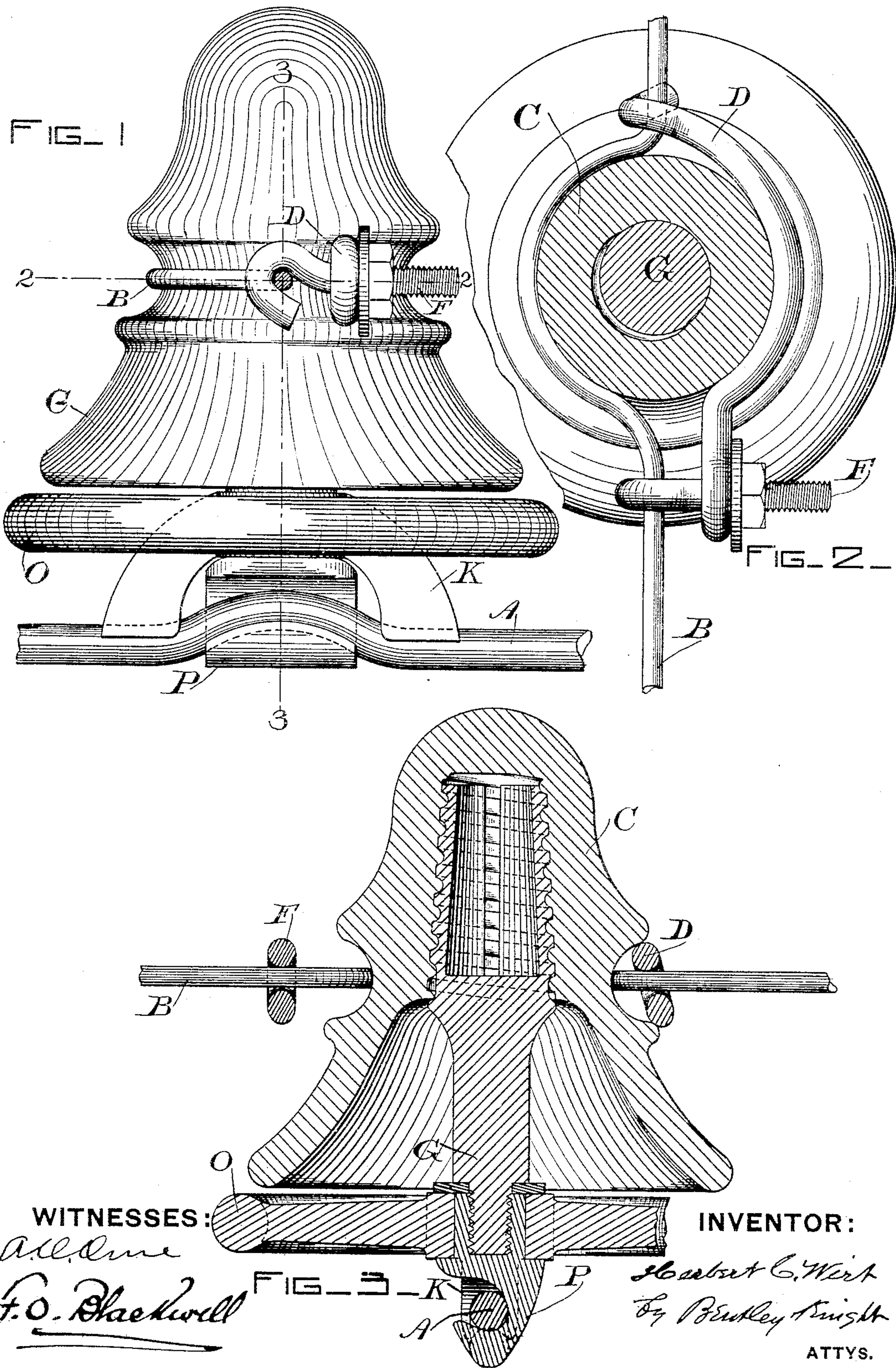


(No Model.)

H. C. WIRT.  
SUPPORT FOR ELECTRIC LINE WIRES.

No. 448,703.

Patented Mar. 24, 1891.





# UNITED STATES PATENT OFFICE.

HERBERT C. WIRT, OF BOSTON, MASSACHUSETTS.

## SUPPORT FOR ELECTRIC LINE-WIRES.

SPECIFICATION forming part of Letters Patent No. 448,703, dated March 24, 1891.

Application filed March 17, 1890. Renewed January 29, 1891. Serial No. 379,501. (No model.)

*To all whom it may concern:*

Be it known that I, HERBERT C. WIRT, a citizen of the United States, residing at Boston, in the county of Suffolk, State of Massachusetts, have invented certain new and useful Improvements in Supports for Electric Line-Wires, of which the following is a specification.

My invention consists in details of construction set forth at length in the following specification, reference being made to the accompanying drawings, in which—

Figure 1 is a side elevation of the said supports. Fig. 2 is a transverse section on the line 2 2 of Fig. 1, and Fig. 3 is a vertical transverse section on the line 3 3.

In the drawings, A represents a line-wire for an electric railway, adapted to be supported above the line of the track.

B is a transverse supporting-wire extending from poles upon opposite sides of the street in a well-known manner.

C is an insulator, preferably of glass or porcelain. This insulator is secured to the transverse wire B by means of the clamp D. The clamp D consists of a wire or bar of metal, having at one end a hook adapted to embrace the transverse wire upon one side of the insulator, and at its other end is an eye, through which passes a bolt F, having upon one side a nut and washer and upon the other side a hook embracing the wire B.

In securing the insulator to the cross-wire the cross-wire is first put in position and the insulator placed against it at the desired point. The cross-wire is straight, and the clamp D is also substantially a straight piece of wire having a hook at one end. This hook is placed around the wire B, and the bolt F is hooked around the wire B upon the opposite side of the insulator, and its screw end is placed through the eye in the end of clamp D. The nut and washer are then put on and screwed up, thereby bending both the wire B and the clamp D tightly around the neck of insulator C. The means for connecting the line A to the insulator C consist, first, of a screw-threaded shank G, adapted to enter the insulator from the under side. At the lower end of this shank G is an arch K, having its opposite ends grooved to fit the upper surface of wire A. A clamp P surrounds the

wire A, and is drawn up into the opening of the arch K by means of a screw on the lower end of shank G. A guard O, circular in form and corresponding quite closely to the lower edge of insulator C, is attached to the arch, so that the insulator is always protected against accidental blows from the trolley in case it is thrown off from wire A. In practice it is preferable to give the wire A an initial bend by means of a suitable vise, after which it may be placed against the arch K and the clamp P drawn tightly up to hold it in position.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, in an electric railway, of an insulator and transverse supporting-wire passing around the insulator, a clamp secured at its ends to the wire so that the insulator is surrounded and held between the wire and clamp, and a line conductor suspended from the insulator, as set forth.

2. The combination, in an electric railway, of the transverse supporting-wire and clamp attached thereto, with the insulator held by and between the wire and clamp, a metallic shank seated in the insulator, and a line conductor suspended by the shank, as set forth.

3. The combination, with a line-wire for an electric railway, of a transverse supporting-wire, and an intermediate insulator secured to the said transverse wire by means of a clamp attached to the transverse wire at one side of the insulator and at the other side of the insulator held by means of a connecting-bolt adapted to draw the clamp tightly around the insulator.

4. The combination, with a line-wire for an electric railway, of a transverse supporting-wire and an intermediate insulator, a connection from the under side of the insulator to the line-wire, and a protecting-guard for the insulator.

5. The combination, with a line-wire of an electric railway, of a supporting-insulator therefor, a connection between the line-wire and the said insulator, and a protecting-guard of metal attached to the said connecting device.

6. The combination, with a line-wire of an electric railway, of a supporting-insulator

and an intermediate connecting device consisting of an arch and a clamping-piece for bending the wire into the said arch, and a protecting-guard for the insulator attached  
5 to the said arch.

7. The combination, with an electric line conductor, of a transverse supporting-wire, an intermediate insulator secured to the said transverse wire, a screw-shank entering the  
10 said insulator, an arch on the lower end of shank, having its ends resting upon the line-wire, and an intermediate clamp embracing the line-wire and adapted to be drawn into the arch by a screw connection.

8. The combination, with an electric line- 15 wire, of a supporting-insulator and an intermediate connection consisting of an arch having its ends resting on the line-wire and a clamp embracing the line-wire and adapted to bend the said line-wire into the said arch. 20

In witness whereof I have hereunto set my hand this 7th day of March, 1890.

HERBERT C. WIRT.

Witnesses:

E. M. BENTLEY,  
F. O. BLACKWELL.