

(No Model.)

F. T. WALTON.
TROLLEY.

No. 570,740.

Patented Nov. 3, 1896.

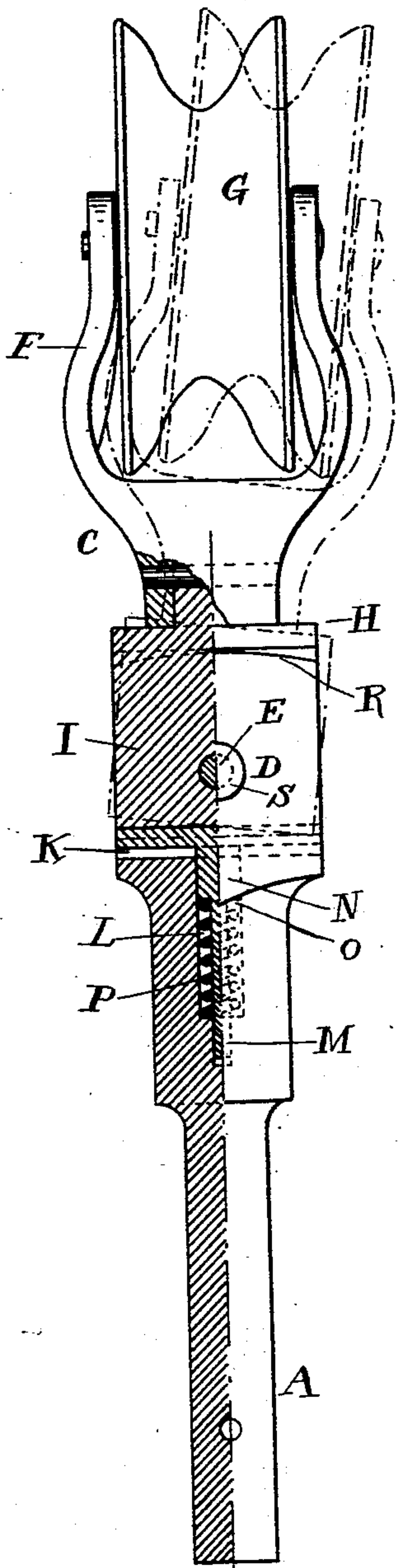


Fig. 1

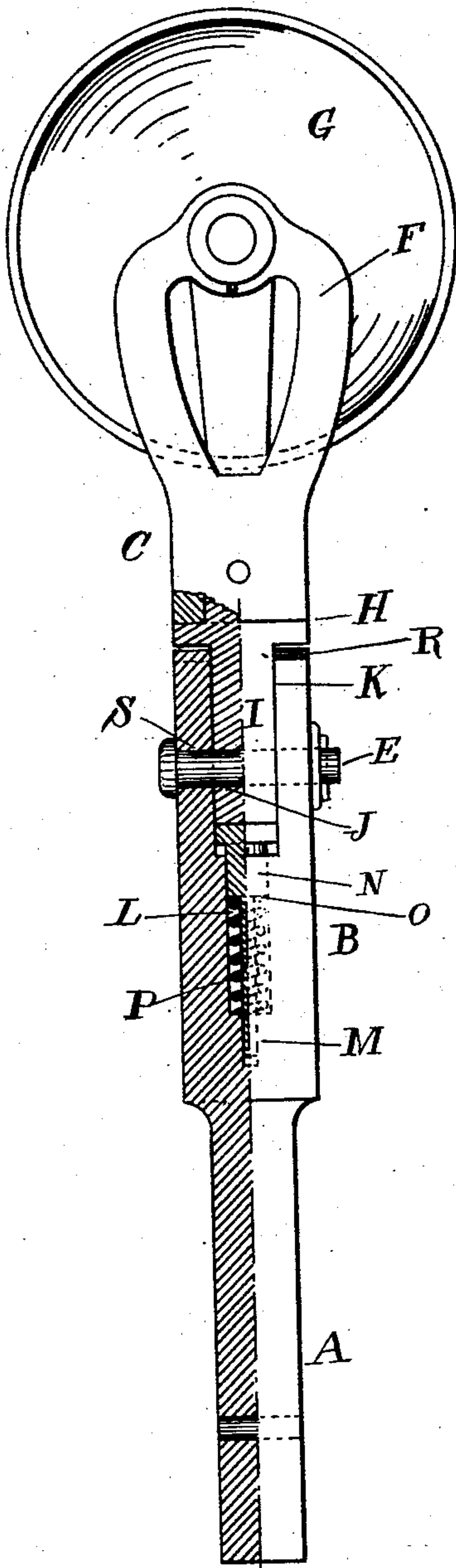


Fig. 2

Witnesses:
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UNITED STATES PATENT OFFICE.

FREEMAN T. WALTON, OF PORTLAND, MAINE.

TROLLEY.

SPECIFICATION forming part of Letters Patent No. 570,740, dated November 3, 1896.

Application filed May 23, 1896. Serial No. 592,740. (No model.)

To all whom it may concern:

Be it known that I, FREEMAN T. WALTON, a citizen of the United States of America, residing at Portland, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Trolleys; 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 appertains to make and use the same.

My invention relates to improvements in trolleys for electric-motor cars, and especially in providing a trolley which will not leave the wires. To accomplish this, I make the shank of the trolley in two sections pivoted together, so that the trolley-head will have a lateral movement. By this lateral movement the usual wearing of the wire upon the flange of the wheel and the wearing of the wire itself at curves are very much lessened.

In the drawings herewith accompanying and forming a part of this application, Figure 1 is a front elevation of the trolley, partly in section, showing my improved way of jointing the shank, the dotted lines showing the position of the trolley-wheel when it is rounding a curve or taking a switch. Fig. 2 is a side elevation, also partly in section, of the same.

Same letters refer to like parts.

In said drawings, A represents the "shank," so called, of the trolley, which is adapted to be fitted to the end of the trolley-pole in the usual manner. Said shank is divided into two sections B and C, pivotally joined together, as at D, by means of a pivot-bolt E. Attached to the upper part of the shank is the usual harp or fork F, in which the trolley-wheel G is mounted. Rigidly attached to the fork or harp F, or made integral therewith, is a shoulder H, having a projection or tongue I thereon. This tongue is provided with a socket J for the reception of the pivot-bolt E. The lower half of the shank of the trolley is grooved, as at K. This also is provided with a suitable socket S, which is adapted to register with the socket in the tongue when said tongue is placed in position in the groove. In the bottom of the groove and in the center thereof is bored a socket L, the lower portion of which is smaller in diameter

than the upper portion, as shown at M in dotted lines in the figures. Adapted to be seated in said socket is a T-post N. Said T-post is provided with a shoulder O to prevent it from sinking too far into the socket L in the lower part of the trolley-shank. Surrounding said T-post and adapted to fit against the shoulder O is a spiral spring P, the lower extremity of said spring being adapted to rest upon the lessened diameter of the socket. Said spring tends to keep the T-post upright and away from the bottom of the groove. When the tongue in the lower part of the trolley-head is inserted in the groove and the pivot-bolt inserted in the sockets in both the groove and tongue, said sockets being adapted to register with each other, the upper part of the trolley will be capable of a lateral movement on said pivot-bolt, the T-post serving as a rocker-plate upon which the trolley-head may move, and as the upper ends of the sides of the groove are crowned, as at R, the upper part of the trolley-head travels practically in a semicircle. When the car goes around a curve or takes a switch in the ordinary rigid trolley-head, only a swinging movement of the pole takes place. This causes the trolley-wheel to bear harder on one flange of the wheel, causing a wear thereon, from the fact that the wheel does not travel parallel with the trolley-wire. In my improved swiveling head the lateral movement which is given the wheel, in addition to the swinging movement of the pole, enables it to travel parallel with the wire, so that the side pressure will not be brought to bear upon either flange of the wheel, saving thereby wear on the wheel, the forming of grooves on the side which tends to throw the wheel off from the wire, and also saving wear upon the wire itself.

The advantages of my improved trolley are that it is cheap to construct, strong, and durable.

Having thus described my invention and its use, I claim—

1. In a trolley in combination, a suitable shank divided in two sections the upper part thereof being provided with a tongue, the lower part provided with a groove, a socket in the bottom of said groove, a spring-actuated T-post seated in said socket, and means

for pivotally fastening said tongue in said groove, substantially as and for the purposes set forth.

2. In a trolley in combination, a head, a
5 divided shank, a tongue rigidly attached to the upper portion thereof, a groove in the lower section thereof the edges of which are crowned, a socket in the bottom of said groove, a spring-actuated T-post seated in said socket,
10 and means for pivotally fastening said tongue

in said groove, substantially as and for the purposes set forth.

In testimony whereof I affix my signature, in presence of two witnesses, this 21st day of May, 1896.

FREEMAN T. WALTON.

Witnesses:

ELGIN C. VERRILL,
NATHAN CLIFFORD.