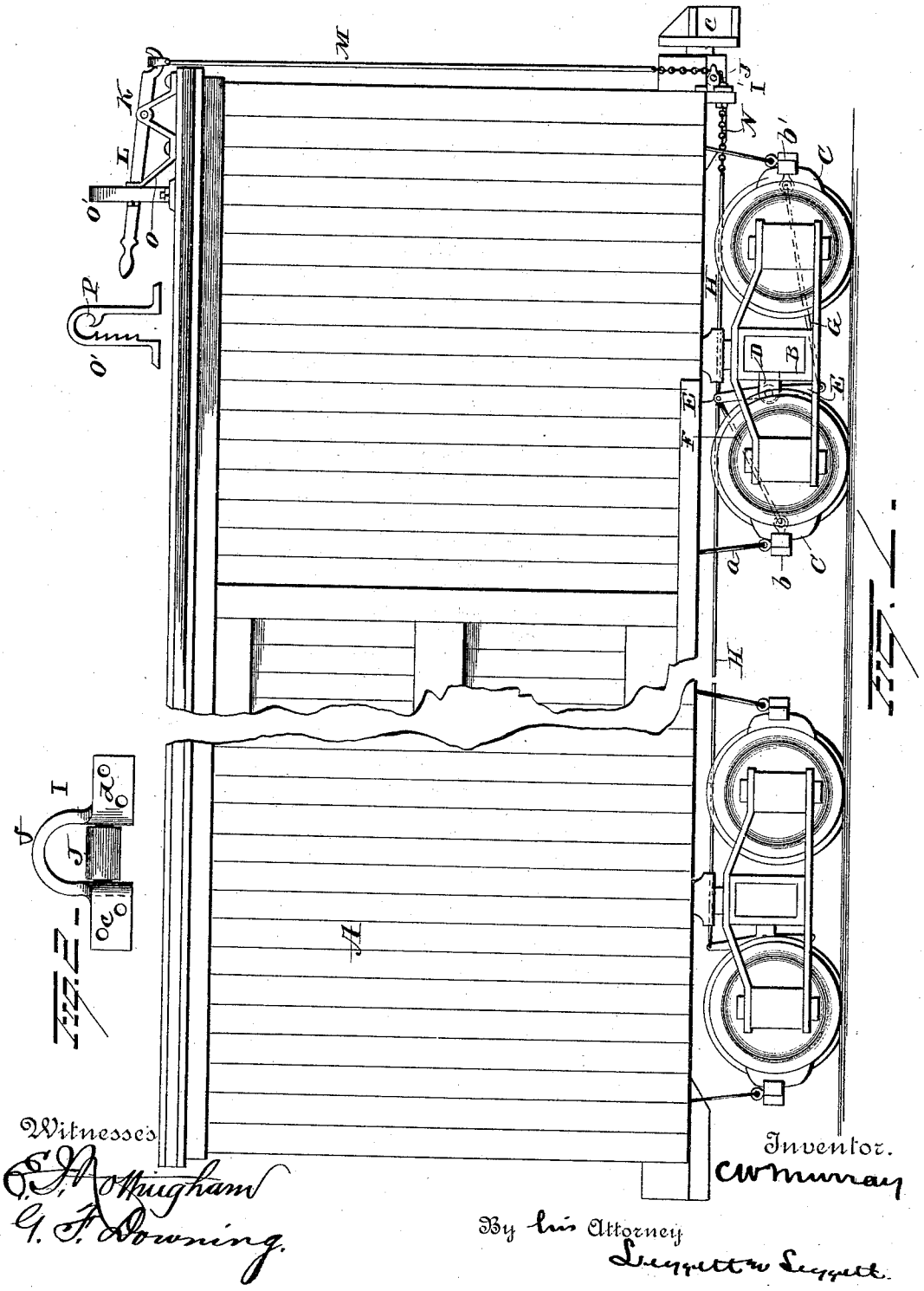
(No Model.)

C. W. MURRAY.

CAR BRAKE.

No. 395,662. Patented Jan. 1, 1889.



Witnesses:
E. A. Nottingham
G. F. Downing.

Inventor.
C. W. Murray
By his Attorney
Leggett & Leggett.

UNITED STATES PATENT OFFICE.

CHARLES WILLIAM MURRAY, OF WESTBOROUGH, MISSOURI.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 395,662, dated January 1, 1889.

Application filed September 7, 1888. Serial No. 284,849. (No model.)

To all whom it may concern:

Be it known that I, CHARLES WILLIAM MURRAY, of Westborough, in the county of Atchison and State of Missouri, have invented certain new and useful Improvements in Car-Brakes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in car-brakes.

Heretofore in the construction of car-brakes mechanism has been employed by which the brakes can be operated from the top of a car by a person standing away from the edge thereof, so that if any part of the device should break the operator would not be liable to fall between the cars. In this construction of apparatus a bell-crank lever has been pivoted to the frame-work of the car and connected at one end by suitable devices to the brake-rods, while the other end of this lever was attached to a rod extending upwardly to the top of the car. This latter-named rod was pivoted to the end of a lever mounted in a standard on the top of the car, which lever was adapted to be held at any desired adjustment by the engagement of a pin with a pivoted rack-bar.

With such construction the device is rendered impracticable and disadvantageous by the number of pivotal connections and the limited play of the bell-crank lever.

It is the object of my present invention to so construct a car-brake that it can be operated from the top of the car without danger of injury to the operator by falling between the cars.

A further object is to provide operating mechanism for a car-brake which shall be of simple construction, effective in operation, and employ but few pivotal connections.

With these objects in view my invention consists in the novel construction and peculiar combination and arrangement of parts, as will be hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 represents a side elevation of a car with my improved brake applied thereto. Fig. 2 is a detached view of the roller-supporting bracket.

A indicates a railroad-car of the usual construction, having trucks B and brake-shoes C, the latter being suspended by rods *a*, as shown. Each wheel will preferably be provided with a brake-shoe, and the corresponding shoes at the opposite sides of the car are connected by brake-beams *b b'*.

A suitable bracket, D, is fixed to the truck B at or near its center, beneath the car, and adapted to support a lever, E, which is pivoted at or near the center in this bracket. A rod, F, is pivoted at one end to the upper extremity of the lever E, and at the other end to the brake-beam *b*, and the lower end of the lever E is pivotally connected by means of a rod, G, with the other brake-beam, *b'*. It will of course be understood that such an arrangement will be provided for each set of wheels of the car.

In order to operate the brake-shoes of each set of wheels simultaneously, I provide a rod, H, which extends from one set of wheels to the other, and is pivotally connected, preferably, to the upper end of the lever E of each set of wheels, although it is obvious that this rod may be connected with the levers E at their lower end, if desired.

Secured to the car, preferably immediately in rear of the draw-head *c*, is a bracket, I, Fig. 2. This bracket I consists of two plates, *c d*, having inwardly-projecting studs or pins, which serve as bearings for a roller, J, of metal or other suitable material. The plates *c d* of the bracket I are connected at their top by a curved guide-rod, *f*, which may be cast integral with the plates *c d*, or affixed thereto, as desired.

A short standard, K, is secured to the top of the car at one end, preferably in a line with its longitudinal axis. The upper end of this standard K is adapted to receive and form a bearing for a lever, L, which is so pivoted in the standard that its outer extremity will project slightly beyond the end of the car. The outer end of the lever L is preferably made hook-shaped to receive a loop or eye made in the upper extremity of a rod, M, which extends downwardly to a point somewhat above the bracket I. To the lower extremity of rod M is attached a chain, N, which, passing through the loop formed by the guide *f* and over the roller J, is extended beneath the car and con-

nected to the end of a rod, H. It is evident that in lieu of the chain N a rope made of wire or other suitable material may be used.

Fixed upon the top of the car in rear of the standard K, and braced by a rod, O, is an upright, O′, provided with ratchet-teeth, with which the lever L is adapted to engage and be retained thereby in any desired position. The rear end of the lever is extended somewhat and provided at its free end with a handle with which to operate it.

Fixed upon the upright O′, near its upper end and above the ratchet-teeth, is a hook or support, P, into which lever L is adapted to rest when the brake is not in operation, and thus prevent the lever from engaging the ratchet-teeth at the wrong time.

With a brake constructed and arranged as above described a great amount of power may be applied to the shoes, and as but few pivotal connections are employed in the operating mechanism the device is rendered very secure against breaking of pivot-pins.

Having 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 brake beams and shoes, a pulley attached to the car at the lower edge of one end thereof, and brake-operating mechanism connecting the beams, of a chain connected to the brake-operating mechanism and passing under the pulley, a rod connected to the chain, a lever pivoted at a point between its ends to the car and provided with a hook at one end to engage a loop in one end of the rod, and a rock-bar secured to the top of the car-body in a position to engage the lever at a point behind the fulcrum of said lever, substantially as set forth.

2. In a car-brake, the combination, with brake shoes and beams and brake-operating device, of the lever pivoted at a point between its ends and provided with a hook at one end and a handle at its opposite end, and the rack-bar having a hook or rest to support the handle end of the lever in an elevated position, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

CHARLES WILLIAM MURRAY.

Witnesses:
A. A. SEUREY,
B. W. HURST.