

(No Model.)

H. H. CARPENTER.
ELECTRICAL CONDUCTOR.

No. 419,923.

Patented Jan. 21, 1890.

Fig. 1.

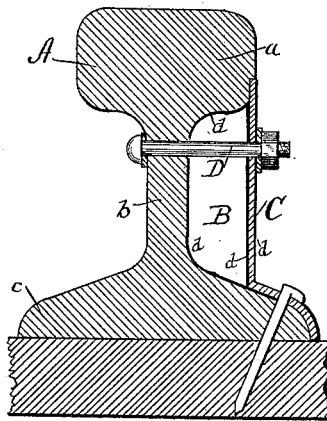
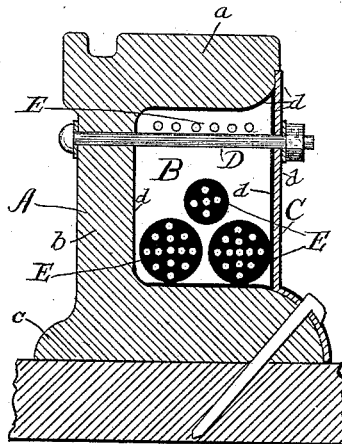


Fig. 2.



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UNITED STATES PATENT OFFICE.

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ELECTRICAL CONDUCTOR.

SPECIFICATION forming part of Letters Patent No. 419,923, dated January 21, 1890.

Application filed December 5, 1889. Serial No. 332,625. (No model.)

To all whom it may concern:

Be it known that I, HIRAM H. CARPENTER, a citizen of the United States of America, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Systems of Electrical Distribution, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to a method of distributing electrical energy by utilizing the space between the head, shank, and base of traction railroad-rails.

Referring to the drawings, wherein letters of like form and name indicate like parts in each figure, Figure 1 shows a cross-section of an ordinary T-rail, with the insulated chamber formed by the application of a detachable lid or cover. Fig. 2 shows a similar cross-section of a grooved rail, and also showing the distributing system of electric wires in place.

A indicates the rail proper, of which *a* shows the part which I denominate the "head," *b* the "shank," and *c* the "base."

B indicates the insulated chamber, and C the detachable lid or cover.

The letter *d* shows the insulating coating or paint applied to the inner surface of the chamber and the exterior of the lid or cover.

The traction-rail may be of any convenient form, so that sufficient space be left on the one side or the other of the rail to form the insulated chamber. It is evident that the shape of the detachable lid or cover C will vary with the form of the rail. In the ordinary T-rail I return the lower edge of the cover C at an angle that conforms to that of the base and fasten it in place by means of spikes or bolts that pass through coinciding

holes in the returned part and the base of the rail. It may be also further secured by a bolt passing through the cover and upper part of the rail, as shown at D, or it may be held in place by clamps, or the whole chamber may be filled with asphalt or other electrically-insulating material before the same is sealed up.

The cover C may be of any convenient form adapted to the rail to be used and of a convenient length, so that it will be easily detachable and admit of access to the system of distributing-wires contained in the chamber B.

The chamber B is electrically insulated by the asphalt coating or other electrically-insulating paint *d*, and contains the system of wires E, which are individually insulated and may be carried either separately or in a cable in any of the methods in common use.

It will readily be seen that when a rail is provided with this system of distributing the electrical energy by removing the cover C the system may be easily reached at any point on the line without disturbing the roadway or the rail itself.

Having thus described my invention, what I claim is—

The combination of the traction-rail A with an independent detachable cover C, supported by and fastened to said rail, and the electric wires E within said cover, as and for the purpose intended, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

HIRAM H. CARPENTER.

Witnesses:

A. G. SAFFORD,
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