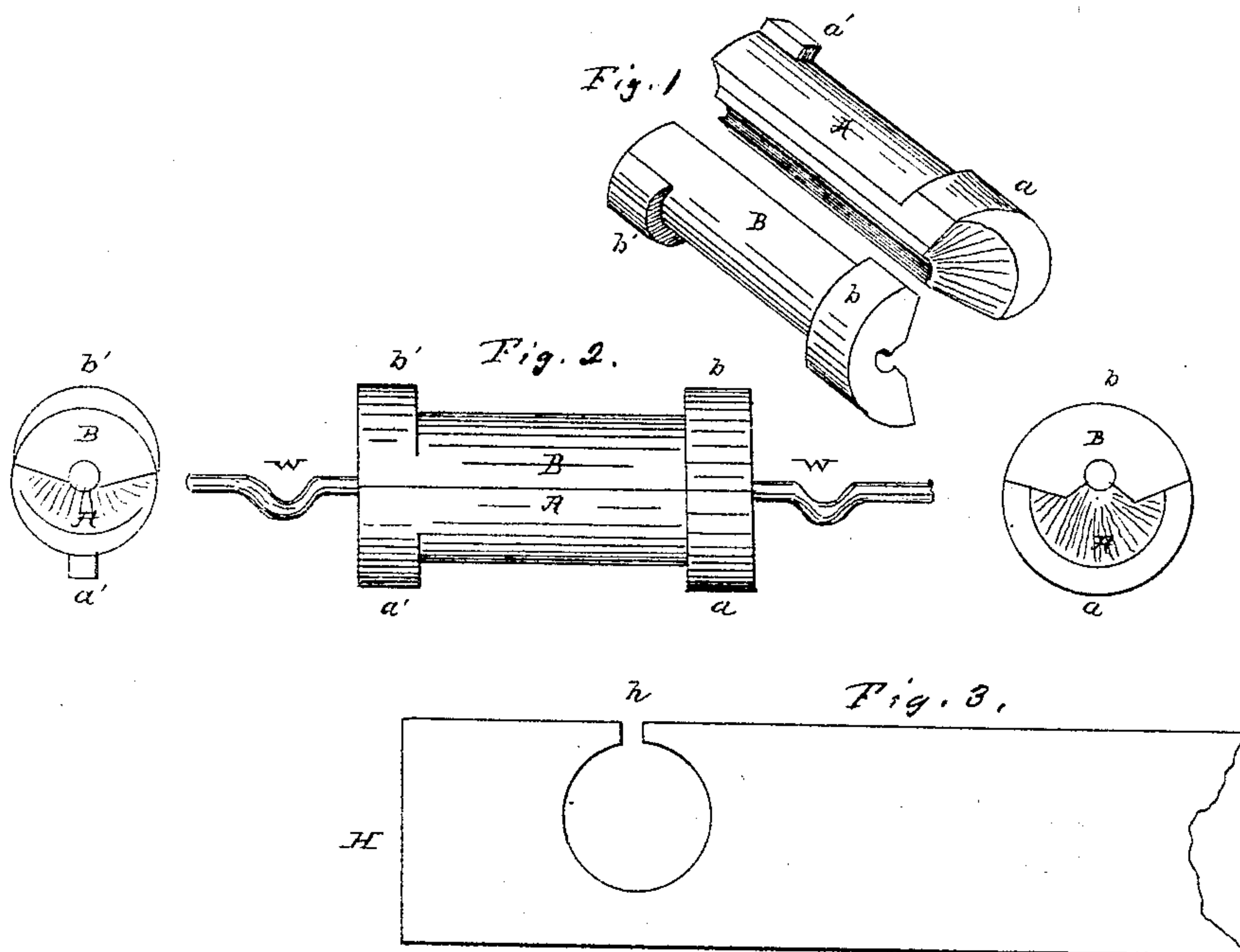


P. EBY & M. B. FENNINGER.  
 Insulators for Telegraph Lines.

No. 138,489.

Patented May 6, 1873.



Witnesses  
 Reuben R. Royer  
 J. R. R. R.

Inventors  
 Peter Eby.  
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 Per J. Stauffer. Atty.

# UNITED STATES PATENT OFFICE.

PETER EBY AND MICHAEL B. FENNINGER, OF KINZER'S P. O., PENNSYLVANIA.

## IMPROVEMENT IN INSULATORS FOR TELEGRAPH-LINES.

Specification forming part of Letters Patent No. **138,489**, dated May 6, 1873; application filed December 24, 1872.

*To all whom it may concern:*

Be it known that we, PETER EBY and MICHAEL B. FENNINGER, near Kinzer's Post-office, in the county of Lancaster and State of Pennsylvania, have invented certain Improvements in Telegraph-Insulators, of which the following is a specification:

The nature of my improvement relates to that class of insulators for telegraph-wires made of glass or its equivalent, in two parts, so constructed as to lock firmly and to secure the wires against becoming rusted from water lodging, or to become disengaged from the insulator when broken at intermediate points, said portions being inserted through an orifice in the arm-bearing or support for the insulator made horizontally.

The accompanying drawing shows the construction of the separate pieces and their combination with the wire inserted and kinked on each side, as also the combined ends of said insulator.

The portion A has a flanged head or collar, *a*, on one end, and a raised lug, *a'*, on the other end, centrally on the semi-circumference. The diameter has a longitudinal groove for the half-diameter of the wire raised on the sides, forming a sloping ridge. The ends are rounded out from the wire groove to form a sloped drain, while the collar and partial collar *b b'* on the portion B form a projecting shelter over the beveled or hollowed-out ends on the portion A when in proper position in the arm or support.

The raised central core and sloped sides of the diameter of the united pieces prevent the possibility of water getting into the groove for the wire.

The wooden arm H has an auger-hole of the desired diameter near the upper edge to receive the insulator horizontally. From one side a narrow slot, *h*, is cut out centrally across the arm H into the hole or aperture just wide enough to receive the wire. This open slot *h* also answers for a groove for inserting the several segments of the insulator with their appendages.

The portion B, having on one end only a partial collar or flange, *b'*, which is set vertically so that the upper edge enters the wire-slot *h*, and when inserted up against the outer flange or collar *b* it is then turned down with the diameter and wire-groove upward. The wire is now laid down through the slot

into the groove; and the other portion A is then inserted, the raised lug *a'* on the one end entering through the open slot *h*, and its diameter fitting over the wire and portion B. When inserted up to its outer flange or collar *a* the two portions fit over each other, and are now jointly turned half around, so that the lug *a'* on A comes to the under side, in which position both pieces will be firmly locked together and against the arm H in a manner that no shaking of the wire by wind or otherwise can cause them to turn; thus, by its construction and application, forming a positive protection to the wire, which is not the case when the sections are made to slip one at a time through a slot made in the arm or seat, and locked by a partial rotation.

Our sections differ substantially; nor do we insert them in an aperture by means of a slot communicating with said aperture. A groove over the aperture would answer our purpose as well for inserting our insulator; but, in order to introduce the wire, we make use of an open slot, which also answers for the groove.

We, therefore, disclaim a telegraph-insulator made and inserted as claimed in patent No. 70,132.

In order to prevent the wire from being withdrawn when broken between intermediate points, we make a short kink on each side of the insulator, allowing sufficient play for ordinary contraction or expansion.

The whole having been submitted to competent judges, who declare it to be possessed of useful novelty, and a decided improvement in this class of insulators.

What we claim as our improvement or invention, and desire to secure by Letters Patent in a telegraph insulator, is—

The combined construction of the segments or portions A B when a semi-groove for the wire is, in each portion, so raised and beveled in their connection as to exclude water, and locked by a full half turn by means of the collars or flanges *a b* on one side, and the lug and partial shoulder or flange *a' b'* on the other side, all substantially made and applied in the manner and for the purpose specified.

PETER EBY.

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Witnesses:

GEO. R. BOWER,

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