2 Sheets—Sheet 1.

J. HEWITT.

Lightning-Rods.

No. 211,847. Patented Feb. 4, 1879.

Fig. 1.

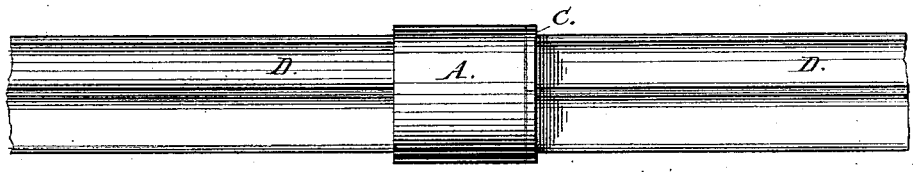


Fig. 2.

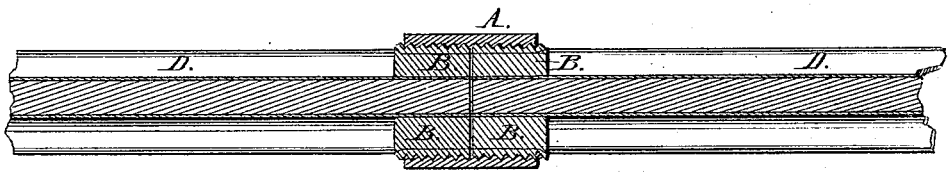


Fig. 3.

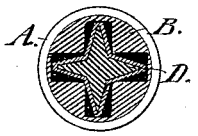


Fig. 4.

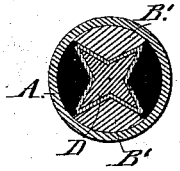
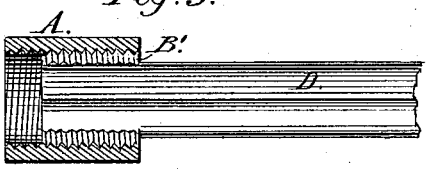


Fig. 5.



Witnesses:

D. C. Allen

B. M. Griggs.

Inventor:

John Hewitt.

By J. J. Johnston.

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Fig. 6.

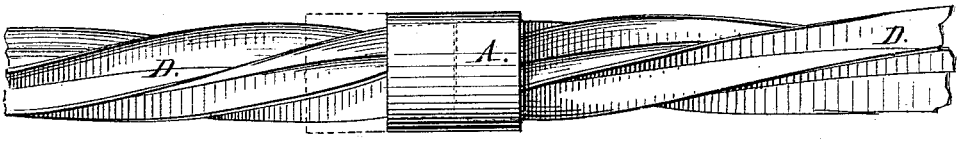

Fig. 7.

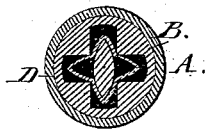

Fig. 8.

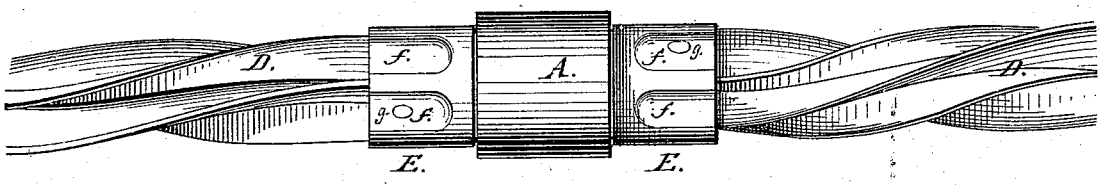

Fig. 9

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UNITED STATES PATENT OFFICE.

JOHN HEWITT, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN LIGHTNING-RODS.

Specification forming part of Letters Patent No. **211,847**, dated February 4, 1879; application filed October 20, 1878.

To all whom it may concern:

Be it known that I, JOHN HEWITT, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Joints for Lightning-Rods; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to an improvement in joints for lightning-rods; and consists in securing the sections together by means of a tube, the inner wall of which is provided with screw-threads, and screw-threads at or near the ends of the sections, the whole constructed and arranged for the purpose of bringing the ends of the sections in contact with each other, thereby forming a continuous conducting medium of the same metal or combination of metals constituting the body of the lightning-rod.

To enable others skilled in the art with which my invention is most nearly connected to make and use it, I will proceed to describe its construction and operation.

In the accompanying drawings, Figure 1 is a side view of my improvement in joints for lightning-rods, representing it when used on the rod in the untwisted form. Fig. 2 is a longitudinal section of the same. Fig. 3 is a transverse section of the same. Fig. 4 is a transverse section of the joint, representing the screw-threads on the rod as only partly encircling the rod. Fig. 5 is a longitudinal section of the same. Fig. 6 is a side view of my improvement in joints, representing the same when applied to the twisted form of lightning-rod, the body of which is formed of oval iron surrounded with sheet-copper. Fig. 7 is a transverse section of the same. Fig. 8 is a side view of my improvement in joints when applied to the twisted form of lightning-rod, the body of which is constructed of iron known as "star iron," surrounded with sheet-copper, the screw-threads being attached to the sections by sockets, the screw-threads being on the socket. Fig. 9 is a cross-section of Fig. 8.

In the accompanying drawings, A represents the tube, having screw-threads on its inner wall. This tube may be constructed of iron, brass, copper, or other suitable metal. B represents the screw-threads on the rod D, which screw-threads are formed on a cylinder, the bore of which conforms to the contour of the rod D when viewed in cross-section, and is secured to the rod by the process of brazing, riveting, or any other desirable means that may suggest itself to the mind of the mechanic. The cylinder having screw-threads B may, on one end of each section of the rod D, have a flange or shoulder, to serve the purpose of a stop for the tube A, as indicated at C in Fig. 1. The screw-threads B may be secured on the rod D in sections, as shown in Figs. 4 and 5, or they may be formed on a socket, which is shown at E in Fig. 8, which socket is bent into the grooves in the rod D, as shown in Fig. 8 at *f*, and secured to the rod D by rivets, as shown at *g*.

In the operation of uniting two or more sections of the lightning-rod B together, the tube A is moved back on the rod, as indicated by the dotted lines in Fig. 6, and the two ends of the sections of the rod D are brought close together and united thus by screwing the tube A over the screws B, as shown in Fig. 2, thereby bringing the ends of two sections close together, causing them to press hard against each other, and forming a close union, in which position they are permanently held by the tube A. By this arrangement of joint one continuous line of conductor is formed of the metal constituting the body of the rod, which is the thing desired in a lightning-rod.

The screw-threads on the rod D may be formed in two sections, as shown at B′ in Figs. 4 and 5, and secured in the angles of the rod D by rivets or the brazing process.

The peculiarity of construction of my improvement in joints for lightning-rods, besides securing an unbroken and continuous line of conductor of the metal or combination of metals which form the body of rod, also greatly diminishes the labor and expense of placing the rod in position on the building to which it may be applied. All the necessary curves in the rod may be made in order to

adapt it to the contour of the walls, cornice, and roof of the building, and the union of the several sections of the rod subsequently effected with as much ease as could be done if the rod were perfectly straight. The advantages of being enabled to form the union between the several sections of the rod after being bent to the contour of the walls, cornice, and roof of the building will be very apparent to all who have any experience in placing lightning-rods, the curves and bends of the rod always impeding the formation of the union between the sections of the rod, and very often resulting in serious accident to the operator.

I am aware that unions have been formed between two sections of pipe, also between two sections of shafting and other things, by the use of a short tube having screw-threads on its inner wall, combined with screw-threads on such pipe, shafting, and other thing; therefore I do not claim, broadly, a tube having screw-threads on its inner wall when combined with screw-threads on pipes, shafting, and other things as now used in the arts among mechanics; but I am not aware that such device was ever used for forming a close union between the ends of pipes, shafting, and other things, as in the case of the lightning-rod hereinbefore described.

What I claim is—

1. The method herein described of forming a close union between the ends of the sections of the rod D by means of the tube A and screws B on the rod D, the diameter of the bore of said tube A being greater than the largest diameter of the rod D, as and for the purpose set forth.

2. In a joint for lightning-rods, the tube A, in combination with the sections B B, provided with screw-threads B′ B′, secured in the angles of the rod D, substantially as herein described.

In testimony that I claim the foregoing as my own invention I affix my signature in presence of two witnesses.

JOHN HEWITT.

Witnesses:
JOS. T. K. PLANT,
J. A. PATTERSON.