## W. W. PATTERSON. Car-Brake.

No. 208,116.

Patented Sept. 17, 1878.

Fig 1. ٤  $\odot$ ¥ig. 2. C. . ]]\_1

Witnesses. A. Ruppert, J. G. Mason.

Mr. M. Patterson Inventor. D.P. Holloway He Atten

## UNITED STATES PATENT OFFICE.

## WILLIAM W. PATTERSON, OF CORNING, IOWA, ASSIGNOR OF ONE-HALF HIS RIGHT TO JOHN B. HARRIS AND WALTER J. DAVENPORT, OF SAME PLACE.

## IMPROVEMENT IN CAR-BRAKES.

Specification forming part of Letters Patent No. 208,116, dated September 17, 1878; application filed August 22, 1878.

To all whom it may concern:

Be it known that I, WILLIAM W. PATTER-SON, of Corning, in the county of Adams and State of Iowa, have invented certain new and useful Improvements in Car-Brakes, of which the following is a specification:

My invention consists in applying the brake to the top instead of to the side of the wheel, as is usually the case in brakes in common use; and my object in so applying it is that, if required, I can utilize the weight of the car in increasing the friction, and thus bring it to a stand-still much sooner.

In the annexed drawings, making a part of this specification, Figure 1 is a side elevation, partly in section, showing the brake when not applied. Fig. 2 is a side elevation, partly in section, showing the brakes when applied to the wheels.

The same letters are employed in both figures in the indication of identical parts.

A A are the wheels of an ordinary car-truck. B B are cams, shaped as distinctly shown in the drawings, placed immediately above the wheels, and securely pivoted to the bed-timber of the car. C C are brake-shoes, which are supported above the wheels, between them and the cams B. The brake-shoes are held in this position by means of chains C', which are fastened to the bottom of the car or to the bedtimber thereof.

When the brakes are not applied the brakeshoes are raised clear of the wheels by means of spiral springs D D, one end being fastened to the brake-shoe and the other attached to the bottom of the car. E is also a spiral spring, which is attached, as shown, for the purpose of keeping the cams clear of the brake-shoes when the brakes are not applied.

The several cams operating the different brake-shoes are connected by means of rods or chains, the whole system being governed by a chain, F, which connects the forward cam with the brake-rod F'.

The operation is as follows: The brake-rod F' being turned to apply the brakes, the chain F is drawn taut, forcing the faces of the cams against the upper faces of the brake-shoes, forcing them down upon the revolving wheels, thus increasing the friction until the car is finally brought to a stand-still.

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

The combination, in a car-truck, of the cams B, securely pivoted to the bed-timber of the car, brake-shoes C, springs D and E, chains C' F, and rod G, all operating and used for the purposes set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WILLIAM W. PATTERSON.

Witnesses:

J. W. HOLMES, IRA P. CLARK.