

(No Model.)

L. P. LAWRENCE.
CAR BRAKE.

No. 408,982.

Patented Aug. 13, 1889.

Fig. 1

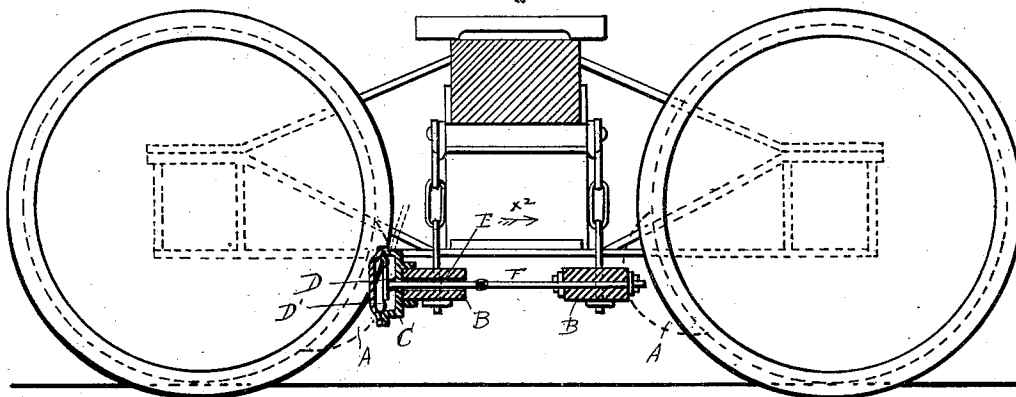


Fig. 2.

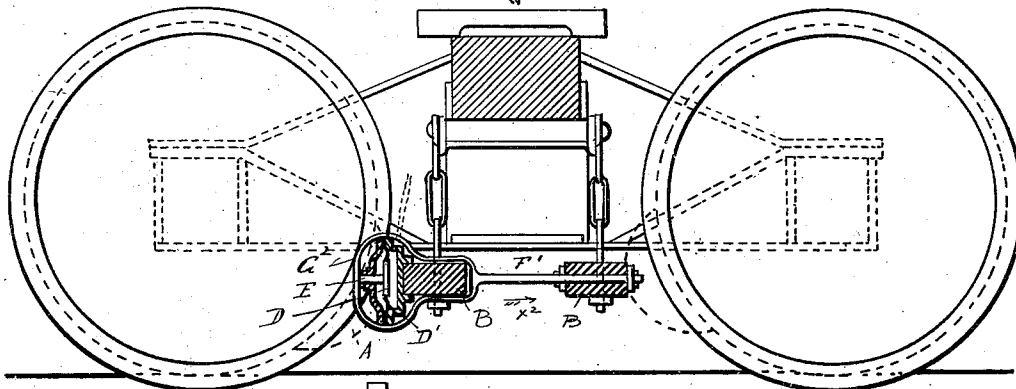
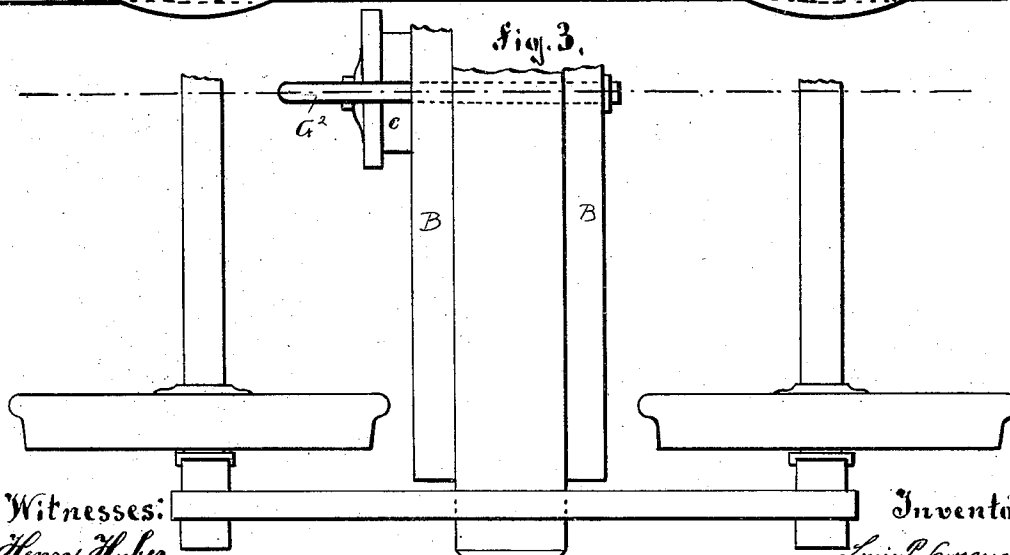


Fig. 3.



Witnesses:
Henry Huber
Meinhard

Inventor

Louis P. Lawrence

BY

James R. Rogers
ATTORNEYS.

UNITED STATES PATENT OFFICE.

LOUIS P. LAWRENCE, OF PASSAIC, NEW JERSEY, ASSIGNOR TO THE LAWRENCE RAILWAY BRAKE COMPANY, OF NEW YORK, N. Y.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 408,982, dated August 13, 1889.

Application filed May 9, 1889. Serial No. 310,105. (No model.)

To all whom it may concern:

Be it known that I, LOUIS P. LAWRENCE, of Passaic, county of Passaic, State of New Jersey, a citizen of the United States, have
5 invented certain new and useful Improvements in Car-Brakes, of which the following is a specification.

This invention relates to improvements in brakes for cars, and especially to brakes in
10 which the brake-beams are located between the wheels on a truck and moved from each other when the brakes are applied.

The object of this invention is to provide a brake of this kind which is simple in construction, strong, powerful, and cheap, and
15 which can be readily applied.

The invention consists of the construction and combination of parts and details, as will be fully described and set forth hereinafter, and finally pointed out in the claim.
20

In the accompanying drawings, Figure 1 is a longitudinal sectional view of a diamond or freight-car truck provided with my improved brake, parts being omitted. Fig. 2 is a similar view showing a modified construction.
25 Fig. 3 is a plan view of the construction shown in Fig. 2, parts being broken out and others omitted.

Similar letters of reference indicate corresponding parts.
30

The brake-shoes A are held adjacent to the rims of the wheels H on the brake-beams B, which are between the wheels, as is customary in diamond trucks. To the inner edge of
35 one brake-beam—that is, to the edge facing the wheels—the cylinder C is secured, which is longer than it is wide, its long axis being parallel with the brake-beam. Said cylinder contains the piston D and the diaphragm D'.
40 The piston-rod E, projecting from the piston, is suitably packed and passes through an aperture in the inner head of the cylinder and through a corresponding aperture in the brake-beam to which the cylinder is secured,
45 and is connected by a bar F with the other brake-beam. When the air is exhausted, by means of an ejector or other suitable device, from that part of the cylinder between the

piston and inner head, the pressure of the exterior air presses the piston D, bar F, and
50 the brake-shoe connected with said bar in the direction of the arrow x^2 , and the back-pressure presses the other brake-beam which carries the cylinder in the inverse direction of the arrow x^2 . Both brakes are thus pressed
55 toward their corresponding wheels and are pressed from each other. As shown in Fig. 3, the piston-rod E can be arranged to project from the outer head of the cylinder, and is then connected by a stirrup or yoke G² with
60 the bar F', secured to the other brake-beam, said yoke or stirrup embracing the brake-beam to which the cylinder is secured. If the air is then exhausted, as set forth, both brake-beams will be pressed toward their corresponding
65 shoes and will move from each other. The brake-cylinder must be secured on the inner edge of the brake-beams, as the outer edges of said beams are so close to the central cross-beam of the truck that there is not sufficient
70 space for said cylinder.

In place of operating the brake by means of a vacuum, it can readily be adjusted to be operated by compressed air, steam, or any other operating-fluid.
75

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination, with two brake-beams mounted between two pairs of wheels, and also
80 mounted to move from each other when pressing the brake-shoes against the wheel-rims, of a brake-cylinder secured on the inner edge of one brake-beam, a piston in said cylinder mounted to move while operating toward the inner edge of the brake-beam to which the
85 cylinder is secured, and a rod or bar connecting said piston with the other brake-beam, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.
90

LOUIS P. LAWRENCE.

Witnesses:

OSCAR F. GUNZ,
JOHN ALONZO STRALEY.