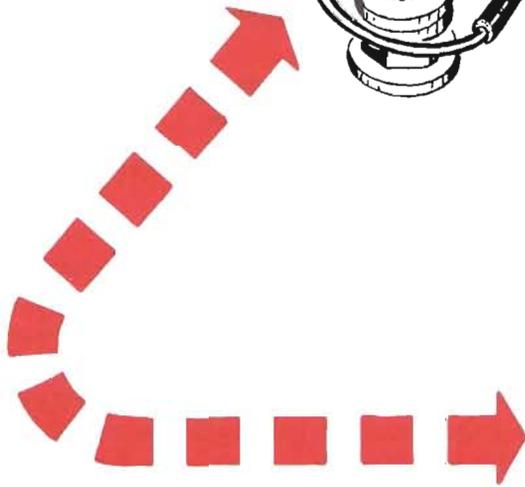


**DON'T
BE AN ALARMIST!**



KNOW YOUR...

**SPECIAL SAFEGUARDING MEASURES (SSM)
AND
SPECIAL SERVICE PROTECTION (SSP)**

SECTION C23.100.1

1.00 INTRODUCTION

1.01 This section covers special safeguarding measures and special service protection.

1.02 This section is reissued to include information on new protective devices.

1.03 Due to extensive changes marginal arrows have been omitted.

2.00 SPECIAL SAFEGUARDING MEASURES

2.01 Special safeguarding measures are precautions taken with certain special circuits to ensure reliable and uninterrupted service. These measures, which provide maximum security to the most critical circuits, include the following:

- Unbridged cable pairs
- Locked terminal boxes
- Cable instead of drop wire
- Inside wire conduit.

3.00 SPECIAL SERVICE PROTECTION

3.01 Special service protection is the use of devices and procedures intended to identify and preserve certain special service circuits. Such protection is referred to in some companies as normal safeguarding measures.

4.00 PROTECTIVE DEVICES

4.01 Common protective devices used on special service circuits are shown in Fig. 1 through Fig. 16.

4.02 Indicator KS-6660 is a red plastic ring, 1/2 inch in diameter. This indicator must be placed on wires before they are terminated. It is used to identify special service circuits. A KS-6660 indicator is shown in Fig. 1.



Fig. 1 — Indicator KS-6660

4.03 Indicator KS-16847 is a red cellulose-acetate spiral ring, 3/8 inch in diameter. This indicator is also used to identify circuits. The split-ring feature of this indicator permits placing or removing indicator on terminated wires. (See Fig. 2.)



Fig. 2 — Indicator KS-16847

4.04 Binding post caps, Fig. 3 through 9, are neoprene caps for use on cable and wire terminals as protection against accidental contacts on special service lines, and as a means of minimizing faceplate leakage in distribution cable terminals. Binding post caps are supplied in red and black. Red caps are intended for use on special service lines, and the black caps are for general use.

- The B binding post caps, Fig. 3, are for use on nonworking posts of N, T, and 61-type cable terminals.



Fig. 3 — Binding Post Cap B

- The C binding post caps, Fig. 4, are for use on working posts of N, T, and 61-type cable terminals.



Fig. 4 – Binding Post Cap C

- The D binding post caps, Fig. 5, are for use on 7A fuses installed in L-type fuse chambers.



Fig. 5 – Binding Post Cap D

- The E binding post caps, Fig. 6, are for use on 49-type cable terminals.



Fig. 6 – Binding Post Cap E

- The F binding post caps, Fig. 7, are for use on terminals equipped with insulation crushing washers such as B buried cable terminals, and 30-2, 57B, and 59A-type connecting blocks.



Fig. 7 – Binding Post Cap F

- The G binding post caps, Fig. 8, are for use on 30-type connecting blocks.



Fig. 8 – Binding Post Cap G

- The H binding post caps, Fig. 9, are for use on 31-type connecting blocks.



Fig. 9 – Binding Post Cap H

4.05 The KS-14539 guard protector, Fig. 10, is a red plastic hood designed to cover the heat coils and springs on protected-type PBX frames.



Fig. 10 – Guard Protector KS-14539

4.06 Binding post insulators are open-ended fiber insulators for use on binding posts to prevent accidental contacts. These insulators are designated No. 1, 2, 3, and 6, and are shown in Fig. 11. Binding post insulators have a red enamel finish.



Fig. 11 – Binding Post Insulators

- No. 1 insulators, Fig. 11, are for use on binding posts having 3/8-inch hexagonal nuts, and on 7T fuses.

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- No. 2 insulators, Fig. 11, are for use on binding posts having 7/16-inch hexagonal nuts, and on 7A fuses.
- No. 3 insulators, Fig. 11, fit the screw binding posts of BD, BE, BF, and BG cable terminals.
- No. 6 insulators, Fig. 11, are for use on terminations of the alarm and contactor circuits in T pressure contactor-terminals and 3-pair gas-tight terminals.

4.07 Terminal punching insulators are open-ended fiber insulators for use on terminal punchings to prevent accidental contacts. These insulators are designated No. 4, 5, and 7 and are shown in Fig. 12. Terminal punching insulators have a red enamel finish.



Fig. 12 – Terminal Punching Insulators

- No. 4 insulators, Fig. 12, are 1/2 inch in length and are used on terminal strips.
- No. 5 insulators, Fig. 12, are 5/8 inch in length and are also used on terminal strips.
- No. 7 insulators, Fig. 12, are for use on cable conductor terminating lugs of the C- and E-type protector mountings.

4.08 The B coil spring insulator is a fiber insulator designed for use on the 70-type connecting block (Fig. 13). When installed, one B insulator will protect two coil springs, “Tip and Ring,” that are mounted on the face or station side of this block. This insulator has a red enamel finish.



Fig. 13 – B Coil Spring Insulator

4.09 The B clip terminal insulator is a red plastic insulator, Fig. 14, designed to protect one row of terminals on the 66-type connecting block. This insulator may be cut with diagonal pliers to fit all clip-type connecting blocks.



Fig. 14 – B Clip Terminal Insulator

4.10 The 12A guard is shown in Fig. 15. It is designed to protect special service lines appearing on PBX frames that are equipped with 444A test jacks.

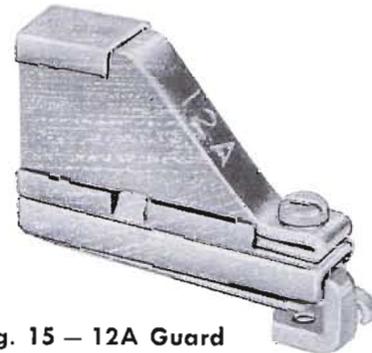


Fig. 15 – 12A Guard

4.11 The 12B guard, Fig. 16, is the same as 12A guard with addition of a locking screw for maximum security.



Fig. 16 – 12B Guard

5.00 WHICH CIRCUITS REQUIRE SSP AND/OR SSM?

Typical circuits requiring SSP and/or SSM are:

Burglar alarm	Fire alarm
Carrier	Fire and police reporting system
Civil Air Defense Warning	Radio program supply
Concentrator and identifier trunk	Special military and government
Data transmission	Teletypewriter
Federal Aviation Agency	Utility metering and control
Locally designated circuits	

6.00 WHY ARE SSM AND SSP IMPORTANT?

To avoid energizing special equipment or interrupting messages accidentally. (It is essential that special service lines be maintained in full operative condition at all times.) Remember—some special service lines operate on shunted circuits, while others operate on a grounded or an open circuit.

**7.00 HOW DO YOU AVOID DIFFICULTIES?**

By:

- Obtaining authorization before working on a special circuit.
- Using SSP and/or SSM when required.
- Using hand test set with capacitor in line when first going across a pair.
- Not running down a terminal with a shunt when trying to locate a pair.
- Exercising care to avoid accidental contact with other lines.
- Obtaining authorization before removing any SSP.

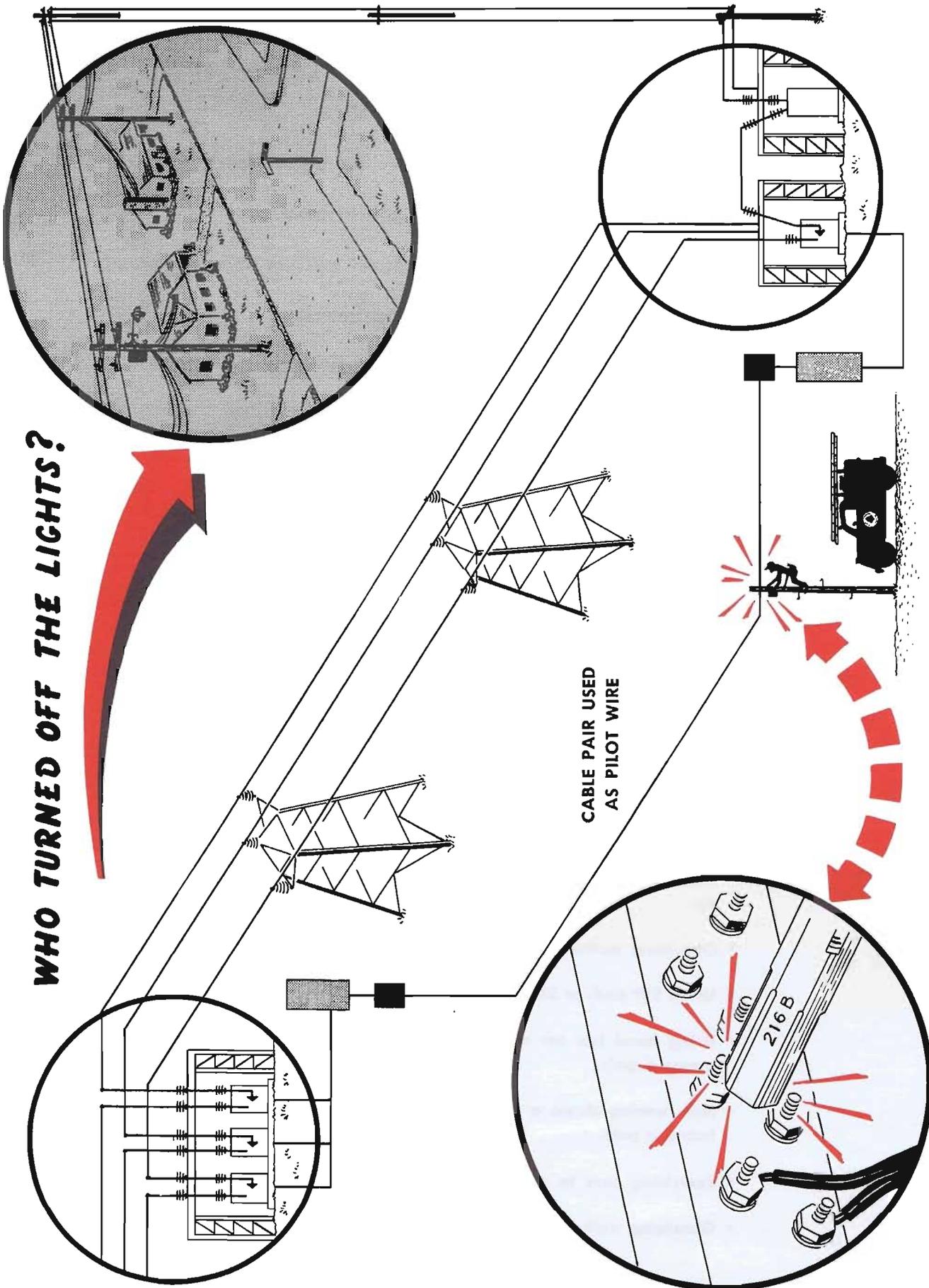


Fig. 17

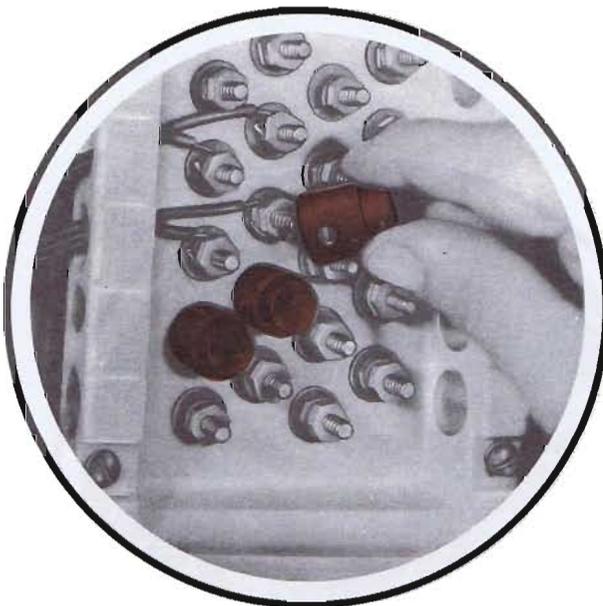
8.00 INSTALLING AND REMOVING SSP

8.01 Special service protection may be installed or removed upon receipt of Form E-4106, shown in Fig. 18.

8.02 After proper authorization is received (Form E-4106), install SSP as shown in Fig. 19 through 33.

Fig. 18 – Facsimile of Form E-4106 ▶

BINDER POST INSULATORS TERMINALS		PROTECTOR GUARD DEVICES DISTRIBUTING FRAMES			
CENTRAL OFFICE <u>SHERWOOD</u>		DUE DATE <u>8-15-60</u>	SERVICE ORD. NO. <u>4073</u>		
DATE ISSUED <u>8/12</u>	BY <u>LR</u>	WORK ORD. NO. <input checked="" type="checkbox"/>	TRANS. NO. <input checked="" type="checkbox"/>		
COPY FOR <u>FIELD</u>		FOR INFORMATION CALL <u>742-8163</u>			
PLACE AND OR REMOVE SPECIAL SERVICE PROTECTION AT LOCATIONS LISTED.					
CABLE	PAIR	BP	TERMINAL LOCATIONS	PROTECTION	
				PLACE	REMOVE
21	228		F 310 STYLES	X	
			F 437 HARMON AV.	X	
		13	R 42 CAROL RD.	X	
		9	R 48 " "	X	
		5	R 54 " "	X	
		14	R 76 " "	X	
WORK COMPLETED BY _____ DATE _____ O.K. NO. _____					



▲ Fig. 19

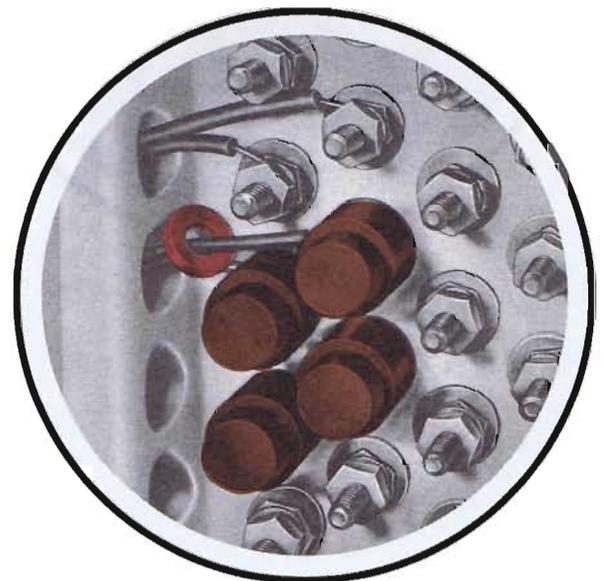


Fig. 20 ▲

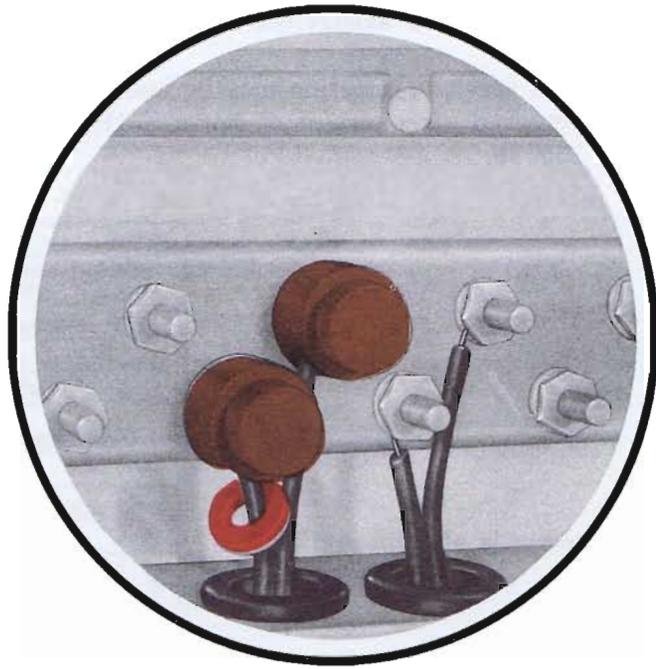
Install binding post caps as follows:

1. Clean faceplate.
2. Place cap over binding post and push until seated against faceplate.

Slip the KS-6660 indicator over end of wire, as shown in Fig. 20. Split-ring feature of KS-16847 indicator permits placing or removing indicator on terminated wires.

Fig. 21 ►

SSP used in N-type cable terminals, wiring terminals, or fuseless protected terminal blocks.



◀ Fig. 22

SSP used with 42A connecting block.

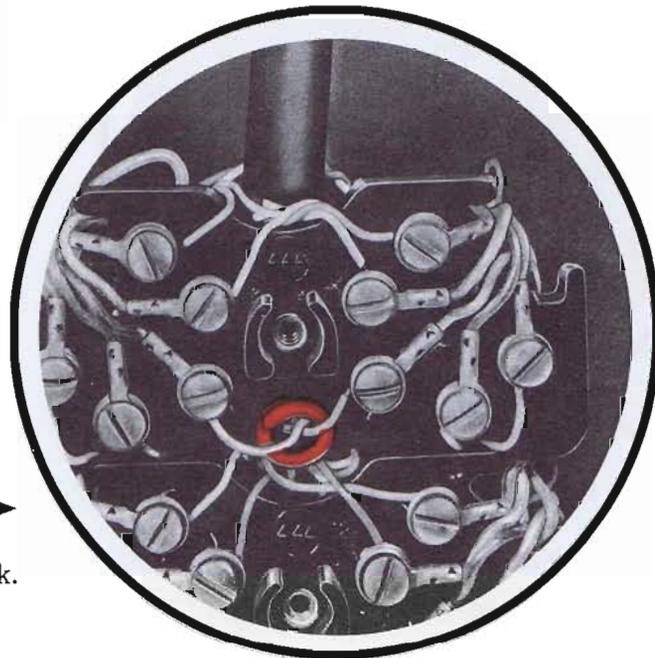
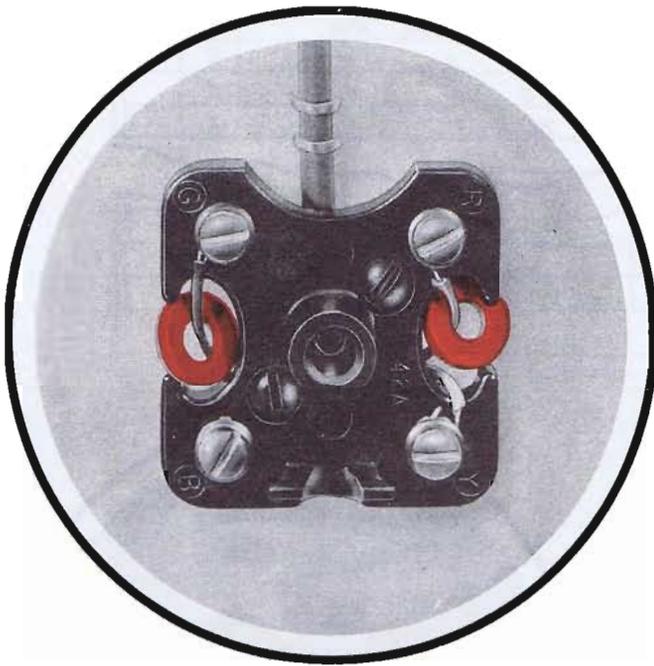
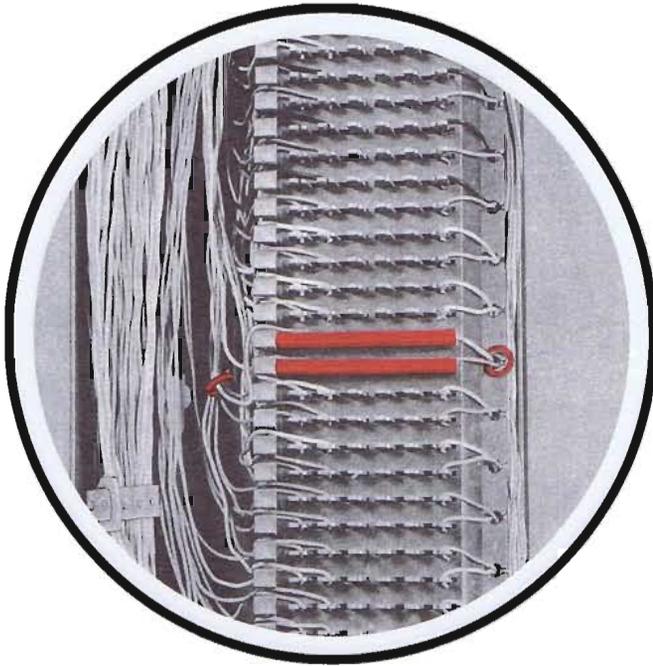


Fig. 23 ►

SSP used with 44A connecting block.

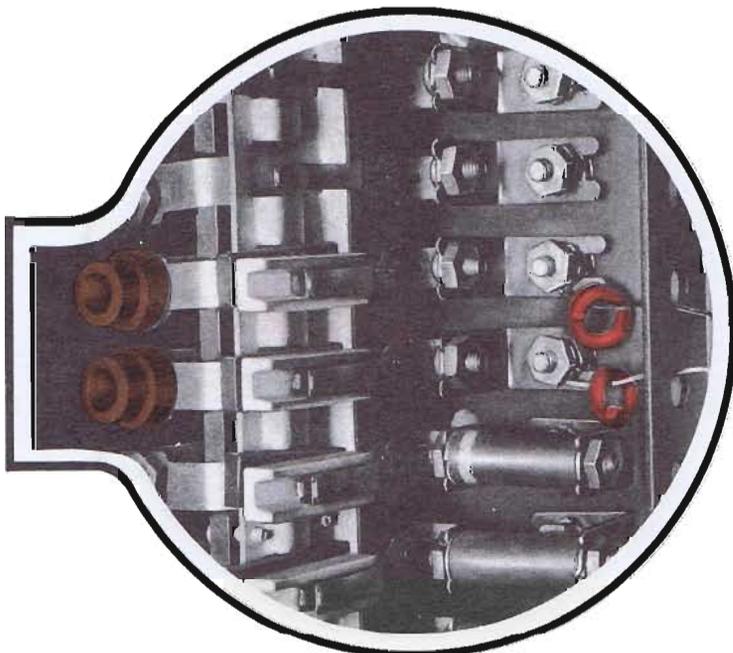
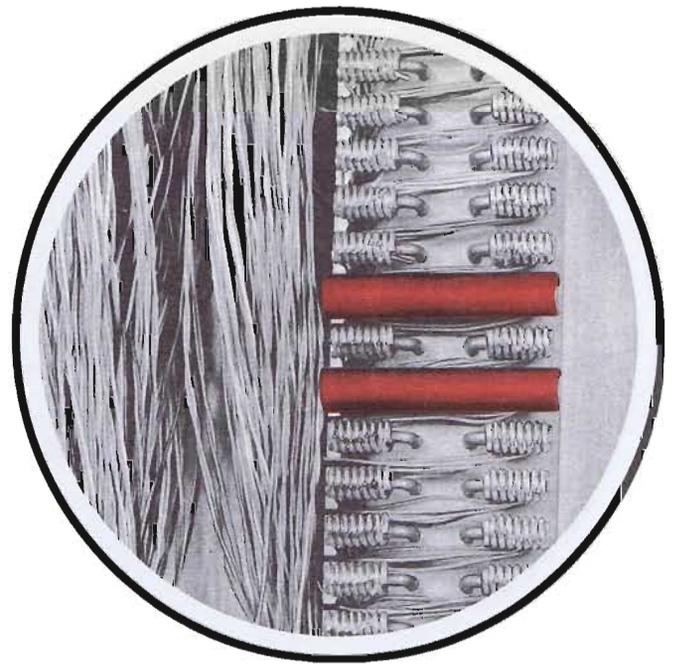


◀ Fig. 24

B clip terminal insulators installed on 66-type connecting block.

Fig. 25 ▶

B coil spring insulators installed on 70-type connecting block.

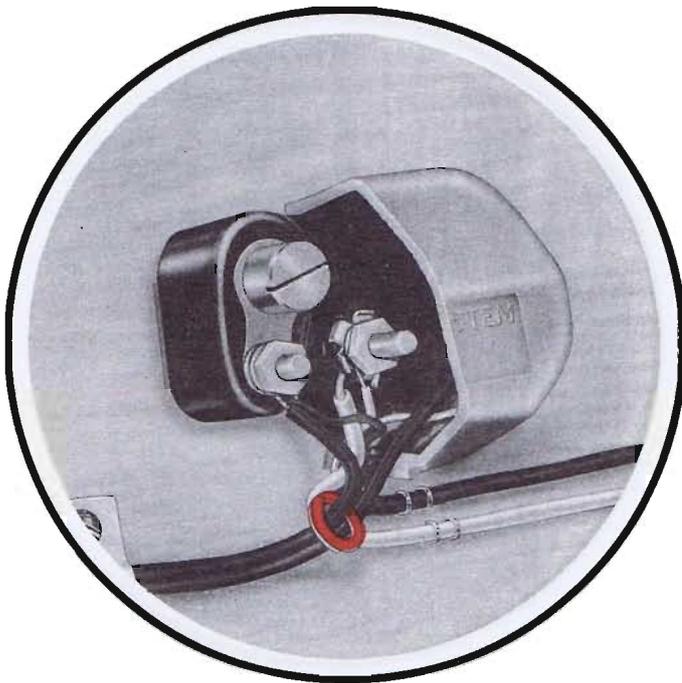
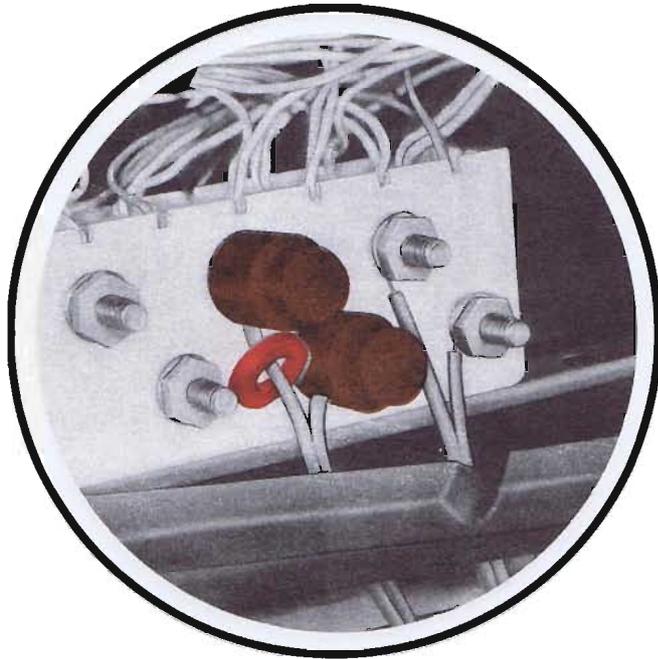


◀ Fig. 26

D binding post caps installed in L-type fuse chamber.

Fig. 27 ►

E binding post caps and indicator used with 49A cable terminal.

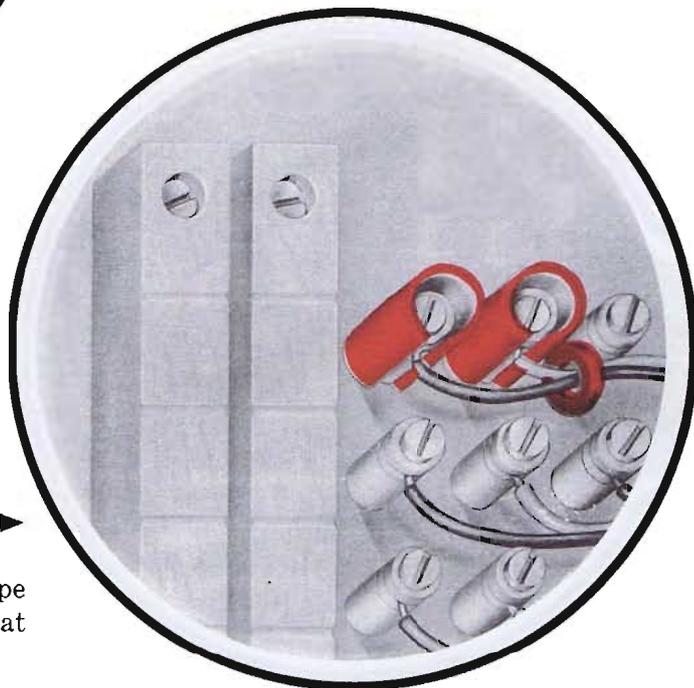


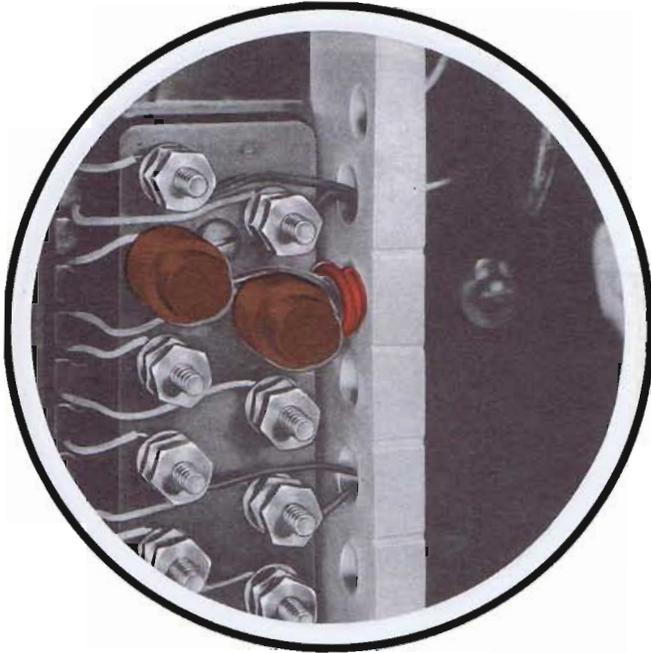
◀ Fig. 28

Indicator used with station protector 123A1A. The 150A cover (shown cut away) gives added security.

Fig. 29 ►

No. 3 binding post insulators installed in BD-type cable terminal. Remember—SSP is required at both ends of cross-connecting wires.



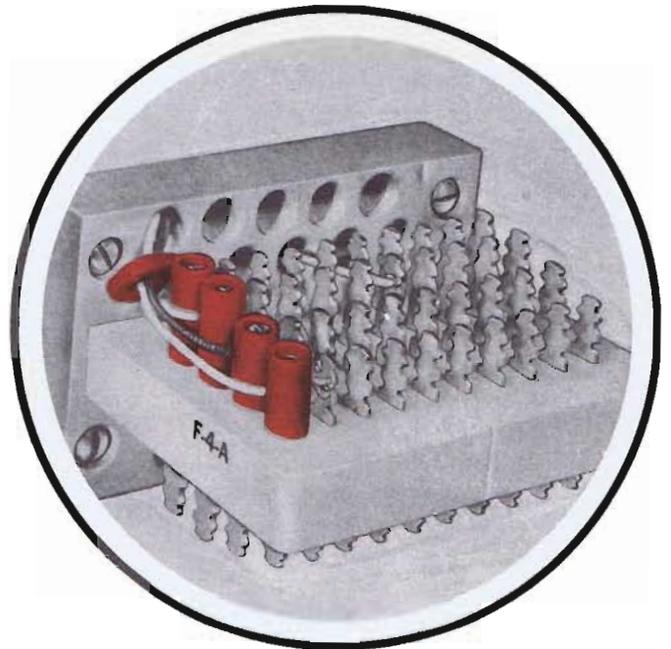


◀ Fig. 30

A 30-type connecting block with SSP.

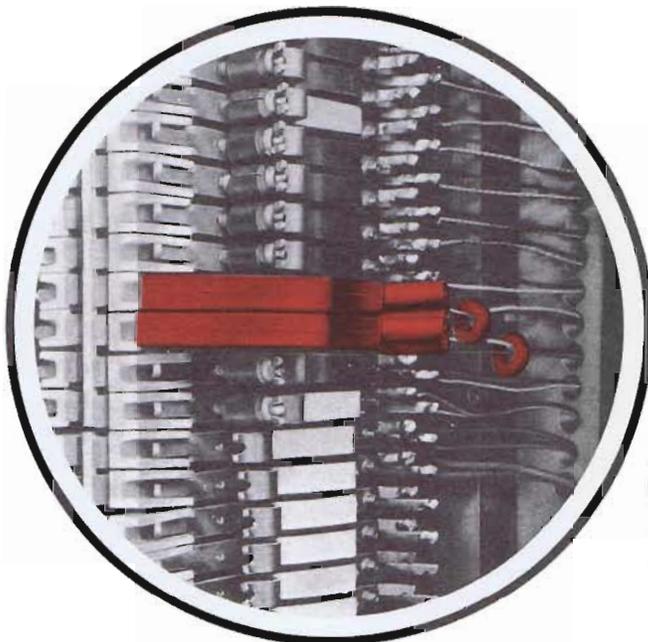
Fig. 31 ▶

Typical terminal strip with SSP. Terminal punching insulators shown here are No. 4 (short) and No. 5.



◀ Fig. 32

Protected PBX frame with KS-14539 guard and terminal punching insulators. **Protect each special circuit appearing on frame. Place SSP on each end of jumper wire.**



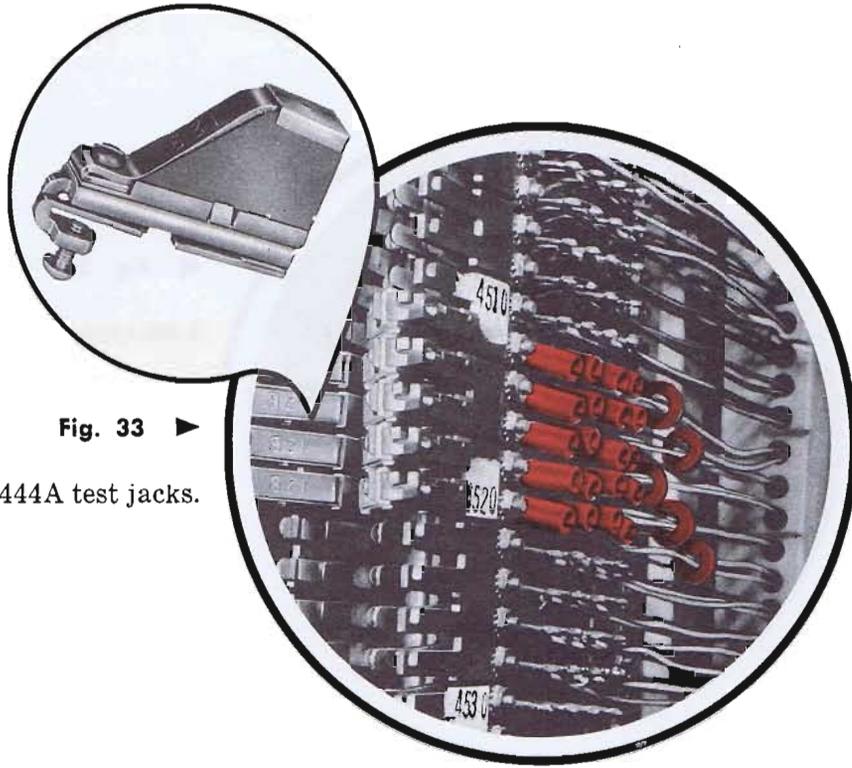


Fig. 33 ▶

SSP on PBX frame equipped with 444A test jacks.