(No Model.)

E. H. KITFIELD.

TROLLEY WIRE HANGER OR SUPPORT.

No. 441,800. Patented Dec. 2, 1890.

FIG. 1.

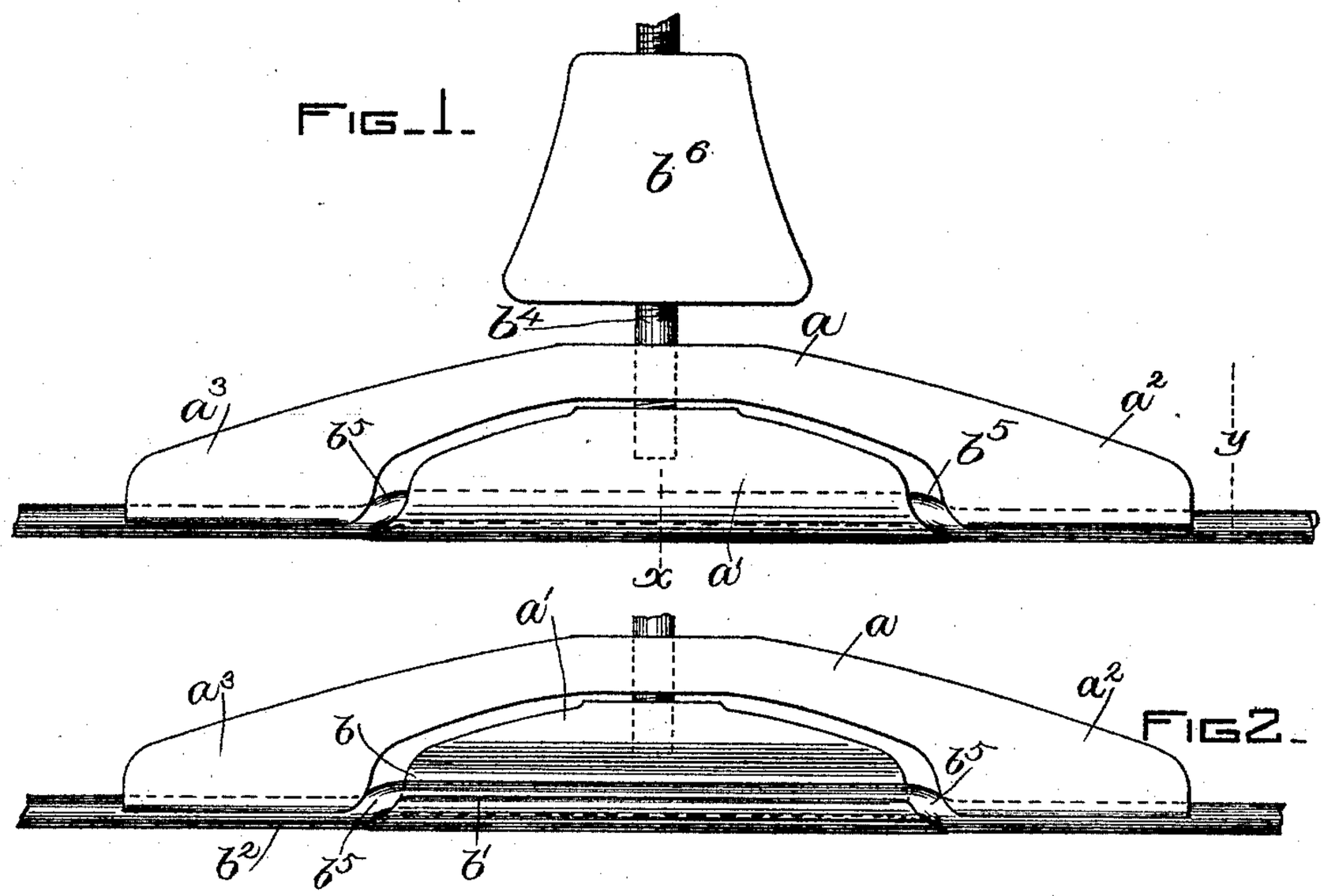
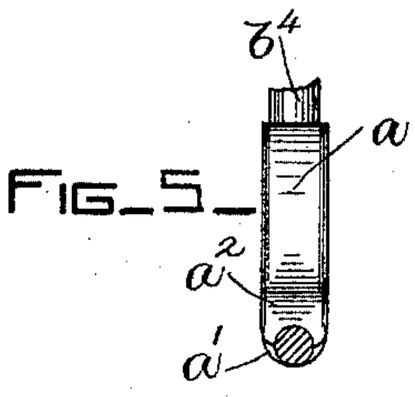


FIG. 2.

FIG. 5.



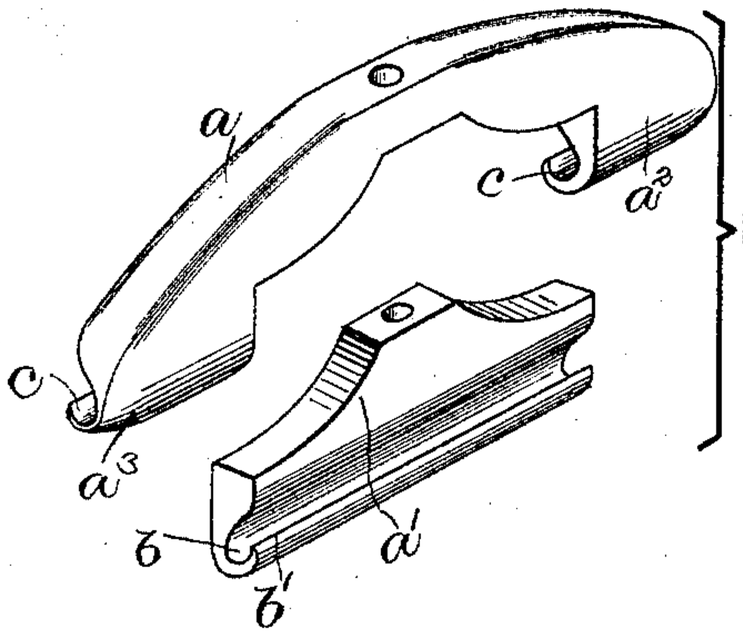
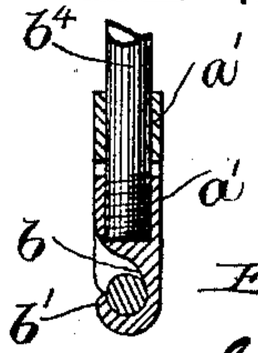


FIG. 3.

FIG. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

EDWARD H. KITFIELD, OF LYNN, ASSIGNOR OF TWO-THIRDS TO HERBERT C. WIRT AND JAMES L. KIMBALL, BOTH OF BOSTON, MASSACHUSETTS.

TROLLEY-WIRE HANGER OR SUPPORT.

SPECIFICATION forming part of Letters Patent No. 441,800, dated December 2, 1890.

Application filed March 12, 1890. Serial No. 343,629. (No model.)

To all whom it may concern:

Be it known that I, EDWARD H. KITFIELD, of Lynn, county of Essex, State of Massachusetts, have invented an Improvement in Trolley-Wire Hangers or Supports, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention relates to a support or hanger for trolley-wires, and has for its object to provide a simple, strong, efficient, and cheap support or hanger by which the trolley-wire may be held suspended without the use of solder.

In accordance with my invention the hanger or support is composed of two parts or members, one member, preferably the upper member, being provided with extensions or arms, and the other member being adapted to be fitted between the said arms and provided with a longitudinal groove or recess to receive the trolley-wire, the said central member being secured to the upper member, as will be described, so as to hold the trolley-wire against the extended arms of the upper member.

The particular features of my invention will be pointed out in the claims at the end of this specification.

Figure 1 is a side elevation of a trolley-wire and one form of hanger or support embodying my invention. Fig. 2 is a rear side elevation of the hanger or support shown in Fig. 1. Fig. 3 is a modification to be referred to; Fig. 4, a transverse section of the trolley-wire support shown in Fig. 1 on line x, the bolt or rod being shown in elevation; and Fig. 5, a section on the line $y\ y$, looking toward the left, Fig. 1.

My improved trolley-wire support or hanger consists of two parts or members $a\ a'$, of metal or other suitable material capable of withstanding strain. The part or member a is made substantially arch-shaped, and, as shown in Fig. 1, is thickened at its opposite ends to form arms $a^2\ a^3$, provided, as shown in said figure, with a cylindrical groove on their under side. The part or member a' is made so as to substantially fit in the space between the arms $a^2\ a^3$, and is provided on one side with a longitudinal groove or channel b, the said groove or channel being formed in the part a' above its bottom so as to leave a lip b' partially surrounding the trolley-wire b^2 when the latter is laid in the said groove. The parts or members $a\ a'$ are secured together by a threaded rod or bolt b^4, extended through the central portion of the member a into the member a'. The member a' may be secured in position by screwing or turning the threaded rod b^4 so as to draw the member a' up toward the member a. As the member a' is thus drawn up toward the member a the trolley-wire b^2 is bent or crimped upward between the inner ends of the arms $a^2\ a^3$ and the outer ends of the member a', as at b^5, so that the lower or bottom surface of the member a' will lie substantially flush with the main portion of the trolley-wire under the hanger or support, thereby reducing to a minimum sparking between the trolley-wheel and the trolley-wire.

The threaded rod or post b^4 is connected to an insulator b^6, herein shown as bell-shaped, but which may be of any other desired construction or shape, the said insulator in practice being secured or suspended from the usual span-wire. (Not herein shown.)

I prefer to construct the hanger or support as shown in Fig. 1; but instead thereof it may be constructed as shown in Fig. 3, wherein the arms $a^2\ a^3$ are bent to form a groove or channel c to receive the trolley-wire, and the part or member a' is made substantially as above described, and is secured to the part or member a so that its groove or channel b will be on the side of the hanger opposite to the groove or channel c, whereby when the member a' is secured to the member a the trolley-wire is firmly clamped and cannot be accidentally detached.

When the hanger or support is made substantially as shown in Fig. 3, I prefer to secure the member a' to the member a, as described; but it is evident that the member a' may be secured to the member a so that the channel or groove b will be on the same side of the hanger as the groove or channel c, and will preferably form a continuation of the groove or channel; and while this construc-

tion and arrangement may possess advantages over the ordinary hanger or support now in use I do not regard it as efficient as when the member a' is secured to the member a so as to have the channel or groove b on the opposite side to the channel or groove c.

By means of my improved hanger or support the trolley-wire is firmly supported or secured in operative position without the use of solder, which in practice has been found to be a very expensive and inefficient way of suspending the trolley-wire.

I claim—

1. The combination, with an insulator, of a hanger or support for wires, consisting of one member provided with arms to engage the wire on its upper side, and a second member provided with a longitudinal groove or channel to receive the wire, and means to secure said second member to the insulator, substantially as described.

2. The herein-described hanger or support for wires, it consisting of one member a, provided with arms a^2 a^3, having a groove or channel on their under side, and a second member a', provided with a groove or channel made on one side to form a lip b', and means to secure the member a' to the member a, whereby the wire is bent or crimped between the member a' and the arms a^2 a^3, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWARD H. KITFIELD.

Witnesses:

JAS. H. CHURCHILL,

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