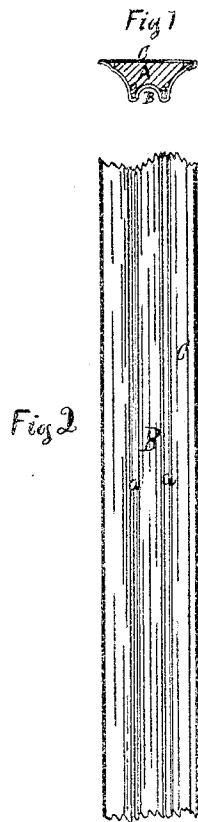


W. A. WELLS & G. HOUSE.

Improvement in Lightning Rods.

No. 123,600.

Patented Feb. 13, 1872.



Witnesses
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UNITED STATES PATENT OFFICE.

WARREN A. WELLS, OF ST. PAUL, MINNESOTA, AND GEORGE HOUSE, OF
GALLIPOLIS, OHIO.

IMPROVEMENT IN LIGHTNING-RODS.

Specification forming part of Letters Patent No. 123,600, dated February 13, 1872; antedated January 27, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that we, WARREN A. WELLS of St. Paul, in the county of Ramsey, State of Minnesota, and GEORGE HOUSE, of Gallipolis, in the county of Gallia, State of Ohio, have invented a new and useful Improvement in Lightning-Rods; and we do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which our invention appertains to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a cross-section of a lightning-rod embodying our improvements, and Fig. 2 is an elevation of the same.

Similar letters of reference indicate like parts in both figures of the drawing.

Our invention relates to that class of lightning-rods which are provided with a copper covering or casing; and the improvements consist in the form and construction of the same, which will be more fully understood from the following description.

In the drawing, A represents the rod proper, which is made of soft iron, of any desired length, and is formed flat upon its rear side, and is fluted upon its front side, as shown at B, forming projecting ridges *a* and *a*. Firmly secured

upon and around the said rod is a covering of thin sheet copper, C, which is shaped corresponding to the outer sides of the rod, and is closely fitted thereto, so as to protect the iron from exposure and rust, and to give a greater conducting-surface.

By this construction and form of rod a greater surface may be obtained with a given amount of material; it is stiff and strong, retaining its shape, and not liable to bend laterally; a continuous rod may be formed at less cost than any of the heretofore-known rods having the same amount of surface; and its shape is such as to admit of being easily bent and adjusted to conform to its connections with buildings.

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

A lightning-rod, consisting of a continuous piece of iron, made flat upon its rear side, and fluted upon its front side, as shown, and provided with a sheet-copper covering, substantially as described.

The foregoing specification of our invention signed by us this 8th day of June, A. D. 1871.

WARREN A. WELLS.
GEORGE HOUSE.

Witnesses:

N. C. GRIDLEY,
N. H. SHERBURNE.