(No Model.)

A. CODD.

CAR BRAKE.

No. 260,942. Patented July 11, 1882.

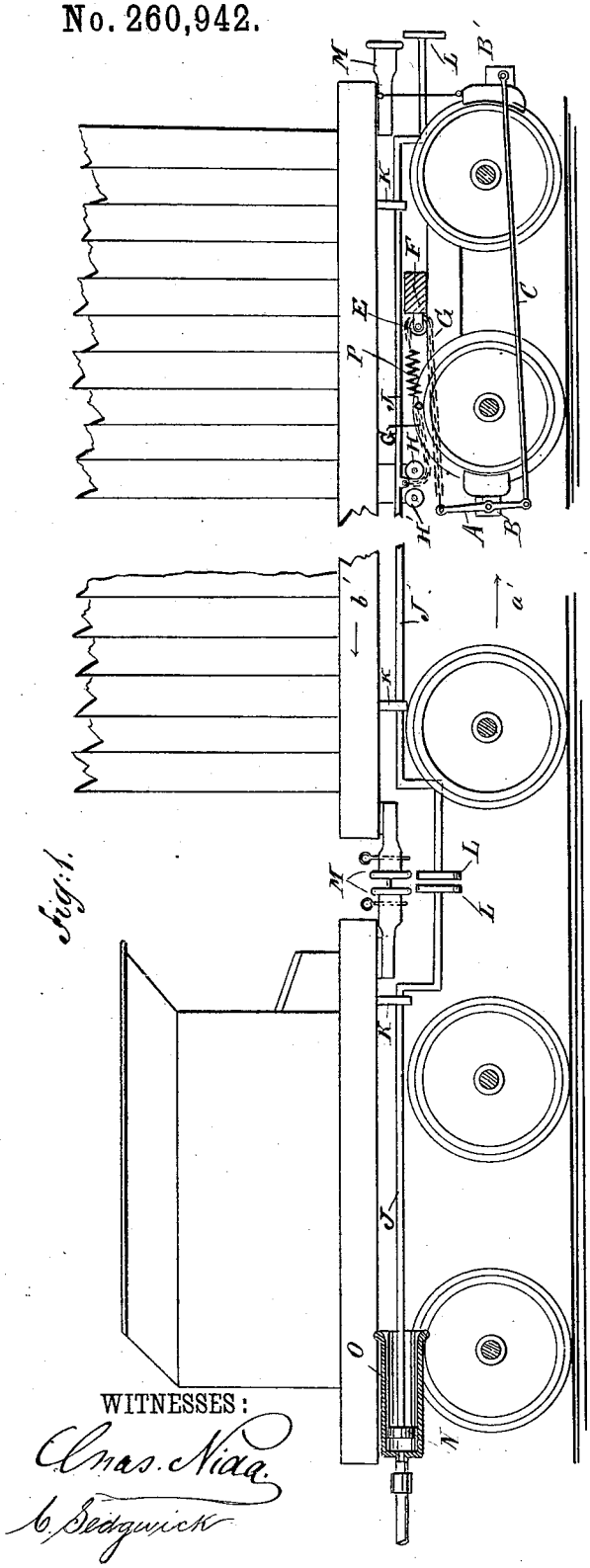

Fig. 1.

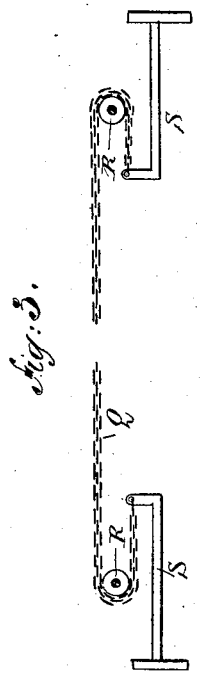

Fig. 3.

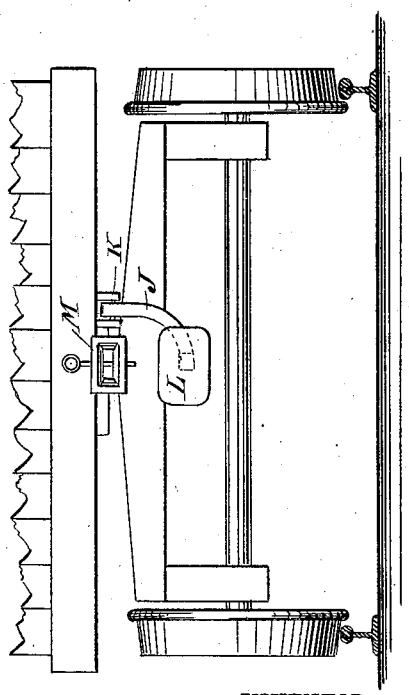

Fig. 2.

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ARTHUR CODD, OF BOWMANVILLE, ONTARIO, CANADA.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 260,942, dated July 11, 1882.

Application filed March 4, 1882. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR CODD, of Bowmanville, Ontario, in the Dominion of Canada, have invented a new and Improved Car-Brake-Operating Device, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved device for operating all the brakes of a train of cars from the locomotive or tender.

The invention consists in a novel construction and arrangement of parts, as hereinafter described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal sectional elevation of the end parts of a car and tender provided with my improved device for operating car-brakes. Fig. 2 is an end elevation of the car. Fig. 3 is a plan view of a modification in the construction of my improved device for operating car-brakes.

A lever, A, is pivoted to the brake-shoe bar B of the inner wheels of a car, and to the lower end of this lever A a rod, C, is pivoted, the other end of which is attached to the brake-shoe bar B′ of the outer wheels.

To the upper end of the lever A a chain or equivalent device, G, is attached, which passes over a pulley, E, on the cross-beam F of the truck, and from this pulley E the chain G passes between two adjoining pulleys, H H, journaled to projections on the under side of the car. The end of the chain G is attached to a rod, J, running longitudinally along and under the bottom of the car, which rod rests on pulleys journaled in projections K on the under side of the car. The ends of the rods J are provided with buffers L, and these ends of the rods J are bent in such a manner that the buffers L will be below the draw-heads M. The front end of the rod J under the tender or locomotive is provided with a piston, N, fitting into a cylinder, O, for compressed air or steam, attached to the bottom of the locomotive or cylinder. A powerful spring, P, is interposed in the length of the chain G between the pulleys E and H. The rods J must be of such lengths that their buffers are in contact when the cars are coupled. The point at which the chain G is attached to the rod J must be directly above the space between the pulleys H H′ when the brakes are loosened.

In place of the rods J, chains Q can be used, to which the brake-chains G are attached in the same manner as to the rods J. These chains Q must pass over pulleys R at the ends of the cars, and are attached to the ends of buffer-bars S, held and adapted to slide on the ends of the car-bottoms. The inner ends of these buffer-bars, to which the ends of the chain Q are attached, must be between the middle of the car and the pulleys R.

The operation is as follows: If the brakes are to be applied, compressed air or steam is admitted into the cylinder O, and this compressed air or steam presses the piston N and the rod J under the tender toward the rear, or in the direction of the arrow *a′*, and as the buffer of one rod J presses against the buffer of the next all the rods J will be moved in the direction of the arrow *a′*. The chain G will be drawn over the pulleys E and H, and the upper end of the lever A will be moved in the direction of the arrow *a′*, whereby the brake-shoes on the bar B will be pressed against the inner wheels of the car. The lower end of the lever A and the rod C will be moved in the reverse direction of the arrow *a′*—that is, in the direction of the arrow *b′*, whereby the brake-shoes on the bar B′ will be pressed against the outer wheels of the car. If the rod J is moved in the direction of the arrow *b′* to apply the brakes, the chain G will pass over the pulleys E and H′, and the lever A and rod C will operate in the same manner as described above. If the chain Q, the pulleys R, and the buffer-bars S are used to operate the brakes, the operation will be the same as described above. On account of irregularities in the positions of the cars or in the sizes of the draw-heads it may happen that the brakes of the first car are applied before the rear buffer, L, of the first car has reached the front buffer of the next car, and as the rods J cannot be moved any farther when the brakes are applied it follows that the rods J of the second and following cars could not be moved and the brakes

not applied under the circumstances, as above mentioned. To avoid this, I have provided the springs P, for when the brakes are applied and pressure is still applied on the rods J these springs stretch and permit of a longitudinal movement of the rods J even after the brakes are applied, so that if the brakes of the first car are applied the rod J of this first car can be moved longitudinally sufficiently to permit this rod J of the first car to act on the rod J of the next following car. It is evident that the spring P can be interposed in the chain G between the upper end of the lever A and the pulley E, or between the ends of the rod C, as well as between the pulleys E and H.

If desired, the ends of the rods J can be provided with hooks in place of the buffers, and the brakes will then have to be operated by pulling the rods J in place of pushing them.

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

1. In a car-brake, the combination, with the brake-shoe bars B B′, of the lever A, rod C, the chain G, the pulleys E H H′, and the rod J, provided with the buffers L, substantially as and for the purpose set forth.

2. In a car-brake, the combination, with lever A, the brake-shoes B B′, the rod C, and the pulley E H H′, of the chain G, the spring P, interposed in the chain, and the sliding rods J, provided with the buffers L, substantially as and for the purpose set forth.

3. In a car-brake, the combination, with the lever A, the brake-shoes B B′, the rod C, and the pulleys E H H′, of the chain G, the rods J, provided with the buffers L, and the projections K, secured to the under side of the car and provided with pulleys, substantially as and for the purpose set forth.

4. In a car-brake, the combination, with the lever A, the brake-shoes B B′, the rods C, and the cylinder O, of the chains G, the sliding rods J, the piston on the forward end of one of the said sliding rods, and the spring P, interposed in the chain, substantially as and for the purpose set forth.

ARTHUR CODD.

Witnesses:
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