

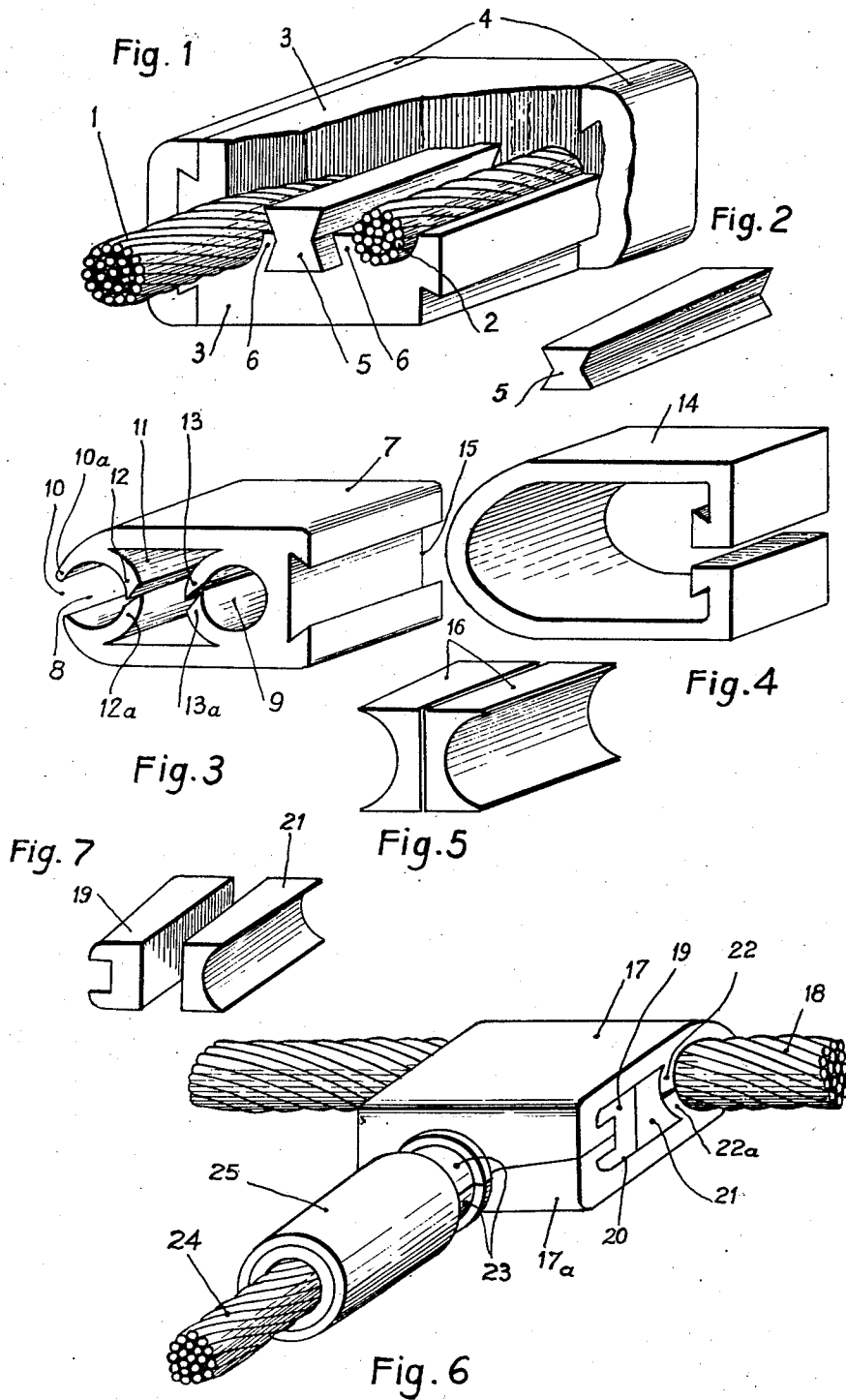
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JUNCTION DEVICE FOR ELECTRICAL CONDUCTORS

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JUNCTION DEVICE FOR ELECTRICAL CONDUCTORS

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5 Claims. (Cl. 339—247)

This invention relates to junction devices for electric conductors and more particularly to junction devices for effecting branch connections between continuous cables and the ends of separate cables.

An object of the present invention is to provide a conductor joining device designed particularly, but not exclusively, to effect a union between a continuous cable and a branch connection in such manner as to avoid any break in the main line.

A device in accordance with one embodiment of the invention comprises essentially a socket consisting of one or a plurality of parts joined by means of elements forming a lock; the socket being provided with recesses for the passage of a continuous cable and the end of a branch cable. These recesses are provided with tongues capable of being pressed against the cables by means of one or a plurality of wedges which engage in the socket against the tongues and lock the elements of the socket against the lock or locks.

Furthermore, the different parts constituting this unit are made from a metal having the same coefficient of thermal expansion as that of the conductors to be connected so that the whole behaves thermally as a solid unit. This insures that, during the heating and cooling cycles, there is no relative mechanical stress on the different elements; thus the electrical quality of the contacts remains constant.

In order that the invention may be more clearly understood, some preferred embodiments thereof will next be described by way of example with reference to the accompanying drawings in which:

Figure 1 is a perspective view of a junction device according to the invention;

Figure 2 is a separate perspective view of one part of the device of Fig. 1;

Figures 3 to 5 are separate perspective views of the various parts constituting another form of construction;

Figure 6 is a perspective view of another modification;

Figure 7 is a separate perspective view of certain parts of the modification of Fig. 6.

Referring to the drawing, Figure 1 shows the branching of a conductor 2 on a main conductor 1. A socket 3 is cut along the plane of the axes of the recesses intended for the cable, so that it is made up of two symmetrical parts held in place by two locks 4, which are slid over the socket by a dovetail joint. A wedge 5, of truncated conical shape, is engaged in the socket 3 and causes the lateral locking of parts 6 of the socket, which are in the form of tongues, both on the main conductor and on the connected conductor.

Figure 3 illustrates a socket 7 in one piece. It is pierced longitudinally by recesses 8 and 9 intended re-

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spectively for the main cable and for the connecting cable. The recess 8 has an amply open slot 10 enabling the cable to be introduced laterally, without its being cut, owing to the elasticity of the edges 10a. The socket also has a central recess 11 intended for the wedge, of which the walls common to the recesses 8 and 9 respectively are split so as to constitute semi-cylindrical tongues 12, 12a, 13, 13a.

A locking sleeve 14 shown in Figure 4 slides over the socket of Figure 3 by means of a groove 15 in the form of a dovetail. Wedges 16 shown in Figure 5 are then fitted in the socket and laterally lock the tongues 12, 12a, 13, 13a against the conductors.

Figure 6 shows a junction box on which connection of the branched conductor is effected at right angles.

In this construction, the junction box is made in one piece comprising two symmetrical parts 17, 17a leaving a recess for the passage of the main cable 18. These two parts are joined, after the cable 18 is put into position, by a dovetail slide 19 forming a lock, which is introduced into a central recess 20 where a wedge 21 is also fit to press the tongues 22, 22a against the conductor 18, each part of the box having an extension 23, at right angles to the recess of the main cable; these extensions form together a socket to receive the end of a connected cable 24, and over this socket is fitted a sleeve 25, which gives concentric locking.

What is claimed is:

1. A junction device for electric conductors, intended particularly for effecting a branch connection between a continuous cable and the end of another cable, constituted essentially by a socket having recesses therein for the passage of the cables, a lock cooperating with the socket to prevent the cables from being freed from the socket, at least part of the walls of the recesses including flexible parts, and at least one wedge engaging in the socket and operative to effect a lateral locking of the flexible parts against the cables, so as to lock the latter in their recesses, the different elements of the junction device being produced from a metal having substantially the same coefficient of thermal expansion as the conductors.

2. A junction device for electric conductors according to claim 1, wherein said lock is in the form of a sleeve enabling the socket to be held so as to prevent its deformation outwards.

3. A junction device for electric conductors according to claim 1, wherein said socket is constituted by two parts which are joined by dovetail slides.

4. A junction device for electric conductors according to claim 1, wherein said socket is in one single piece, and has a wide slot along the recess intended for the continuous cable and which, owing to the elasticity of its edges, enables the cable to be introduced laterally into its recess.

5. A junction device according to claim 1, wherein the recess provided for the end of the connected cable is disposed at an angle to that of the continuous cable, and is formed by two half-rings, each solid respectively with one socket part, a sleeve being fitted with force over said half-rings, to effect the locking of the connected cable.

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