

N. E. SMITH.
Lightning Rod.

No. 50,398.

Patented Oct. 10, 1865.

Fig. 1

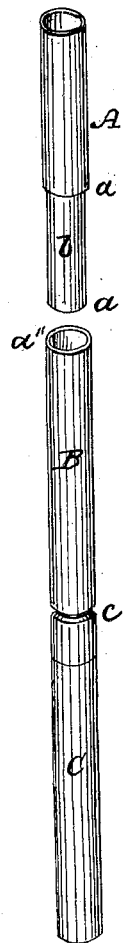


Fig. 2

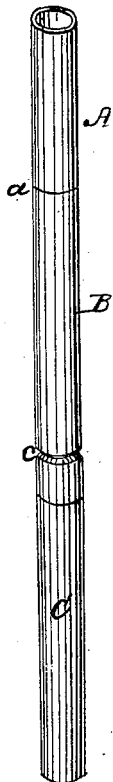
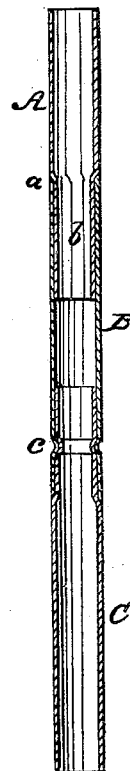


Fig. 3



Witnesses
J. H. Burdick
W. M. Clelland

Inventor
N. E. Smith

UNITED STATES PATENT OFFICE.

N. E. SMITH, OF CLEVELAND, OHIO.

LIGHTNING-ROD JOINTS.

Specification forming part of Letters Patent No. 50,398, dated October 10, 1865.

To all whom it may concern:

Be it known that I, N. E. SMITH, 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 complete description of the construction of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figures 1 and 2 are perspective views of the rod. Fig. 3 is a sectional view of Fig. 2.

Like letters of reference refer to like parts in the views.

My improvement relates to a new mode of connecting the sections of a lightning-rod, whereby one continuous hollow rod is formed without projections on the outside to obstruct the currents.

I do not claim forming connections by means of a solid or hollow tenon or dowel made separate from the rod and then inserted into the end of each section of the rod to be united and secured by screws or otherwise; but what distinguishes my invention is in compressing the end of a section of the rod, as represented at *b* in Fig. 1, where the end of the section is compressed from *a* to *a'*, forming the end of the rod into a tenon that is to be inserted in the open end of another section, as *B*, the tenon fitting down close inside, and the end *a''* of the section *B* coming against the shoulder *a*, formed by the rod being thus compressed into a tenon, which is a part of the body of the rod. When the compressed end of one section of

the rod, as *A*, is inserted in the end of another, as *B*, the sections are united, as seen in Figs. 2 and 3, which are then secured by making an indenture around the rod by means of tongs or pinchers for this purpose, and which is very readily done. The indenture is made about the middle of where the sections overlap, as represented at *c*, where the sections *B* and *C* were united in a similar manner to *A* and *B*, and then indentured round. The inside or tenon part is indented the same as the outside, rendering the connection most secure.

This mode of forming a continuous lightning-rod by compressing the end of one section and inserting it in the end of another as it is set up, and securing the connections by being indented, as described, has many advantages. It forms a hollow rod of very simple construction. The connections are most readily made and secured. It is a very light rod, and, being hollow, the water or any dampness that may condense on the inside is allowed to run down and not lodge on any projections or solid connections, where it would be liable to corrode the metal more or less. There are no projections on the outside for water to lodge on or to obstruct the currents of electricity.

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

Connecting the sections of lightning-rods as herein specified.

N. E. SMITH.

Witnesses:

W. H. BURRIDGE,
A. W. McCLELLAND.