P. SEILER.

TELEGRAPH INSULATOR.

No. 187,183. Patented Feb. 6, 1877.

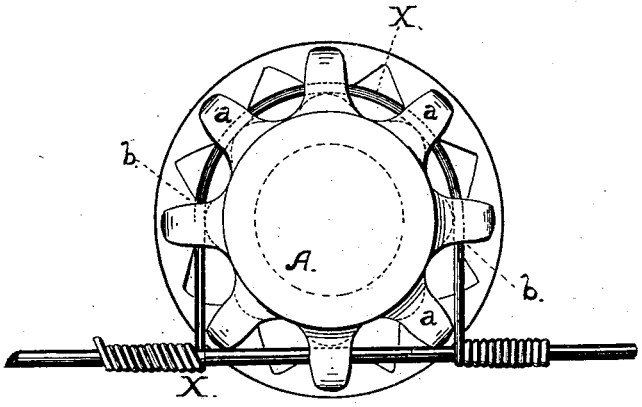
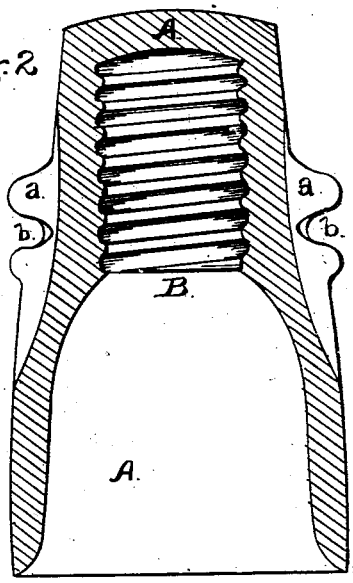


Fig: 1

Fig: 2.



Witnesses:

R. T. Dyer

L. H. Selby.

Inventor:

Paul Seiler.

By C. W. M. Smith & Co. Attorneys.

UNITED STATES PATENT OFFICE.

PAUL SEILER, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO JOSEPH HERZ, OF SAME PLACE.

IMPROVEMENT IN TELEGRAPH-INSULATORS.

Specification forming part of Letters Patent No. **187,183**, dated February 6, 1877; application filed November 18, 1876.

To all whom it may concern:

Be it known that I, PAUL SEILER, of the city and county of San Francisco, in the State of California, have invented an Improved Insulator for Line-Wires of Electric Telegraphs, of which the following is a specification:

The object of my invention is to provide a glass insulator for electric telegraphs which shall be of stronger construction and a better non-conductor than those now in general use. To this end I construct an insulator of glass, with a series of ribs upon its periphery, in which are formed grooves or notches to receive the binding-wire, as will be fully described and explained hereinafter, whereby the body of the glass is not weakened by having a groove or depression made in it.

The following description of the nature and construction of my invention is sufficiently full and clear to enable any person skilled in, and familiar with, the art to make and use or apply the same, reference being had to the accompanying drawings, and the figures and letters of reference thereon, forming part of this specification.

Figure 1 of the drawing is a top view. Fig. 2 is a section.

The insulator A is made of glass, of the usual cylindrical form, with a socket, B, provided with a screw-thread, to receive the end of the supporting-pin, upon which the insulator is mounted, this being the method at present employed to secure it in position upon the pole, or in any other situation. Upon the periphery of the insulator are formed and arranged a number of ribs or bridges, *a a a*, each with a groove or depression, *b*, in it. These grooves are all in the same horizontal plane, and the bottom of each one is beyond and outside of the body of the insulator, so that the binding-wire, (shown at *x*, Fig. 1, of the drawing,) when passed around the insulator, will lie in, and be held by, the grooves *b b*, without touching and being in contact with the body of the glass.

The face of the insulator between the ribs is made with channels or depressions, so that the diameter of the body of the insulator between the ribs is somewhat smaller than the rest of the cylinder. This is for the purpose of affording a free space between the body of the glass and the binding-wire without increasing the size or depth of the ribs.

The upper part of the insulator, where these spaces or channels are located, may be made smaller, or the channels may be formed in its face between the ribs, without affecting the strength of the glass, for the addition of the longitudinal ribs *a a* upon and around the circumference of the insulator adds greatly to its strength in withstanding the strains and weight of the wire to which it is subjected.

In the use and application of glass insulators for line-wires, it is desirable to have as few points of contact as possible between the binding-wire and the body of the insulator, for the glass, especially in foggy and wet weather, acts more or less as a conductor, and thus interferes with the proper working of the wires; but by supporting the binding-wire upon the ribs *a a*, or bridges, away from the body of the insulator, the contact of the wire with the glass is reduced to a few points, and a better instrument is produced.

The insulators now in common use are provided with a groove running entirely around the cylinder, and made in the body of the glass, to receive and hold the binding-wire; but this construction is weak and defective, and the glass breaks at this point from the weight and strain of the line-wire.

By the addition of the ribs or bridges to the body of the cylinder, as above described and shown, I am enabled to strengthen the insulator without increasing its size and bulk—a very essential item in the construction of glass insulators.

The channels or sunken spaces between the ribs *a a* in the body of the cylinder also act as conductors, to carry off the rain from between the wire and the glass, and wash out the particles of dust and other solid matter that lodges in the space between the ribs, by which means the openings are kept always free and clean.

It will be evident, from the foregoing description, that these insulators may be made of any suitable material other than glass without departing from the nature and principle of my invention.

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

1. An insulator for line-wires of electric telegraphs, composed of a body, A, socket B, projecting ribs or bridges *a a a*, and grooves or notches *b b b*, arranged and constructed substantially as herein described, for the purpose set forth.

2. The combination, with an insulator-body, of the longitudinal ribs or bridges *a a a*, with channels or spaces between them, for the purpose of strengthening the insulator without increasing its size and bulk, substantially as herein described and specified.

3. The application, to the body of an insulator, of a series of projecting ribs or bridges, *a a a*, with notches or equivalent projections, to receive the binding-wire, for the purpose of holding said wire upon points around the circumference, and out of contact with the main body of the insulator, substantially as herein described, for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 8th day of November, 1876.

PAUL SEILER.

Witnesses:
JOSEPH HERZ,
WILLIAM HARNEY.