

W. HALL.  
Lightning Rod.

No. 77,729.

Patented May 12, 1868.

*Fig. 1.*



*Fig. 2.*



*Witnesses*

*Johns. Hollingshead  
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*Inventor*

*William Hall*

# United States Patent Office.

WILLIAM HALL, OF DUBUQUE, IOWA.

*Letters Patent No. 77,729, dated May 12, 1868.*

## IMPROVEMENT IN LIGHTNING-RODS.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM HALL, of the city of Dubuque, in the county of Dubuque, and State of Iowa, have invented a new and useful Improvement in Lightning-Rods, which I call "William Hall's Continuous Cylindrical Lightning-Rod;" and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing, in which—

Figure 1 represents a portion of the rod, and

Figure 2 represents an end view of the same.

This invention consists of a continuous cylinder, and is constructed in the following manner: I take a strip of sheet copper, any length required for a lightning-rod, and by means of adequate machinery I form it into a cylinder or tube, allowing the sheet to be rolled once, twice, or more times around, giving as great capacity for conducting electricity as I choose. The cylinder, single or double, may be formed over an iron wire or not, and may be either soldered or not, at discretion.

The advantages I claim for this invention are:

First. Perfect continuity.

Second. Perfect uniformity, causing an equal distribution of the free electricity over the entire surface of the conductor, and offering no obstruction in its transmission; and

Third. Great strength and durability.

I am aware that there has been constructed a tube from a continuous strip of copper, to be used as a lightning-rod, and I do not claim to have invented a simple tube, nor have I set up any claim to said invention. My invention consists in so constructing a cylinder, of a continuous strip of sheet metal, that the sheet shall extend several times around the axis in forming the cylinder, leaving the edges unsoldered or open.

The advantages of this mode of constructing a lightning-rod are manifold.

First. It gives any desired amount of conducting-surface required in a very compact form.

Second. It maintains a perfectly cylindrical form, no matter to what extent the sheet is rolled.

Third. By this means a much greater strength is obtained, and hence greater durability.

Fourth. The machinery by which this rod is made is of my own invention, and I believe it was never invented nor used by any one, and is peculiarly and only adapted to the construction of this convoluted cylinder, and it is my intention to apply for a patent for said machine as soon as I shall bring it as near perfection as desirable.

Having thus stated what I do not claim, and the nature of my invention, with some of its advantages,

What I claim as my invention, and desire to secure by Letters Patent, as an article of manufacture and use, is—

A continuous convoluted cylinder, constructed of sheet metal, wherein the sheet of which it is composed shall extend more than once around the axis in forming the cylinder, whether the same shall be constructed over an iron wire or not, when the same is made substantially as and for the purposes herein set forth.

WILLIAM HALL.

Witnesses:

JOHN S. HOLLINGSHEAD,

JOHN D. BLOOR.