W. T. GODDARD.

INSULATOR.

APPLICATION FILED JUNE 12, 1908.

947,516. Patented Jan. 25, 1910.

Fig 1.

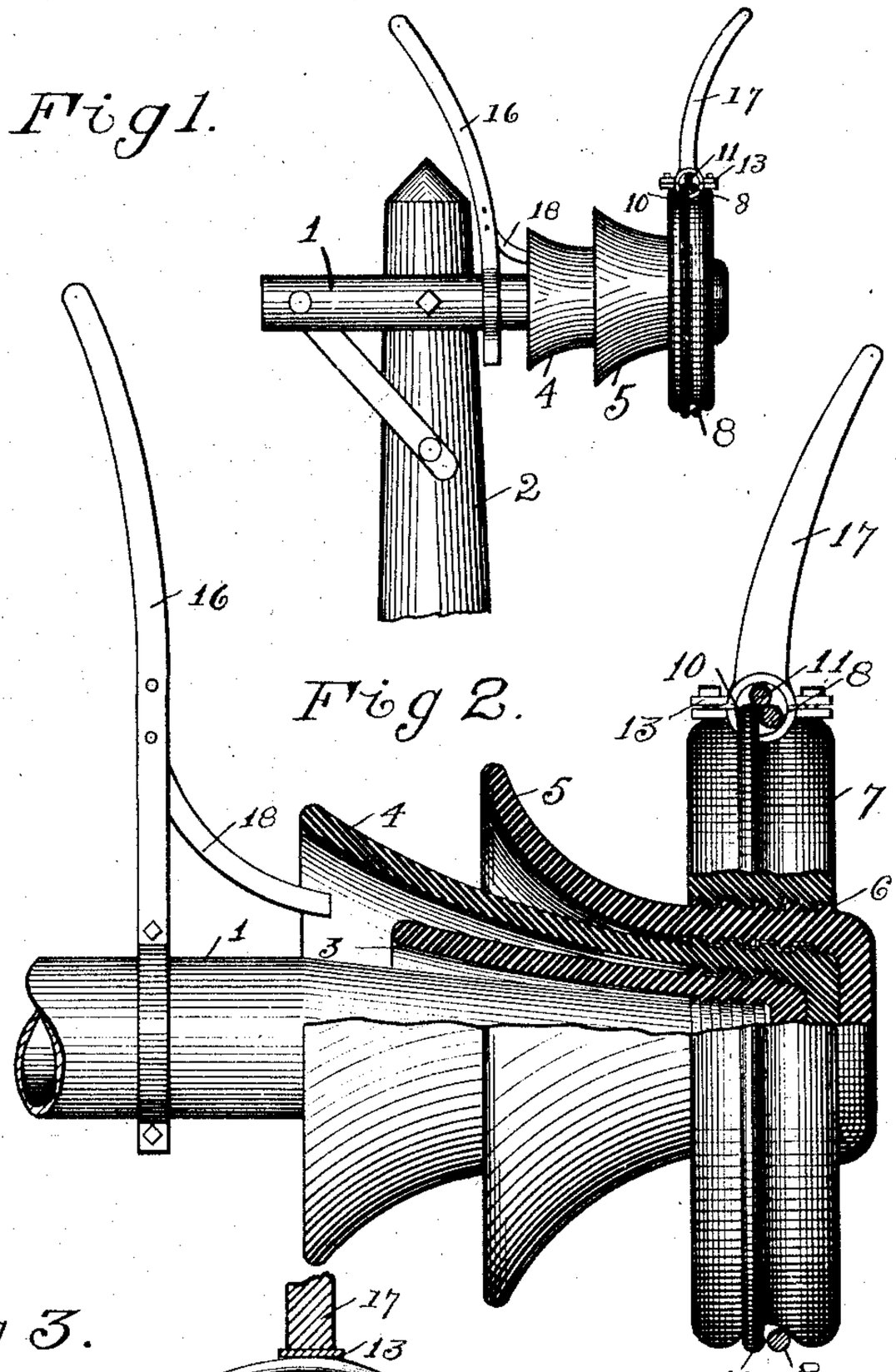
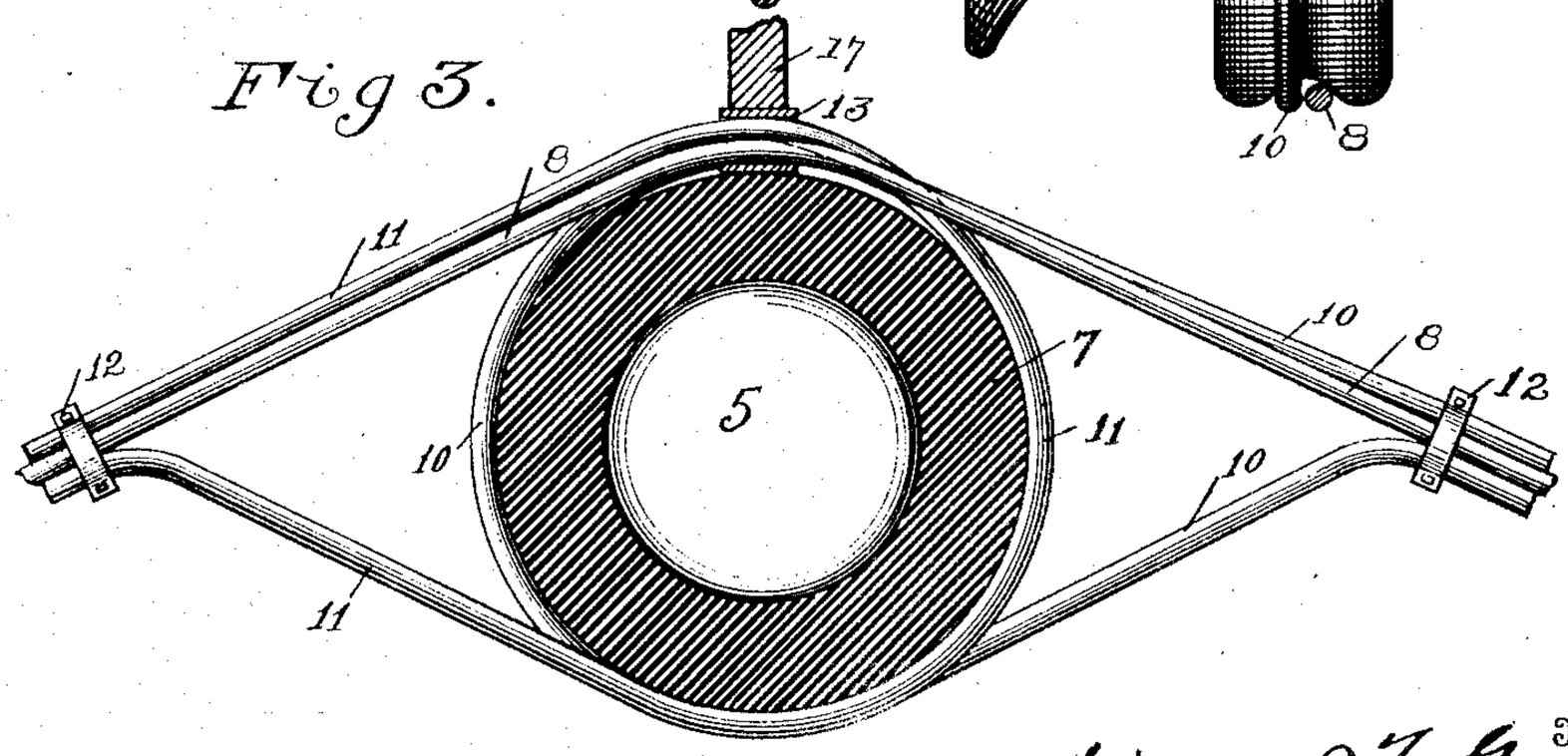


Fig 2.

Fig 3.



Witnesses

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UNITED STATES PATENT OFFICE.

WALTER T. GODDARD, OF VICTOR, NEW YORK, ASSIGNOR TO THE LOCKE INSULATOR MFG. CO., OF VICTOR, NEW YORK, A CORPORATION OF NEW YORK.

INSULATOR.

947,516. Specification of Letters Patent. Patented Jan. 25, 1910.

Application filed June 12, 1908. Serial No. 438,056.

To all whom it may concern:

Be it known that I, WALTER T. GODDARD, of Victor, in the county of Ontario and State of New York, have invented certain new and useful Improvements in Insulators; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the reference-numerals marked thereon.

The present invention relates to insulators for high voltage transmission lines and it has for an object to provide a construction in which the line wire is removed as far as possible from the pin or support without unduly increasing the weight of the insulator.

To these and other ends the invention consists in certain improvements and combinations of parts all as will be hereinafter more fully described, the novel features being pointed out in the claims at the end of the specification.

In the drawings: Figure 1 is a view of a support having an insulator thereon embodying this invention; Fig. 2 is a view partly in vertical section showing one of the insulators; and Fig. 3 is a sectional view showing the manner of securing the conductor to the insulator.

In the embodiment of the invention herein shown, the insulator is supported horizontally, the support 1 in this instance being in the form of a cross piece secured to a post 2. The insulator preferably comprises a plurality of sections, three of which, 3, 4, and 5 are, in this instance, flared and fitted one within another and are closed at their smaller ends which abut. The sections 3, 4 and 5 are secured together in any suitable manner but preferably by screw threads 6 cemented together, the inner section 3 being secured to the support 1 and having its inner end arranged within the section 4, the outer section 5 having a greater flare than the section 4, and the section 4 having a greater flare than section 3.

Carried by the insulator is a conductor-supporting section in the form of a vertically disposed flange or ring 7 which has such a diameter that the conductor is removed from the support 1 a distance to reduce the static strain to a minimum. This ring preferably has a grooved periphery to which the conductor 8 is secured in any suitable manner. In the present instance the conductor rests in the groove of ring 7 and is secured to the insulator by two tie wires 10 and 11 looped around the ring on opposite sides of the latter and secured at their ends to the conductor as by split clamps 12. This arrangement does not produce on the insulator any twisting strain that would tend to separate the parts of the insulator.

In order to prevent an arc formed between the insulator and its support destroying or cracking the insulator, I provide two arcing members 16 and 17, one connected to the support, the other connected to the insulator and both preferably projecting upwardly to a plane above the insulator. Preferably, one of the members 17 carries a clamp 13 which is secured to the conductor 8 and tie wires 10 and 11 so as to be in direct connection with the conductor, while the other member is clamped to the support 1 and has an extension 18 which projects in proximity to the flared portion of one of the petticoat sections.

The construction and the arrangement of the arcing member are not claimed in this application, but form the subject matter of a divisional application filed by me on October 25th, 1909, Serial No. 524,469, for improvements in insulator protectors.

In this construction of insulator, the flared ends of the sections form a number of circular vertically disposed arcing barriers between the supporting ring 7 and the support. All parts of the insulator are exposed to the atmosphere but this is not material as all insulators' tests are made under this assumption that at one time or another the insulator will be required to carry its full capacity while covered with a film of water. Further, the flared portions of the sections being arranged horizontally cause the insulator to drain quickly.

I claim as my invention:

1. The combination with a horizontally arranged support, of an insulator composed of a series of horizontally arranged flaring sections having closed outer ends secured to the support, and a ring shaped insulating member surrounding the flared sections and having means for securing an electrical conductor to the periphery thereof.

2. The combination with a horizontally arranged support, of an insulator section closed at its outer end, fitted over the sup-

port and having a vertically disposed arc barrier surrounding the support, and a ring-shaped conductor-supporting member surrounding the section between the closed end and the barrier, and having means for securing an electrical conductor to the periphery thereof.

3. An insulator comprising a plurality of flared sections having closed ends and fitting one within another, and a ring shaped insulating member secured to the outer section and having a grooved periphery.

4. The combination with a horizontally arranged support, of an insulator section closed at its outer end, fitted over the support and having a vertically disposed arc barrier surrounding the support, and a ring-shaped conductor-supporting member surrounding the section between the closed end and the barrier and having a grooved periphery.

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