

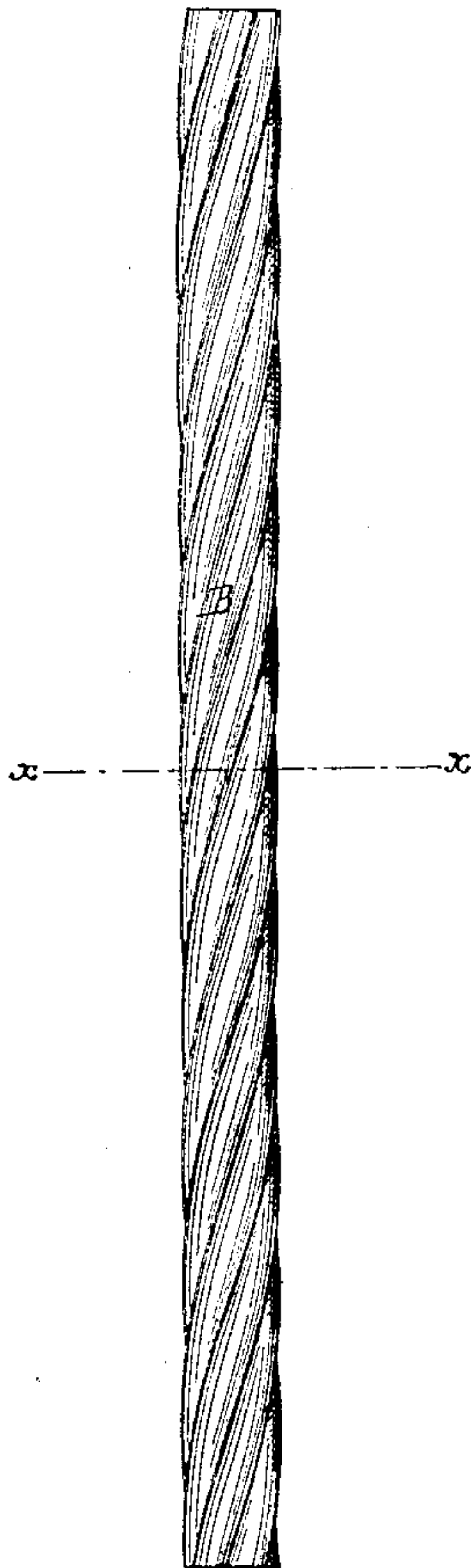
W. B. MUNN.

Lightning-Rods.

No. 135,574.

Patented Feb. 4, 1873.

*Fig. 1.*



*Fig. 2.*



*Witnesses.*

*John. Tyler*  
*Edmond Clarke*

*Inventor.*

*Wm. B. Munn*

*By his atty. Wm. C. Antire*

# UNITED STATES PATENT OFFICE.

WILLIAM B. MUNN, OF CLEVELAND, OHIO.

## IMPROVEMENT IN LIGHTNING-RODS.

Specification forming part of Letters Patent No. 135,574, dated February 4, 1873.

*To all whom it may concern:*

Be it known that I, WM. B. MUNN, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Lightning-Rods; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing making a part of this application.

My invention relates to that class of lightning-rods composed of a twisted wire cable core surmounted by a sheet-copper covering; and has for its object the tucking away of the edges of the metal cover so that they will be out of sight, thus preventing the exposure of said edges to the action of the weather, as will be hereinafter more fully explained; and to these ends my invention consists in tucking away the edges of the copper covering between the adjacent wires of the cable, so that when the core and covering are twisted or bent the tucked-away edges will be bit or clasped tightly by the said wires.

Previous to my invention, as far as I have been able to discover, all rods of the class to which my invention refers have had the edges of the copper covering simply pressed one on top of the other or brazed. In every instance the raw edges may be bulged out by bending the rod around a sharp curve or angle, thus exposing said edges to the action of the weather, and allowing moisture or rain to enter the seam and penetrate to the inside of the cable, and, to a greater or less degree, impairing the conducting properties of the rod. My present invention completely overcomes all these difficulties, and permits the rod to be made in any length and coiled, and afterward cut according to the height of the premises it is intended to protect.

To enable those skilled to more fully appreciate and understand the same, I will describe its construction by reference to the accompanying drawing, in which—

Figure 1 is plan view of a piece of rod embracing my improvements, and Fig. 2 is a horizontal section taken at the line *xx* of Fig. 1.

Similar letters indicate the same parts in both views.

A A A A are the wires forming the core, which is twisted, and B is the sheet-copper covering, which is rolled onto and twisted with the core. The edges 1 1 of this covering are, during the process of covering, tucked away between any two of the wires forming the core, so that when completed the edges will be firmly secured, as clearly seen at Fig. 2 of the drawing. These edges 1 1 are shown as spreading in opposite directions. This arrangement of them is intended in the drawing to clearly show them, but in practice they will accommodate themselves to the influences worked by the twisting process.

The gist of my invention lies in the idea of having these edges turned in between the wires, so that the covering is held fast throughout the whole extent of the rod, and any bending of the rod into a coil for the purposes of transportation, or around sharp curves and angles in its erection, will have the reverse tendency that would operate upon rods as at present constructed, and bite or grasp the inturnd edges at such points with even more tenacity than where the line of the rod is straight.

I have concluded that the process of covering may be rendered simple and economic by a machine which I am at present at work upon perfecting, &c., but which it is not necessary to further allude to.

Having described the construction and advantages of my improved lightning-rod, what I claim as of my invention, and desire to secure by Letters Patent, is—

A lightning-rod composed of a central-wire cable core, or its equivalent, surrounded by a sheet-metal conducting covering, when the edges of such covering are tucked away, substantially in the manner and for the purposes herein set forth.

In testimony whereof I have hereunto set my hand and seal this 5th day of September, A. D. 1872.

W. B. MUNN. [L. S.]

In presence of—

ARTHUR L. MCINTIRE,  
WM. C. MCINTIRE,