A. H. FARGO.

INSULATOR.

APPLICATION FILED APR. 3, 1914.

1,329,656. Patented Feb. 3, 1920.

Fig. 1.

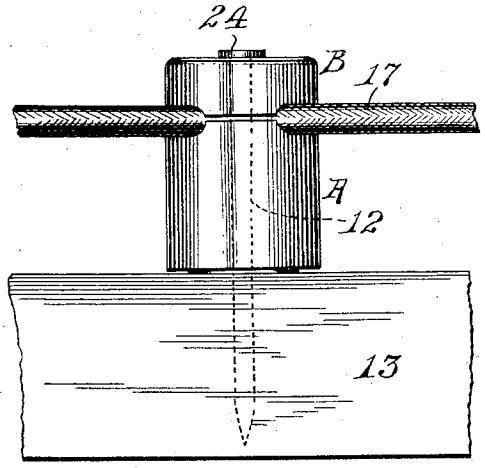


Fig. 2.

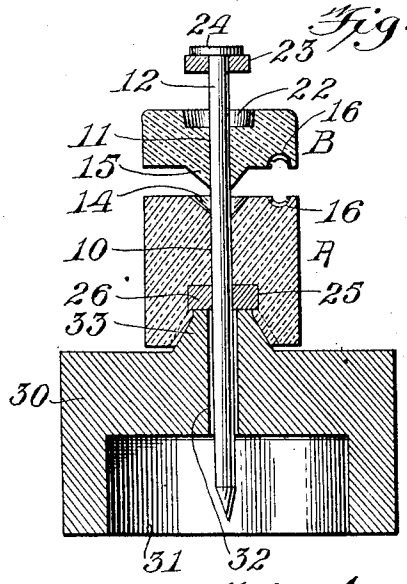


Fig. 3.

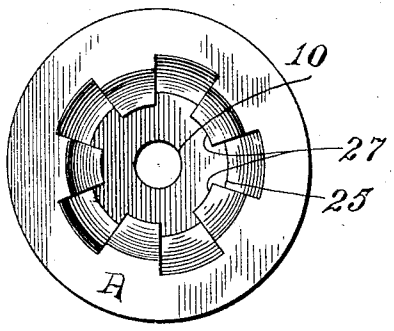


Fig. 4.

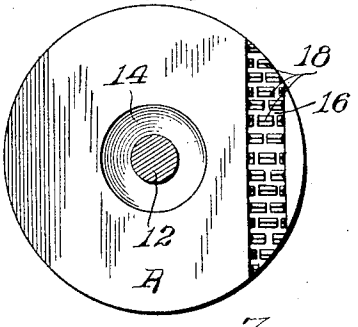


Fig. 5.

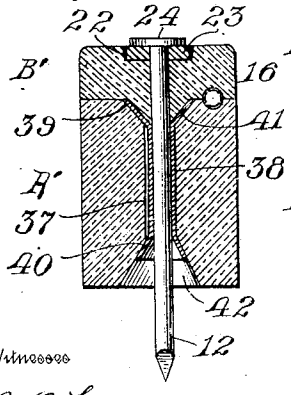


Fig. 6.

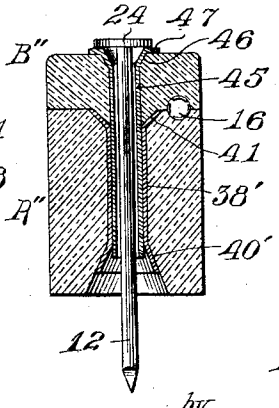


Fig. 7.

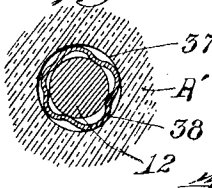
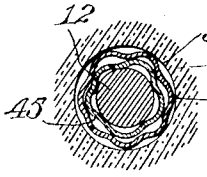


Fig. 8.



Witnesses

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UNITED STATES PATENT OFFICE.

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INSULATOR.

1,329,656. Specification of Letters Patent. Patented Feb. 3, 1920.

Application filed April 3, 1914. Serial No. 829,392.

To all whom it may concern:

Be it known that I, ARTHUR H. FARGO, a citizen of the United States, and resident of Poughkeepsie, county of Dutchess, and State of New York, have invented certain new and useful Improvements in Insulators, of which the following is a full, clear and exact disclosure.

This invention relates to an insulator for electric conductors and in particular to divided insulators, having their respective body and cap members provided with alining slots adapted to receive the conductor when the members are in coöperative position.

The usual form of insulator of this type is constructed so that its respective sections can not be coupled together until they are assembled directly upon the insulator support. The individual parts are thus produced separately and the electrician is compelled to fit the same together as each insulator is mounted upon or secured to its support. Thus, in addition to the unnecessary loss of time occasioned by this operation, he is put to great inconvenience and sometimes under certain conditions such operation is practically impossible.

Therefore, the object of the invention is to provide an efficient means for loosely assembling the respective insulator parts as they are packed at the factory, the body and cap being placed in their relatively operative positions and the usual securing member inserted therethrough, the improved means frictionally engaging said member and preventing the accidental displacement thereof prior to its being secured upon its support.

Another object is to provide a corrugated sleeve frictionally engaging the inner walls of the bore of the body member of the insulator and flared at its ends to prevent its longitudinal movement therein, and an attaching member extending through the cap and frictionally engaging the extremities of the inner corrugated surface of the said sleeve, to hold the several insulator parts and attaching member in assembled relation.

Still another object is to provide a sleeve frictionally engaging the inner walls of the bore of the body member of the insulator, a second sleeve frictionally engaging the inner walls of the first sleeve and extending through the insulator cap and an attaching member extending through said second sleeve.

Still another object is to provide an insulator comprising body and cap members, and an attaching member extending through alined apertures in the same, said body member being provided with a yielding member secured thereto and frictionally engaging said attaching member to secure the latter in place.

A further object is to provide a split insulator having alining slots for the reception of a conductor, said slots being provided with means to prevent the accidental slipping of said conductor therethrough.

Further advantages of the invention are fully brought out in the following specification and accompanying drawings, in which Figure 1 is a side elevation of an insulator comprising the preferred embodiment of the invention; Fig. 2 is a vertical diametrical sectional view of the same, together with the support used in assembling; Fig. 3 is a bottom plan view of the insulator; Fig. 4 is a top plan view of the body member. Fig. 5 is a diametrical sectional view of one modification of the insulator; Fig. 6 is a similar view of a second modification; Fig. 7 is a horizontal sectional view of the device shown in Fig. 5; and Fig. 8 is a similar view of the construction shown in Fig. 6.

Referring to Figs. 1, to 4, inclusive, of the drawings, the invention in its preferred embodiment comprises a body member A and a cap member B, having alined axial bores 10 and 11, through which slidably passes any suitable form of member 12, such as a nail or screw for attaching the insulator when assembled to the support 13.

The body member A is provided upon its upper face with a central, substantially conical recess 14 into which is adapted to extend the similarly shaped male portion 15 on the under face of the cap member B. These two opposed faces are also provided with suitable alining slots 16 for the reception of an electrical conductor 17, the surfaces of said slots being provided with raised portions 18 of any desired shape, size or arrangement, for gripping said conductor.

The upper surface of the cap is preferably provided with a recess 22 into which moves a suitable washer 23 carried by the member

12 adjacent to the head 24 thereof, said washer operating to prevent the direct engagement of said head with the cap member, and thus lessen the liability of the attaching member breaking the insulator parts, as the former is driven or secured into place when mounting the latter.

The under surface of the body member A is recessed at 25 and adapted to receive and grip a yielding washer 26 of any desired shape and material, said washer being centrally apertured to receive and frictionally engage the surface of the attaching member 12, and being itself held in place by radially extending projection 27, integral with the side walls of said recess and having converging faces substantially parallel therewith, as shown in Figs. 2 and 3. In assembling the parts of the insulator when packing the same at the factory for shipment, a suitably shaped block 30 is provided, which is hollowed on its under face at 31 to lessen its weight, and provided with a central vertical bore 32, an integral, circular, tapered extension 33 on the upper surface of said block being coaxial with said bore and adapted to force into position and seat the washer 26 in the operation of assembling. When carrying out this operation, said washer is placed on said extension, the body member placed over said washer, the cap member on said body member, and finally the attaching member 12, first provided with the washer 23, is passed through said cap and body members and through the bore in the washer 26, said latter washer having first been forced into the recess 25 and beneath the projections 27, by forcing the body member and the assembling block together with the washer therebetween.

In the modification illustrated in Figs. 5 and 7, the cap member B′ is similar to the cap B, except that it may, or may not, be provided with the recess 22 to receive a washer 23. The bore 37 of the body member A′ is larger than that in the member A and receives a sleeve 38 of thin corrugated metal, flared at its ends 39 and 40, to cooperate with the side walls of the oppositely directed conical recesses 41 and 42, respectively, and thus prevent any longitudinal movement thereof. The attaching member 12 frictionally engages the inner extremities of these corrugations, the latter being yielding and resilient and capable of adjusting themselves to said member upon any changes in the temperatures of the coöperating part. The member 38 is flared after being placed in position at either or both of its ends and is therefore irremovable.

The modification illustrated in Figs. 6 and 8 is exactly similar to the modifications just described, except that, besides the axial bore 37′ and sleeve 38′ being of increased diameter in the body member A″, the bore 11″ of the cap member B″ is also of increased diameter and frictionally engages the outside of a sleeve 45, which is flared at 46 and comprises an annular flange 47 for engagement with the head of the attaching member. The sleeve 45 then extends downwardly between and frictionally engages said last-named member and the sleeve 38′, thus yieldingly and adjustably maintaining the several parts of the device in assembled relation.

From the foregoing description and accompanying drawings, it is apparent that the invention provides a sectional insulator, which is extremely simple in construction and composed of the fewest number of parts, and one which besides being highly efficient in its operation is capable of being produced at an exceedingly low cost. The insulator is also one which is adapted to be assembled at the factory or in the shop, so that the electrician or wireman does not have to assemble the various parts during the installation.

Having thus described my invention, what I claim and desire to protect by Letters Patent of the United States is:

1. An insulator for wires comprising in combination, base and cap portions provided with perforations, a nail extending through the perforations and comprising a shank provided at the end carrying the cap with a head fixed with respect to the shank and adapted to prevent the removal of the cap and at the other end with a point, and means on the shank coöperating with the base to prevent accidental withdrawal of the shank from the base, the said means and the head of the nail being separated such a distance that when such means and the base are in coöperating position and the wire to be supported is gripped between the opposing faces of the cap and base, the head of the nail lies spaced to the rear of the cap.

2. The combination of an insulator, comprising base and cap portions having perforations extending therethrough, with a fastening member comprising a nail having a shank extending through the said perforations and provided at the end carrying the cap with an integral head which will not pass through the perforation in the said cap portion, the said shank of the nail being provided with means longitudinally slidable with respect to the shank of the nail and engageable with the said base portion, to prevent the withdrawal of the fastening member therefrom.

3. The combination of an insulator, comprising base and cap portions having perforations extending therethrough, with a fastening member comprising a nail having a shank extending through the said perforations and provided at the end carrying the cap with an integral head which will not

pass through the perforation in the said cap portion, and a washer surrounding and frictionally engaging the shank of said nail, to prevent the accidental withdrawal of said shank from said base portion.

4. An insulator, comprising cap and base portions having perforations, a nail extending through said perforations, and means upon the shank of the nail, operative to prevent the accidental separation of said cap and base portions, and so constructed that it offers substantially no resistance to the nail being driven longitudinally into a supporting member.

5. The combination with a two part insulator comprising cap and base portions having alined openings therethrough, of a nail of sufficient length to extend through both the cap and base portions and enter a support, said nail having a head which lies outwardly of the cap and prevents removal of the cap and means upon the nail preventing accidental displacement of the base therefrom, so located with respect to the head of the nail as to permit separation of the cap and base a sufficient distance for the insertion of conducting wires therebetween, said means upon the nail being of such nature as to permit the nail to be driven into a support by a longitudinal driving action.

In witness whereof, I have hereunto set my hand this 27th day of March, A. D., 1914.

ARTHUR H. FARGO.

Witnesses:

THOMAS J. BOWEN, Jr.,

ANTHONY MCGARVEY.