(No Model.)

C. BULLOCK.

CAR FOR CABLE RAILWAYS.

No. 328,917. Patented Oct. 27, 1885.

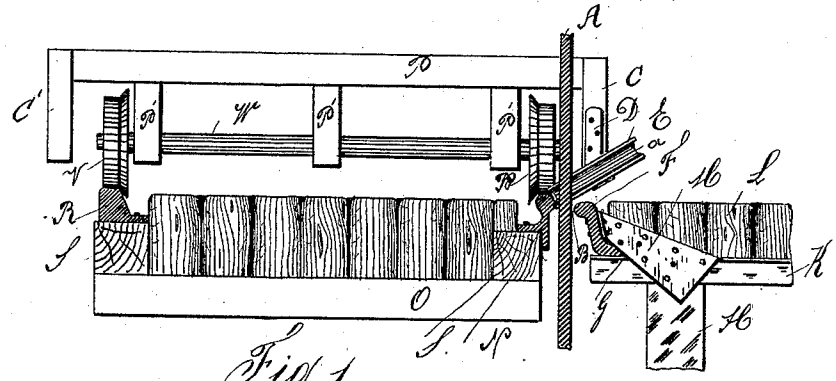

Fig 1.

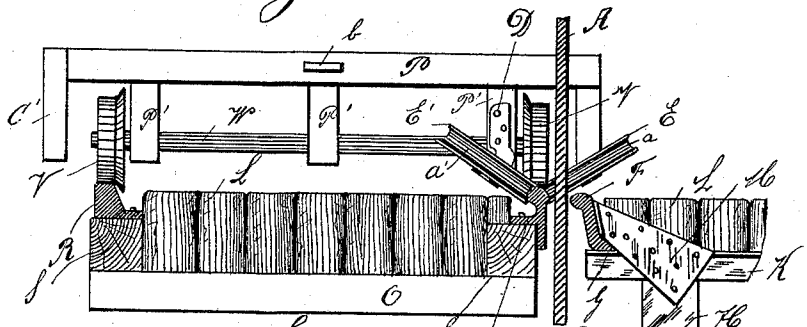

Fig 2.

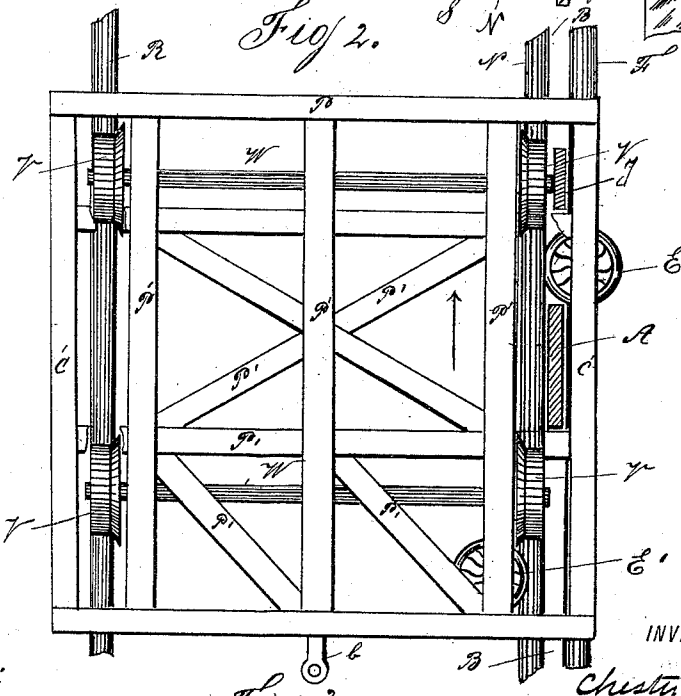

Fig 3.

WITNESSES

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UNITED STATES PATENT OFFICE.

CHESTER BULLOCK, OF NEW YORK, N. Y.

CAR FOR CABLE RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 328,917, dated October 27, 1885.

Application filed March 12, 1885. Serial No. 158,642. (No model.)

To all whom it may concern:

Be it known that I, CHESTER BULLOCK, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented a new and useful Grip-Car for Cable Railways, of which the following is a specification.

My invention relates to improvements in grip-cars for cable-railways, in which the stem of the grip is placed near one side of the car, and when on the track said stem passes down and through a slot made by the side of one of the rails of the car-tracks to the conduit that contains the cables; and the objects of my improvements are, first, to provide a grip-car to run on a track where a conduit is constructed between double-track cable railways with a slot by the side of the inner rails of said tracks; second, to reduce the friction and side draft of the car while being propelled by the cable, and third, to protect the stem of the grip from obstructions and from wear when it passes through the slot by being kept in place while the car is in motion. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section of the front part of the truck of the car divided in front of the back wheels with the road-bed and stem of the grip in the slot of the conduit with front guide or anti-friction wheel. Fig. 2 is a vertical section of the back end of the truck of the car with road-bed, slot of the conduit, and back guide or anti-friction wheels. Fig. 3 is a top view of the truck of the grip-car and car-track.

Similar letters refer to similar parts throughout the several views.

A is the stem of the grip, leading from the car to the cable in the conduit through the slot; B, the slot to the conduit; C, outside timber of the frame of the truck; D, shank of the bearing on which guide or anti-friction wheels revolve, they being firmly bolted to the frame of the truck; E, guide or anti-friction wheels are attached to the frame of the truck, or can be fastened to the stem of the grip—that is, fastened to the truck and placed at an angle sufficient to allow the lower face of the wheel to bear against the rails and pass over the road-bed, one wheel being placed forward and the other back of the stem of the grip, and so arranged to bear against the rail as to keep the stem of the grip from wearing against the sides of the slot; also, to reduce the friction and side draft while the car is propelled by the cable. The anti-friction wheel or wheels can be placed to bear or run against either of the rails of the road, and can be made with flange or smooth face, as the weight of the car and the angle on which the wheels are set will keep them equally in place.

F is a slot-rail; G, bolts that secure slot-rail to plate; H, upper end of post that sustains plate; K, angle-iron plate riveted to post E E; L, paving-blocks of the street; M, brace that is riveted to post H and plate K at the bottom, and bolted at the top to slot-rail F; N, inner rail of the track, and forms one of the slot-rails; O, cross-ties that sustain rail-timbers; P, end and inside timbers and braces, and, with side timbers, *c*, are bolted firmly together and form the frame of the car-truck; Q, car-wheels; R, outside rail of the track; S, rail-timbers on which the rails are spiked; T, slot-cleaner—a bar of iron or steel of sufficient thickness to pass through the slot and about six inches wide, with the upper end firmly secured by bolts to the frame of the car while the lower end passes down into the slot. It is placed forward of the grip, and when the car is in motion it cleans the slot from obstructions. (Shown in Fig. 3.) W, axles of the car-wheels; *a*, groove in the face of the guide or anti-friction wheels; *b*, draw-bar that connects the cars.

I am aware that prior to my invention cable-cars with the grip placed near the center of the car when the conduits are placed between the rails of the track have been in use. I therefore do not claim such a combination, broadly; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. A guide or anti-friction wheel attached to a grip-car or parts belonging thereto, and placed forward of the grip to bear or run against the rail of the track, and set at an angle sufficient to pass over the road-bed, substantially as shown, and for the purpose set forth.

2. A guide or anti-friction wheel attached

to a grip-car or parts belonging thereto, and placed back from the grip to bear or run against the rail of the track, and set at an angle sufficient to pass over the road-bed, as shown, and for the purpose set forth.

3. Guide or anti-friction wheel or wheels attached to a grip-car or parts belonging thereto and placed to bear or run against a rail of a track for cable railways, in combination with traction cable, as described, and for the purpose set forth.

CHESTER BULLOCK.

Witnesses:
FREDERICK A. WOOD,
B. THOMPSON WHIPPLE.