May 22, 1928. 1,670,429

J. P. ARNDT

PIN FOR INSULATORS

Original Filed Dec. 31, 1920

FIG. 1

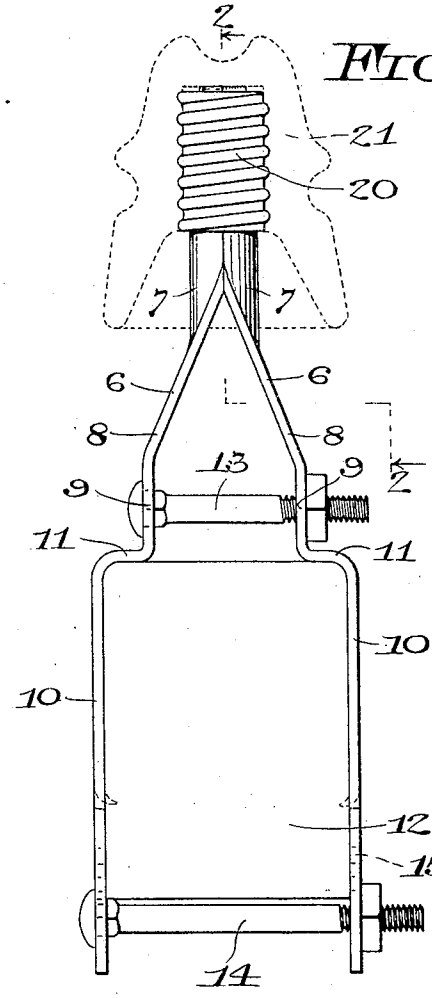


FIG. 3

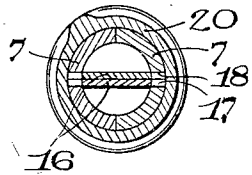


FIG. 2

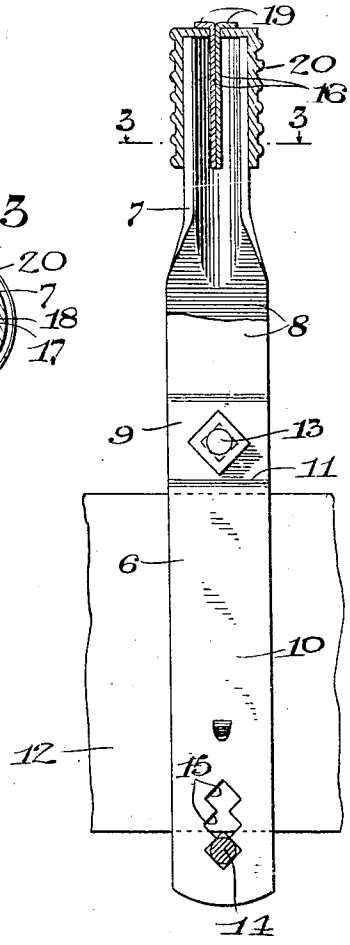


FIG. 4

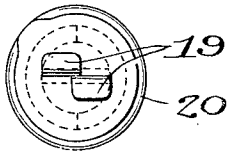
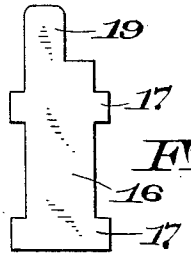


FIG. 5



WITNESSES

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UNITED STATES PATENT OFFICE.

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PIN FOR INSULATORS.

Original application filed December 31, 1920, Serial No. 434,309. Divided and this application filed March 2, 1922. Serial No. 540,534.

The invention relates to insulator pins.

One of the objects of the invention is to provide an insulator pin for attachment to the cross arm of a line conductor pole which may be arranged in different positions on the cross arm and can be used on cross arms of different sizes.

A further object of the invention is to provide a simple and efficient insulator pin made of metal stampings that may be assembled in the factory ready for use.

With the above and other objects in view the invention consists in the insulator pin hereinafter described and all equivalents.

This application constitutes a division of the application filed by me December 31, 1920 for insulator pins, Serial No. 434,309, and relates more particularly to the means for fastening the insulator pin to the cross arm.

In the drawings: Fig. 1 is an end view of an insulator pin embodying the invention; Fig. 2 is a section taken on the line 2—2 of Fig. 1; Fig. 3 is a section taken on the line 3—3 of Fig. 2; Fig. 4 is a top view of the pin; Fig. 5 is a detail view of one of the parts of the pin.

The insulator pin includes a pair of complementary members 6 formed from flat metal bars by stamping. Each member has a semicylindrical head 7, an inclined portion 8, and straight side portions 9 and 10 connected by a laterally extending portion 11. These members 6 are assembled together so that the heads 7 form a cylindrical head, the portions 8 forming diverging arms and the portions 10 and 11 forming clamping members for engaging a cross arm 12. The members 6 are clamped to the cross arm by means of a carriage bolt 13 passing through openings in the portions 9 and by a carriage bolt 14 passing through any one of a set of square holes 15 in the lower ends of side portion 10. The square shank portion adjacent the head of the carriage bolt 14 fits against rotation and lateral displacement in any one of the square holes 15 and the threaded end portion of the carriage bolt is held against lateral rotation by its passage through the opposite aligned square hole. The square holes 15 in each portion 9 of the bar 6 together form a slot with serrated edges and permit relatively close spacing between the several possible positions of the bolts 14. While the holes or openings 15 may be made of square configuration on only one of the bars 6, they are preferably made similar on both bars for convenience in manufacture as well as facility in placing the bolt 14. The spaced holes 15 permit the pin being used on cross arms of different cross-sectional area, and when the bolts 13 and 14 are tightened up the pin is firmly secured to the cross arm. Furthermore, the adjustable connection above described allows the pin to project from the top, bottom or side of the cross arm.

The members 6 are held in aligned position by plates 16 having projections 17 disposed in slots 18 in the heads 7 and provided with tongues 19.

A thimble 20, preferably of soft metal, such as lead, fits over the cylindrical head formed by the head ends 7 of the members 6 and is exteriorly threaded to receive the insulator 21. The thimble is firmly secured to the members 6 by passing the tongues 19 on the plates 16 through a slot in the top of said thimble and bending said tongues over upon the head in opposite directions. The plates 16 thus connect the thimble to the ends of the members 6 and the thimble itself serves to hold the members 6 together.

I desire it to be understood that this invention is not to be limited to any specific form or arrangement of parts except in so far as such limitations are specified in the claims.

What I claim as my invention is:

1. An insulator pin comprising a pair of complementary sheet metal members having co-operating thimble-receiving ends and forming a shouldered fork adapted to straddle a cross-arm, a bolt connecting said sheet metal members at intermediate portions for clamping said members to the sides of the cross-arm, and a second bolt connecting the free ends of said members for clamping them to the cross-arm, said cross-arm being disposed between said bolts and said sheet metal members having aligned openings near their free ends permitting the placement of said last-named bolt at any one of a plurality of predeter-

mined positions against lateral movement to accommodate cross-arms of different sizes.

2. An insulator pin comprising a pair of sheet metal members having co-operating insulator-receiving ends and spaced at their other ends and at intermediate portions for engagement with opposite sides of a cross-arm, and spaced parallel clamping bolts connecting said members together with the cross-arm between said bolts, there being aligned openings in said members for one of said bolts permitting the placement of said bolt at any one of a plurality of predetermined positions varying in distance from the other of said bolts to accommodate cross-arms of different sizes.

3. An insulator pin comprising a pair of sheet metal members having co-operating thimble-receiving ends and side portions engageable with opposite sides of a cross-arm, and spaced parallel clamping bolts connecting said side portions together with the cross-arm between them, at least one of said bolts having a non-circular shank portion and there being aligned non-circular openings in said sheet metal members to receive said latter bolt therethrough, the walls of said openings being engageable with said shank portion against relative rotation and lateral displacement and permitting the placement of said bolt at any one of a plurality of predetermined positions varying in distance from the position of the other bolt to accommodate cross-arms of different sizes.

4. An insulator pin including a pair of spaced complementary metal members forming a fork adapted to straddle a cross-arm and engage its opposite sides, a clamping bolt connecting the intermediate portions of said members and mounted therein against relative rotation, and a second headed clamping bolt connecting the free ends of said members and having a non-circular shank portion, there being aligned serrated slots at the free ends of said members to receive said last-named bolt and presenting walls engaging said shank portion against relative rotation and lateral displacement and forming a plurality of laterally communicating openings to receive said bolt at any one of a plurality of predetermined positions varying in distance from the position of said first-named bolt to accommodate cross-arms of different sizes.

5. An insulator pin comprising a pair of spaced complementary metal members forming a fork adapted to straddle a cross-arm and engage its opposite sides, clamping means connecting the intermediate portions of said members, and a headed clamping bolt connecting the free ends of said members and having a non-circular shank portion adjacent its head, there being aligned slots at the free ends of said members to receive said bolt and at least one of said slots being serrated to form a plurality of non-circular pockets within which said non-circular shank portion fits against relative rotation and lateral movement at any one of a plurality of predetermined positions to accommodate cross-arms of different sizes.

In testimony whereof I affix my signature.

JOHN PHILIP ARNDT