

D. MUNSON.

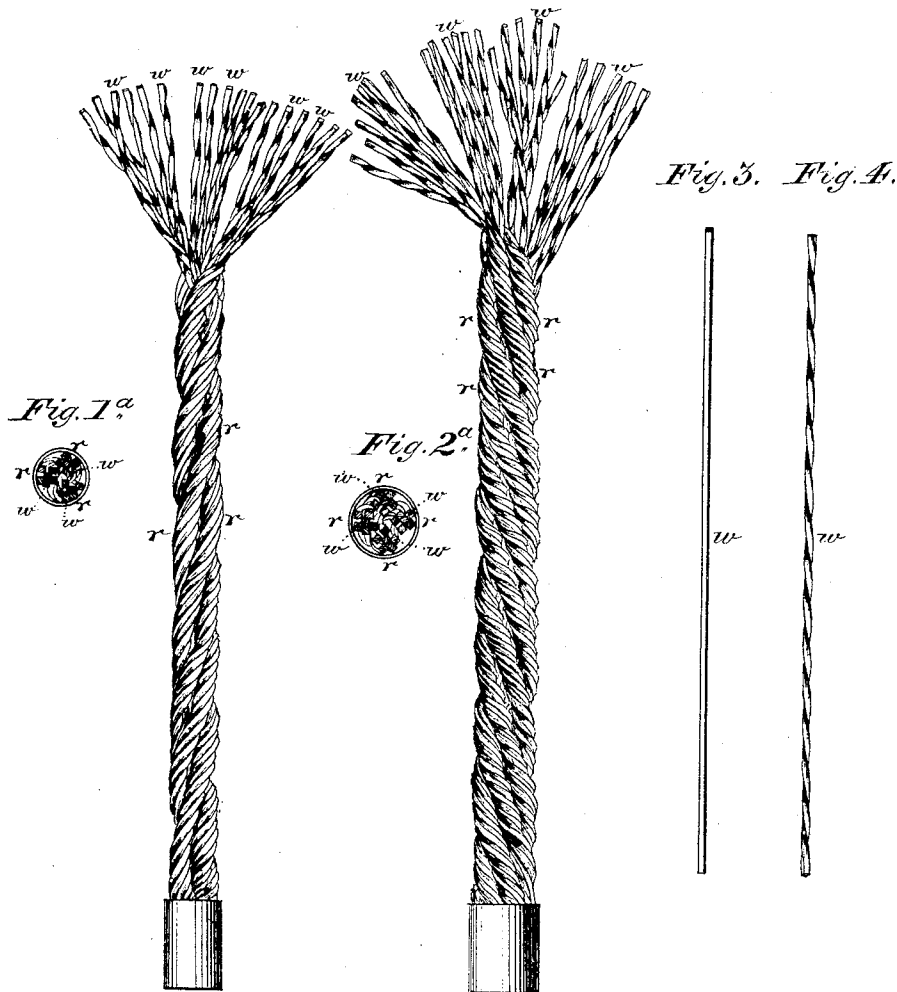
Improvement in Lightning-Rods.

No. 129,675.

Patented July 23, 1872.

Fig. 1.

Fig. 2.



Witnesses:

J. C. Buecht.
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his Attorneys

UNITED STATES PATENT OFFICE.

DAVID MUNSON, OF INDIANAPOLIS, INDIANA.

IMPROVEMENT IN LIGHTNING-RODS.

Specification forming part of Letters Patent No. 129,675, dated July 23, 1872.

To all whom it may concern:

Be it known that I, DAVID MUNSON, of Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Improvement in Lightning-Rods, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a view of a piece of my improved lightning-rod, consisting of three ropes of twisted angular strands of copper wire; and Fig. 1^a represents a sectional view of the same. Fig. 2 represents a view of a piece of my improved lightning-rod, consisting of four ropes of twisted angular strands of wire; Fig. 2^a, a sectional view of the same. Figs. 3 and 4 represent a single angular copper wire, straight, and twisted around its own axis, from the latter of which the rope is formed.

My invention consists in forming lightning-rods of angular copper wires, each separate wire being first twisted in itself around its own axis, and a plurality of such wires twisted together to form a rope of angles, such ropes being twisted together around and upon each other to form the rod.

In Figs. 1 and 1^a I have shown a simple form of lightning-rod, constructed according to my improvement, and consisting of three ropes, *r*, each of which is composed of six angular copper wires, *w*, which wires, previously to their being formed into a rope, *r*, are each twisted around their own axis, as shown in Fig. 4, these ropes *r* being laid or twisted around each other without a core to form the rod. In Figs. 2 and 2^a the rod is shown as constructed of four ropes, *r*, each composed of six angular copper wires, *w*, constructed like those shown in Figs. 1 and 1^a, and twisted into a rod without a core also. The copper wires are drawn out square, triangular, or in any desired angular shape except flat, so as to have a plurality of faces and sharp edges, as shown in Fig. 3, and

the wires thus drawn are then twisted separately, each around its own axis, as shown in Fig. 4, after which a plurality of such wires is formed into a rope, *r*, and a number of the ropes twisted or wound around and upon themselves to form a rod. By this construction an infinitesimal number of sharp edges and angles are continuously presented to attract the electric fluid from the upper to the lower end of the rod, and thus the attractive and conductive capacity of the same greatly increased. But another advantage of the construction of the rod according to my improvement is that such large number of angular copper wires, twisted and intertwisted, as described, forms a rod of increased lateral and longitudinal strength, thereby enabling me to dispense with a core, and thus greatly reduce the cost of the rod, while at the same time it can be bent so as to be passed over ledges or around corners.

It will be readily understood that any desired number of angular copper wires may be twisted around their own axis and then twisted into a rope, and that any desired number of ropes, consisting of the same or different number of wires, may be twisted around each other to form the rod; and these numbers of wires and ropes and their relative arrangement may be varied as occasion may require.

Having described my invention, I claim—

A lightning-rod composed of a plurality of angular copper wires, each separate wire being twisted around its own axis, and a number of such twisted wires formed into a rope, and a number of such ropes twisted or wound around each other, essentially as described.

DAVID MUNSON.

Witnesses:

THOS. H. BOWLES,
CHARLES W. TAYLOR.