

(No Model.)

D. W. SMITH.
CONDUIT ELECTRIC RAILWAY.

No. 541,020.

Patented June 11, 1895.

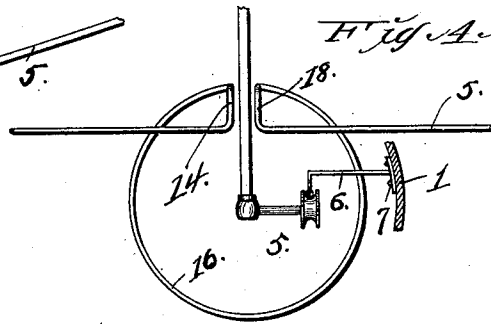
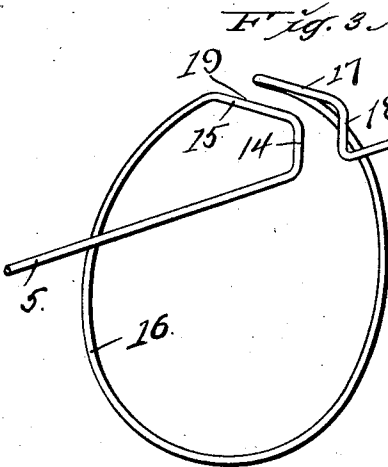
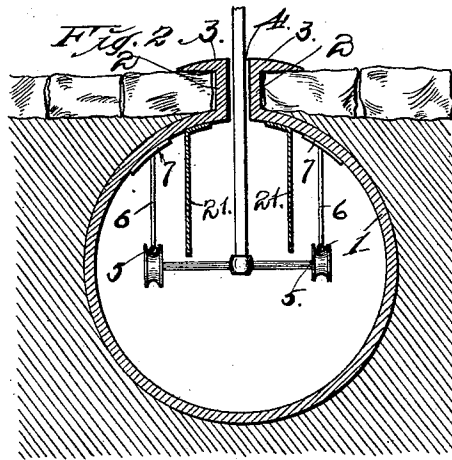
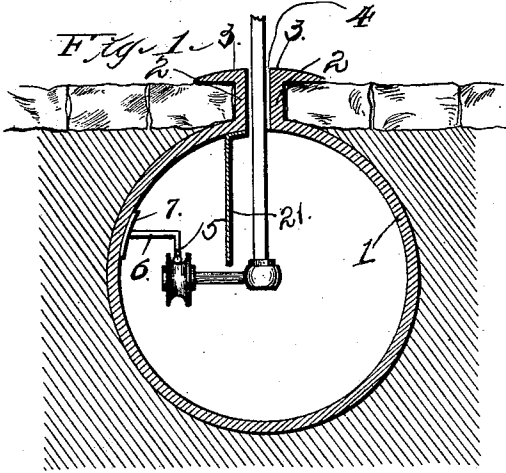


Fig. 5.

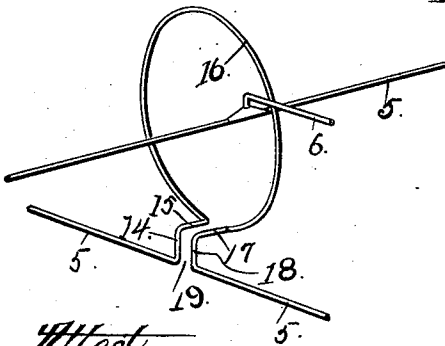


Fig. 6.

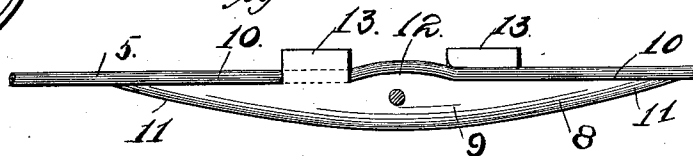
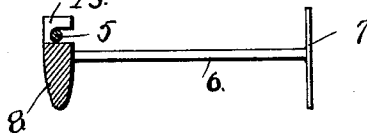


Fig. 7.



Attest

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UNITED STATES PATENT OFFICE.

DANIEL W. SMITH, OF ST. LOUIS, MISSOURI, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, OF TWO-THIRDS TO ALFRED BEVIS AND CHARLES H. LONGSTRETH, OF SAME PLACE.

CONDUIT ELECTRIC RAILWAY.

SPECIFICATION forming part of Letters Patent No. 541,020, dated June 11, 1895.

Application filed September 10, 1894. Serial No. 522,559. (No model.)

To all whom it may concern:

Be it known that I, DANIEL W. SMITH, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Conduit Electric Railways, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to a conduit for electric railways, the object of my invention being to construct a cheap and simple conduit, simple and efficient means of positioning the conductor or conductors within said conduit, and the construction and positioning of a guard for the conductor or conductors.

A further object of my invention is to form a simple and efficient crossing for the conductors in conduits without necessitating the cutting or splicing of said conductors.

My invention consists in certain novel features of construction, combination and arrangement of parts, hereinafter described and designated in the claims.

Referring to the drawings, Figure 1 is a cross-sectional view of a conduit, showing a single conductor positioned therein. Fig. 2 is a cross-sectional view of a conduit, showing a pair of conductors positioned therein. Fig. 3 is a perspective view of a loop I form in the conductor and make use of at the crossings of the conduits and conductors. Fig. 4 is an elevation of the loop, showing the second conductor passing through said loop and a trolley in engagement with said second conductor and passing through the loop. Fig. 5 is a view in perspective, showing the loop in use in the overhead system of conductors. Fig. 6 is a side elevation of one of the conductor clamps or hangers of which I make use in carrying out my invention. Fig. 7 is a cross-sectional view of one of these hangers and the support for same.

Referring by numerals to the accompanying drawings, 1 indicates the conduit which is preferably tubular in form and provided with upwardly extending portions 2 and out-turned flanges 3. Thus the slot 4 is formed between the vertical portions 2. This conduit

is adapted to be located in the ground as is ordinarily the practice.

Extending through the conduit to one side of the center is the conductor 5, the same being sustained or held at various points in the conduit by means of either vertical or horizontal hangers 6, provided with the plates 7 which are rigidly fixed to the interior of the conduit in any suitable manner, and the conductor-clamps 8. These clamps 8 comprise the body portion 9, flat top surface 10 and tapered ends 11. In the center of the top flat surface 10 is a raised portion 12 on both sides of which and on the opposite sides of the body portion 9 are hooks 13.

The conductor 5 is adapted to lie upon the flat surface 10, passes beneath the right and left hand hooks 13 between which it will necessarily be raised and thrown out of a horizontal line by reason of the raised portion 12.

The hanger 6 is rigidly secured to the body portion 9 on one side of the clamp. When the crossing in the conduit is reached, the conductor 5 is given a vertical bend 14, then a horizontal bend 15 at right angles to the main conductor 5, and is now bent into a loop 16, the same being preferably circular. The conductor is now given a horizontal bend 17 to correspond with the bend 15, a vertical bend 18 to correspond with the vertical bend 14, and from thence in a horizontal line on through the conduit. This, as it will be seen, forms a loop, through the top portion of which is a passage 19. The conductor 20 passing at right angles to the conductor 5 is passed through the loop 16 at one side of the center of the same and held in position by hangers, such as 6. Thus it will be seen how the trolleys of the respective lines will pass along on the conductors 5 and 20 and not interfere in any way with each other.

The trolley carrying the trolley-wheel that runs on the conductor 20 will pass through the passage 19, while the trolley-wheel running on the conductor 5 will pass along said conductor and being of suitable size will contact with the vertically bent portion 18 before it leaves the vertically bent portion 14.

After the conductors have been hung within the conduits, suitable guards 21 are firmly secured to the interior of the conduit and depend in such a manner as that their lower edges will terminate slightly below the conductor or conductors 5. These guards 21 are preferably of non-conducting material and are for the purpose of preventing anything from coming in contact with the conductors after having been introduced through the slot 4.

Thus it will be seen how I have constructed a simple, inexpensive and complete conduit for electric railways, and one that is easily cleaned and kept in order.

What I claim is—

1. In a conduit electric railway, a loop formed integral with and in the length of the conductor at the crossings of the conduit, said loop comprising the vertically bent portions

14 and 18, horizontally bent portions 15 and 17 and the circular loop 16, all bent from the length of the conductor 5.

2. In a conduit electric railway, a suitable hanger as 6, in combination with a clamp 8 comprising a body-portion 9, the same being provided with tapered ends 11, a flat upper surface 10, a raised curved portion 12 at a central point in the length of the clamp, and right and left hand hooks 13 on each side of said raised portion and projecting in a plane above the latter, for the purpose of engaging the conductor.

In testimony whereof I affix my signature in presence of two witnesses.

DANIEL W. SMITH.

Witnesses:

E. E. LONGAN,
MAUD GRIFFIN.