

W. E. WILCOX.
CAR BRAKE.

No. 52,501.

Patented Feb. 6, 1866.

Fig. 2.

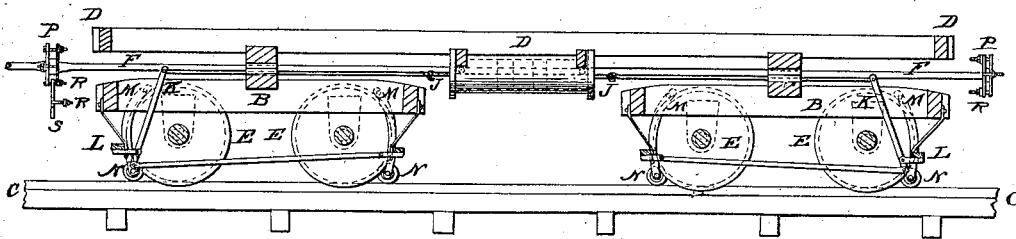


Fig. 1.

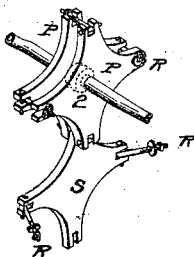
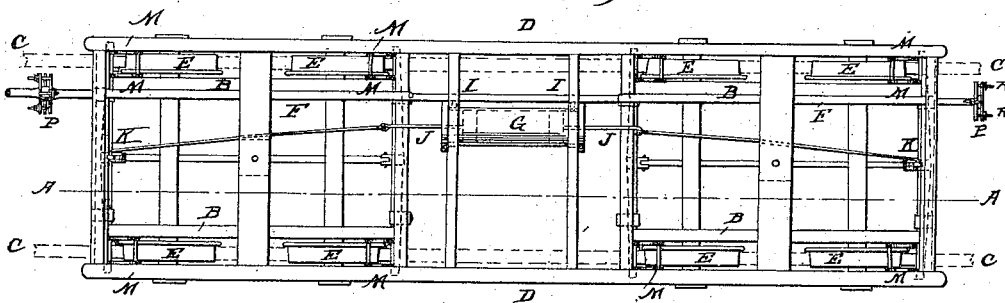


Fig. 3.

Witnesses:

Wm. R. Rayson
J. Lucas

Inventor

W. E. Wilcox.
By his Atty -
J. Franklin Reigars

UNITED STATES PATENT OFFICE.

W. E. WILCOX, OF CLEVELAND, OHIO, ASSIGNOR TO HIMSELF AND LUTHER MOSES, OF SAME PLACE.

IMPROVED CAR-BRAKE.

Specification forming part of Letters Patent No. 52,501, dated February 6, 1866.

To all whom it may concern:

Be it known that I, W. E. WILCOX, of Cleveland, Cuyahoga county, State of Ohio, have invented new and useful Improvements in Car-Brakes; and I do hereby declare the following to be an exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction of the hose-couplings, when attached to steam-pipes and arranged and combined with car-brakes operated by steam, as herein specified; also, the friction-wheels, when placed between or on either side of the car-wheels as a car-brake.

Figure 1 represents a top view of the railway-trucks with the brake devices. Fig. 2 represents a longitudinal section, through the line A of Fig. 1, as a side view; Fig. 3, the hose-coupling.

B represents the frame of the car-trucks; C, the railway; D, the bottom of a car; E, the car-wheels; F, the steam-pipe, extending along the bottom of a car the whole length of the car and the steam-cylinder G, located at the center, the steam entering the cylinder at I and operating the piston J, that draws the levers K that are attached to the brake-frame L. The brake-frame L is suspended to curved side pieces, M, that operate on pivots attached to the truck-frame B. These side pieces, M, are of bar-iron curved at the top, that their lower ends may hang inclined to the car-wheels E, but prevented by the springs T from coming in contact with the wheels E until the brake is applied. The lower ends of side pieces or brake-levers M have a friction-roller, N, that brakes the car-wheel at the same time that it attaches itself to the rail C, the revolution of the car-wheel revolving the roller in one direction, while the roller coming in contact with the rail is driven in an opposite direction, the curved ends of the brake-levers M having a tendency to lower the friction-

rollers N till brought in contact with the rail C by the operation of the lever K and piston J, and thus the friction-rollers N become a complete brake, instantly acted on by the application of steam to the cylinder.

In descending grades the locomotive opens her steam-cocks to exhaust steam. That steam can be advantageously applied to my improved brake.

In connecting the cars to make up the train, and that my steam-pipe F may correspond with the motion of the cars, I use an elastic hose, with a coupling, P, to correspond, so that the car can easily and quickly be coupled at either end, (as the usual male and female screw of hose-couplings would not answer but one end of a car.) I have a double brass plate, P, with a short tube, Q, on each, so that the tubes meet at their smooth faces, and the corners of the plates P are screwed together by hinged and nutted screws R. I have a third plate, S, that is without the tube Q, so that the hind-car coupling is closed by screwing the solid plate S against the tube Q, closing the aperture tightly and preventing the steam from escaping at the rear of the train.

I do not claim a double-acting steam-cylinder with its pistons, as heretofore used with a car-brake; but

What I do claim is—

1. The arrangement of a steam-cylinder with the hose-couplings and friction-wheels, when arranged and combined in the manner herein specified, and for the purposes set forth.

2. The construction of the hose-couplings, when arranged and combined with car-brakes operated by steam as herein described, and for the purposes set forth.

3. The friction-wheels, to be placed between or on either side of the car-wheels, as herein described, and for the purposes set forth.

W. E. WILCOX.

Witnesses:

J. FRANKLIN REIGART,
EDM. F. BROWN.