

(No Model.)

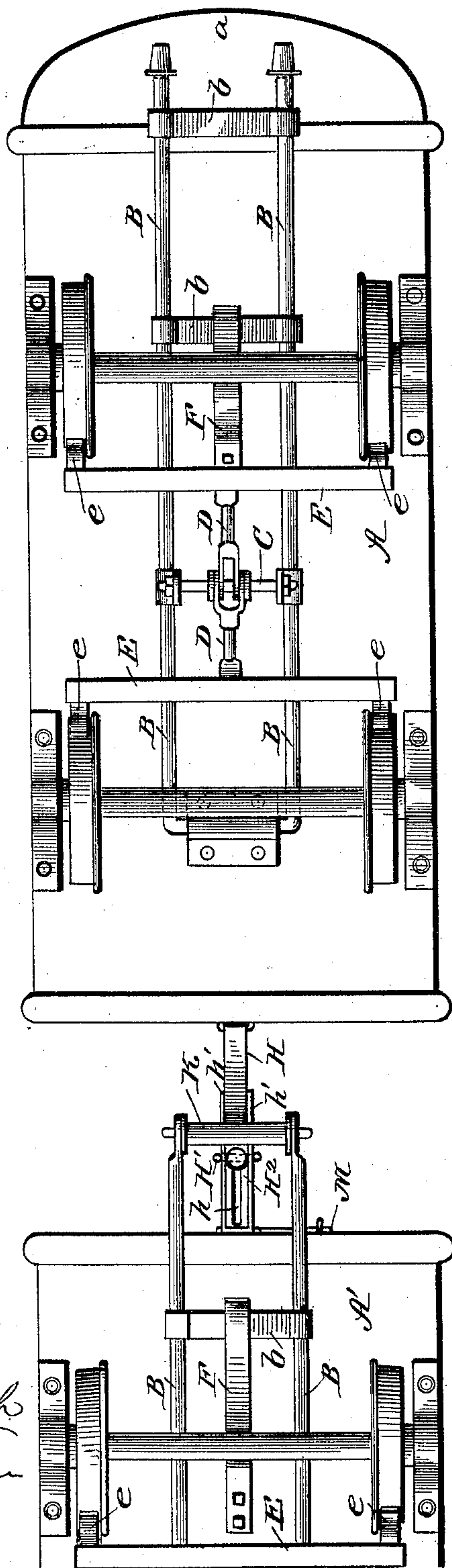
2 Sheets—Sheet 1.

J. W. NEUMANN & J. R. PFLANZ.
CAR BRAKE.

No. 474,261.

Patented May 3, 1892.

Fig. 1.



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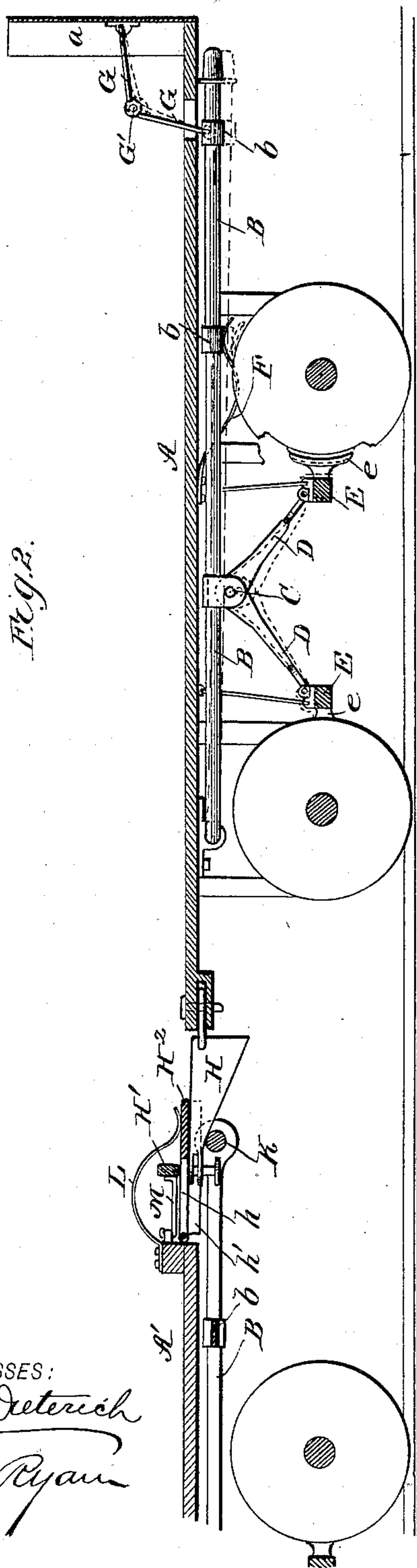
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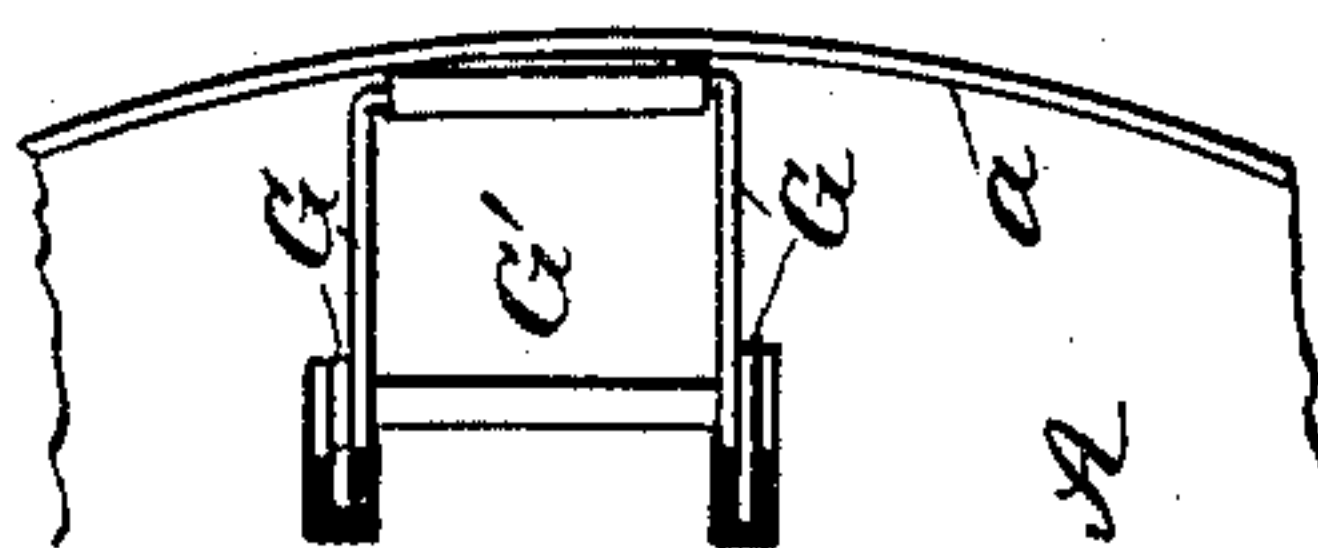


Fig. 4.

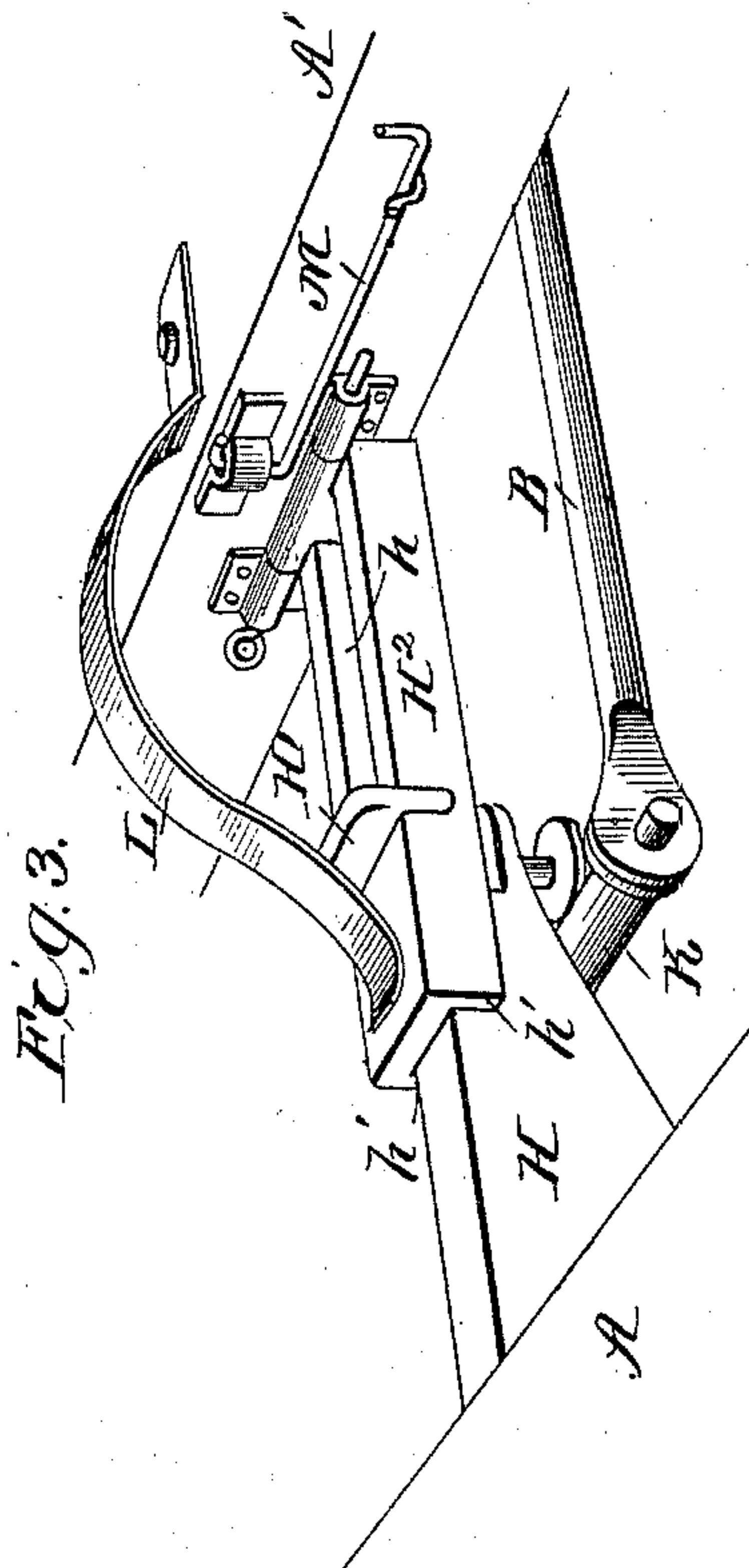


Fig. 3.

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UNITED STATES PATENT OFFICE.

JOHN W. NEUMANN AND JOHN R. PFLANZ, OF LOUISVILLE, KENTUCKY.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 474,261, dated May 3, 1892.

Application filed September 21, 1891. Serial No. 406,417. (No model.)

To all whom it may concern:

Be it known that we, JOHN W. NEUMANN and JOHN R. PFLANZ, of Louisville, in the county of Jefferson and State of Kentucky, have invented a new and useful Improvement in Car-Brakes, of which the following is a specification.

This invention relates to an improved brake for street-cars and the like, the object of the invention being to provide a novel form of brake for the motor-car which can be quickly and easily applied by the operator, and a further object of our invention is to provide a novel form of mechanism for the trail car or cars, whereby as the motor-car is stopped the coupling devices will operate to apply the brakes to the trail-cars.

With these various objects in view our invention consists in the peculiar construction of the various parts and the novel combination or arrangement of the same, all of which will be fully described hereinafter, and pointed out in the claims.

In the drawings forming a part of this specification, Figure 1 is a bottom plan view of the motor-car and a portion of the trail-car, said cars being coupled. Fig. 2 is a vertical longitudinal section of said cars in a coupled condition. Fig. 3 is a detail view of the coupling device and Fig. 4 is a top plan view of the foot-lever.

Referring to the drawings, A indicates the motor-car, provided with the usual dash *a*. Upon the under side of the car are arranged the parallel operating-rods B B, said rods being pivoted to the said bottom near the rear end of the same, and these bars are connected and braced by means of the cross-pieces *b b*. A transverse shaft C is attached to the operating-rods about midway between the wheel-trucks, and to said shaft are pivoted the pitman-rods D D, the opposite ends of said rods being connected with brake-beams E E, which are hung from the bottom of the car, and carrying shoes *e e*, which bear upon the wheels, as usual.

A spring F is attached to the bottom of car and bears upon the inner or rear cross-piece *b* to hold the operating-bars normally in an elevated position, and while the bars are so held the shoes are held out of contact with the wheels.

In order to apply the brakes, it is only necessary to depress the free or distal end of the operating-bars, which project forward beneath the dash-platform, and in order to so operate them we provide the angular-shaped lever-rods G G, which are pivoted at their upper ends to the dash-board, and are pivotally-connected at their lower ends to the outer or forward cross-piece *b*, the platform being slotted longitudinally to permit the passage of said lever-rods. A transverse bar G' connects the lever-rods G G at the bends of the same, and said rods are also coiled at that point to provide a passage for the said bar. The foot is placed upon this transverse bar when the brakes are applied, said bar insuring a uniform action of the lever-rods G G.

From the above description it will be understood that the shoes are normally held away from the wheels by means of the spring F', and also that the brakes are applied by pressing down upon the bar G' with the foot, thereby depressing the operating-rods, lowering the common pivotal point of the pitmen, spreading the beams, and applying the shoes to the wheels.

The trail-car A' is provided with operating-rods, pitmen, springs, &c., the same as the motor-car.

A wedge-shaped draw-head H is pivotally attached to the rear end of the motor-car, said draw-head being capable of moving vertically and horizontally, as desired. This draw-head is arranged with its broader end foremost, and at its narrow end is provided with a vertically-movable coupling-pin H', which is provided with a T-shaped head and a circular base, as clearly shown. The trail-car A' is provided with a draw-head H², which is slotted longitudinally, as at *h*, to receive the coupling-pin, and said head is also formed with depending sides *h'*, which act as guides for the draw-head H as it slides upon the draw-head H². A friction-roller K is arranged between the free ends of the operating-rods of the trail-car and beneath the draw-head of said car.

In coupling the cars the head of the coupling-pin is inserted in the slot of draw-head and then locked therein, as shown, the wedge-shaped draw-head resting beneath the slotted draw-head. A spring L bears upon the slotted

draw-head, thereby holding the wedge-shaped draw-head down upon the friction-roller, and as the motor-car is braked the trail-car moving forward will cause the wedge-shaped draw-head to ride upon the friction-roller, thereby depressing the forward ends of the operating-rods and applying the brakes of the trail-car a very short time after the brakes have been applied to the motor-car. A locking-catch M is pivoted to the frame of the trail-car just above its draw-head, said catch being adapted to be swung outward and engage the head of the coupling-pin when it is desired to back the train, the catch serving to keep the wedge-shaped draw-head from riding upon the friction-roller and applying the brakes.

Having thus described our invention, what we claim as new is—

1. The combination, with the brake-beams carrying shoes, of the pitman-rods connected therewith and the operating-rods connected with the pitman-rods, said operating-rods being pivoted at the rear ends and free to be depressed at their forward ends, substantially as shown and described.

2. The combination, with the brake-beams, of the pitman-rods attached thereto, the pivoted operating-rods connected with the pitman-rods, a spring adapted to maintain said rods normally in a raised position, and a depressor adapted to bear upon the forward

ends of the operating-rods to apply the brakes, substantially as shown and described.

3. The combination, with a draw-head having an inclined lower face, of a coupling-pin connected with the free end thereof, a longitudinally-slotted draw-head, the pivoted operating-rods, the friction-roller, pitman-rods, and brake-beams, all arranged substantially as shown and described.

4. The combination, with the brake-beams, pitman-rods, operating-rods, and friction-roller, of the longitudinally-slotted draw-head having depending sides, the wedge-shaped draw-head, and the vertically-movable coupling-pin having a T-shaped head, all arranged substantially as shown and described.

5. The combination, with the brake-beams and pitman-rods, of the pivoted operating-rods and the lever-rods adapted to depress the free ends of said rods, substantially as shown and described.

6. The combination, with the operating-rods and attached parts of the lever-rods, of the dashboard, the slotted platform, and transverse bar, all arranged substantially as shown and described.

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