

(No Model.)

2 Sheets—Sheet 2.

H. F. COOK.

CAR BRAKE.

No. 347,575.

Patented Aug. 17, 1886.

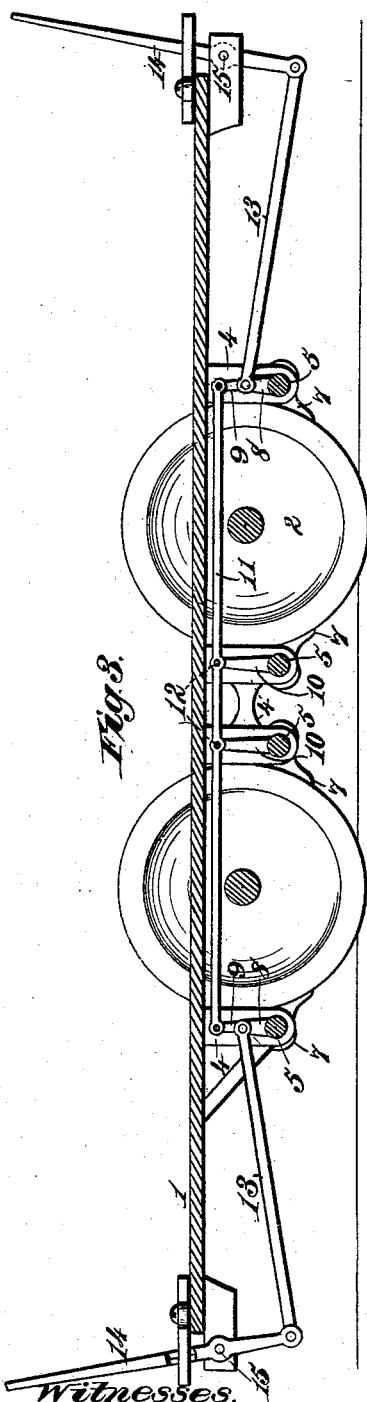


Fig. 3.

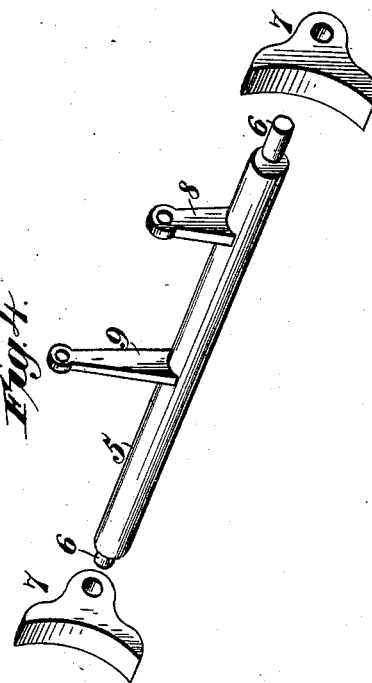


Fig. 4.

Witnesses.
Robert Smith,
Geo. H. Rea

Inventor.
Henry F. Cook.
By James L. Norris.
Atty.

UNITED STATES PATENT OFFICE.

HENRY F. COOK, OF NEW YORK, N. Y.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 347,575, dated August 17, 1886

Application filed July 7, 1886. Serial No. 207,348. (No model.)

To all whom it may concern:

Be it known that I, HENRY F. COOK, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Car-Brakes, of which the following is a specification.

This invention relates to car-brakes especially designed for horse-cars, cable, electric, and other railway cars; and it has for its object to provide a novel brake mechanism, whereby two brakes can be applied with great power to each car-wheel from either end of the car.

To such ends the invention consists in a series of rock-shafts having at each end an eccentric pin or stud engaging a brake-shoe, all the shafts being pivotally connected by a rigid rod, and operated by a lever at each end of the car in such manner that by moving either lever all the shafts are operated, and by the eccentric pins or studs the brake-shoes are thrown into engagement with the car-wheels by a wedging action with great power, two of the brake-shoes being applied to opposite sides of each wheel, so that wear of and injury to the car axle or boxes are avoided, the action being centrifugal, and the friction on the wheels is greatly increased.

The invention consists in other features of construction and combination, which will be hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a side elevation of a car-truck with my invention applied thereto; Fig. 2, a bottom plan view; Fig. 3, a longitudinal sectional view taken on the line *xx* of Fig. 2, and Fig. 4 a perspective view of one of the rock-shafts and its brake-shoes detached therefrom.

In order to enable those skilled in the art to make and use my invention, I will now describe the same in detail, referring to the drawings, where—

The numeral 1 indicates the truck frame or platform of what may be a street horse-car, and 2 indicates the truck-wheels, having journals mounted in boxes 3 in the usual way.

To the opposite sides of the frame or platform are secured pendent brackets 4, in which are journaled the end portions of rock-shafts 5, there being two of the latter at opposite sides

of each pair of car-wheels. The extremities of the rock-shafts project beyond the brackets in which they are mounted, and at each end they are provided with an eccentric pin or stud, 6, on which is journaled or swiveled a brake shoe, 7, thus placing two brake-shoes, respectively, at opposite sides of each car-wheel. The end rock-shafts are each furnished with two rigidly-attached upwardly-projecting lever-arms, 8 and 9, those numbered 8 being near one end of the rock-shafts, while those numbered 9 are adjacent to or at the middle of the same. The rock-shafts which are journaled between the two pairs of wheels are provided with rigidly-attached central lever-arms, 10, in line with the arms 9, and all of these central arms are connected by a rigid bar, 11, having a pivotal attachment, 12, with each arm, such attachment consisting, as here shown, of pivot-pins joining the bar to the arms.

To each of the arms 8 of the end rock-shafts is pivotally connected one end of a rod, 13, to the other end of which rod is pivoted the lower end of an upright hand-lever, 14, fulcrumed at 15 on the car-platform, and projecting upward a sufficient distance to be within convenient reach of the driver or other attendant. When either one of these hand-levers is moved in the proper direction to apply the brakes, all the rock-shafts will be rocked in their bearings through the medium of their connecting-bar, and consequently the eccentric pins or studs swiveled to the brake-shoes will force the latter upon the car-wheels with a wedging action. In this way the brakes are applied with great force by a minimum amount of power exerted on the hand-levers, and as there are two brakes, respectively, at opposite sides of each wheel, the car will be stopped without injury to the axle or boxes.

I do not confine myself to the particular hand-lever mechanism shown for actuating the end rock-shafts, as other means may be provided for accomplishing that end.

Having thus described my invention, what I claim is—

1. The combination, with the wheels of a car, of a rock-shaft mounted in suitable bearings and provided at its end with an eccentric pin or stud, a brake-shoe swiveled or journaled on the eccentric pin or stud, an arm rigidly attached to and projecting from the shaft, and

mechanism connected with said arm for rocking the shaft in its bearings to apply the brake-shoe with a wedging action, substantially as described.

5 2. The combination, with the wheels of a car, of a rock-shaft journaled in brackets pendent from the car-frame, and provided at each end with an eccentric pin or stud, a brake-shoe swiveled or journaled on each eccentric pin or stud, a lever-arm rigidly attached to the shaft, and lever mechanism connected with the lever-arm for rocking the shaft and applying the brake-shoes with a wedging action.

3. The combination, with the wheels of a

car, of two rock-shafts journaled in bearings, 15 respectively, at opposite sides of each pair of wheels, and each shaft having its ends provided with eccentric pins or studs, a brake-shoe swiveled or journaled on said pin or stud, for applying the brake-shoe to the car-wheel with 20 a wedging action, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY F. COOK.

Witnesses:

JOHN SHERRY, Jr.,

EVERETT A. CARPENTER.