dependent links pivotally secured to the car-truck frame, and means for connecting the said links to the swinging cross-plate
5 consisting of a rod passing through the links and through the eyes in the bearings on the swinging plate, and means for holding the brake-shoes from the track comprising a loop on the swinging cross-plate, adapted to be
10 engaged by a hook pivotally secured to the car-body, and retained in position by a spring secured to the car.

3. A brake comprising a swinging cross-plate having two rearwardly-extending shoes
15 provided on their under surfaces near their inner edges with flanges adapted when in use to grip the inner surface of the rail, bearings on said swinging cross-plate, provided with eyes, dependent links pivotally secured to the
20 car-truck frame, and means for connecting the said links to the swinging cross-plate con-

sisting of a rod passing through the links and through the eyes in the bearings on the swinging plate, and means for holding the brake-shoes from the track comprising a loop on the
25 swinging cross-plate, adapted to be engaged by a hook pivotally secured to the car-body, and retained in position by a spring secured to the car, and means for releasing the hook and throwing the brake-shoes against the
30 track comprising a rod secured at one end to the said depending hook and at the other end to a lever fulcrumed in the car-platform.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 26th day of August, 1896. 35

MAURICE FRANCIS CROTTY.

Witnesses:

THOMAS MALLOY,
DANIEL B. WHITE.