

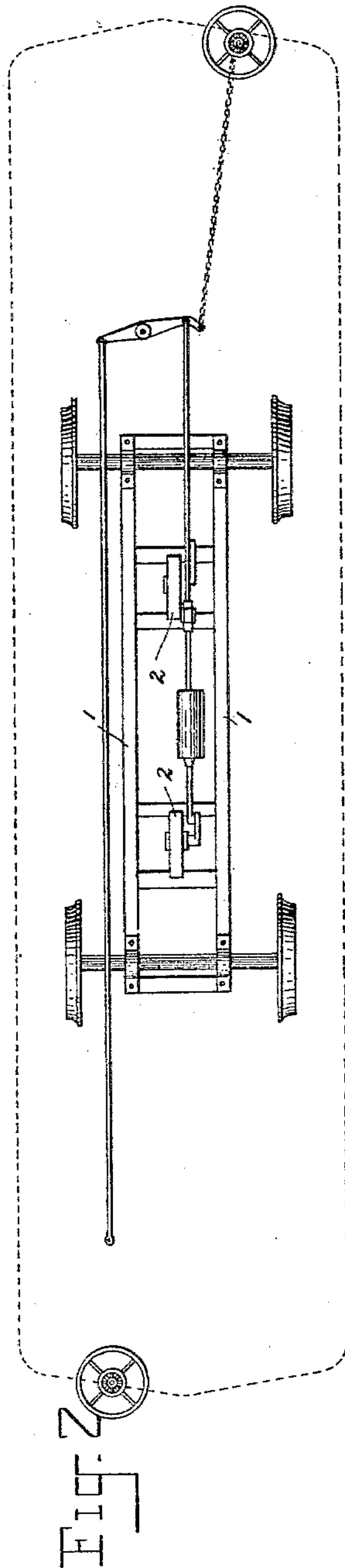
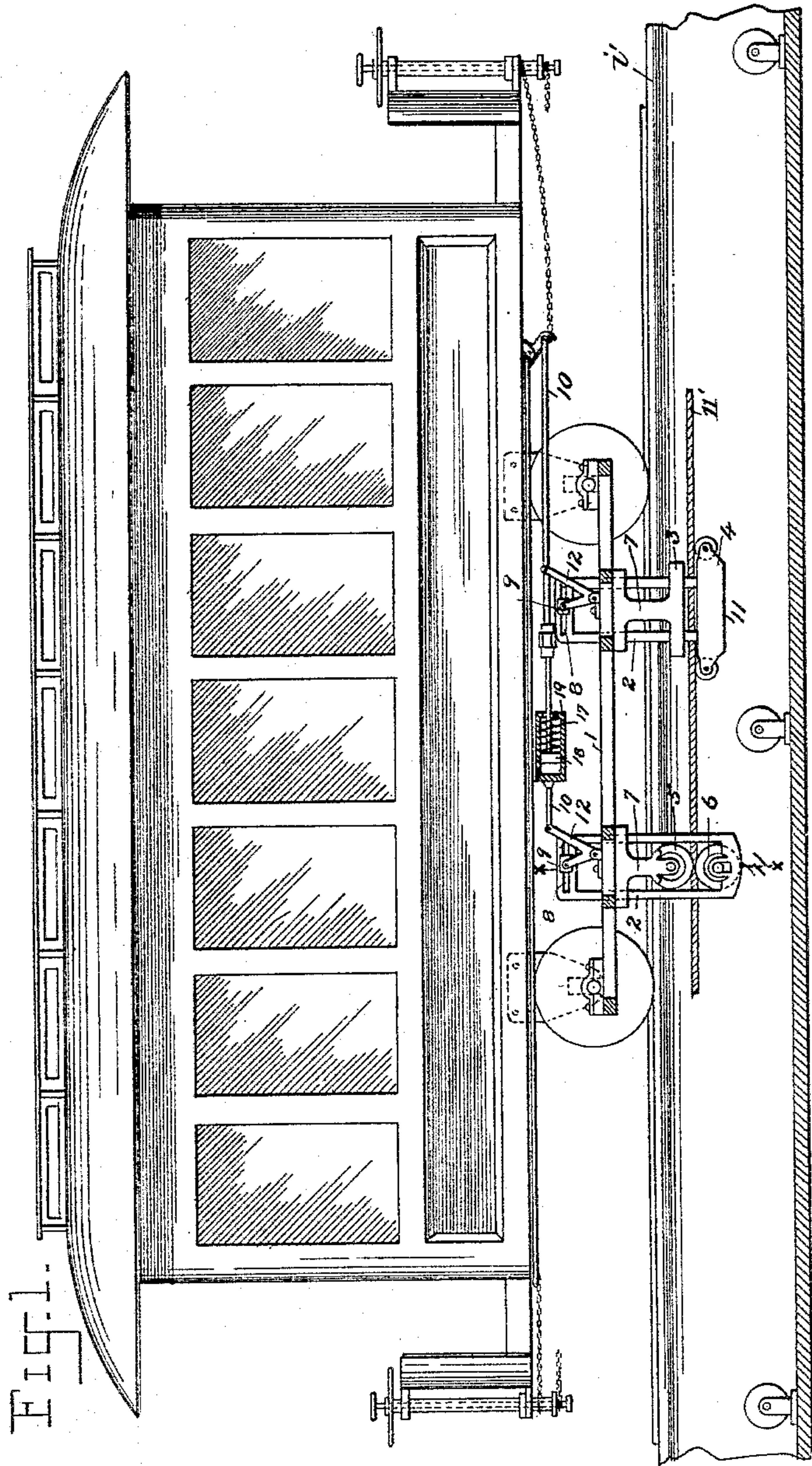
(No Model.)

J. H. PENDLETON.

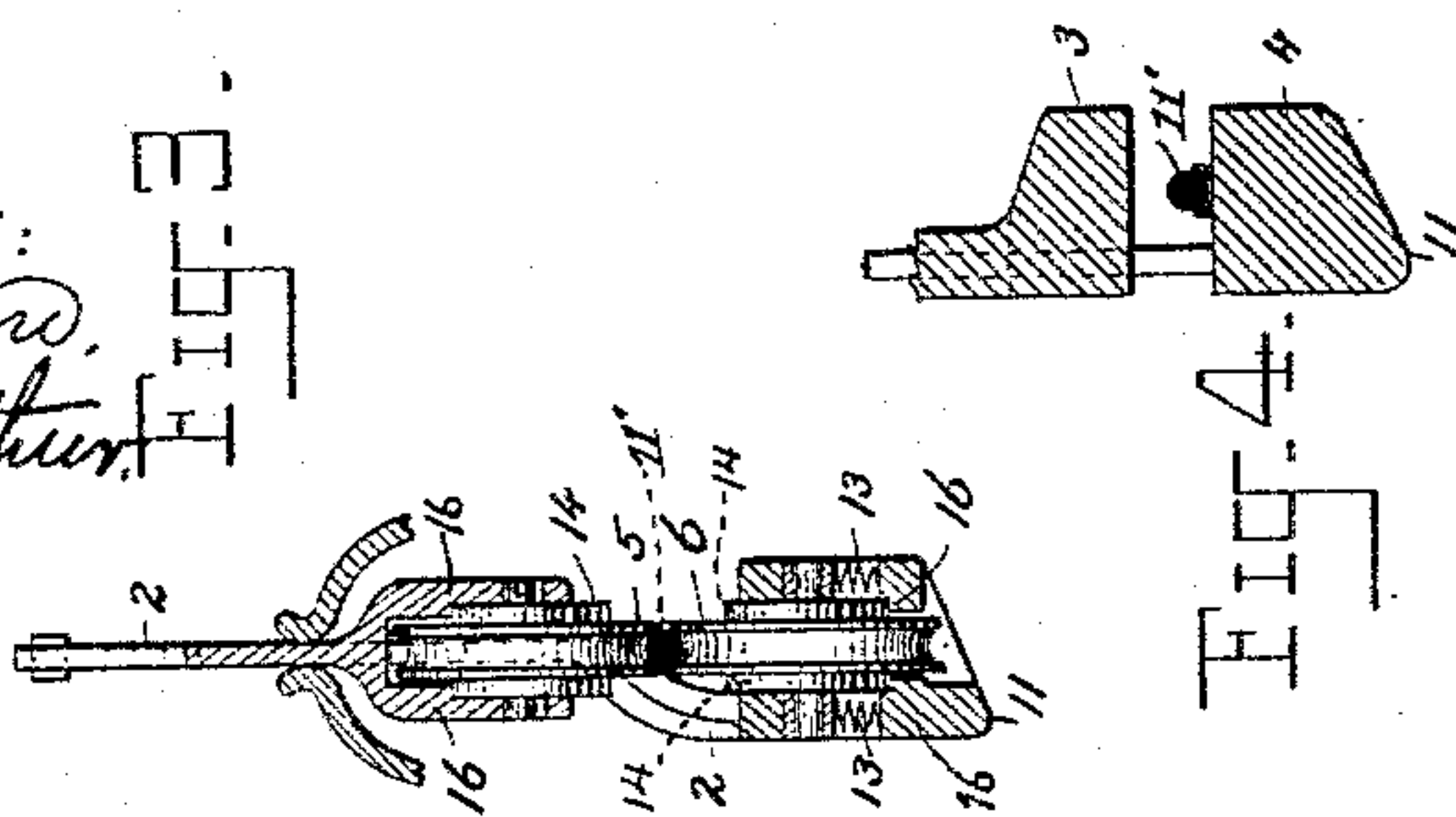
GRIP FOR CABLE RAILWAY CARS.

No. 387,911.

Patented Aug. 14, 1888.



WITNESSES:
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UNITED STATES PATENT OFFICE.

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GRIP FOR CABLE-RAILWAY CARS.

SPECIFICATION forming part of Letters Patent No. 387,911, dated August 14, 1888.

Application filed December 19, 1887. Serial No. 258,348. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. PENDLETON, a citizen of the United States, residing at Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Grips for Cable-Railway Cars, of which the following is a full, clear, and exact specification.

My invention relates to a device which I have also shown and described in my application, Serial No. 243,774, filed July 8, 1887, and which is for gripping the traveling cable employed as motive power on railways; and it relates more particularly to those devices employed on surface-roads where the cable is located in the conduit below the surface; and it has for its object to provide a grip which will be simple in its operation and at the same time be effective and cause little or no detriment to the cable.

With these ends in view my invention consists in the employment of a starting or auxiliary grip and a positive grip, which are connected with the same source of operation and are brought to bear at their proper time upon the cable by a continuous and simple movement, which requires but very little care and attention on the part of the operator.

My invention further consists of a grip which is perfectly adapted for picking up the cable, as well as grasping and holding it, and in certain features of novelty, which will now be described with reference to the accompanying drawings, which form a part of this application, and in which—

Figure 1 is a side elevation, partly in section, of the street-car having my improved grips appended therefrom. Fig. 2 is a plan of the car-truck and the grips. Fig. 3 is an enlarged detail section of the roller-grip, taken on the line X X, Fig. 1. Fig. 4 is a cross-section of the jaws of the positive grip.

1 represents the car-truck frame or the bracket from which the grips are suspended, and 2 2 are the shanks which go through the slot-rail 2' and carry the grip-jaw 4 and the grip-roller 6, respectively. 7 7 are also shanks which extend downward through the slotted rail and carry the roller 5 and jaw 3; but these, however, are rigidly secured to the frame 1,

while the shanks 2 are capable of sliding vertically in said frame.

8 are slots in the tops of the shanks 2, in which slots fit studs or blocks 9, to which latter are secured one arm of each of the bell-crank levers 12, whose other arms are secured to the draw-bar 10. These bell-cranks are fulcrumed to the stationary shanks, so that when the draw-bar is operated in one direction they will cause the sliding shanks to descend and bring the bevel or cam surface 11 on the under side of each grip in contact with the cable 11', thus deflecting it to one side until the grips have descended far enough to bring the wheel 6 and jaw 4 below the cable, when the latter will spring back to its place just above said wheel and jaw, and when operated in the opposite direction will cause the sliding shanks to rise and bring the cable with them, resting upon the wheel 6 and jaw 4.

The wheels 5 6 are mounted in vertically-elongated bearings, and the wheel 6 is provided with springs 13 under its journals, which tend to keep it to the upper extremity of its bearings, and by which arrangement it will be seen that the wheels 5 6 will come together on the cable before the jaws meet, and when the springs are entirely compressed the flanges 14 on the wheels 5 6 will come in contact with shoulders 16 on the movable and stationary shanks, and thus brake the revolution of the wheels. The flanges on the upper wheel, 5, however, will come in contact with the shoulders as soon as the pressure produced by the upward movement of the lower wheel is sufficient to lift the wheel 5, and the revolution of the latter will be gradually retarded from that moment.

It will be noted that the grip thus obtained is given through the medium of the stout spiral spring 17, coiled on the draw-bar 10, between the follower 18 and the head of the cylinder 19. The inertia of the latter spring is much greater than that of the others, and consequently the grip thus obtained is sufficient to carry the car over levels and ordinary grades; but when the car is to mount a steep grade or carry an extra load it is necessary to bring the positive grip to bear. This is accomplished by continuing the pull upon the draw-bar,

which will compress the spring 17, throw the movable shank of the positive grip upward, and bring the jaw 4 firmly against the cable and jaw 3.

5 Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

10 1. The combination, with two or more positive and roller or auxiliary grips, of a draw-bar for bringing all of them to bear and having an elastic or yielding medium, whereby one grip is brought to bear before the other.

15 2. The combination, with the roller or auxiliary grip and a positive grip, of a draw-bar for causing the grips to engage the cable, brakes, springs between said brakes and the rollers, mechanism connected to said brakes and draw-bar for causing them to engage with the rollers, and an elastic medium in the draw-
20 bar of greater inertia than the aforesaid springs.

3. The combination, with the roller or auxiliary grip and a positive grip, of a draw-bar connected with the operating mechanism of

said grips and an elastic medium in said draw- 25
bar between the points of connection with said grips, substantially as set forth.

4. The combination, with a roller-grip and a positive grip, of a draw-bar connected with the operating mechanism of said grips, an elas- 30
tic medium in said draw-bar between the points of connection with the grip mechanism, and springs or cushions for holding the rollers normally in advance of the jaws, substantially as set forth.

35 5. The combination, with the fixed roller 5 and jaw 3 of the sliding shanks 2, having slots 8, of a cushioned roller, 6, and a jaw, 4, secured to said shanks respectively, a draw-bar, 10, pivoted bell-cranks having one arm secured 40
to said bar 10 and the other in the slots 8, and an elastic medium in said draw-bar between the said bell-cranks, substantially as set forth.

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Witnesses:

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