

**BELL SYSTEM PRACTICES**  
**Outside Plant Construction**  
**and Maintenance**

**SECTION G56.649.1**  
**Issue 3, April, 1956**  
**AT&T Co Standard**

## **BURIED CABLE SPLICING**

### **F-51577 AND F-51602 TERMINALS**

### **(POST OR POLE MOUNTED)**

<b>Contents</b>	<b>Page</b>
1. General .....	1
2. Description .....	2
3. Preparation of Sheath Opening .....	3
4. Installation of Terminal .....	5
5. Terminating .....	9
6. Splicing .....	12
7. Loading .....	12

#### **1. GENERAL**

1.01 This section describes the F-51577 and F-51602 Cable Terminals and their use in terminating, splicing and loading polyethylene insulated cables in buried urban and rural distribution systems. It is reissued to include changes in methods and materials. Issue 2 is replaced.

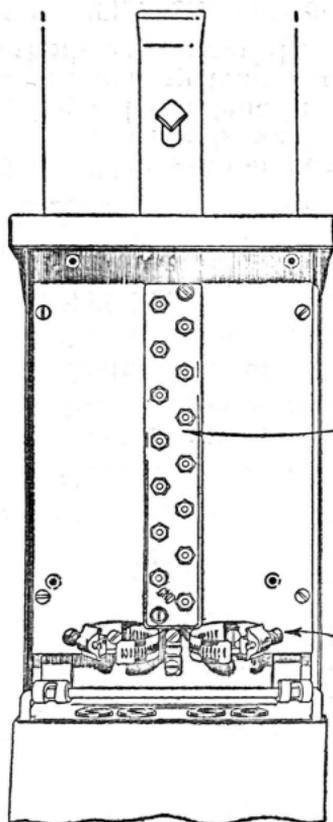
1.02 The terminals described herein can be used with cables as large as 1.2 inches in diameter and provide terminating facilities for as many as 12 pairs or, in conjunction with the 177A Loading Coil Case, to load six pairs. The pairs not terminated or loaded can be looped through the boxes.

1.03 The use of post mounted terminals on cables up to 1.6 inches in diameter with a maximum of 51 terminations is covered in Section G56.649.2.

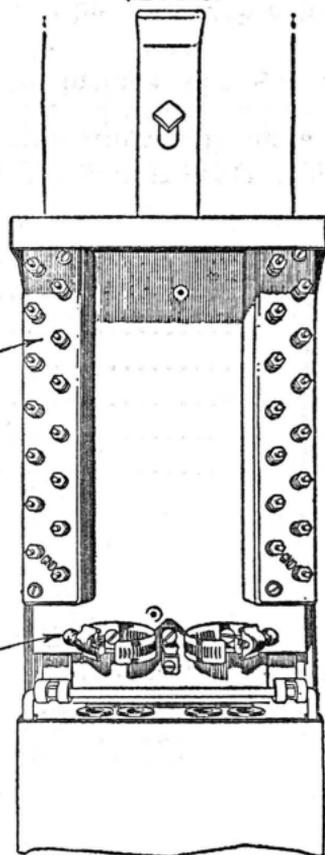
## 2. DESCRIPTION

2.01 The F-51577 Terminal and the F-51602 Terminal are used to terminate 6 and 12 pairs respectively. The sheet metal housing approximately 11-1/4 inches high, 6-7/8 inches wide and four inches deep has a slot in the base through which the cables can be looped. The Aero-Seal Clamps together with the inner clamps are used to maintain the sheath continuity of the cable through the housing of the terminal. A mounting bracket and ground connector are furnished as a part of each assembly.

F-51577 CABLE TERMINAL  
(6 Pairs)



F-51602 CABLE TERMINAL  
(12 Pairs)



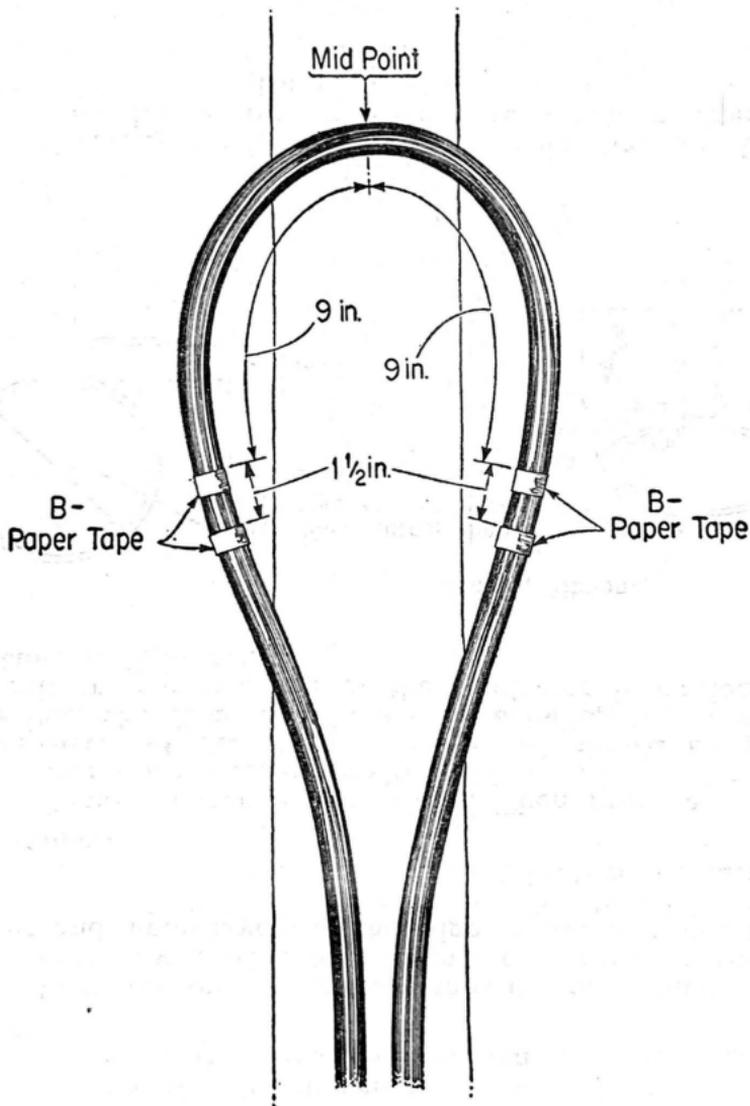
P 19B755  
Terminal Block  
Assembly

QS-100M16S  
Aero-Seal  
Clamp

### 3. PREPARATION OF SHEATH OPENING

3.01 Sufficient cable will be looped at the post or pole during the cable placing operation to permit the termination to be made at the desired height above the ground level.

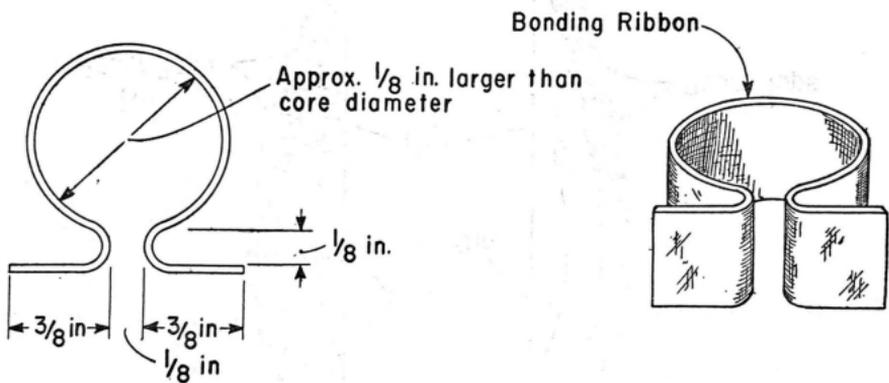
3.02 Mark the mid-point of the cable loop at the top. Then place four B Paper Tape markers on the sheath as illustrated below.



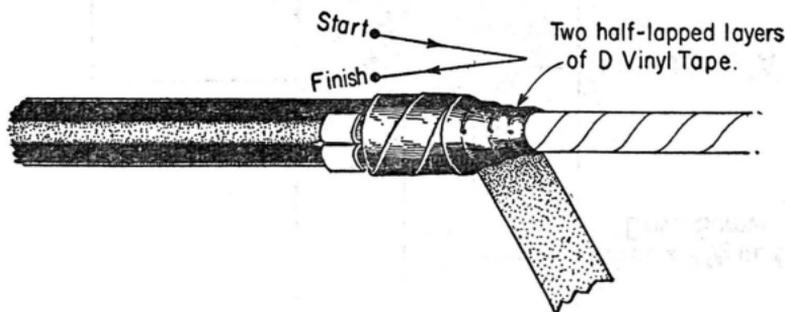
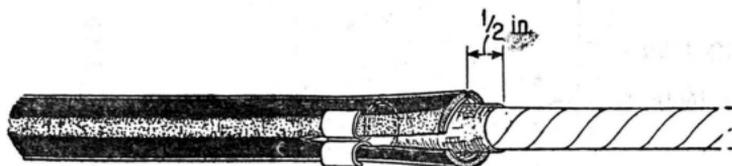
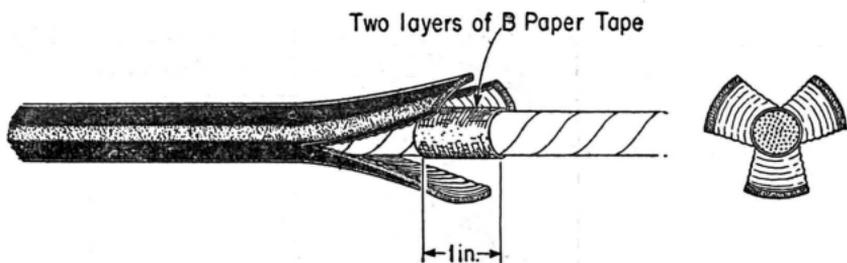
3.03 Remove sheath between inner paper tape markers (18 inches) in the usual manner. Remove inner paper tape markers.

3.04 With the scissors prepare tabs of approximately equal width by making longitudinal cuts through the polyethylene and metal layers to the edge of the tape marker. On cables up to 1 inch in diameter, three tabs should be cut. On larger cables it is desirable to cut four tabs. Avoid injuring the core wrapper.

3.05 Remove paper tape markers. Then prepare an inner clamp of a strip of bonding ribbon as illustrated below. **The diameter of the clamp when closed should be slightly larger than the diameter of the core including the core wrap.** This will prevent crushing of the conductor insulation when the clamp is tightened.



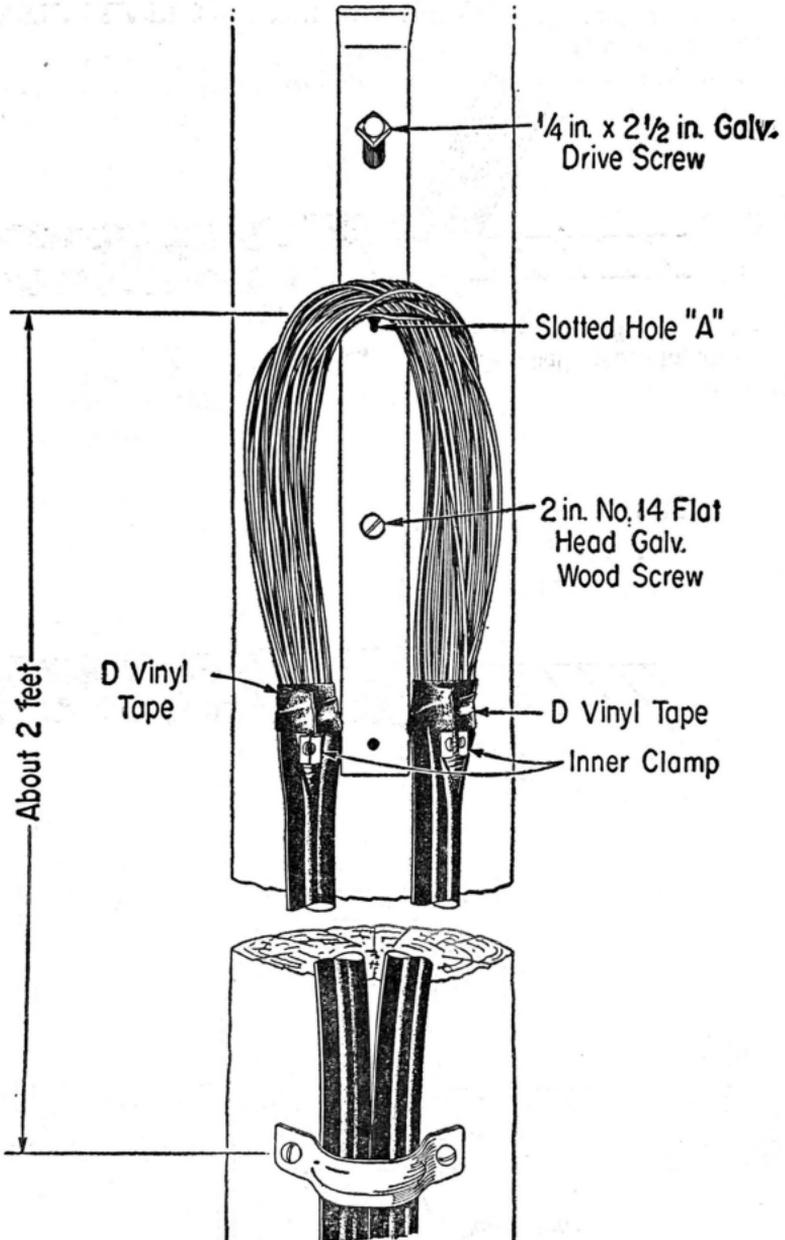
3.06 Carefully bend the tabs away from the core. **Do not bend sharply** to avoid tearing the aluminum. Then place the inner clamp as illustrated below.



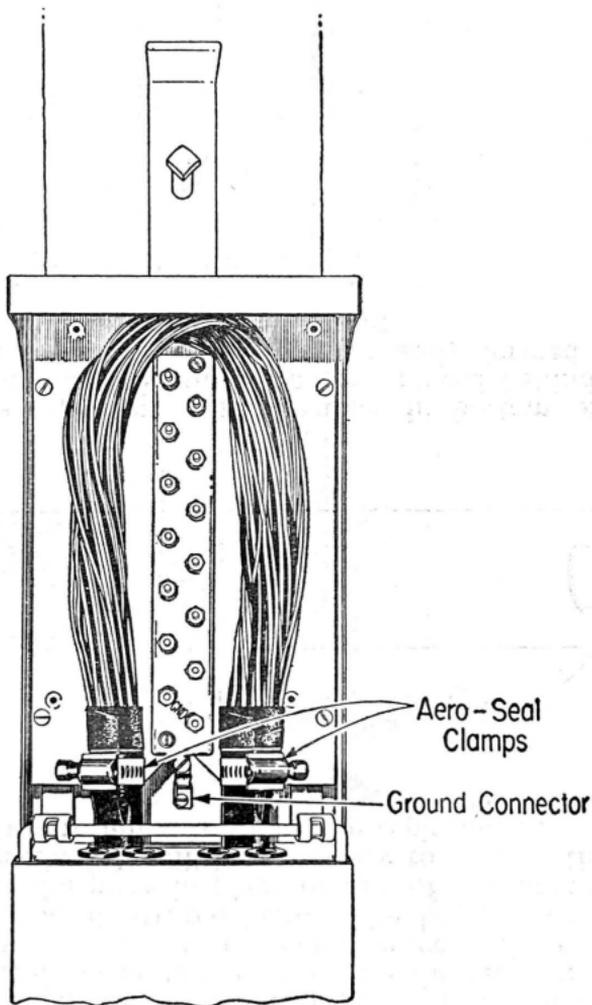
#### 4. INSTALLATION OF TERMINAL

4.01 Place the cable alongside the pole in its final position and clamp it temporarily about 2 feet below the top of the loop. Remove core wrapper. Then position the terminal mounting bracket between the cable and pole so that the slotted hole "A" in the bracket is just below the top of the loop. Mark

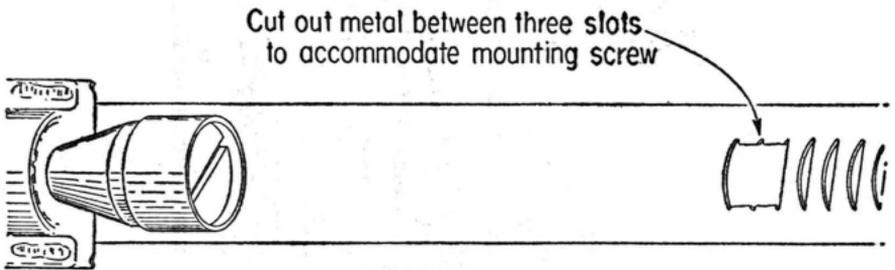
the location of the hole "A" on the pole, remove the bracket and drill or chisel a hole in the pole approximately 3/4 inch in diameter and 1/2 inch deep. Then replace the bracket in the original position and mount it on the pole as illustrated.



4.02 Open Aero-Seal Clamps to permit placing over cable sheath. Then place open end of box over cable loop and engage the mounting lug on the back of the box in the slotted hole "A." Press down on box to properly engage lug in hole. Then place ground connector over hole in bottom center of box which is in alignment with the tapped hole in the mounting bracket and fasten with screw. Tighten Aero-Seal Clamps around sheath ends so they will bear on the ears of the inner clamps.



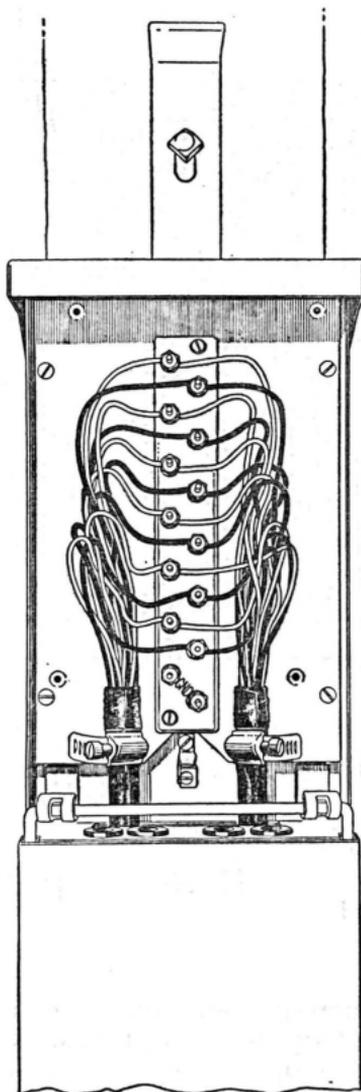
4.03 At junctions where three cables enter the box one of the Aero-Seal Clamps should be replaced with the standard Sealing Clamp in which two cables can be placed. A hole sufficiently large to accommodate the mounting screw can be made by cutting out the metal between three slots in the larger clamp as illustrated below. The larger clamp should be mounted on the plate in place of one of the clamps furnished with the terminal. It will be necessary to remove the mounting plate from the terminal to make the replacement.



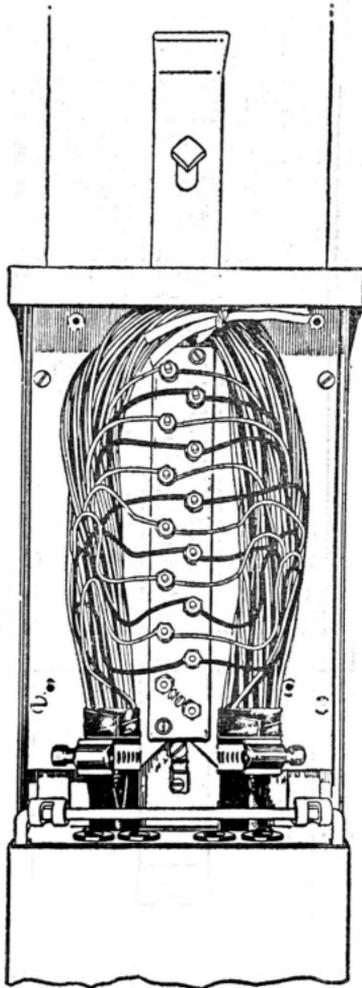
4.04 Seal openings around cables in bottom of box with strips of B Sealing Tape one placed behind the cables and one in front. The tape can be readily formed around the cables and will adhere to the housing.

## 5. TERMINATING

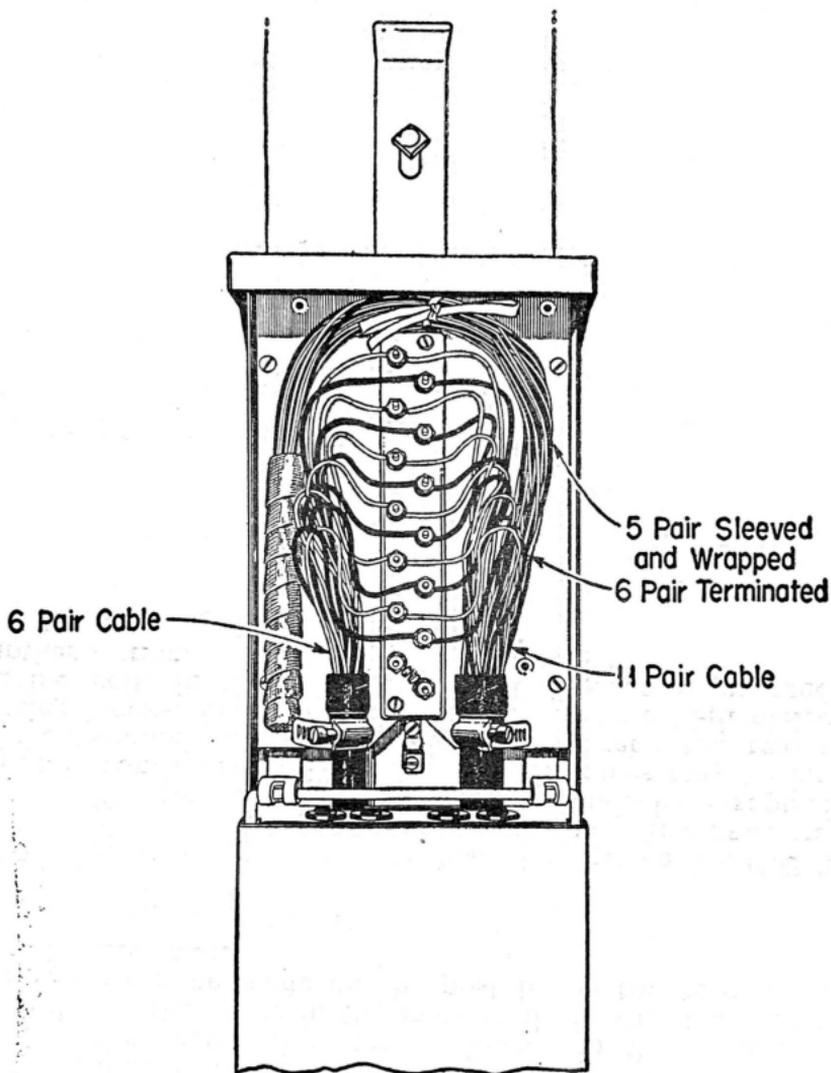
5.01 If 6 pair or 12 pair cables are to be terminated the conductors should be bridged under the bottom washer and nut in the terminal. If the cable is not cut, break the conductor insulation, slide it back about 3/4 inch, then loop the skinned portion of the wire and place it under the washer as illustrated.



5.02 The following arrangement shows a 51 pair cable looped through the terminal with six pairs bridged. Cables smaller than 51 pair may be looped in a similar manner. The cotton sleeving which holds the looped pairs in position is inserted under the terminal block assembly by loosening the mounting screws.



5.03 At junctions of different size cables, the ends of the excess pairs can be sleeved and tied back.



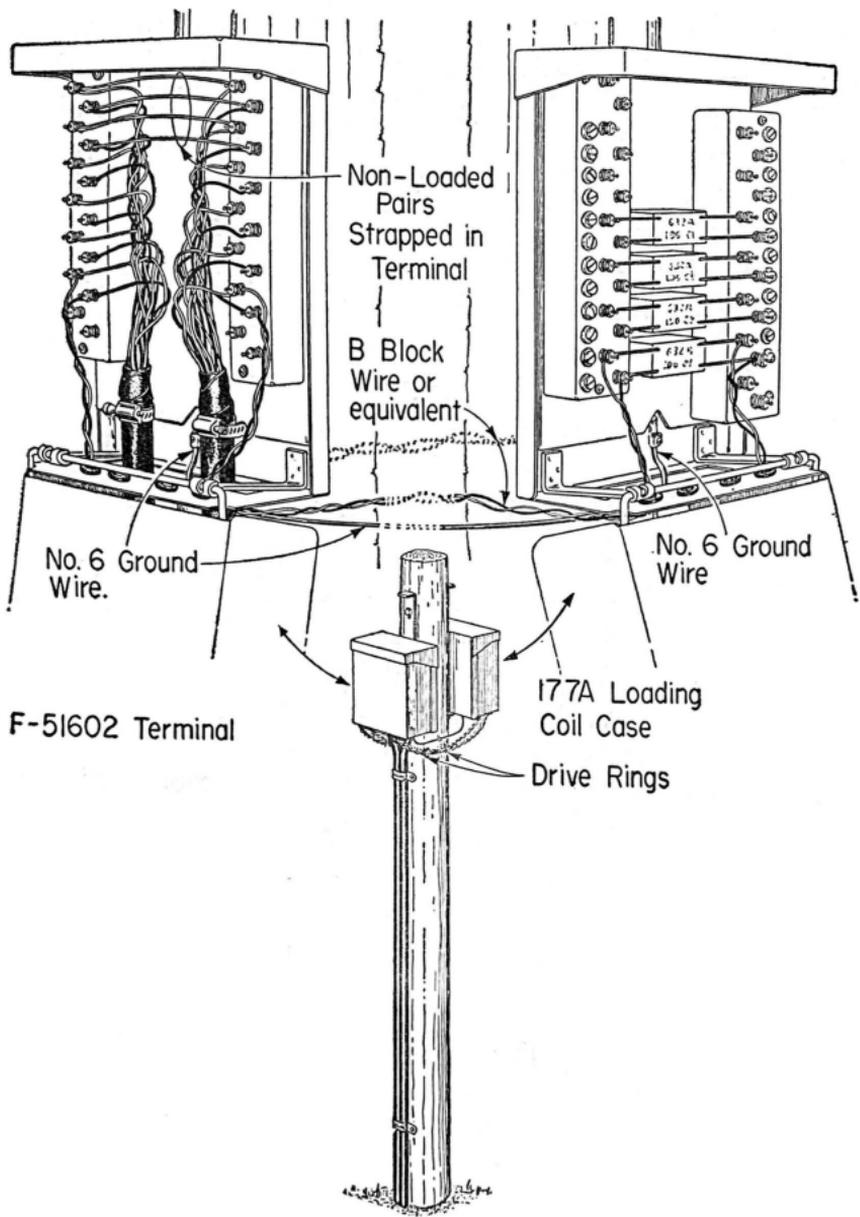
## 6. SPLICING

6.01 At reel ends of cables larger than the capacity of the terminal for terminating, a butt splice can be made on a post or a buried splice made.

6.02 If the reel end of a cable larger than the terminal capacity coincides with a terminal location a small cable of the proper size may be looped in the terminal and bridged into the splice in the main cable in the usual manner. The splice can be made on the post below the terminal or a buried splice made.

## 7. LOADING

7.01 Up to six pairs can be loaded using an F-51602 Terminal and a 177A Loading Coil Case. Any pairs in the F-51602 Terminal that are not loaded shall be strapped to maintain continuity as illustrated. Larger cables may be looped in the terminal with the loop located between the two connecting blocks. The installation of the 637 type high dielectric loading coils in the 177A Loading Coil Case is covered in another section.



7.02 Larger complements shall be splice loaded in the usual manner using high dielectric 171, 172A, 173A, or 174 type splice loading coil cases.

**G56.649.1**

Page 13  
13 Pages

**BURIED CABLE SPLICING  
F-51577 AND F-51602 TERMINALS  
(POST OR POLE MOUNTED)**