May 22, 1928.

1,670,333

G. H. ALDRICH

BOLTLESS DEAD END CLAMP

Filed Nov. 29, 1927

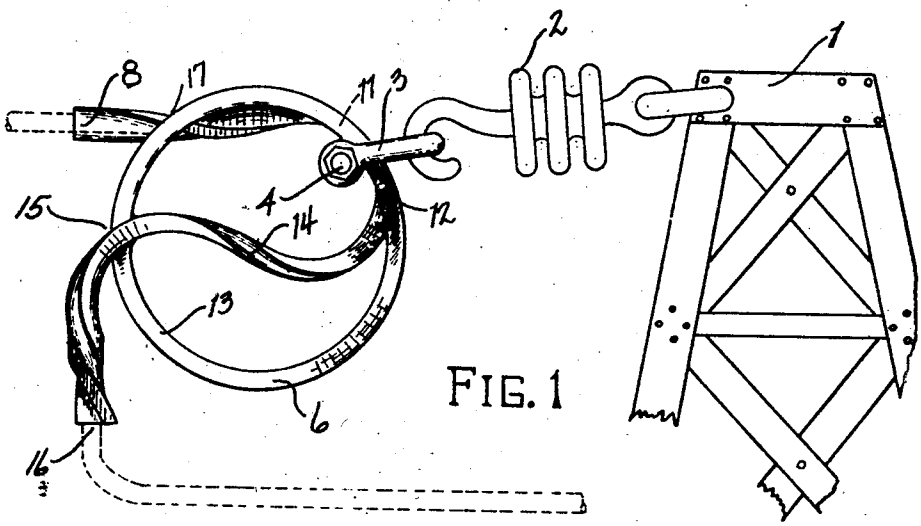


FIG. 1

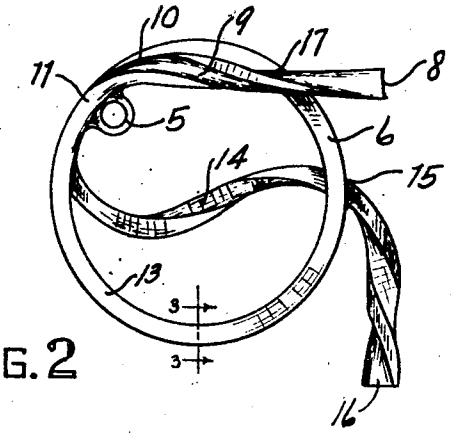


FIG. 2

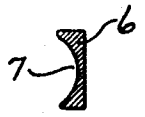


FIG 3

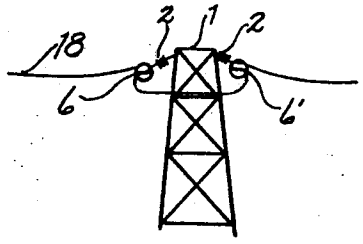


FIG. 4

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UNITED STATES PATENT OFFICE.

GEORGE HENRY ALDRICH, OF HIGH POINT, NORTH CAROLINA.

BOLTLESS DEAD-END CLAMP.

Application filed November 29, 1927. Serial No. 236,474.

This invention relates to boltless, dead-end clamps and more particularly to an improvement over the clamp disclosed in my Patent No. 1,618,160, February 22, 1927.

It is the purpose of this invention among others, to provide a clamp which possesses all the desirable features of the prior patent and which, in addition is so constructed as to be more compact, more easily and cheaply manufactured, and which may be more quickly placed in service than my prior invention.

With these and other objects in view, the invention will now be described in connection with the accompanying drawing in which like numerals refer to corresponding parts throughout, and in which:

Figure 1 shows the manner in which my improved clamp may be used to secure the dead end of a cable to a tower or other abutment,

Fig. 2 is a view of the clamp from the side opposite to that shown in Fig. 1,

Fig. 3 is a cross-section on line 3—3 of Fig. 2, and

Fig. 4 shows in general outline how my improved clamps may be used in supporting the cables of a transmission line.

Referring now in detail to the drawing, 1 denotes a tower or other fixed object to which it is desired to anchor the dead end of a wire rope or cable. Secured to said tower is the usual insulator 2, one end of which engages the clevis 3. The said clevis is secured to the clamp by means of a bolt 4 passing through an eye 5, Fig. 2. The said eye may be secured to the inner periphery of the clamp by any means, such as welding, riveting or brazing; or it may be formed integral with the channeled member later to be described.

The clamp proper consists of a strip of material, preferably ferrous metal, having a cross-section as shown in Fig. 3 with a channel 7 to receive and accommodate the cord or cable to be secured. Of course this strip 6 may be of any shape in cross-section; and its channel may be shaped in cross-section to fit the shape of the cable or element to be suspended.

Beginning with the end adapted to accommodate the incoming cable as 8, Figs. 1 and 2, the channeled side being shown in Fig. 1, is twisted through an angle of 180 degrees to the point 9, Fig. 2. From the point 9 a further twist of about 90 degrees combined with a lateral curvature is imparted to the strip as at 10, Fig. 2, said strip gradually merging into the arc of a circle at 11. From point 11 the strip 6 is bent into circular form with substantial radius and with channeled face outward, and is, in this form, carried around through somewhat more than a complete turn and overlapping itself for a distance such as from point 11 to point 12, Fig. 1, to form the circle.

From 12 the strip is laterally curved inwardly at smaller radius, toward the center of circle 13 and, at the same time, is given an outward twist of about 90 degrees to the point 14, Figs. 1 and 2, the channeled face being shown in Fig. 1. From 14 the strip is further twisted through about 90 degrees and is laterally curved downwardly at the point 15 where it crosses the loop or circle 13. From point 15, the strip is further curved downwardly at about right angles to its other end 8, and is further twisted through an angle of substantially 270 degrees to the end point 16, with the channeled face in view at 16, Fig. 2.

Those portions of the strip which coincide or cross as at 17, points 11 to 12, and 15, are welded or otherwise suitably secured together, thus forming the clamp into a compact, rigid unit. Moreover, the eye 5 may be secured to both adjacent portions of the strip 6 thus adding further rigidity thereto.

It will be noted that the strip is twisted in one sense of rotation from point 8 to point 15 and in the opposite sense from 15 to 16 both twists being about equal in angular value.

In Fig. 4 are shown two of my improved clamps 6 and 6′ as used to support a transmission cable 18 on a tower 1. The incoming cable is simply fitted into the channel of the strip 6 throughout its length, entering at 8 and emerging at 16. Because of the opposite directions of twist of the strip 6, no permanent twist is imparted to the cable. That is, no twist has been imparted to the cable by its being fitted to the clamp.

By this arrangement, the cable or wire is securely held, without slipping, and without injury to the metal, such as is often caused by ordinary clamps.

What I claim is: —

1. A boltless clamp comprising a strip of

uniform cross-section throughout, said strip having a longitudinal, line-receiving channel therein, the mid-portion of said strip being bent into a circle of substantial radius, and having a subsequent portion crossing and secured to said circular portion.

2. In a boltless clamp a channeled strip bent into a circle of substantial radius and having adjacent parts overlapping for a short distance, one end of said strip from said overlapping portion being bent inwardly across said circle to a substantially diametrically-opposite point.

3. In a clamp as per claim 2, and an eye fixedly secured to the inner, overlapping portions of said strip.

4. In a boltless clamp, a longitudinally channeled strip having its mid-portion bent into a loop with adjacent portions coinciding for a predetermined arc, and with said channel facing outwardly, one end of said strip extending in a straight line from said coinciding portion to cross said loop, said end portion being twisted through an angle of substantially 270 degrees.

5. A clamp as per claim 4 in which the crossed portions of the strip are secured together as by welding.

6. In a boltless clamp, a longitudinally channeled strip having its mid-portion bent into a loop with adjacent portions overlapping over a predetermined arc, and with said channel facing outwardly, one end of said strip being bent inwardly across said loop and crossing the same at a point opposite said overlapping portion and being, at the same time, twisted through substantially 180 degrees.

7. A clamp as per claim 6, in which the overlapping and crossing portions are rigidly secured together.

8. A clamp as per claim 6, in which the said end from said crossing portion is bent downwardly and twisted in the opposite sense from said 180 degrees twist, through an angle of about 270 degrees, said end terminating in a substantially straight portion.

9. In a boltless clamp, comprising a single channeled strip having its mid-portion bent into a loop with channel outward and having adjacent portions overlapping and rigidly secured together for a predetermined distance, one end of said strip leaving the overlapping portion in a substantially straight line, crossing said loop and secured thereto and being twisted through an angle of substantially 270 degrees; the other end leaving said overlapping portion and being bent inwardly to extend substantially diametrically across and crossing said loop and, at the same time, being twisted through about 180 degrees, said end from the loop crossing portion being bent downwardly and away from the other end portion and terminating in a substantially straight part and, at the same time being twisted in the opposite sense of rotation from said other twists through a predetermined angle.

10. A clamp as per claim 9, and an eye secured to and connecting the inner surface of said overlapping portions.

11. A clamp as per claim 9, said last-named end and loop being rigidly attached at their adjacent portions.

In testimony whereof I affix my signature.

GEORGE HENRY ALDRICH.