

49-TYPE CABLE TERMINAL TERMINATING CONDUCTORS

CONTENTS	PAGE
1. GENERAL	1
2. TERMINAL BLOCKS	1
3. IDENTIFYING AND MARKING BINDER GROUPS	2
4. SELECTION OF CABLE PAIR	4
5. PREPARING AND TERMINATING CONDUCTORS	4
6. REARRANGEMENT	11

1. GENERAL

1.01 This section describes a new method of arranging plastic-insulated conductors for terminating in 49-type cable terminals. This method will:

- (a) Promote better housekeeping.
- (b) Facilitate the selection of assigned cable pairs.
- (c) Simplify making conductor joints.

1.02 This section is reissued to revise the figures.

2. TERMINAL BLOCKS

2.01 The 49-type terminals are furnished with one P-18A782 Terminal Block (6 pair). See Fig. 1 and 2.

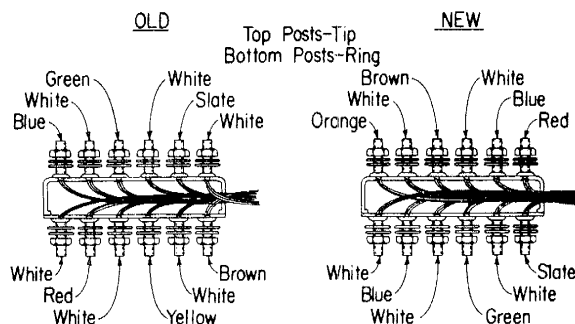


Fig. 1 — Color Codes of P-18A782 Terminal Block ←

2.02 The P-18A782 Terminal Block is mounted in the first position. When additional blocks are required, mount them in the order shown in Fig. 2.



Mount Terminal Blocks in following order:

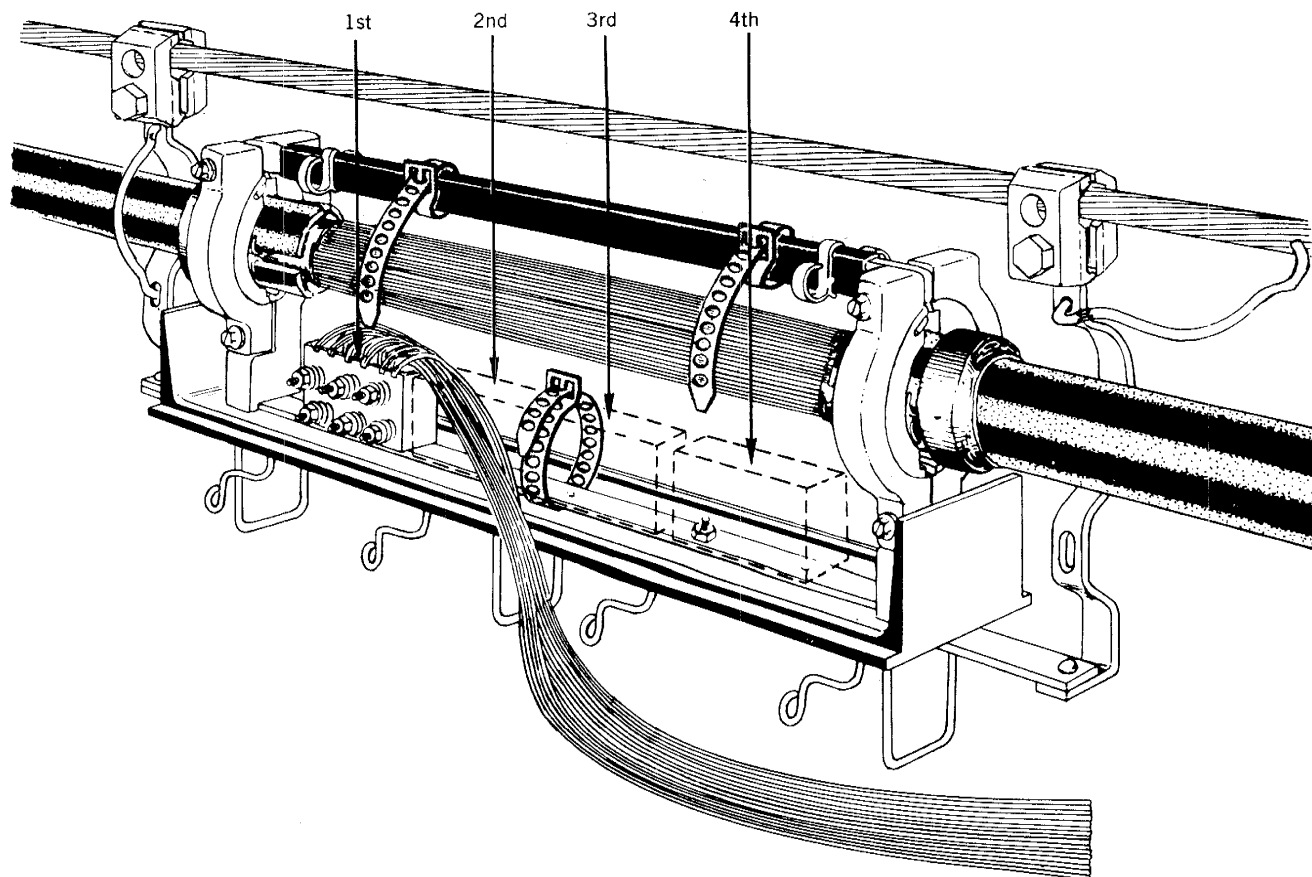


Fig. 2 — Terminal Block Mounting Positions



2.03 At seacoast or other locations where corrosion due to salt atmosphere can be expected, remove the P-18A782 Terminal Block and replace it with a 3A1-6 Terminal Block. These blocks are similar except that the mounting studs of the 3A1-6 Terminal Block are made of zinc-plated steel.

2.04 If cable protection is required, remove the P-18A782 Terminal Block and substitute a 3A2B-3 Terminal Block (3 pair). The 3A2B-3 Terminal Block replaces the F-53458 Terminal Block. See Fig. 3.

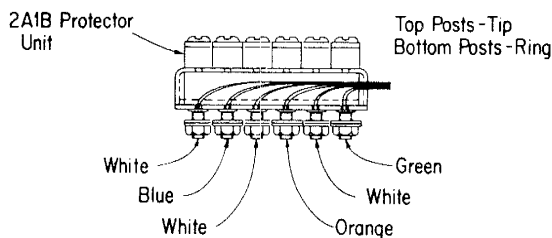


Fig. 3 — Color Code of 3A2B-3 (F-53458) Terminal Block



2.05 When mounting a terminal block, pierce the neoprene base visible in the mounting holes of the terminal and then work the studs of the block into the holes. Fasten securely with the nuts provided.

2.06 The terminal blocks are equipped with two leads internally connected to each binding post. The two leads are designated as either tip or ring by colored plastic (PVC) insulation.

3. IDENTIFYING AND MARKING BINDER GROUPS

3.01 Remove the core wrapper from the sheath opening. On color-coded cable having more than one binder group, it is necessary to identify the group or groups containing the assigned terminations. Each of these groups must be marked before removing its unit binders, so that the color code of the groups can be determined at later visits to the terminal. Binder groups are marked with color-coded plastic-insulated wire or with

colored plastic markers. The method is illustrated in Section 632-410-200. It is recommended that insulated wire binder group markers be placed at

the center of the opening, which will facilitate selecting the binder group for the assigned cable pair. See Fig. 4 and 5.

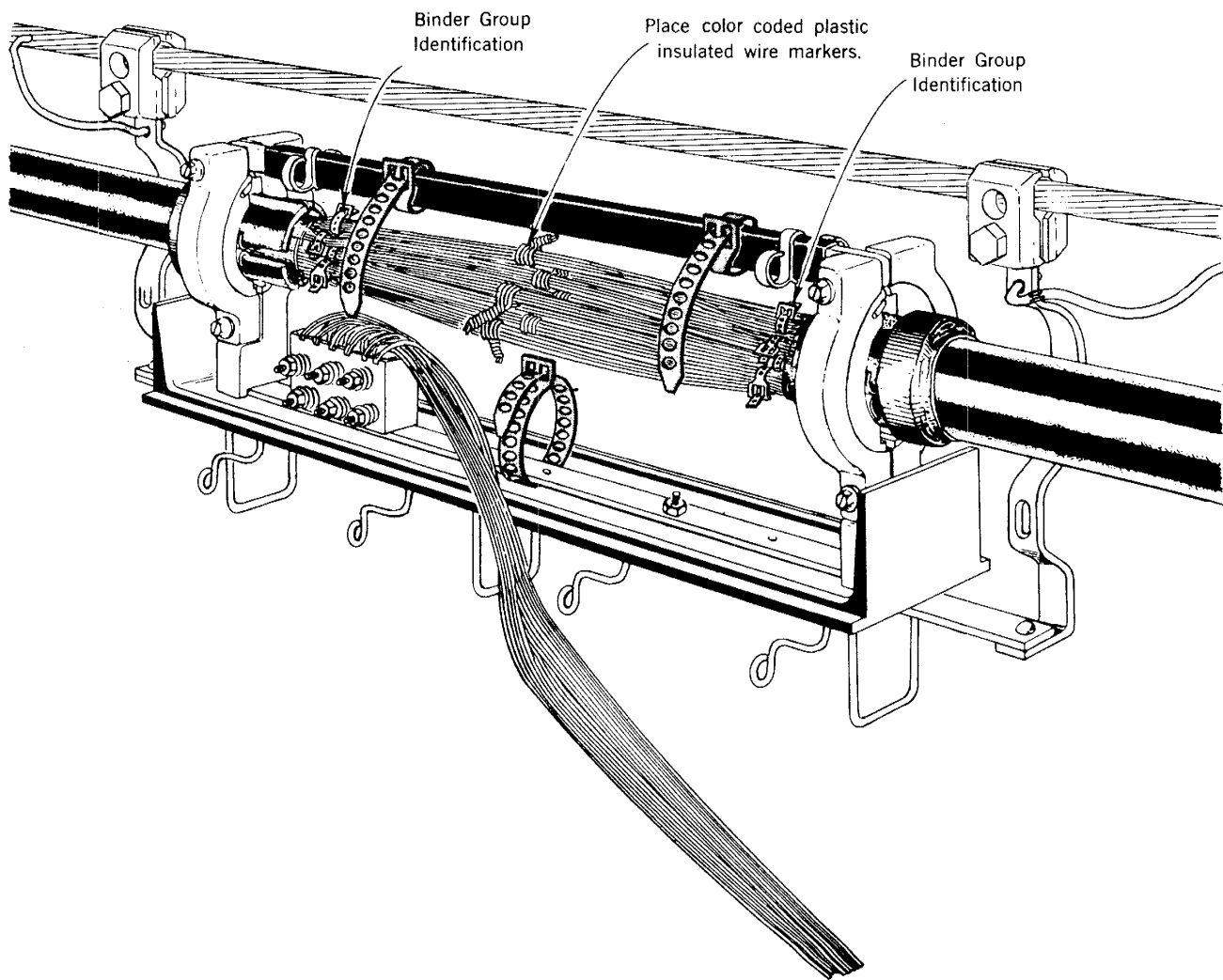


Fig. 4 — Placing Binder Group Identification in Cable

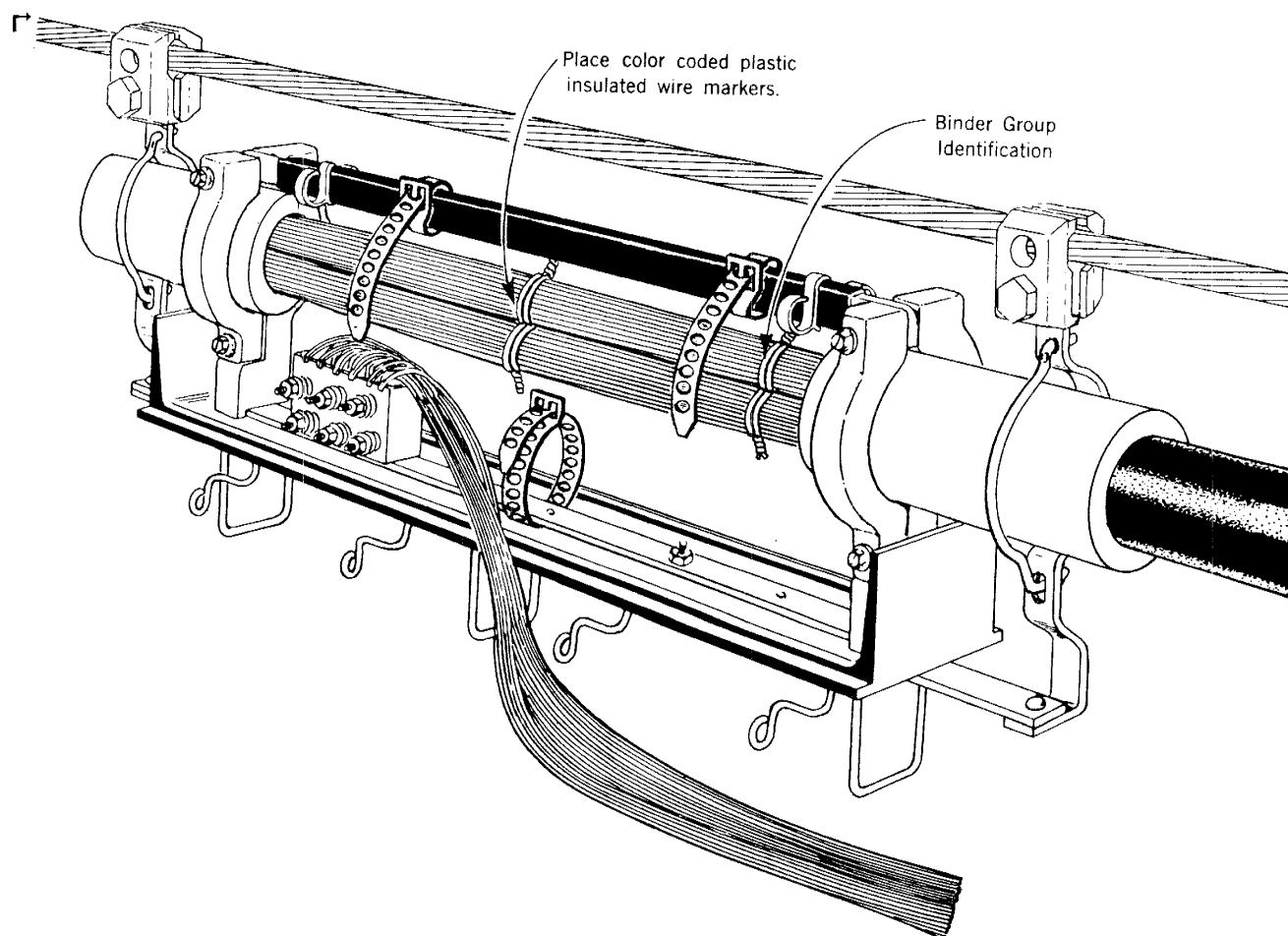


Fig. 5 – Placing Binder Group Identification in Stub

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4. SELECTION OF CABLE PAIR

4.01 The selection of the cable pair or pairs to be terminated should be done as called for on the work authorization, which should specify the method of identifying the pair, that is by color code or tone.

4.02 When selecting cable pairs by color code, use the *center* binder group markers for identifying the required group. Slide the marker to one side and then select the required cable pair within the group.

5. PREPARING AND TERMINATING CONDUCTORS

At Loop Through Locations

5.01 Cable Pair

- (1) Cut the selected cable pair at the center of the sheath opening.

- (2) Restore the binder group marker to the center. See 3.01 and 4.02.

- (3) Separate the cut cable pair ends from the remaining pairs and from the center binder group marker.

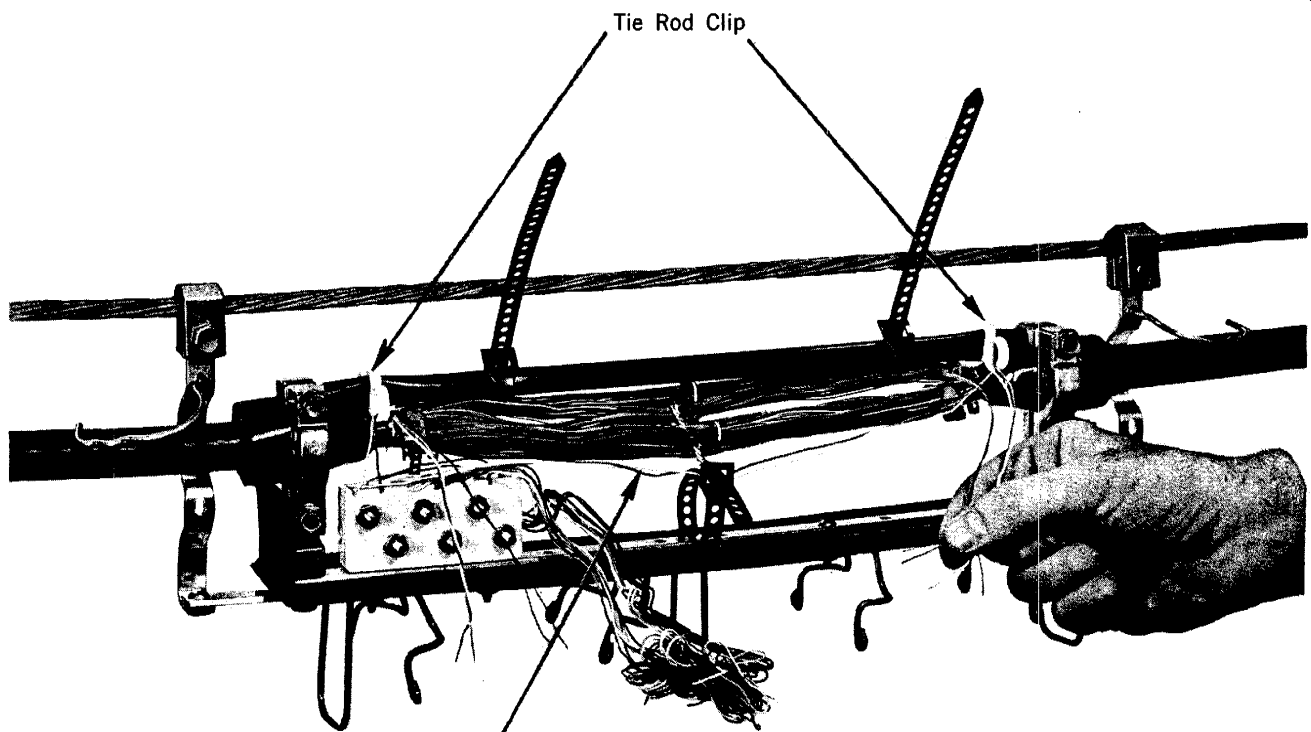
5.02 Terminal Block Leads

- (1) Pair the leads for the assigned binding post.
- (2) Twist each pair separately for the in and out connection.
- (3) Loop the binding post pairs through the tie rod clips.
- (4) Cut the binding post pairs so they are of lengths equal to the cut cable pair ends. See Fig. 6.

5.03 Terminate conductors as outlined in Sections 632-205-204 and 632-205-205.

5.04 The terminated pairs are then twisted together. See Fig. 7.

5.05 Fig. 8 illustrates in and out connections for one cable pair completed and held in place with B Cable Ties.



Note: One Binding Post Pair is threaded through the B Cable Tie fastened to the base.

Fig. 6 — Cutting Binding Post Pairs

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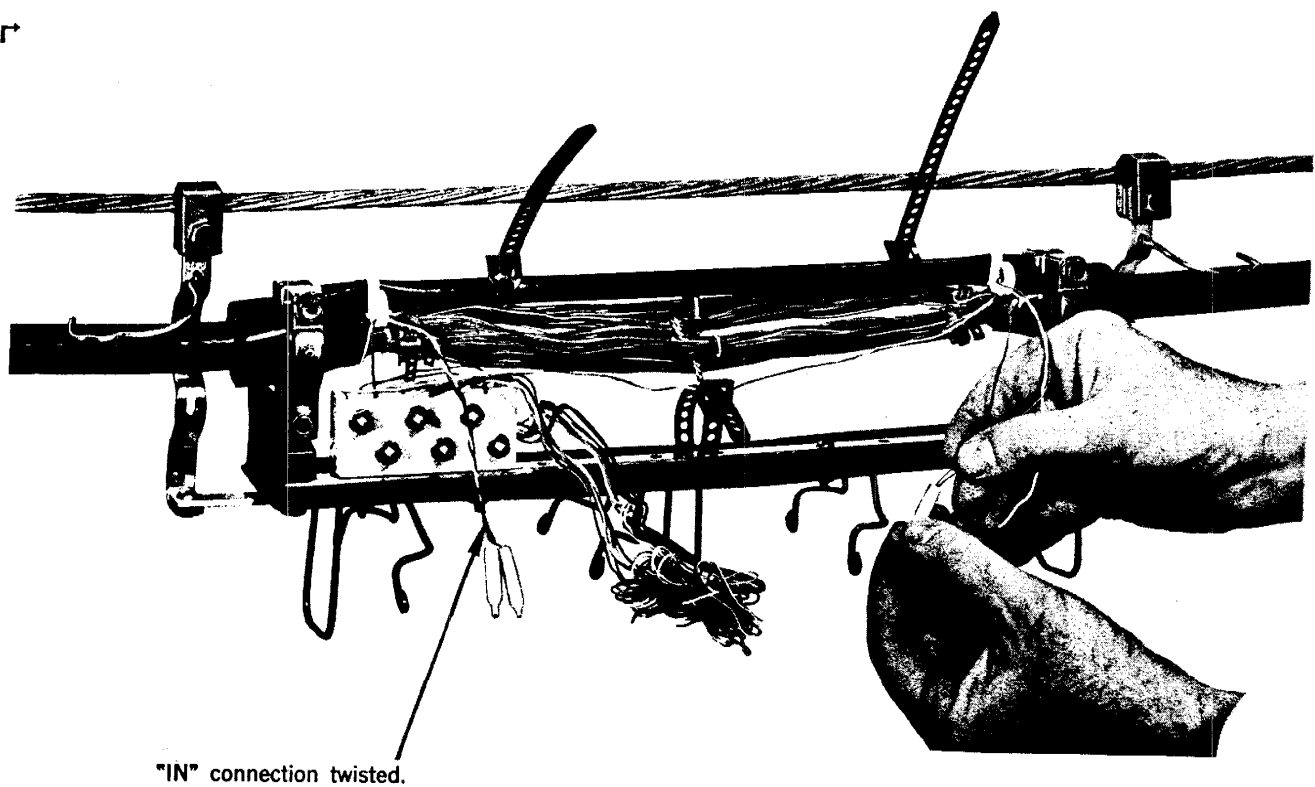


Fig. 7 — Terminated Pairs Twisted Together

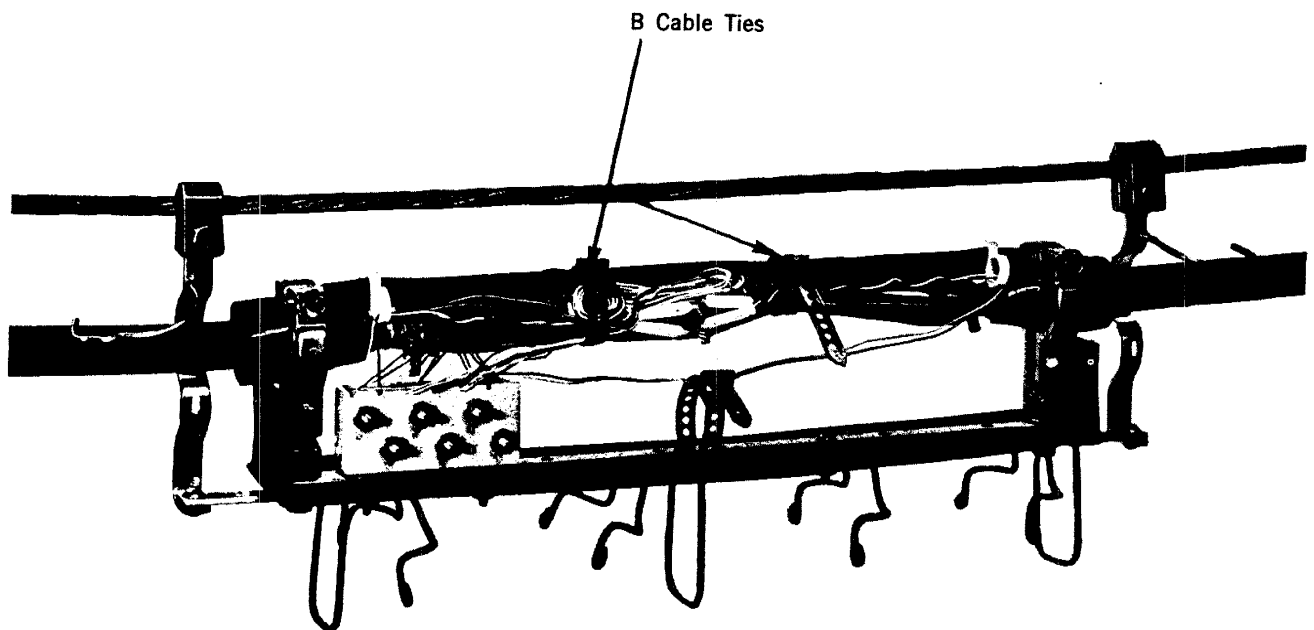


Fig. 8 — Completed Termination

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5.06 Fig. 9 illustrates *eight* cable pairs terminated. Note the ease of gaining access to the unterminated cable pairs.

5.07 Fig. 10 and 11 illustrate *four* terminal blocks placed with all terminal block leads joined to the assigned cable pairs. Note the orderly housekeeping that can be achieved.

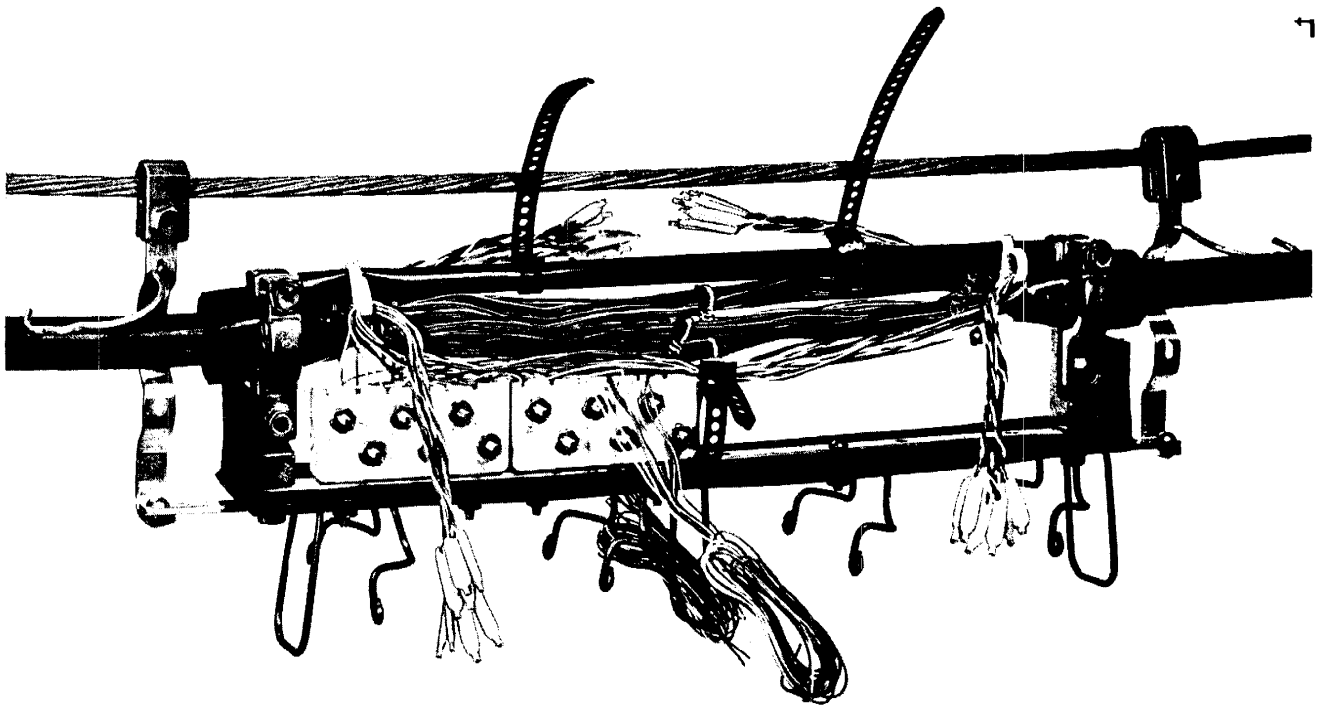


Fig. 9 — Eight Cable Pairs Terminated

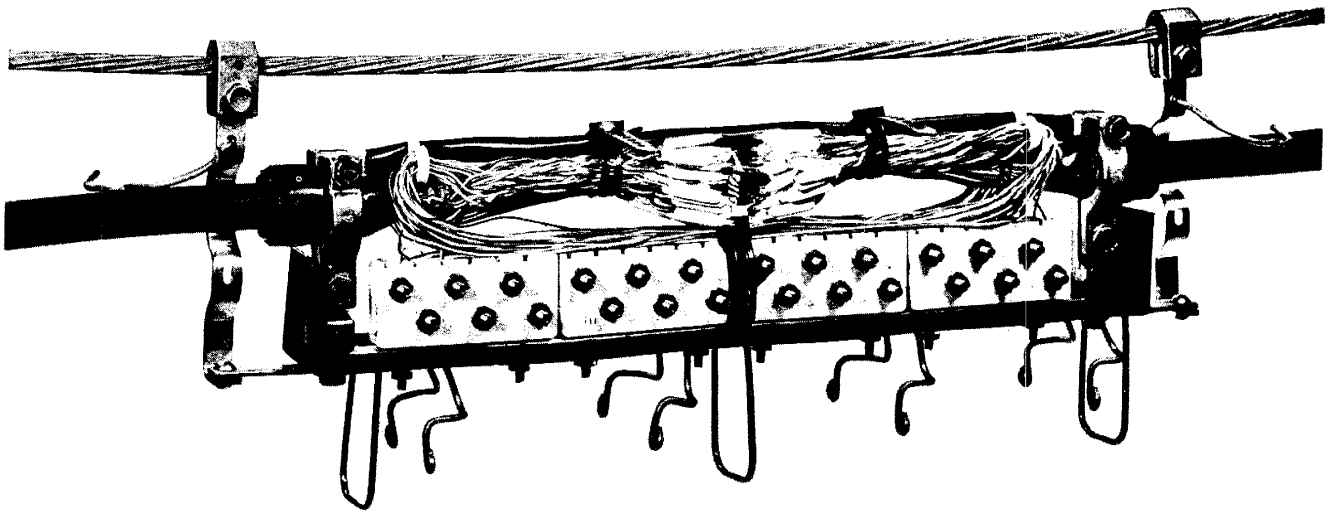
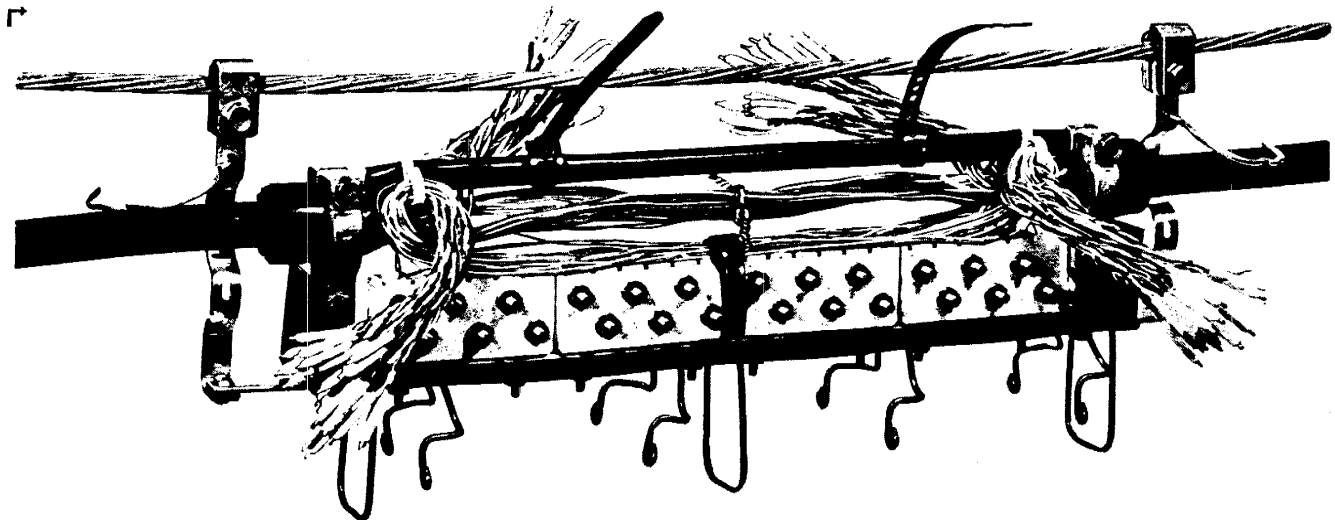


Fig. 10 — Four Terminal Blocks Terminated



NOTE: The terminated pairs are folded back to gain access to the unterminated cable pairs for rearrangement.

Fig. 11 — Terminal Prepared for Rearrangement

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At 1A1 or 1B1 Terminal Stub Locations

5.08 Cable Pair

- (1) Cut the selected cable pair at the capped end of the opening.
- (2) Restore the binder group marker to the center. See 3.01 and 4.02.
- (3) Separate the cut cable pair from the remaining pairs and from the center binder group marker.

5.09 Terminal Block Leads

- (1) Cut off (as close to the terminal block as feasible) one ring (or tip) lead to each binding post. This should be done for the initial furnished terminal block and for subsequent blocks.
- (2) Twist together the remaining leads for the assigned binding post to form a pair.
- (3) Loop the binding post pair through the tie rod clip.
- (4) Match the binding post pair with the cut cable pair and cut the pairs so they are of equal lengths. See Fig. 12.

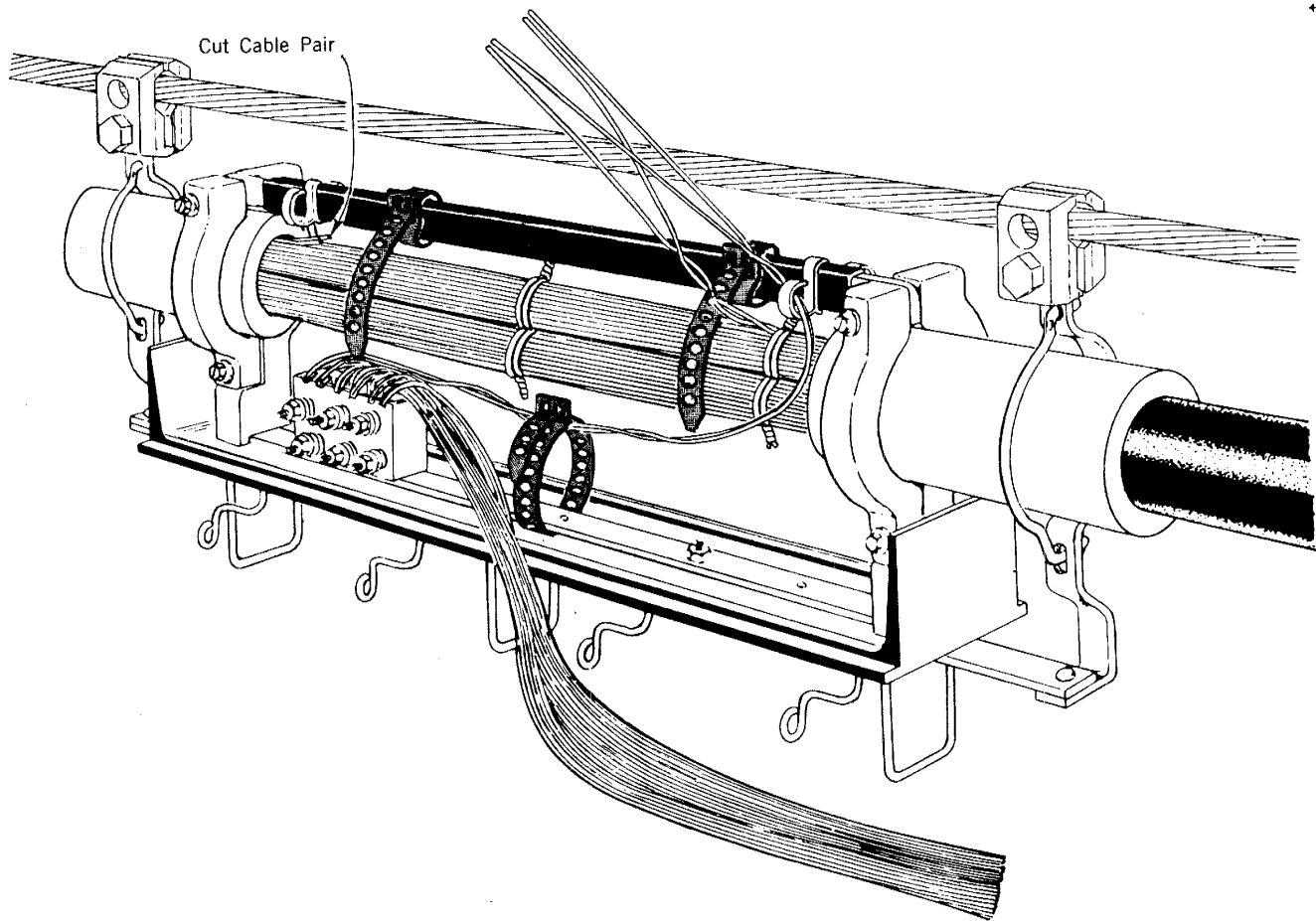
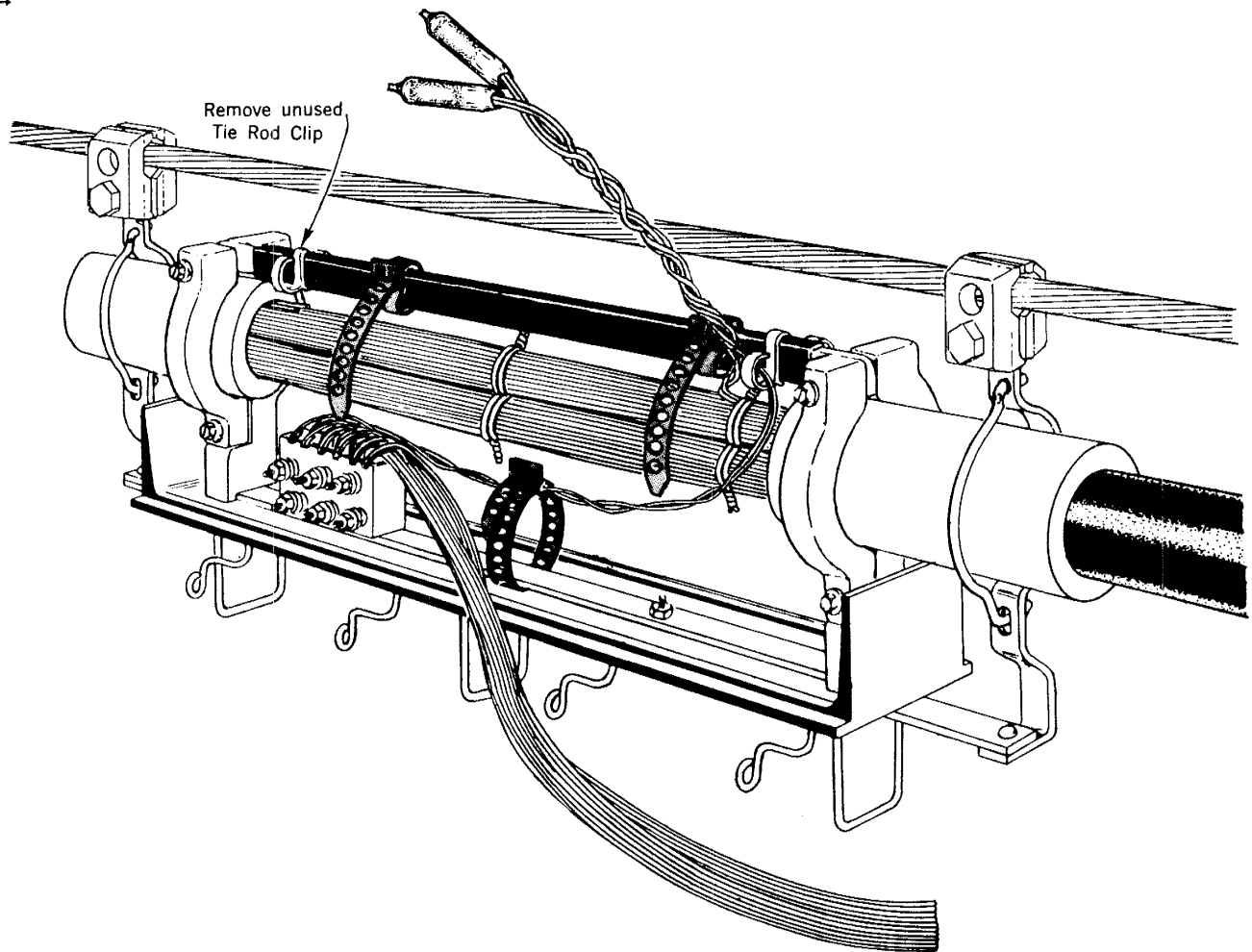


Fig. 12 — Wire Arrangement at Stub Locations

5.10 *Terminate conductors as outlined in Section 632-205-204 and 632-205-205. The terminated pairs are then twisted together. See Fig. 13.*

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Fig. 13 – Terminated Pairs Twisted Together

- 5.11 Fig. 14 illustrates three terminated cable pairs held in place with B Cable Ties.

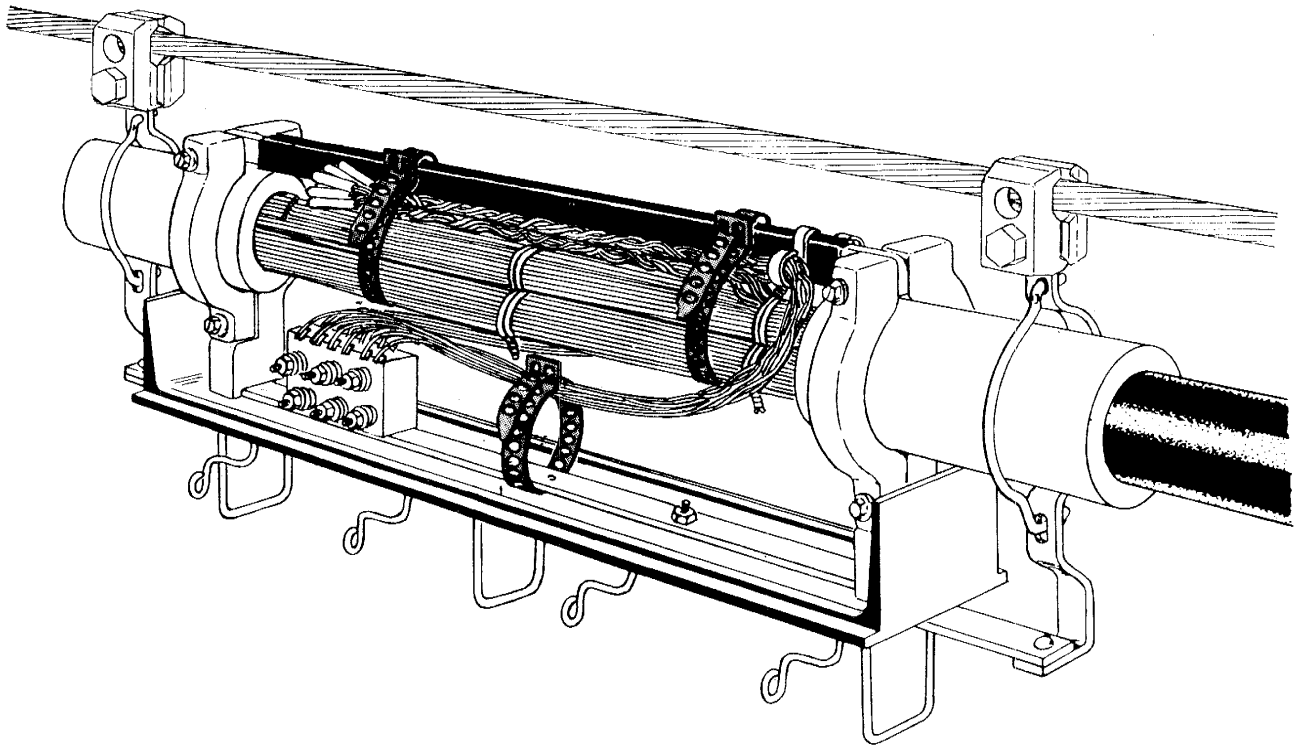


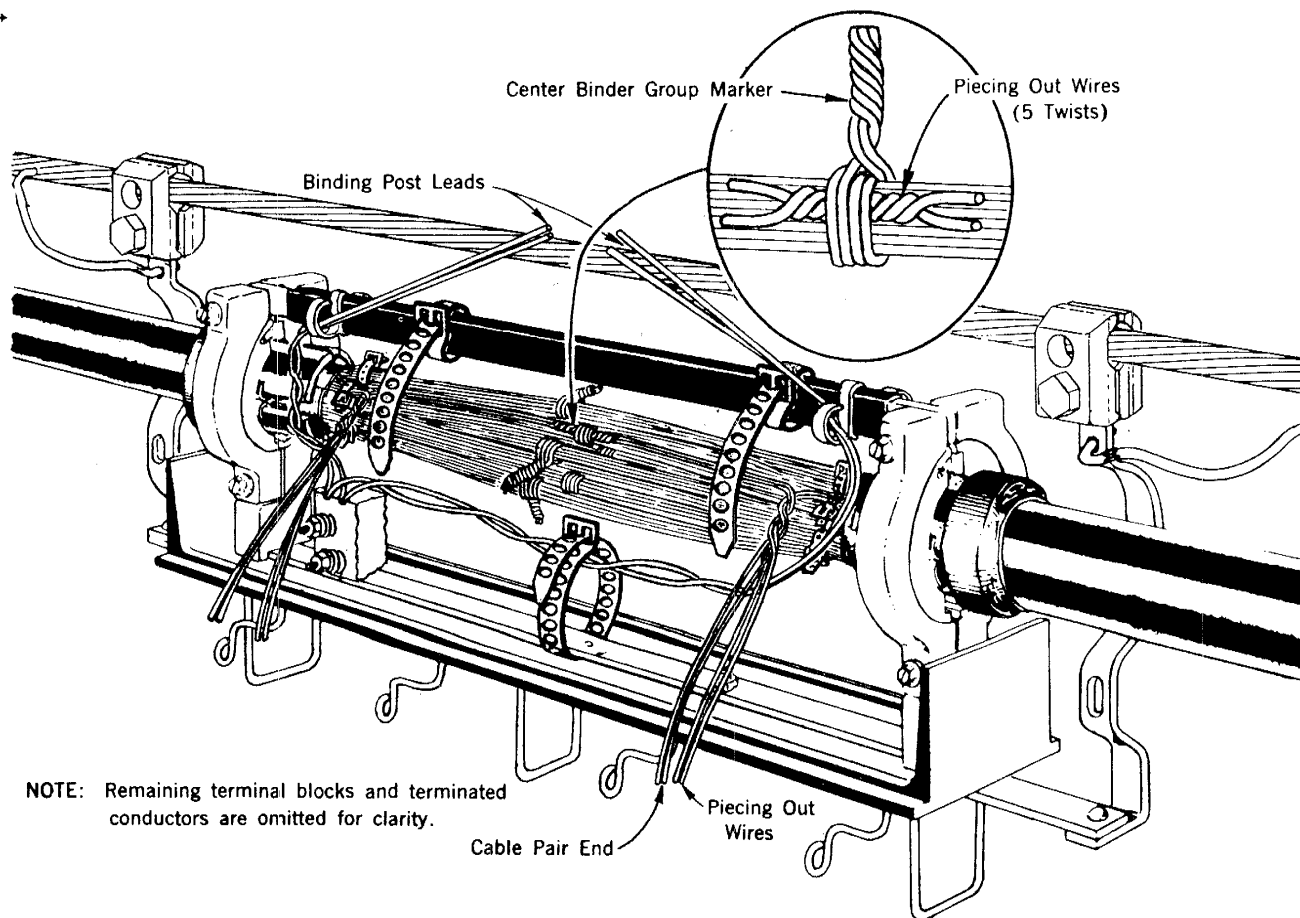
Fig. 14 — Completed Termination of Three Cable Pairs

6. REARRANGEMENT

6.01 If a binding post (whose leads are joined to a cable pair) is to be reassigned to a new cable pair, proceed as follows.

At Loop Through Locations

- (1) Ascertain the binder group color and cable pair color for the pair to be restored.
- (2) Cut off the B Wire Connectors which join the binding post leads to this pair.
- (3) Separate the cut cable pair ends from the binding post leads.
- (4) Using approximately 20 inches of piecing-out paired wire having the same color insulation as the cut cable pair conductors, apply five tight twists at the center of the paired wires.
- (5) Thread the piecing-out wires through the center binder group marker from which the original cable pair was removed.
- (6) At each end of the opening (approximately 1 inch from the end binder group markers), apply two turns with the piecing-out wires and the cut cable pair ends. See Fig. 15.



NOTE: Remaining terminal blocks and terminated conductors are omitted for clarity.

Fig. 15 — Applying Turns to Pairs

(7) Cut the ends of the conductors to equal lengths and then join the conductors with B Wire Connectors as outlined in Sections 632-205-204 and 632-205-205.

(8) Twist the joined pair for each end back to the point of crossover. See Fig. 16.

(9) Rerminate the binding post leads to the new cable pair in the normal manner.

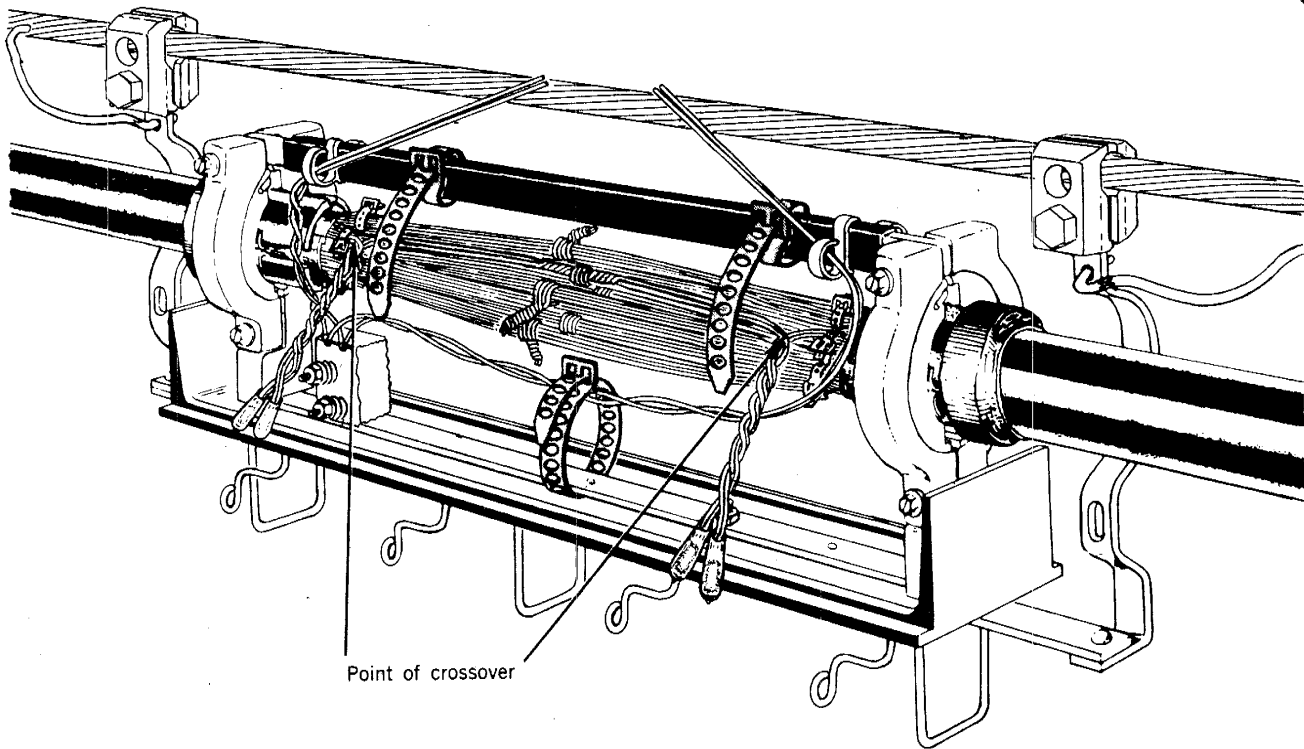
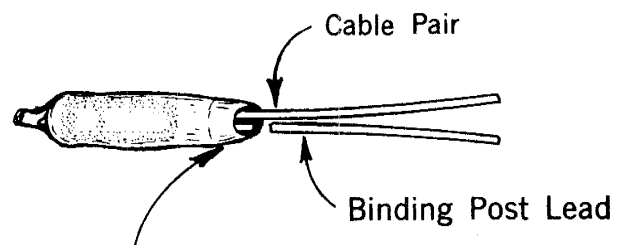


Fig. 16 — Piecing Out Completed

- (10) If a pieced-out cable pair is reassigned, **cut off the B Wire Connectors** which join the piecing-out wires to the cable pair ends. Remove the piecing-out wires from the center binder group marker and then handle the cable pair ends in the normal manner.

At 1A1 or 1B1 Terminal Stub Locations

- (11) Ascertain the binder group color and cable pair color of the pair to be restored.
- (12) Cut off the binding post leads **only** at the B Wire Connector which joins these leads to the old cable pair. See Fig. 17.
- (13) **Twist together the old cable pair conductors (whose ends are cleared with the B Wire Connectors) for a few turns and replace in the original center binder group marker.**



Cut the Binding Post Lead inside the plastic covering of the B Wire Connector.

Fig. 17 — Cutting Binding Post Lead

- (14) Reterminate the binding post leads to the new cable pair in the normal manner.
- (15) If a cable pair (whose ends are cleared with B Wire Connectors) is reassigned, cut off the connectors and then terminate the conductors in the normal manner.