STEPHEN H. MINER.

Improvement in Lightning Rods.

No. 121,884. Patented Dec. 12, 1871.

Fig. 1.

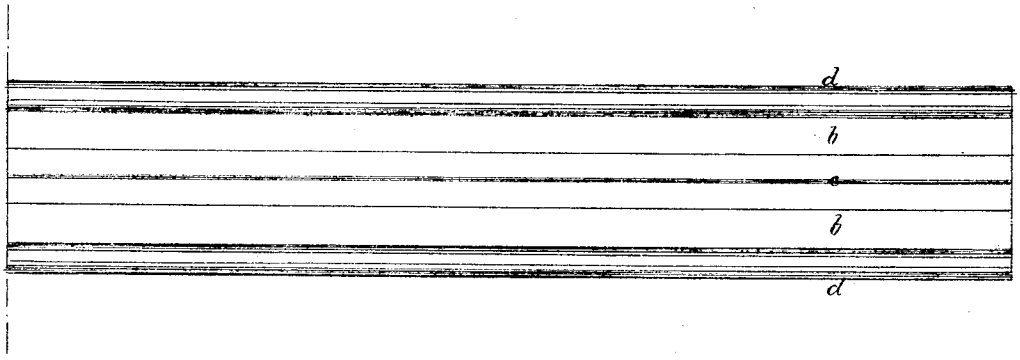
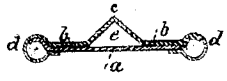


Fig. 2.



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AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS)

UNITED STATES PATENT OFFICE.

STEPHEN H. MINER, OF WINONA, MINNESOTA.

IMPROVEMENT IN LIGHTNING-RODS.

Specification forming part of Letters Patent No. 121,884, dated December 12, 1871.

To all whom it may concern:

Be it known that I, STEPHEN H. MINER, of Winona, in the county of Winona and State of Minnesota, have invented certain Improvements in Lightning-Rods; 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 make and use the same, reference being had to the accompanying drawing forming a part of this specification.

Figure 1 is a top view, and Fig. 2 is a transverse vertical section.

This invention relates to a lightning-rod constructed of two sheet-metal plates of any suitable material, one of said plates having a longitudinal rib struck along its center line, which plate is placed side by side with the other flat plate, the two together forming a rod with a hollow central triangular chamber, and being connected by bending the edges of the ribbed plate around those of the flat one in the shape of beads.

Referring to the drawing, *a* is the aforesaid flat plate, and *b* the ribbed plate, of which *c* is the rib and *d d* the beads, *e* being the hollow central chamber. The rib and beads strengthen the rod and also enlarge its conducting surface. At the same time the flat sides and the comparative thinness of the rod cause it to stow compactly.

In proportion to its bulk, this rod has a very large conducting surface and great strength.

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

As an article of manufacture, a lightning-rod constructed of the plates *a b* and having the central rib *c* and beads *d*, as specified.

STEPHEN H. MINER.

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