

## 66-TYPE CONNECTING BLOCK DESCRIPTION AND USE

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### 1. GENERAL

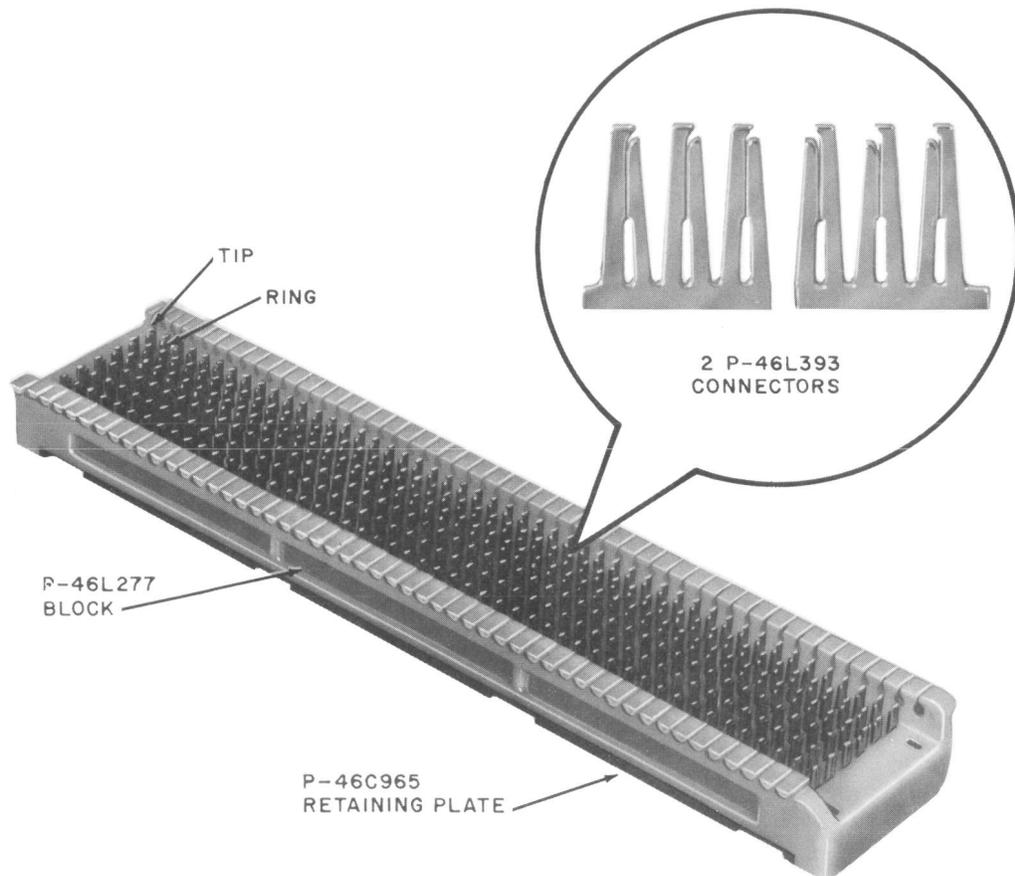
**1.01** This section covers the description and use of the 66-type connecting block used for making multiple connections in outside plant and station installations.

**1.02** This section is reissued to include information on 66B3-50 and 66B4-25 connecting blocks which were originally covered in Section 631-050-107 and on 66M1-25 connecting block. The 66L3-50 and 66L3-100 connecting blocks also covered in Section 631-050-107 have been rated Manufacture Discontinued. Since this is a general revision, arrows ordinarily used to indicate changes have been omitted.

**1.03** Refer to other sections in the 631 Division of the Bell System Practices for the use of these connecting blocks in building terminals and other applications.

### 2. DESCRIPTION

**2.01** The 50-pair 66B3-50 connecting block (Fig. 1) consists of 50 horizontal rows of quick-connect



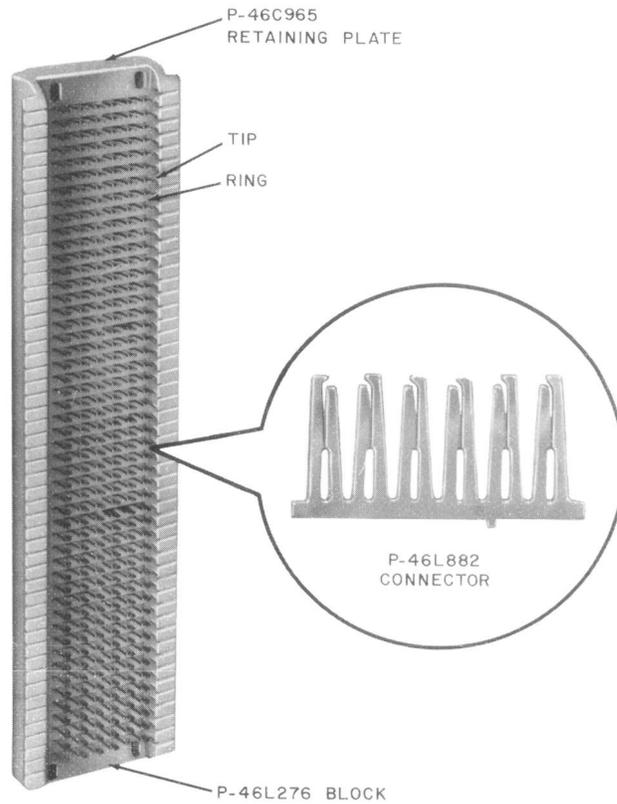
**Fig. 1—66B3-50 Connecting Block**

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connectors inserted in a fire-retardant molded plastic block and held in place by a plastic retaining plate. Each row contains two P-46L393 connectors with three interconnected terminals on each connector.

**2.02** The 25-pair 66B4-25 connecting block (Fig. 2) is identical in construction to the 66B3-50 connecting block except that each row of terminals consists of one P-46L882 connector with six interconnected terminals. This block is molded from grey fire-retardant plastic and can be easily distinguished from the white 66B3-50 connecting block.

**2.03** The 66M1-50 connecting block (Fig. 3) consists of 50 horizontal rows of quick-clip connectors inserted in a fire-retardant molded plastic block and held in place by a plastic retaining plate. Each horizontal row contains two double quick-clip connectors. The 89B bracket (Fig. 4) is used for mounting the connecting block as shown in Fig. 5. The mounting position and numbering procedure is shown in Fig. 6. The vertical slot of the connecting block must always be located at the lower right corner to prevent backplate from releasing during the terminating (punch down) operation.



**Fig. 2—66B4-25 Connecting Block**

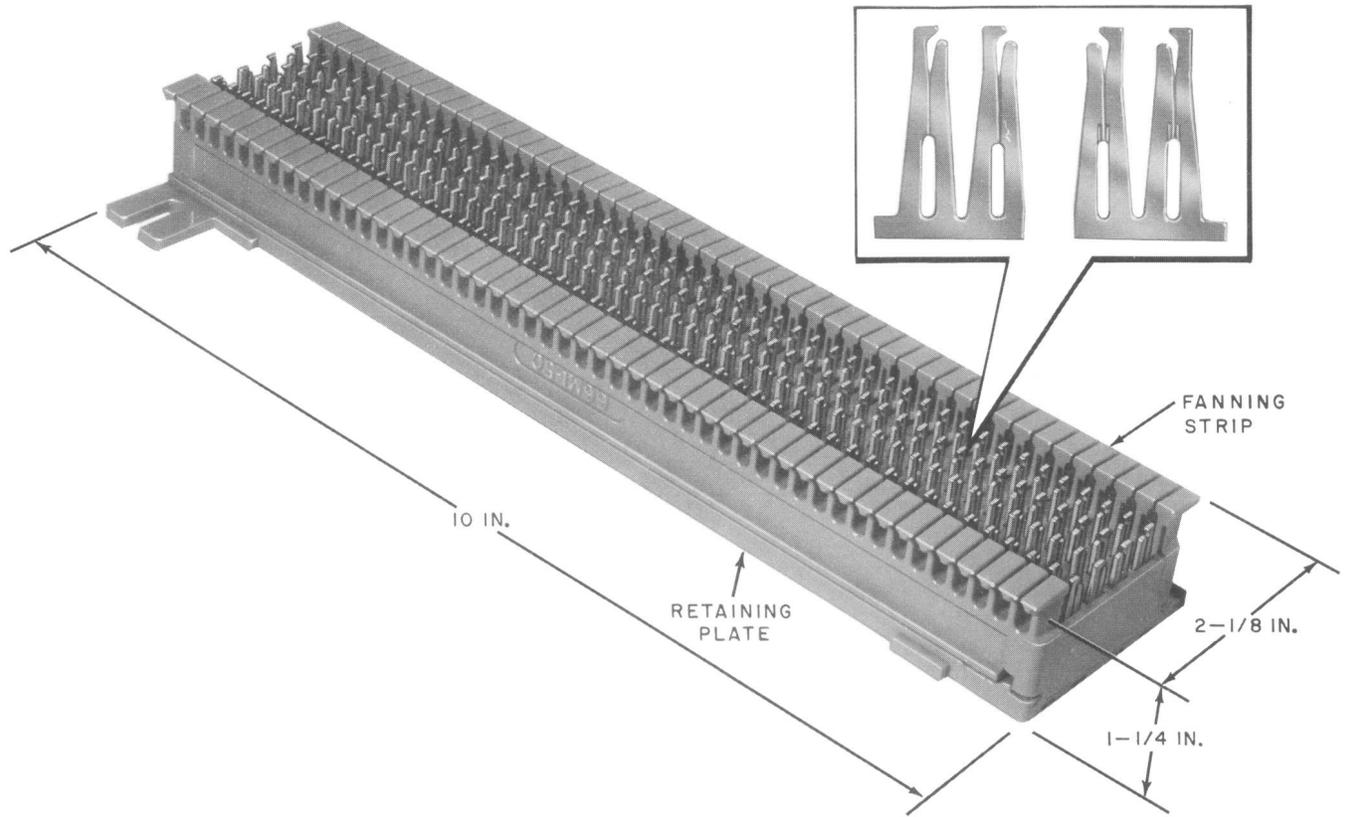


Fig. 3—66M1-50 Connecting Block

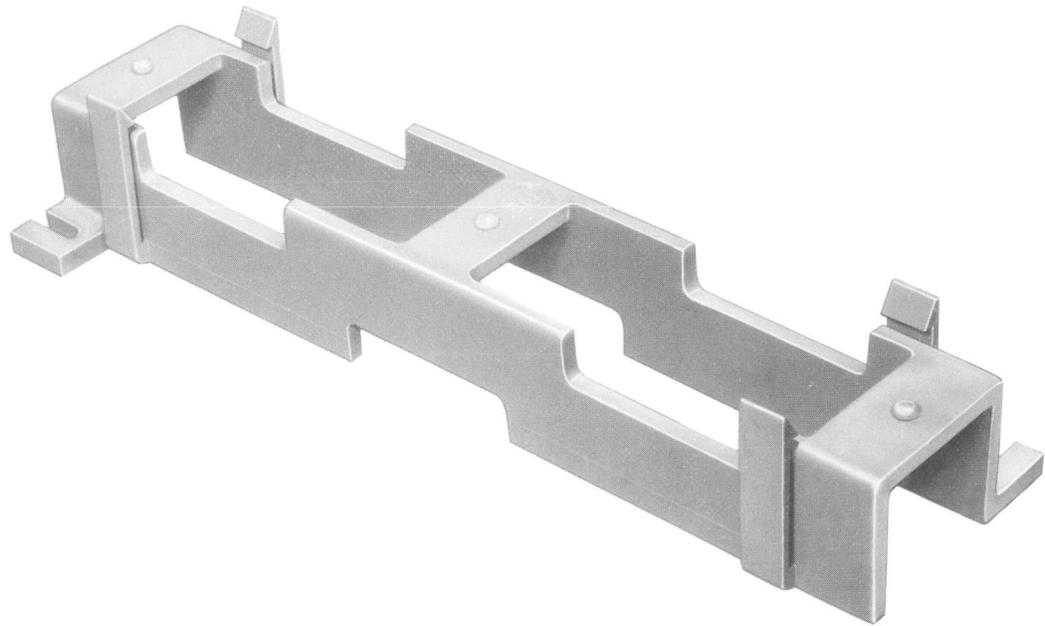


Fig. 4—89B Bracket

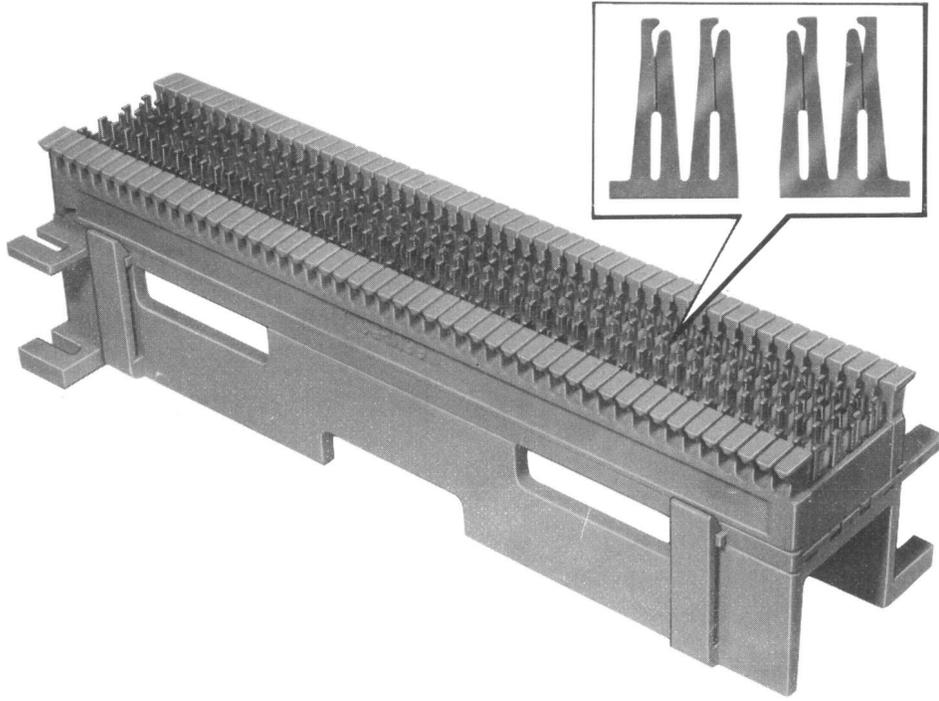


Fig. 5—66M1-50 Connecting Block Mounted on 89B Bracket

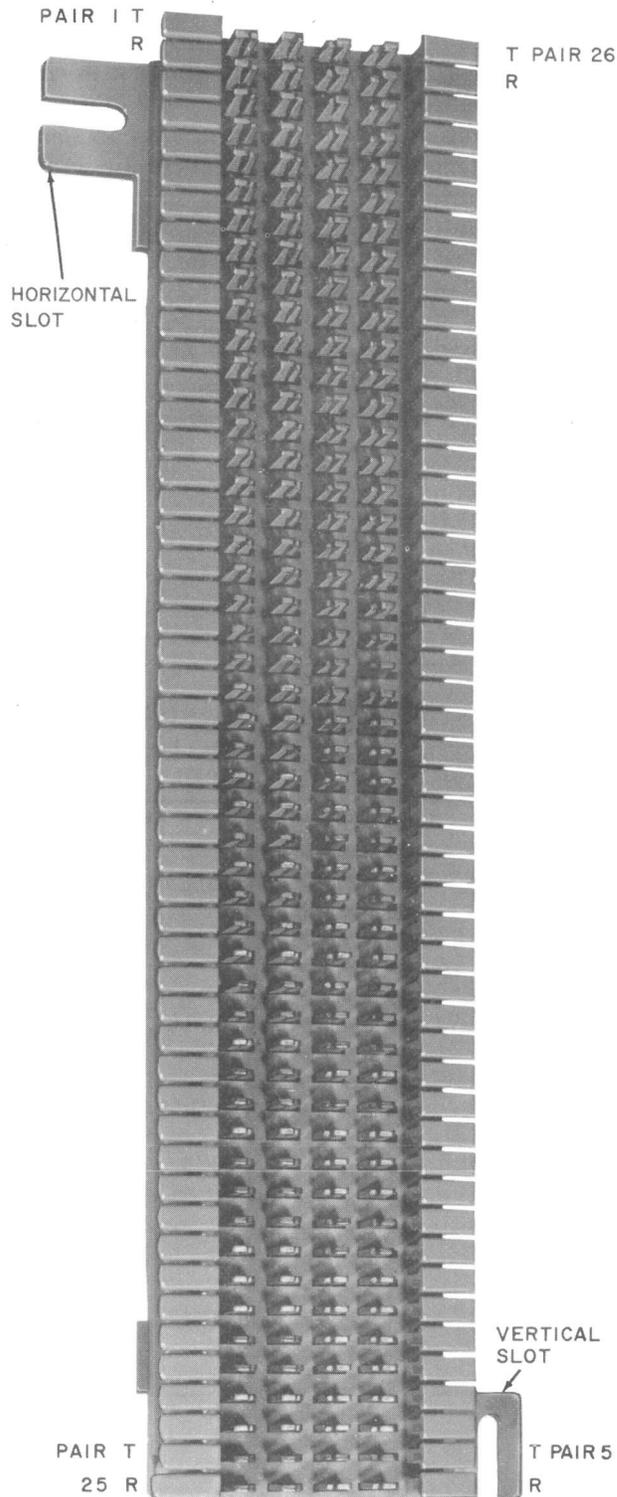


Fig. 6—66M1-50 Connecting Block—Numbering Procedure

2.04 The 66M1-25 connecting block (Fig. 7) is identical in construction to the 66M1-50 connecting block except that each row of terminals consists of one P-46L569 connector with four interconnected terminals. This block is molded from a grey fire-retardant plastic and can be easily distinguished from the white 66M1-50 connecting block.

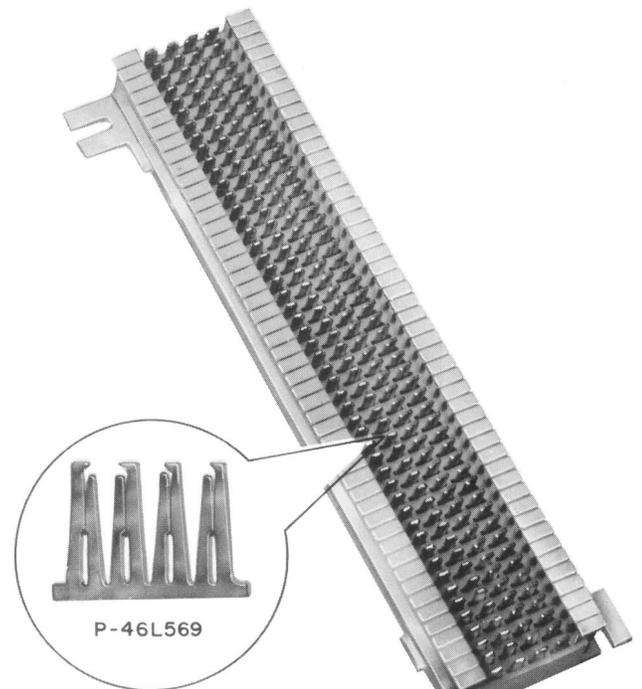


Fig. 7—66M1-25 Connecting Block

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**2.05** Characteristics of the connecting blocks are listed in Table A.

**2.06** The 66-type connecting blocks are used for terminating 20-, 22-, 24-gauge PIC, PVC, PE-PVC and HDPE without removing the insulation; ***26-gauge conductors may be terminated on the 66M1-50 connecting block when used in conjunction with the 89B bracket to provide mechanical protection to cable conductors and the terminations are permanent. Smaller gauge wire cannot be terminated on a terminal that has been used previously to terminate an 18- or 19-gauge conductor.***

**2.07** ***The 66-type connecting blocks are not recommended for terminating 26-gauge waterproof cable conductors or 24-gauge waterproof cable conductors at temperatures below 30 F.*** If these condition cannot be met it is recommended that the waterproof cable be stubbed out with air core PIC utilizing the waterproof splicing system as outlined in Section 632-410-204. The 22-gauge waterproof cable conductors can be terminated on 66-type connecting blocks without any restrictions.

**2.08** ***The 66-type connecting blocks are not recommended for terminating conductors in air core or waterproof aluminum conductor cables.***

**TABLE A**  
**CHARACTERISTICS OF CONNECTING BLOCKS**

CONNECTING BLOCK	NUMBER OF CONNECTORS	NUMBER OF TERMINALS PER CONNECTOR	ARRANGEMENT OF CONNECTORS	DIMENSIONS (APPROX INCHES)			COLOR OF BLOCK
				LENGTH	WIDTH	DEPTH	
66B3-50	100	3	50 horizontal rows 2 connectors per row	13-7/16	2-5/8	1-3/16	White
66B4-25	50	6	50 horizontal rows 1 connector per row	13-7/16	2-5/8	1-3/16	Grey
66M1-50	100	2	50 horizontal rows 2 connectors per row	10	2-1/8	1-1/4	White
66M1-25	50	4	50 horizontal rows 1 connector per row	10	2-1/8	1-1/4	Grey

### 3. TERMINATING

**3.01** All terminations on the 66-type connecting blocks described in Part 2 should be made with the 714B tool (Fig. 8) or B impact tool AT-8762.

**3.02** The 714B tool consists of a reversible steel blade attached by a screw to a plastic handle. One end of the blade is used for seating and cutting conductors while the other end is used for seating the conductors only.

**3.03** The plastic handle is yellow and green. The yellow identifies the cutting edge of the blade.

**3.04** To reverse the blade of the 714B tool, proceed as follows:

- (1) Loosen the screw, then pull the blade out.
- (2) Rotate the blade 180 degrees, push the blade back into the handle, and tighten the screw.

**Warning:** Always carry the 714B tool with the cutting edge protected or turned into handle.

**3.05** The B impact tool AT-8762, which can be used interchangeably with the present 714B tool as described herein, employs a spring impact mechanism in the handle to activate the blade, thereby reducing the effort required to terminate conductors on 66-type connecting blocks.

**3.06** The following types of terminations can be made on the 66-type connecting block:

- (a) **Loop-Through Termination:** The conductors loop through the terminal to another terminal or connecting block.
- (b) **End Termination:** The conductor ends at this location.

**3.07** When working on in-service connecting blocks having special circuits, **make sure that the special circuit terminals are protected with B clip terminal insulators (Fig. 9 and 10.) Protect any special circuit not having insulators by cutting B clip terminal insulators to proper length and placing over special circuit terminals.**

**Obtain authorization before working on a special circuit.**

**Note:** Procedure for making terminations and removing wire from terminal are illustrated using 66M1-50 connecting block; however, the procedures are identical for all 66-type connecting blocks listed in Table A.

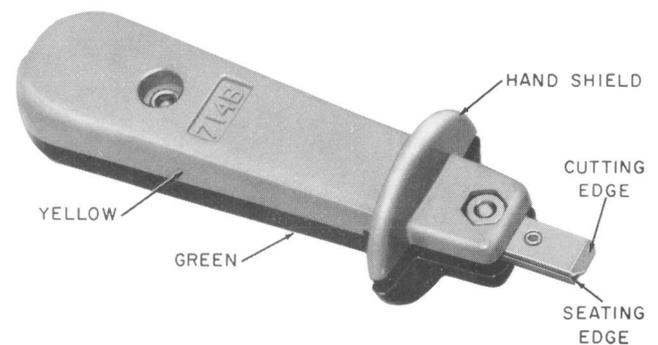


Fig. 8—714B Tool



Fig. 9—B Clip Terminal Insulator

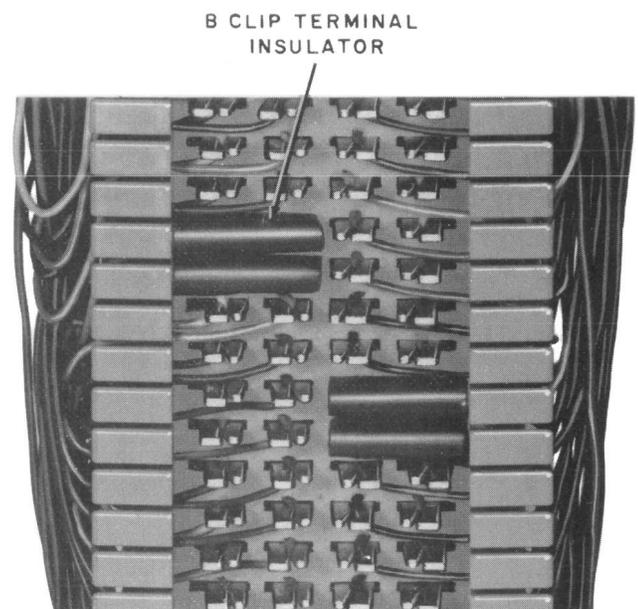


Fig. 10—B Clip Terminal Insulator Installed on Connecting Block

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3.08 To make a loop-through termination on the connecting block, proceed as follows (Fig. 11 and 12):

- (1) Select the wire to be looped and feed through the fanning slot adjacent to connector.

- (2) Loop the wire and place in hook of terminal.

- (3) Place the *seating end* of the 714B tool over the terminal and press the tool toward the block until the wire is fully seated. **Avoid tilting or twisting the 714B tool when seating the wire.**

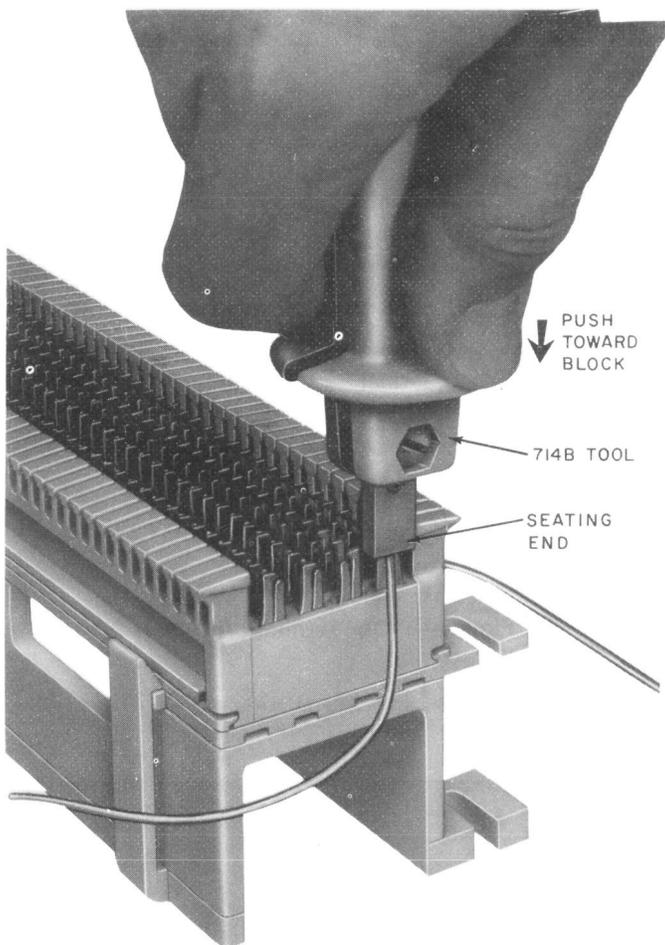


Fig. 11—Making Loop-Through Termination

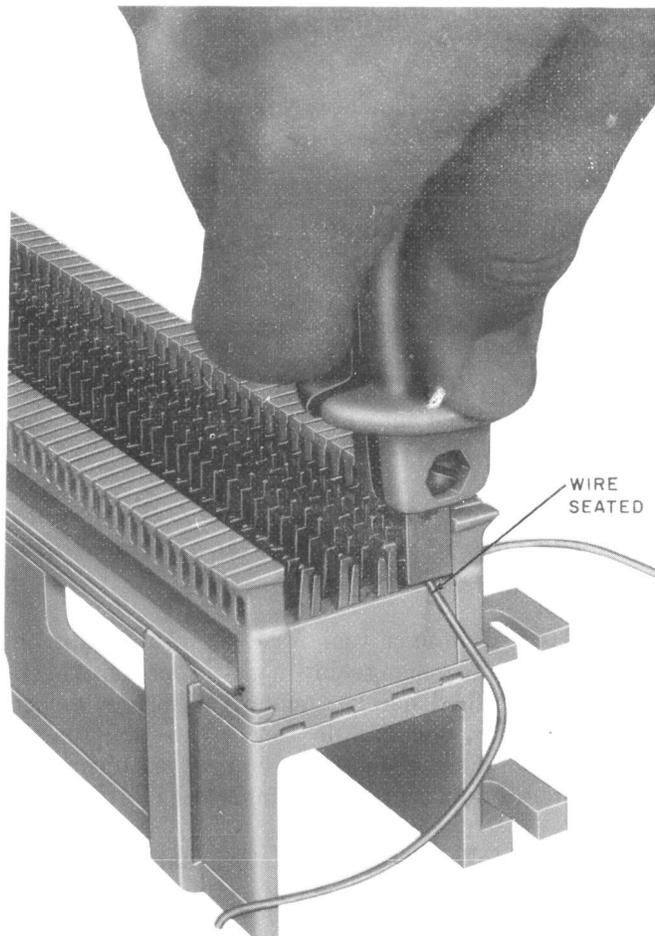


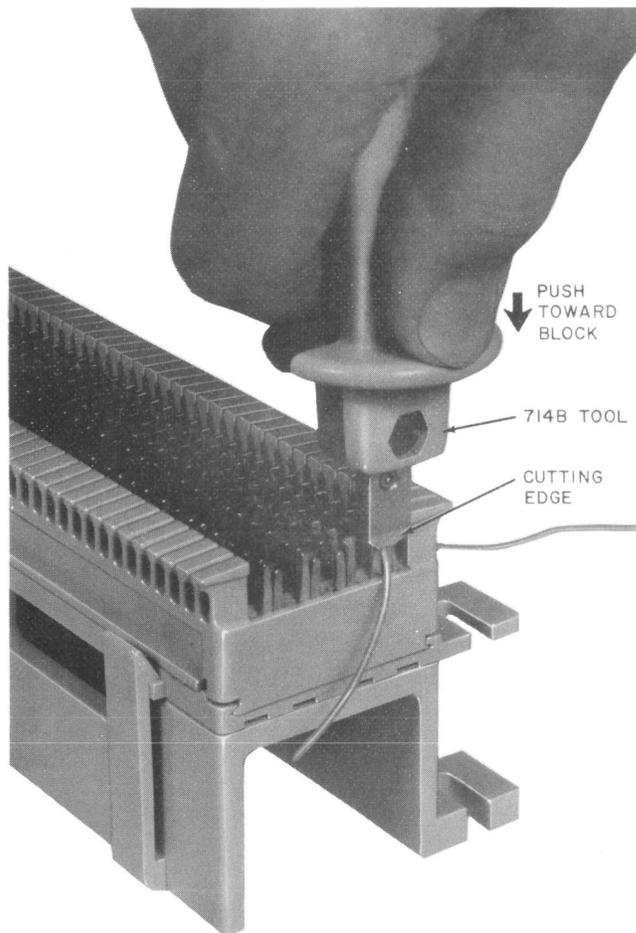
Fig. 12—Loop-Through Termination Complete

**3.09** To make an end termination on the 66-type connecting block proceed as follows (Fig. 13 and 14):

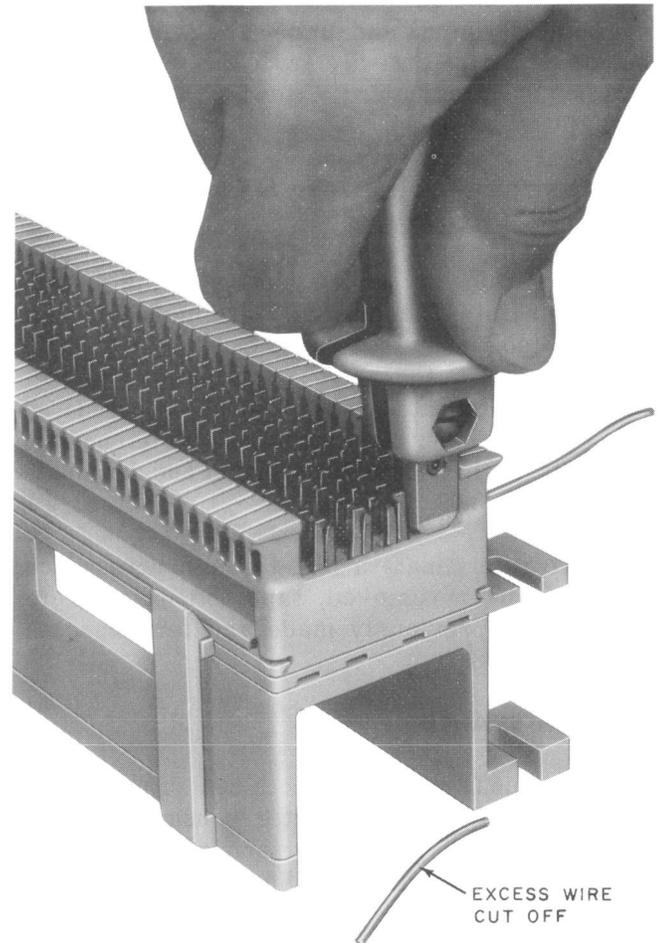
- (1) Select the wire to be terminated and feed through the fanning slot adjacent to connector.
- (2) Place the wire in hook of terminal.

(3) Position the *cutting end* of the 714B tool over the terminal. *Ensure that the cutting edge of the blade is positioned over the scrap end of the wire.* Push the 714B tool toward the block until the wire has been severed against the face of the block.

**3.10** Refer to Section 631-470-201 for multiple wire terminations on each terminal connector by the use of 183A2 adapter.



**Fig. 13—Making End Termination**



**Fig. 14—End Termination Complete**

4. REMOVING WIRE FROM TERMINAL

4.01 The 724A tool (Fig. 15) is used to remove wires from the terminals of the 66-type connecting block.

4.02 The 724A tool consists of a two-pronged fork with an insulated handle. The fork is sized to fit around the beams of the terminal and underneath the seated conductor. Use of the 724A tool reduces the possibility of disturbing or degrading adjacent wire connections during removal of wire.

4.03 Place the fork of the 724A tool astraddle the terminal and under the wire. Grasp the tool and pull the wire from the terminal in a direction perpendicular to the face of the block (Fig. 16).

**Caution:** Do not use adjacent terminals as leverage points.

4.04 Remove any small pieces of insulation remaining around the terminals with an insulated tool.

4.05 To reterminate a wire which has been removed for testing or rearrangement (end termination only) cut off the old contact portion and terminate as outlined in 3.09.

4.06 To reterminate a loop-through wire which has been removed, tape the wire where contact was previously made and terminate as outlined in 3.08.

5. MAINTENANCE

5.01 Terminals which have been bent or misaligned (Fig. 17) may be corrected by using long-nose pliers (Fig. 18). Bend the terminal until it is aligned with its mate or other terminals of the same row. **Take care not to move terminals in a direction which would spring or open the contact surfaces between the two halves.**

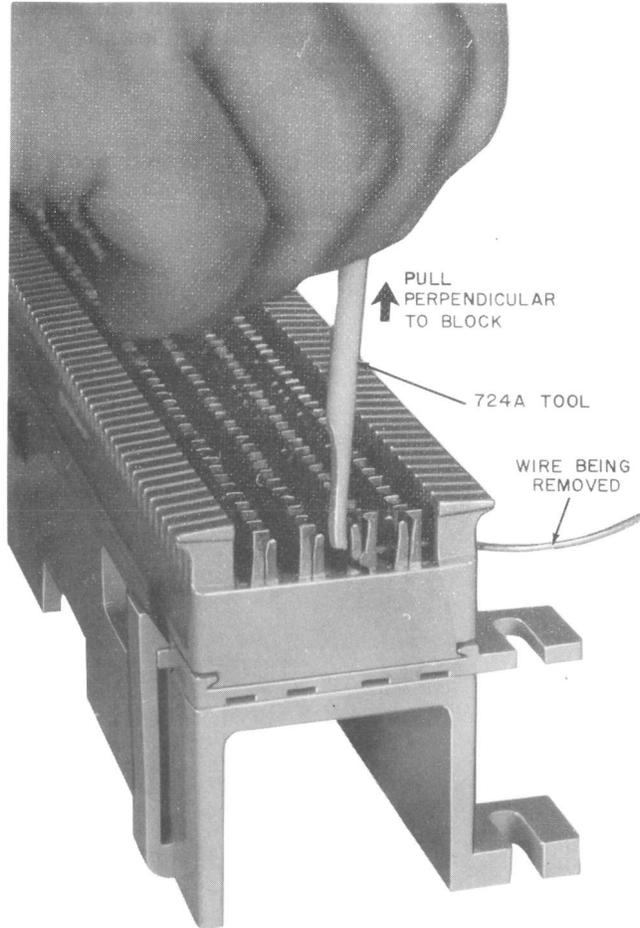


Fig. 16—Removing Wire With 724A Tool



Fig. 15—724A Tool

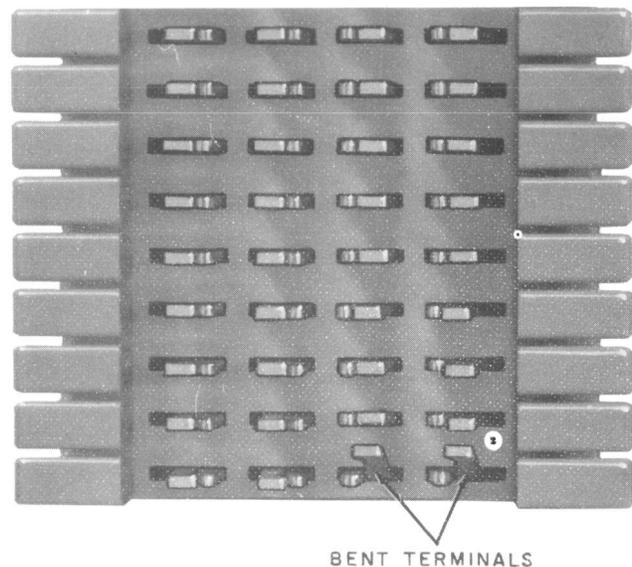


Fig. 17—Bent Terminals

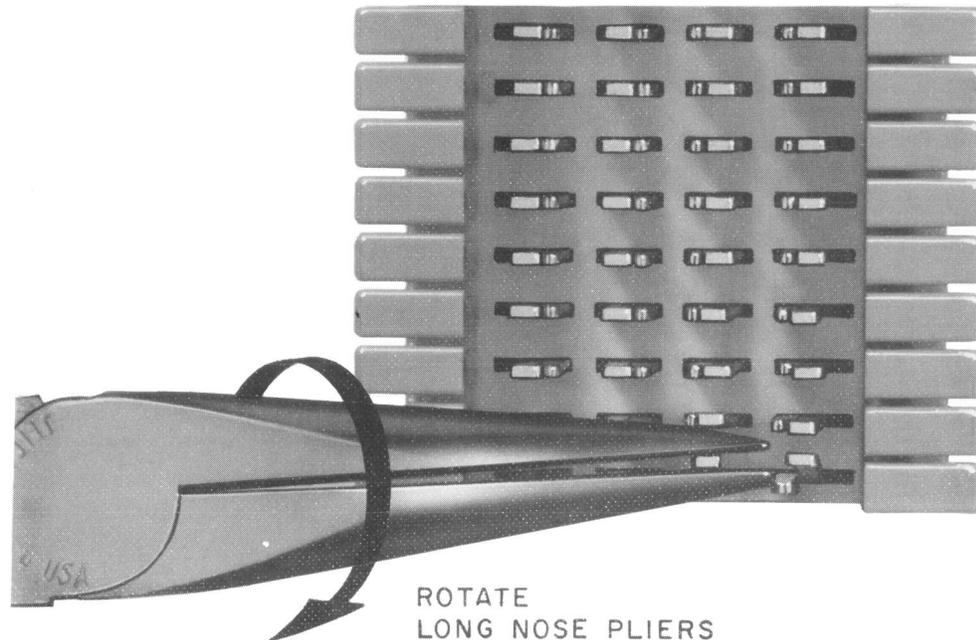


Fig. 18—Straightening Bent Terminals

**5.02** Terminals which have been damaged or sprung, resulting in an obvious gap between the two contact surfaces, *should not* be used. There is no prescribed method for correcting a damaged connector; the connector must be replaced.

**5.03** To replace a connector on a block not in use, remove the retaining plate, and then remove and replace the damaged connector. *Be careful not to turn the connector block terminals up so that they will fall out, while the retaining plate is off.* Replace the retaining plate.

**5.04** Procedures for replacing connectors on an in-service connecting block are as follows:

- (1) Using a 724A tool, disconnect the wires from the connector to be replaced.
- (2) Remove the connecting block from its mounting location.
- (3) Move the connecting block to a position to provide access to its back. *Take care to prevent disruption of service on in-service terminals.*
- (4) Remove the retaining plate, then remove and replace the damaged connector. *Be careful not to turn the connector block terminals up so that they will fall out, while the retaining plate is off.* Replace the retaining plate.
- (5) Secure the connecting block in its original position.
- (6) Rerterminate the conductor on the new terminal.
- (7) Check the connecting block for broken or damaged conductors.