L. L. MAST.

ELECTRIC CABLE LIGHTNING ROD.

APPLICATION FILED NOV. 12, 1909.

965,207. Patented July 26, 1910.

Fig. 1.

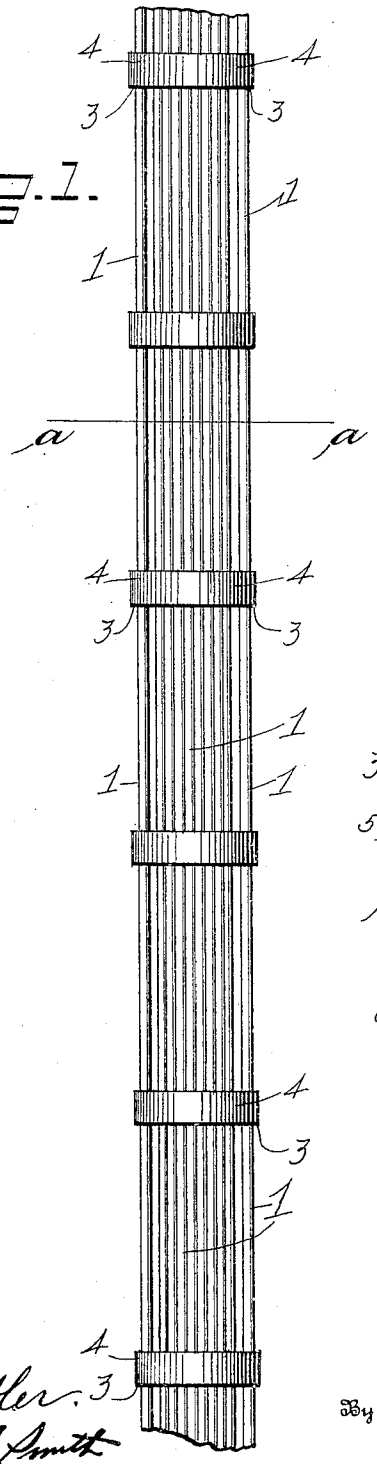


Fig. 2.

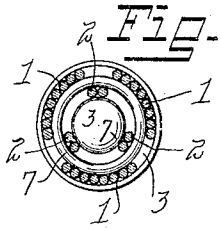
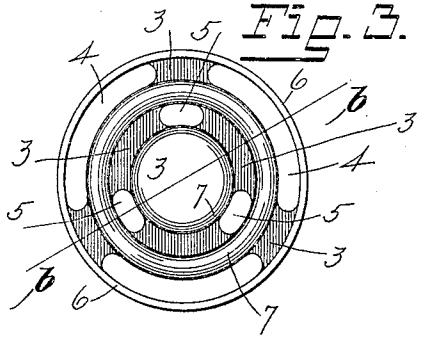


Fig. 3.



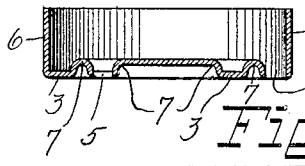


Fig. 4.

Witnesses

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ELECTRIC-CABLE LIGHTNING-ROD.

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To all whom it may concern:

Be it known that I, LOUIS L. MAST, a citizen of the United States, residing at West Milton, in the county of Miami and State of Ohio, have invented certain new and useful Improvements in Electric-Cable Lightning-Rods; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in electric conductors especially adapted for the purpose of lightning rods.

The object of the invention is to provide cable for lightning rod purposes which is devoid of twists or spiral windings and which offers the least possible resistance to the passage of high tension or atmospheric electricity. In construction the device consists of a multiplicity of straight wires arranged in parallel relation and assembled in the form of a cable which is devoid of any twist or lateral features hereinbefore stated and as will hereinafter more fully appear.

In the accompanying drawings, Figure 1 is a side elevation of a rod or conductor made in accordance with my invention. Fig. 2 is a sectional view on the line *a*—*a* of Fig. 1. Fig. 3 is an enlarged plan view of one of the metallic bands or holders. Fig. 4 is a sectional view of one of the metallic bands or holders upon the line *b*—*b* of Fig. 3.

In the specification and drawings similar reference characters indicate corresponding parts.

Extending throughout the length of the rod or conductor in a parallel manner, and free from spirals or twists, are a multiplicity of outer wires 1 and inner wires 2 assembled in groups in circular form. Each series of wires, which it will be understood are constructed of copper, is separated from the other so as to provide a large radiating surface to prevent the conductor from becoming overheated when charged with current. The different series of wires so assembled are maintained in position as shown in the drawings, by means of a suitable number of metallic cup shaped bands 3, which are constructed of copper. The band consists of an annular rim 6 which extends from a perforated disk portion 3 at one end thereof, which disk portion is provided with annular corrugations 7 extending in opposite directions to add strength to the device. These cup-shaped bands are provided with inner and outer openings 5 and 4 through which the wires forming the conductor are passed. The outer openings 4 receive the outer series of wires which lie close to the annular band portion 6 and by reason of such band portion 6 the holders are prevented from having any tendency to move out of horizontal positions. Each of the inner series of openings 5 receive two wires of the inner series of wires, and it will be seen from the drawings that the outer and inner series of wires are spaced apart a distance equal to the width of the outer corrugation 7. It will be understood that owing to the assembled wires being straight throughout their lengths, the least resistance is offered to the passage of current and the possibility of high tension currents leaving the conductor at any time is reduced to a minimum. A rod or conductor so constructed, for the reasons above indicated, may be used as a lightning rod with a greater degree of safety than is possible in the use of spirals or twisted wires. The metallic bands are maintained in their positions by the friction created through the contact of the wires with the edges surrounding the various openings hereinbefore described.

Having described my invention, I claim:

1. An electric cable for high tension currents, consisting of a multiplicity of straight wires assembled in parallel relation, and a series of bands surrounding said wires, each of said bands having a laterally extended annular rim adapted to lie on the outside of the assembled wires.

2. In an electric cable for high tension currents, a plurality of series of parallel wires, each series being separated from the adjacent series to provide atmospheric space, and a plurality of holders for maintaining said wires in position, said holders comprising disk portions with perforations therein to receive the several series of wires and to maintain them in their spaced relation.

3. In an electric cable for high tension currents, a plurality of series of straight wires arranged in parallel relation, and a plurality of metallic holders encompassing

said wires, each of said holders consisting of a disk with two concentric series of openings therein to receive the wires and to maintain them in their spaced relation, and an annular rim extending from each of said holders and surrounding the outermost series of wires.

4. In an electric cable for high tension currents, a plurality of outer groups of wires and a plurality of inner groups of wires concentrically assembled in parallel relation, in combination with a series of individual holders, each of which has a series of outer openings and a series of inner openings to receive said wires and to maintain them spaced apart.

5. In an electric cable for lightning rods, a plurality of wires arranged in groups and forming an outer series, a plurality of wires arranged in groups and forming an inner series, the wires of both groups being straight throughout their lengths and each group being spaced from the adjacent groups, and a series of metallic holders each of which is provided with openings corresponding to the number of groups of wires and which receive said groups of wires, each of said holders having an annular rim which incloses the outer group of wires.

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

LOUIS L. MAST.

Witnesses:
MATTHEW SEIBLER,
HOWARD S. SMITH.