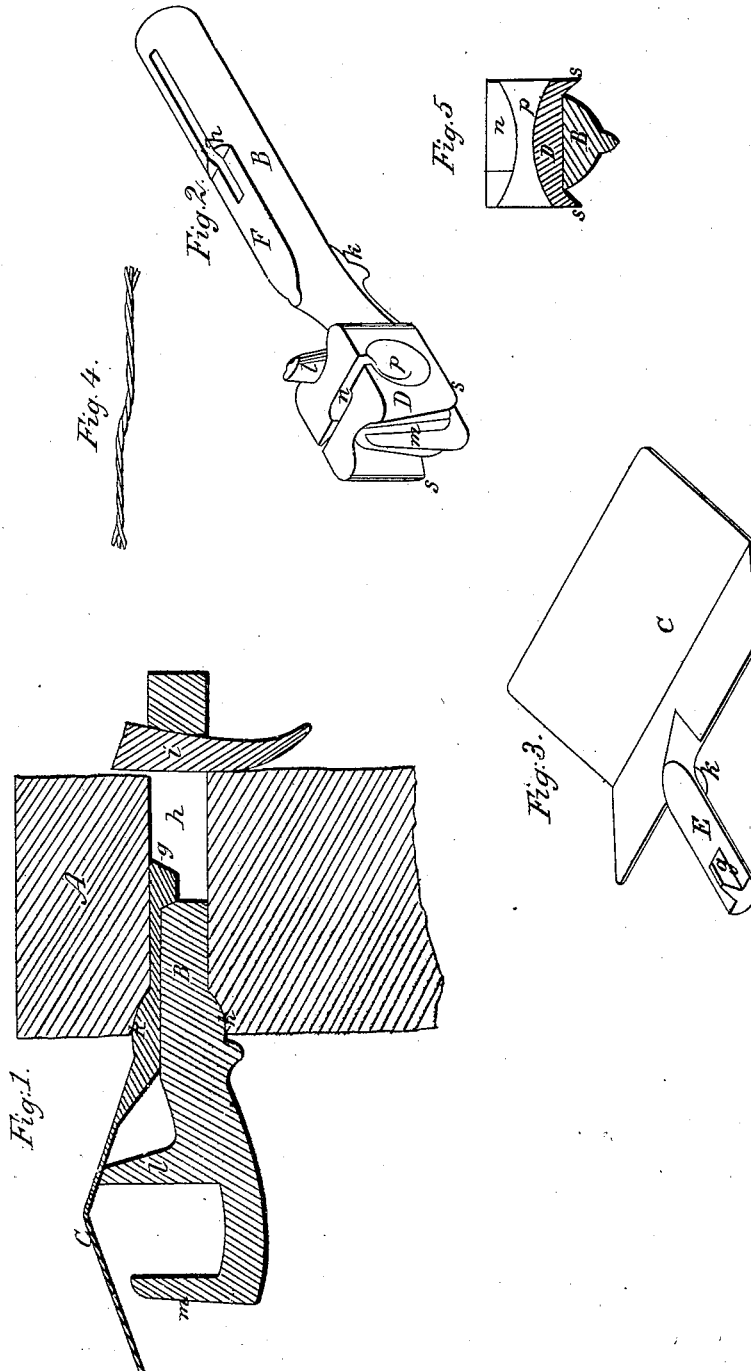


L. R. LIVINGSTON, J. J. ROGGEN & C. ADAMS.
INSULATING SUPPORT FOR TELEGRAPH WIRES.

No. 5,889.

Patented Oct. 31, 1848.



UNITED STATES PATENT OFFICE.

L. R. LIVINGSTON, J. J. ROGGEN, AND CALVIN ADAMS, OF PITTSBURG, PA.

IMPROVEMENT IN INSULATING-SUPPORTS FOR TELEGRAPH-WIRES.

Specification forming part of Letters Patent No. 5,889, dated October 31, 1848.

To all whom it may concern:

Be it known that we, LAURESTON R. LIVINGSTON, JOHN JAY ROGGEN, and CALVIN ADAMS, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and Improved Insulating-Supporter for Telegraph-Wires; and we do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a vertical longitudinal section of the metallic portion of the supporter inserted into the section of a post; and Figs. 2 and 3 are perspective views of the component parts of the supporter detached. Fig. 4 is a view of a portion of the telegraph-wire.

Similar letters indicate like parts in all the figures.

A is a vertical section of a portion of the upper end of a post into which the insulating-supporter is inserted and secured.

B is the principal metallic portion of the supporter, the shank of which passes through an aperture in the post, and is retained in the same by means of the key *i*, or, if preferred, by a nut and screw.

l and *m* are vertical arms, rising from the front end of B, which receive between them the glass insulator D. The insulator D is secured in its position by means of vertical grooves in its sides, into which the arms *l* and *m* accurately fit.

p is the aperture through the insulator that receives and sustains the telegraph-wire. The wire is placed in the aperture *p* in the insulator, through the zigzag or curved slit *n*, opening into the top of the same, the wire being first forced into the shape represented in Fig. 4, corresponding with the slit or opening *n*. The curve or angle in the wire is then removed a sufficient distance from the insulator to prevent the possibility of the wire's being lifted out of the aperture in the same. Thus it will be perceived that the wire can be securely retained in the aperture of the insulator simply by means of a curved or a zigzag opening into the same through which the wire is admitted.

C is the roof for covering the insulator and preventing snow, ice, or moisture from reach-

ing the same. The roof C is secured in its position as follows:

F is a plane surface on the upper side of the supporting-shank of B, which receives the plane surface E on the under side of the shank of the roof.

h is a vertical slot passing through the shank B, embracing a portion of the plane F.

g is a lug or tooth descending from the end of the plane E of the shank of the roof, which fits into the inner end of the slot *h*, when the roof-shank is placed in its position on the supporting-shank, as represented in Fig. 1. The roof and supporting-shanks being thus fitted to each other, are driven into a small aperture in the post, which securely unites them. The key *i*, which fastens the supporter to the post, passes through the outer end of the slot *h*. The long arm *l* rises to the roof C, as shown in Fig. 1, and aids in sustaining the same.

k k are flanges projecting from the under side of the supporting-shank B and from the upper side of the shank of the roof, which, as they are forced into the sides of the aperture in the post, serve to secure the supporter more firmly and prevent it from turning.

The roof C serves to keep the insulator D from contact with moisture, and also prevents it from being removed from its position between the arms *l* and *m*. The aperture *p* in the insulator D is smallest at its center, and gradually enlarges from this point toward each extremity, as represented in Fig. 5. The object of giving the aperture this form is to enable the supporting-posts to be placed in such positions as to cause a considerable angle of the telegraph-wire at the insulators without exposing the wire to danger of injury. This form of aperture *p* also serves to carry off the water, should any find its way to the insulator, and prevents it from accumulating and freezing about the wire and filling up the aperture. Flanges *s s* descend from the sides of the insulator on each side of its supporter B, as represented in Fig. 5, which serve to carry off any water that may find its way to the insulator and prevent it from accumulating and freezing between the insulator and its supporter, and also serve to give the insulator additional permanence in its position. The cross-section of

that portion of B under the insulator tapers off to a point on its under side, as shown in Fig. 5, serving as an additional means of preventing the accumulation of water about the insulator.

What we claim as our invention, and desire to secure by Letters Patent, is—

Our improved insulating-supporter for telegraph-wires, composed of the metallic support-

er B, the glass insulator D, and the roof C, combined with each other and with the post A, substantially in the manner herein set forth.

L. R. LIVINGSTON.

JOHN J. ROGGEN.

CALVIN ADAMS.

Witnesses:

ALEX. MILLAR,

WM. D. WOOD.