

No Model.)

F. S. JOHNSON.
CAR BRAKE.

No. 545,507.

Patented Sept. 3, 1895.

FIG. 1.

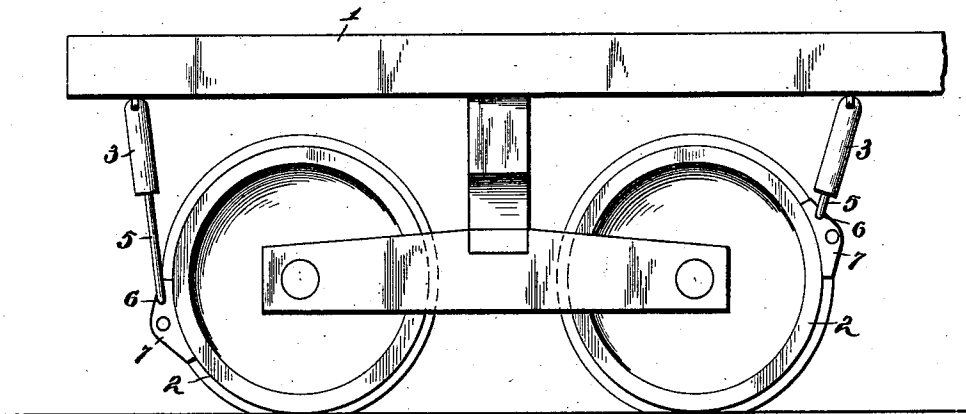


FIG. 2.

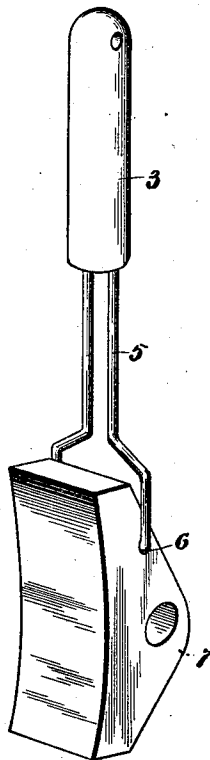


FIG. 3.



Inventor

Frank S. Johnson.

Witnesses

D. W. Riley
R. M. Smith

By *his* Attorneys.

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

FRANK S. JOHNSON, OF NEW BEDFORD, ILLINOIS.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 545,507, dated September 3, 1895.

Application filed June 22, 1895. Serial No. 553,707. (No model.)

To all whom it may concern:

Be it known that I, FRANK S. JOHNSON, a citizen of the United States, residing at New Bedford, in the county of Bureau and State of Illinois, have invented a new and useful Car-Brake, of which the following is a specification.

This invention relates to an improvement in car-brakes, and has for its object to simplify and improve the construction thereof with a view to obtaining a braking mechanism which shall be simple and inexpensive in construction and which may primarily be operated with a very small expenditure of power, whereby the position of the brake-shoes will be changed and the supporting-links thereof inclined in such manner that said shoes will be automatically forced with considerable pressure against the rims of the wheels.

Other objects and advantages of the invention will appear in the course of the subjoined description.

The invention consists in certain novel features and details of construction and arrangement of parts whereby certain advantages in point of simplicity and efficiency are attained, as hereinafter fully described, illustrated in the drawings, and finally pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of a sufficient portion of a car to illustrate the application of the improvement thereto. Fig. 2 is a detail perspective view of one of the brake-shoes, the supporting-link therefor, and the guiding-cylinder within which said link slides. Fig. 3 is a detail sectional view through the guiding-cylinder, showing the internally-arranged link and a portion of the lower link in elevation.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

Referring to the accompanying drawings, 1 designates a car or a sufficient portion thereof to illustrate the application of the present improvement, and 2 the wheels thereof.

Secured to the bottom sill or other convenient point of the framework of the car-body are two cylindrical castings 3, one for and adjacent to each wheel, as shown. These cylinders may be of any desired length and diameter and are preferably formed with closed

upper ends, being pivotally secured in any convenient manner firmly beneath the car-body and preferably outside of the car-wheels. 55

Arranged within each cylinder 3 is an elongated link 4, extending the entire vertical length of said cylinder and secured therein at its upper end by the same means which connects the cylinder to the car-body or in any convenient manner. 60

5 designates the link which carries the brake-shoe. This link comprises an upper narrow portion which passes through and engages the lower end of the internally-arranged link 4 within the cylinder and a lower expanded portion the cross-bar of which passes through a horizontal opening 6 in the upper end of the brake-shoe, (indicated at 7.) By means of this construction the link 5 may slide upwardly within the cylinder, being held in place by the link 4 and guided in its vertical movements by both said link and the cylinder. The length of the link 4 within the cylinder 3 and the brake-shoe link 5 are so regulated that the brake-shoe may rise a distance about equal to the vertical length of said shoe. 75

By reference to the drawings it will be apparent that in whichever direction the car is traveling, when the brake connections are operated in such manner as to bring the shoes into contact with the wheels, only a slight pressure is needed to cause the proper shoe to bind against the tread of its wheel with sufficient force to carry said shoe upward into the position shown in Fig. 1, in which position the links which support said shoe will be inclined and the distance between the brake-shoes upon each side of the truck will be increased. As there is little or no give or yield to the brake-rods, beams, and other connections, it will be seen that as one of the shoes is carried upward by the rim of the wheel it will be forced with greatly-increased pressure against said rim and will thus operate effectively to brake such wheel until the car is brought to a standstill. When the car is going in the opposite direction, the other brake-shoe will act in a manner that will be readily understood. By the construction described it will be seen that very little initial power is required to throw one or more brake-shoes into operation. The brake-shoes will 100

relieve themselves from the wheel when the car stops or may be withdrawn therefrom while in motion by means of the brake connections.

5 The mechanism described is very simple in construction and may be manufactured and applied to any form of car or truck, whether for street or railway use, at very small expense.

10 It will be apparent that the length and form of the guiding-cylinders, and also the intermediate links which connect with the brake-shoes, may be changed, and that other changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the
15 advantages of this invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

20 1. In a car brake mechanism, the combination with the car body, of a guiding cylinder or casing secured to and suspended beneath the same, a brake shoe suspending link capa-

ble of sliding within said cylinder or casing, and a brake shoe carried by and suspended 25 from the lower end of said link, substantially as and for the purpose described.

2. In a car brake mechanism, the combination with a guiding cylinder or casing connected to and suspended beneath the frame 30 of a car or truck, of an elongated link arranged within said guiding cylinder or casing, a brake shoe having a transverse horizontal opening near its upper end, and an intermediate link having said shoe suspended upon its lower 35 end and capable of sliding at its upper end within said guiding cylinder or casing and the internally arranged link, substantially in the manner and for the purpose specified.

In testimony that I claim the foregoing as 40 my own I have hereto affixed my signature in the presence of two witnesses.

FRANK S. JOHNSON.

Witnesses:

WM. HART,
FRED HART.