

## BURIED WIRE

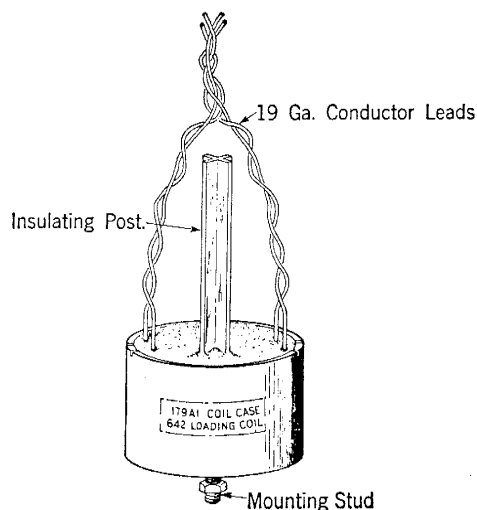
### INSTALLATION OF 179A1 COIL CASE

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#### 1. GENERAL

**1.01** This section covers the installation of the 179A1 Coil Case with D Underground Wire at buried locations and at D or E Buried Wire Terminal locations.

**1.02** The 179A1 Coil Case consists of one 642 Loading Coil in a plastic container filled with an epoxy resin. The terminals of the coil are 19 gauge copper conductors which provide electrical connection to the D Underground Wire conductors only. The mechanical mounting is provided by means of the mounting stud and nut in the bottom of the case. The case is illustrated in Fig. 1.



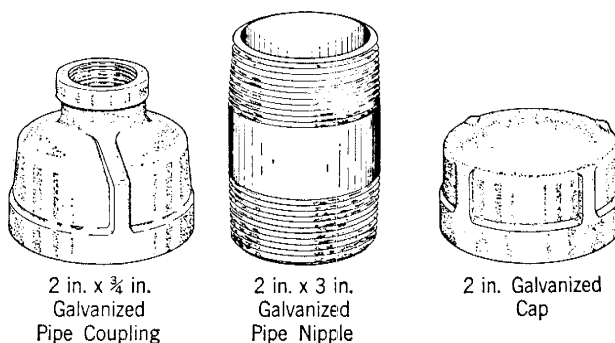
**Fig. 1**

#### 2. INSTALLATION AT BURIED LOCATIONS

**2.01** Loading coils should be installed at buried locations as soon as practical after the wire is placed, but not before the wire has been tested and reported free of trouble. The coil location should be marked temporarily by stakes, by an open trench suitably protected, or by other similar methods.

**2.02** In wet weather, load coils should be installed under a shelter such as a tent or tarpaulin. Satisfactory installation requires that the surfaces of the wire be dry and clean at the time of assembly.

**2.03** The items other than coil case and wire which are required for installing the load coil are shown in Fig. 2. The pipe nipple, pipe coupling, and pipe cap may be purchased locally.



**Fig. 2**

**2.04** The ends of the D Underground Wire are prepared as shown below:

(a) Remove PVC jacket as shown in Fig. 3.

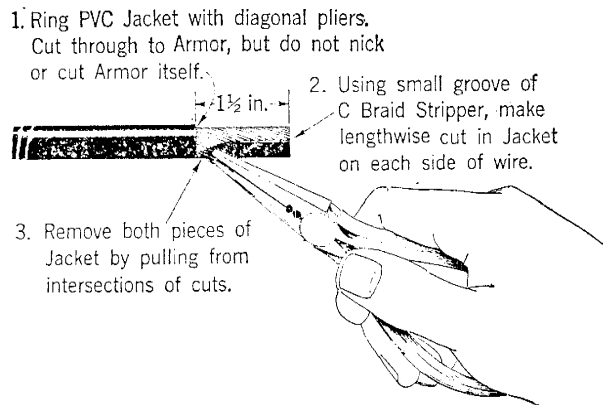


Fig. 3

(b) Twist armor wires together as in Fig. 4.

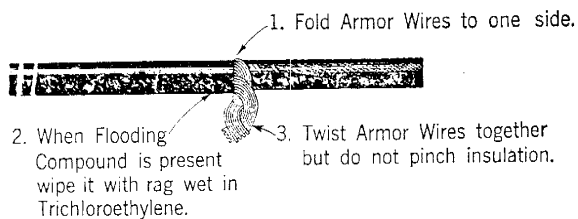


Fig. 4

(c) Split conductor ends as shown in Fig. 5.

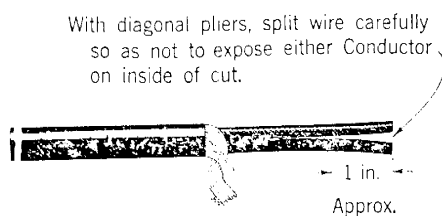


Fig. 5

(d) Remove insulation from both conductors as shown in Fig. 6.

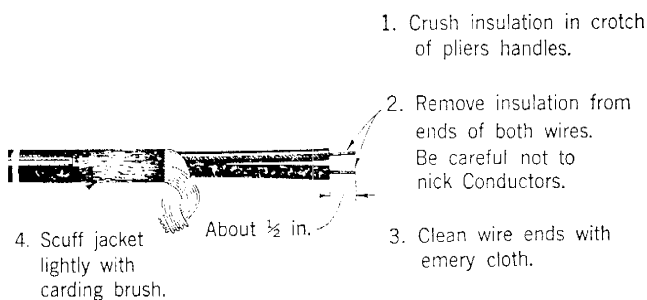


Fig. 6

(e) Prepare both buried wires being installed in coil case as in (a) through (d) above. Twist armor wires together and insert through pipe coupling as shown in Fig. 7.

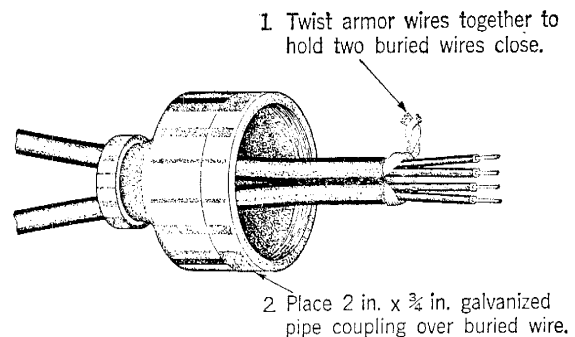


Fig. 7

**2.05** Prepare the ends of the conductors from the coil case as shown in Fig. 8.

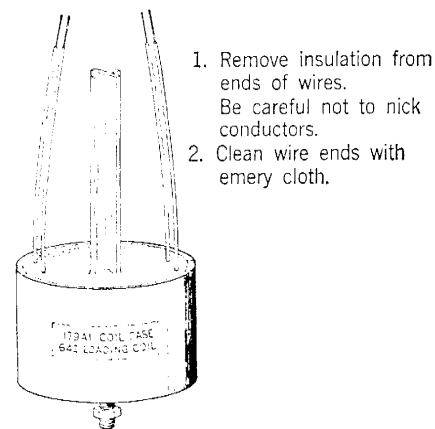


Fig. 8

**2.06** Splice the buried wire to the coil case as shown in Figs. 9 and 10.

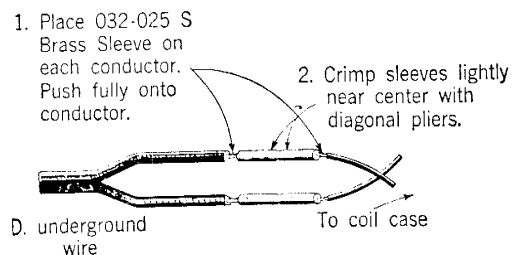


Fig. 9

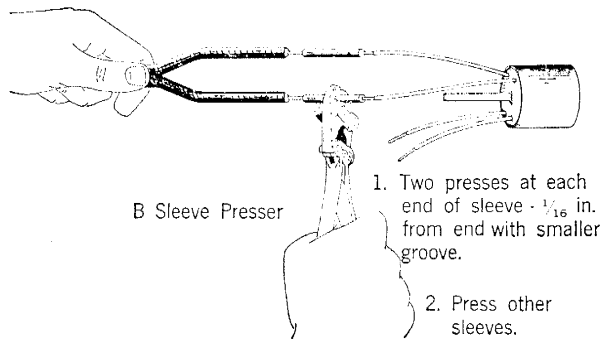


Fig. 10

**2.07** Arrange sleeves on insulating post as shown in Fig. 11.

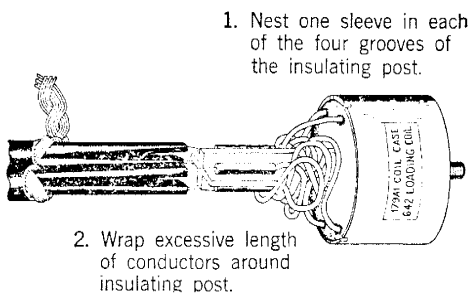


Fig. 11

**2.08** Assemble the coil case and other components as shown in Fig. 12. Make sure that the twisted armor wires do not touch the metal pipe nipple or coupling. This separation from ground is necessary for using the ground potential method in fault locating.

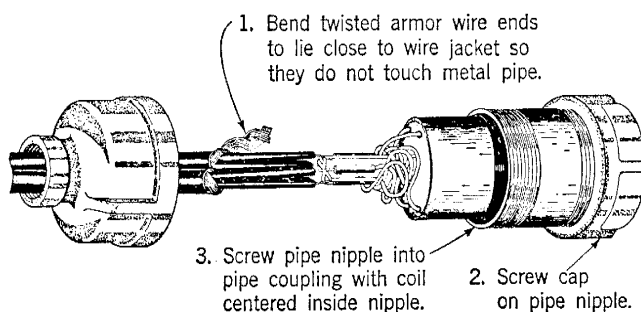


Fig. 12

**2.09** Fill the assembled coil case with B Plug Compound as follows: (More completely covered in Sections 637-241-011 and 637-242-011).

(a) The compound starts to set up in about 15 minutes at 70°F. Faster setup occurs at higher temperatures, and slower setup at lower temperatures. Therefore, the mixing should be done immediately before using. The coil case should preferably be filled at temperatures above 45°F. Where the plug compound must be used at lower temperatures, keep it warm before mixing, such as mixing inside a truck with a heater operating.

(b) **OPENING CAN (Part I):** Place the can on a flat surface and remove the friction cap carefully to avoid spilling. Use a 4-inch regular screwdriver or its equivalent as a pry. Form a pouring lip on the can by crushing the top rim against the side with the jaws of side cutting pliers. Do this before emptying Part II into the can.

(c) **HANDLING TUBE (Part II):** Hold the tube vertically and break off the tip with scissors or a pair of pliers. Invert the tube and squeeze the contents into the opened can; start at the folded end of the tube and press progressively toward the tip.

(d) Mix (do not whip) the two parts in the can thoroughly with the wooden blade for at least two minutes. See Section 637-241-011 for more complete instructions.

(e) Pour into opening of pipe coupling as shown in Fig. 13.



1. Place Assembly in Upright Position.
2. Be Sure Coil Case is Centered Inside Assembly.
3. Fill with 300 Grams of B Plug Compound.

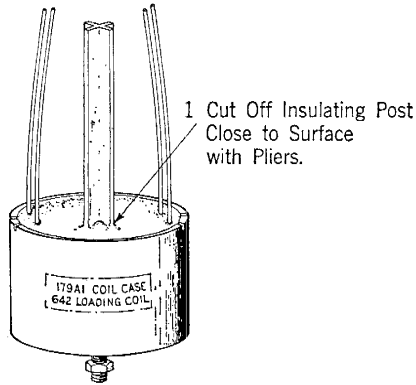
Fig. 13

**2.10** Close the filling hole in the pipe coupling with B Sealing, DR or D Vinyl Tape, sufficiently to keep out dirt during backfilling of hole. Place the wire and coil case at the original plowing depth and backfill.

### 3. INSTALLATION AT D OR E BURIED WIRE TERMINALS

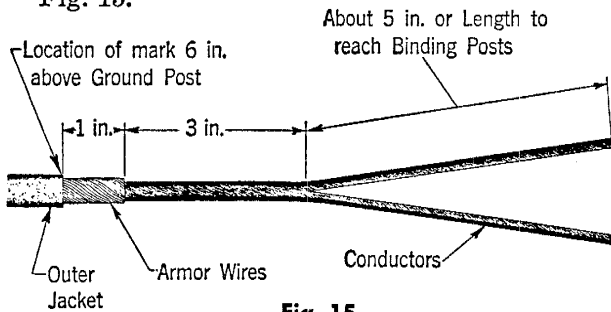
**3.01** At D or E Buried Wire Terminals the 179A1 Coil Case can be installed in the following manner:

- (a) Cut off the insulating post close to the surface of the potting compound as shown in Fig. 14.



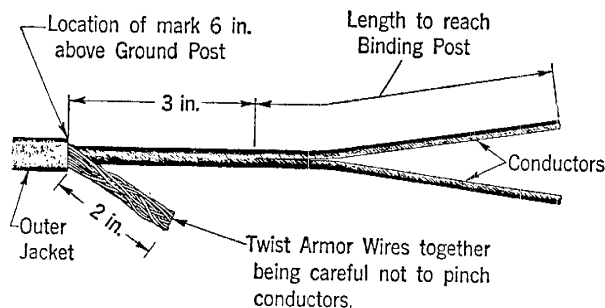
**Fig. 14**

- (b) Terminate the armor wire on the first two D Underground Wires by pulling the slack from the wires and mark the outer jacket about 6 inches above the ground post. Then prepare the ends of the wire as illustrated in Fig. 15.



**Fig. 15**

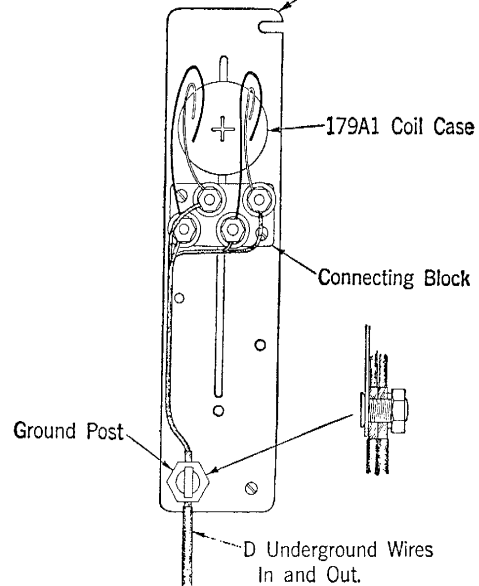
- (c) Where there are more than two underground wires, terminate the third and fourth wires by pulling the slack from them and mark the outer jacket about 6 inches above the ground post. Prepare the ends as illustrated in Fig. 16.



**Fig. 16**

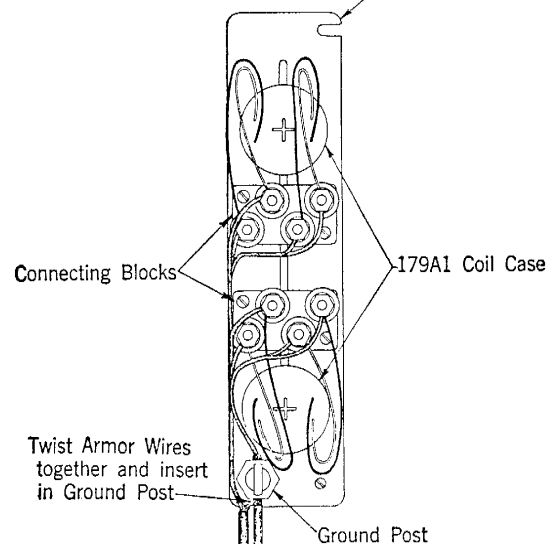
- (d) Install the additional connecting block, when needed, with the screws furnished with the block. The 179A1 Coil Cases are mounted on the terminal plate with the mounting stud located on the bottom of the case. Connect the conductors and coil case leads to the proper binding posts of the connecting blocks as shown in Figs. 17 and 18.

Terminal Plate of D or E Buried Wire Terminal.  
Rest of Terminal omitted for clarity.



**Fig. 17**

Terminal Plate of D or E Buried Wire Terminal.  
Rest of Terminal omitted for clarity.



**Fig. 18**