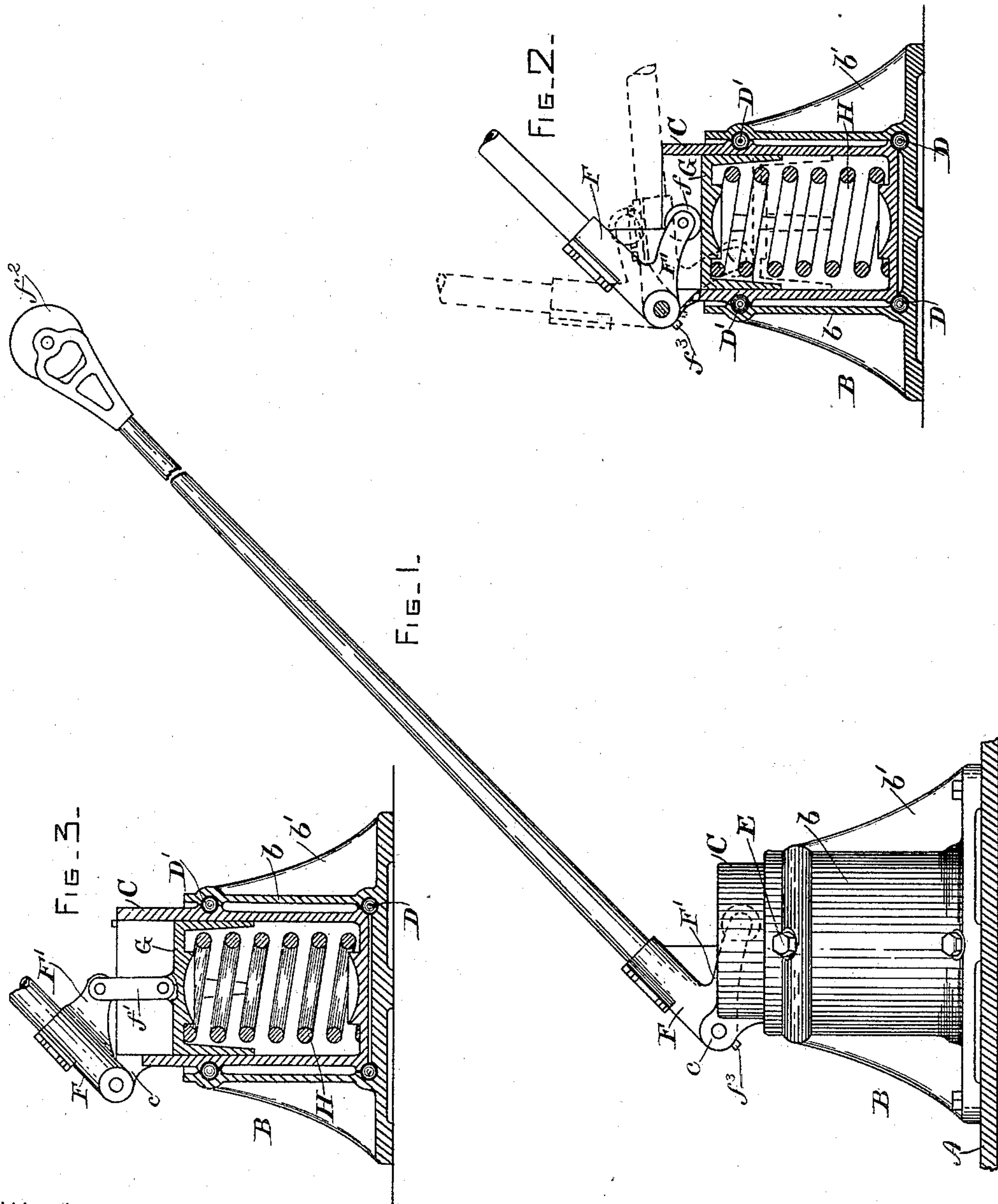


(No Model.)

E. M. BENTLEY.
TROLLEY STAND FOR ELECTRIC CARS.

No. 488,179.

Patented Dec. 20, 1892.



WITNESSES.
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UNITED STATES PATENT OFFICE.

EDWARD M. BENTLEY, OF BOSTON, MASSACHUSETTS.

TROLLEY-STAND FOR ELECTRIC CARS.

SPECIFICATION forming part of Letters Patent No. 488,179, dated December 20, 1892.

Application filed July 20, 1892. Serial No. 440,649. (No model.)

To all whom it may concern:

Be it known that I, EDWARD M. BENTLEY, a citizen of the United States, residing at Boston, county of Essex, State of Massachusetts, have invented certain new and useful Improvements in Trolley-Stands for Electric Cars, of which the following is a specification.

My invention relates to trolleys for electric cars, and its object is to facilitate the movements of the trolley on the stand on which it is mounted. Trolleys frequently jump off the overhead conductor when running over switches or around curves, and this is partly due to the fact that the trolley moves stiffly in its bearings, so that it cannot accommodate itself quickly to the movements of the car.

This invention aims to afford a bearing for the trolley that will permit it to readily and instantly move in any direction, and thus tend to follow the wire closely under all circumstances.

In the drawings, Figure 1 is a side elevation of a trolley embodying my invention. Fig. 2 is a vertical section of the stand. Fig. 3 shows a modification.

Secured upon the roof A of the car is a pedestal B, comprising a flat base supporting an upright cylinder *b*, which is preferably steadied by buttresses *b'*. A cylindrical drum C, closed at its bottom, but open at the top is fitted loosely into the cylinder B, resting preferably upon a row of balls D running in an annular groove in the bottom of the cylinder. Near the upper end of the cylinder a row of balls D' may be introduced, through an opening closed by a screw plug E, into registering grooves in the interior of the cylinder and the exterior of the drum. Any other suitable bearings between the drum and the cylinder may be used instead of the ball bearings described, care being taken that the drum shall rotate freely and easily in the cylinder. The upper end of the drum extends above the cylinder, and has at one side a pair of ears *c*, between which is hinged the trolley pole socket piece F. A lateral arm F' projects from this socket piece towards the cen-

ter of the drum where it has a bearing on a plunger G, fitted to slide smoothly in the drum, and supported on a strong spring H which is seated upon the bottom of the drum. The arm F' may have an anti-friction roller *f* resting on the plunger, or it may be connected therewith by a link *f'*: or in any other suitable manner.

The operation is obvious: the spring keeps the trolley wheel *f*² normally pressed up against the overhead conductor, but permits the pole to sway up and down as may be necessary. The drum turns easily on its bearings in the cylinder, and thus provides for the lateral movement of the pole in rounding curves and the like. To prevent the pole from being thrown over forward when the trolley wheel accidentally jumps off the wire, a stud *f*³ may be inserted in the end of the pole socket, to abut against the edge of the drum just before the pole reaches a vertical position.

What I claim as new and desire to secure by Letters Patent is:—

1. A trolley stand comprising an upright cylinder, a drum rotatable therein, and adapted to carry a pivoted trolley pole, and a spring plunger sliding in the drum to support said pole, substantially as described.

2. A trolley stand comprising an upright cylinder, a drum rotatable therein, a spring plunger sliding in the drum, and a trolley pole hinged to the drum, and having an arm bearing upon said plunger, substantially as described.

3. A trolley stand comprising an upright cylinder, a drum rotatable therein, a spring plunger in said drum, and a trolley pole hinged to ears on said drum and having a lateral arm carrying a roller which rests upon the plunger, substantially as set forth.

In witness whereof I have hereunto set my hand this 13th day of July, 1892.

EDWARD M. BENTLEY.

Witnesses:

H. J. LIVERMORE,
C. L. HAYNES.