(No Model.)

W. B. MUNN.

COUPLING FOR LIGHTNING RODS.

No. 258,590. Patented May 30, 1882.

Fig. 1.

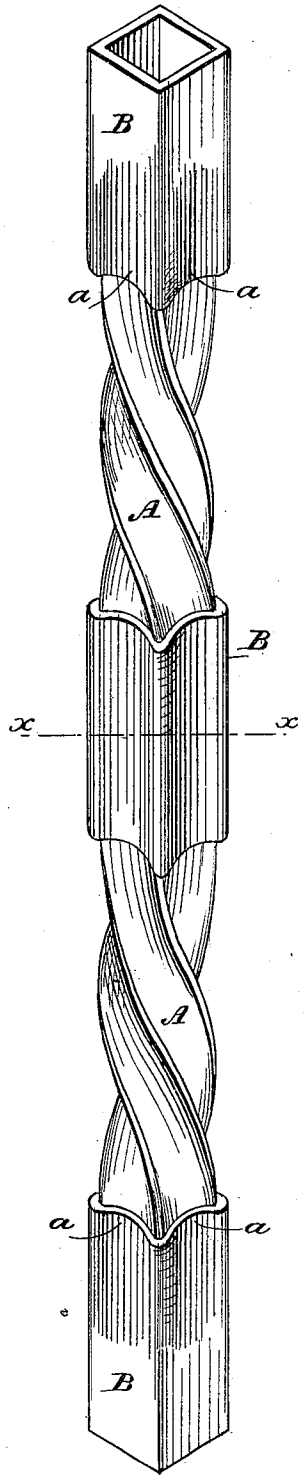


Fig. 2.

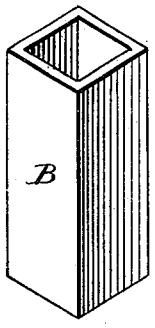
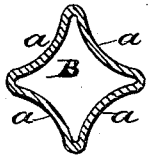


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM B. MUNN, OF COLLINGSWOOD, NEW JERSEY.

COUPLING FOR LIGHTNING-RODS.

SPECIFICATION forming part of Letters Patent No. 258,590, dated May 30, 1882.

Application filed February 1, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. MUNN, a citizen of the United States, residing at Collingswood, in the county of Camden and State of New Jersey, have invented new and useful Improvements in Couplings for Lightning-Rods, of which the following is a specification.

My invention relates to certain new and useful improvements in lightning-rods, or, more particularly, to the connection thereof.

My invention has for its object to secure a rigid connection between the sections of the rod, and at the same time assure perfect conductivity.

Prior to my invention it has been suggested to provide the ends of the sections of a spiral rod with couplings having solid bodies provided with screw-connections at their adjacent ends and extended at their opposite ends to form hollow cylindrical convoluted walls adapted to fit the grooves and ribs of said sections, as fully described in Letters Patent No. 183,426, dated October 17, 1876. I have discovered from practical experience that in the manufacture of such coupling devices the natural imperfections in castings render the device liable to inaccurate fitting of the adjacent sections, and that the continuity of the rod being dependent upon screw-connections, it is liable to become loosened by the vibrations of the rod, and that the joints are also liable to admit rain and moisture, tending in time to render imperfect the conductivity of the rod.

My invention is designed to overcome all these objections, and to provide a coupling which shall be effective and at the same time economic of construction, and easily applied outside of the shop; and with these ends in view my invention consists of a coupling for lightning-rod sections, composed of a simple hollow cast-metal box, of rectangular or other suitable shape in cross-section, adapted to be secured to the adjacent ends of two sections of lightning-rod by the compression of the sides of said box into the grooves of the rod, as will be hereinafter fully set forth.

My invention also consists of lightning-rod sections provided at one or both ends with coupling-boxes hollow from end to end, and secured thereto so as to extend slightly beyond the terminus of the section, and adapted to receive the adjacent end or ends of additional sections, as will be hereinafter described.

In order that those skilled may know how to make and use my improvement, I will proceed to describe the same, referring by letters to the accompanying drawings, in which—

Figure 1 is a representation in perspective of two sections of an ordinary spiral rod connected at their adjacent ends by my improved coupling, and each section provided at its opposite ends with similar coupling-boxes, secured in place and adapted to receive the ends of additional sections. Fig. 2 is a perspective view of the cast-metal box before it is applied to the rod; and Fig. 3, a cross-section of the box after it is applied, and at the line *x x*, Fig. 1.

Similar letters indicate like parts in the several figures.

A A represent the sections of rod, which is composed of an ordinary wrought-iron core having a cruciform section, so as to present four longitudinal ribs, said rod being incased or covered with thin copper, and the whole twisted to produce the spiral form shown in the drawings.

B is the coupling, which consists of a cast-metal box, preferably of brass, hollow from end to end, and preferably rectangular in cross-section, the diagonals of said box being of sufficient extent to receive the opposite ribs of the rod-sections, as clearly indicated.

It is customary in the manufacture of rods to make a continuous rod in the shop, and, as occasion or the demand requires, to cut it up into sections of about ten feet in length and apply, as far as may be desirable, (in the shop,) the couplings to one end of each section. To do this I pass one of my improved couplings (which in practice are about two inches in length) over one end of a section of rod to the distance of about one-half the length of the coupling. The side walls of the couplings are then by a drop-press, or in any other suitable manner, compressed against the copper covering between the wings or ribs of the rod, as clearly shown at *a a*, up to about the central portion of the coupling. In this manner one end of each section is securely united to the coupling, and said sections are shipped in this condition, and when it is desired to apply the

sections to use they are put together by entering that end of the section which is not provided with a coupling into the coupling applied to the adjacent end of a section, and by the application of a pair of compressing tongs or levers the uncompressed side portions of the coupling are forced against the inserted section, so as to produce a continuous depression from end to end of the box, as shown at the center of Fig. 1, and produce a configuration of the box, such as shown at the cross-section, Fig. 3, thereby not only rigidly securing the two sections of the rod together, but at the same time securing actual conductivity and giving great resisting strength to the coupling against the effects usually produced by the vibrations of the rod.

While I prefer to prepare the sections for market in the manner above described, it is apparent that I may equip both ends of alternate sections with the couplings and leave the alternate sections without any couplings.

While I have shown the coupling-boxes of a rectangular shape in cross-section as best adapted to the particular kind of rod shown, it will be obvious that they may be made cylindrical in form.

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

1. A coupling for spiral lightning-rod sections, consisting of a cast-metal box hollow from end to end, and adapted to be secured to the sections by compression, in the manner set forth.

2. A section of spiral lightning-rod with one or both of its ends provided with a cast-metal coupling-box hollow from end to end, secured in place by compression, and adapted to receive the end of an adjacent section, substantially as and for the purpose set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

WILLIAM B. MUNN.

Witnesses:

WM. H. BATES,

B. F. MORSELL.