

(No Model.)

M. I. MARTIN.
CONDUIT FOR ELECTRIC RAILWAYS.

No. 530,283.

Patented Dec. 4, 1894.

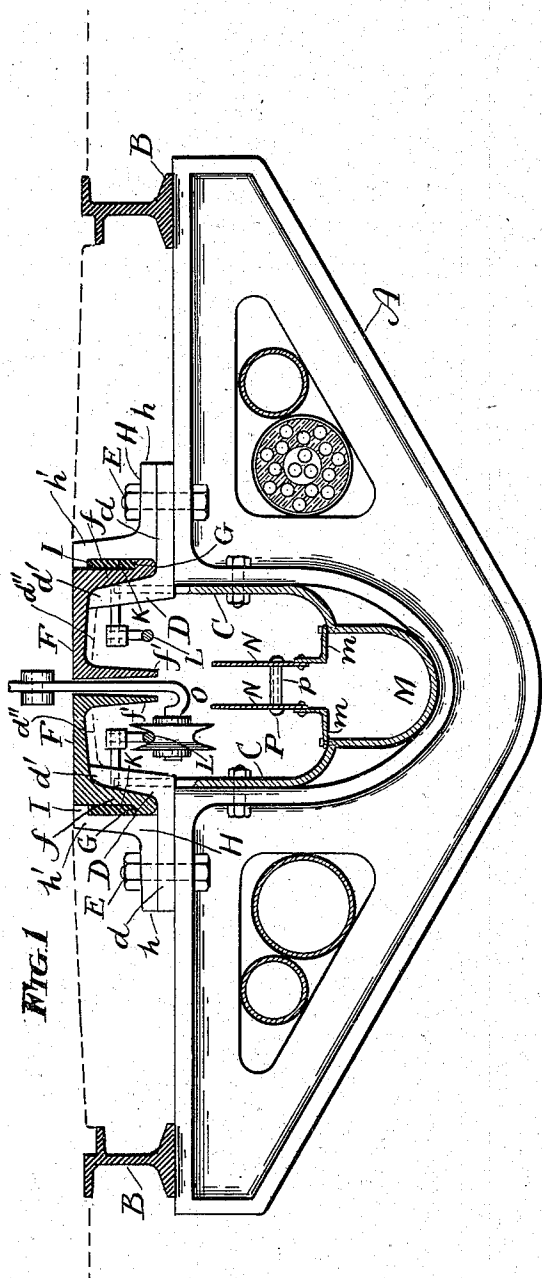


FIG. 1

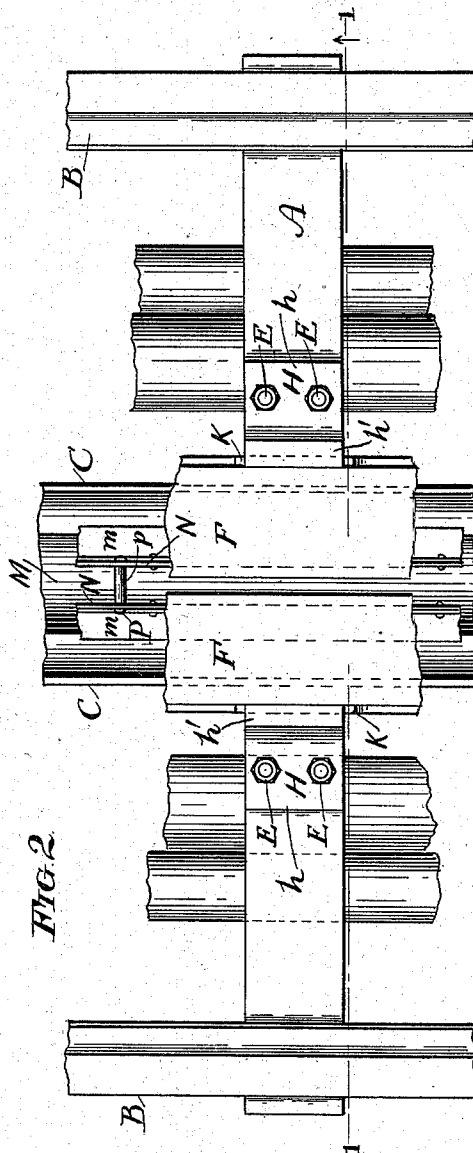


FIG. 2

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UNITED STATES PATENT OFFICE.

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CONDUIT FOR ELECTRIC RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 530,283, dated December 4, 1894.

Application filed February 7, 1894. Serial No. 499,342. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL I. MARTIN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Conduits for Electric Railways, of which the following is a specification, reference being had to the accompanying drawings, which are made a part hereof, and in which—

Figure 1 is a vertical transverse section of a conduit embodying the invention, and Fig. 2 is a plan view of a section thereof.

The present invention relates in part to the construction of the slot rails and the means for securing them in place, and the object of this part of the invention is to provide a rail of improved construction and improved means for securing said rail in place whereby it may be easily and quickly removed without the necessity of disturbing any part of the pavement lying adjacent to it.

The invention relates in part also to the interior construction of the conduit, and particularly the means for securing in place certain flanges or plates which extend upward toward the depending flanges of the slot rails for the purpose of making it more difficult to tamper with the conductor by introducing a wire or other device through the slot.

To these ends the invention consists in the features of novelty that are particularly pointed out in the claims hereinafter.

In the drawings, A represents a yoke, which may be of any desired construction, but which preferably consists of a single casting of sufficient length to extend from one to the other of the track rails B, and having in its center a U-shaped depression which defines the walls of the conduit. A number of yokes of this construction are arranged at intervals in the customary manner, and to the interior of the depressed central portions the sheet-metal conduit C is secured.

Upon the top of each of the yokes are placed two angle irons D, the horizontal flanges *d* of which are secured to the yoke by means of bolts E, and the flanges *d'* of which extend upward and are so shaped that their outer surfaces converge upward to a slight degree so as to form complementary seats for the outer flanges *f* of the slot rails F, said outer flanges

being preferably of such shape in cross-section that their surfaces converge toward their edges; or, in other words, said flanges are preferably of tapering or wedge shape in cross-section. Near its bottom each of the flanges *f* is provided on its outer surface with a shoulder G presented upward.

H are angle irons, the horizontal flanges *h* of which rest upon the flanges *d* of the angle irons D, and are secured to the yoke by the bolts E before mentioned. The other flanges *h'* of these irons extend upward so that their upper edges are flush with the tops of the slot rails. Near its upper edge each of them is provided with a shoulder I presented downward, so that between the flanges *d'* and *h'*, and their shoulders G and I, respectively, there is left a rectangular space into which is driven a key K. The construction and arrangement of these parts are such that when the key is driven into place, bearing upward against the shoulder I and downward against the shoulder G, it will force the tapering flange *f* of said slot rail into the correspondingly shaped socket left for it between the flange *d'* and the flange *h*, and thereby securely hold the slot rail in place. When it becomes necessary to remove the slot rail, it is simply necessary to remove the key, after which the slot rail may be lifted out of place without disturbing any part of the paving lying adjacent to it.

At their inner edges the slot rails are provided with depending flanges *f'*, behind which are located the conductors L, but I do not claim these flanges to be of my invention.

Between the angle irons D of each yoke and the next, the sheet-metal conduit C extends above the tops of the yokes and above the lower edges of the outer flanges *h* of the slot rails, so as to prevent water, which may find its way to the bottom of said flanges, from entering the conduit. The bottom portion of the conduit is so shaped as to form a drain M, and to said conduit are secured sheet-metal plates N, so located as to leave between them a space directly beneath the slot, through which water or dirt falling through the slot may pass into the drain. These plates extend upward such a distance as to leave, between their upper edges and the lower edges of the depending flanges *f'* of the slot rails, a suffi-

cient space O for the passage of the shank of the contact device. The plates N are preferably somewhat farther apart than the flanges f' of the slot rails, and their object is to make it difficult to reach the conductor with a wire or other device inserted through the slot. As shown in the drawings, the drain M is of U-shape in cross-section, and its upper edges join the adjacent portion of the conduit in an angle.

To the upper edges of the drain are secured angle irons m , to the vertical flanges of which the plates N are secured, said plates being in turn secured to each other so as to be incapable of relative movement either toward or from each other, by means of tie-bolts P passing through them and sleeves or struts p surrounding the tie-bolts and bearing at their extremities against the plates.

The slot-rail sections are made of such length that the joints fall in the vertical planes of the yokes, and wherever a joint occurs I use an angle-iron having at its upper edge an extension, as indicated by dotted lines at d'' , upon which both rail-sections rest.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a conduit, the combination with a slot rail having a downturned flange, of a substructure having two upturned flanges forming a socket adapted to receive the flange, of the rail and a key inserted in the socket and engaging the flange, of the rail, said flange, socket and key having complementary engaging surfaces whereby when they are in place the flange and key are prevented from being withdrawn through the top opening of the socket, substantially as set forth.

2. In a conduit, the combination with a slot rail having a downturned flange, of a substructure therefor having two upturned flanges forming a socket adapted to receive the flange, of the rail and provided with a shoulder presented downward, and a key inserted in the socket and engaging said flange and shoulder, substantially as set forth.

3. In a conduit, the combination with a slot rail having a downturned flange provided with a shoulder presented upward, of a substructure therefor having two upturned flanges forming a socket adapted to receive the flange, of the rail and having a shoulder presented downward, and a key inserted between said shoulders, substantially as set forth.

4. In a conduit, the combination of a slot rail having a downturned flange of wedge

shape in cross-section, a substructure having two upturned flanges forming a socket therefor, and a key inserted in the socket and engaging the flange, of the rail, said flange key and socket having complementary engaging surfaces whereby the flange and key are prevented from being withdrawn through the top opening in the socket, substantially as set forth.

5. In a conduit, the combination with a yoke, of a pair of angle irons having horizontal flanges secured to the yoke and having upturned flanges leaving between them a socket, the outer one of said upturned flanges having a shoulder presented downward, a slot rail having a downturned flange occupying said socket, and having a shoulder presented upward, and a key inserted between said shoulders, substantially as set forth.

6. In a conduit, the combination with a yoke, of a pair of angle irons having horizontal flanges secured thereto and having upturned flanges which diverge leaving between them a tapering socket, the outer one of said upturned flanges having a shoulder presented downward, a slot rail having at its outer edge a downturned flange of wedge shape in cross-section provided on its outer surface with a shoulder presented upward, and a key inserted between said shoulders, substantially as set forth.

7. As a new article of manufacture, a slot rail having two downturned flanges, and an upturned shoulder formed on one of said flanges, substantially as set forth.

8. The combination, with a conduit having slot rails provided at their inner edges with downturned flanges, and conductors located behind said flanges of plates located within the conduit and extending upward toward said flanges, said plates being located so as to leave between them a space or opening directly beneath the slot, substantially as set forth.

9. The combination, with a conduit having a slot, of a drain, the angle irons m secured to the top of the drain, the plates N secured to said angle irons and extending upward therefrom, and means connecting said plates and bracing them against each other, said plates being located so as to leave between them an opening directly beneath the slot, substantially as set forth.

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