

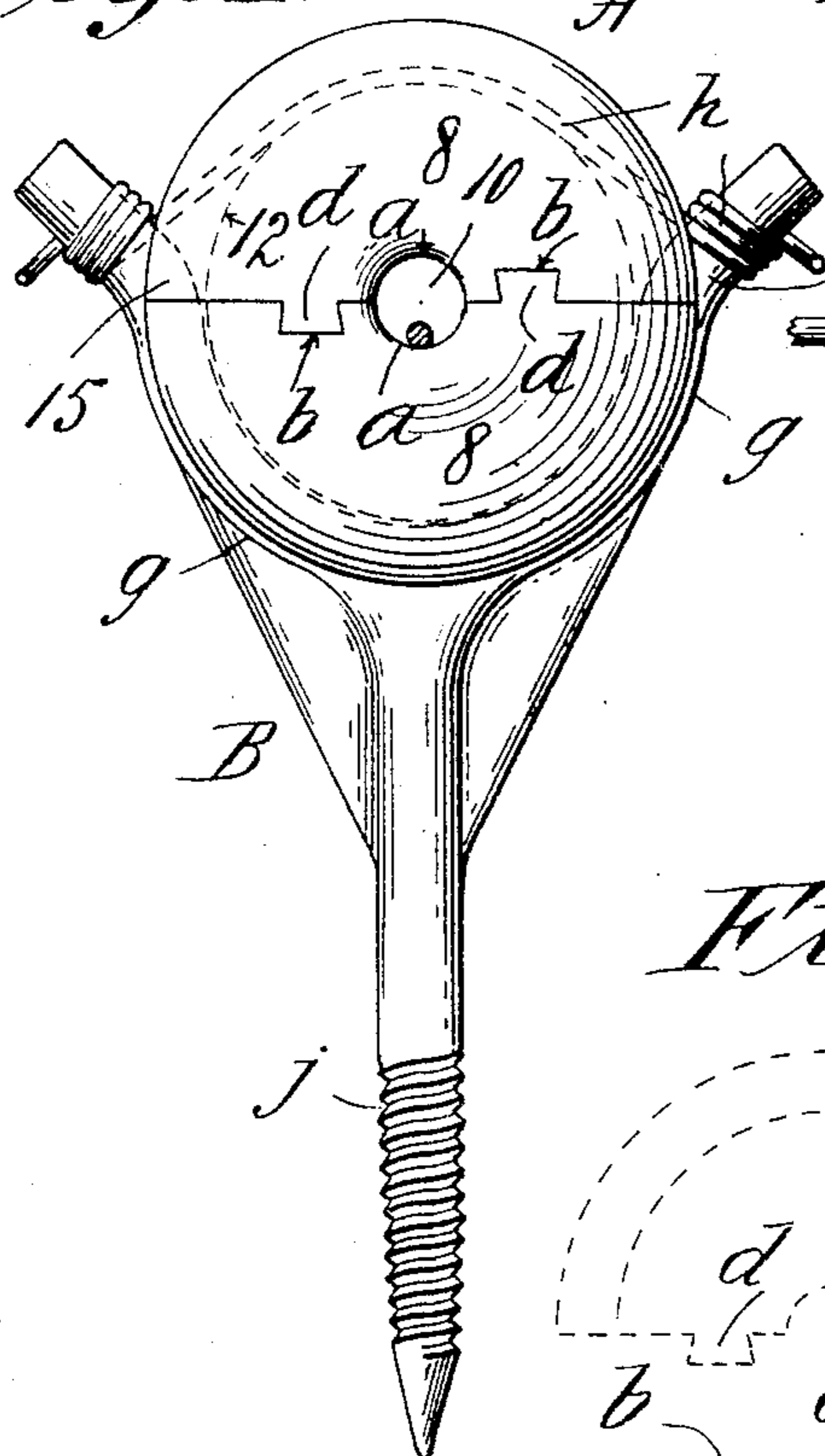
No. 803,973.

PATENTED NOV. 7, 1905.

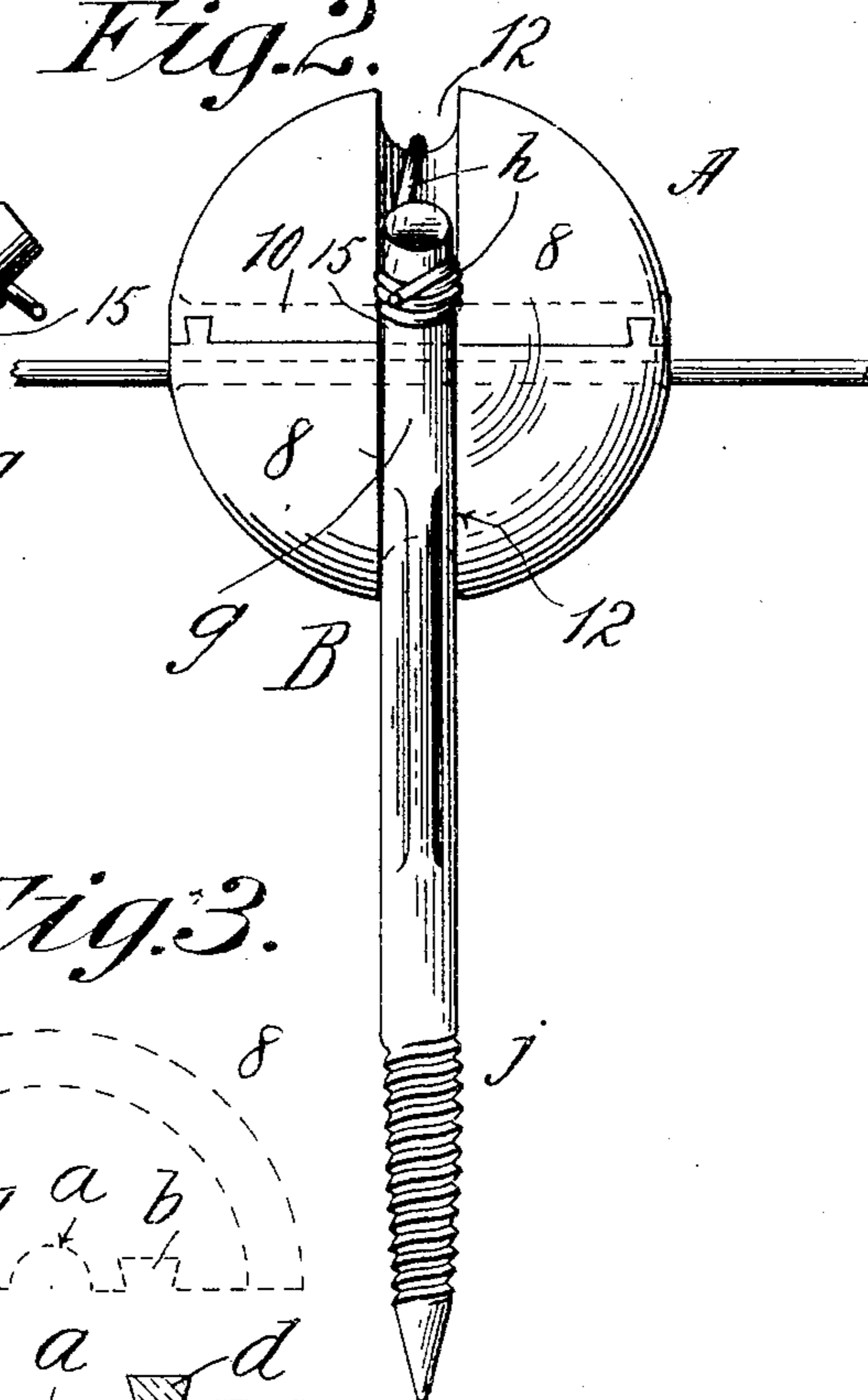
G. M. BEMIS.  
INSULATOR.

APPLICATION FILED JUNE 11, 1904.

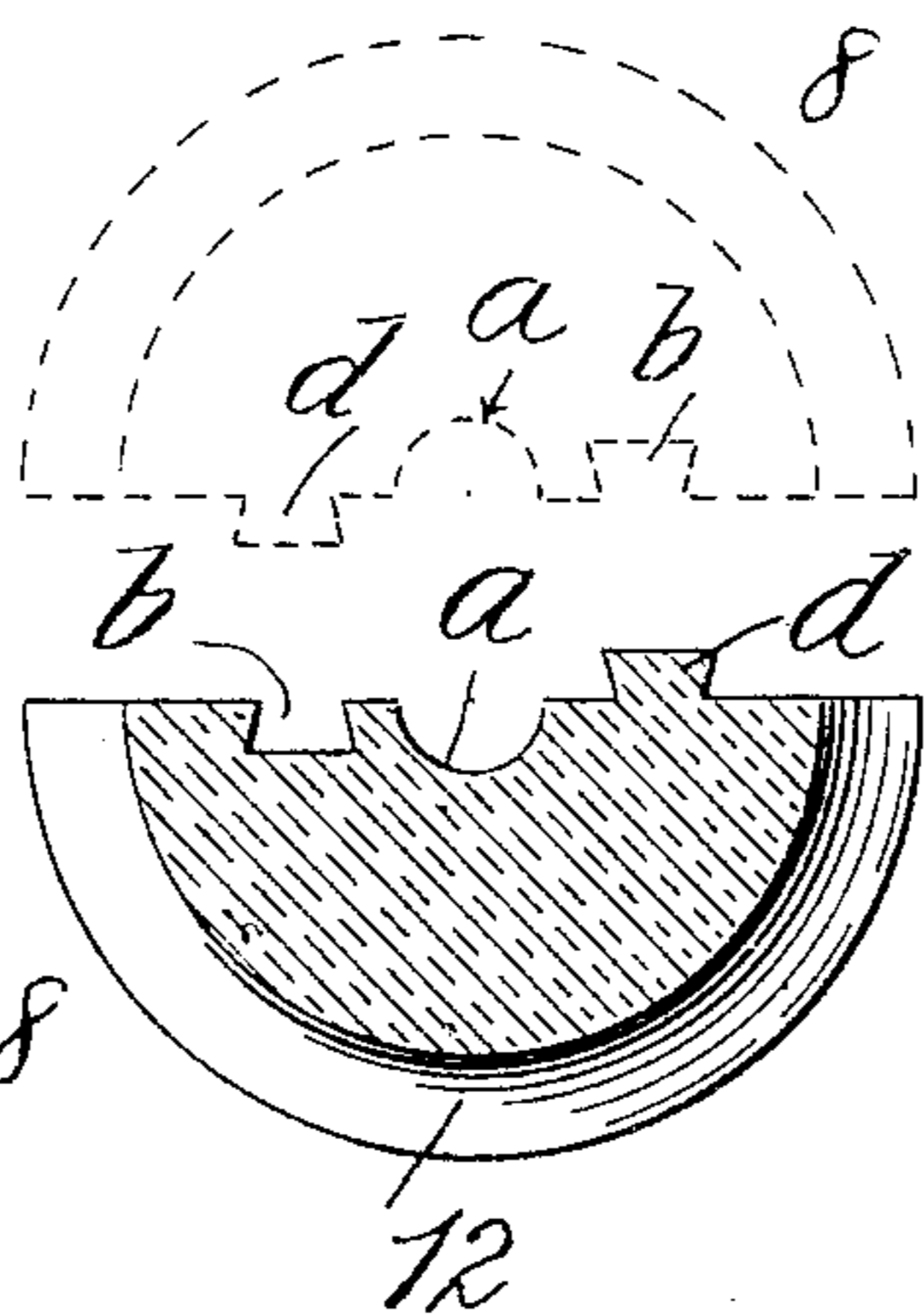
*Fig. 1.*



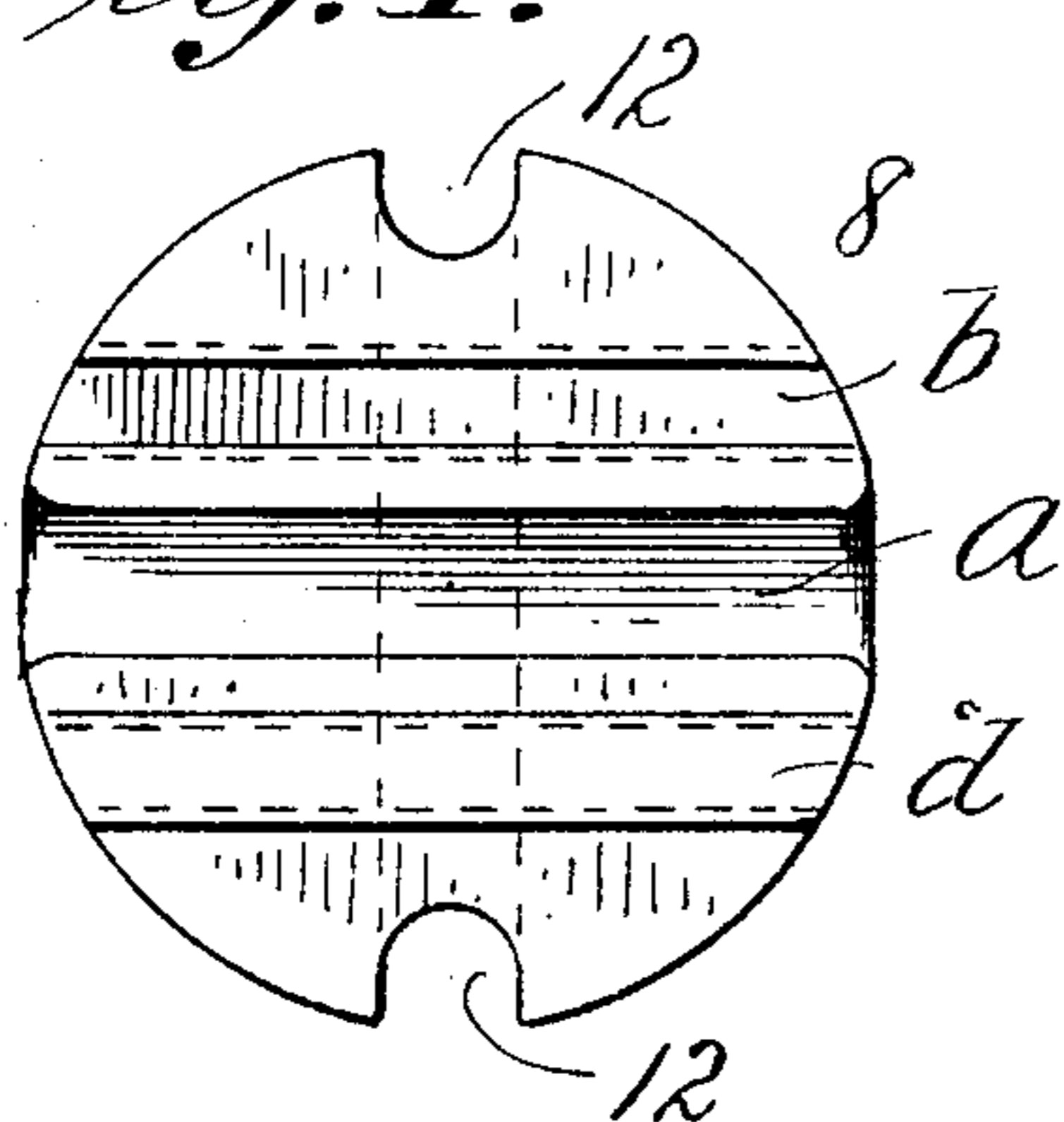
*Fig. 2.*



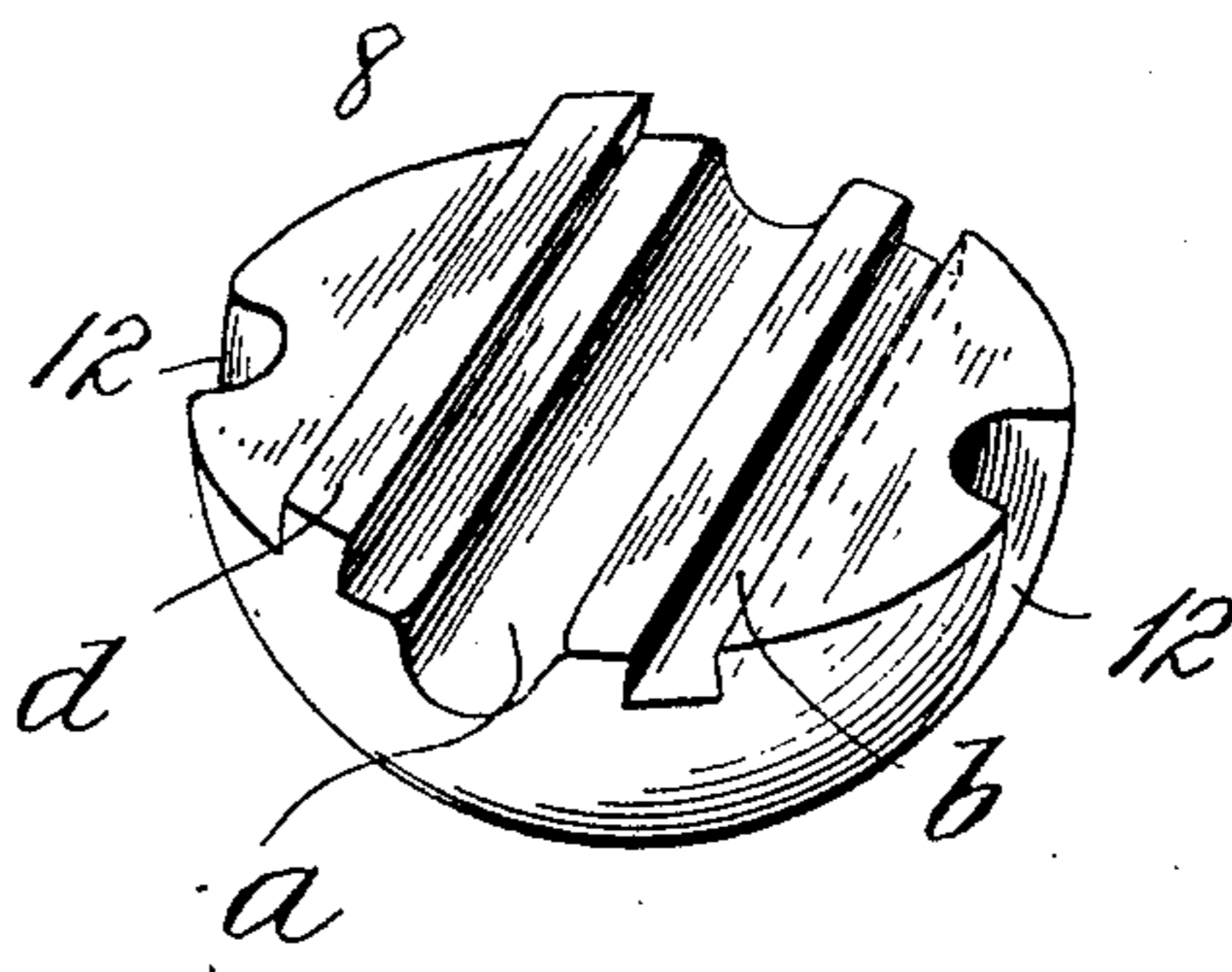
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



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# UNITED STATES PATENT OFFICE.

GEORGE M. BEMIS, OF READSBORO, VERMONT.

## INSULATOR.

No. 803,973.

Specification of Letters Patent.

Patented Nov. 7, 1905.

Application filed June 11, 1904. Serial No. 212,163.

*To all whom it may concern:*

Be it known that I, GEORGE M. BEMIS, a citizen of the United States of America, and a resident of Readsboro, in the county of Bennington and State of Vermont, have invented certain new and useful Improvements in Insulators, of which the following is a full, clear, and exact description.

This invention relates to an improved insulator for the support of electric—especially telegraph and telephone—wires.

An object is to construct an insulator and supporting-yoke therefor in such manner that the wire may pass through a hole in the former and receive its support on the under wall of such hole, the series of such insulators permitting the wire to be self-conforming for its proper degree of catenary depression between the insulating-supports, the necessity of fastening the wire to each insulator being avoided, and so that the insulators may be readily mounted on any available supports—such as trees, poles, or their cross-arms—which may be found at the disposal of the lineman.

Another object is to provide a sectional and peculiarly-interengaged construction of the insulator-body, whereby the separated parts may permit equally and conveniently the engagement of any intermediate part of the wire therewith and therethrough, the sectional parts when united being held against accidental displacement by means of the simplest character and structural form.

Another object is to so construct the separable sections, two of which constitute the insulator-body, that each is a counterpart of the other, any two selected from a mass or quantity of the sections necessarily matching and interlocking together, no care or thought as to rights and lefts being necessary in the setting up of the insulators.

Other advantages accrue from the structural formations, which are of practical value and appreciable to those responsible for the equipment and maintenance of the telephone and telegraph line.

The invention consists in parts formed and combined as hereinafter described, and set forth in the claims.

The insulator in its approved form of construction is illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of the end of the insulator-body and the side of the yoke.

Fig. 2 is an elevation at right angles to Fig. 1. Fig. 3 is a sectional view showing one-half or separable section of the insulator-body in full lines, the matching or complementary half being represented as by dotted lines and as separated. Fig. 4 is a plan view of one of the separable sections as seen looking at its matching face. Fig. 5 is a perspective view of one of the sections.

Similar characters of reference indicate corresponding parts in all of the views.

In the drawings, A represents the insulator-body, and B the yoke for engagement therewith and for the support of the insulator-body.

The insulator-body consists of two like cross-sectionally semicircular sections 8 8, the same being in the preferred form hemispheres, which are arranged with their flat or plane faces in contact with each other. The body in its entirety has a hole 10 centrally therethrough, the same having for its boundaries the walls of the straight central grooves *a a*, one of which is formed in the flat face of each section, and parallel with the groove *a* each section has formed in its matching plane face parallel with the longitudinal axis of the hole 10 and at one side thereof a straight undercut or dovetail groove *b* and on its opposite side a straight undercut or dovetail rib *d*, said groove and rib extending entirely across the said plane face. The distances of the rib and groove *b* and *d* from the longitudinal center line of the hole 10 are exactly the same, so that the sections are complementary to each other and may be matched and interlocked together by bringing either end of either section to juxtaposition with either end of the other section, no right and left hand formation having to be observed, a matter of convenience in that a lineman before ascending a pole or tree has only to carry up any two of the sections selected at random, but always with the assurance that they may be properly detachably united the one with the other.

It will be seen that when the sections are placed together with the ribs and grooves in engagement that the formation of said grooves and ribs locks the sections together, so that they are locked together against lateral separation and cannot become displaced under ordinary conditions of use.

The sections 8 8 have a comparatively deep encircling groove 12 centrally thereof and on

a plane perpendicular to the matching face of the section along which are the groove *a* and dovetail groove and rib *b* and *d*.

The sectional insulator having the halves thereof brought at opposite sides of the wire and to slide together and interlock surrounding the wire receives engagement of the opposite prongs *g g* of the U-shaped top of the yoke *b* in the encircling groove 12 of both halves 8 8 of the insulator-body, the prongs extending upwardly, as seen at 15, Fig. 1, beyond the central matching plane of the separable halves, and the side prongs not only prevent the insulating-body as a whole from displacing movement from the yoke on a line parallel with the central hole 10, but prevent one insulator half or section from a displacement by sliding movement endwise relatively to the other.

The most approved manner of fastening the insulator in the yoke so that it may not move out of the divergent part thereof is by the wiring represented at *h*, end portions of the wire being wound around the extremities of the yoke, while the intermediate portion passes over and binds in the groove of the upper or outer section of the insulator. The shank or tang *j* of the yoke is shown pointed and screw-threaded, so that it may be fastened in a tree, pole, cross-arm, or other available support.

The yoke may be supported in the vertical position shown in an inverted position horizontally or at any inclination.

The insulator-body of this invention need not necessarily be of the spherical form shown, which, however, is the preferred form, as the body may be made in other forms without avoiding the novel formations and characteristics forming the gist of this invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. An insulator comprising two identical sections, each having a flat face formed with a central groove therein extending entirely across said face, and corresponding undercut ribs and grooves on the flat face of each section and parallel with the said central groove, the construction and arrangement of the

parts being such that when the flat faces of the two sections are brought into contact and their corresponding ribs and grooves in interlocking engagement the said sections will be held together and against movement away from each other in a line at right angles to the longitudinal axis of the opening formed by the central grooves.

2. An insulator comprising similar substantially hemispherical sections, each having its flat face formed with a central groove therein, said sections being arranged with their flat faces in contact with the said grooves in registration to form an opening through the insulator, and corresponding undercut ribs and grooves on the flat face of each section extending entirely across the said face and parallel to the groove first mentioned, the undercut rib and groove on one section adapted to interlock with those on the face of the opposite section to lock said sections against movement away from each other in a line at right angles to the longitudinal axis of the opening formed by said central grooves.

3. An insulator comprising similar substantially hemispherical sections each having its flat face formed with a central transverse groove therein, said sections being arranged with their flat faces in contact, with the said grooves in registration to form an opening through the insulator, the sections combining to form a substantially spherical body, the flat face of each section being formed with a dovetail groove and rib extending entirely across said face and parallel with the first-mentioned groove and arranged respectively on opposite sides of the latter, and adapted to interlock with the corresponding rib and groove on the opposite section to lock said sections against movement away from each other on a line at right angles to the longitudinal axis of the opening formed by said central grooves.

Signed by me at Springfield, Massachusetts, in presence of two subscribing witnesses.

GEORGE M. BEMIS.

Witnesses:

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