

BURIED WIRE SPlicing D UNDERGROUND WIRE

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1. GENERAL

1.01 This section describes the methods and materials used in splicing D Underground Wire. It includes the restoration of the armor at splices which, to be fully effective as lightning protection, must be made electrically continuous across the splice.

1.02 In wet weather, splicing should be done under a shelter, such as a tent or tarpaulin, to keep the surfaces of the wires dry. Satisfactory splices cannot be made otherwise.

1.03 Splicing should follow as soon as practical after placing, but not before the wire has been tested and reported free of faults. Locations will be found marked by stakes placed upright to one side of the wire and indicating the distance in feet to the wire ends. On completion of the work, the wire should be buried at the depth of the original plowing.

2. PREPARING WIRE ENDS

2.01 In preparation for splicing the conductors, remove the PVC jacket as shown in Fig. 1.

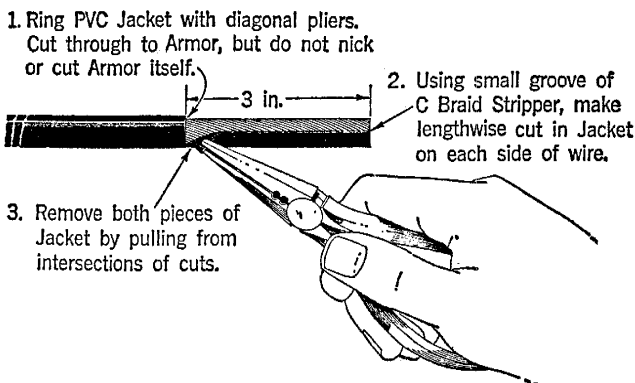


Fig. 1

2.02 Free the armor wires from the insulation as shown in Fig. 2.

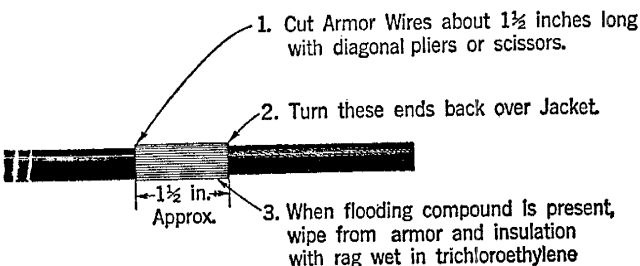


Fig. 2

2.03 Split the insulation between conductors to separate them as shown in Fig. 3.

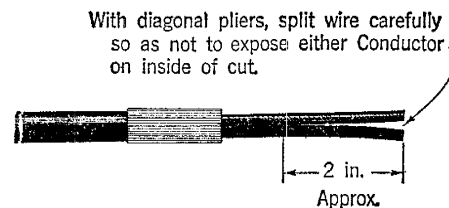


Fig. 3

2.04 Remove the insulation from the ends of both wires as shown in Fig. 4.

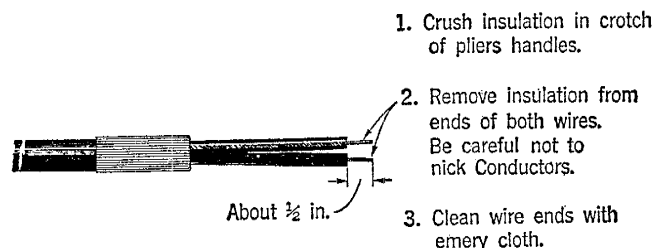


Fig. 4

2.05 Repeat the operations shown in Fig. 1 through Fig. 4 with the end of the other wire to be spliced.

2.06 BEFORE SPLICING THE CONDUCTORS shape a 10-inch length of Iron Shielding Braid into a tube and slip it over one of the wires.

3. SPLICING CONDUCTORS

3.01 Place 032-025 S Brass Sleeves on the bared ends of each conductor as shown in Fig. 5.

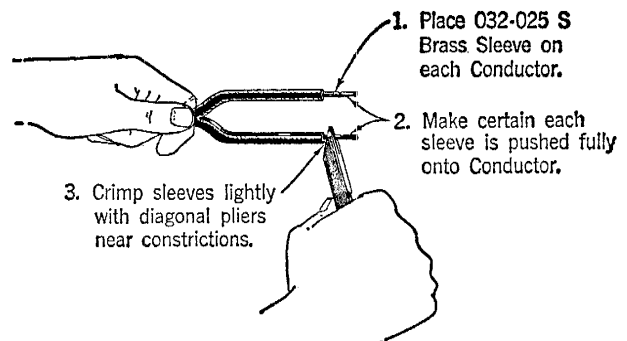


Fig. 5

3.02 Insert the conductors of the other wire end into the sleeves as shown in Fig. 6.

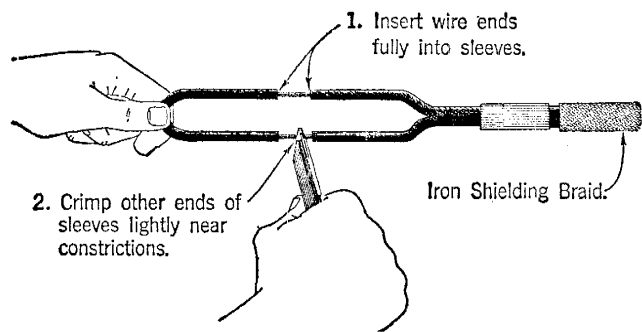


Fig. 6

3.03 Complete the splice by pressing the sleeves as shown in Fig. 7.

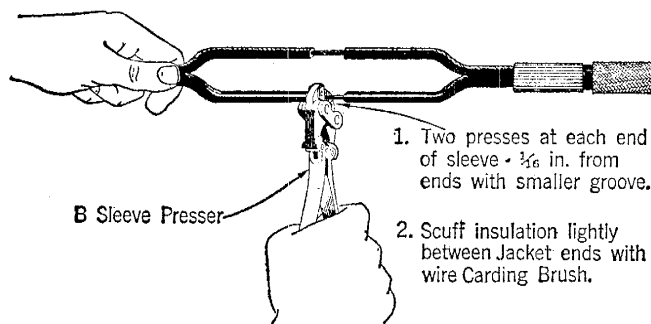


Fig. 7

4. INSULATING CONDUCTORS

4.01 Over each pressed sleeve fold a 1-1/4 inch length of 2-inch DR Tape as shown in Fig. 8.

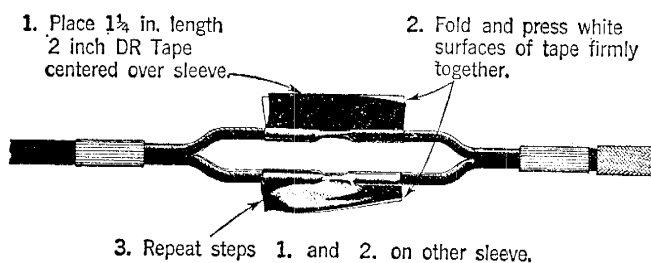


Fig. 8

4.02 Provide a length of D Underground Wire to act as a splint to stiffen the splice as shown in Figs. 9 and 10.

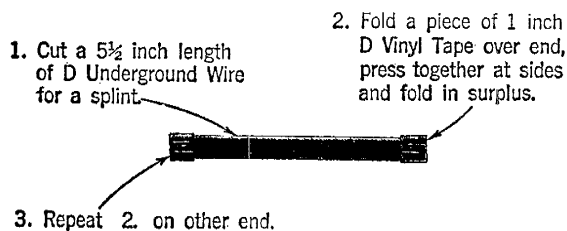


Fig. 9

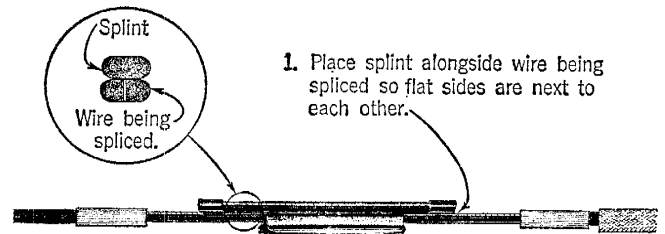


Fig. 10

4.03 Wrap splice in two continuous, half-lapped layers of DR Tape as shown in Figs. 11 and 12.

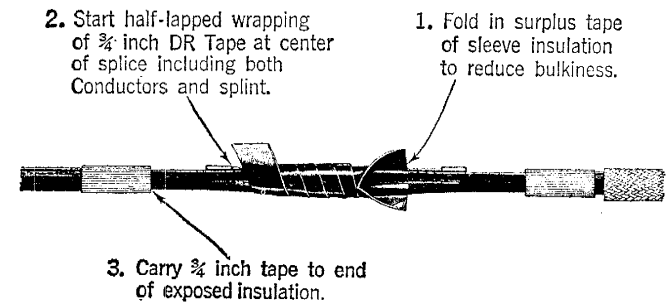


Fig. 11

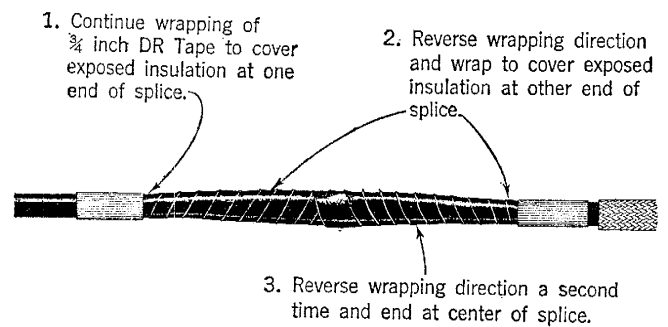


Fig. 12

5. RESTORING ARMOR

5.01 The length of Iron Shielding Braid (see Paragraph 2.06) placed over the insulated splice is intended to serve a double purpose; (1) the braid makes the armor electrically continuous over the splice, and (2) the completed covering provides mechanical protection against cuts, punctures, or insect damage comparable with that of the wire itself.

5.02 Apply the splice covering as shown in Fig. 13 through Fig. 16.

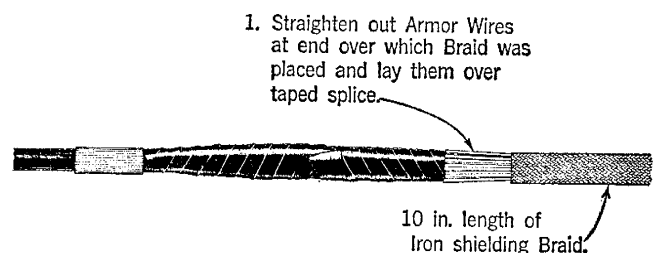


Fig. 13

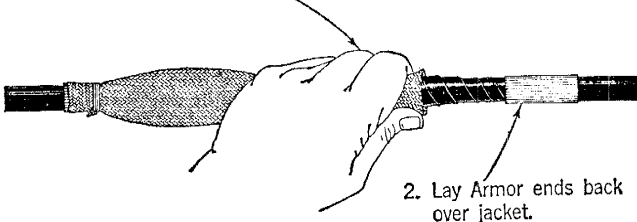
1. Slip Braid over splice so that the Braid overlaps the Armor at the other end of the splice.



2. Lash Braid to Armor with 049 Construction Wire. Fold flat against braid to prevent wire from puncturing tape covering.

Fig. 14

1. Compress tube of Braid by pressing back on free end until it clears Armor.



2. Lay Armor ends back over jacket.

Fig. 15

1. Release Braid and pull it down snugly over the length of splice to overlap the turned back Armor ends.



2. With Carding Brush, lightly scuff Jacket for about 2 inches beyond Armor at each end.

About 2 in.

Fig. 16

- 5.03 Apply tape covering to completed splice as shown in Fig. 17.

1. Start $\frac{3}{4}$ inch DR Tape about 2 inches beyond lashed end of Braid.

2. Apply two half-lapped wrappings of tape over the Jacket and Braid.



3. Tape to within about $1\frac{1}{2}$ in. of end of Braid - THEN - lash Braid tightly against Armor with 049 Construction Wire. Fold flat against braid to prevent wire from puncturing tape covering.

4. Continue taping to about 2 in. beyond Braid.
5. Wrap tape back on itself to the starting point.

Fig. 17

- 5.04 Apply outer tape covering of 1-inch D Vinyl Tape to provide tougher shell and to hold DR Tape tight.

1. Apply single half-lapped wrapping over DR Tape of 1 inch D Vinyl Tape extending $\frac{1}{2}$ inch beyond at each end.



Fig. 18