

(No Model.)

C. ELKINS.  
INSULATOR.

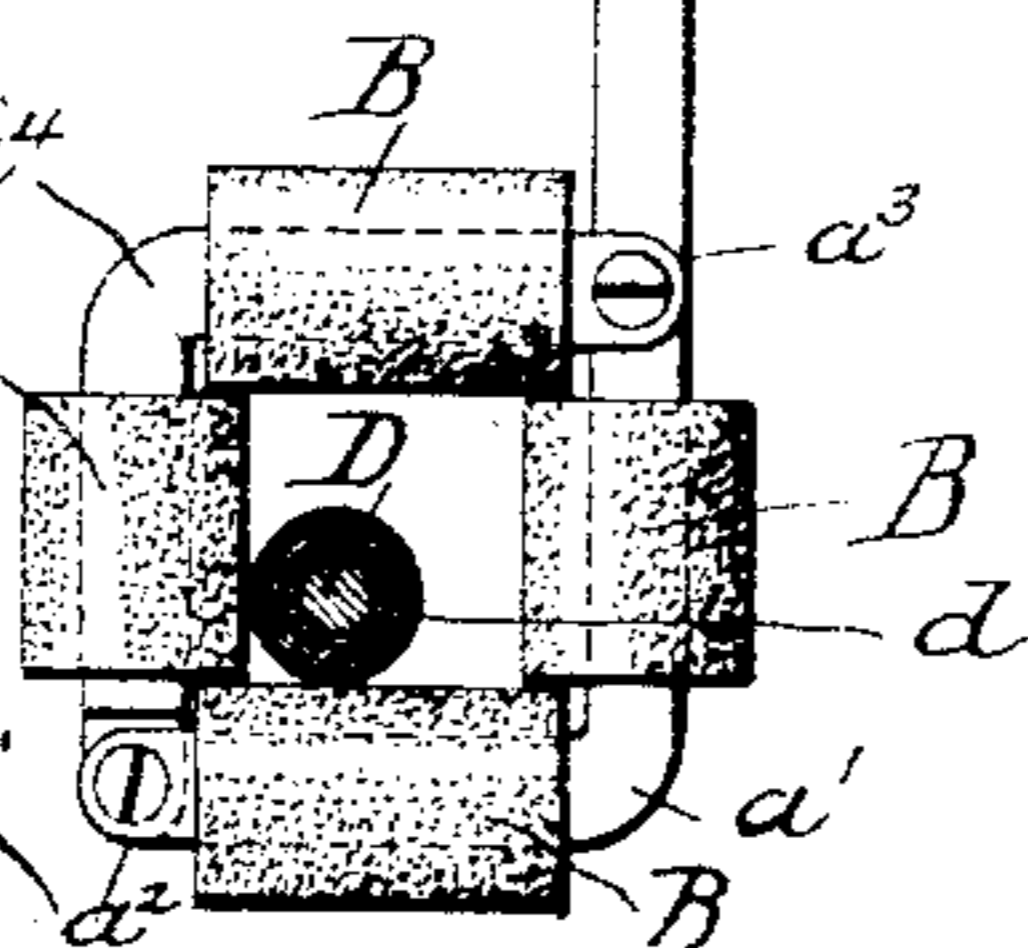
No. 444,879.

Patented Jan. 20, 1891.



*Fig. 2.*

WITNESSES:  
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*Thomas K. Leachard,*



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# UNITED STATES PATENT OFFICE.

CHARLES ELKINS, OF SACCARAPPA, MAINE.

## INSULATOR.

SPECIFICATION forming part of Letters Patent No. 444,879, dated January 20, 1891.

Application filed April 22, 1890. Serial No. 349,033. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES ELKINS, a citizen of the United States, residing in Saccarappa, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Insulating-Supports for Electric Wires, of which the following is a specification.

My invention relates to insulating-supports for electric wires; and my object is to produce a support that will allow a free movement either of the wire through the support or the support on the wire, and yet avoid any electrical contact between the two.

While my invention is useful for uncovered electric conductors, it is especially designed for use in connection with insulated wires, such as "underwriter's wire." Electric conductors are frequently strung to supports which are liable to move, such as trees, and if an unyielding connection is made therewith the conductor will be subjected to alternate pulling and slacking by the movement of said support, and if a yielding connection is made, such as by passing the conductor through an eye attached to said support, the movements of the latter will cause injurious wear on the conductor, particularly if an insulated one.

My invention consists in a rectangular frame having an insulating anti-friction sleeve or roller on each of its sides and means for connecting said frame to a support; and it also consists, further, in the construction and combination of parts hereinafter described and claimed.

In the drawings which accompany and form part of this specification, Figure 1 is a view of my hanging insulator, illustrating its use; and Fig. 2 is an enlarged side elevation of the insulator.

A indicates the insulator, consisting of the arm  $a$ , bent at a right angle at  $a'$ , and having connected to it at  $a^2$  and  $a^3$  a bent portion  $a^4$ , to form a complete rectangular frame. On each side of this frame is an anti-friction sleeve or roller B, of hard insulating material. The object of having the frame in two parts is to enable the sleeves B to be applied to their

places before the portions  $a^4$  are connected to the bent arm. At the upper end of the insulator is pivotally connected the bracket C, having plate  $c$ , with holes for screws or nails, by which the entire insulator is attached to a tree or other support. The object of the pivotal connection is not only to allow a swinging movement of the insulator regardless of the inclination of the support to which it is attached, but also to prevent an undue strain on the conductor when the support sways out of its normal position.

D indicates the electric conductor, having an insulating-covering  $d$ . This conductor is simply threaded through the rectangle, or in case of applying my insulator to a line already strung the bracket C and arm  $a$  will be placed in position and the wire laid on the lower roller or sleeve B, and then the portion  $a^4$ , with its sleeve, will be permanently connected to arm  $a$ .

The support, as a tree, and the insulator can be swung or moved, as by the wind, without straining the wire, and wear on the insulating-covering of the latter is reduced to a minimum, owing to the anti-friction sleeves or rollers B B.

Having thus described my invention, I claim—

1. A hanger or support for electric wires, having a rectangular frame, and anti-friction rollers on the sides of said frame.

2. A hanger or support for electric wires, having a rectangular frame in two parts, and an insulating anti-friction roller on each of the four sides of the frame.

3. A hanger or support for electric wires, consisting of a frame carrying a plurality of anti-friction rollers, and a bracket pivotally connected to said frame and forming the means of attaching to a support.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

CHARLES ELKINS.

Witnesses:

WOODBURY K. DANA,  
FRANK J. DANA.