No. 772,946. PATENTED OCT. 25, 1904.

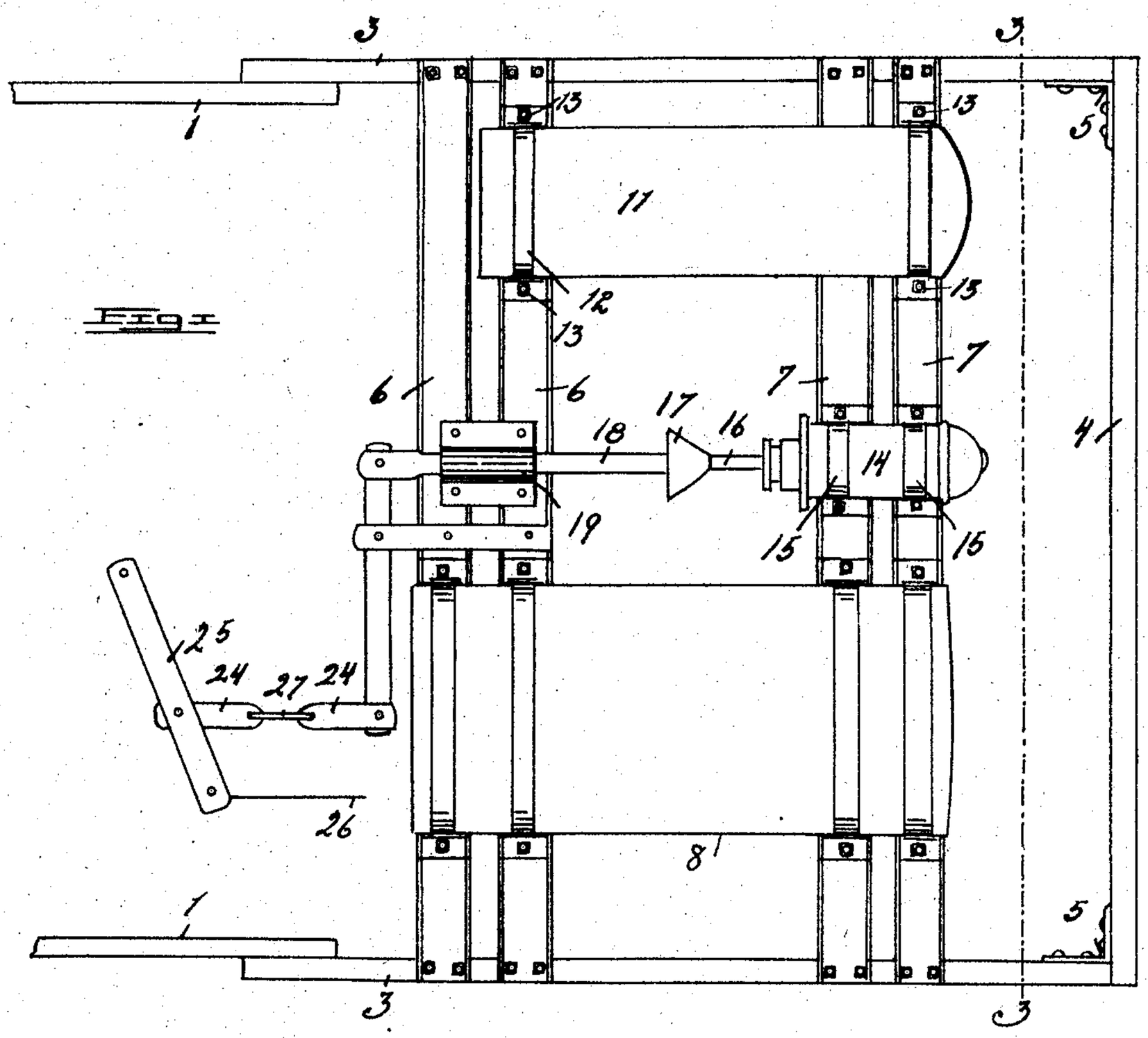
W. G. MacLAUGHLIN.

# SUPPLEMENTARY TRUCK FRAME FOR BRAKE MECHANISMS.

APPLICATION FILED FEB. 19, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

Fig 1



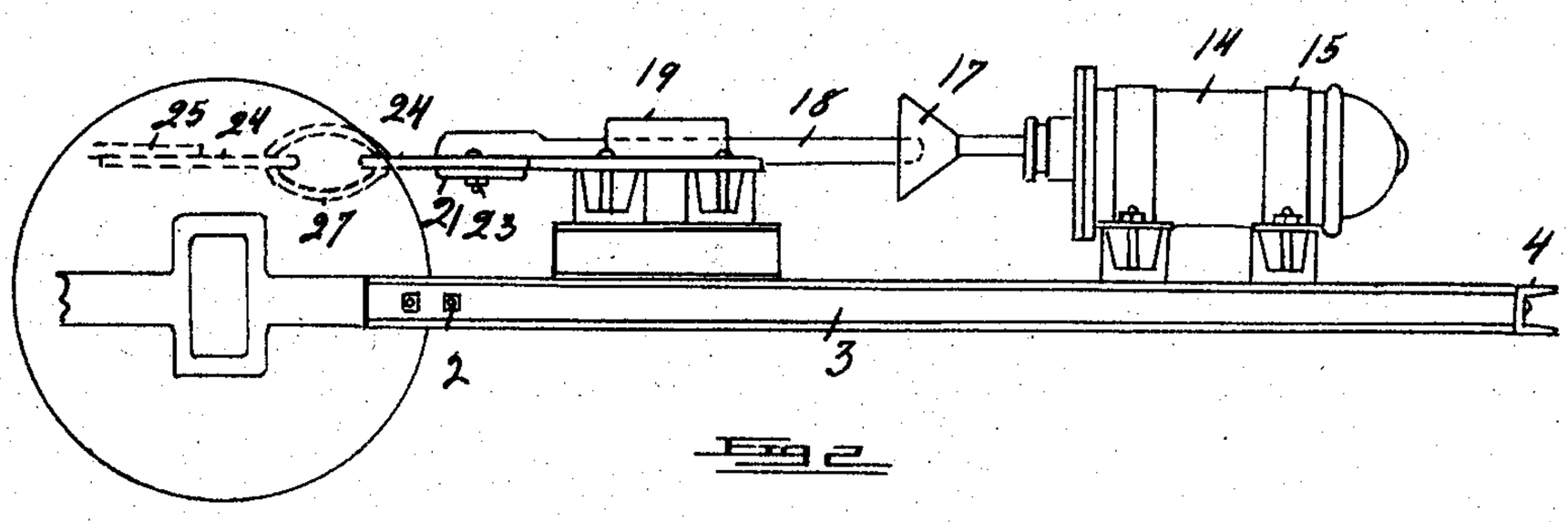




Fig 2

Witnesses
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NO MODEL. 2 SHEETS—SHEET 2.

Fig 3.

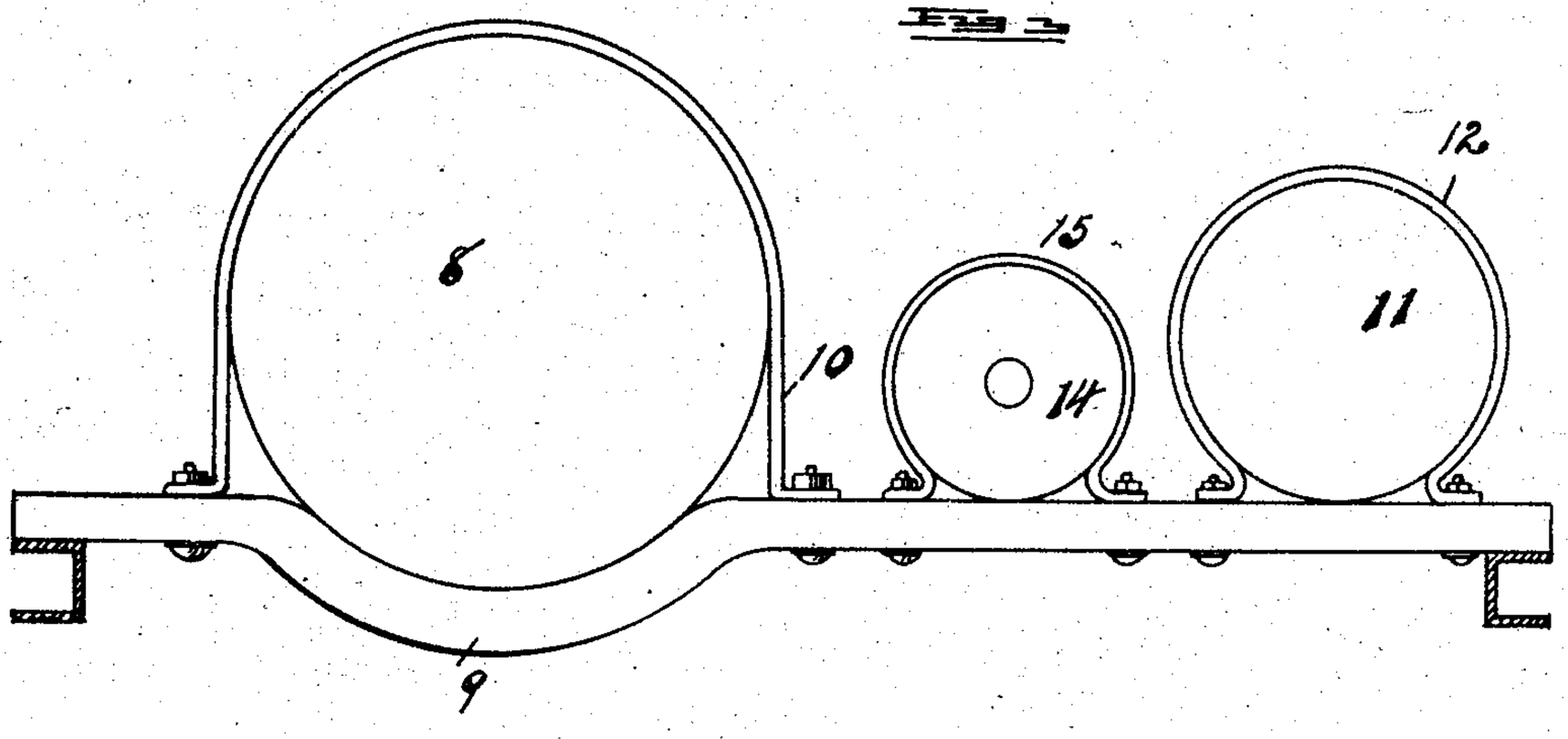
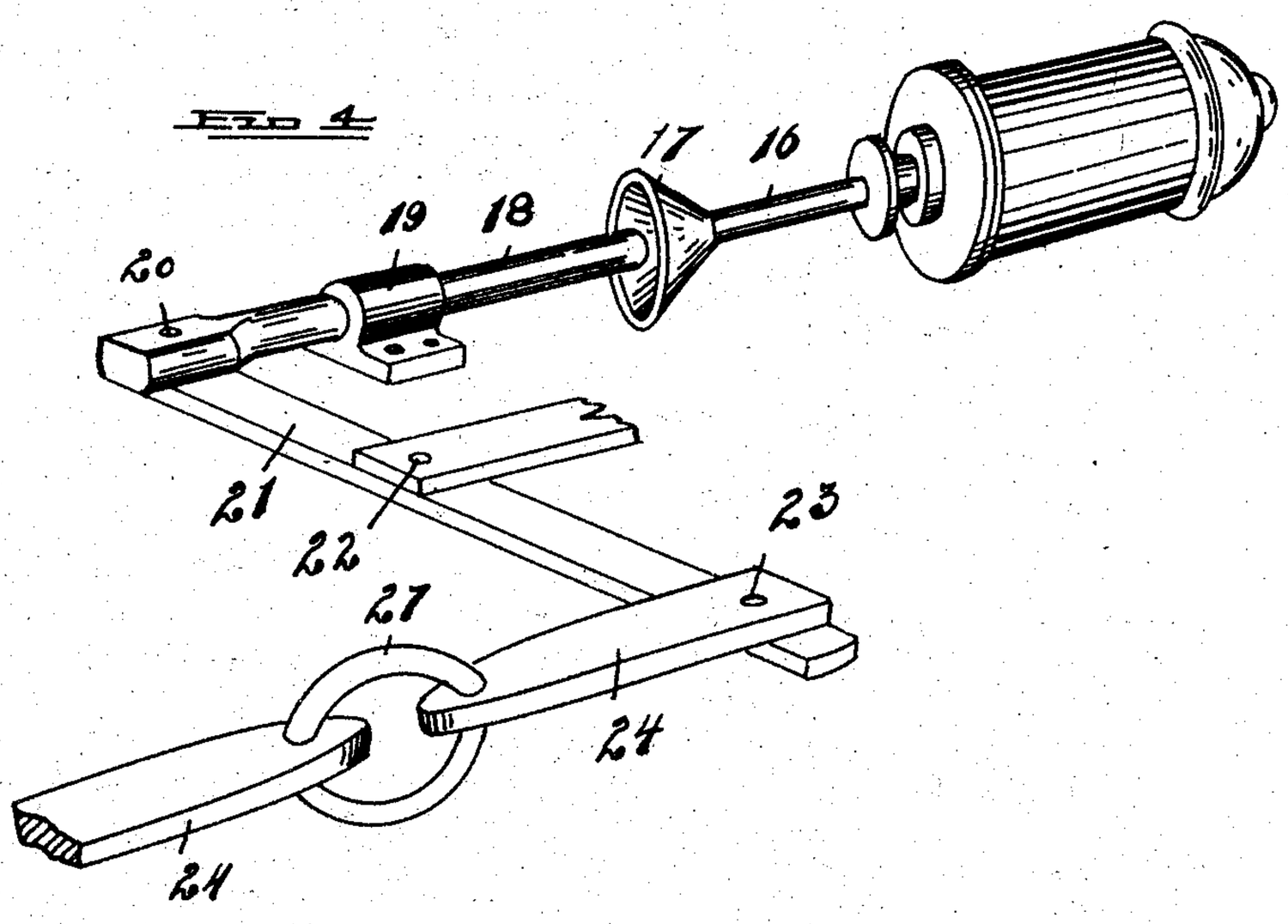



Fig 4.

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No. 772,946. Patented October 25, 1904.

# UNITED STATES PATENT OFFICE.

WILLIAM GORDON MACLAUGHLIN, OF WINDSOR, CANADA.

## SUPPLEMENTARY TRUCK-FRAME FOR BRAKE MECHANISM.

SPECIFICATION forming part of Letters Patent No. 772,946, dated October 25, 1904.

Application filed February 19, 1903. Serial No. 144,066. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM GORDON MACLAUGHLIN, a citizen of the United States, residing at Windsor, in the county of Essex, Province of Ontario, Canada, have invented certain new and useful Improvements in Supplementary Truck-Frames for Brake Mechanism; and I do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to an auxiliary cradle or frame adapted to be attached to the truck-frame of cars and to support the air-brake mechanism by means of which the cars are controlled.

The object of the invention is to provide means for mounting the brake mechanism directly upon an extension of the truck-frame, so that the working parts of the brake may be securely fixed in a manner to prevent change in their relative positions, overcoming the objection which heretofore has been encountered where a portion of the brake mechanism has been mounted upon the truck-frame and a portion upon the body of the car. In single-truck cars the relative movement between the car-body and the truck-frame is such as to render impossible the perfect working of the brake mechanism where portions of the operative parts are mounted upon the truck-frame and car-body.

The above object is attained and the difficulties mentioned overcome by the formation and association of parts illustrated in the accompanying drawings, in which—

Figure 1 is a plan view showing my auxiliary cradle or frame mounted upon and extending from the end of the truck-frame and carrying certain parts of the brake mechanism. Fig. 2 is a side elevation of Fig. 1. Fig. 3 is a horizontal section on line 3 3 of Fig. 1. Fig. 4 is a perspective view of the brake-cylinder, its piston-rod, and the push-rod actuated thereby and connected with a system of brake-levers.

Referring to the characters of reference, 1 designates the side bars of the truck-frame. To the ends of these side bars are bolted at 2 the channel-irons 3, which form the sides of the auxiliary frame or cradle, the outer ends of said channel-irons being connected by the cross channel-iron 4 through the medium of the corner-brackets 5. Crossing between the side irons 3 are the transverse channel-iron bars 6 and 7, which are bolted at their ends to the flanges of the side irons.

Supported upon the cross-bars 6 and 7 is the main air-reservoir, into which air is pumped from a suitable compressor. (Not shown.) The cross-bars 6 and 7 at the point where the main reservoir is supported thereon are curved downwardly, as at 9, to form a seat for said reservoir and at the same time depress it sufficiently to allow it to be mounted without coming in contact with the car-body. Suitable straps 10 are passed around said reservoir and bolted to the cross-bars to maintain it in place. Upon the opposite side of the supplementary frame to that occupied by the main reservoir is located the auxiliary reservoir 11, adapted to be connected with the main reservoir by suitable pipes. (Not shown.)

The auxiliary reservoir is supported upon the main cross-bars of the frame and is maintained in place by the metal straps 12, which embrace the upper arc of said reservoir and are bolted at 13 to the cross-bars 6 and 7.

The brake-cylinder 14 is mounted upon the bars 7 of the frame and is adapted to receive air from the auxiliary cylinder through a suitable pipe, (not shown,) said cylinder being secured in place by the metal straps 15, which are bolted to said bars. The piston-rod 16, extending from said cylinder, is provided on the outer end thereof with a funnel-shaped hood 17, which is adapted to loosely fit over the end of the push-rod 18, mounted in a suitable guide 19, which is secured to the bars of the frame and through which said push-rod is adapted to reciprocate. Pivoted at 20 to the push-rod is a lever 21, which is fulcrumed at 22 and pivoted at 23 to a connecting-bar 24, which is in turn pivoted to the brake-lever 25, adapted to be connected with the brake mechanism. (Not shown.) To one end of the brake-lever is attached a rod 26, adapted to

lead to the hand-brake, whereby provision is made for braking the car by hand when necessary. Mounted in and uniting the divisions of the connecting-bar is a link 27, which adds flexibility thereto. When the piston-rod moves outwardly, the funnel-shaped hood engages the end of the push-rod 18 and operates said rod to apply the brakes, as will be understood. The flaring opening in the hood always insures the entrance of the push-rod therein and obviates any binding of said parts should the springing of the frame cause the piston and push-rod to stand out of axial alinement.

It will now be understood that by means of this cradle or supplementary frame, which may be attached to the side bars of the ordinary truck-frame, provision is made for mounting the brake mechanism directly upon the truck-frame of a two-wheeled truck and obviating the necessity of mounting a portion of the operative mechanism upon the bottom of the car, as commonly practiced, and which because of the motion between the car and truck-frame disarranges the operative parts of the brake and renders them inoperative.

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

1. The combination with the truck-frame of a car, of an independent supplementary cradle or frame attached thereto and projecting therefrom in a manner to support the brake mechanism beyond the end of the truck-frame proper, of the brake-applying mechanism mounted upon said supplementary frame and connected with the brake-lever.

2. The combination with the truck-frame of a car, of the supplementary frame or cradle secured to the side bars of said frame and projecting therefrom at one end, the brake-operative mechanism mounted upon said supplementary frame, and means establishing a universal-joint connection between the power-applying agent and the agent transmitting said power to the brakes.

In testimony whereof I sign this specification in the presence of two witnesses.

WILLIAM GORDON MACLAUGHLIN.

Witnesses:

E. S. WHEELER,

P. A. HALL.