

Car Brake.

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Inventor
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United States Patent Office.

G. L. MILLER, OF DE WITT, NEW YORK.

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IMPROVED CAR-BRAKE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, G. L. MILLER, of De Witt, in the county of Onondaga, and State of New York, have invented a new and improved Car-Brake; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to a new and improved car-brake, which is applicable to either horse or steam-cars; and it consists in a novel construction and arrangement of the brake, as hereinafter fully shown and described, whereby it is rendered capable of being operated through the medium of a friction-wheel, and the brake operated on a single car, or all the brakes of a series of cars comprising a train operated simultaneously.

In the accompanying sheet of drawings—

Figure 1 is a side sectional view of a locomotive-tender, and a side view of a car provided with my invention, *x x*, fig. 2, indicating the line of section of the tender.

Figure 2, an inverted plan of the same.

Similar letters of reference indicate corresponding parts.

A represents the lower part of a locomotive-tender, and

B the lower part of a passenger-car, constructed in the usual manner or any proper manner.

C C' represent brake-bars, each provided with shoes, *a*, one near each end of each bar.

These brake-bars are placed between the two pairs of wheels D of each truck, and are connected by links, *b b*, *b' b'*, to two levers, E E, which have their fulcrum-pins *c* passing into the under side of the bed F of the car and tender, the links *b b* being attached to the levers E near their outer ends, beyond the fulcrum-pins *c*, and the links *b' b'* attached to the levers at the opposite sides of the fulcrum-pins, at the same distance therefrom as the links *b*, (see fig. 2.)

G represents a bar, placed longitudinally under each bed F of the tender and cars, the bars of the cars, having a head, *d*, at each end, and the bar of the tender having a head at its rear end only.

These bars are each provided with pendent lugs, *e*, between which the inner ends of the levers E E fit, and the front end of the bar G of the tender has a rack, H, secured to its under side, into which rack a pinion, I, gears, said pinion being on a shaft, *f*, which is fitted in movable or sliding bearings in guides, *h*, secured to the under side of the bed F.

On the shaft *f* there is keyed a wheel, J, which, by pressing down the shaft *f*, is brought in contact with a wheel, K, on the axle L of the car-wheels D nearest to the shaft *f*.

The shaft *f* may be pressed down by means of a lever, M, which is attached to an upright, *i*, on shaft *f*.

The friction produced by pressing the wheel J in contact with the wheel K will cause the shaft *f* to be rotated from the axle L, and the pinion I, in consequence, into the rack H, will move the bar G of the tender in the direction indicated by arrow 1, and the levers E E will be moved so as to apply the brakes, and it will of course be seen that with a series of cars or a train, the brakes of the cars will be simultaneously applied, as each bar G will act upon the one immediately in the rear of it; and it will further be seen that the brakes will be applied when the cars of a train jam together in contact.

The bar G of the tender is designed to have sufficient elasticity to spring upward when relieved of downward pressure.

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

1. The construction and arrangement of the central bar G, having the rack H and lugs *e*, pivoted levers E, connected to the brakes C by the links *b b'*, the adjustable pinion I, and friction-wheels J K, as herein described for the purpose specified.

2. The spring-rack bar G, when provided with the central lugs *e*, in combination with the pivoted levers E and brakes C, as herein described for the purpose specified.

3. The pinion I upon the shaft *f*, when such shaft is hung in bearings adjusted vertically by the bar *i* and lever M, and when provided with the friction-wheel J, engaging with the wheel K upon the axle L of the tender, as herein described for the purpose specified.

G. L. MILLER.

Witnesses:

HENRY C. GOODELL,

W. M. PUTNAM.