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2,099,465

CONDUCTOR CLAMP

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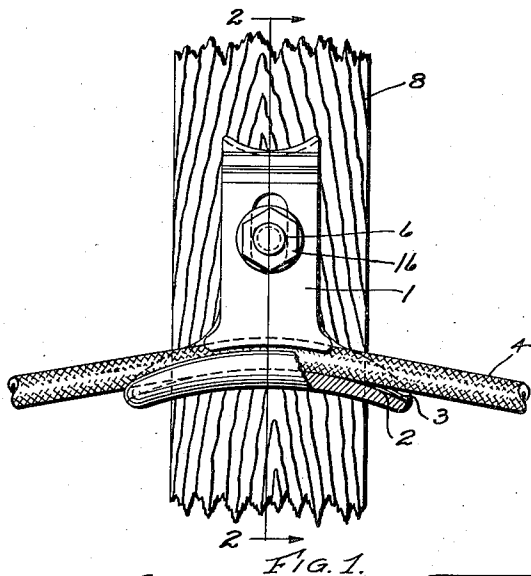


FIG. 1.

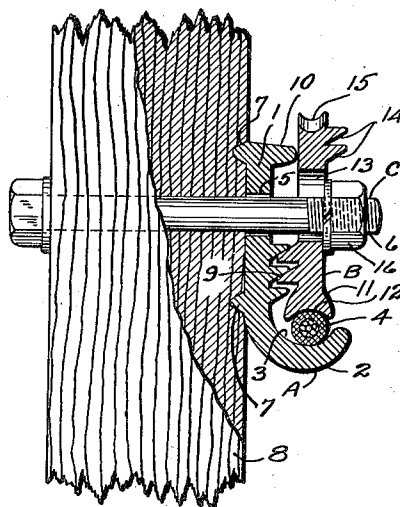


FIG. 2.

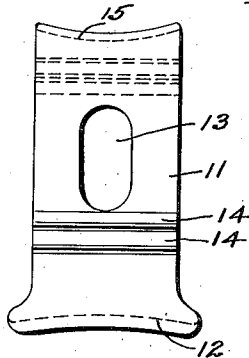


FIG. 3.

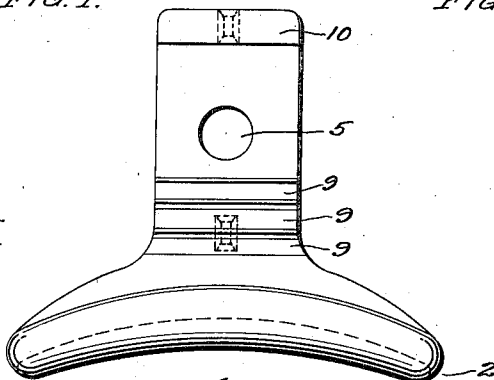


FIG. 4.

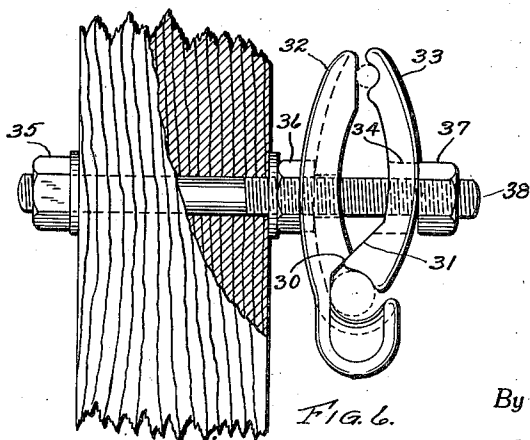


FIG. 6.

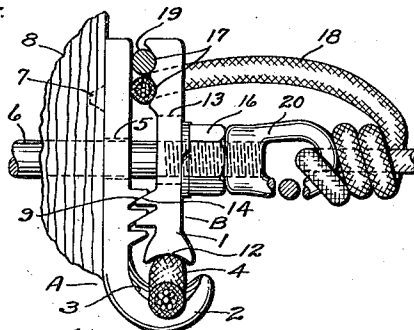


FIG. 5.

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CONDUCTOR CLAMP

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Application July 3, 1935, Serial No. 29,682

6 Claims. (Cl. 248-74)

My invention relates to supports and clamps for conductors.

One object of my invention is to provide a support and clamp which will be simple and economical in construction and application, and adjustable to various sizes of conductors and which may be attached to a supporting structure.

Other objects of my invention will appear as the invention is set forth in the specification.

The activity on the part of power transmission companies in supplying the rural districts with electric power has created a demand for simple, efficient and inexpensive devices for supporting and clamping conductors.

These devices are used mainly in connection with low voltage conductors leading from the step-down transformers to the customer's service pole, commonly designated as secondary circuits.

My invention resides in the new and novel construction, combination and relation of the various parts hereinafter described and shown in the accompanying drawing.

In the drawing:—

Fig. 1 is a face view in elevation of my invention as applied to a wood supporting structure and in turn supporting a cable.

Fig. 2 is a view in partial section on the line 2-2 of Fig. 1.

Fig. 3 is a back view of the clamping member shown in Fig. 1.

Fig. 4 is a front view of the body or supporting member of my invention.

Fig. 5 is a side view in elevation of a modified form of my invention as applied to a wood supporting structure and provided with means for supporting and clamping three cables and anchoring a cable thereto.

Fig. 6 is a modified form of my invention.

Figs. 3 and 4 are somewhat enlarged as compared with corresponding parts shown in Figs. 1 and 2.

As shown in Figs. 1 to 4 inclusive, I provide a body or supporting member A and a clamping member B, also a supporting bolt C; the latter may be of the ordinary bolt and nut type or it may be an ordinary lag screw, both devices being common in pole line construction work.

The member A comprises the body 1 having a saddle portion 2 with a concavo-convex cable seat 3 upon which is mounted a cable 4.

The body is also provided with a transverse opening 5 through which extends the shank 6 of the bolt. The body is further supplied with projecting members 7 adapted to be seated in the wood support 8 to prevent the device rotating; these projections may be conical, pyramidal or any other shape for interlocking with the support 8.

The face of the body 1 is also provided with one or more transversely disposed and sloping

surfaces 9 and with a transversely disposed fulcrum 10 which may be made a part of the member B.

The cooperating member B comprises a body 11 having a curved clamping seat 12 concave both transversely and longitudinally to engage the conductor 4. The body 11 is also provided with a transverse elongated opening 13 through which passes the shank 6 of the member C. The body 11 is also provided on its front and rear faces with transversely disposed sloping surfaces 14. The upper edge of the body 11 has a curved seat 15 which is concaved longitudinally and transversely, and also adapted to engage with a cable on the seat 3 of smaller diameter than the cable 4.

The clamping member B is reversible with respect to the member A both as to its faces and its upper and lower ends and with this arrangement the device can be made to accommodate cables of considerably varying sizes.

The sloping surfaces 14 on both the front and rear faces of the member B correspond with sloping surfaces 9 on the member A and the cooperating surfaces act as wedges such that when the cable 4 is in position and the nut 16 is tightened the member B will be moved transversely to the member A and the member B will be moved toward the seat 3 of the member A through the wedging action of the surfaces 9 and 14 and grip the cable 4.

The fulcrum 10 acts to maintain the upper end of the clamping member B in transverse fixed relation with respect to the member A but permits the lower end of the member B to move inwardly or outwardly and the member B downwardly relatively to the member A for purposes of adjustment.

The device shown in Figs. 1 to 4 inclusive may be arranged for fastening to metal supports as well as wood supports, and in such case the members 7 may be eliminated.

In the form shown in Fig. 5 the construction is quite similar to that shown in Figs. 1 to 4 inclusive, except that the device is arranged to clamp one or more cables simultaneously and comprises parts the same as those shown in the device just described insofar as the numerals are alike.

It will be noted that in the modified form shown in Fig. 5 the clamping member B is not reversible but the upper inner face of the clamping member is provided with a plurality of transverse grooves 17 to receive the cables 18 and 19 but only one groove may be provided if advisable. The threaded projecting end of the stud 6 is provided with a strain eye 20 to which a cable such as 18 may be secured, and if desired the cable may be efficiently secured between the clamping members A and B as shown. The cables 4 and 18 are shown as insulated, but if de-

sired they may be bare and the clamp grounded. The conductor 19 is shown as bare and may be used to ground the clamp if desired.

The cooperating wedging faces 9 and 14 on this form of clamp also permit of downward movement of the member B relative to the member A to grip the cable 4 when the nut 16 is tightened. It will be noted that the tightening of the nut 16 not only causes a gripping of the cable 4 but a simultaneous gripping of the cables 18 and 19.

The modification shown in Fig. 6 might be termed as a simplified form of my invention in that they have simple wedging seats 30 and 31 on the body 32 and clamp 33 respectively. The latter is slotted as at 34. The nuts 35 and 36 mounted on the stem 38 permit securing the device firmly to the pole and adjusting for any looseness developing after installation and the nuts 36 and 37 permit of mounting the members 32 and 33 and adjusting the same without disturbing the attachment to the pole which is not true of the other forms disclosed. The clamping of the conductors is the same as in the other forms described.

The nuts 36 and 37 contact with curved surfaces on the members 32 and 33 thus permitting better angular adjustment of the parts. The conductor between the upper end of the members 32 and 33 when present acts as a fulcrum otherwise the upper ends of the members engage and form a fulcrum. The nut 36 may be integral with the stem 38 if desired.

In Figs. 1 to 5 inclusive the device is simple of installation as the member C simultaneously clamps the cable or cables in place and fastens the device to the support. The members A and B are adjustable to grip cables of greatly varying sizes.

There will be many modifications which will suggest themselves to those skilled in the art based on the disclosure I have made and, therefore, I wish to be limited only by my claims.

I claim:—

1. A supporting and clamping device for a cable comprising in combination a body member having a grooved cable-seat at one end and a transverse opening and a wedging seat having a surface obliquely disposed to the axis of the said opening, a clamping member having a cable receiving groove at one end and a transverse opening and a wedging seat having a surface obliquely disposed to the axis of the said opening to cooperate with the aforesaid surface to guide the members longitudinally relative to each other and grip the cable and fastening means extending through the openings in the aforesaid members to secure the members to a support and also effect a gripping of the cable.

2. A conductor clamp comprising a body member arranged to be mounted on a support and having an elongated projecting flange provided with a concave cable-seat, an elongated clamping member having a concave seat at one end to cooperate with the cable-seat to grip a cable, a groove at the opposite end of the clamping member cooperating with the body to receive and grip a conductor, oppositely disposed through-openings in the members, fastening means extending through the openings and arranged to draw the members towards each other and secure the members to the support and cooperating wedging seats on each member to guide the clamping member to move longitudinally rela-

tive to the body member to grip the cable positioned in the concave seats.

3. A conductor clamp comprising a body member arranged to be attached to a support and having an elongated projecting flange provided with a concave cable-seat, an elongated clamping member having a concave seat at one end to cooperate with the cable-seat to grip a cable, a groove at the opposite end of the clamping member cooperating with the body to receive and grip a conductor, fastening means to draw the members towards each other, an opening through the body member, an elongated opening through the clamping member registering with the first opening, the openings arranged to receive the fastening means and the elongated opening permitting the members to move relative to each other and cooperating wedging means on the members to guide the members when moved by the fastening means relative to each other to grip a cable reposing between the concave seats.

4. A cable clamping device comprising in combination a body member arranged to be attached to a support and having a grooved cable-seat at one end and a transverse opening and a wedging seat having a surface obliquely disposed to the axis of the said opening, a clamping member having a cable receiving groove at one end and a transversely disposed elongated opening and a wedging seat having a surface obliquely disposed to the axis of said opening to cooperate with the aforesaid wedging surface to guide the clamping member longitudinally and transversely relative to the body member and into engaging relation with the cable and fastening means extending through the openings in the aforesaid members to secure the members together and move the clamping member relative to the body member to effect the gripping of the cable.

5. A conductor clamp comprising a body member arranged to be attached to a support and having an elongated projecting flange provided with a grooved cable-seat, a clamping member having a cable-seat at one end to cooperate with the body cable-seat to grip a cable, fastening means to draw the members towards each other, registering openings through the members and one opening being oblong, the openings arranged to receive the fastening means and the elongated opening permitting the members to move obliquely relative to each other and cooperating wedging means on the members to guide the members when moved by the fastening means relative to each other to grip a cable reposing between the concave seats.

6. A supporting clamp for a conductor comprising in combination a body member arranged to be mounted in a support, an opening through the body member, a concave-convex cable-seat at one end of the body and a fulcrum at the other end thereof, an end-for-end reversible clamping member having a slotted opening therethrough, a concave seat at each said end of the clamping member to cooperate separately with the seat on the body member to grip the cable, fastening means extending through the openings and arranged to draw the members towards each other and secure the members to the support, and cooperating wedging seats on the members to guide the clamping member to move relative to the body member to grip the cable between the body seat and either one of the seats on the clamping member.

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