

(No Model.)

J. STEPHENSON.  
CABLE CAR TRUCK SUPPORT.

No. 396,838.

Patented Jan. 29, 1889.

Fig. 1.

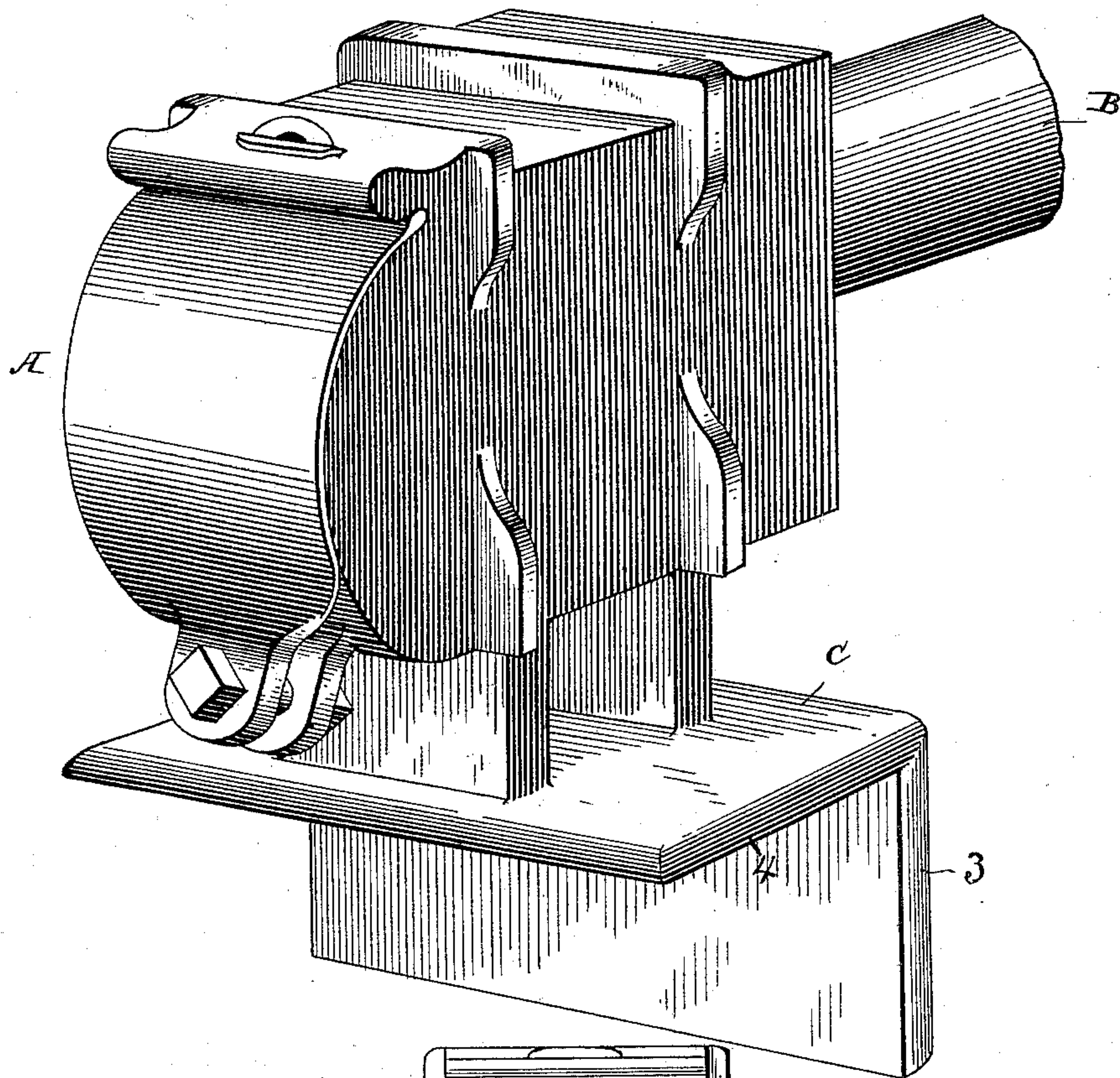
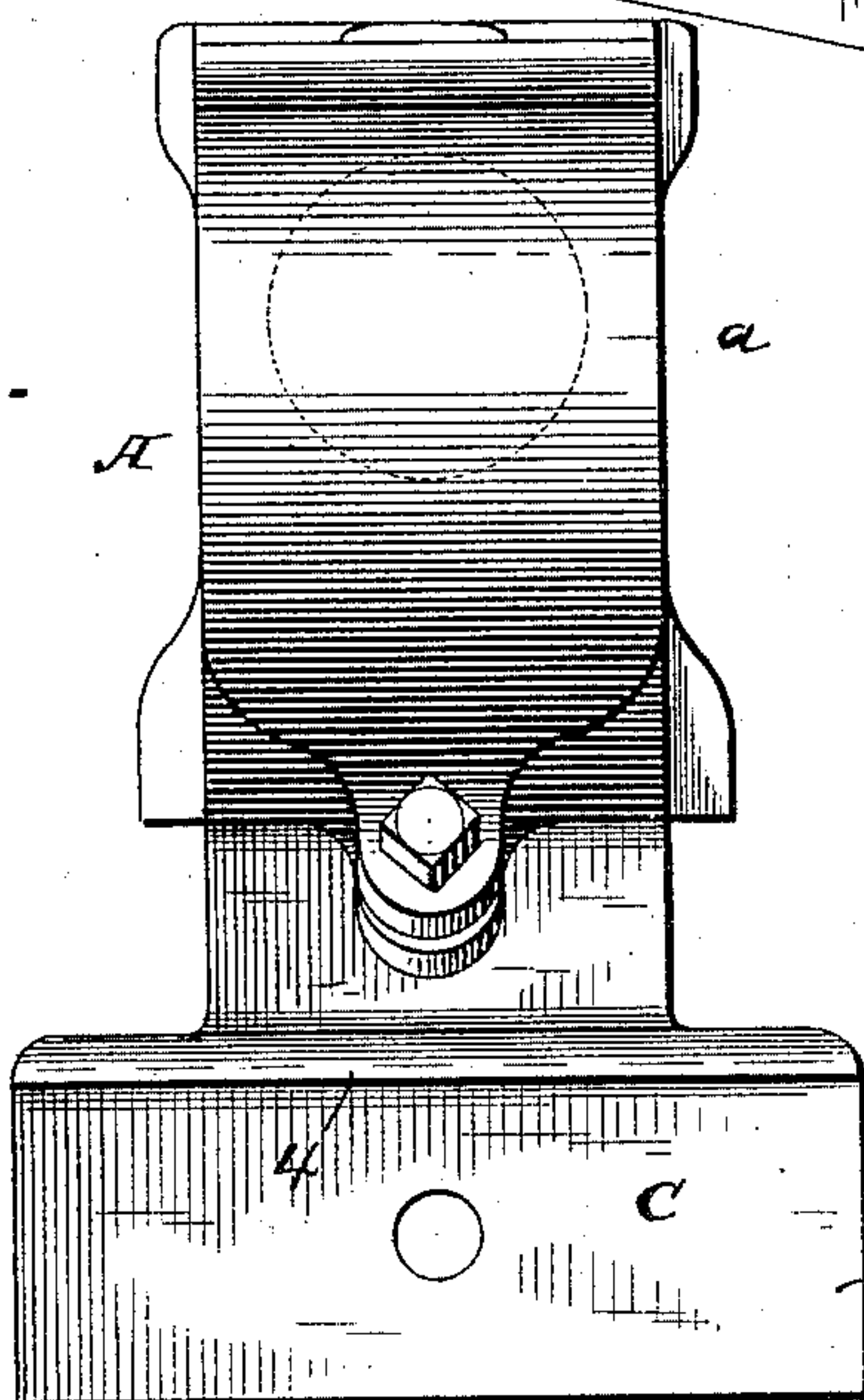


Fig. 2.



Attest:

J. J. McCarthy.  
J. G. Hinkel, Jr.

Inventor:

John Stephenson  
By Foster & Freeman  
attys



# UNITED STATES PATENT OFFICE.

JOHN STEPHENSON, OF NEW YORK, N. Y.

## CABLE-CAR-TRUCK SUPPORT.

SPECIFICATION forming part of Letters Patent No. 396,838, dated January 29, 1889.

Application filed February 23, 1888. Serial No. 265,074. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN STEPHENSON, a citizen of the United States, residing in New York, in the county and State of New York, have invented certain new and useful Improvements in Cable-Car-Truck Supports, of which the following is a specification.

Cars propelled by traveling cables are of recent development, and, being yet in the field of experiment, are not fully adapted to meet the requirements of the cable system. One of these requirements is that the cable-grip shall be suspended from some part of the car structure, and it is essential that the vertical distance of the grip below the surface of the tram-rail shall be invariable; but this distance cannot be maintained when springs intervene between the car-axle and the car-body carrying the grip. Attempts at compromise have been made by using stiff springs having little motion; but this has proved imperfect and unsatisfactory, because there is still a continued vertical variation of the grip, although in less degree, and also because of the discomfort to the passengers resulting from the stiffness of the springs and consequent inelastic nature of the body-support.

In another device which has been used the grip has been suspended from two parallel bars having their ends journaled to the central section of the car-axle—that is, between the two wheels of each axle; but this arrangement is subject to difficulties, viz: first, the tremor of the central part of the car-axle, where the parallel bars are journaled, is destructive to the machinery thus connected; second, the part of the axle forming the improvised journal for sustaining the parallel bars with the grip soon wears and weakens, the rapidity of the wear being promoted by the mud and dust abounding at this point; third, the location is difficult of access, so that the proper oiling and care of such improvised journals are impracticable.

My improvement, which remedies these evils, secures increased durability, economizes labor, and conduces to the safety of the passengers by providing for the suspension of the cable-grip neither from the car-body nor from the aforesaid parallel bars at the central portions of the axle, but from the axle-journal at

the ends of the car-axles, where the tremor or vibrations do not exist, or are infinitesimal, and where any special oiling and care-taking of the bearings are needless, because there are no bearings additional to those of the axle-journals in the usual boxes. This suspension of the parts from the axles may be effected in different ways, one of which I have illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a car-axle box having a bearing for the grip-supporting frame or bar. Fig. 2 is a front elevation of the box illustrated in Fig. 1.

In the construction shown in said drawings the car-axle box A is supported by the journal *a* (dotted lines, Fig. 2) at one end of one of the axles B, and has its lower surface or bottom formed so as to be adapted to receive and hold beneath the car-journal the corner of a car-truck frame or bar which carries the cable-grip and other appliances.

In practice I find that the best method is to suspend at some little distance below the axle-box floor, but integral with the box-shell, an angle-plate, C, which constitutes the bearing for the truck or other grip-support. The angle-plate has a vertical back, 3, and horizontal top 4, of such length and strength as to receive and hold the end of the truck side rail. It is possible, however, to dispense with either member of the angle-plate, leaving a single flat plate to constitute the bearing of sufficient strength to support the corner of the truck. I, however, prefer the angle form of bearing described.

Although I have referred to the bearing for the car-truck frame or other grip-support as being in the form of a pendant below the box, it may be elsewhere arranged so as to be supported by the journal of the axle, and I therefore do not limit myself to said arrangement.

I claim—

1. A car-axle box having integral with its shell an extension of its lowest side in the form of an angle-plate, constituting bearing-faces at an angle to each other to receive and hold the corner of a grip-supporting truck or frame, substantially as described.

2. A car-axle box having integral with its shell a downward extension of its rear wall, forming a vertical plate, constituting a bear-

ing-face for the attachment of a grip-support-  
ing truck or support, substantially as set forth.

3. A car-axle box having integral with its  
shell an extension of the lower part, having a  
5 horizontal bearing - face extending trans-  
versely to the axle-journal and adapted to re-  
ceive and sustain a corner of a grip-support-  
ing truck, substantially as set forth.

In testimony whereof I have signed my name  
to this specification in the presence of two sub- 10  
scribing witnesses.

JOHN STEPHENSON.

Witnesses:

S. A. STEPHENSON,  
AUG. RIPPERGER.