J. BLACKBURN.

INSULATOR CLAMP.

APPLICATION FILED JAN. 9, 1909.

945,213. Patented Jan. 4, 1910.

Fig. 1.

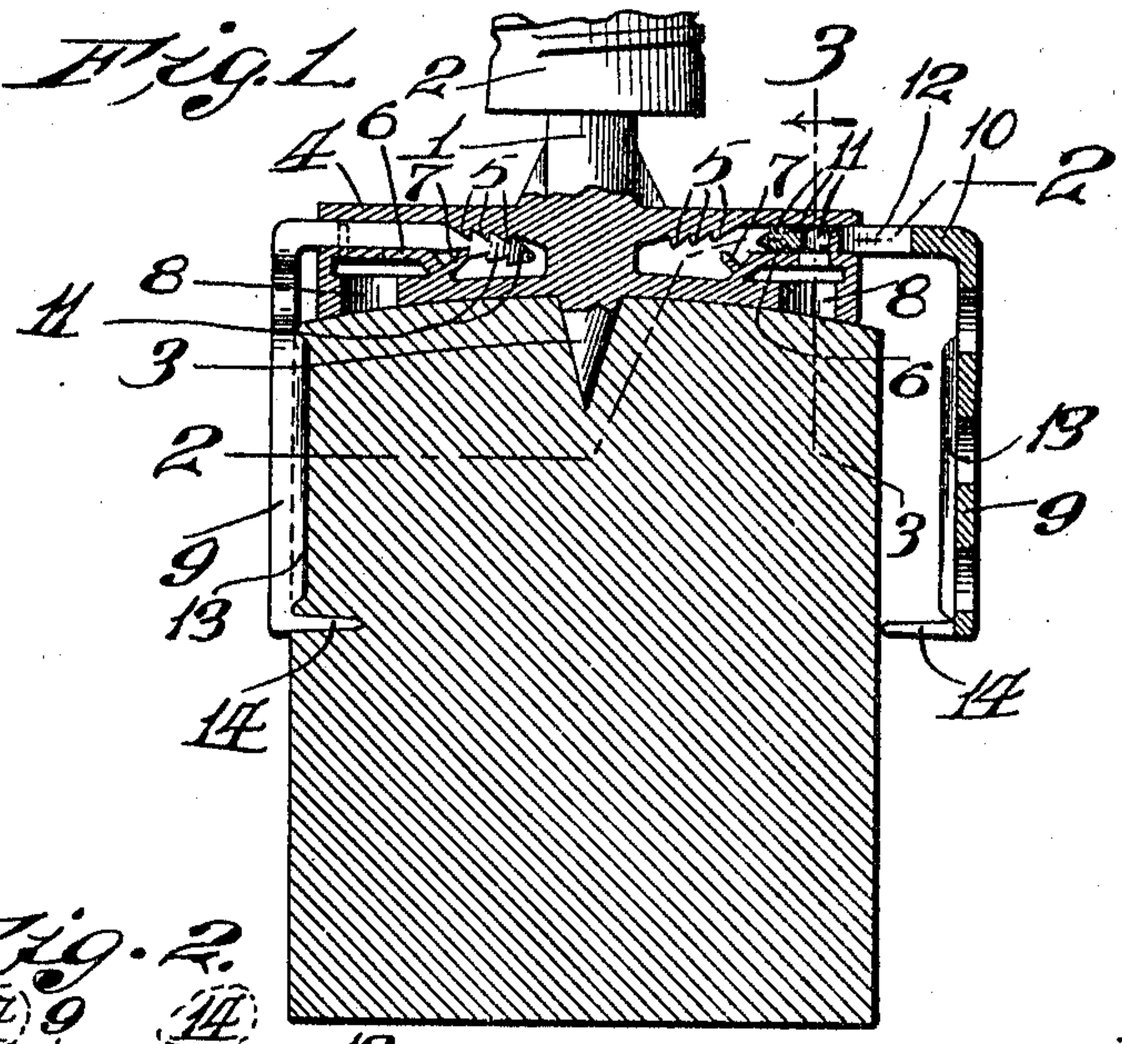


Fig. 2.

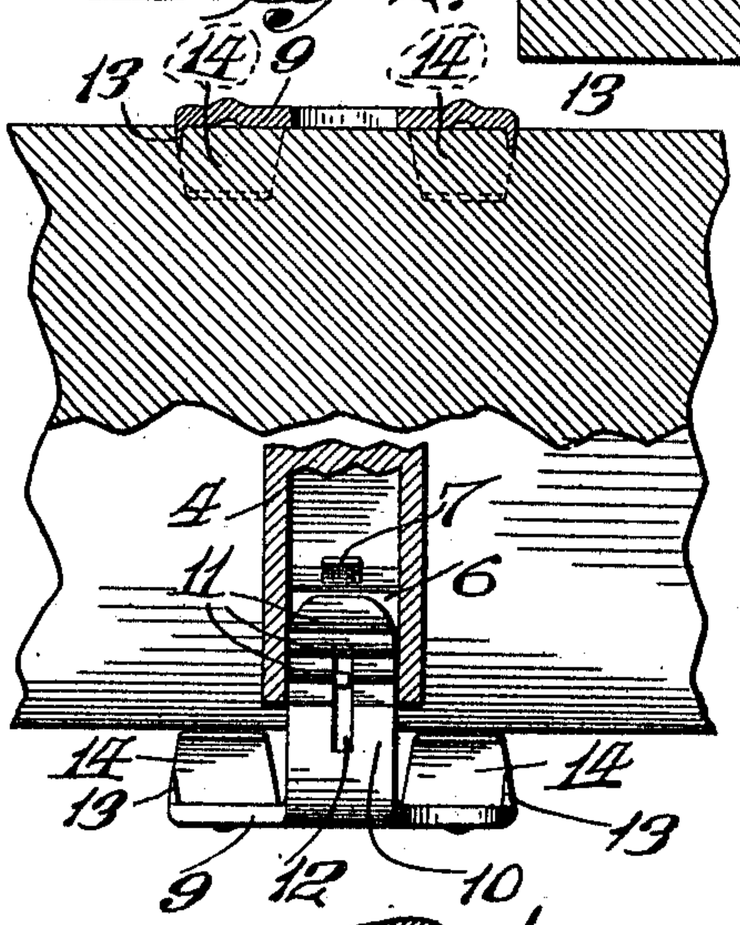


Fig. 3.

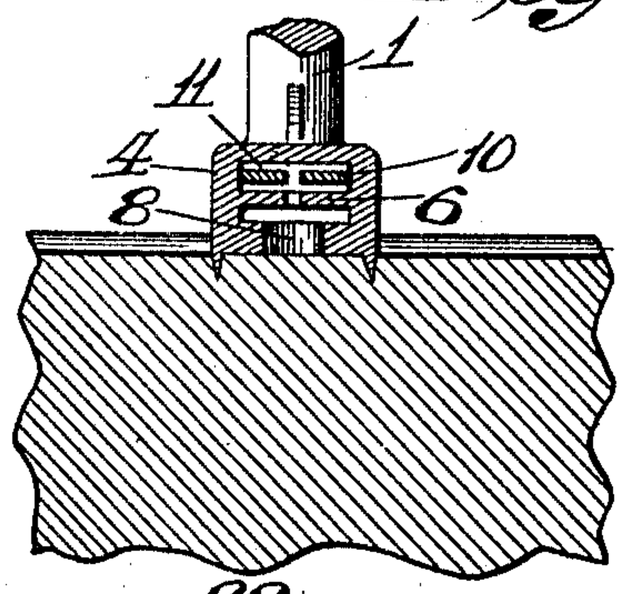


Fig. 5.

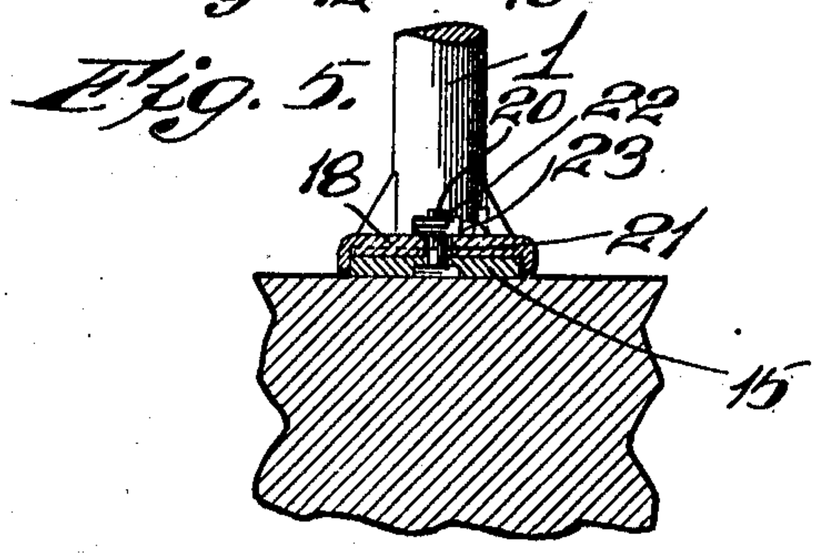
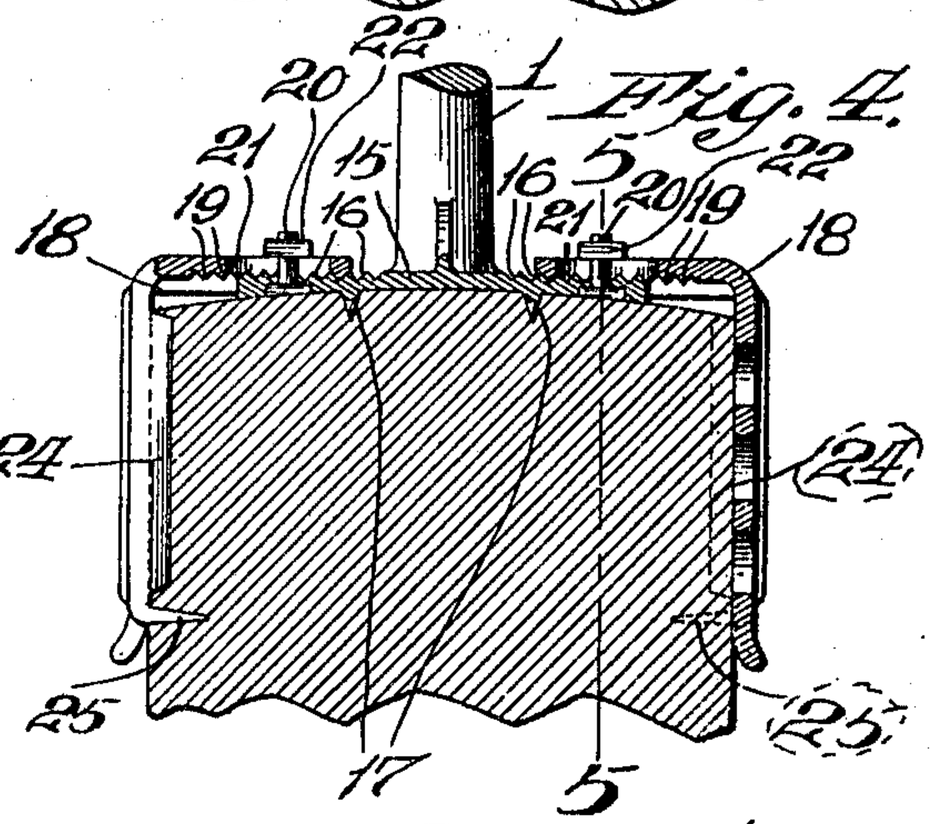


Fig. 4.



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INSULATOR-CLAMP.

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To all whom it may concern:

Be it known that I, JASPER BLACKBURN, a citizen of the United States, and resident of Kirkwood, Missouri, have invented certain new and useful Improvements in Insulator-Clamps, of which the following is a specification, containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to an insulator clamp adapted to be applied to cross arms of wire supporting poles and the like, the object of my invention being to construct a simple, inexpensive device combining a pin which carries the glass or porcelain insulator, and means carried by said pin whereby the same is rigidly clamped in proper position upon the cross arm.

To the above purposes, my invention consists in certain novel features of construction and arrangement of parts which will be hereinafter more fully set forth, pointed out in the claims and illustrated in the accompanying drawings, in which:

Figure 1 is a cross section of a cross arm, and showing one of my improved insulator supports positioned thereon, and parts of which support are shown in vertical section; Fig. 2 is a horizontal section taken on the line 2—2 of Fig. 1; Fig. 3 is a vertical section taken on the line 3—3 of Fig. 1; Fig. 4 is a vertical section taken through the upper portion of a cross arm and showing a modified form of my device in position thereon; and Fig. 5 is a vertical section taken on the line 5—5 of Fig. 4.

Referring by characters to the accompanying drawings: 1 designates a pin, the upper end of which receives a glass or porcelain insulator 2, of usual form, and the lower end of said pin is pointed, as designated by 3, and said pointed lower end is embedded in the upper portion of the cross arm when the device is applied thereto. Formed integral with the lower portion of the pin and adapted to occupy a transverse position on top of the cross arm is a horizontally disposed housing 4, and formed integral with the under side of the top wall of this housing, immediately adjacent the pin 1, are ratchet teeth 5. Formed integral with the side walls of the housing 4 at the ends thereof are horizontally disposed partitions 6, and formed integral with the housing at the end of each partition is a prong or tooth 7, which projects toward the series of teeth 5. Formed through the bottom of the housing adjacent each end thereof is an aperture 8, which permits the insertion of a tool utilized for upsetting a portion of the partition 6, as hereinafter described. The means employed for engaging in the housing 4 and clamping the cross arm comprises a pair of inverted L-shaped members 9, the horizontal arms 10 of which are adapted to enter the ends of the housing 4, and formed in the upper and lower faces of the ends of these horizontal arms 10 are notches 11, which when the members are driven into place receive the teeth 5 and the prongs 7. The horizontal arms 10 of the clamping members are provided with slots 12, and when the parts of the device are assembled a suitable tool is inserted through the apertures 8 and a portion of the partition 6 is upset and bent into the slot 12, and thus the members 9 are temporarily held in the housing. Formed integral with the side edges of the vertical arms of the members 9 are inwardly projecting sharpened ribs 13, and formed integral with the lower ends of said vertical arms 9 are horizontally projecting prongs 14, which, together with the ribs 13, enter and engage in the sides of the cross arm A when the device is properly assembled thereon.

The form of the device as described and shown in Figs. 1 and 3 inclusive is adapted to be permanently attached to a cross arm, and can only be removed by being broken apart, but in Figs. 4 and 5 I have illustrated a form of the device which may be detached from the cross arm when desired. In this detachable construction a plate 15 is formed integral with the lower end of the pin 1, and formed on the top surface of said plate at its ends is a series of transversely disposed teeth 16. Prongs 17 are formed integral with the under side of this plate 15 for engaging in the cross arm when the plate is applied thereto.

18 designates the gripping members, which are of inverted L-shape, and formed on the under side of the horizontal arms of these members are teeth 19, which are adapted to engage with the teeth 16. Bolts 20 are seated in the ends of the plate 15, and said bolts pass through slots 21 formed in the horizontal arms of the members 18, and the upper ends of said bolts receive nuts 22. When this form of the device is made use

of and the members 18 are adjusted and clamped on the cross arm, the nuts 22 are tightened, and to prevent said nuts from loosening, lugs 23, which are formed integral with the horizontal arms of the members 18, are bent into position against the side faces of said nuts. The vertical arms of the members 18 are provided with sharpened ribs 24 and with prongs 25, which engage in the sides of the cross arm when said members are clamped thereto.

When the form of the device seen in Figs. 1 to 3 inclusive is clamped upon a cross arm, the pointed lower end of the pin 1 is driven into the top of said cross arm, after which the members 9 are forcibly driven toward the sides of the cross arm and the ends of the housing 4, and by so doing the notched ends of the horizontal arms of the members 4 engage the teeth 5 and prongs 7, thus preventing the withdrawal of the clamping members, and the sharpened ribs 13 and the prongs 14 engage in the sides of the cross arm A to rigidly hold the insulator carrying pin in proper position upon said cross arm.

By my improved construction it is not necessary to bore holes through the cross arm, which action materially weakens said cross arm, and the device is so constructed as to be readily applied at any point throughout the length of the cross arm.

I claim:

1. An insulator support, comprising a pin, a plate integral with the lower end thereof and adapted to bear on top of the cross arm, and clamping members adapted to engage the sides of the cross arm intermediate of its top and bottom faces and the ends of the plate, and means for securing said clamping members to the plate.

2. A device of the class described, comprising an insulator carrying pin, a plate formed integral with the lower portion thereof and adapted to rest on top of a cross arm, there being teeth formed on said plate, a pair of gripping members adapted to engage a cross arm, and teeth formed on said gripping members and adapted to engage the teeth on the plate.

3. A device of the class described, comprising an insulator carrying pin, a plate integral with the lower portion thereof and adapted to rest on top of a cross arm, a pair of inverted L-shaped gripping members adapted to engage the sides of the cross arm, and the horizontal arms of which gripping members adjustably engage the ends of the plate.

4. A device of the class described, comprising an insulator carrying pin, a horizontally disposed open ended housing integral with the lower portion of said pin, and a pair of gripping members adapted to engage the sides of a cross arm and the upper portions of which gripping members engage in the ends of the housing.

5. A device of the class described, comprising an insulator carrying pin, a horizontally disposed open ended housing integral with the lower portion of said pin, teeth formed integral with the wall of the housing on the interior thereof, gripping members adapted to engage the sides of a cross arm, the upper portions of which gripping members enter the ends of the housing, and teeth formed on the upper portions of the gripping members, which teeth engage with the teeth in the housing.

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

JASPER BLACKBURN.

Witnesses:

M. P. Smith,

E. L. Wallace.