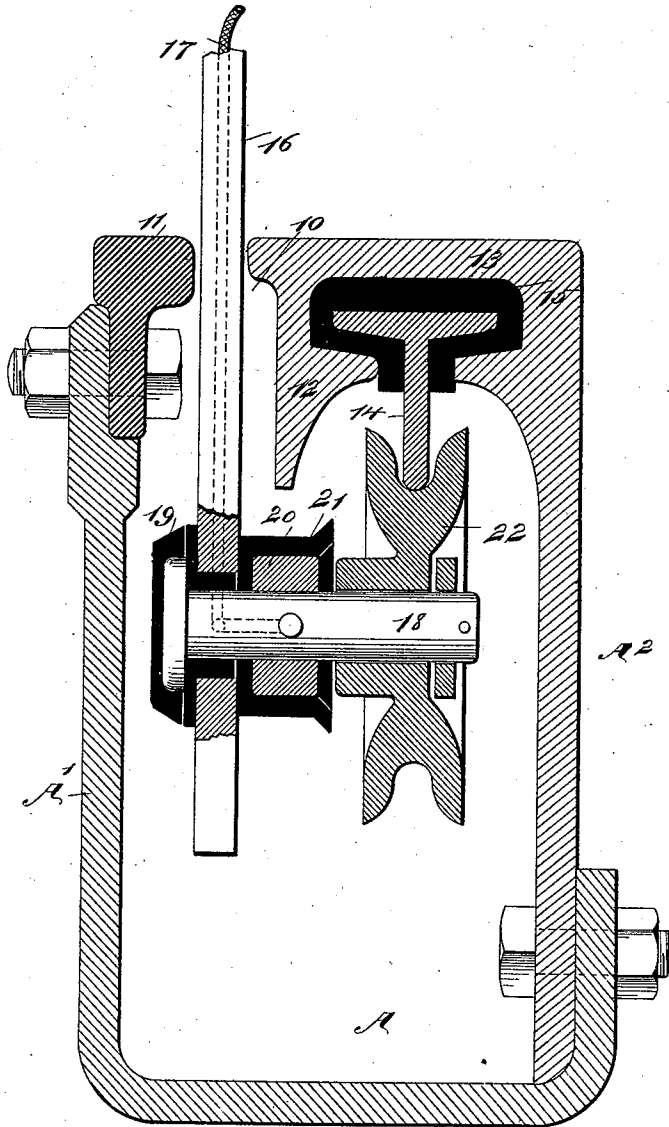


(No Model.)

W. E. DELABARRE, F. M. FRAZER & R. A. CARRICK.
CONDUIT RAILWAY TROLLEY.

No. 530,828.

Patented Dec. 11, 1894.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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CONDUIT-RAILWAY TROLLEY.

SPECIFICATION forming part of Letters Patent No. 530,828, dated December 11, 1894.

Application filed January 26, 1894. Serial No. 498,144. (No model.)

To all whom it may concern:

Be it known that we, WALTER E. DELABARRE, FRANCIS MACDONALD FRAZER, and ROBERT A. CARRICK, of New York city, in the county and State of New York, have invented a new and Improved Conduit Conductor for Vehicles, of which the following is a full, clear, and exact description.

Our invention relates to a conduit-conductor for vehicles, especially adapted for transmitting electricity from the main conductor located in a conduit, which may be either underground or overhead, to the motor or driving mechanism of a vehicle adapted to travel over or under the conduit.

Another feature of the invention is to provide an electrical conduit for vehicles, so constructed that the main conductor of electricity, which is located in the conduit, will be thoroughly protected from the action of the weather, and other external interference, and furthermore, to provide a means whereby the opening in the conduit through which connection is made with a car traveling over the conduit, will be so located that it will likewise serve as a channel for the flange of the wheels of the vehicle running upon one of the rails.

A further object of the invention is to provide a conduit of the character above described which will be exceedingly simple, durable and economic in its construction.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claims.

Reference is to be had to the accompanying drawing, forming a part of this specification, which represents a section through the conduit, and likewise a section through a rail connected therewith, the main conductor of electricity and the transmitting medium.

In carrying out the invention the casing A of the conduit is preferably made in two sections, as shown in the drawing, both sections A' and A², being substantially L-shaped in general contour, the vertical member of one meeting and being attached to the horizontal section of the other, but it will be understood that the casing may be made in as many parts as in practice may be found desirable.

Between, for example, the inner end of the horizontal member of the section A² and the inner surface of the vertical member of the section A' of the casing, a slot or opening 10, is produced, and upon the vertical section A' of the casing one of the rails 11 is secured, over which the vehicle is to pass when the conduit is adapted to be used underground, or when the vehicle is to run over the conduit. Thus it will be observed that the slot 10 in the top of the conduit will serve as a channel in which the flange of the wheels traveling on the track 11 will enter. The horizontal member of the section A², which member is at the upper portion of the conduit, is provided with a guard 12 adjacent to the slot 10, which guard extends downward a predetermined distance within the chamber of the casing; and the inner face of this guard, and likewise preferably the under surface of the horizontal member of the said section A², is more or less concave. The horizontal member of the said section A², which constitutes the main portion of the top of the conduit, is provided with a longitudinal opening therein, adapted to receive and hold the head 13 of the main electrical conductor 14, the said main electrical conductor being preferably T-shaped in cross section, its head being the horizontal member thereof, and the vertical or main member of the conductor extends downward through and beyond the lower wall of the upper or horizontal member of the said casing section A², and that portion of the main body of the conductor which extends down within the chamber of the conduit is exposed, that is, non-insulated, but that portion of the head and body of the conductor contained in the longitudinal opening in the upper portion of the casing is surrounded, or practically so, by an insulating material 15 of any approved character.

A rod or bar 16, or the equivalent thereof, is adapted to be projected from the vehicle to be propelled. This rod or bar extends downward into the conduit through the slot 10, in which it is free to move. This bar carries an insulated wire 17, adapted to be connected with the motor or other driving mechanism of the car or vehicle. The rod at or near its lower end is made to support a short

shaft 18, the shaft being at right angles to the rod or bar. That portion of the said shaft which passes through the rod or bar is insulated, as illustrated at 19 in the drawing.

5 Usually the shaft 18, is provided with a head at one of its ends, and the insulation over the head is beveled in order that water dropping thereon through the slot 10, will immediately be discharged into the bottom of the conduit.

10 A collar 20, is located upon the shaft 18, and the said collar is located immediately below the guard 12 at the upper portion of the conduit. This collar is provided with an insulated covering 21, the inner end of which
15 is provided with a beveled flange in order that it may shed water and prevent any drip from passing to a wheel or friction trolley 22, held to turn upon the inner end of the shaft 18, the said trolley being preferably grooved
20 in order that it may receive the downwardly-projecting and exposed portion of the body of the main electrical conductor 14. The bottom or lower edge of the conductor, and likewise the surface from its lower or bottom
25 edge to its insulated portion is protected upon its exposed side by the said guard 12.

Any approved arrangement of springs may be employed to hold the trolley in contact with the conductor. As will be seen by reference to the drawing, the trolley is allowed
30 a limited longitudinal movement on its shaft, so that lateral oscillations of the transmitting arm will not destroy the contact between the wheel and the conductor, or cause a lateral strain on the latter.

It will be observed that the insulated material 21 surrounding the collar 20 on the shaft 18 will effectually prevent water, or any foreign matter that may enter the conduit,
40 from reaching the conducting wheel 22. The wire 17, located in the transmitting bar or rod 16, is in electrical connection with the shaft 18, since the electricity is taken from the main conductor 14, and transmitted through
45 the wheel, its shaft 18 and its connecting wire 17 to the motor, or to whatever driving mechanism may be employed upon the vehicle. It will be readily understood that the conduit may be employed in connection with over-
50 head, underground or surface railroads with equal facility. When employed for an over-

head conductor, the conduit is used in an inverted position.

It will be understood that while the slot 10 is preferably located near one of the rails 55 upon which the vehicle is to travel, without departing from the spirit of the invention it may be placed at any point between the rails of the track, or even adjacent to the outside surface of either rail. 60

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The combination, with the slotted conduit, the conductor therein, and the transmitting arm adapted to project through the slot 65 of the conduit, of a trolley connected to the said arm, and a covering of an insulating material secured to the arm beneath the slot of the conduit, said covering being provided, at 70 its ends, with bevels facing in the opposite direction from that of the trolley, as and for the purpose set forth.

2. The combination, with the conduit having a slot and a guard plate on one side thereof, 75 and the conductor held in the conduit laterally of the said guard plate, of a transmitting arm adapted to project through the said slot, a trolley connected to the arm and adapted for contact with the conductor, and an insulating covering connected to the said arm 80 and arranged essentially beneath the said guard plate, the said covering being provided, intermediate of the trolley and the vertical line of the guard plate, with a bevel facing 85 in the direction of the slot, substantially as and for the purpose set forth.

3. The combination, with the transmitting arm adapted to project through the slot of a conduit, of a trolley connected to the said 90 arm, and a covering of an insulating material secured to the arm, said covering being provided, at its ends, with bevels facing in the opposite direction from that of the trolley, as and for the purpose set forth.

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