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CURVE PULL-OFF HANGER.

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1,336,504. Patented Apr. 13, 1920.

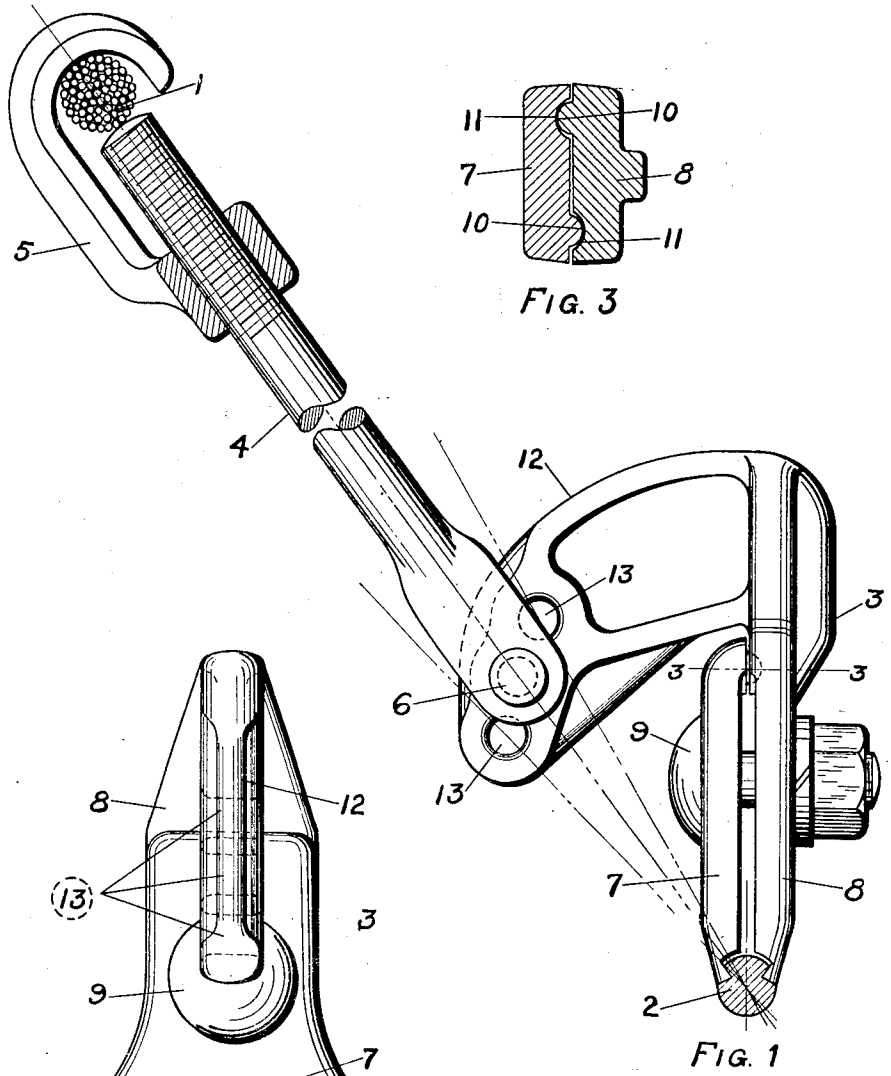

FIG. 3

FIG. 1

FIG. 2

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CURVE PULL-OFF HANGER.

1,336,504. Specification of Letters Patent. Patented Apr. 13, 1920.

Application filed October 18, 1917. Serial No. 197,235.

To all whom it may concern:

Be it known that I, JOHN ROWLAND BROWN, a citizen of the United States, residing at Mansfield, in the county of Richland and State of Ohio, have invented certain new and useful Improvements in Curve Pull-Off Hangers, of which the following is a specification.

This invention relates to improvements in hangers for trolley wires and has more particular reference to the class of hangers known as curve pull-off hangers.

The primary object of my invention is to provide an improved device of this character for suspending the trolley wire from the messenger cable around curves at turnouts, etc., and which will be durable and simple in construction and effective and efficient in operation.

Another object of this invention is to provide an improved device of this character for suspending the trolley wires of electric railways around curves without subjecting the wires to twisting strains.

A further object of the invention is to produce a pull-off hanger for suspending trolley wires around curves, provided with a plurality of openings for adjustably securing the hanger to an inclined supporting member at such a point as to cause the strains of the trolley wire to maintain the hanger in a normal vertical position.

To the attainment of these ends and the accomplishment of other new and useful objects, as will appear, the invention consists in the features of novelty in the construction, combination and arrangement of the several parts hereinafter more fully described and claimed and shown in the accompanying drawings illustrating one embodiment of the invention, and in which:

Figure 1 is an end elevation of a pull-off hanger embodying the principles of my invention shown as usually connected to the messenger cable and suspending a trolley wire, the cable and the trolley wire being shown in section.

Fig. 2 is a front elevation of the hanger shown in Fig. 1.

Fig. 3 is a sectional view taken on the line 3—3 Fig. 1.

Referring to the drawings in which similar reference characters indicate like parts on the different views, reference numeral (1) designates the messenger cable of a catenary system around a curve, (2) the trolley wire which is suspended by means of my improved pull-off hanger generally indicated at (3). The trolley wire (2) is held in proper relation upon the curved sections of the track way by means of suitable supporting members (4) which are connected to the messenger cable by clips (5), or any other well known means and to the hanger by the bolt (6), as shown, or otherwise.

The pull-off hanger comprises a pair of jaws (7) and (8), each provided with an aperture adapted to receive the bolt (9), by means of which they are adjusted into clamping engagement with the wire (2). The jaws are preferably provided with grooved lower ends to engage the trolley wire as shown in Fig. 1, and are retained in proper relation with respect to each other by means of a lug (10), on each jaw projecting into a pocket (11) formed in the adjacent surface of the other jaw as shown in Fig. 3.

It is common practice in a catenary suspension system to employ a large number of supporting members for suspending the trolley wire from the messenger cable in so-called pull-off positions around curves, these supporting members, when installed, assume inclined positions at various angles conforming to the direction of the resultant force on the trolley wire due to the horizontal and vertical stresses.

The principal feature of my invention is to provide a hanger adapted to be connected to the supporting members for suspending the trolley wire around curves in the manner above stated without subjecting the wire to twisting strains and which, when arranged on the wire will assume an upright or vertical position. To accomplish this, I provide the hanger with a plurality of perforations whereby the supporting member may be adjustably connected thereto at various points. These perforations are arranged and disposed in such a manner as to provide for connecting the parts together at a point intermediate the trolley wire and the messenger cable and disposed in the plane extending through the axis of both of the latter, see Fig. 1. Accordingly, one of the jaws, such for instance, as the jaw (8) is provided with a projection (12) which terminates at a point above the lower end of

the jaw, to which the strap is connected by means of one of the openings (13), a number of which are provided and arranged in such a manner so as to provide a suitable connection for supporting members disposed at various inclined positions around the curve. Thus connected it will be obvious that the resultant line of force will pass through the center of the messenger cable and the trolley wire whereby the latter will not be subjected to twisting strains. This arrangement provides also for maintaining the jaws (7) and (8) in a vertical position so as not to interfere with the traveling collector of cars when passing the suspension points.

Having fully described my invention and shown one form embodying the same, I do not wish to be limited to the details of the construction shown, since these can be obviously changed without departing from the spirit and scope of the invention, what I claim, and desire to secure by Letters Patent is:—

1. A pull-off hanger for electric lines comprising clamping members provided with complementary grooves in their inner sides to receive a trolley wire, and means for adjustably securing the hanger to a support consisting of an arm formed integrally with one of the clamping members and provided with a plurality of openings arranged one above the other and at one side of the grooves.

2. A pull-off hanger for electric lines comprising a pair of clamping members provided with complementary grooves in their inner sides and disposed adjacent their lower end to receive and hold a trolley wire, an arm projecting laterally from the upper end of one of the members and formed integrally therewith, said arm provided with a plurality of openings arranged one above the other and disposed at one side and above the grooves for adjustably securing the hanger to a support by means of one of said openings, a clamping device passing through both of the members intermediate the arm and grooves for adjusting the members, and means for maintaining the members in position relatively to each other.

3. A pull-off hanger for electric lines comprising two clamping members having their lower ends grooved for engagement with a trolley wire, one of said members provided with an arm projecting laterally from the upper end thereof having a plurality of openings formed therein for effecting a pivotal connection with an inclined supporting member by means of one of said openings at a point on the hanger disposed substantially in the plane extending longitudinally through the axis of the supporting member and the trolley wire, and means consisting of a lug on one member projecting into a pocket formed in the other member for maintaining the members in alinement with each other.

In testimony whereof I affix my signature.

JOHN ROWLAND BROWN.