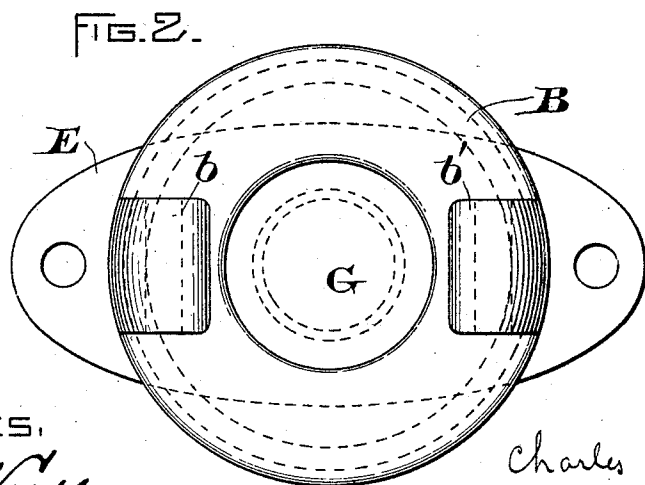
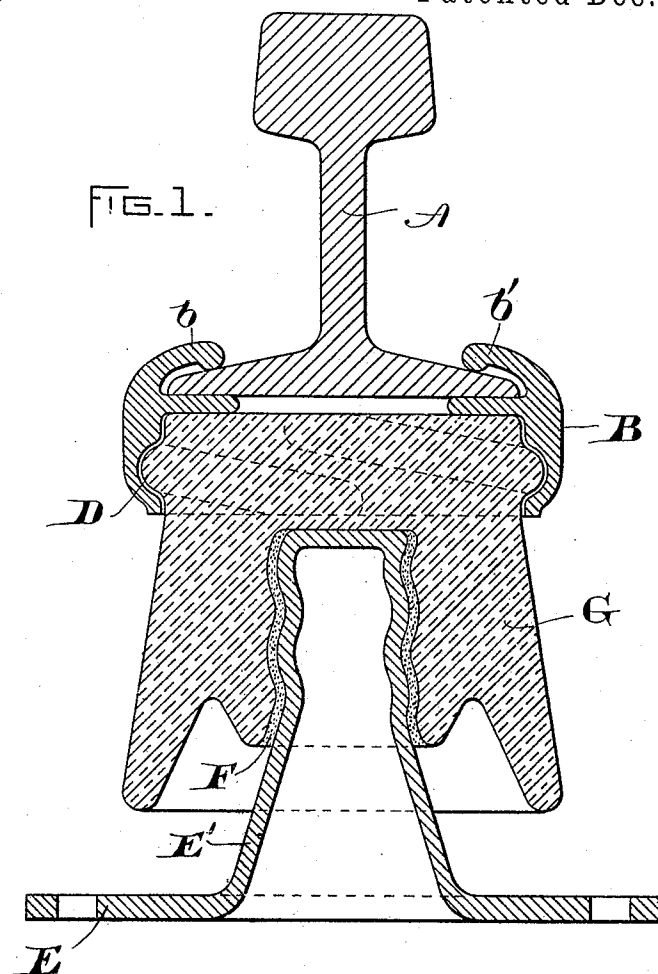


(No Model.)

C. B. MARTIN.
INSULATOR.

No. 574,101.

Patented Dec. 29, 1896.



WITNESSES.

R. B. Hill
A. Macdonald.

INVENTOR
Charles B. Martin
By *Chas. B. Martin*
Atty.

UNITED STATES PATENT OFFICE.

CHARLES B. MARTIN, OF SCHENECTADY, NEW YORK, ASSIGNOR TO THE
GENERAL ELECTRIC COMPANY, OF NEW YORK.

INSULATOR.

SPECIFICATION forming part of Letters Patent No. 574,101, dated December 29, 1896.

Application filed September 28, 1896. Serial No. 607,153. (No model.)

To all whom it may concern:

Be it known that I, CHARLES B. MARTIN, a citizen of the United States, residing at Schenectady, county of Schenectady, State of New York, have invented certain new and useful Improvements in Insulators, (Case No. 438,) of which the following is a specification.

The present invention relates to insulators employed in electric railways in which the supply-conductor is made in the form of a rail and located either between the tracks or to one side thereof.

The invention has for one of its objects to provide an insulator which may readily be mounted in position after the conductor-rail is in place and without disturbing the remainder of the insulators either under the same rail or the adjoining rail or rails.

The invention also has for its object to provide an insulator which is so constructed that after it is placed in position it is held there by means of the conductor-rail without additional or secondary means.

The invention further has for its object to provide a cheap reliable insulator and one having an extended smooth surface over which the moisture must creep in order to establish a leak-circuit.

The invention also has for one of its objects to provide an insulator which can be secured to the rail-clamps by a slight angular movement, the rail-clamps being secured to the rail in such a manner as to prevent angular movement thereof.

In the accompanying drawings, attached to and made part of this specification, Figure 1 is a section view of an insulator embodying my invention, and Fig. 2 is a plan view of the same with rail removed.

A is the conductor-rail, shown as T-shaped in the present instance; but this is immaterial, as any conductor of irregular outline will do. The clamp B is made of malleable iron and provided with lugs *b b'*, which engage with the lower flange of the conductor-rail A. These clamps are adapted to be slipped upon the rail from the ends, and after they are placed in the desired position the lugs *b b'* may be hammered down, so as to clamp the lower flange. Ordinarily this would be done after the insulator G and its support were se-

cured to the cross-ties in a manner herein-after described.

The under portion of the clamp B is made in the form of an inverted cup and is provided with a coarse internal double screw-thread adapted to engage with corresponding threads on the insulator G. The insulator G is provided with a center hole of irregular shape in which the support or base E is secured. The upper portion of the insulator G is provided with a coarse double screw-thread D, engaging with a similar one on the clamp B for securing the two members together. The threads on the insulator are semicircular and are sufficiently strong to resist any movement of the rail A. By providing a double screw-thread I am enabled to secure the parts together by a slight angular movement, amounting in the present instance to approximately one-half of a revolution.

The base E is provided with an upwardly-extending portion E', forming a support for the insulator G. Between this portion and the insulator G is a filling of cement or other similar material which serves to secure them together.

In mounting a conductor-rail a number of clamps would be slipped upon the rail from the ends and suitably spaced, after which the rail would be placed in position and the insulators G inserted in the clamps and given a turn or a portion of a turn, which will secure them to the clamp, after which the bases are bolted to the cross-ties. If the rail were in position and it were desired to replace the insulator, the lugs *b b'* on the clamps B would be bent backward slightly to release their hold upon the rail-flange. The bolts would then be removed from the base E, and the insulator as a unit moved to the space between two cross-ties, where it could be rotated and withdrawn from engagement with the clamp, after which a new insulator could be inserted in place and the reverse operation performed.

The screw-threads on the insulator G and the non-rotary clamp form a prominent part of the invention, as they prevent any rotation of the support or base E.

The base E is ordinarily secured by bolts to the cross-tie; but in the event of this being left undone, or the insulator becoming loose

on its support E', the insulator G would still remain in place, for any tendency to a backward or left-handed rotation of the insulator is opposed by the weight of the rail and by the adjoining clamps, which hold the rail down against vertical as well as horizontal movement.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In an insulator, the combination of a non-rotatable clamp, an insulator provided with a screw-thread engaging therewith, and a metal base for the insulator.

2. In combination, a rail, a non-rotatable rail-clamp, a body of insulating material, a base therefor, and means for securing the body of insulating material by an angular movement to the rail-clamp after the latter has been mounted in place.

3. In combination, a rail, malleable-iron rail-clamps adapted to be slid upon the rail from the ends, lugs on the clamp for gripping the rails and preventing any angular movement of the clamp, a metal base, a body of

insulating material mounted on the base, and means on the insulator for securing it to the rail-clamp by an angular movement.

4. In an insulator, the combination of a conductor-rail, a clamp secured thereto and held against angular movement, a downwardly-extending portion of the clamp provided with a screw-thread, a body of insulating material provided with a thread corresponding to that of the clamp and adapted to be secured thereto by a slight angular movement, and a base for supporting the insulator.

5. As an article of manufacture, a rail-clamp provided with lugs *b*, *b'* adapted to grip the rails and prevent any angular movement of the clamp, and a downwardly-extending portion provided with a double screw-thread.

In witness whereof I have hereunto set my hand this 25th day of September, 1896.

CHARLES B. MARTIN.

Witnesses:

B. B. HULL,

A. F. MACDONALD.