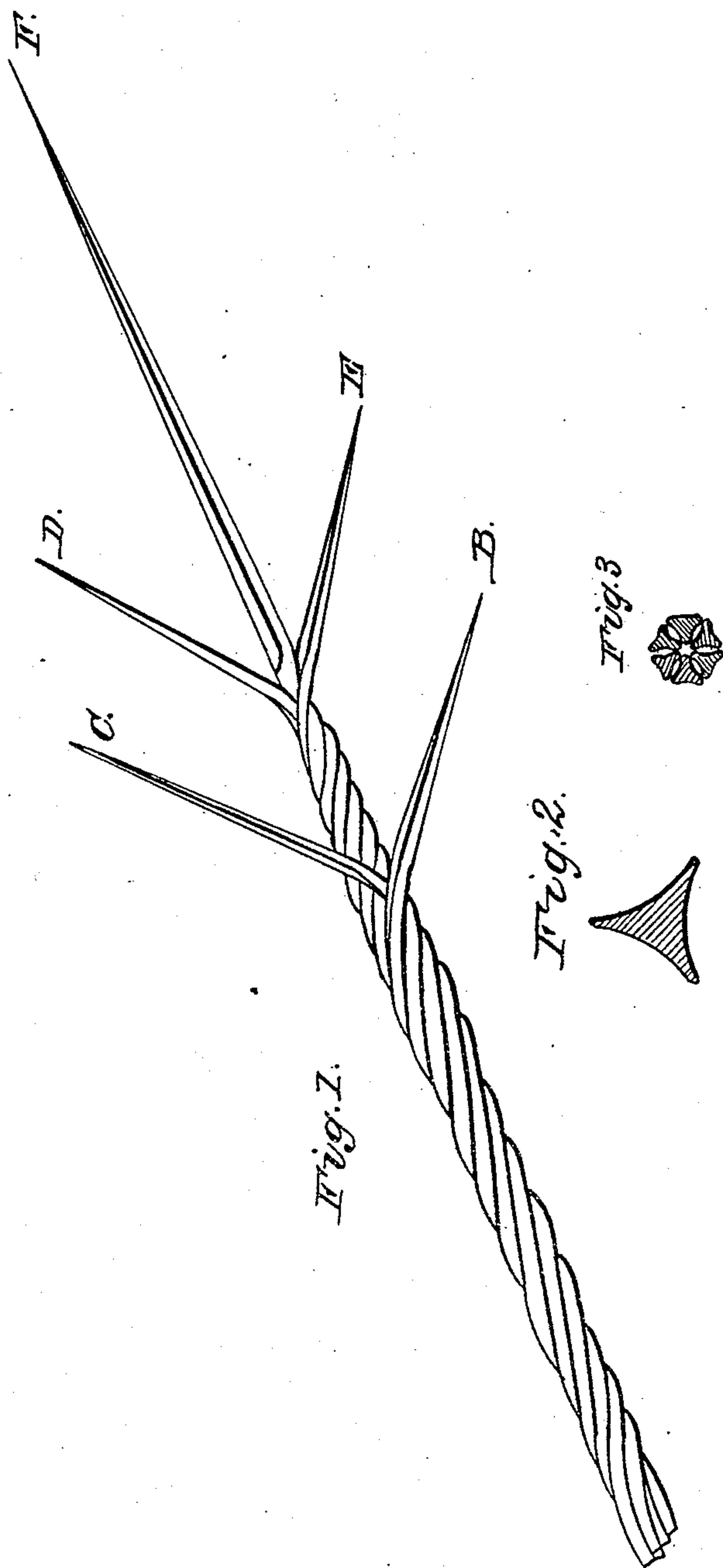


G. W. OTIS.  
Lightning Rod.

No. 80,205.

Patented July 21, 1868.



Witnesses  
Thos W. Hunt  
& A. Raymond

Inventor  
George W. Otis

# United States Patent Office.

GEORGE W. OTIS, OF LYNN, MASSACHUSETTS.

*Letters Patent No. 80,205, dated July 21, 1868.*

## IMPROVEMENT IN LIGHTNING-RODS.

*The Schedule referred to in these Letters Patent and making part of the same.*

TO ALL WHOM IT MAY CONCERN:

Be it known that I, GEORGE W. OTIS, of Lynn, in the county of Essex, and State of Massachusetts, have invented a new and useful Improved Lightning-Rod; and I 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 accompanying drawings, forming a part of this specification.

The collection of electricity from the air, or from any prime conductor, is known to be more readily and gradually effected by metallic points than by masses of metal. The mass will receive a larger charge at once without injury, while the point will gradually receive the same amount in a longer time, so as to avoid a shock.

I have endeavored, in the construction of my present improvement, to take advantage of this property, and also make a lightning-rod convenient to adjust, and practically continuous whenever erected, no matter how long it may be, nor how much it may be spliced, forming the projecting points of it from the same material as the rod itself, and continuous with it.

I do this as follows: I have prepared, as shown in the drawings, an angular copper wire, preferably of the section given in fig. 2, which presents more and sharper angles in proportion to its mass than any other section, but it may be square, with or without fluted sides, or a triangle. This angular wire I lay up into a rope by twisting the strands around each other, as shown in figs. 1 and 3. This rope, it will be seen, can always be used as a continuous conductor, for, when in other conductors a joint would be required, in this it is avoided by making a splice of the kind called a "long splice" between the two pieces, that is, alternately laying up the strands of each piece into the other.

When the conductor is to be pointed, it is only necessary to unlay the strands of wire at the upper end of the rod, as shown in fig. 1, at B C D E F, giving them any desired position relative to each other, and pointing each with a file.

I claim as my invention, and desire to secure by Letters Patent—

The lightning-conductor described, consisting of several strands of angular metallic wire laid into a rope, all as and for the purpose described.

GEORGE W. OTIS.

Witnesses:

THOS. WM. CLARKE,

E. A. RAYMOND.