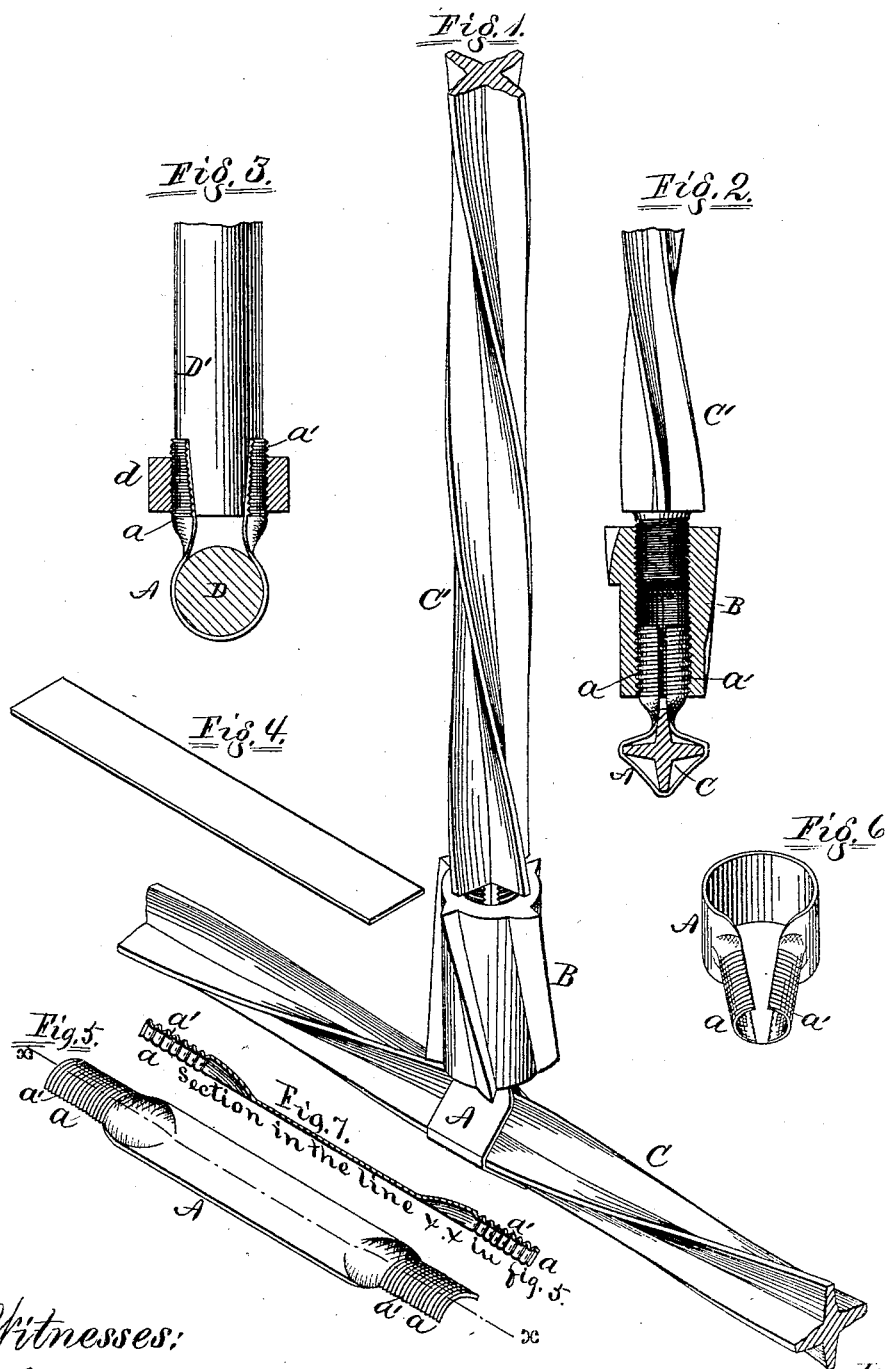


A. SNOOK.

LIGHTNING-ROD CONNECTING-CLIP.

No. 186,503.

Patented Jan. 23, 1877.



Witnesses:

P. B. Richards,

M. H. Baringer.

Inventor:

Albert Snook,

(By) W. B. Richards, atty.

# UNITED STATES PATENT OFFICE.

ALBERT SNOOK, OF OSWEGO, ILLINOIS.

## IMPROVEMENT IN LIGHTNING-ROD-CONNECTING CLIPS.

Specification forming part of Letters Patent No. **186,503**, dated January 23, 1877; application filed August 23, 1876.

*To all whom it may concern:*

Be it known that I, ALBERT SNOOK, of Oswego, in the county of Kendall and State of Illinois, have invented certain new and useful Improvements in Lightning-Rod-Connecting Clips; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The nature of my invention relates to improvements in clips for connecting certain parts of lightning-rods; and the invention consists in a peculiar construction of the clip, adapting it to manufacture and sale as an article of manufacture, and to be readily and easily applied to uniting the end of one section of rod to any part of the main portion of another section, all as hereinafter fully described.

Figure 1 of the drawings is a perspective view, showing the application of my improved clip to the union of two sections of rod. Fig. 2 is a sectional view through the union at Fig. 1. Fig. 3 is a side elevation and section, showing a modified application of the device. Figs. 4, 5, 6, and 7 are views showing the clip and its processes of construction.

Referring to the parts of the drawings by letters, letter A represents the clip formed of a strip of thin sheet metal, preferably copper, shown at Fig. 4, in its blank state; at Fig. 5 as stamped or pressed in dies, to curve its ends *a* in their cross-section, and strike the metal up into segmental screw-threads *a'*, as shown more plainly at Fig. 7; and at Fig. 6 as bent or curved, to form the complete clip, ready for use and for sale as an article of merchandise. B is the ordinary nut used for making connections of the ends of rods. C C' are short sections of lightning-rod of a well-known ordinary form of construction.

The method of uniting the end of the rod C' at right angles to, and to any part of, the rod C is plainly shown at Figs. 1 and 2 of the drawings. The clip A, being slightly opened and passed around the rod C, may be easily pressed and tightened thereon, and its ends *a* brought into position, as shown at Figs. 1, 2, and 6, when the nut B may be screwed into position for receiving the threaded end of the rod C', as shown at Figs. 1 and 2.

With the ordinary T-shaped nut unions of the ends of rods to the main parts of other rods, for the purpose of raising points, &c., can only be made by cutting the main rod, to make a union for the reception of the T-shaped nut. With my improved clip points can be raised at any place upon the main rod without cutting it.

Fig. 3 is a modification, showing a sectional view of the main rod, made of round iron D, and clasped by the clip A, which receives the unthreaded end of the rod D' interior to its ends *a*, where it is securely retained by a nut, *d*.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The clip A, constructed as described, with threaded ends *a a*, and combined with the nut B and rods C C', substantially as and for the purpose specified.

2. As a new article of manufacture, the clip A, constructed of thin plate metal, and its ends pressed into segments of screw-threads, substantially as and for the purpose specified.

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

ALBERT SNOOK.

Witnesses:  
W. H. SPARKS,  
B. B. HESS,  
D. JUD.