April 19, 1960 R. T. WILLIAMS 2,932,870

CABLE CLAMP

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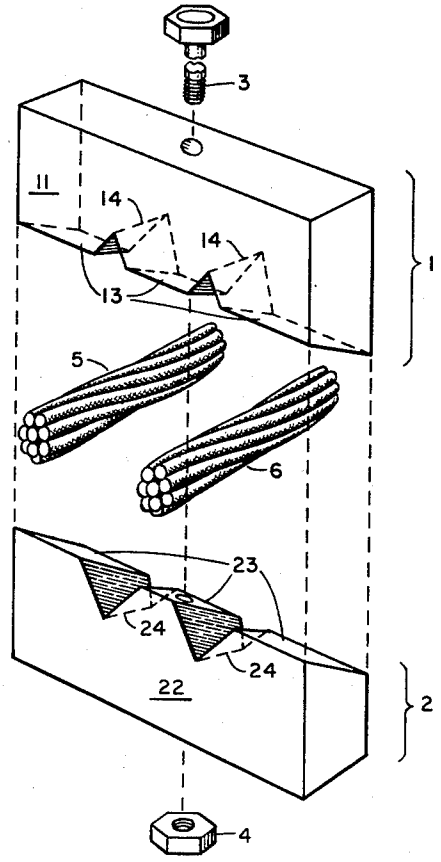


FIG. 1

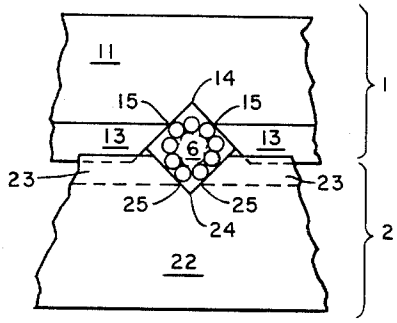


FIG. 2

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CABLE CLAMP

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My invention is directed to clamps for securing cables and more particularly to clamps for joining multistrand cables of the type commonly encountered in the transmission of electrical power.

In the past it has been the usual practice to provide a cable clamp comprising two or more symmetrical or nonsymmetrical jaws or clamping blocks of intricate shape to be drawn up around a portion of a cable in order to prevent the cable from working itself loose and to maintain electrical contact between clamp and cable. Such clamps tend to distort the cable excessively and require excessive pressure in order to prevent loosening. In addition to these drawbacks, such clamps tend to be expensive owing to the intricate nature of the cast or machined parts from which the clamp is formed.

Accordingly, it is an object of my invention to provide a new and improved cable clamp.

Another object of my invention is to provide a cable clamp employing a minimum number of different parts.

Another object of my invention is to provide a cable clamp having extremely simple clamping blocks.

Another object of my invention is to provide a two block cable clamp having blocks which are identical to each other.

For a better understanding of my invention, reference is made in the following description to the drawings attached to and forming a part of the present specification, and in which:

Fig. 1 shows an exploded view of a cable clamp; and

Fig. 2 shows a front elevation of a section of a cable clamp.

Referring to Fig. 1, the clamp forming the preferred embodiment of my invention is adapted to join electrically two multistrand cables, **5** and **6**. The clamp comprises substantially identical first and second metallic blocks **1** and **2**, respectively. In the drawings, a two-digit reference number is used to describe points and elements on the blocks. Because the blocks are identical, the second digit of each element reference number is the same on each block, and the first digit, **1** or **2**, is used to determine which of the first and second blocks, respectively, is being referred to.

Each of blocks **1** and **2** is formed from rectangular bar material having substantially parallel front and back faces. In Fig. 1, block **1** shows back face **11**, while block **2** shows front face **22**. The clamp also includes means comprising screw **3**, passing from top to bottom through an opening in blocks **1** and **2** and nut **4** for drawing blocks **1** and **2** toward each other through a plane of travel parallel to the plane defined by back surface **11** and front surface **22** of blocks **1** and **2**, respectively.

Blocks **1** and **2** are provided with opposing inward facing surfaces **13** and **23**, respectively. The surfaces **13** and **23** are substantially parallel to each other and non-normal to the plane of travel of blocks **1** and **2**. Each of surfaces **13** and **23** is indented to form first and second grooves extending across surfaces **13** and **23**. The

indentations are of regular cross section along their lengths and are oriented in blocks **1** and **2** so that they are directly opposed to each other when the blocks are positioned in the manner shown in Fig. 1. The indentations in each block open into the aforementioned front and back faces of each of blocks **1** and **2**. While I show V-shaped troughs in the preferred embodiment of my invention, it is to be understood that troughs of circular or other cross-sectional shape would also serve to fix cables relative to blocks **1** and **2** in the manner to be described next. The major axis of the trough, and therefore bottoms **14** and **24** of the troughs in blocks **1** and **2**, respectively, and the surfaces formed in blocks **1** and **2** by the indentations are normal to the plane of travel of blocks **1** and **2**. When blocks **1** and **2** are moved toward each other, cables of a particular diameter such as **5** and **6** are received within the left- and right-hand troughs of each of blocks **1** and **2**, respectively.

Referring to Fig. 2, each indentation in surfaces **13** and **23** is of sufficient depth to receive a cable such as **6** at front surface such as **22** of block **2** to a degree such that the cable does not escape from the confines of the indentation upon vertical compression of the cable when blocks **1** and **2** are drawn together. Similarly, the indentation of surfaces **13** and **23** is of sufficient depth to receive cable **6** at the blocks' back surfaces, such as **11** of block **1**, to a depth that cable **6** is distorted to spread beyond the confines of the indentation upon vertical compression of the cable when blocks **1** and **2** are drawn together.

Vertical compression of that part of cable **6** adjacent to a back face, such as face **11** of block **1**, drives at least a part of the edge formed at the intersection of the trough and face **11** to distort cable **6**. In the case illustrated, the cable **6** is distorted at the intersections of the groove's surfaces with surfaces **11** and **13**, indicated as points **15**. Deforming cable **6** in this manner prevents the cable from being moved in a direction vertical to the paper on which Fig. 2 is printed and into the paper. A similar distortion of cable **6** takes place at the back face of block **2** at points **25**, thereby preventing the movement of cable **6** in the opposite direction. The anchoring action of blocks **1** and **2** on cable **5** in the other trough is similar to the action described in connection with cable **6**.

While the discussion above is limited to the case where cables **5** and **6** are the same diameter, it is obvious that cables **5** and **6** may be of different diameters. The only change from the above described equipment needed to hold cables of different size is that troughs or indentations in blocks **1** and **2** be adjusted to receive the cables in the above described manner.

While I have shown and described the preferred embodiment of my invention, other modifications will readily occur to those skilled in the art. I, therefore, aim in the appended claims to cover all such modifications as fall within the true spirit and scope of my invention.

What is claimed is:

1. A cable clamp comprising first and second blocks and means for drawing said blocks together through a single particular plane of travel, said blocks having opposing surfaces, said surfaces lying in planes which are substantially parallel to each other and which intersect but are not normal to the plane of travel of said blocks, and said surfaces being indented at opposing points in said blocks to form grooves extending across said blocks in a direction substantially normal to the plane of travel of said blocks for receiving a cable.

2. The clamp set forth in claim 1 wherein said surfaces are indented to form a V-shaped trough.

3. The clamp set forth in claim 1 wherein said surfaces are indented to form grooves of substantially regular cross section along their lengths.

4. In a clamp for receiving a cable, first and second blocks and means for drawing said blocks together through a single particular plane of travel, said blocks having opposing surfaces, said surfaces lying in planes which are substantially parallel to each other and which intersect but are not normal to the plane of travel of said blocks, each of said blocks having front and back surfaces substantially parallel to the plane of travel of said blocks, and said opposing surfaces having indentations at opposing points in said blocks to form grooves extending across said blocks in a direction substantially normal to the plane of travel of said front and said back faces for receiving said cable, the depth of indentation of each block at said front face being substantially greater than the depth of indentation at said back face.

5. The clamp set forth in claim 4 wherein said surfaces are indented to form V-shaped grooves.

6. The clamp set forth in claim 4 wherein said surfaces are indented to form grooves of substantially regular shape along their lengths.

7. In a clamp for receiving a cable, first and second blocks and means for drawing said blocks together through a single particular plane of travel, said opposing surfaces lying in planes which are said blocks having opposing surfaces substantially parallel to each other and which intersect but are not normal to the plane of travel of

said blocks, each of said blocks having front and back faces substantially parallel to the plane of travel of said blocks, and said surfaces having indentations at opposing points in said blocks to form grooves extending across said blocks in a direction substantially normal to the plane of travel of said blocks and opening into said front and said back faces for receiving said cable, the depth of said indentation at said front face of each block being sufficient to contain said cable within the indentation upon the compression of said cable, and the depth of said indentation at said back face of each of said blocks being insufficient to contain said cable within said indentation upon the compression of said cable.

8. The clamp set forth in claim 7 wherein said surfaces are indented to form a V-shaped groove.

9. The clamp set forth in claim 7 wherein said surfaces are indented to form grooves of substantially regular shape along their lengths.

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