

V. SCHRAGE.
Lightning-Rod Insulator.

No. 20,916.

Patented July 13, 1858.

Fig: 1.

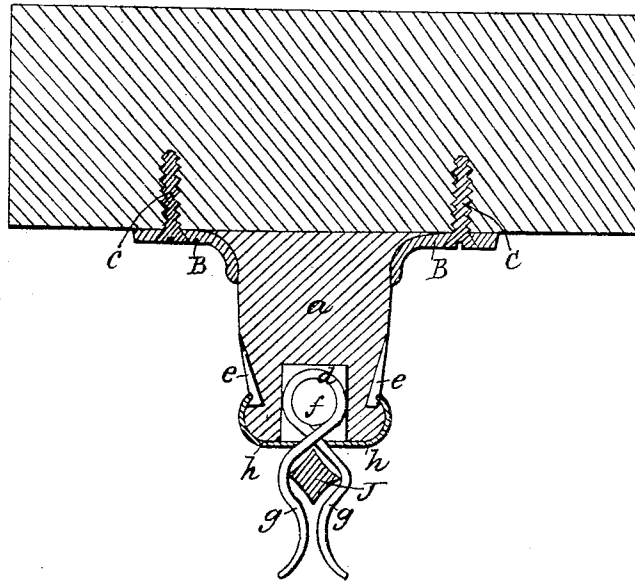
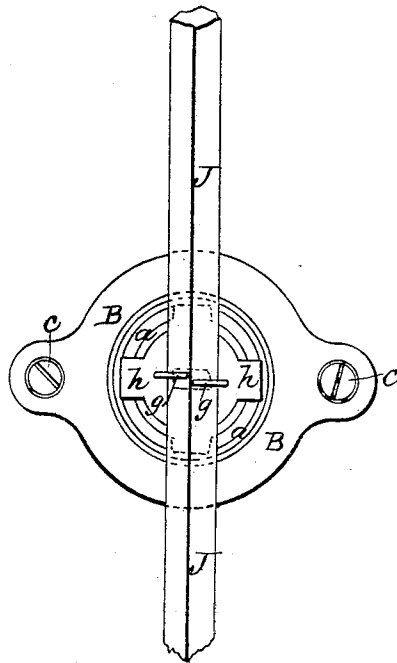


Fig: 2.



UNITED STATES PATENT OFFICE.

V. SCHRAGE, OF CINCINNATI, OHIO.

IMPROVED DEVICE FOR SECURING LIGHTNING-RODS.

Specification forming part of Letters Patent No. **20,916**, dated July 13, 1858.

To all whom it may concern:

Be it known that I, VICTOR SCHRAGE, of the city of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Improvement in Attachments for Lightning-Rods; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, and made to form part of this specification.

Similar letters refer to like parts of the improvement.

The nature of the improvement consists in the combined arrangement of a spring with the insulator, as represented, with which the rod is attached and detached with the insulator without having to slip the insulators over the ends of the rods in attaching the rods to buildings.

To enable others skilled in the art to make and use the improvement, I will proceed to describe its construction and operation by referring direct to the accompanying drawings, of which—

Figure 1 is a horizontal sectional view of an insulator made of glass, and shows the manner of attaching the spring to it for holding the rod, and the means employed for attaching the insulator to the building; and Fig. 2 is a face view of the insulator.

a represents the insulator, made of glass

and supposed to be attached to the building with the flange B and screws C C, and the end of the insulator is provided with a recess, *f*, and the recess is furnished with three or four turns of a spiral spring, *d*, and the ends *g g* of the spring are made to project out through the plate *h*, which clamps the rod J, as represented. The plate *h* serves to hold the spring *d* in the recess *f*, which plate is held to the end of the insulator by clamping the four sides of it to the end of the insulator in the recess *e e*, as represented in Fig. 1. The ends of the spring *g g* are made flaring sidewise, for the purpose of securing the rod between them when it is required to force it between the springs. This attachment will admit of the rod J being attached and detached at any part of it without taking the rod apart at its joint.

I am aware of other attachments being made for the same purpose, and therefore do not broadly claim attaching and detaching rods after this manner; but

What I do claim as my improvement, and desire to secure by Letters Patent, is—

The spiral spring *d*, as constructed and arranged to the insulator *a*, in the manner and with the means represented, for the purposes before described.

VICTOR SCHRAGE.

Witnesses:

M. BENSON,
P. GREEN.