

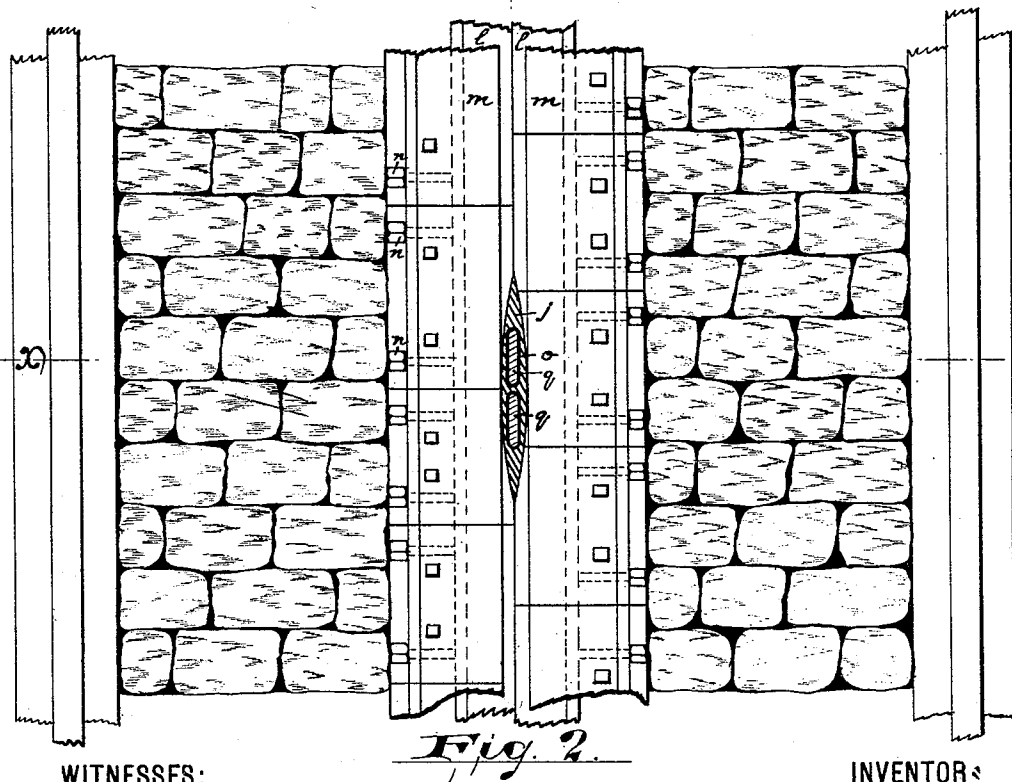
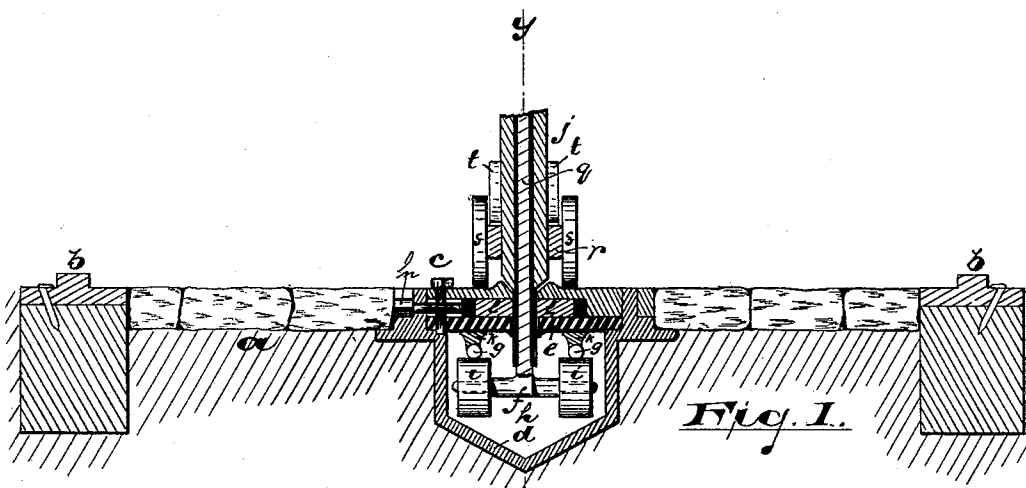
(No Model.)

2 Sheets—Sheet 1.

A. A. VANDERPOOL.
CLOSED CONDUIT FOR ELECTRIC RAILWAYS.

No. 487,654.

Patented Dec. 6, 1892.



WITNESSES:

INVENTOR:

Oscar A. Michel.
E. L. Shearman

Albion Alexander Vanderpool,

BY W. H. H. Co. ATTY'S.

(No Model.)

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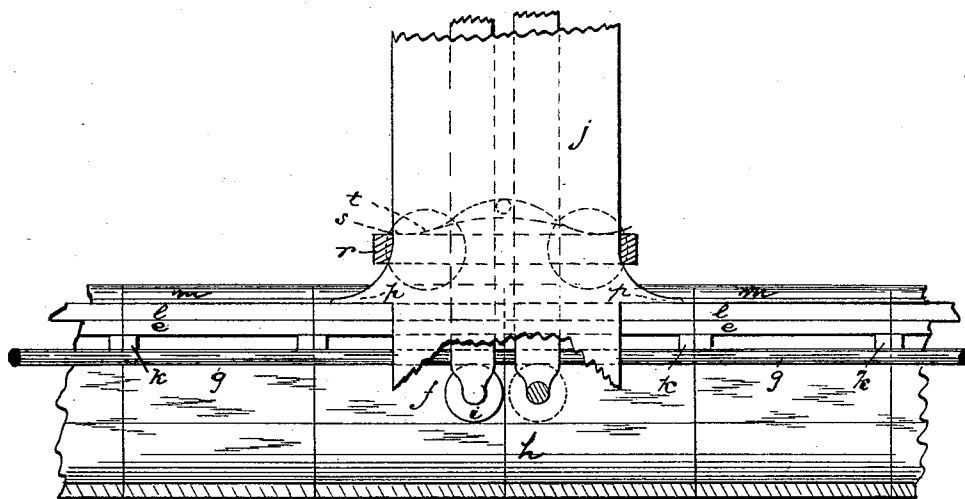


Fig. 3

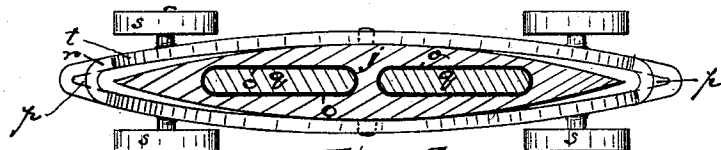


Fig. 4

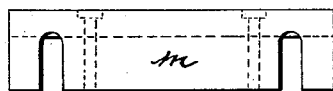


Fig. 5

WITNESSES:

INVENTOR:

Oscar A. Michel.
E. L. Sherman

Albion Alex. Vanderpool,

BY Drum Co. ATTY'S.

UNITED STATES PATENT OFFICE.

ALBION ALEXANDER VANDERPOOL, OF NEWARK, NEW JERSEY, ASSIGNOR
OF ONE-HALF TO DAVID H. BARNETT, OF SAME PLACE.

CLOSED CONDUIT FOR ELECTRIC RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 487,654, dated December 6, 1892.

Application filed March 18, 1890. Serial No. 344,290. (No model.)

To all whom it may concern:

Be it known that I, ALBION ALEXANDER VANDERPOOL, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Conduits for Street-Railways, &c.; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide an electric conductor for street or other railways which, while being arranged beneath the surface of the street, where it will not be exposed to view to any objectionable degree and where it will necessitate the use of unsightly poles and other rigging to render it operative, will be more efficient in its operations.

The more specific advantages and results sought to be gained are to more perfectly prevent dust and dirt from entering and clogging the conduit and moisture from gaining access to the conductor, and thereby allowing a leakage of electric force or power and occasioning great loss and interfering with the movements of the vehicles.

A further object is to reduce the cost of construction and to secure a more perfect safety from accidents arising through contact with the electric conductors.

The invention consists in the improved electric conduit for street or other railways and in the arrangements and combinations of parts, substantially as will be hereinafter set forth, and finally embodied in the clauses of the claim.

Referring to the accompanying drawings, in which like letters indicate corresponding parts in each of the several figures, Figure 1 is a vertical section, taken on line *x*, showing the conduit in connection with a contact-foot depending from a suitable part of the car or vehicle. Fig. 2 is a plan of the track and conduit and the foot referred to, the latter being in horizontal section. Fig. 3 is a verti-

cal longitudinal section taken on line *y*. Fig. 4 is an enlarged section of the contact-foot, and Fig. 5 is an end view of a clamping-plate for holding a certain slot-closer in position.

In the drawings, *a* indicates the road-bed of the street or way, *b b* the car-rails arranged therein, and *c* is an electric conduit, which is preferably disposed midway between said rails, the upper face thereof lying flush or approximately flush with the surface of the said road-bed.

The conduit *c* consists, preferably, of a metallic trough *d*, provided with a longitudinally-slotted upper plate or part *e*, through which the contact-foot *f*, extending downward from the car, extends to the conducting-wires *g*, arranged within the interior chamber *h* of said trough. The said foot *f* may be provided with rollers *i*, brushes, or other appropriate contact-surfaces, whereby the electric current or force may be transmitted from said wire through the leg *j* of said foot to the motor in the car or vehicle.

The conducting-wire is preferably arranged at the upper part of the chamber and is insulated from the metallic trough by non-conducting blocks or bearings *k*. The said conductor will thus be protected against leakage of electric force; but it may be protected or arranged within said chamber in any other appropriate manner.

To prevent surface water, mud, dust, &c., from passing through the slot into the trough, I have provided the conduit with an elastic slot-closer, consisting of rubber strips *l* or strips of other elastic material, adapted to close the slot when the latter is not in use, but to give way to the leg as it passes through the slot impelled by the car or vehicle. The rubber, however, closely hugs the foot in its movement, so that no material opening is formed through which the water may leak.

I prefer to make the elastic slot-closer in two parts, as indicated in the drawings, the said parts being clamped by plates *m m*, and thus held in position. Thus held they extend over or across the opening in the trough, the parts meeting one another at about the center of the slot and forming an impervious joint. Where said leg extends through said

joint, the same is provided at the front and rear with wedge-like blades or prow-like conformations adapted to force the elastic strips apart without great exertion of power.

5 I may provide set-screws or take-up screws *n* for taking up wear on the elastic slot-closer. In lieu of set-screws I may employ any other means desirable for accomplishing the same result.

10 Just above the slot in the conduit I may enlarge the leg, so that a fender *p* is formed just above the rubber, adapted to force the water away from the rubber before the joint between the parts thereof is opened, as will be understood.

15 The metallic conductors *q* or connections in the leg are suitably covered with insulation *o* in any appropriate and effective manner, and the leg is steadied in its movement by
20 a spring-truck *r*, having wheels *s*, which bear on the upper clamping-plate *m*. The spring *t* which is suitably secured to the leg, bears down on the truck, the said truck having a vertical play to allow for differences in the
25 relations of parts.

The elastic strips *l* may have a metallic backing *u* to receive the pressure of the setting-screws and secure a uniform bearing of the two strips at the joint.

30 Having thus described the invention, what I claim as new is—

1. In an electric railway, the combination, with a metallic trough closed at the top by longitudinally-slotted plates or parts *c c*, an
35 elastic slot-closer arranged on said plates or parts, and clamping-plates *m* for holding the

same in position, of conducting-wires *g g*, held beneath the plates or parts *e e* and insulated therefrom, and take-up screws or devices to take up wear on the elastic slot-closers, substantially as set forth.

2. The combination of a trough slotted at the top, conducting-wires arranged in said trough, slot-closers, clamping-plates for holding the same in position, adjusting or setting
45 screws for taking up wear on said slot-closers, and a leg adapted to be secured to the car or vehicle and provided with a foot to engage said conducting-wires and being wedge-shaped at its forward and rear parts and insulated to
50 prevent the escape of electricity, substantially as set forth.

3. In combination with the conduit having elastic slot-closers, a leg connected with a car and having a fender for forcing the water, &c., from the face of said closer before
55 the slot is opened, substantially as set forth.

4. In combination with a trough *d*, clamping-plates *e* and *m*, elastic slot-closers arranged between said plates and engaging one
60 another to form an impervious joint, a leg *j*, having wedge-like edges and fenders, and a spring-truck for steadying said leg, substantially as set forth.

In testimony that I claim the foregoing I
65 have hereunto set my hand this 6th day of March, 1890.

ALBION ALEXANDER VANDERPOOL.

Witnesses:

CHARLES H. PELL,
OSCAR A. MICHEL.