(No Model.) 2 Sheets—Sheet 1.

# H. D. OLER.

## CONDUIT FOR ELECTRIC RAILWAYS.

No. 511,452. Patented Dec. 26, 1893.

Fig: 1.

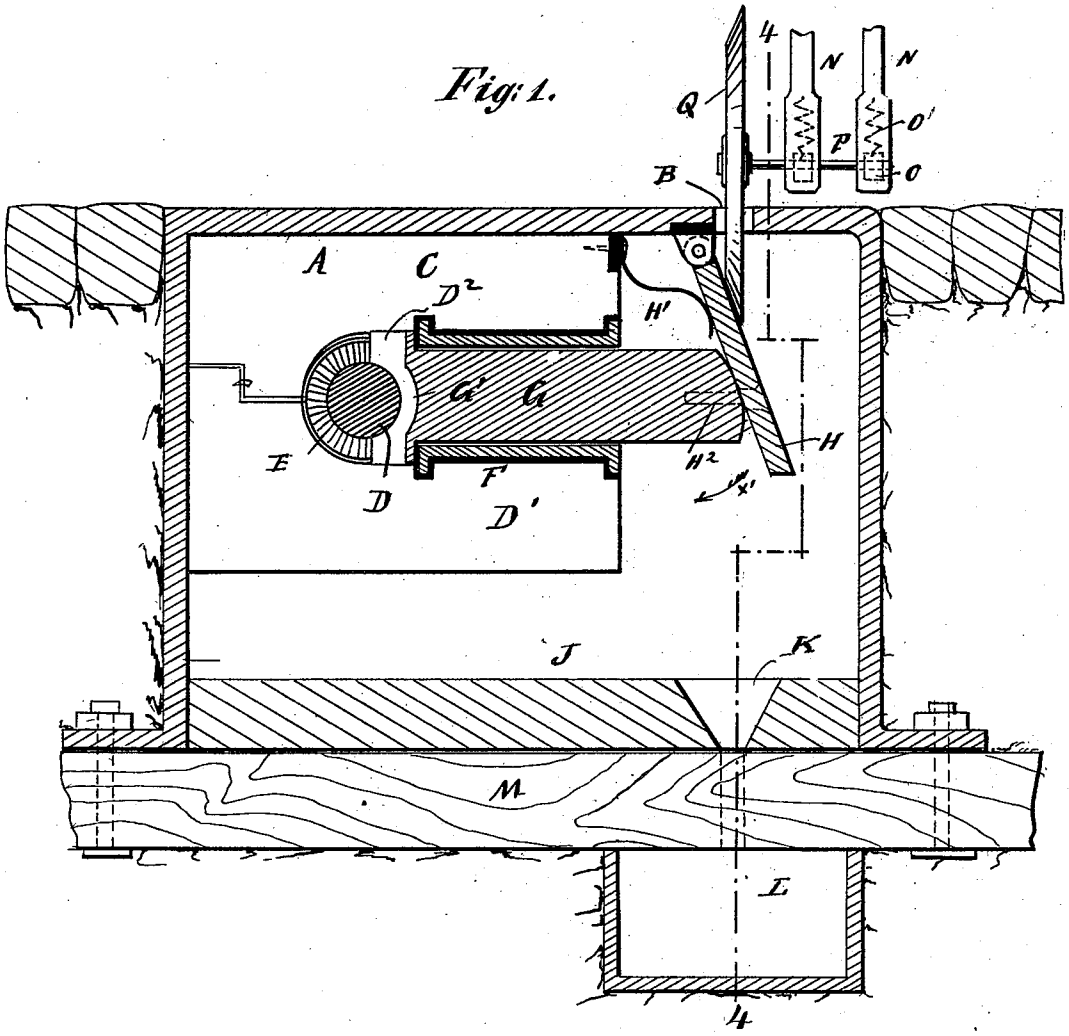


Fig: 2.

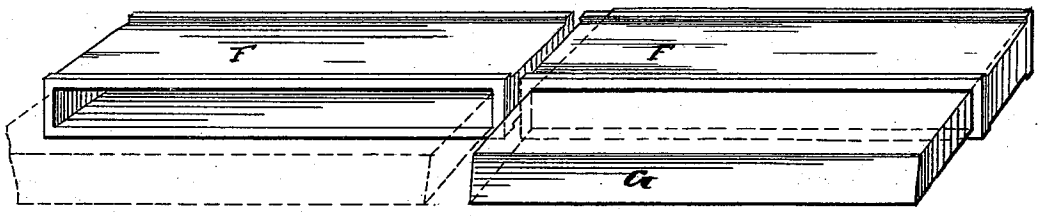


Fig: 3.

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(No Model.) 2 Sheets—Sheet 2.

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## CONDUIT FOR ELECTRIC RAILWAYS.

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Fig: 4.

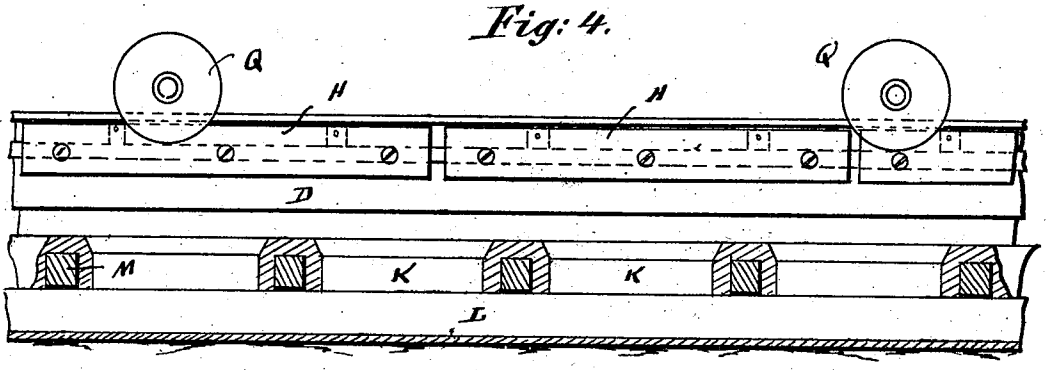
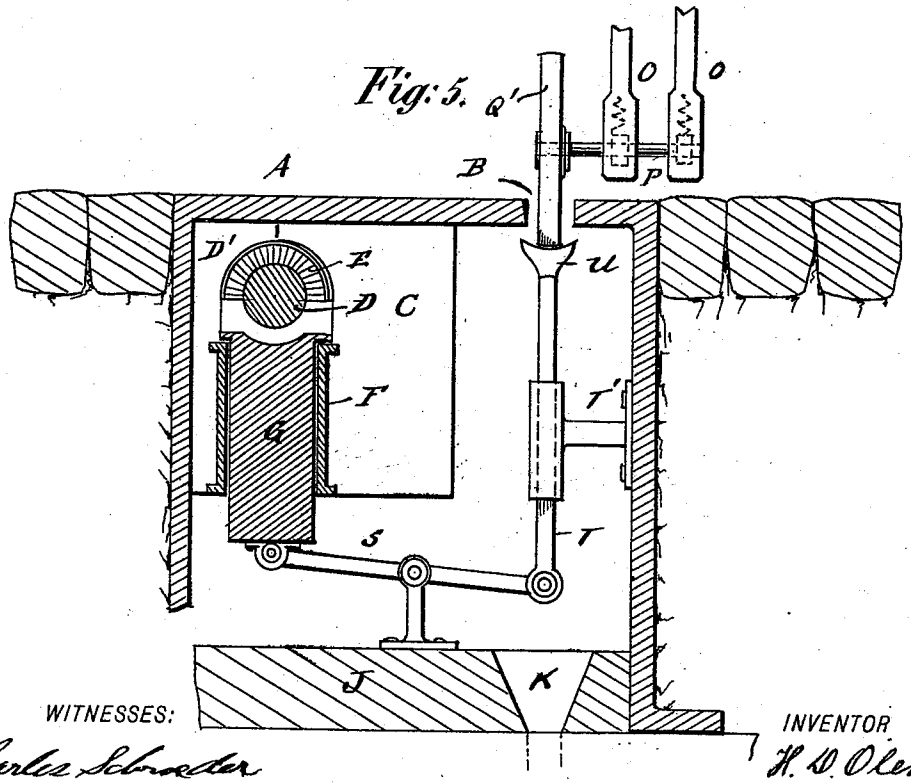



Fig: 5.

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# UNITED STATES PATENT OFFICE.

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## CONDUIT FOR ELECTRIC RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 511,452, dated December 26, 1893.

Application filed August 23, 1892. Serial No. 443,901. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY D. OLER, a citizen of the United States, residing at Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Conduits for Electric Railways, of which the following is a specification.

This invention relates to improvements in conduits for the conductors of electric railways; and the object of my invention is to provide a conduit for electric railways which is so constructed that the circuit is at all times broken except when the car passes, and then the current can only pass from the conductor to the car.

The invention consists in the combination with a conduit of a conductor held in a longitudinal groove in blocks in the conduit, sliding blocks in said groove and swinging members in the conduit and actuated from a wheel on the car for successively bringing the several blocks in contact with the conductor.

The invention also consists in the construction and combination of parts and details which will be fully described hereinafter and finally pointed out in the claims.

In the accompanying drawings, Figure 1 is a vertical transverse sectional view of my improved conduit for electric railways. Fig. 2 is a perspective view of the guide for the sliding blocks. Fig. 3 is a perspective view of the guide and block. Fig. 4 is a vertical longitudinal sectional view, on the line 4 4, Fig. 1, on a smaller scale, and Fig. 5 is a vertical transverse sectional view of a modification of the conduit.

Similar letters of reference indicate corresponding parts.

The conduit A, which is constructed of metal or wood, as may be desired, is provided with a longitudinal slot B in its top. To the under side of the top plate a block of wood C is fastened, and to the under side of the same another block of wood D′ is held in a suitable manner. Between said blocks the conductor D is arranged and held, the left hand side of said conductor being naked and the remaining half being provided with an insulating covering E composed of any suitable insulating material, preferably of ground glass mixed with rubber or like composition. The blocks C and D′ extend the entire length of the conductor, and from the exposed side of the conduit an opening or groove $D^2$ extends throughout the entire length of the conduit through the blocks, to the right hand side of the same. In said opening a series of guide boxes F are held, which are provided with an insulating covering and are provided with flanges at the inner and outer ends, and in said guide-boxes sliding blocks G are arranged, which have their inner ends recessed, as at G′, to fit against the conductor D. Plates H are hinged to the under side of the top of the conduit and insulated from the same and are connected by pins $H^2$ with the outer ends of the sliding blocks G, said plates being pressed outward at their lower ends by springs H′ fastened to the upper blocks C and bearing against said plates. As the springs H′ press the lower ends of the plates outward they also draw the blocks G outward until their flanges at the inner ends of said blocks strike against the inner flanges of the guide boxes F. The bottom J of the conduit is provided with a series of slots K, through which the accumulated water can pass into a trough L arranged below the sleepers M, the entire length of the conduit.

From the bottom of the car two bars N project downward, and each contains a sliding bearing block O, which is pressed downward by a spring O′, and in said blocks the shaft P is mounted, which carries on its end a wheel Q having a beveled edge, which wheel passes through the slot B of the conduit and bears against the plates H. As the wheel Q rolls along it presses the successive plates H inward, as indicated by the arrow $x'$ in Fig. 1. Thereby the sliding blocks G are successively pressed inward and their inner ends brought in contact with the exposed or naked side of the conductor D. The current now passes from the conductor through the blocks G, the plates H and the wheel Q to the motor in the car. As soon as the wheel Q passes over one of the plates H said plate and the corresponding block G are drawn outward by the action of the springs H′, and thus the circuit is broken. The circuit is closed, that is, the blocks G are in contact with the conductor D, only then when the wheel Q on the car bears on any one plate H.

In the modification shown in Fig. 5, the

opening for the boxes F and sliding blocks G is arranged vertically, and the sliding blocks are pivoted to levers S, the opposite ends of which are connected with bars T guided by sleeves T′ projecting from the sides of the conduit and each bar T is provided on its upper end with a rail U, on which the wheel Q′ runs. As the wheel Q′ runs upon one of the rails U it depresses the same, whereby the inner end of the lever S is raised and the corresponding block G bears against the conductor. As soon as the wheel Q′ runs off the rail section U the corresponding block G descends and the circuit between the same and the conductor is broken.

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

1. The combination, with a conduit, of wooden blocks fastened in the same the entire length of the conduit, in which blocks a groove is formed extending the length of the conduit, a conductor held in said groove, a part of which conductor is insulated and the remaining part exposed, sliding blocks in the groove, plates hinged in the conduit and connected with the sliding blocks, a wheel passing through the slot of the conduit and adapted to act on the hinged plate, a shaft for said wheel and spring bearing blocks mounted on parts of the car, in which bearing blocks the said shaft is mounted, substantially as set forth.

2. The combination, with a conduit, of wooden blocks fastened in the same and extending the length of the conduit, in which blocks a groove is formed that extends the length of a conduit, a conductor held in said groove, a part of which conductor is insulated from the blocks and a part exposed, guide boxes in said groove, sliding blocks in the guide boxes plates hinged in the conduit and connected with the sliding blocks, a wheel passing through the slot of the conduit and bearings supported from the car for the shaft of said wheel, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

H. D. OLER.

Witnesses:
OSCAR F. GUNZ,
MARION HALL.