R. W. HARMS.

INSULATOR PIN.

APPLICATION FILED MAY 8, 1915.

1,328,732. Patented Jan. 20, 1920.

Fig. 1.

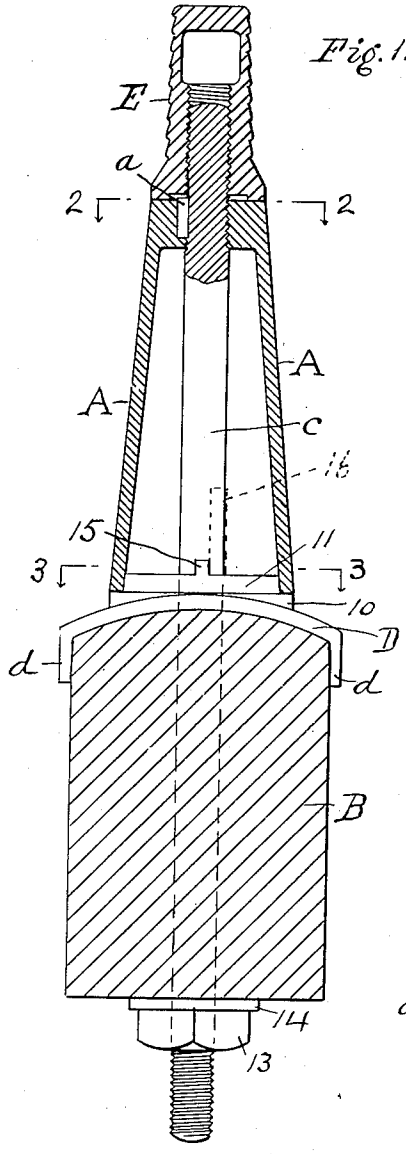


Fig. 2.

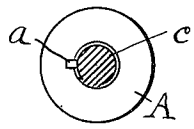


Fig. 3.

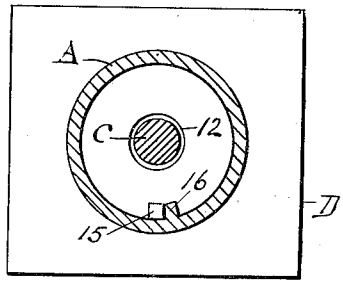
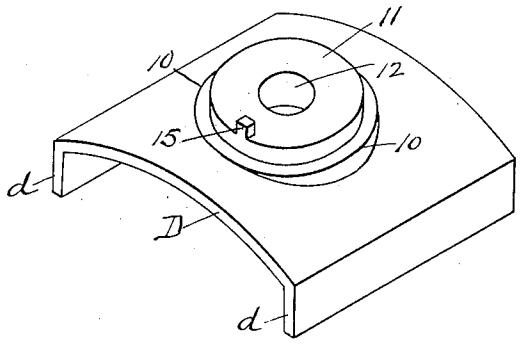


Fig. 4.



Witnesses:
Hubert A. Howson
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By his Attorneys
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UNITED STATES PATENT OFFICE.

RHINEHART W. HARMS, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE R. THOMAS AND SONS COMPANY, OF EAST LIVERPOOL, OHIO, A CORPORATION OF OHIO.

INSULATOR-PIN.

1,328,732. Specification of Letters Patent. Patented Jan. 20, 1920.

Application filed May 8, 1915. Serial No. 26,756.

To all whom it may concern:

Be it known that I, RHINEHART W. HARMS, a citizen of the United States of America, residing in the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Insulator-Pins, of which the following is a specification.

My improvements in insulator pins have been designed more particularly for application to insulator supports of the type forming the subject of the patent of W. S. Lee, Jr., No. 855,253, dated May 28, 1907, the main object of my invention being to improve the construction so as to provide a strong support for the bolt, while permitting the parts to be readily taken down or adjusted to aline the top groove of the insulator properly.

In the accompanying drawings,

Figure 1 is a vertical section showing my improved insulator pin mounted upon a cross-arm;

Fig. 2 is a sectional plan on the line 2—2, Fig. 1;

Fig. 3 is a sectional plan on the line 3—3, Fig. 1.

Fig. 4 is a perspective view of the base plate.

A is a hollow conical pin or standard through which passes centrally the vertical securing bolt C, threaded at its projecting upper end into the head E. This latter may be cemented or otherwise secured into the insulator in the manner described.

The bolt C besides being threaded into the head E, is secured to the conical standard A, preferably by being screwed into a correspondingly threaded opening in the upper end of the standard A and then locked by a key *a* or equivalent. The bolt C having first been screwed into the standard A and then locked by the key *a*, is screwed into the head E until the latter rests firmly upon the upper end of the standard.

To receive the lower end of the standard A there is provided a separable base plate D which is constructed to fit upon the cross-arm B and may be curved and have retaining flanges *d*, *d*, at the edges to grip the cross-arm, as shown. The upper surface of this base plate has an annular shoulder 10 forming a seat for the base of the standard A and a centering projection 11 fitting within the lower end of the hollow cone. The bolt C passes down through a central hole 12 (Fig. 4) in the base plate D and through the cross-arm, and below the latter, the projecting threaded end of the bolt is provided with a securing nut 13 and washer 14, Fig. 1.

In order that the top groove of the insulator may be properly alined to receive the conductor, the standard and bolt have a limited freedom to turn upon the base-plate, but interlocking projections, such as 15 on the base plate D and 16 on the standard A, are provided, so that if the nut 13 should rust fast and it then becomes necessary to apply a wrench to unscrew the nut to take down the insulator pin for repairs, the projection 16 will fetch up against 15 and hold the standard and bolt from turning farther.

The construction described provides a strong support for the bolt, and prevents any tendency to bend the bolt under strain of the conductors, and yet permits the parts to be readily taken down. Also the insulator can be conveniently alined. The securing of the bolt C to the standard A before the bolt is screwed into the head E, prevents the bolt from being accidentally dropped from the cross-arm during erection.

I claim as my invention:

1. In an insulator pin, a base plate, a separable standard free to turn thereon, and means to limit the freedom of said turning movement, for the purpose described.

2. In an insulator pin, a base plate, a separable standard free to turn thereon, and opposed lugs on said base and standard respectively to limit the freedom of said turning movement.

3. An insulator pin, comprising a hollow standard with a tapped hole at its upper end, in combination with a securing bolt lying within the standard and having a threaded end screwed through said tapped hole and projecting beyond the upper end of the standard to enter the interiorly threaded thimble of a coöperating insulator.

4. An insulator pin having a hollow standard, with a tapped hole at its upper end, in combination with a securing bolt lying within the standard and having a threaded end screwed through said tapped hole and projecting beyond the upper end of the standard to enter the interiorly threaded thimble of a coöperating insulator, together with means for locking said standard and

bolt against relative rotation after the insertion of the bolt.

5. An insulator pin having a hollow standard with a tapped hole at its upper end, in combination with a securing bolt lying within the standard and having a threaded end screwed through said tapped hole and projecting beyond the upper end of the standard to enter the interiorly threaded thimble of a coöperating insulator, together with means for locking said standard and bolt against relative rotation after the insertion of the bolt, and a separable base plate on which said standard is mounted with limited freedom of rotation.

6. An insulator pin, comprising a hollow standard, a separable base plate therefor adapted to be secured on the cross-arm, a bolt passing through the standard and base plate and secured to the standard, and a head secured to the top of the bolt, together with engaging elements on the standard and base, respectively, limiting the freedom of the standard to turn upon the base plate.

7. An insulator pin, comprising a hollow standard, a bolt passing through the standard and screwed from below into the upper end of the latter, a head for the insulator screwed on the top of the bolt, and means to lock the bolt to the standard.

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

RHINEHART W. HARMS.

Witnesses:
ANNA M. HARMS,
MARION PICKETT.