

(No Model.)

C. L. GERRARD.
INSULATOR.

No. 459,686.

Patented Sept. 15, 1891.

Fig. 1.

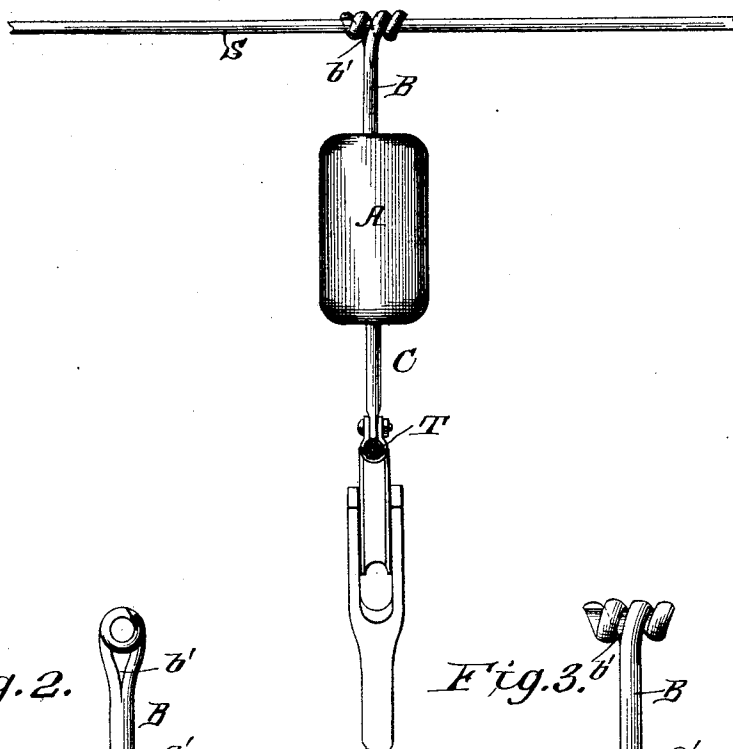


Fig. 2.

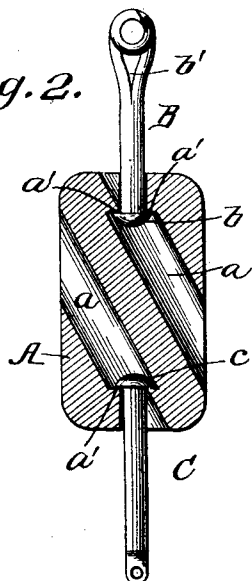
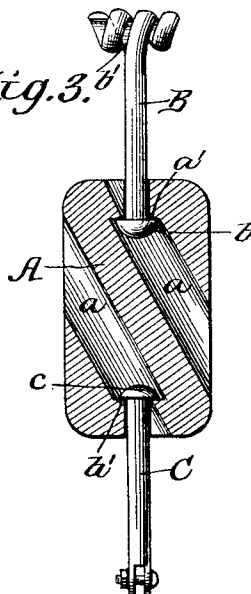


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

CLARENCE L. GERRARD, OF COLUMBUS, NEBRASKA.

INSULATOR.

SPECIFICATION forming part of Letters Patent No. 459,686, dated September 15, 1891.

Application filed April 3, 1891. Serial No. 387,568. (No model.)

To all whom it may concern:

Be it known that I, CLARENCE L. GERRARD, of Columbus, in the county of Platte and State of Nebraska, have invented a new and useful Improvement in Insulators, of which the following is a specification.

This invention relates generally to insulators, and more particularly to trolley-wire insulators for electric railways.

The object of my invention is to provide a device of this class that shall be cheap and simple in construction, easily applied, and one that will prevent rain, snow, sleet, ice, &c., forming a connection with the ground, which is frequently done in insulators now in use.

With these objects in view my invention consists of an insulating-body having independent apertures formed therein, a sustaining rod or bolt arranged in one of the apertures and adapted to be attached to the sustaining-wire, and a trolley-supporting rod or bolt arranged in the other aperture and adapted to be attached to and support the trolley-wire.

My invention consists, also, in certain details of construction and combination of parts, all of which will be fully explained hereinafter, and pointed out in the claims.

In the drawings forming a part of this specification, Figure 1 is a side elevation of my improved insulator. Fig. 2 is a sectional view of the same, and Fig. 3 is a similar view showing a somewhat different construction.

In the embodiment of my invention I employ a body A of insulating material, such as porcelain, glass, and the like, said body being preferably cylindrical in shape, though it may be spherical, cubical, or any preferred shape. In this body A of insulating material are produced two independent apertures or bores *a*, said apertures or bores being preferably parallel with each other and arranged obliquely, as shown, extending from opposite sides of the body to the opposite ends of the same, and near the ends of the body the apertures are provided with inwardly-projecting shoulders *a'*. It is preferred to so arrange the apertures or bores that they shall open at the opposite ends in alignment with each other and in coincidence with the longitudinal axis of the body, and between the shoulders and

the ends of the body the bore is diverted somewhat and arranged parallel with the axis of the body or at right angles to the plane of the shoulders.

A sustaining rod or bolt B is inserted in one of the apertures, said bolt being inserted from the side, and is provided with a head *b*, adapted to engage the shoulders of its aperture, whereby said rod or bolt is swiveled in the body at one end of the same. The outer end of the rod or bolt B is slotted longitudinally at *b'*, by means of which one half of the said split end may be wound around the sustaining-wire S in one direction, while the other half may be wound around the said wire in the opposite direction, thus holding the insulating-body suspended from the sustaining-wire. A trolley-wire-supporting rod or bolt C is inserted in the other aperture or bore from the side in the same manner as the sustaining rod or bolt, and the rod C is also provided with a head *c*, by means of which it is swiveled in the body at the opposite end, and the outer end of the rod C is so shaped that it can be conveniently attached to the trolley-wire T. The insulating-block is made in one piece, and as the bores are independent of each other a partition of insulating material is formed between them, and it will be seen that it is impossible for rain, snow, ice, &c., to form a connection between the two rods arranged in their respective apertures or bores.

Having thus described my invention, what I claim as new is—

1. The combination, with an insulating-body having independent parallel apertures or bores produced therein, of a sustaining rod or bolt secured in one of the apertures or bores and projecting from one end of the body, and the trolley-wire-supporting rod or bolt secured in the other aperture or bore and projecting from the opposite end of the body, substantially as shown and described.

2. The combination, with an insulating-body having independent parallel diagonal apertures or bores produced therein, said apertures or bores extending from opposite sides of the body to the opposite ends, of the sustaining rod or bolt arranged in one of the oblique apertures or bores and projecting from one end of the body, and the trolley-wire-supporting rod or bolt arranged in the other ap-

erture or bore and projecting from the opposite end of the body, substantially as shown and described.

3. The combination, with the insulating-
5 body having independent parallel oblique apertures or bores formed therein, said apertures or bores extending from opposite sides to the opposite ends of the body and near the
10 ends of the body are provided with inwardly-projecting shoulders, of the sustaining rod or bolt arranged in one of the apertures or bores and provided with a head adapted to engage the shoulders of said aperture or bore, and
15 the trolley-wire-supporting rod or bolt arranged in the other aperture or bore and provided with a head adapted to engage the shoulders of said aperture, substantially as shown and described.

4. The combination, with an insulating-body
20 having independent parallel oblique apertures or bores produced therein, said bores extending from the opposite sides of the body to the opposite ends of the same and provided with inwardly-projecting shoulders
25 adjacent to said ends of the body, of the sustaining rod or bolt swiveled in one of the

apertures or bores and provided with a head adapted to bear upon the shoulders of said aperture or bore, the outer end of said rod or bolt being split to wind upon the sustaining- 30 wire, and the trolley-wire-supporting rod or bolt swiveled in the other aperture or bore, said rod or bolt having a head adapted to engage the shoulders of its aperture or bore, the outer end of said rod or bolt being adapted 35 to be secured to the trolley-wire, substantially as shown and described.

5. As an improved article of manufacture, the herein-described insulator, consisting of a body of insulating material having inde- 40 pendent parallel oblique apertures or bores produced therein, said apertures or bores extending from opposite sides of the body to the opposite ends of the same, producing an insulating-partition between them, said aper- 45 tures or bores being provided with inwardly-projecting shoulders near the end of the body, substantially as shown and described.

CLARENCE L. GERRARD.

Witnesses:

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