

VERMILYA, REYBURN & HUNTER.

Lightning Rod.

No. 92,551

Patented July 13, 1869.

Fig. 1.



Fig. II.



Witnesses

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LELAND D. VERMILYA, OF DAYTON, OHIO, AND WILLIAM S. REYBURN AND EDMOND A. W. HUNTER, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 92,551, dated July 13, 1869.

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 we, LELAND D. VERMILYA, of Dayton, Montgomery county, Ohio, and WILLIAM S. REYBURN and EDMOND A. W. HUNTER, of Philadelphia, Philadelphia county, Pennsylvania, have invented a new and useful Improvement in Lightning-Rods; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to lightning-rods; and

It consists in forming a rod of a core of angle-iron, to which a strip or sheet of copper is so applied as to fit perfectly at every point and form also a tight joint at its contiguous edges, the core and its casing being twisted together, all as will be hereinafter described.

In the accompanying sheet of drawings—

Figure 1 represents a view of a section of rod constructed according to our invention.

Figure 2 is an end view, showing the form of the rod in cross-section.

Similar letters of reference indicate corresponding parts.

A represents the rod, which is formed of a core, *a*, of angle-iron, and an outer covering or casing, *b*, of sheet-copper, which fits closely to the angles and plain surface of the core, as shown.

The iron (in cross-section) is in the form of a cross, there being four wings or angles, (there may be three or more wings or angles,) of sufficient weight to give the required strength to the rod when the same is twisted or made in the spiral form, as represented in the drawing. This is undoubtedly the best form that a given weight of iron can be put into for a lightning-rod, as its self-supporting power and conductivity can not be excelled, and it may be called "a first-class iron rod."

For increasing the conductive power of the rod, we cover the iron (water-tight) with sheet-copper. This

we do when we twist the rod, the sheet of copper being put on and the rod twisted at one and the same operation.

The edges of the copper ribbon are lapped over each other, and pressed down, so as to effectually exclude water and prevent oxidation.

The copper is firmly pressed to the surface and into the angles of the iron, and the rod in this spiral form is equal, in its conductive power, to a round copper rod of the same diameter, while the stiffness and strength of the iron are secured by the combination of two metals in this form.

This combined spiral rod (which is equal, as to its conductive power, to a solid copper rod presenting the same superficial area, and superior as regards its strength and self-supporting power,) can be manufactured for one-third the cost of the solid copper rod above named.

We are thus enabled to furnish to the public a lightning-rod quite equal, if not superior to any rod in use, at a greatly reduced expense.

Having thus described our invention;

What we claim as new, and desire to secure by Letters Patent, is—

The lightning-rod A, consisting of the core *a* of angle-iron, encased by the copper strip *b* applied thereto, and twisted with it at the same operation, so as to fit perfectly every portion of the surface of said core, and form a tight joint at the contiguous edges of the copper, as herein set forth, as a new article of manufacture.

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