

J. TEMPLE.
Car-Brakes.

No. 141,608.

Patented August 5, 1873.

Fig.1

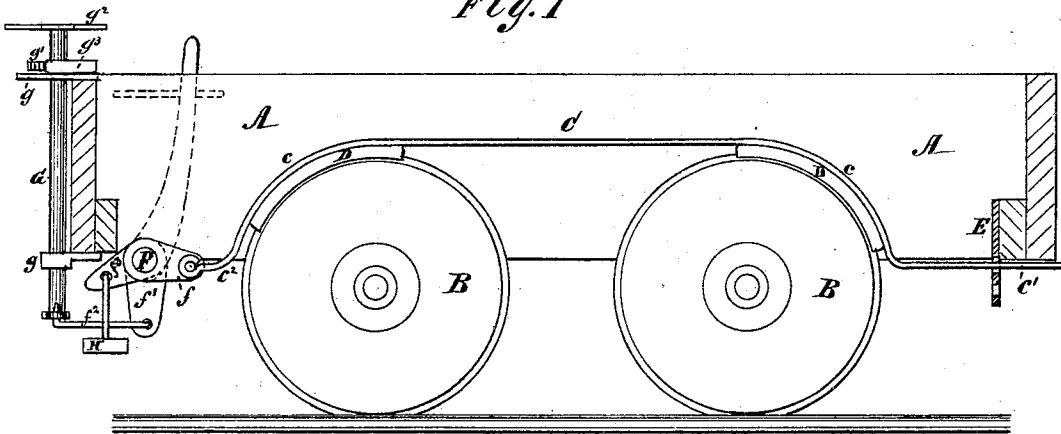
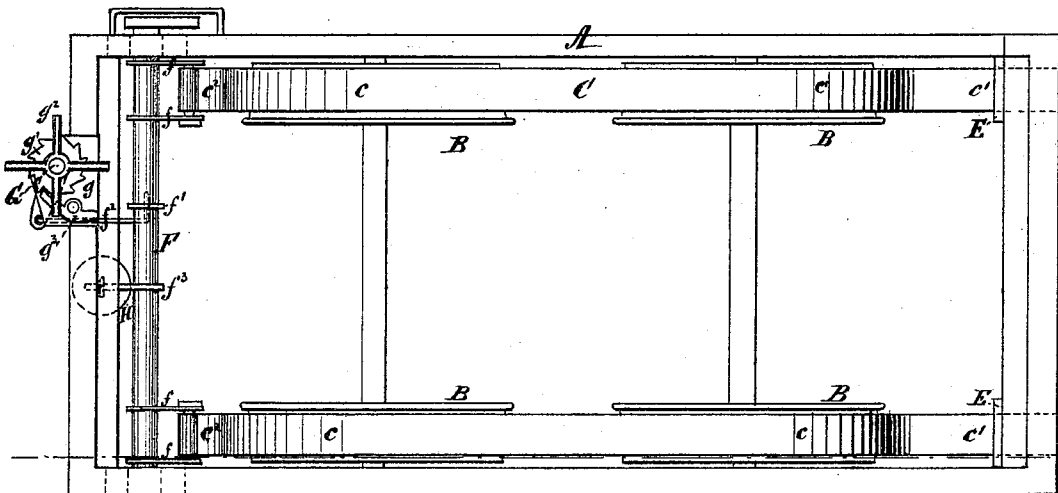


Fig.2.



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UNITED STATES PATENT OFFICE.

JAMES TEMPLE, OF MOORESBURG, PENNSYLVANIA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO HIMSELF AND DANL. J. ROTE, OF SAME PLACE.

IMPROVEMENT IN CAR-BRAKES.

Specification forming part of Letters Patent No. 141,608, dated August 5, 1873; application filed May 9, 1873.

To all whom it may concern:

Be it known that I, JAMES TEMPLE, of Mooresburg, in the county of Montour and State of Pennsylvania, have invented a new and useful Improvement in Car-Brakes; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to a novel and effective brake for railroad cars, designed to operate to a more advantageous degree than brakes of the description upon which the improvements are based. This invention consists in the employment of a longitudinal bar carrying at or near its ends arc-shaped brake-shoes, which are caused to act or bear upon a surface of the wheels, which is a true segment of a circle, or one nearly so, bisected in an imaginary sense by a line drawn from the hub vertically to the highest point of the wheel, and horizontally to the center of the same; the object of this arrangement being to enable the brake-shoes of the rear wheels to be tightened by the downward or forward movement of the front shoes, effected by the frictional contact with the wheels before their complete revolution is arrested, the bar or bars carrying the brake-shoes being so hung or fitted as to enable the same to move longitudinally to a sufficient extent for enabling the shoes to act in the manner stated. The invention further consists in fitting the longitudinally-sliding bar carrying the brake-shoes in a guide hanger or bracket, provided with two or more slots, located at different elevations, for enabling the shoe-bar to be adjusted vertically to counteract the effects of wear upon the brake-shoes and wheels.

In the accompanying drawings, Figure 1 is a longitudinal sectional view, and Fig. 2 is a plan view, of a truck provided with my brake.

The truck frame and wheels designated by letters A B are of the ordinary construction. Immediately over each pair of wheels there is arranged a longitudinal bar, C, which may be of thin bar or plate metal, so as to enable it to be bent into shape to form the arc-curves *c c*, under which are attached the

brake-shoes D D, which are covered with a suitable frictional substance. The rear straight end *c*¹ of the bar C is passed through a slotted bracket or hanger, E, attached to the truck-frame, and provided with two or more slots arranged one above each other, as shown, in order to enable the bar C to be adjusted vertically as the brake shoes or wheels wear away, thus furnishing means for always maintaining the shoes in proper contact with the wheels. The forward end *c*² of the bar C is jointed or connected to the arms *f f* of a horizontal rock-shaft, F, which is journaled in the sides of the truck-frame. The rock-shaft possesses another pendent arm, *f*¹, which is connected, by means of a rod or link, *f*², to a vertical hand-shaft, G, that is stepped and vibrated in the projecting-plates *g* applied to the front of the truck. The hand-shaft is provided at its upper end with a ratchet-wheel, *g*¹, and lever-arms or hand-wheel *g*², a detent or pawl, *g*³, being combined or arranged in proper relation to the ratchet for locking the hand-shaft. A weight or spring, H, is attached to another arm, *f*³, of the rock-shaft, for the purpose hereinafter stated, and to the outer end of the shaft there is also attached a hand-lever, *g*⁴, serving as an auxiliary device for operating the same.

The operation is as follows, viz: When the cars are running the weight or spring applied to the rock-shaft throws the same around so as to hold up the brake-shoe bar over and out of contact with the periphery of the wheels. When it is desired to apply the brakes force is exerted to turn the hand-shaft, which, through the intervention of the rock-shaft and connecting devices, serves to bring the brake-shoes down upon the wheels. The front shoes, which receive the direct force applied to the manual operative devices, are moved downward or forward to a suitable extent by the sudden frictional contact with the perimeters of the wheels, and will thus obviously draw the shoe-bar longitudinally for tightening the rear brake-shoes. The longitudinal movement of the shoe-bar is rendered possible by curving the same in the particular manner shown, so as to cause the brake-shoes to act upon a segmental sur-

face of the wheels, which tends to move the front brake-shoes downward and the rear shoes upward for clamping together, as it were, the front and rear wheels.

It will be apparent that a brake-shoe of a semicircular shape acting directly upon the upper surface of the wheels, as shown in a previous application filed by myself June 6, 1860, will not accomplish the result attained by the present invention.

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

1. A longitudinally-sliding bar arranged, in relation to the wheels, as shown, and carrying arc-shaped brake or friction shoes applied to

correspondingly-shaped portions of the bar, the bar being fitted to slide in hanger E at one end, and connected to the arm *f* of crank-shaft F at the other, the various parts being combined and arranged to operate in the manner set forth.

2. The sliding shoe-bar fitted in a slotted guide-hanger, to enable the same to be vertically adjusted, to counteract the effects of wear upon the shoes and wheels, as herein set forth.

JAMES TEMPLE.

Witnesses:

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