(No Model.)

F. E. HEAD.

TROLLEY WIRE SUPPORT.

No. 493,212. Patented Mar. 7, 1893.

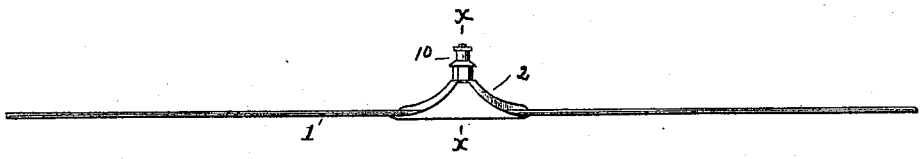

Fig. 1.

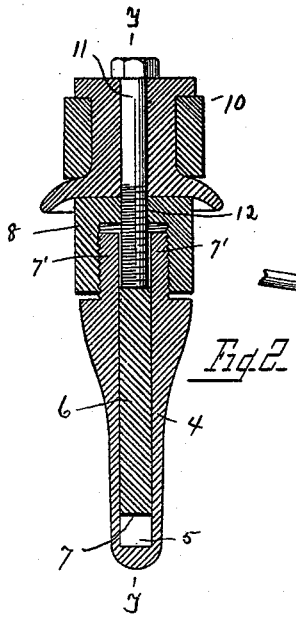

Fig. 2.

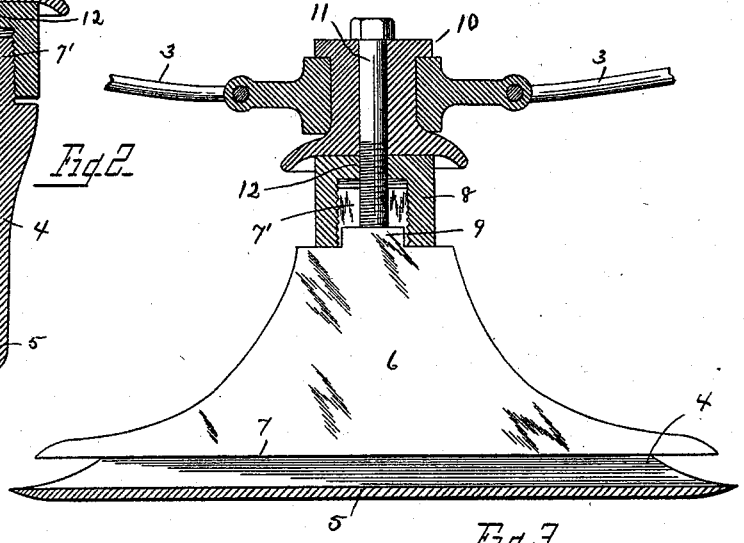

Fig. 3.

WITNESSES.

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UNITED STATES PATENT OFFICE.

FRANK E. HEAD, OF TOLEDO, OHIO, ASSIGNOR OF ONE-HALF TO ELMER E. KUNEY, OF SAME PLACE.

TROLLEY-WIRE SUPPORT.

SPECIFICATION forming part of Letters Patent No. 493,212, dated March 7, 1893.

Application filed June 13, 1892. Serial No. 436,469. (No model.)

To all whom it may concern:

Be it known that I, FRANK E. HEAD, of Toledo, county of Lucas, and State of Ohio, have invented certain new and useful Improvements in Trolley-Ears; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form part of this specification.

My invention relates to trolley ears, of that class which are secured to the trolley wire by which to suspend the same, in the overhead system of electrically propelling cars.

The invention consists in the parts and combination of parts, as shown in the drawings, described in the specification, and pointed out in the claims.

In the drawings: Figure 1 is a side elevation of a section of the trolley wire with an ear constructed in accordance with my invention, suspending the same. Fig. 2 is a sectional elevation of the ear and insulation for the same, the trolley wire being omitted, this view being taken on lines *x*—*x* Fig. 1. Fig. 3 is a sectional elevation of the same on lines *y*—*y* Fig. 2.

Heretofore in suspending the trolley wire, the ear has been either soldered or clamped on the wire, leaving the lower portion of the wire to be acted upon by the trolley wheel. These methods are impracticable in as much as the parts are easily disarranged, and soon become loosened and disconnected, from the wire, causing an uneven travel of the trolley wheel, and causing it to leave the wire, also necessitating trouble and expense in refastening the disconnected parts.

The object of my invention is to overcome these difficulties, by providing a clamp for the trolley wire that shall not only secure the same without a possibility of its becoming loosened or disengaged, but to so construct the ear that the lower portion of the same shall act as a conductor.

In the drawings, 1 designates the trolley wire, 2 the trolley ear, and 3 the span wire.

I lay no claim to the trolley wire or span wires and fastenings therefor, and therefore have not described them in detail.

Ear 2 comprises the U shaped hanger 4 in the lower portion 5 of which fits the trolley wire 1, there being a clamping piece 6 fitting in the length of the hanger, the lower edge 7 of which bears upon the wire and serves to clamp the same. On each section of the hanger is a portion of lug 7′, screw threaded on their exterior surfaces, to allow of insertion of nut 8.

9 designates a lug or projection on the upper edge of the clamping piece 6, which is of a size to be embraced by nut 8 when the same is screwed to place, positively holding the clamping piece from lateral motion.

10 designates the combined insulator and clamp for the span wires 3 which is secured to the trolley ear by means of bolt 11, screwing into the annular internally screw threaded portion 12 of nut 8, the lower end of the bolt resting against lug 9 of clamping piece 6.

To apply the trolley ear hanger 4 is placed to the trolley wire, bringing the wire in the lower portion 5 of the same, clamping piece 6 is then inserted, so as to bring the lug 9 between the screw threaded lug 7′, nut 8 is now screwed to place, the lower end of the nut resting upon and bearing against the upper edge of the clamping piece 6, each side of lug 9 causing the same to clamp the wire and hold the ear firmly to the same. Insulator 10 is now attached to the ear by screwing the bolt 11 into the nut 8, and said bolt bearing upon the lug 9 serves to give additional pressure to the clamping piece. The span wires are now secured to the insulator and the trolley wire is ready for use.

It will be seen that I have provided an ear that is cheap of construction, and easy of manipulation to either construct or put up a trolley wire, or to remove the same in case of repairs &c.

What I claim is—

1. The combination with a U shaped hanger, of a clamping piece arranged therein, and a collar or nut screwed upon the hanger and adapted to hold the clamping piece upon the wire.

2. The combination with a U shaped hanger,

of a clamping piece arranged therein, an adjusting collar or nut, an insulator block, and a bolt connecting the said block and adjusting collar or nut.

3. The combination with a U shaped hanger, of a clamping piece arranged therein, and provided with a lug, an adjusting collar adapted to hold the piece down into the hanger, said collar being screwed upon the upper ends of said hanger, an insulator block located upon the collar, and a bolt connecting said parts, said bolts passing through the collar and bearing upon the lug of the clamping piece.

In testimony that I claim the foregoing as my own I hereby affix my signature in presence of two witnesses.

FRANK E. HEAD.

Witnesses:
WILLIAM WEBSTER,
CARROLL J. WEBSTER.