N. W. STORER.

TROLLEY WIRE HANGER.

APPLICATION FILED DEC. 2, 1909.

1,100,792.

Patented June 23, 1914.

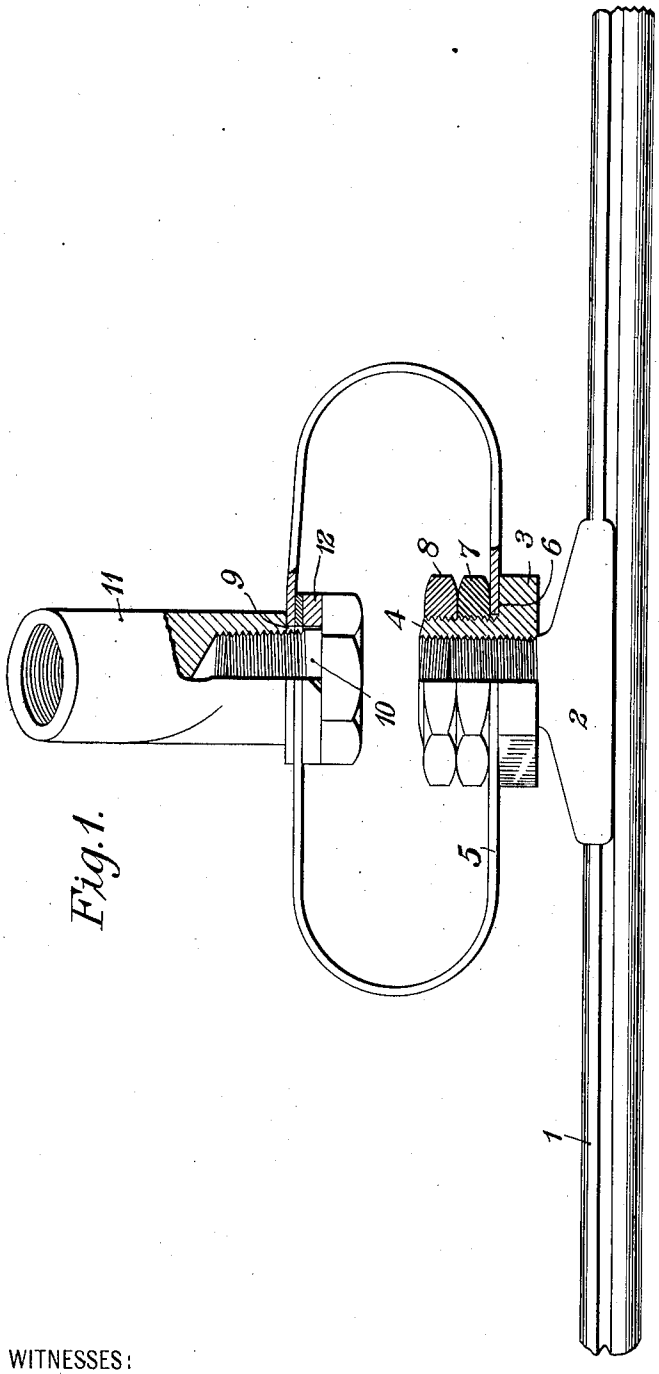


Fig. 1.

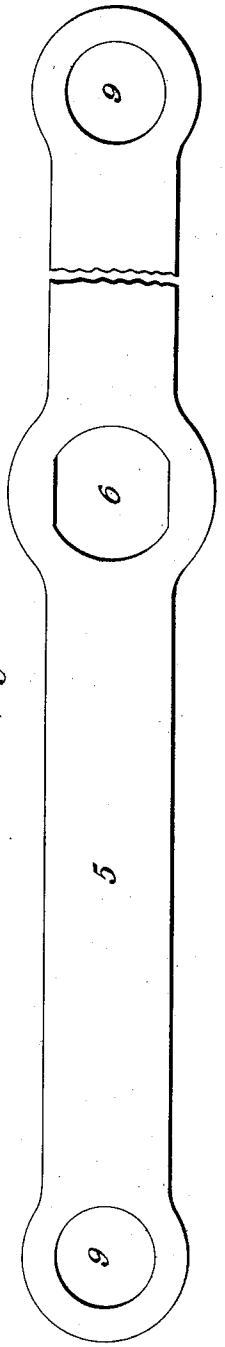


Fig. 2.

WITNESSES:

C. L. Belcher

R. F. Barbour

INVENTOR

Norman W. Storer

BY

Wesley G. Carr

ATTORNEY

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

NORMAN W. STORER, OF PITTSBURGH, PENNSYLVANIA, ASSIGNOR TO WESTINGHOUSE ELECTRIC AND MANUFACTURING COMPANY, A CORPORATION OF PENNSYLVANIA.

TROLLEY-WIRE HANGER.

1,100,792. Specification of Letters Patent. Patented June 23, 1914.

Application filed December 2, 1909. Serial No. 531,052.

To all whom it may concern:

Be it known that I, NORMAN W. STORER, a citizen of the United States, and a resident of Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Trolley-Wire Hangers, of which the following is a specification.

My invention relates to devices for supporting trolley conductors and is primarily intended for use in catenary systems in which messenger wires or cables are employed for supporting trolley conductors, hangers being interposed at suitable intervals between the messenger wire or cable, which hangs in catenary curves, and the trolley conductor in order to maintain the latter in substantially parallel relation to the surface of the road in connection with which the system is employed.

It becomes extremely desirable and, in some cases, necessary, in the operation of railway vehicles at high speeds, to provide for a considerable degree of flexibility in trolley wire hangers, and it is the object of my present invention to provide an inexpensive and serviceable hanger which will yield to permit the trolley conductor to move vertically and longitudinally but will prevent lateral or twisting movement of such conductor.

In the accompanying drawing, Figure 1 is a view, partially in side elevation and partially in section, of a section of trolley conductor and a hanger for supporting the same. Fig. 2 is a detail view of the spring which is embodied in the structure shown in Fig. 1, before the same is bent into operative form.

The trolley conductor 1 is shown as of the ordinary grooved type and is gripped by means of members 2 having suitably formed jaws, the members being held together, in clamping relation, by means of a nut 3. Mounted upon a cylindrical projection 4, with which the nut is provided, is a spring strip or plate 5, an opening 6 being provided to fit over this projection. The spring strip 5 is clamped against the head of the nut 3 by means of a clamping nut 7 and a lock nut 8, and the free ends of the spring, which are severally provided with holes 9, are bent toward each other to form an approximately elliptical structure. A bolt 10 is then inserted through the two holes 9, which are superposed over each other, and is screwed into the lower end of a hanger rod 11, the latter being either of tubular form or provided with a screw-threaded recess in its lower end to receive the bolt. As shown in the drawing, a washer 12 is interposed between the head of the bolt 10 and the spring, but this feature may be omitted or otherwise modified, as desired. It will be readily understood from the drawing and the foregoing description that the approximately elliptical spring thus formed and interposed between the trolley wire clamp and the hanger rod will serve to permit such vertical and longitudinal yielding of the trolley conductor, under the pressure exerted by the trolley, as may be desired, and that the resiliency of the spring will be such as to insure the return of the conductor to its normal position after the upward pressure exerted by the trolley has been removed. It will also be understood that the structure prevents material lateral or twisting movement of the conductor 1.

The spring 5 may, of course, be reversed in position with reference to the trolley wire clamp and the hanger rod, if desired.

I claim as my invention:

1. A trolley wire hanger comprising clamping jaws, a hanger rod and a substantially elliptical strap spring of approximately uniform resiliency throughout its length interposed between the said parts with its major axis substantially parallel to the trolley wire.

2. A trolley wire hanger comprising a clamp, a hanger rod and a curved spring strip the middle point and the overlapped ends of which are respectively fastened to the trolley wire clamp and to the lower end of the hanger rod.

3. A trolley wire hanger comprising a clamp, a hanger rod and a spring strip the middle point of which is rigidly fastened to one of said parts and the overlapped ends of which are rigidly fastened to the other of said parts.

4. A trolley wire hanger embodying a hanger rod and a strap spring of loop form

having opposite portions clamped, respectively, to the trolley wire clamp and to the lower end of the hanger rod.

5. A trolley wire hanger comprising a hanger rod, a clamp and an interposed strap metal spring of elliptical form disposed with its major axis substantially parallel to the trolley wire.

In testimony whereof, I have hereunto subscribed my name this 26th day of November, 1909.

NORMAN W. STORER.

Witnesses:
WILLIAM SCHAAKE,
B. B. HINES.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."