Feb. 28, 1967 R. T. LOWERRE 3,306,973

LINE CABLE SUPPORT WITH SUPPRESSOR BOND

Filed March 30, 1965

FIG. 1

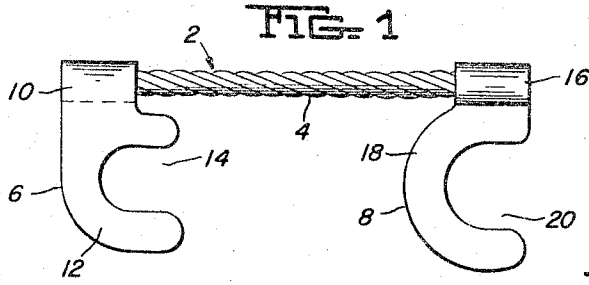


FIG. 2

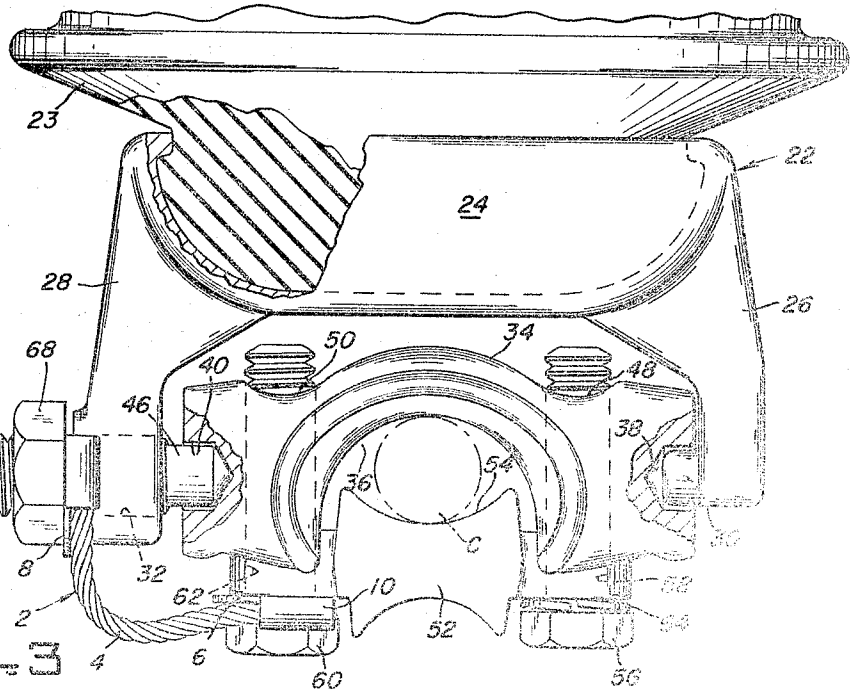
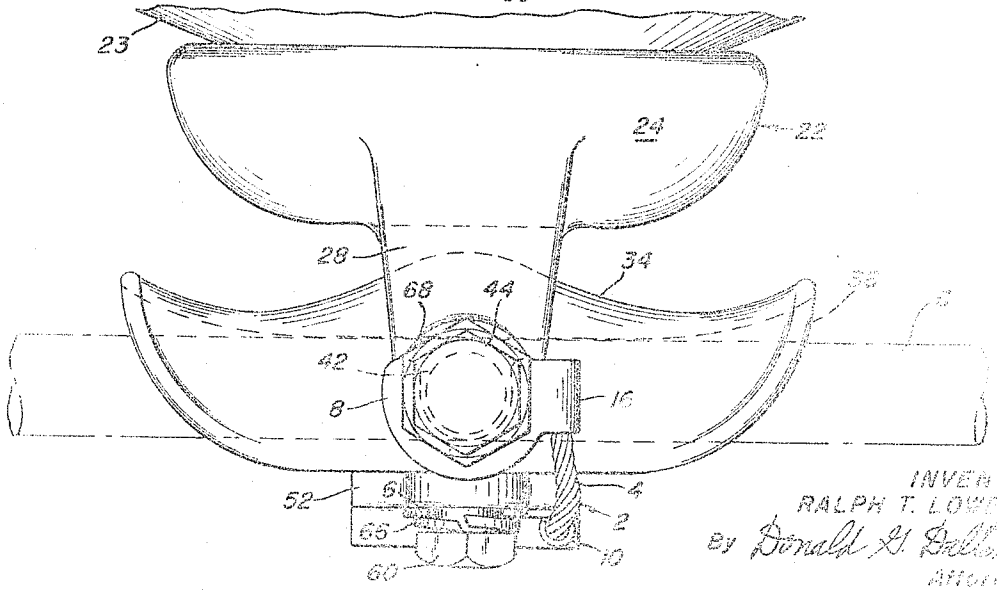


FIG. 3



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LINE CABLE SUPPORT WITH SUPPRESSOR BOND

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This invention relates to a line cable support and more particularly to such a support including an interference suppressor bond for cutting down interference on high tension power lines. High tension power lines are often located in the vicinity of places where radios, TV sets, long distance communication facilities, radio telescopes and other electronic devices are used. Interference to the operation of these devices occurs due to corona and sparks as well as harmonics. The cable is normally supported by a fitting which can pivot or otherwise move with respect to the main support. This movement causes sparking and hence interference to the operation of the various electronic devices.

It is therefore an object of my invention to provide a line cable support which incorporates means for eliminating interference due to sparks.

Another object is to provide a suppressor bond for use in such a support which can be easily installed and which cannot be readily dislodged accidentally.

Still another object is to provide such a bond which will have long life.

These and other objects will be more apparent after referring to the following specification and attached drawings, in which:

FIGURE 1 is a view of the bond of my invention;

FIGURE 2 is an elevation, partly in section, of a line cable support with the bond incorporated therein; and

FIGURE 3 is a side view of FIGURE 2.

Referring more particularly to FIGURE 1 of the drawing, reference numeral **2** indicates the bond of my invention. This includes a stranded wire conductor **4** which is preferably made of hard drawn bronze wires with a 7 x 19 construction. U-shaped fittings **6** and **8** are attached to the ends of the conductor **4**. Fitting **6** includes a sleeve **10** attached to one end of conductor **4** with a flat portion **12** extending tangentially therefrom and having its slot or opening **14** facing the fitting **8**. The fitting **8** includes a sleeve **16** attached to the other end of the conductor **4** with a flat portion **18** extending tangentially therefrom but spaced around the periphery of the stranded conductor from the flat portion **12** so that the points of tangency of the portions **12** and **18** are 180° apart. Opening **20** of portion **18** faces away from the fitting **6**.

The support for the line cable C includes a bracket **22** which is attached to an insulator **23**. The bracket **22** includes a base **24** and spaced apart lugs **26** and **28** extending therefrom. Lug **26** has an integral round pin **30** at its lower end with its axis generally parallel to the base **24**. Lug **28** has a threaded opening **32** therethrough having its axis aligned with the axis of pin **30**. A support member **34**, having a cable receiving groove **36** therein, is pivotally supported between the lugs **26** and **28**. For this purpose the support member **34** is provided with axially aligned holes **38** and **40** on opposite sides of the groove **36** with their axes generally normal to the axis of groove **36**. Pin **30** is received in hole **38** and a threaded member **42** having a head **44** is threaded into opening **32**. Threaded member **42** has an unthreaded end **46** which is received in the hole **40**. In order that the support member **34** may pivot readily with respect to the bracket **22** substantial clearance is provided between pin **30** and hole **38** and between end **46** and hole **40**. The support member **34** has two threaded holes **48** and **50**

therethrough, one on each side of groove **36** with the axes of the holes **48** and **50** in substantially the same plane as the axes of holes **38** and **40**, but generally normal to the axes thereof. A cable clamp **52** having a cable receiving groove **54** therein is attached to the support member **34** by means of a capscrew **56** which passes through a hole **58** in clamp **52** and is threaded into hole **48** and by a capscrew **60** which passes through a hole **62** in clamp **52** and is threaded into hole **50**. Lock washers **64** and **66** may be provided between the heads of capscrews **56** and **60** and clamp **52**. The parts so far described, except for the bond **2**, are conventional.

According to my invention I position fitting **6** around the capscrew **60** and fitting **8** around the threaded member **42**. To do this the capscrew **60** is loosened and the conductor **4** positioned generally parallel to the grooves **36** and **54** and the sleeve **10** away from the clamp **52**. The bond **2** is then moved longitudinally so that the capscrew **60** is received in opening **14** after which it is turned through 90° so that the opening **14** will face toward the threaded member **42**. A nut **68**, which is threaded on threaded member **42**, is loosened a sufficient amount to enable the fitting **8** to slide over threaded member **42**. A socket wrench is then used to tighten capscrew **60** and an open end wrench used to tighten nut **68**. Since sleeve **16** is on the side of flat portion **18** toward lug **28** there is no interference with the operation of the open end wrench. Even though the capscrew **60** and/or nut **68** should loosen a certain amount the bond **2** will remain in position because the spring action of the conductor **4** will hold the fitting **6** against clamp **52** and the fitting **8** against the nut **68**. This latter force also functions to prevent turning of the nut **68**. It has been found that the conductor **4** has sufficient flexibility and strength that it will not fail due to fatigue caused by movement of the member **34** with respect to bracket **22**. Also, since current flows from the member **34** through bond **2** to the bracket **22** sparking between these members is eliminated. While the bracket **22** is shown with its base **24** above the cable C it may also be positioned with its base **24** below the cable C.

While one embodiment of my invention has been shown and described it will be apparent that other adaptations and modifications may be made without departing from the scope of the following claims.

I claim:

1. A line cable support comprising a bracket, a support member having a cable receiving groove therein, means pivotally supporting said support member on said bracket, said last named means including a threaded member, a cable clamp having a cable receiving groove therein, means for fastening said clamp to said support member including a second threaded member having its axis generally normal to the axis of said first threaded member, and a suppressor bond extending between said screw members, said suppressor bond including a stranded conductor and a flat U-shaped fitting secured to each end of said stranded conductor, the first of said fittings having its opening facing toward the second of said fittings and the second fitting having its opening facing away from the first fitting, said first fitting receiving the second threaded member in its opening and being attached thereto, said second fitting receiving the first threaded member in its opening and being attached thereto.

2. A line cable support comprising a bracket having a base and spaced apart lugs extending therefrom, one of said lugs having a threaded hole therethrough, a support member having a cable receiving groove therein, means pivotally supporting said suport member between said lugs with said groove facing away from said base, said last named means including a screw member threaded into said threaded hole, said support member having a pair of threaded holes therein one on each side of its groove,

a cable clamp having a cable receiving groove therein and a lug extending outwardly therefrom on each side of its groove, each of said last named lugs having a hole therein, a bolt passing through each of said last named holes into the associated threaded hole in said support member, said bolts being tightened to clamp a line cable between said support member and clamp, a suppressor bond extending between said screw member and the bolt adjacent thereto, said suppressor bond including a stranded conductor and a flat U-shaped fitting secured to each end of said stranded conductor, the first of said fittings having its opening facing toward the second of said fittings and the second fitting having its opening facing away from the first fitting, the fittings extending generally tangential from said conductor at diametrically opposite sides thereof, said first fitting receiving the associated bolt in its opening with the conductor on that side of the fitting away from said grooves, said second fitting receiving said screw member in its opening with the conductor on that side of the fitting toward said support member, and a nut on said screw member holding said second fitting against said bracket.

3. A suppressor bond adapted to extend between and to be attached to two members arranged with their axes generally normal to one another comprising a stranded wire conductor, and a flat U-shaped fitting secured to each end of said stranded wire conductor with the first of said fittings having its opening facing toward the second of said fittings and the second fitting having its opening facing away from the first fitting, each of said fittings including a sleeve surrounding the stranded wire conductor, and a portion extending tangentially therefrom, the last named portions being spaced around the periphery of the stranded conductor 180° from one another.

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