C. H. SMITH & J. HEWITT.
Lightning-Rod Connection.

No. 201,059. Patented March 5, 1878.

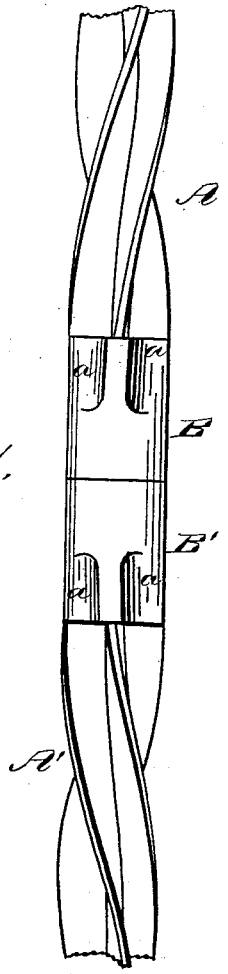


Fig. 1.

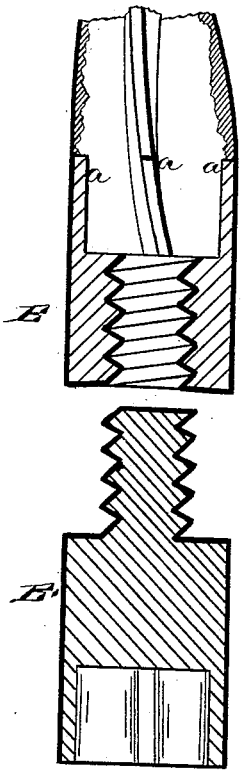


Fig. 2.

WITNESSES
E. H. Bates
F. J. Masi

INVENTORS
C. H. Smith
John Hewitt
by E. W. Anderson
ATTORNEY

# UNITED STATES PATENT OFFICE.

CHARLES H. SMITH AND JOHN HEWITT, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN LIGHTNING-ROD CONNECTIONS.

Specification forming part of Letters Patent No. **201,059**, dated March 5, 1878; application filed December 29, 1877.

*To all whom it may concern:*

Be it known that we, CHARLES H. SMITH and JOHN HEWITT, of Chicago, in the county of Cook and State of Illinois, have invented a new and valuable Improvement in Lightning-Rods; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side view of our invention, and Fig. 2 is a sectional view thereof.

This invention has relation to improvements in means for jointing sectional lightning-rods.

The usual mode of forming the joints on galvanized lightning-rods is, first, to galvanize the rod, and then mill its end to receive the coupling-burr, by means of which it is connected to a second rod or section thereof. This practice disconnects the outer surfaces of the coupling and rod, and thereby not only lessens the conductivity of the device, but, a portion of the galvanic coating of the rod being removed, also renders it liable to rust.

The object of our invention is to remedy this defect, and is accomplished by forming the tenon upon the rod sections and securing the coupling thereon before galvanizing, and then placing them in the galvanizing medium, thus not only rendering the coating continuous, but also securing the coupling and its adjacent rod section or sections rigidly together.

Our invention also consists in a sectional lightning-rod, the parts of which are rigidly and continuously connected by the galvanic coat or surface, as will be hereinafter more fully set forth.

In the annexed drawings, the letters A A′ designate two adjoining sections of a lightning-rod having, respectively, a male and a female coupling-section, B B′, which, when screwed the one into the other, serve to unite the said sections.

In the illustration of our invention we have chosen a four-flanged twisted rod-section, as we deem it the best form in which the advantages of our invention could be most clearly brought out; but we do not wish to be understood as limiting our invention to this especial form, as it is advantageously applicable to any and all forms of sectional rods.

The ends of each rod-section are, preferably, rabbeted, as shown at *a*, and may be screw-threaded, and upon them are passed the coupling-sections B B′, a male section being at one end and a female section at the other.

The couplings and the rod-section, being united, are placed in the galvanizing material in the usual manner, and there retained until the entire length thereof has received a galvanic coating. This extends from end to end of the rod-sections and couplings, accurately covering every part thereof, and filling the interstices between the rod and the said couplings. A continuous coating is thus formed on the rod and its couplings, which, to all intents and purposes, obliterates their joints, and accurately cements or solders the parts of the rods together.

It is evident that, the joints of the rod-sections being continuous, the conductivity of the rod is greatly increased, and that the rusting of the joints of the said sections is effectually prevented.

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

1. The process of forming the tenon upon the rod-sections and securing the coupling thereon before galvanizing, and then placing them in the galvanizing medium, thus not only rendering the coating continuous, but also securing the coupling and its adjacent rod section or sections rapidly together, substantially as specified.

2. The combination of a section of a lightning-rod and its couplings, when united by a continuous galvanic coat, substantially as specified.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

CHARLES H. SMITH.
JOHN HEWITT.

Witnesses:
A. B. ELLITHORPE,
WILLIAM LORIMER.