BELL SYSTEM PRACTICES
Outside Plant Construction and Maintenance

SECTION G34.801.2
Issue 1, April, 1959
AT&TCo Standard

C RURAL WIRE
PLACING

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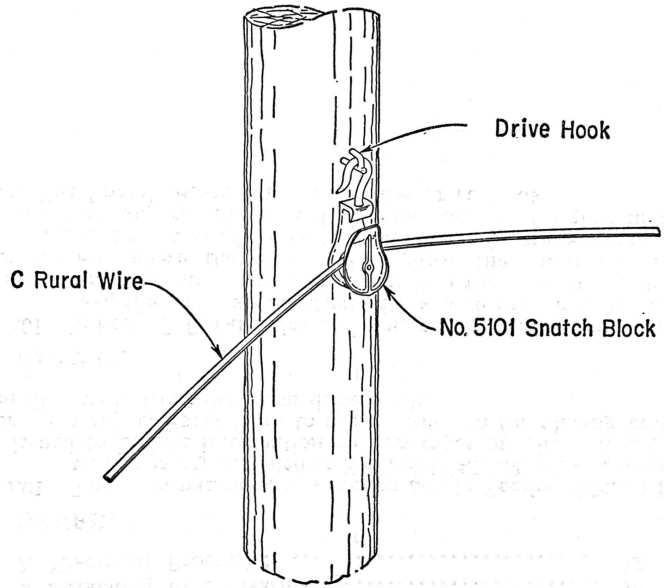
1. GENERAL

1.01 The information in this section and in Section G34.801.1 was formerly included in Section G34.120.2. This section is issued to include information on new types of wire supports for attaching C Rural Wire to a crossarm and for placing two parallel wires from the same drive hook.

2. PLACING

2.01 Where C Rural Wire is being placed from a moving reel, the wire can be lifted with a wire raising tool and laid over a drive hook which is driven into the side of a pole. At corners where the wire pulls against the hook (inside corners) and at poles where downward change in grade exceeds 10 per cent, support the wire during placing and sagging in a No. 5101 Snatch Block attached to the drive hook.



2.02 Where C Rural Wire is being pulled from a stationary reel, it may be pulled over drive hooks, except at corners where the wire pulls against the hook and at poles where the downward change in grade exceeds 10 per cent. At such locations, support the wire during placing and sagging in a snatch block as shown in Paragraph 2.01. The wire may be prevented from dragging over obstructions in the span by use of a Wire Payout Reel equipped with a B Reel Brake placed between the wire supply reel and the first pole of the wire run. A single turn of wire is made around the payout reel and tension maintained by the reel brake. The wire should not be passed through the loop on the reel brake tension arm.

2.03 The Deadend Support can be used where temporary dead ends are required to maintain clearances during placing operations.

3. SAGGING

3.01 Sag C Rural Wire in accordance with the sag tables in Section G34.120.4.

3.02 The Deadend Support can be used as a temporary grip during the sagging operation.

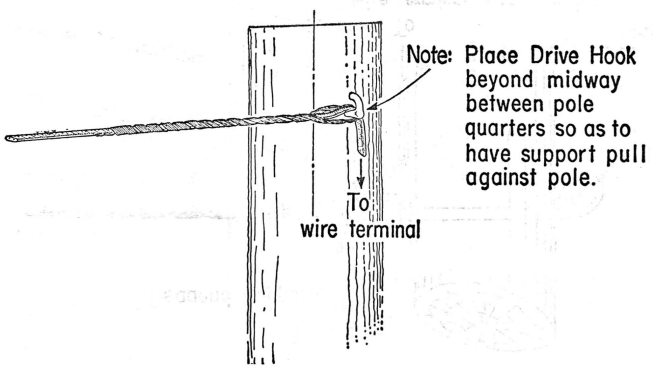
3.03 C Rural Wire should not be pulled around corners exceeding a 10-foot pull during the final sagging operation. In leads where such corners exist, it will be necessary to sag the wire by sections and to dead-end the wire in both directions at corners exceeding a 10-foot pull.

4. ATTACHING TO POLES

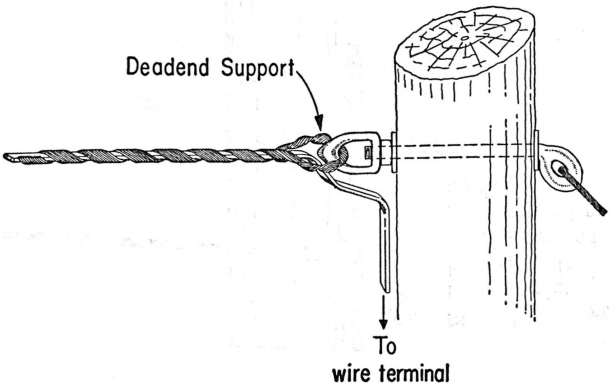
4.01 After sagging but before making the pole attachment, introduce at least 10 complete twists (in either direction) into the wire in each span in order to minimize noise from power line induction as well as the dancing of the wire in high winds. These twists may be placed in two spans of wire at an intermediate pole, after the attachments have been made to the adjacent poles, by lifting the D Wire Support at the intermediate pole and rotating it through ten complete turns before placing it on the drive hook. Where there are an odd number of spans, rotate the D Wire Support at the pole between the last span and the next to last span through ten complete turns in the **same direction** as the last previous rotation. This will introduce 20 twists into the next to last span in order to get 10 twists into the last span.

4.02 Attachments at dead-end poles are made with the Deadend Support as shown in the following illustrations:

(a) Wire dead-ended without a guy.



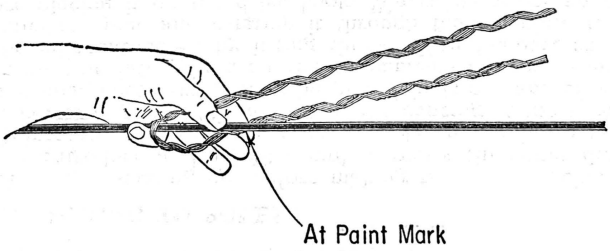
(b) Wire dead-ended with a guy.



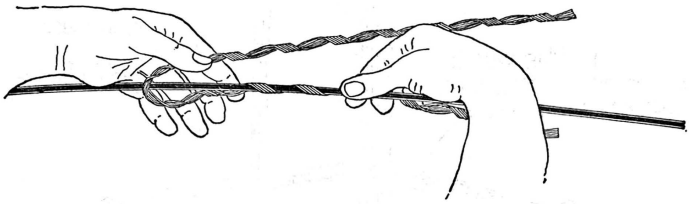
4.03 The Deadend Support can be applied to the C Rural Wire in the following manner:

(a) Hold the support with the eye toward or engaged with the pole hardware.

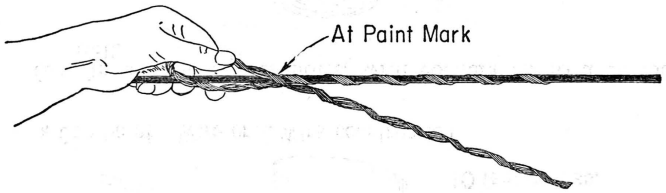
(b) Place the wire between the spirals in one of the legs at the point indicated by the colored paint marking.



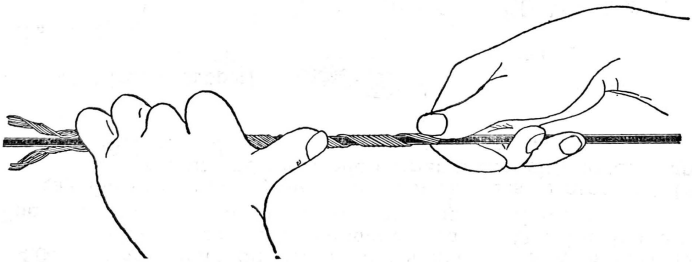
(c) Wrap the leg around the wire using the thumb and forefinger and working from the point of contact near the eye toward the tail of the leg. Wrap the entire length of the leg around the wire. **Do not wind on by holding tail end of leg.**



(d) Cross the second leg over the first at the color-marked points, and wrap it around the wire in the same manner.

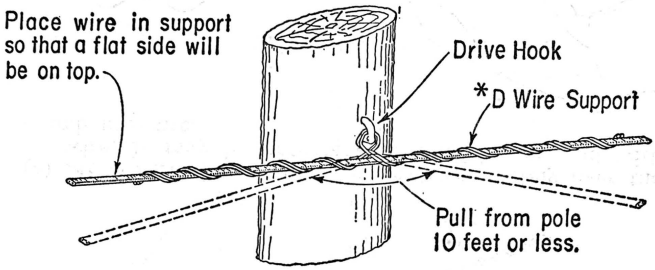


(e) Make sure the end of each leg is completely over the wire. It may be necessary to snap in the end with thumb pressure.



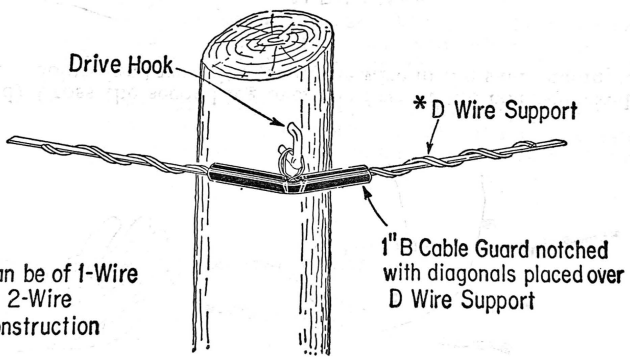
4.04 Attachments on in-line poles and poles with corners up to a 10-foot pull are made with the D Wire Support. The following illustrations show these applications.

(a) On in-line poles, on poles with changes in grade up to 10 per cent and on inside corner poles with corners up to a 10-foot pull.

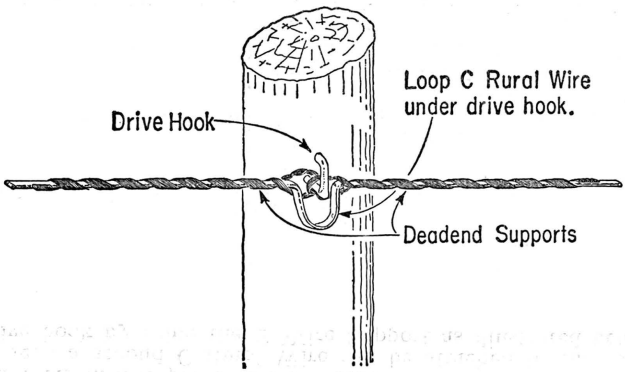


* Can be of 1-Wire or 2-Wire construction

(b) On outside corner poles, with corners up to a 10-foot pull.

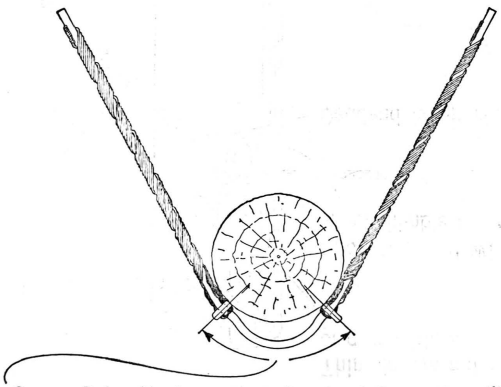


4.05 WHERE ATTACHMENTS ARE MADE TO POLES ADJACENT TO ROAD CROSSINGS, C RURAL WIRE SHALL BE DEAD-ENDED IN BOTH DIRECTIONS, as illustrated in the following.

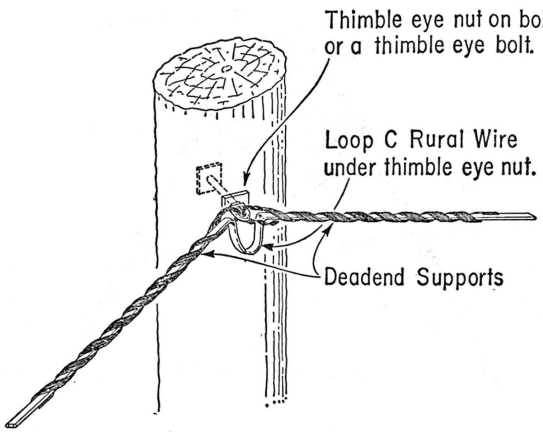


4.06 At corner poles where the pull is more than 10 feet or at poles where the change in grade is greater than 10 per cent, it is necessary to dead-end the C Rural Wire from both directions as shown in the following illustrations.

(a) At outside corners where there is more than 10 feet of pull.



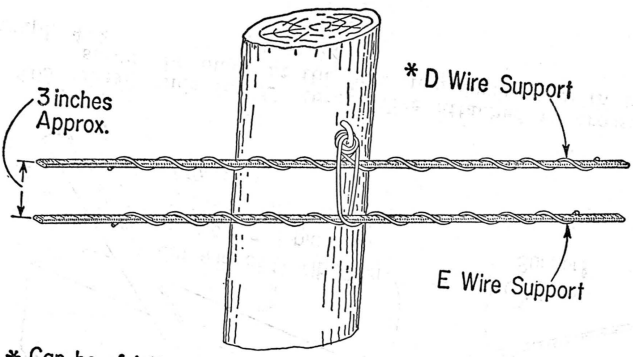
(b) At inside corners where there is more than 10 feet of pull.



5. PARALLEL RUNS ON SAME POLE LINE

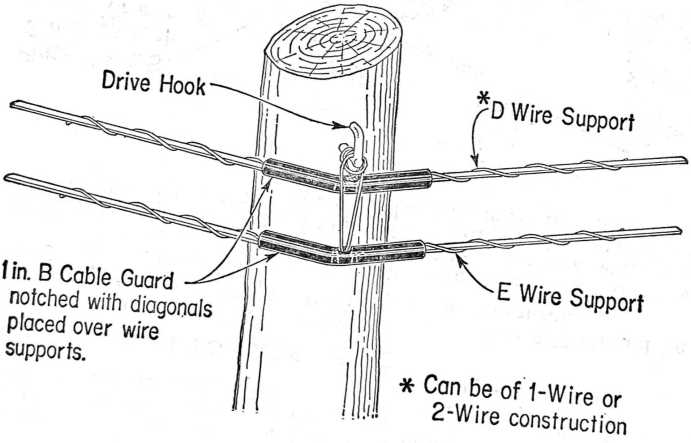
5.01 Two or more parallel C Rural Wires on the same pole line should be separated from each other by at least 3 inches. Care should be taken to adjust the sags in these spans so that the lower wire will have a larger sag than the upper wire. At in-line poles and at corner poles with pulls up to 10 feet, a second C Rural Wire can be attached to the same drive hook by using the E Wire Support as illustrated below.

(a) At in-line pole or pull away from pole at corners up to 10 feet of pull.



* Can be of 1-Wire or 2-Wire construction

(b) At outside corners with up to 10 feet of pull.

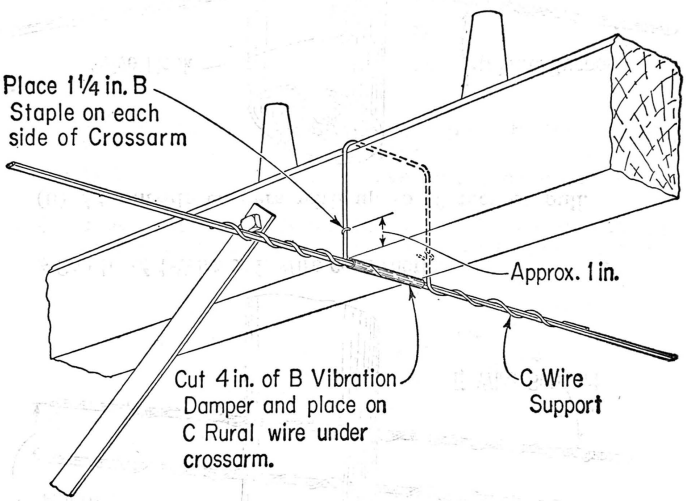


5.02 The second C Rural Wire at dead-end poles and at corners with more than 10 feet of pull should be attached on its own attachments in the same manner as the first wire except that the separation of at least 3 inches from the first wire should be maintained.

6. ATTACHING TO CROSSARMS

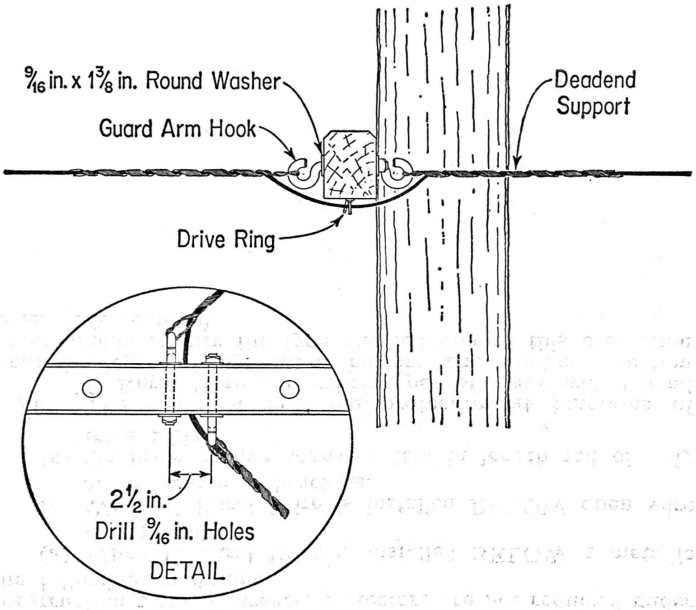
6.01 The same twists described in Paragraph 4.01 should be carried out when attaching to a crossarm.

6.02 Attachments to crossarms on in-line poles and on poles with corners up to 10 feet of pull are made with the C Wire Support. Other C Rural Wires can be run parallel to the first provided a separation of at least 3 inches is maintained.



6.03 Dead ends for C Rural Wire attached to crossarms should be made at the pole in accordance with Paragraph 4.02.

6.04 Corners where the pull is more than 10 feet and less than 50 feet can be made on the crossarms by using guard arm hooks as shown. At corners with over 50 feet of pull, the wire should be dead-ended on the pole in the usual manner. When the corner is made with a double arm, attach one guard arm hook in each crossarm to hold the Deadend Support.



7. ELECTRICAL PROTECTION

7.01 From the station protection standpoint, C Rural Wire is classed as open wire. Subscriber stations that are served by this facility require a fuse-type station protector.

7.02 When C Rural Wire is placed jointly with power circuits less than 2900 volts to ground, no protection is required unless lightning protection is specified.

7.03 When C Rural Wire is placed jointly with power circuits exceeding 2900 volts to ground, the type and location of protection required should be specified on the detail construction plans. However, protectors are not required under the following conditions:

(a) When C Rural Wire is installed BELOW a metallic sheath cable.

(b) When C Rural Wire is installed BELOW open wire on crossarms or brackets.

(c) On leads of five spans or less in length fed directly from cable.

7.04 The need for lightning protection at junctions of C Rural Wire and other types of plant will depend upon the degree of exposure of the wire. The detail construction plans should specify the type and location of this protection when it is required.