J. HEWITT.

LIGHTNING-RODS.

No. 193,654. Patented July 31, 1877.

Fig. 1.



Fig. 5.



Fig. 6.

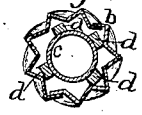

Fig. 3.



Fig. 2.

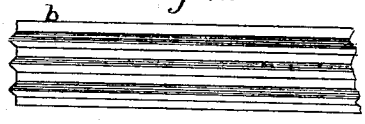

Fig. 4.



Witnesses:

Wm Bruce

J. C. Schoonmaker.

Inventor:

John Hewitt.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN HEWITT, OF HAMILTON, ONTARIO, CANADA.

IMPROVEMENT IN LIGHTNING-RODS.

Specification forming part of Letters Patent No. **193,654**, dated July 31, 1877; application filed December 21, 1876.

To all whom it may concern:

Be it known that I, JOHN HEWITT, of the city of Hamilton, in the county of Wentworth, Province of Ontario, Dominion of Canada, have invented certain new and useful Improvements 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.

My improvements relate to the construction of a lightning-rod that will be manufactured cheap, and possess great strength combined with unusual surface capacity.

It consists in wrapping one or more corrugated strips of metal around a tube or tubes.

By reference to the accompanying drawings, Figure 1 represents a section of a single tube wrapped with a corrugated metallic strip. Fig. 2 is a top view of a part of a corrugated metallic strip. Fig. 3 is an edge view of the same. Fig. 4 is a side view of a portion of the finished lightning-rod.

I first construct corrugated metallic strips *b* of metal, copper being preferable, about three-quarters of an inch wide, similar to that shown in Fig. 5, and a cross-section of the same shown at Fig. 6. This strip is then, by means of proper machinery, wrapped around a single tube, *c*, Fig. 1, which will possess great surface area and conducting power.

The advantage of a lightning-conductor constructed as described is, forming a continuous conductor of great strength and unusual surface capacity without materially increasing the cost.

My rod is susceptible of various modifications. For instance, Fig. 5 shows an end section, which represents a continuous single corrugated tube, formed by being wrapped around a central core, and the core afterward withdrawn, which makes the rod sufficiently flexible and elastic to admit of its being carried and erected in continuous lengths without joints or couplings, thus avoiding the danger of joints becoming broken and disconnected, incident to all sectional rods.

Another style of my rod is shown in Fig. 6, wherein a series of strips of metal, *d*, is interposed longitudinally between the corrugated exterior *b* and the interior tube *c*, for the purpose of adding to the conducting power of the rod.

Having thus described my device, and disclaiming all other lightning-conductors, what I claim as my invention, and desire to secure by Letters Patent, is—

A continuous tubular lightning-conductor, constructed by wrapping one or more corrugated strips of metal spirally around a tube of metal, substantially as described.

Dated at Hamilton, Canada, this 16th day of February, A. D. 1876.

JOHN HEWITT.

In presence of—
WM. BRUCE,
I. GROSSMAN.