No. 682,711. Patented Sept. 17, 1901.

W. F. JENKINS.

CONDUIT FOR ELECTRIC RAILWAYS.

(Application filed Feb. 7, 1901.)

(No Model.)

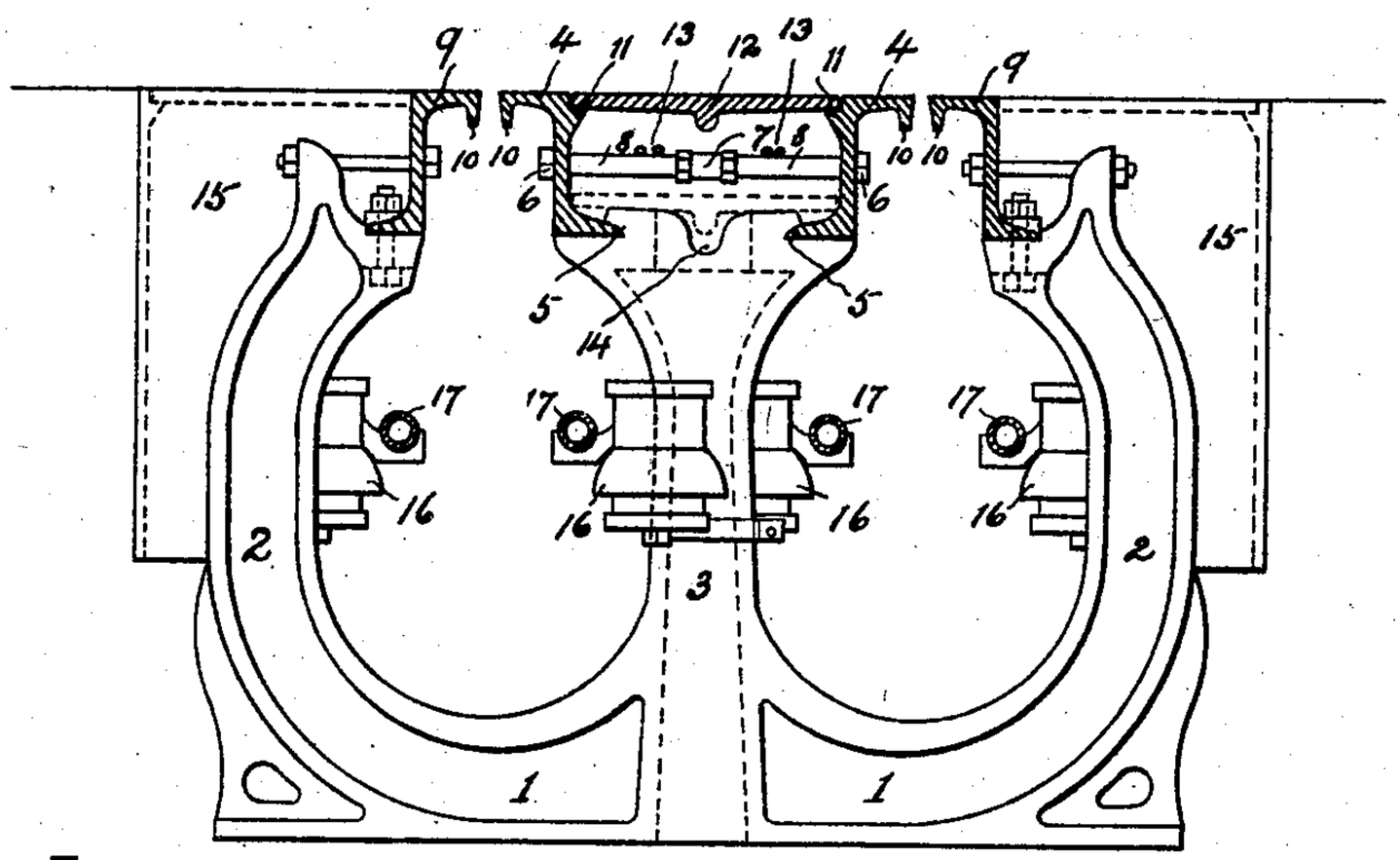

Fig. I.

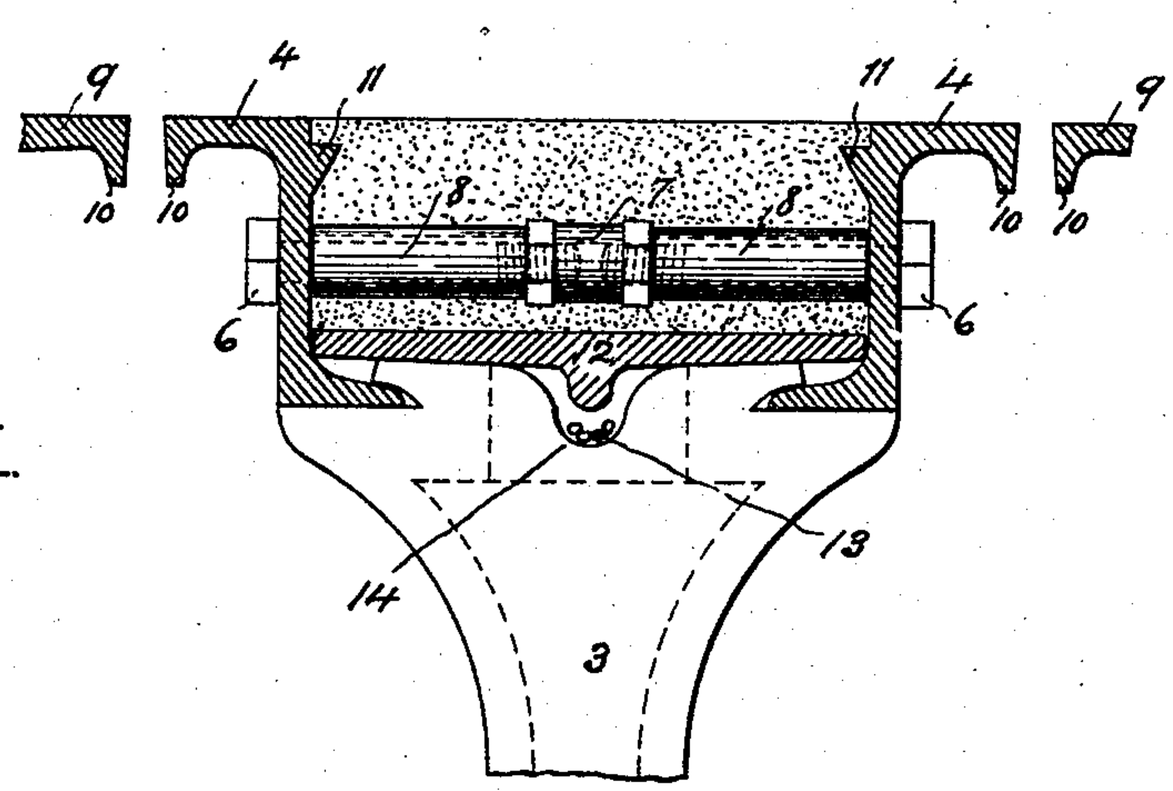

Fig. II.

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CONDUIT FOR ELECTRIC RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 682,711, dated September 17, 1901.

Application filed February 7, 1901. Serial No. 46,407. (No model.)

To all whom it may concern:

Be it known that I, WILTON F. JENKINS, a citizen of the United States, and a resident of Richmond city, State of Virginia, have invented certain new and useful Improvements in Conduits for Electric Railways, of which the following is a specification.

My invention relates to conduits for electric railways; and it consists in certain improvements in the conduit and the conduit-yokes, whereby provision is made for the reception of the feed-wires by which the current is carried to and from the conductors and whereby the interior of the conduit may be more easily accessible.

This invention is an improvement upon a conduit and yoke of the character shown in Letters Patent No. 612,344, dated October 11, 1898. The conduit set forth in said patent comprises yokes having center posts, each of which posts has a head undercut in its opposite sides, slot-plates, of which the two inner ones are engaged as to their bases by the said undercut head, and fastenings for securing the said inner slot-plates together and in engagement with the center-post head. The said inner slot-plates are beams of such a form that when they are fixed in position on the center posts of the yokes their inner upper flanges will meet, thus forming a continuous surface of metal between the two slots. In some localities objection might be raised to the metal surface extending from slot to slot; and one object of my invention is to avoid such objection by providing for an alternative construction in which the road-surface between the slots may be formed either of metal, or concrete, or asphalt, or other suitable material; and another object of my invention is, while providing this improved form of construction, to also provide a channel or conduit for the reception of the feed-wires and in which they may be thoroughly protected and at the same time be readily accessible.

Referring to the drawings which accompany and form a part of this specification, and in which like numerals refer to like parts in the different views, Figure I is a front elevation of the yoke with slot-plates attached. Fig. II is a detail showing in front elevation the top of the center post of the yoke with the slot-plates attached.

In Fig. I, 1 is a yoke having the side posts 2 2 and the center post 3, (see also Fig. II,) the head of the said central post forming a base for the inner slot-plates 4 4 and being undercut at 5 5 to engage the bottom flange of each of the said slot-plates. The latter are held in position by means of the bolts 6 6, of which one is right and the other left hand. These bolts engage in the nut or socket 7, which has a right-hand female thread at one end and a left-hand female thread at the other. Upon turning the socket 7 the bolts 6 6 are drawn together or forced apart, according to the direction in which the socket is turned. In order that the two slot-plates 4 4 may be kept at a proper distance apart when the bolts are drawn together, the bolts 6 6 are passed through distance-pieces 8 8, consisting, preferably, of short lengths of pipe, and which distance-pieces abut at one end on the socket 7 and at their other ends on their corresponding slot-plates. It will be seen that the two distance-pieces 8 8 and the socket 7 together form a distance-piece of invariable length and that when the socket 7 is turned so as to draw the bolts 6 6 together the slot-plates, drawn together by the heads of the bolts 6 6, will be firmly held against the outer ends of the distance-pieces 8 8. A great advantage of this construction will be noted hereinafter.

The slot-plates 4 4 and 9 9 consist, preferably, of **Z**-bars of the form shown, the upper flanges having depending and slightly-receding lips 10 10 10 10. The object of these lips is to provide a ridge on which surface water entering the slots may collect, and from which the collected surface water may drop harmlessly. If the outer face of the lip is vertical, the water collected on its bottom edge will be brushed off by passing trailing contacts, down which it will run to the injury of oxidizable material lying on its path. This is entirely avoided by making the lower edge of the lip recede, as shown, as water collected on its lower edge will then be entirely out of the path of a passing contact.

In localities where the road-surface between the inner slot-plates 4 4 is preferably con-

structed of metal the said inner slot-plates may be provided with projections 11 11 at intervals throughout their length, or the said projections may form a continuous ledge running along the web of the inner slot-plates. Upon these projections 11 11 there is supported a plate 12, which closes the space between the inner slot-plates 4 4. Now the cover-plate 12 and the two inner slot-plates 4 4 make a trough which will afford a convenient channel and a perfect protection for the feed-wires, which wires may be strung from yoke to yoke over the fastening-bolts, as shown in 13 13, Fig. I, or they may be allowed to rest in the hollow 14, formed in the head of the center posts of the yoke. It will be seen that an important advantage of this construction is that the feed-wires may be readily examined and repaired when necessary by simply removing the cover-plate 12. It should be remembered that the yokes 1, which are from five to seven inches wide over flanges, are spaced at a distance of about nine feet apart and that the slot-plates and cover-plates are made in convenient lengths and span the distance between yokes. Another very important advantage of this center-cover-plate construction is that the bolts 6 6, which hold the inner slot-plates 4 4 in position, are at once accessible, and yet another is that with its adoption the hand-hole boxes 15 15, which are usually some fifteen inches by 10 inches square and which are attached to the ends of the yokes, may be entirely done away with, as it is evident that a section of the center cover-plate may be lifted at any time, and ingress be thus obtained to the conduit; but supposing for any reason it is considered undesirable to have a metallic road-surface between the slot-plates 4 4 the central cover-plates 12 may be dropped to the bottom of the groove formed by the inner slot-plates, where it will rest upon their flanges and upon the head of the center post of the yoke, as shown in Fig. II. The whole of the space above the cover-plate 12 and the inner slot-plates 4 4 may now be filled in with any suitable paving material in which the feed-wires can be conveniently buried.

In Fig. I, 16 16 16 16 are the insulators carrying the conductors 17 17 17 17. These insulators are fully described and claimed in an application filed by me February 7, 1901, on the same day with this application and bearing Serial No. 46,405.

Having now described my invention, what I claim, and desire to protect by Letters Patent of the United States, is—

1. In a double-slotted conduit for electric railways, the combination of a yoke having a central post provided with a head undercut in its opposite sides, a pair of slot-plates secured to the outer posts, another pair of slot-plates having their base-flanges engaging beneath said central-post head and provided near the upper edge of their inner faces with lugs for supporting central cover-plates, fastenings securing said central slot-plates in engagement with said central-post head and at the proper distance apart, and central cover-plates, substantially as described.

2. In a double-slotted conduit for electric railways, the combination of a series of yokes each provided with a central post and an aperture at each side thereof, two pairs of slot-plates, one pair secured to the outside posts of the yokes, and one pair secured back to back to the top of the central posts and provided near the upper edge of their inner faces with lugs for supporting central cover-plates, and central cover-plates located between the two central slot-plates, substantially as described.

3. In a double-slotted conduit for electric railways, the combination of a series of yokes each provided with a central post and an aperture at each side thereof, a pair of slot-plates secured to the outer posts of the yokes, another pair of slot-plates secured, back to back and at a distance apart, to the top of the central posts and provided near the upper edge of their inner faces with lugs for supporting central cover-plates, fastenings to secure the said inner slot-plates in position, and central cover-plates located between the two inner slot-plates, substantially as described.

4. In a double-slotted conduit for electric railways, the combination of a series of yokes each provided with a central post and an aperture at each side thereof, a pair of slot-plates secured to the outer posts of the yokes, another pair of slot-plates secured, back to back and at a distance apart, to the top of the central posts, and provided near the upper edge of their inner faces with lugs for supporting a central cover-plate between them, fastenings to secure the said inner slot-plates in position, and central cover-plates located between the two inner slot-plates, and resting on the lugs with which the said inner slot-plates are provided, substantially as described.

5. In a double-slotted conduit for electric railways, the combination of a yoke having a central post provided with a head undercut in its opposite sides, a pair of slot-plates secured to the outer post, another pair of slot-plates having their base-flanges engaging beneath said central-post head and provided near the upper edge of their inner faces with lugs for supporting central cover-plates, fastenings securing said central slot-plates in engagement with said central-post head and at the proper distance apart, means for supporting the central plates at a lower level than that at which they are supported by the lugs when desirable, and central cover-plates, substantially as described.

6. In a double-slotted conduit for electric railways, the combination of a series of yokes each provided with a central post and an aperture at each side thereof, two pairs of

slot-plates, one pair secured to the outside posts of the yokes, and one pair secured back to back to the top of the central posts and provided near the upper edge of their inner faces with lugs for supporting central cover-plates, means for supporting the central plates at a lower level than that at which they are supported by the lugs when desirable, and central cover-plates located between the two central slot-plates, substantially as described.

7. In a double-slotted conduit for electric railways, the combination of a series of yokes each provided with a central post and an aperture at each side thereof, a pair of slot-plates secured to the outer posts of the yokes, another pair of slot-plates secured, back to back and at a distance apart, to the top of the central posts and provided near the upper edge of their inner faces with lugs for supporting central cover-plates, means for supporting the central cover-plates at a lower level than that at which they are supported by the lugs when desirable, fastenings to secure the said inner slot-plates in position, and central cover-plates located between the two inner slot-plates, substantially as described.

8. In a double-slotted conduit for electric railways, the combination of a series of yokes each provided with a central post and an aperture at each side thereof, two pairs of slot-plates, one pair secured to the outer posts of the yokes, and one pair secured back to back to the top of the central posts, central cover-plates located between the two inner slot-plates, and means for supporting the central cover-plates at two levels.

Signed at Richmond, in the county of Henrico and State of Virginia, this 24th day of January, A. D. 1901.

W. F. JENKINS.

Witnesses:
EUGENE JONES,
ARTHUR SCRIVENOR.