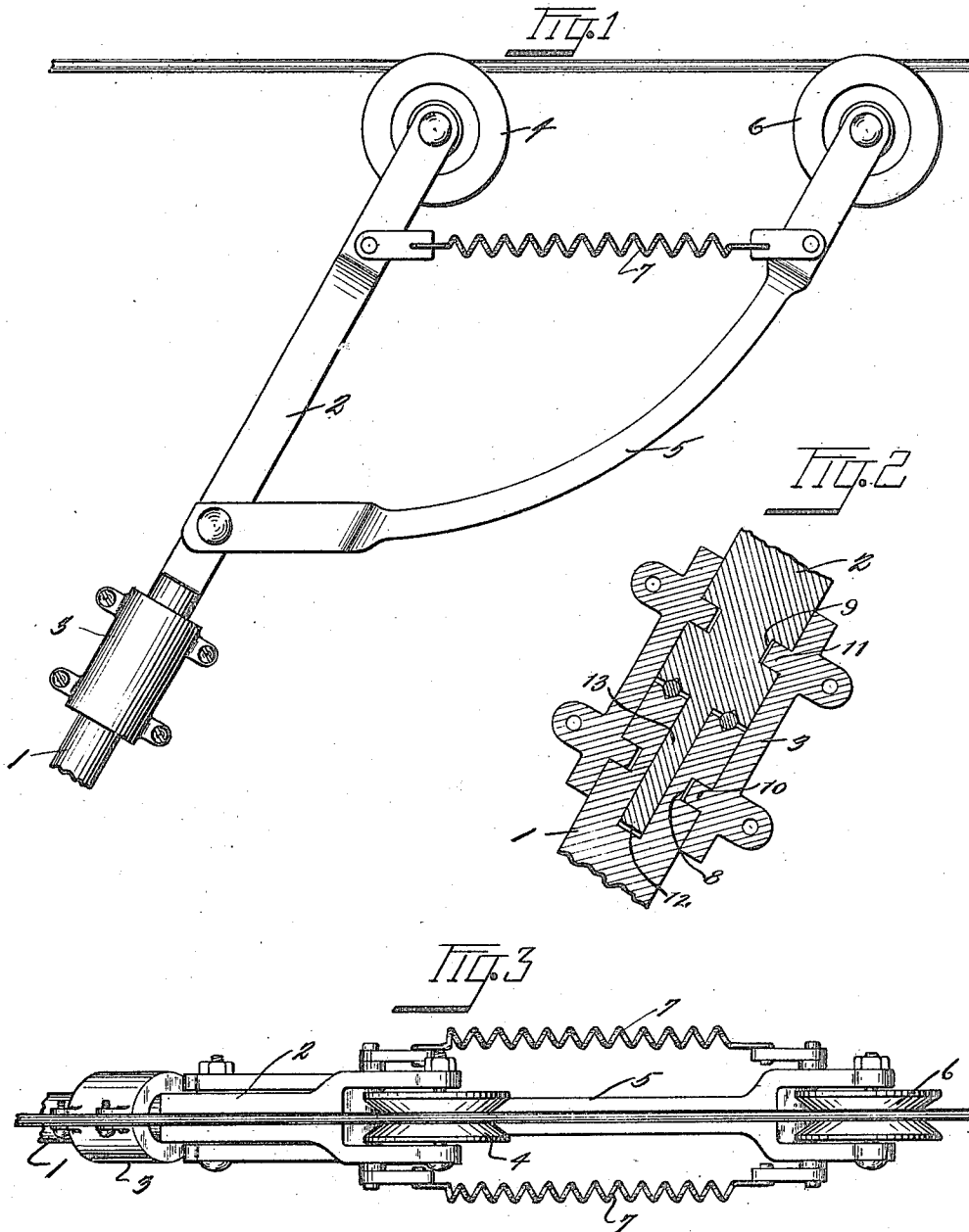


E. ROSENWINKEL & L. PAPENBROK.
ELECTRIC RAILWAY TROLLEY.
APPLICATION FILED MAR. 22, 1915.

1,234,492.

Patented July 24, 1917.



WITNESSES

Otto Melchior
Paul A. Vieser.

INVENTORS

E. Rosenwinkel
and L. Papenbrok
H. J. Dunder

BY

ATTY.

UNITED STATES PATENT OFFICE.

EDWIN ROSENWINKEL, OF LOMBARD, AND LOUIS PAPENBROK, OF ADDISON, ILLINOIS.

ELECTRIC-RAILWAY TROLLEY.

1,234,492.

Specification of Letters Patent.

Patented July 24, 1917.

Application filed March 22, 1915. Serial No. 16,221.

To all whom it may concern:

Be it known that we, EDWIN ROSENWINKEL and LOUIS PAPENBROK, citizens of the United States, residing at Lombard and Addison, respectively, in the county of DuPage, in the State of Illinois, have invented certain new and useful Improvements in Electric-Railway Trolleys, of which the following is a specification.

This invention relates to improvements in electric-railway trolleys and its object is to produce a trolley which can be used for backing-up purposes; another object is to produce a trolley that will take curves in the feed wire without jumping the wire and that will follow the wire under any and all ordinary conditions encountered in ordinary travel.

With the foregoing and other objects in view the invention consists in the combination and arrangement of parts to be hereinafter fully described in the following specification, pointed out in the claim and illustrated in the accompanying drawings which form a part of said specification and in which—

Figure 1 is a side view of the trolley in use.

Fig. 2 is a longitudinal section through a portion of the trolley pole showing the joint therein.

Fig. 3 is a plan view.

Like reference characters indicate corresponding parts throughout the several views.

The trolley comprises the pole formed of lower and upper sections 1 and 2 respectively which are connected by the collar 3 in such a manner that independent rotary movement of the upper pole section is possible, the adjacent ends of the pole sections being connected by ball bearings and otherwise secured together as shown. The upper end of the section 2 of the pole is bifurcated in the usual manner to receive and retain the trolley wheel 4 and said pole section further pivotally carries a curved arm 5 that carries the follower wheel 6, said arm 5 and pole section 2 being further connected at their upper ends by the spring 7 whereby the lower wheel is retained in engagement with the feed wire. The swivel joint by means of which the pole sections are connected enables

the wheels 4 and 6 to readily follow any curves in the wire and the flexible connection between the pole section 2 and arm 5 serves to steady both wheels thus insuring their continual contact with the wire.

As stated, the two sections of the pole 1 and 2 are joined together by means of a collar 3 which is formed in sections. This joining together is accomplished by providing the sections 1 and 2 adjacent their abutting ends with annular grooves 8 and 9 respectively and providing the sections of the collar 3 with internal flanges or ribs 10 and 11 respectively. These ribs or flanges 10 and 11 enter the grooves 8 and 9 respectively and when the sections of said collar are secured together, the sections of the pole are correspondingly secured together, as will appear obvious from the showing of Fig. 2. In order to positively retain the sections 1 and 2 of the pole in alinement, with one another, the section 1 is provided with a central longitudinal socket or the like 12, while the section 2 is provided with a stem or the like 13, entering said socket, as clearly shown in Fig. 2.

What is claimed is:—

In an electric railway trolley, a pole comprising upper and lower solid opposed shaft section forming members having annular grooves said solid shaft-section forming members, themselves being housed or encompassed in an outer casing, itself, having annular ribs received within said annular grooves in said opposed shaft-section forming members, said shaft-section forming members also being provided in their opposed faces with annular grooves containing bearing balls, and provided with a central socket and a central stem respectively the latter being received within said socket, as set forth.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two subscribing witnesses.

EDWIN ROSENWINKEL.
LOUIS PAPENBROK.

Witnesses:

HARRY E. PATRICK,
HENRY OESTMANN.