

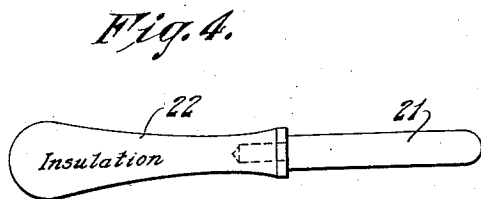
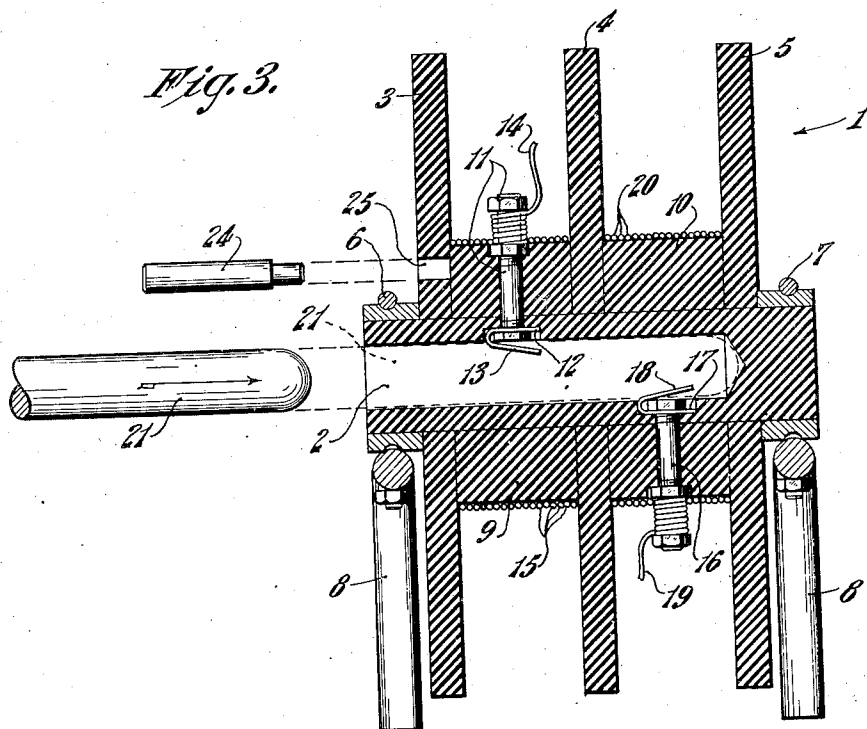
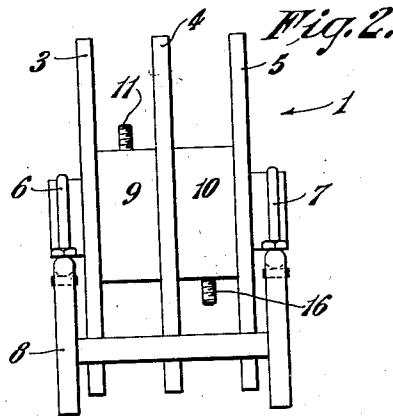
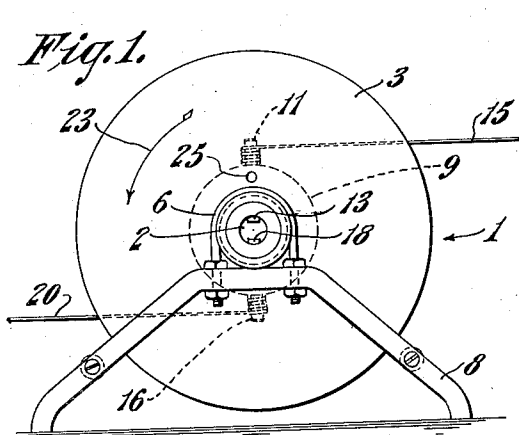
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2,016,441

CONNECTING OR SPLICING DEVICE FOR WIRES

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CONNECTING OR SPLICING DEVICE
FOR WIRES

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8 Claims. (Cl. 173—324)

My invention relates to improvements in connecting or splicing devices for wires, and more particularly, it is intended and designed for use in the splicing of wires designed to carry high tension electric currents.

At the present time, when a high tension wire, or wires, breaks, as they often do, when caused by storm and high winds, or other reasons, as coatings of ice, it is necessary to cut off the current at the source, before permitting workmen to splice the line, or to provide other elaborate and costly means for protection to prevent serious injury, or death, to those repairing the wires. It is an object of my invention to provide a splicing device for high-tension wires by means of which such wires may be quickly and easily, also safely connected, and the circuit closed, in complete safety, without shutting off the current at any time.

A further object of my invention is to provide, in such a device, means for taking up slack in the spliced wires, and for maintaining the wires in a taut condition, after the slack has been taken up and the circuit closed.

These, and other objects and advantages of my invention will be more completely disclosed and described in the specification, the accompanying drawing, and the appended claims.

Broadly, my invention comprises a drum member of insulating material divided into halves by a central partition and having an axial opening therein, a terminal post, to which an end of a wire may be secured, on one-half of the drum and connected to a metallic contact member projecting into the axial opening, a second terminal post on the other half of the drum diametrically opposite the first terminal and also connected to a contact member projecting into the axial opening, and a circuit closing member which, when thrust into the axial opening, closes the circuit between the two contact members.

A preferred embodiment of my invention is illustrated in the accompanying drawing, in which:—

Fig. 1 is an end, elevational view of the device.

Fig. 2 is a side, or front elevational view of the same looking from the right in Fig. 1.

Fig. 3 is a cross, sectional view on the line 3—3 of Fig. 1, and

Fig. 4 is an elevational view of the circuit-closing member.

Referring now to the drawing in detail, in which like numerals refer to like parts throughout:

A drum, or spool 1, of suitable insulating ma-

terial, having an axial opening 2 and flanges 3, 4, and 5, is revolvably supported in bearings 6 and 7 on a frame 8, as shown. The flange 4 divides a hub portion of the spool, or drum 1 into two portions 9 and 10. A terminal stud, or bolt 11, is secured in the portion 9 and extends through this portion to the axial opening 2, at which point a contact member 12 is secured to the stud 11, with a spring portion 13 thereof extending into the opening 2. The stud 11 also projects outwardly beyond the portion 9, thereby providing means for attaching an end 14 of a transmission line wire 15 thereto. A similar stud, or bolt 16, is secured in the portion 10, diametrically opposite the stud, or bolt 11, and has 15 secured thereon a similar contact member 17, with a spring end 18 projecting into the opening 2. The stud, or bolt 16, also projects outwardly beyond the portion 10, providing means for securing thereto an end 19 of a wire 20. A 20 circuit-closing member, comprising a rod, or bar 21, of suitable conducting material, and having a handle portion 22 of insulating material, is provided, and, when thrust into the axial opening 2, as indicated by dotted lines in Fig. 3, engages the spring ends 13 and 18 of the contact members 12 and 17, respectively, thereby closing the circuit through studs 11 and 16 and wires 15 and 20, thus completing and restoring the broken circuit between the ends 15 and 20 of the broken 30 wire 15.

In operation, assume an end of a broken electric current carrying wire 15 is secured on the stud 11 and the opposite end of the wire is secured on the stud 16, as shown in Fig. 1. The 35 central flange 4 prevents any accidental contact between the two ends of the wire while they are being secured to their respective studs. As the contact members 13 and 18 are separated, as indicated in Fig. 3, no closing of the circuit is possible, until the conducting member 21 is inserted 40 in the opening 2. After the ends of the wire have been secured on the studs 11 and 16, the drum 1 is revolved in the direction of the arrow 23, indicated in Fig. 1, thus winding each of the 45 ends 15 and 20 of the wire on its portion 9 and 10, respectively of the hub of the drum, until any slack in the wire has been taken up. A pin 24 is then inserted and left in an opening 25 in the end 50 flange 3 which pin, by engaging against one of the straight legs on the bearing 6, prevents unwinding of the drum 1, due to the tension of the wire ends 15 and 20, which have been wound on the drum. The member 21 is then inserted in the 55

opening 2 to close the circuit between the members 12 and 17.

It should be stated, that having the opening 2 closed at one end, prevents danger from any arcing effects reaching the workman.

What I claim is:—

1. A wire splicing device comprising a spool formed with an axial opening, a support for the spool, flanges at either end and midway of said spool, a terminal stud on said spool between an end flange and the middle flange and extending into said axial opening, a second terminal stud between the opposite end flange and the middle flange and extending into said axial opening, said second terminal stud being diametrically opposed to said first named terminal stud, and means for electrically connecting said terminal studs within said axial opening.
2. A wire splicing or connecting device for the purpose described comprising a drum member formed with an opening therein, a support for rotatably supporting the drum member, means for securing the open ends of a broken wire to said drum member, and which means extends into the opening, means for insulating said ends from each other when secured on said drum, and means for electrically connecting said ends within said opening whereby the circuit will be restored.
3. A wire splicing device comprising a frame, a drum of insulating material revolvably secured on said frame and formed with a flange thereon, said drum being provided with an axial opening, a terminal stud on each side of said flange and connecting with said axial opening, and means for electrically connecting said studs within said axial opening.
4. A wire splicing device comprising a supporting frame member, a drum revolvably secured on said frame member and formed with a flange thereon, said drum being provided with an opening, terminal studs secured in said drum on each side of said flange and extending inwardly to said opening, spring contact members secured on said studs and extending into said opening, and a rod member, having an insulated handle, which, when inserted into said opening will electrically connect said contact members.
5. A device for the purpose described, comprising a cylindrical member formed with flanges at each end and intermediate the ends thereof, said member being provided with an axial open-

ing, a frame for rotatably supporting said member and on which said member is removably secured, contact members in said cylindrical member between each end flange and said intermediate flange and extending into said axial opening, means on said contact members for securing a wire thereto adjacent the outer surface of said cylindrical member, and means for connecting said contact members within said axial opening.

6. In a splicing device for broken electric high tension line wires comprising, a member having an opening in a portion of its length, means for rotatably supporting said member, means forming separated wire-receiving channels on the rotatable member, current conducting means in the channels extending into the opening and to which means the ends of a broken wire are designed to be secured, means for insertion in the opening for engaging the current-conducting means for closing the circuit between the ends of a broken wire, as described, and means for stopping rotation of the drum after the ends of the wires have been wound in the channels.

7. In a device for connecting the ends of a broken electric cable, a drum member having an opening therein, means for rotatably supporting the drum member, means for forming annular channels thereon, a terminal in each channel which extends into the opening in the drum, said terminals being located in the same plane but extending in opposite directions into said channels, the terminals serving to connect the respective broken ends, and means for insertion in the opening for engaging the terminals therein for restoring the circuit through the broken wire.

8. In a device for connecting the ends of a broken electric cable, a drum member having an opening therein, means for rotatably supporting the drum member, means for forming annular channels thereon, a terminal in each channel which extends into the opening in the drum, said terminals being located in the same plane but extending in opposite directions into said channels, the terminals serving to connect the respective broken ends, means for insertion in the opening for engaging the terminals therein for restoring the circuit through the broken wire, and removable means for stopping rotation of the drum member after the free ends of the cable have been attached to the terminals and coiled on the drum in the channels.

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