

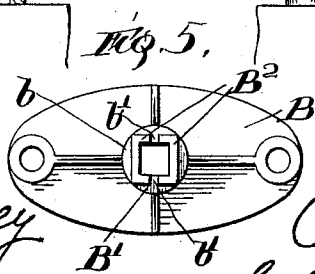
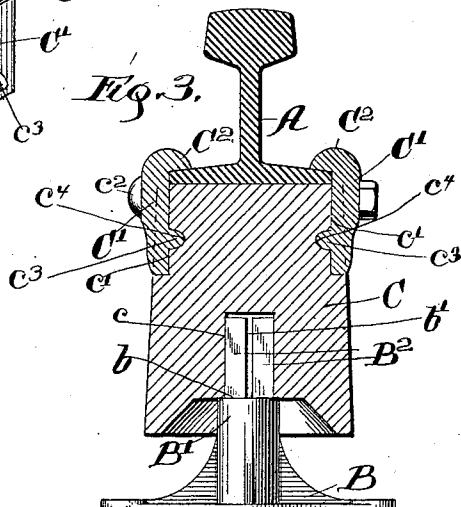
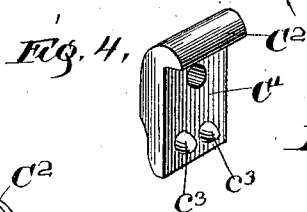
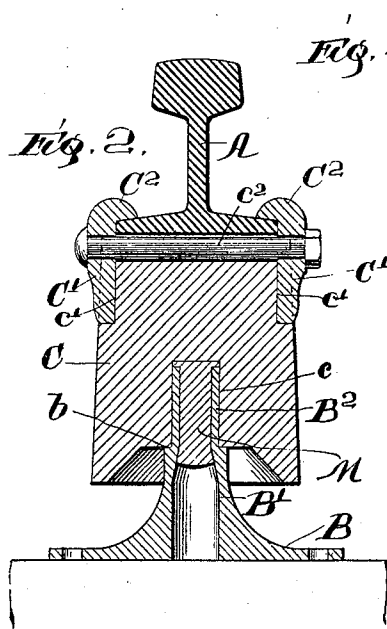
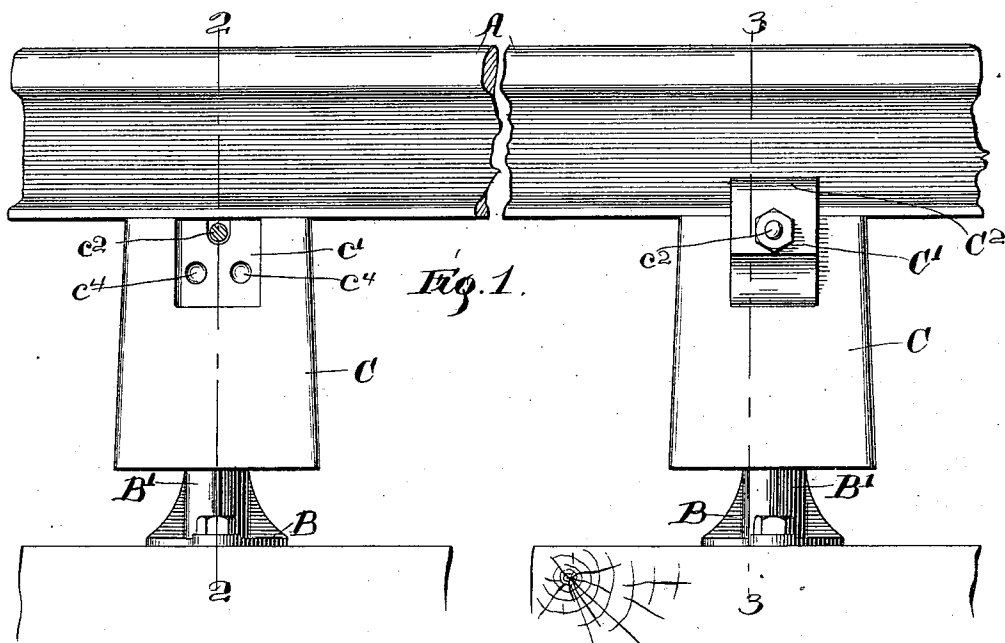
(No Model.)

P. HALEY.

INSULATING SUPPORT FOR RAILS OF ELECTRIC RAILWAYS.

No. 563,482.

Patented July 7, 1896.



Witnesses:

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UNITED STATES PATENT OFFICE.

PATRICK HALEY, OF CHICAGO, ILLINOIS.

INSULATING-SUPPORT FOR RAILS OF ELECTRIC RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 563,482, dated July 7, 1896.

Application filed March 9, 1896. Serial No. 582,412. (No model.)

To all whom it may concern:

Be it known that I, PATRICK HALEY, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Insulating-Supports for Rails of Electric Railways, of which the following is a specification.

My invention relates to certain improvements in insulating-supports for rails of electric railways, its object being to provide a support for rails which shall be strong and substantial, and at the same time completely insulate them from other rails to prevent any short-circuiting.

The invention is more particularly adapted for use in electric railways upon what is known as the "third rail;" and to such end it consists in certain novel features of construction, which will be clearly described in this specification, and particularly pointed out in the claims.

The invention is illustrated in the drawings presented herewith, in which—

Figure 1 is a side elevation of a portion of a rail with my improved supports applied thereto. Fig. 2 is a vertical cross-section in line 2 2, Fig. 1. Fig. 3 is a similar section in line 3 3, Fig. 1. Fig. 4 is a perspective view of one of the clamps used in connection with my device, and Fig. 5 is a plan view of the base which forms a part of the device.

In the views, A is a rail of ordinary construction, which is used in this instance as the third rail adapted to supply the cars with current for the propulsion of the motors.

B is a base secured to the ties by suitable bolts. This base is formed of a suitable size and shape to be easily secured to the tie, and has a central standard B' of suitable height and diameter, and this standard is formed with a spindle B² of any desired cross-section, thus leaving a shoulder b, upon which rests a block C of some strong insulating material, preferably vitrified clay. The standard and spindle of the base are preferably hollow, and the spindle is slit, as seen at b', to give it slight elasticity, so as to make a good fit in the socket c of the insulating-block C, where it is seated in operation.

The rails rest upon the block C, each of

which is preferably provided with recesses c', in which are secured clamps C', preferably of metal, adapted to clamp the rail to the insulating-block C. These clamps are held together by a bolt c², which passes through a groove in the top of the insulating-block, and said bolt is provided with a nut, whereby the clamps may be firmly and securely connected. The clamps C' are provided with hooked portions C³, which engage with the flange of the rail and clamp it to the insulating-block. Upon the inner faces of the clamps are formed lugs c³, which fit into corresponding sockets c⁴ in the insulating-block. (See Figs. 1 and 3.) I have shown the lugs c³ as separate lugs, but it is obvious that one lug, preferably elongated in a horizontal line, may be used, together with a corresponding socket in the block. This forms a very simple and effective means for holding the clamps in the proper position and prevents them from accidentally being raised out of their seats, and when the bolt c² is tightened it securely clamps the rail to the block, thus preventing any upward or lateral movement of the rail.

In constructing this insulating-support, I have found that by running molten metal or cement M into the hollow spindle b² it greatly assists in uniting the base and insulating-block and makes a more perfect joint. This can be done by simply inverting the insulating-block, inserting the spindle in its proper place, then pouring in the molten metal or cement, as may be desired, and allowing it to set.

I have found that this simple device forms a very strong, substantial, and effective insulating-support for the rail, and it is evident that if desired it may be made in any size to accommodate itself to any size of rail. While the blocks as shown are formed with recesses which receive the clamps, it is evident that it is not essential, and that the clamps may simply lie on the lateral faces of the blocks. I claim as new and desire to secure by Letters Patent—

1. In a device of the class described, the combination with a suitably-supported insulating-block adapted to support a rail and formed with sockets in its lateral faces, of clamps having hooked portions adapted to

grasp the flange of said rail, and lugs extending into the sockets in the insulating-block, and suitable means for connecting the clamps.

2. In a device of the class described, the
5 combination with a suitably-supported insulating-block adapted to support a rail and formed with sockets in its lateral faces, of clamps having hooked ends adapted to clamp the rail to the block, and extending into the
10 sockets in the block, and a bolt passing through said block and connecting the clamps, whereby the tightening of the bolt secures the rail firmly to the block; substantially as described.
- 15 3. The combination with a suitably-supported insulating-block having the recesses c' , and sockets c^4 , of clamps C' , engaging the flange of a rail, and seated in said recesses and having lugs c^3 , resting in the sockets c^4 ,
20 and the bolt c^2 , connecting the clamps and clamping the rail to the block; substantially as described.

4. The combination with a rail and an insulating-block secured thereto, of a base hav-

ing a hollow standard and spindle, the stand- 25
ard being adapted to support the insulating-block, and the spindle to enter it, and the sealing substance M ; substantially as and for the purpose set forth.

5. The combination with a rail and an in- 30
sulating-block secured thereto, of a base having a hollow standard adapted to support said insulating-block, and a hollow bifurcated spindle adapted to enter said block; substantially as described.

6. In a device of the class described, the 35
combination with a rail, of an insulating-support therefor comprising substantially a block of insulating material, a base adapted to be secured to a tie, and support said insulating- 40
block, clamps adapted to secure the rail to the block, and provided with lugs entering the block, and means for drawing said clamps together; substantially as described.

PATRICK HALEY.

Witnesses:

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