J. M. MOTT.

Lightning-Rods.

No. 152,153. Patented June 16, 1874.

Fig. 1.

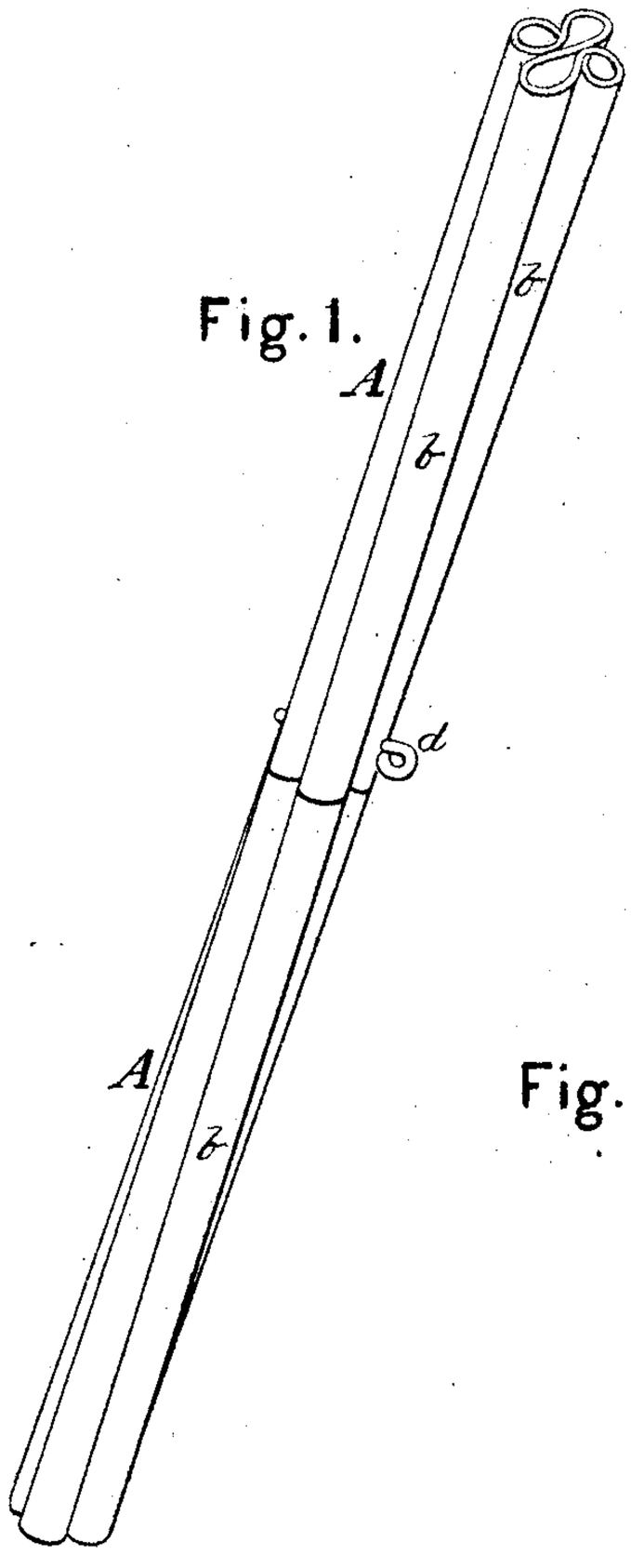


Fig. 2.

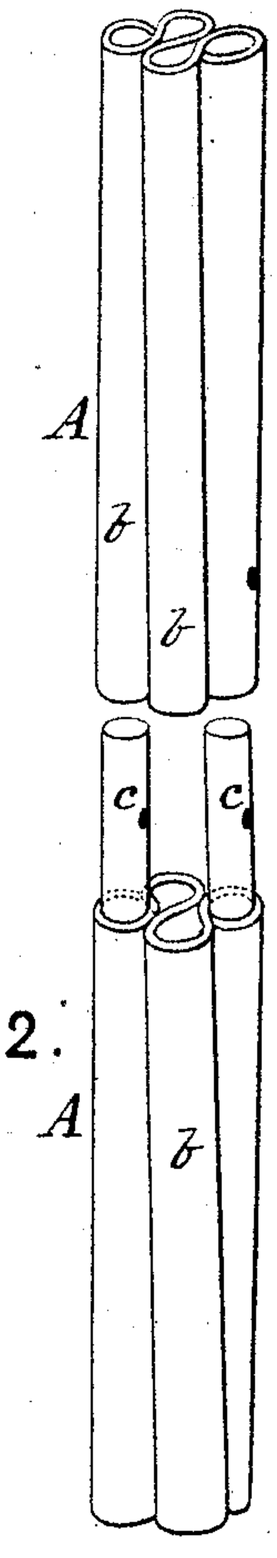
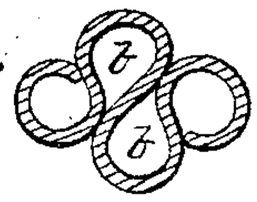


Fig. 3.



WITNESSES.

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UNITED STATES PATENT OFFICE.

JOHN M. MOTT, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN LIGHTNING-RODS.

Specification forming part of Letters Patent No. **152,153**, dated June 16, 1874; application filed January 11, 1873.

To all whom it may concern:

Be it known that I, JOHN M. MOTT, of Chicago, in the county of Cook and State of Illinois, have invented a new and valuable Improvement in Lightning-Rods; 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 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 perspective view of my rod joined. Fig. 2 is a perspective view of separated joint, showing dowel-pin. Fig. 3 is a transverse section of rod.

This invention has relation to the construction of lightning-rods which are made, of sheet-copper or other metal, in the hollow or tubular form; and it consists in longitudinally folding the strip of sheet-copper in a peculiar convolute or scroll shape, in such a manner as to form four parallel tubes in the same continuous strip, having the relation to each other, in the cross-section, of the four corners of a parallelogram. It also consists in the construction and novel arrangement of the small solid coupling-rods or dowels in two opposite tubes, whereby the sections of the lightning-rod are connected together in such a manner that the continuity of the copper surface is not broken or obstructed, and the rod is even more firm at the joints than at the intermediate portions.

In the accompanying drawings, the letters A A designate the sections of the rod. Each section is formed by bending the copper sheet longitudinally in scroll form, forming the convolutions first on one side, and then on the other, in the manner shown at Fig. 3 of the drawings, each convolution being bent entirely around, forming a complete tube, as shown at *b b* of the drawings, and the wall of each tube being a part of the same continuous sheet. In the drawings the sheet is represented as being bent into four convolutions or tubes, which are firmly bound together by the continuous wall, forming a rod of exceeding rigidity.

It will be observed that in the cross-section of this rod the four tubes occupy the four corners of a parallelogram; and, as the dowel-pins are introduced in two opposite tubes, the other two tubes, being arranged one on one side and the other on the other side of the plane of the doweled tubes, serve to brace the joint on each side.

As this rod is more readily manufactured in sections, the coupling-dowels *c* are employed to connect the sections. These dowels are secured, for a short distance above and below the joint, in two or more of the tubes of each section, thus forming a secure coupling, which will keep the rod rigid at the joint without obstructing the interior or exterior surfaces of the copper. A slight twist is designed to be given to the sections, for the purpose of making the convolutions somewhat more secure; but this is not indispensable. A key, *d*, is employed to keep the sections from parting longitudinally. It is designed to pass through the walls of the convolutions and through the coupling-dowels.

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

The lightning-rod or section thereof formed by folding a continuous sheet of metal into four tubular convolutions, occupying, in cross-section, the four corners of a parallelogram, slightly twisting the same, and providing two opposite tubes with solid dowel-pins for connecting the sections, in the manner herein shown and described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOHN M. MOTT.

Witnesses:
C. S. MOTT,
ROB. STORER MOTT.