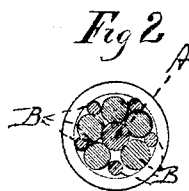
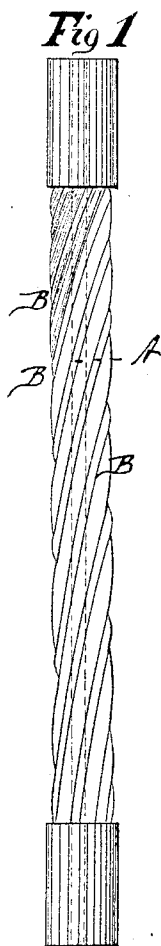


M. D. PHELPS.

Improvement in Lightning Rods.

No. 122,055.

Patented Dec. 19, 1871.



Witnesses:

Frank L. Curran
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Inventor

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UNITED STATES PATENT OFFICE.

MYRON D. PHELPS, OF BRISTOLVILLE, OHIO.

IMPROVEMENT IN LIGHTNING-RODS.

Specification forming part of Letters Patent No. 122,055, dated December 19, 1871.

To all whom it may concern:

Be it known that I, MYRON D. PHELPS, of Bristolville, in the county of Trumbull and in the State of Ohio, have invented certain new and useful Improvements in Lightning-Rod; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists of a lightning-rod composed of a central straight copper core surrounded by three or more twisted iron wires, of the same or different sizes, forming a perfect coat of protection to the core, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side view, and Fig. 2 a cross-section of my lightning-rod.

I construct my lightning-rod of a central copper core, formed of a straight copper rod, A, around which are twisted three or more iron wires, B B, of any desired size, forming an exterior coat to the core. All the splices are to be welded or

brazed, whereby a continuous rod is obtained. The copper core, being free from twist, increases its attractive and conductive powers, and concentrates the current of electricity upon the center of the rod instead of throwing it on the outside, thereby making the electricity less liable to leave the rod. The copper core, being entirely covered with three or more iron wires of same or different sizes, gives it strength and power, and prevents oxidation, which the copper wires are liable to when freely exposed to the atmosphere.

The central copper core may be surrounded by copper wires instead of the iron wires; but I prefer the latter for the reasons above stated.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A lightning-rod composed of a straight copper core surrounded by three or more twisted wires, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 30th day of September, 1871.

MYRON D. PHELPS.

Witnesses:

HEMAN B. HAMMON,
JACOB HAMMOND.

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