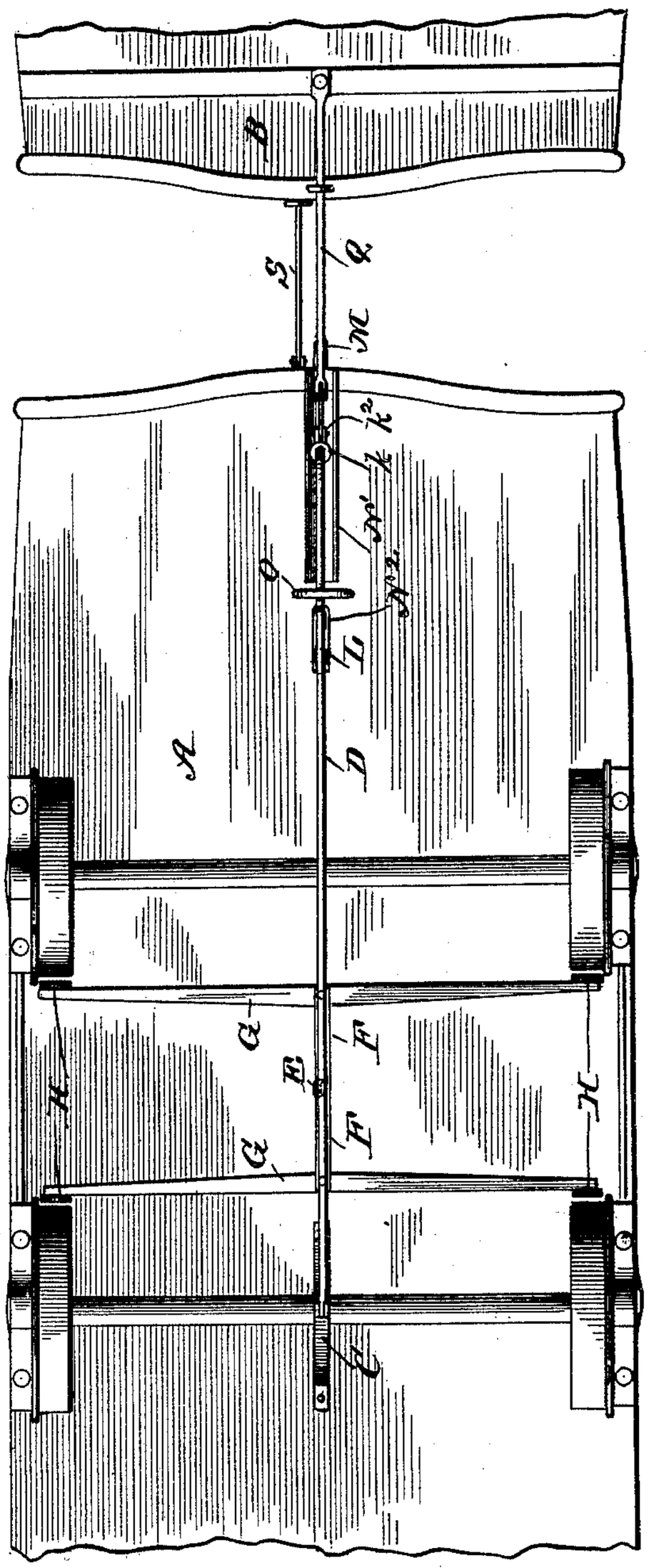
(No Model.) 2 Sheets—Sheet 1.

J. W. NEUMANN & J. R. PFLANZ.

CAR BRAKE.

No. 483,859. Patented Oct. 4, 1892.

Fig. 1.



WITNESSES:
Fred G. Dieterich
Jos. A. Ryan

INVENTORS.
John W. Neumann
John R. Pflanz
BY
Munn & Co
ATTORNEYS

(No Model.) 2 Sheets—Sheet 2.

J. W. NEUMANN & J. R. PFLANZ.

CAR BRAKE.

No. 483,859. Patented Oct. 4, 1892.

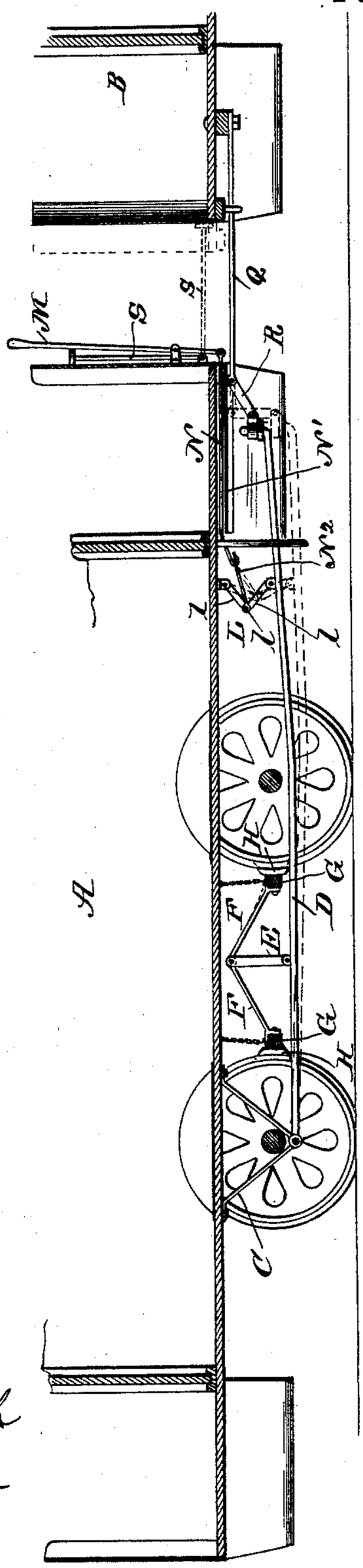


Fig. 2.

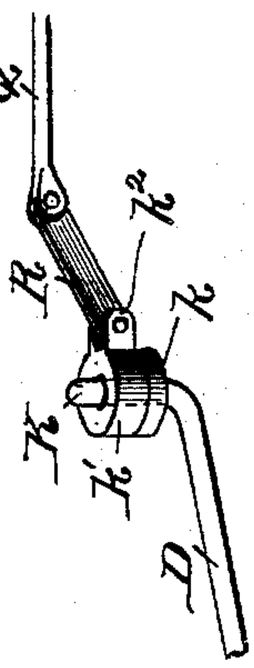


Fig. 3.

WITNESSES:
Fred G. Dieterich
Jos. A. Ryan

INVENTORS.
John W. Neumann
John R. Pflanz
BY
Munn & Co
ATTORNEYS

UNITED STATES PATENT OFFICE.

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

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 483,859, dated October 4, 1892.

Application filed January 4, 1892. Serial No. 417,021. (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.

Our invention is an improved car-brake which can be used either upon a car when moved separately or upon cars arranged in trains.

The object of this invention is to provide a brake which can be operated by the driver when the car is used separately and which will also operate automatically upon the stoppage of the motor-car when the cars are arranged in train.

With these objects in view our invention consists in the parts and combination of parts hereinafter described and claimed.

In the drawings forming a part of this specification, Figure 1 is a bottom plan view of the motor and trail cars provided with our invention. Fig. 2 is a vertical longitudinal section of the same, and Fig. 3 is a detail view of the coupling mechanism.

Referring to the drawings, A indicates a trail or passenger car, and B the motor-car. To the under side of the floor of the passenger-car near the rear end of the same is suspended a bracket C, the lower end of which projects below the axle of the car. A brake-operating rod D has its rear end pivotally connected with the lower end of the bracket, said rod extending forwardly below the axles to a point beneath the dash-board of the car. A vertical upwardly-projecting arm E is rigidly secured to the rod D intermediate the front and rear trucks of the car, and to the upper end of said arm are connected the pitmen F F, the lower ends of said pitmen being connected with the brake-beams G G, carrying the shoes H H, which contact with the wheels of the car when the rod D is depressed. The brake-beams are hung from the bottom of the car in any approved manner.

As our improved brake can be operated either by hand or automatically, we will first describe the constructions for manual operation and then proceed to the automatic mechanism.

The forward end of the rod D is provided with a short upwardly-projecting post K, and near the lower end of said post is arranged a rigid collar or shoulder *k*. Surrounding the post and resting upon the shoulder *k* is a sleeve *k'*, formed with a laterally-projecting ear k^2, the purposes of which will be explained hereinafter. A short distance to the rear of the post K is arranged the toggle-joint L, composed of the links *l*, jointed at *l'*, the outer ends of said links being attached to the bottom of the car and rod D, respectively. A hand-lever M is pivoted upon the front face of the dash-board, and to the lower end of said lever is connected a pitman-rod N, said rod working in a guide N', attached to the bottom of the dash, and to the rear end of the pitman is secured a chain or link N^2, which in turn is connected with the toggle L at its joint *l'*, whereby when the hand-lever is moved back and forth by the operator the toggle L will be operated, the rod D depressed, and the pitmen F, connected with said rod, will cause the brake-shoes to be brought into contact with the wheels, thereby retarding the motion of the car. A depending guiding-bracket O is arranged near the forward end of the car, the rod D working in said bracket, whereby any tendency toward lateral movement of said rod will be prevented.

When the car A is employed as a trail-car and drawn by the motor-car B, the trail or passenger car A may be provided with a forward extension or the floor of the dash-board may be continued, if preferred. A coupling-bar Q is attached to the motor-car, projecting rearwardly therefrom, and to the rear end of said bar Q is pivotally connected the link R, the opposite end of said link being connected with the apertured lug on the sleeve *k'*, thereby establishing a connection between the motor-car and the rod D. The rear end of the coupling-bar and the link rest beneath the projection P or floor of the dash-board, and when the motor-car is retarded the forward motion of the trail-car will cause the said coupling-bar to slide beneath the projection, and as it cannot have any upward movement the link R, which normally rests in a horizontal position, is forced to assume a vertical position, and in doing this the forward end of the

rod D is depressed, thereby applying the brakes. When the motor-car is again started, the various parts will be brought back to the normal positions. When it is desired to back the cars A and B without applying the brakes, we provide a spacing bar or pole S, which is pivoted to the draw-head or dash-board of the trail-car and is adapted to be let down, so as to contact with the rear dash-board of the motor-car, and thus hold the cars the requisite distance apart. This pole is provided with a buffer at its forward end, and when said pole is not in use it is drawn up and rests against the dash-board of the trail-car.

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

1. The combinaton, with the brake-beams, of the pitmen, the arm to which the pitmen are attached, the operating-rod to which the arm is attached, the hand-lever, the toggle, and pitman-rod connecting the hand-lever and operating-rod, substantially as shown and described.

2. The combination, with the motor and trail-cars, of the brake-beams suspended from said trail-car, the pitmen, the arm connected thereto, the operating-rod, the rigid coupling-bar, and the link connecting the rod and bar, substantially as shown and described.

3. The combination, with the motor and trail-cars, of the rigid coupling-bar, the vertically-movable brake-operating rod, the link connecting the rod and bar, the pitmen, and brake-beams connected with the operating-rod, substantially as shown and described.

4. The combination, with the brake-beams carrying shoes, of the pitmen, the rod to which the pitmen are connected, and the hand-lever connected with the free end of said rod, substantially as and for the purpose described.

5. The combination, with the brake-beams, of the operating-rod, the connections between the rod and beams, the hand-lever, the toggle, and pitman rod connecting the hand-lever with the joint of the toggle, whereby said rod may be depressed, substantially as shown and described.

6. The combination of the rod having the beams connected therewith, the post upon the forward end of said rod, the sleeve mounted thereon, the link connected with the sleeve, and the rigid coupling-bar, all arranged substantially as shown and described.

JOHN W. NEUMANN.
JOHN R. PFLANZ.

Witnesses:
G. C. ROBERTS,
JOHN N. VELTEN.