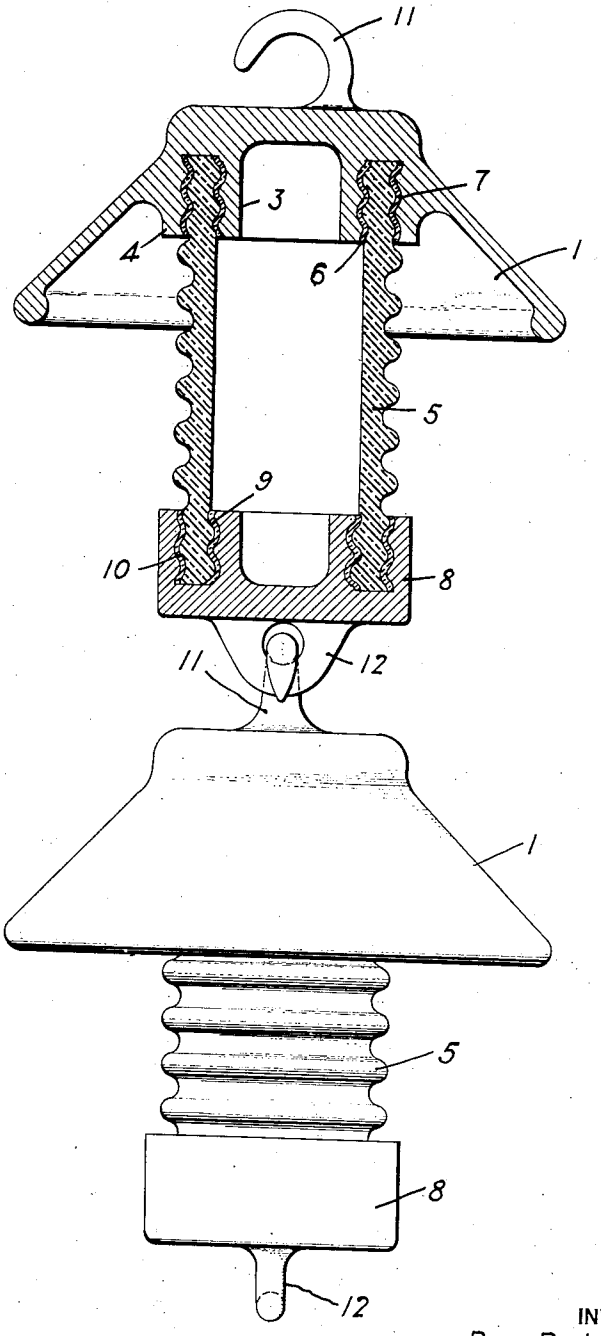
R. P. JACKSON.

ELECTRIC INSULATOR.

APPLICATION FILED MAY 14, 1915.

1,303,324.

Patented May 13, 1919.



WITNESSES:

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ELECTRIC INSULATOR.

1,303,324. Specification of Letters Patent. Patented May 13, 1919.

Application filed May 14, 1915. Serial No. 28,053.

To all whom it may concern:

Be it known that I, RAY P. JACKSON, a citizen of the United States, and a resident of Edgewood Park, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Electric Insulators, of which the following is a specification.

My invention relates to electric insulators, and it has special reference to strain insulators that are adapted to be connected in flexible series.

The object of my invention is to provide a strain insulator of the above indicated character which shall be simple in construction, rugged and durable in operation and efficient in its electrical characteristics.

The single figure of the accompanying drawing is a side view, partially in elevation and partially in section, showing two associated strain insulators constructed in accordance with my invention.

As shown, each insulator section consists of a flanged metal cap 1, provided on its concave side with two concentric rings 3 and 4 which together form an annular channel, the walls of which should be corrugated or otherwise roughened. A hollow cylinder 5, composed of porcelain or other suitable insulating material, is received within the annular channel formed by the rings 3 and 4, the inner and outer sides of the walls of the cylinder, which are engaged by the corrugations on the rings 3 and 4, being correspondingly corrugated. Layers of cement 6 and 7 are interposed between the porcelain cylinder 6 and the rings 3 and 4, respectively.

The outer wall of the porcelain cylinder 5 is preferably provided with transverse corrugations throughout its length for the purpose of providing an increased creepage distance between the metal parts of the insulator. The lower end of the cylinder 5 is attached to a metal disk 8 which is provided with an internally corrugated annular channel similar to the channel formed in the cap 1 and the lower part of the porcelain cylinder is secured in this channel by layers of cement 9 and 10.

Each insulator section is provided, at the top and bottom, with means for attaching the sections to each other and to the usual support. In this particular instance such attaching means comprises a hook 11 formed on the top of the cap member 1 and a perforated ear or yoke 12 formed on the bottom of the disk 8.

It will be observed that the insulator sections which I have shown and described are extremely simple and inexpensive in design and are, at the same time, more durable than ordinary insulators of the same general type, since they have no fragile flanges to be broken off. These insulators have the additional advantage that, when assembled in series, as shown, the electrostatic stresses imposed on the insulating members are substantially uniformly distributed because of the substantially uniform distribution of the electrostatic field surrounding the porcelain insulating tube by reason of the metallic caps 1 acting as electrostatic shields. The details of the structure which I have shown and described may be varied in many particulars without departing from the spirit of my invention, and it is therefore to be understood that no limitations are to be imposed upon my invention except such as are indicated in the appended claims.

I claim as my invention:

1. A suspension-type insulator comprising metallic end members having annular channels provided with uneven walls formed therein and a tubular insulating member for transmitting all the tension between the end members, the ends of the insulating member being provided with both exterior and interior grooves and received in said channels of said end members and one of said metallic end members having a laterally extending outer flange formed thereon to effect a substantially uniform distribution of the electrostatic field surrounding the insulating member.

2. A suspension-type insulator comprising

a plurality of superposed and flexibly connected units each of which comprises metallic end members and a tubular insulating member extending between said end members for transmitting all the mechanical stress therebetween, the upper one of said end members having a laterally extending outer flange formed thereon, the flanges of the units pertaining to the insulator effecting, in combination, a uniform distribution of the electrostatic fields surrounding the insulating members.

In testimony whereof, I have hereunto subscribed my name this 30th day of April, 1915.

RAY P. JACKSON.