N. N. McLEOD.

Lightning-Rod Insulator.

No. 22,188. Patented Nov. 30, 1858.

Fig: 4.

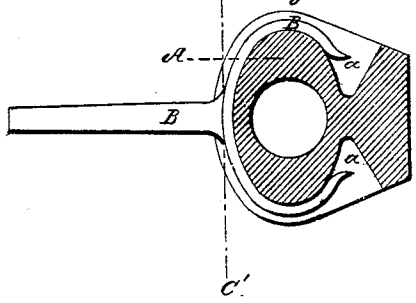


Fig: 3.

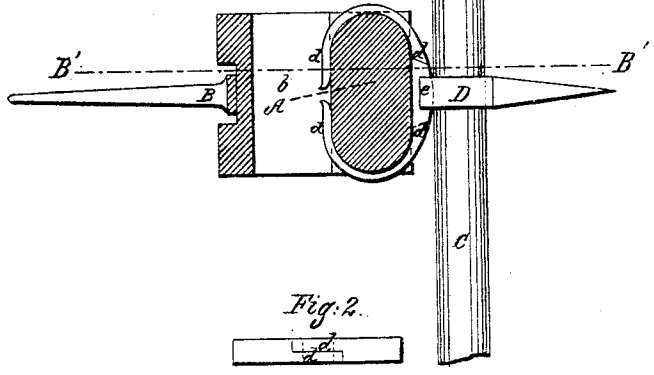
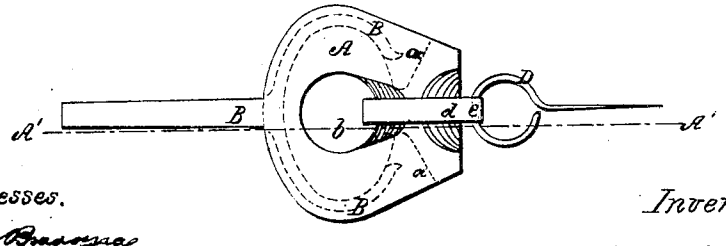


Fig: 2.

Fig: 1.



Witnesses.

Inventor.

N. N. McLeod

N. PETERS. Photo-Lithographer. Washington, D. C.

UNITED STATES PATENT OFFICE.

N. N. McLEOD, OF ST. LOUIS, MISSOURI.

IMPROVED SUPPORTING-INSULATOR FOR LIGHTNING-RODS.

Specification forming part of Letters Patent No. **22,188**, dated November 30, 1858.

To all whom it may concern:

Be it known that I, N. N. McLEOD, of the city and county of St. Louis, and State of Missouri, have invented a new and useful Improvement in Insulators for Lightning-Rods; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a plan; Fig. 2, a detached part of the apparatus, to be hereinafter explained. Fig. 3 is a vertical section through A′ A′, and Fig. 4 is a horizontal section through B′ B′.

My invention involves no new principle in insulation; but it consists in providing a more efficient, a more economical, and a more convenient means of securing the rod to the building, or rather in securing the rod to the insulator, and the insulator to the building.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and application.

Similar letters of reference represent corresponding parts on the different figures.

A is the insulator, which is composed of glass, and is made with a hole through it, as shown at *b*, and with a groove in its edge or side, as shown at *a* and B, Figs. 1 and 4. This groove is so cut as to leave the body of the insulator of any elliptical form, around which the holding-spike is bent, as shown at B B. This holding-spike is first made in the form of a T, that is, with the curved or bent ends made straight, as they would lie if thrown back on the red line *c′ c′*.

d d are a pair of straps, joined together at *e′*, where they are secured by the pointed conductor D, which passes through a mortise in the said straps, shown at *e*. The manner in which these straps are secured is shown at *d d*, Fig. 2. The pointed conductor D forms a holder through which the rod *c c* passes, and by which it is held in its required position.

It will be seen that with this arrangement of devices, in case the glass breaks from any cause it may be removed by simply opening the curved ends of the spike-holder B, after which a new glass may be substituted and the holder bent back around the elliptical body of the glass; but the chief advantage of this arrangement is the ready and easy manner in which the rod may be taken down or put up, and with which one insulator may be taken down without disturbing the others, for by merely unbending the pointed conductor D it may be drawn out of the mortise *e*, which disconnects the insulator from the rod.

Having thus described the nature and construction of my invention, what I claim as new, and as my invention, is—

1. So cutting the groove in the edge of the glass as to form the elliptical body shown at A′, Fig. 1, whereby the insulator is attached to the building in the manner described

2. The combination of the two straps, *d d*, with the glass, and with the pointed conductor, constructed and arranged substantially in the manner set forth, for the purpose specified.

N. N. McLEOD.

Witnesses:

P. W. JOHNSTONE,
JOHN D. BANTA,
AMOS BROADNAX.