(No Model.)

J. R. GRIFFITHS.

TROLLEY POLE STAND.

No. 455,322. Patented July 7, 1891.

Fig. 1.

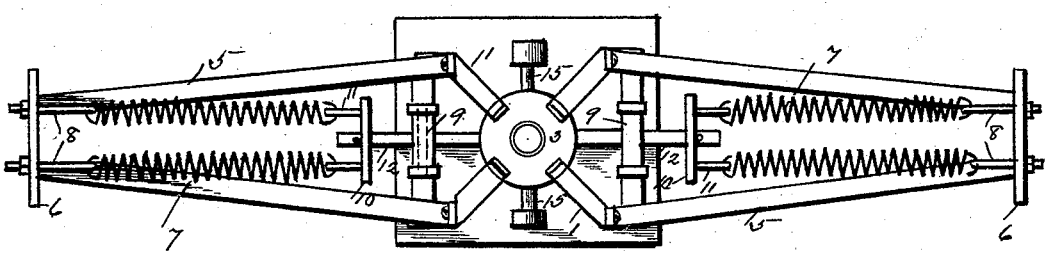

Fig. 3.

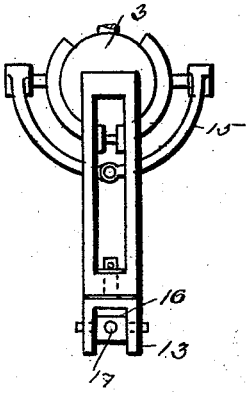

Fig. 2.

Witnesses:
H. C. Harrison.
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UNITED STATES PATENT OFFICE.

JAMES R. GRIFFITHS, OF ALLEGHENY, PENNSYLVANIA.

TROLLEY-POLE STAND.

SPECIFICATION forming part of Letters Patent No. 455,322, dated July 7, 1891.

Application filed January 20, 1891. Serial No. 378,499. (No model.)

To all whom it may concern:

Be it known that I, JAMES R. GRIFFITHS, a subject of the Queen of Great Britain, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Trolley-Pole Stands; and I do hereby 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 pertains to make and use the same, reference being had to the accompanyng drawings, which form a part of this specification.

My invention relates to an improved trolley-pole stand; and it consists in certain details of construction and combination of parts, as will be more fully set forth hereinafter.

In the accompanying drawings, Figure 1 is a plan view of my improved stand, showing the general construction of the same. Fig. 2 is a side elevation partly in section. Fig. 3 is an end view of one of the pivoted links, together with the ball-and-socket bearing of the pole.

To construct a trolley-pole stand for electrically-propelled railway-cars, I construct a frame 1, of suitable size and form of construction, and provide the same with a socket 2, in which a ball-bearing 3 is made to operate in a manner that a trolley-pole 4, secured to the same, may be free to move or swing in several directions. Attached to each side of this frame 1 are brackets 5, which extend horizontally from said frame 1, and are provided with upward extensions 6, to which suitable springs 7 are connected by means of hook or eyebolt 8, which affords a means of increasing or diminishing the tension on said springs 7. The other extremities of these springs 7 are attached to pivoted links 9, hinged to an upward extension of each bracket 5 by means of a transverse bar 10, having hooks 11 attached thereto, and a connecting pivoted link or bar 12. These first-mentioned links 9 project downward and are provided at their lower extremities with couplings 13, pivotally attached thereto. Attached to the ball 3, which supports the trolley-pole, are semicircular links or arms 15, which pass beneath the socket 2, and are pivoted or connected to a coupling 16. Pivotally connected to this coupling 16 and to those 13, attached to the links 9, are connecting-bars 17, which completes the apparatus.

The operation of this stand is obvious. The pole 4 may be brought to a horizontal position, either to the front or rear of the stand, and have sufficient side movement to insure a perfect contact with the line while moving about curves.

Having thus described my invention, I claim—

1. The herein-described trolley-pole stand, consisting of the frame 1, the ball-and-socket bearing for the pole 4, the brackets 5, the springs 7 and a means for regulating the tension of the same, the pivoted links 9, suitably attached or coupled to said springs 7, and the bars 17, connecting the links 9 to the ball 3, all arranged and combined for service substantially as and for the purpose described.

2. In a trolley-pole stand, the combination of a supporting-frame having the socket, the trolley-pole fitted in said socket and adapted to move therein, and means, substantially as described, to permit a lateral movement of the trolley-pole, as and for the purpose set forth.

3. In a trolley-pole stand, the combination of a supporting-frame having a socket in the upper part thereof, the trolley-pole having a ball fitting in said socket, the fixed brackets projecting laterally from the frame, the springs, and vertical links pivoted in the frame and secured at their lower ends to the ball by intermediate connections, substantially as and for the purpose set forth.

4. In a trolley-pole stand, the combination of a supporting-frame having a socket, a trolley-pole having a ball-bearing therein, the fixed brackets, the vertical links pivotally secured in the brackets and having their upper ends connected by springs with the ends of the brackets, and the arms or links pivotally secured to the ball and connected with the lower ends of the vertical arms, substantially as described.

5. The combination, with a stand, of a trolley-pole having a ball-and-socket connection

with the stand, and the tension-springs connected by intermediate devices with the ball, substantially as described.

6. The combination, with a stand, of a socket rigid therewith, a ball fitted snugly in the socket, the pole carried by the ball, an arm or link attached directly to the ball, the springs, the vertical links pivoted to fixed brackets on the frame and having the springs connected thereto, and the inclined links 17, connected to the vertical links and to the arm of the ball, substantially as described.

7. The combination of a stand having the fixed brackets, the socket rigid with the stand, the ball fitted snugly in the socket, the trolley-pole carried by the ball, the vertical links pivoted to the brackets and connected through intermediate devices with the ball, the springs, and adjustable devices connecting the springs with the brackets and the links in a manner to regulate the tension of the springs, substantially as described.

In testimony that I claim the foregoing I hereunto affix my signature this 3d day of December, A. D. 1890.

JAMES R. GRIFFITHS. [L. S.]

In presence of—
M. E. HARRISON,
JOHN C. THOMPSON.