

(No Model.)

C. K. KING.
TROLLEY WIRE HANGER AND SPLICER.

No. 587,740.

Patented Aug. 10, 1897.

Fig. 1.

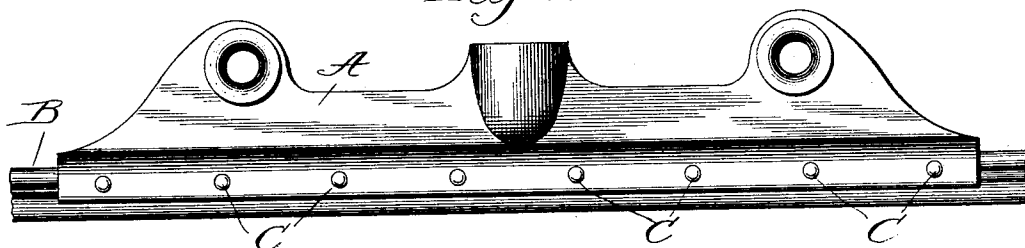


Fig. 2.

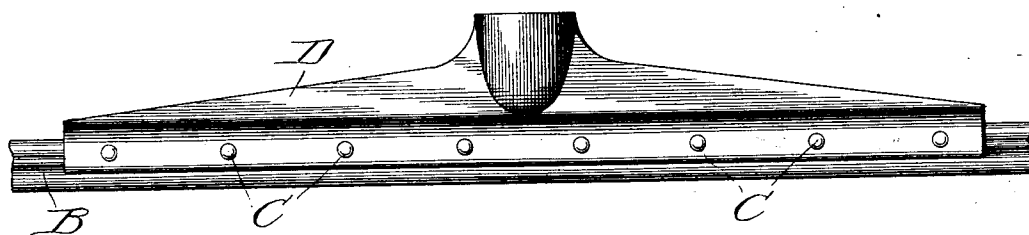


Fig. 3.

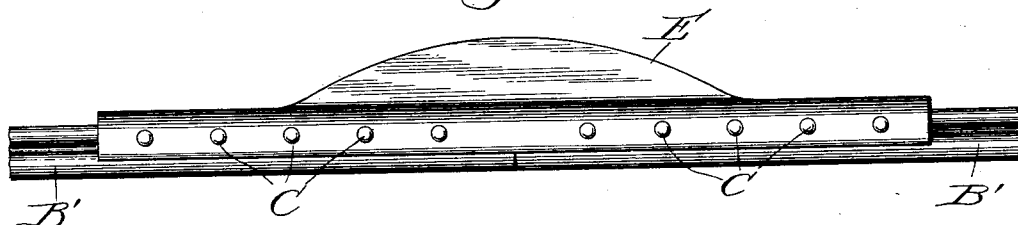


Fig. 4.

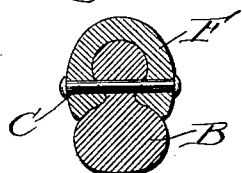


Fig. 5.

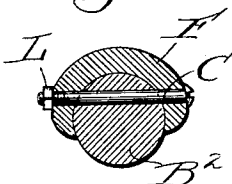


Fig. 6.

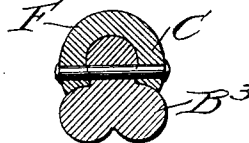
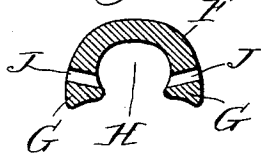


Fig. 7.



Witnesses

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UNITED STATES PATENT OFFICE.

CHARLES K. KING, OF MANSFIELD, OHIO.

TROLLEY-WIRE HANGER AND SPLICER.

SPECIFICATION forming part of Letters Patent No. 587,740, dated August 10, 1897.

Application filed April 13, 1897. Serial No. 632,032. (No model.)

To all whom it may concern:

Be it known that I, CHARLES K. KING, a citizen of the United States, residing at Mansfield, in the county of Richland and State of Ohio, have invented a new and useful Improvement in Trolley - Wire Hangers and Splicers, of which the following is a specification.

This invention relates to trolley-wire hangers and splicers.

The object of the invention is to provide a hanger or splicer which will more efficiently support a conductor or more efficiently couple up the ends thereof than any device heretofore employed for such purpose.

The invention consists substantially in the construction, combination, location, and relative arrangement, all as will be more fully hereinafter set forth, as shown in the accompanying drawings and finally specifically pointed out in the appended claims.

Referring to the accompanying drawings and the various views and reference-signs appearing thereon, Figure 1 is a view in side elevation of a form of hanger embodying my invention applied to a trolley-wire. Fig. 2 is a side elevation showing a slightly-modified form of hanger applied to a trolley-wire and embodying my invention. Fig. 3 is a side elevation of a splicer or ear applied to trolley-wire and embodying my invention. Fig. 4 is a transverse sectional view of a hanger or splicer embodying my invention as applied to what is known in the art as a "figure-eight" trolley-wire. Fig. 5 is a similar view showing the hanger or splicer embodying my invention as applied to the round wire or conductor. Fig. 6 is a similar view showing the hanger or splicer embodying my invention as applied to what is known in the art as a "clover-leaf" conductor. Fig. 7 is a similar view showing the hanger or support before the flanges thereof are clamped around the conductor.

The same part is designated by the same reference-sign wherever it occurs throughout the several views.

In carrying out my invention I provide the hanger or splicer with transverse rivet-holes at such a point in the side flanges thereof

that such holes will intersect a portion of the trolley-wire or conductor when the hanger or splicer is in position thereon, and I then provide similar and registering transverse perforations or holes through the conductor or wire, and finally complete the operation by firmly riveting, bolting, or otherwise securing the hanger or splicer to the conductor by any suitable or convenient form of rivets, bolts, or the like, arranged to pass through the conductor and into the flanges of the hanger or splicer.

In Fig. 1 I have shown my invention as applied to one form of hanger, reference-sign A designating the hanger, B the conductor or trolley-wire, and C the securing devices, passing through the conductor and into the hanger.

In Fig. 2 I have shown a slightly-different type or style of hanger D, but the principle of my invention, as illustrated in this figure of the drawings, remains the same—that is, the hanger D is riveted or secured to the wire or conductor B by means of the rivets, bolts, or other securing devices C, passing through the conductor and into the hanger.

In Fig. 3 I have shown my invention as applied to a splicer for joining the abutting ends of two sections of conductors, reference-signs B' B' representing the ends of the wire or conductor, E the splicer, and C the rivets, bolts, or the like, passed transversely through the sides of the splicer and also through the conductor.

It is evident to persons skilled in the art that my invention may be applied with equal facility and efficiency to conductors or trolley-wires of any desirable shape in cross-section. For instance, in Figs. 1, 2, 3, and 4 I have shown my invention as applied to figure-eight conductors. In this case the securing devices C pass through the conductor adjacent to the thin web or neck connecting the two round portions of the conductor, as clearly shown in the transverse sectional view of Fig. 4, and since this view may indicate any form or style of hanger or splicer I have employed the reference-sign F to designate the hanger or splicer in this figure of the drawing.

In Fig. 5 I have shown the hanger or splicer

applied to a round conductor B², the securing rivets, bolts, or the like C passing transversely through the flanges of the hanger or splicer F and also through the upper half of the conductor.

In Fig. 6 I have shown my invention as applied to a conductor B³, which has a triangular shape in cross-section and which is known in the art as a "clover-leaf" conductor. In this case the rivets, bolts, or other form of securing devices C pass transversely through such conductor at a point adjacent to the thin neck at the juncture of one of the round portions of the conductor, as shown, and efficiently secures thereto the side flanges of the hanger or splicer F.

In Fig. 7 I have shown a transverse section of a preferred form of hanger before being placed upon the conductor. It will be observed that in this form the side flanges G G are flared, whereby the groove H, which receives the conductor or trolley, is sufficiently large for the hanger to be seated directly on the conductor. The said flanges G G are then bent or clamped around the conductor or trolley-wire and the securing devices passed therethrough and through the conductor to complete the joint. Of course it will be understood that the holes J through the flanges G may be formed during the course of manufacture of the hanger or splicer. This is especially true of hangers or splicers made of soft metal. If desired, however, these holes may be bored in the flanges G G after the hanger or splicer is placed on the trolley-wire or conductor and said flanges are clamped down upon the conductor. In this case of course the holes are made at the same time all the way through the conductor.

The securing devices C, which are arranged to pass transversely through the conductor and into the flanges of the hanger or splicer, may be ordinary rivets, as shown in Fig. 4, or, if desired, they may comprise bolts C', headed at one end and threaded at the other end to receive a nut L, or the nut L may be omitted and the threaded end of the bolt screwed directly into opening J of the hanger or splicer.

In the case of splicers it is not necessary that the flanges G be flared and then subsequently clamped down upon the conductor. The reason is apparent. The splicer is used to connect the abutting or adjacent ends of two conductor-sections. The slot or groove H, therefore, in the case of splicers may be cast or formed of the desired configuration to receive the conductor, as shown, for instance, in the cross-sectional view in Fig. 4, and then slipped endwise upon the end of one conductor-section and then the end of the other conductor-section is brought into alinement and the splicer is then slipped back so as to receive the ends of both conductor-sections therein. This form of splicer is particularly advantageous in the case of figure-eight and

clover-leaf conductors, and in such case the cross-sectional area of the longitudinal groove or seat H should be such as to receive snugly and neatly the rib of the conductor endwise therein.

From the foregoing description it will be seen that I rigidly secure the hanger or splicer to the conductor, insure a good electrical contact and joint in the case of the splicers, and an efficient support for the conductor in the case of hangers, and in both cases avoid impairment by reason of the swaying motion of the conductor due to the wind or the passage of the trolley. It will also be seen that I do not depend merely upon clamping the flanges of the hanger or splicer around or partially around the conductor, and I also avoid the use of solder. In both such cases the swaying of the conductor by the wind and also by the passage of the trolley therealong rapidly impairs the support and also the electrical contact.

Having now set forth the object and nature of my invention and forms of devices embodying the same, what I claim as new and useful and of my own invention, and desire to secure by Letters Patent of the United States, is—

1. The combination with a hanger or splicer for suspended trolley-wires, whereby the contacting surface of the wire is continuously exposed, of means adapted to pass through the splicer or hanger and wire for securing the same together in efficient electric connection, as and for the purpose set forth.
2. The combination with a hanger or splicer for suspended trolley-wires wherein the contacting surface of the trolley-wire is continuously exposed, of rivets arranged to be passed transversely through the hanger or splicer, and the wire for securing the same together in efficient electrical connection, as and for the purpose set forth.
3. The combination with a hanger or splicer having flanges forming a longitudinal groove on the under side thereof, and a suspended trolley-wire adapted to be seated in said groove, whereby the contacting surface of said wire is continuously exposed, of securing devices arranged to be passed transversely through said flanges and wire for securing the same together in efficient electrical connection, as and for the purpose set forth.
4. A splicer for joining the abutting ends of conductors and having a longitudinal seat or groove formed in the under side thereof, the cross-sectional area of which conforms to the shape or configuration of the upper sides of the conductor ends whereby said splicer may be slipped endwise upon the ends of the conductor-sections leaving the contacting surfaces of the conductor-sections continuously exposed, as and for the purpose set forth.
5. The combination with a conductor having a longitudinal bead formed on the upper

side thereof, of a splicer made in a single
piece, and having a groove or recess formed
longitudinally in the under surface thereof,
and adapted to receive said bead endwise,
5 whereby the contacting surface of the con-
ductor is continuously exposed, as and for
the purpose set forth.

In witness whereof I have hereunto set my
hand, this 9th day of April, 1897, in the pres-
ence of the subscribing witnesses.

CHARLES K. KING.

Attest:

REID CARPENTER,
W. H. REBACK.