

(No Model.)

C. W. STEPHEN.
INSULATOR PIN.

No. 548,669.

Patented Oct. 29, 1895.

Fig. 1.

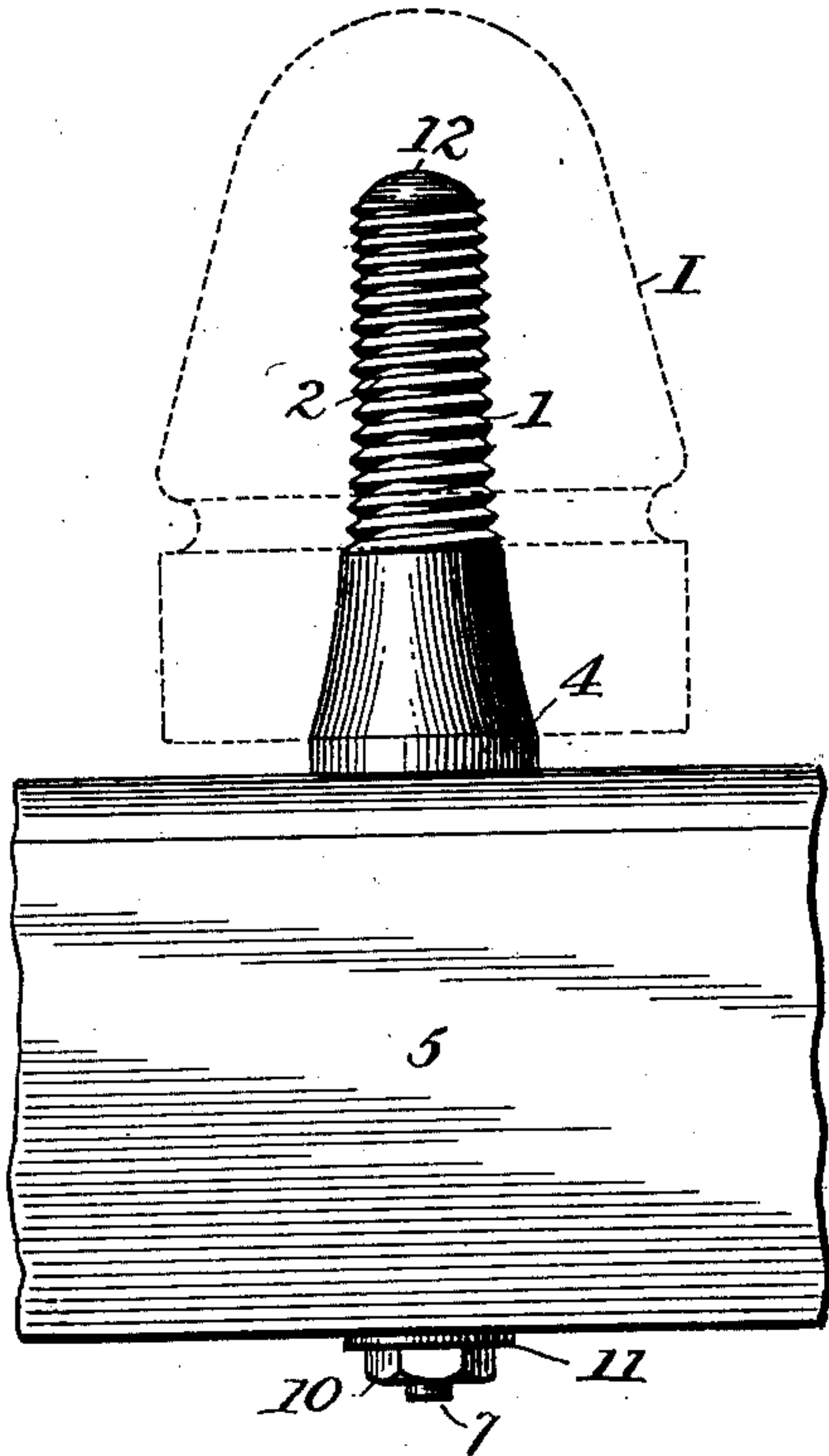
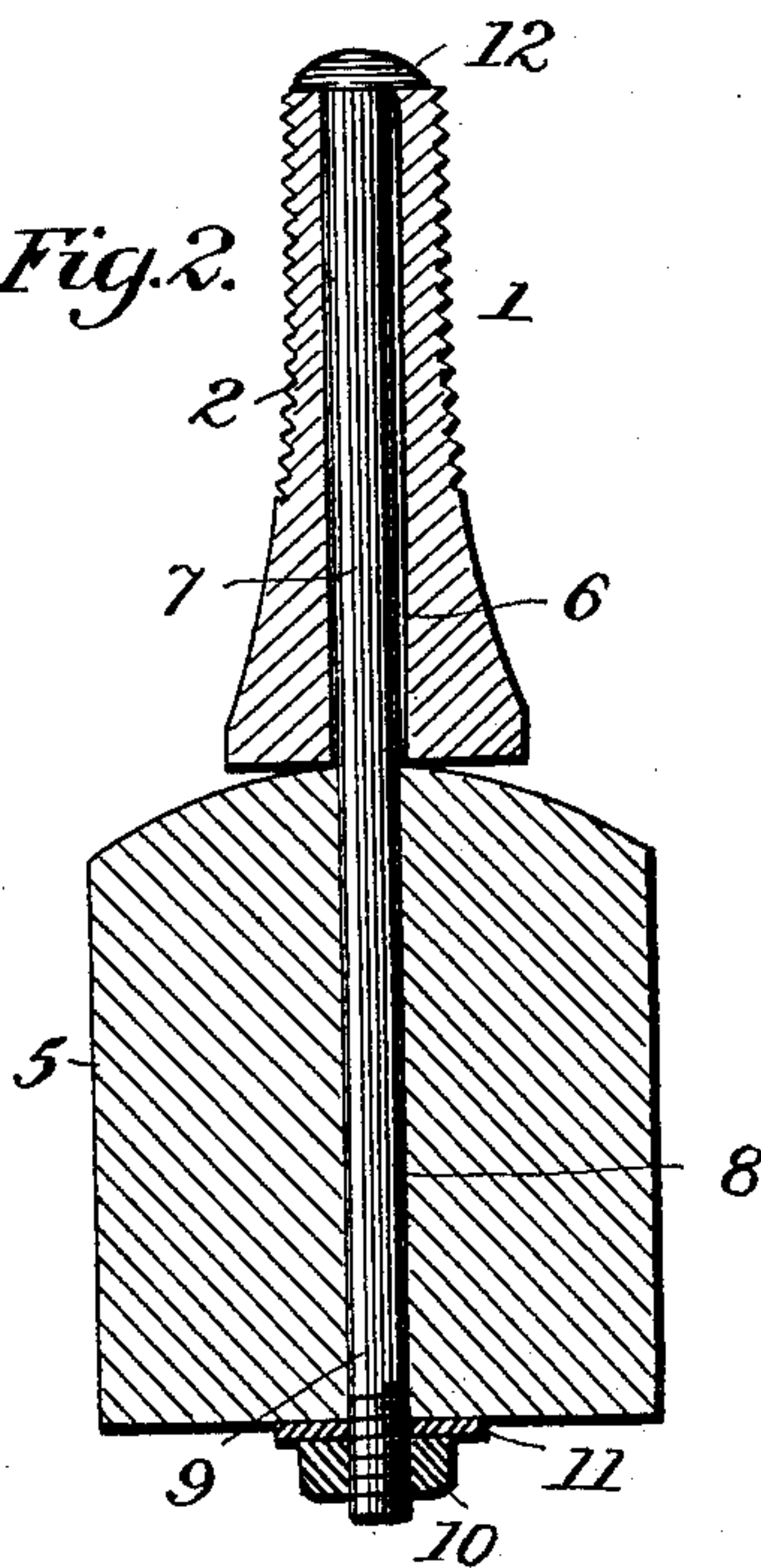


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

MALONE WHELESS, OF WASHINGTON, DISTRICT OF COLUMBIA.

ELECTRIC-ARC LAMP.

SPECIFICATION forming part of Letters Patent No. 548,682, dated October 29, 1895.

Application filed May 2, 1895. Serial No. 547,907. (No model.)

To all whom it may concern:

Be it known that I, MALONE WHELESS, a citizen of the United States, residing at Washington, District of Columbia, have invented certain new and useful Improvements in Arc Lamps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an improvement in arc lamps.

It relates more especially to a form of arc lamp devised by me and for which application for United States patent was filed April 27, 1895, Serial No. 547,394; and it relates more especially to an improvement in the feed or adjusting device shown in such application.

The present invention consists in certain details of construction, which will be hereinafter specified.

In the annexed drawings, Figure 1 represents a transverse section through the arc lamp provided with the invention. Fig. 2 represents a section on line 2 2, Fig. 1, showing a top view of the cross-head. Fig. 3 represents a section on line 3 3, Fig. 1. Fig. 4 represents a detailed view of one of the binding-cams. Fig. 5 represents side and bottom views of the clamp around the holder of the positive carbon.

In the drawings the letter A indicates the light-chamber which is attached to the cap B. At one side of this cap B is made the hole b , in which is an asbestos ring b' . Through this ring b' passes a rod C. On the under side of the cap B there is placed around this rod C asbestos packing c and a metal plate c' to hold the packing in place. Above the cap B is placed another asbestos packing c^2 and a metal plate c^3 . The binding-screw for the negative wire is placed in the top of the rod C. A sleeve D extends downwardly from the rod C and carries at its lower end d the upper end e of the holder E, there being a set-screw d' in the lower end of the tube D, such set-screw bearing against the end e of the holder E. The lower end e' of the holder E is at an angle to the end e and carries the receptacle e^2 , in which is placed the negative carbon.

Extending centrally from the top of the cap

B is a hollowed boss b^2 . Within the bore b^3 of this boss b^2 there is fitted the positive-carbon holder F. This holder F is hollow, open at its lower end f , and having a screw-cap f' at the top. Near the bottom of the end f this holder F has two slots f^2 opposite each other. Just above these slots a clamp G is secured around the holder F by the screw g , which passes through the ears g' of the clamp G. This clamp G has depending lugs g^2 .

Placed about the holder F, at the slots f^2 , are two plates H, which fit the holder F and are provided with ends h . Passing through these ends h are bolts k and l . By means of these bolts k and l the binding-cams K and L are held to the plates H. In the drawings two forms of cams are shown; but either form may be used on both sides. The cam K is a simple cam-wheel securely held on the bolt k . On each side of the cam K there is also secured to the bolt k a plate k' , at the other ends of which plates there is a bolt k^2 . In this form of cam the bolt k is loose in the ends h of the plates H, so that the bolt k , with the cam K, will turn in the ends h . The other cam L is made in one piece with its plates l' instead of being separate, and through these plates l' passes the bolt l^2 . Pivotaly secured to these bolts k^2 and l^2 are hangers k^3 and l^3 , which are pivoted at their upper ends to a cross-head M. This cross-head M has a central hole m , in which is a short tube m' , which fits around and in which is the holder F. In the ends m^2 of the cross-head M are secured by nuts the lower ends of rods N. These rods N pass upward through tubes n , which are secured in holes in the cap B. To the upper end n' of these tubes n are secured the hollow centers O of the solenoids P. In these hollow centers O are the cores Q, which are secured to the upper ends of the rod N. In the holder F is placed the positive carbon. The positive wire is connected to the two solenoids P P, and is then secured by a binding-screw to the top of the cap B. To better secure passage of the current the cap B is connected on the under side by a wire coil R to the holder F.

When the current is turned on, the lamp is in circuit and the solenoids are vitalized. The cross-head M is drawn upward, sliding on the holder F. As this occurs the cams,

so that there is little or no danger of its splitting, and still I am enabled to provide a minimum-sized hole in the cross-bar in order to get a substantial support for the pin. Furthermore, the head 12 of the bolt practically covering the upper end of the pin 1 also tends to prevent its splitting, and even if it should split or crack, by properly tightening the nut 10, so that the pin is held tightly against the upper surface of the cross-bar, the parts of the split pin will practically be held in position between the upper surface of said cross-bar and the head of the bolt. It will be seen that this construction is of such a nature that the parts can be supplied at a minimum cost, that they can be put together quickly and easily, and when the parts are in place and secured tightly together an exceedingly stiff and rigid pin is provided, and all the parts can be of a relatively-small size and still provide the necessary strength and rigidity to properly support the line-conductor, as all the parts co-operate together in producing this rigidity and aiding in giving strength to each other. Furthermore, it will be seen that if perchance the insulator I should become broken or for any other reason it were desired to be changed it can readily be un-

screwed and another one applied without disturbing the pin in its position or in any way tending to loosen its connection to the cross-bar.

Other practical advantages will readily suggest themselves to those skilled in the art, and I may say that in actual use I have found this pin to meet the requirements of the art in the most satisfactory manner.

What I claim is—

An insulator pin, comprising a tapering sleeve of insulating material having an external thread to receive the insulator cap, and provided with a longitudinal opening, a bolt passing through the sleeve and cross-bar and having a head resting upon the upper end of the sleeve, and a nut for tightening the bolt and sleeve in place, the opening in the sleeve being slightly larger than the bolt, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES WM. STEPHEN.

Witnesses:

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