

## NOS. 216A AND 217A SWITCHES

### PIECE-PART DATA AND REPLACEMENT PROCEDURES

#### 1. GENERAL

1.01 This section covers the information necessary for ordering parts to be used in the maintenance of Nos. 216A and 217A switches. It also covers approved procedures for replacing these parts.

1.02 This section is reissued to revise the piece part data and to amplify the procedure for replacing the actuating plate operating bar.

1.03 Part 2 of this section covers the piece part numbers and the corresponding names of the parts which it is practicable to replace in the field in the maintenance of Nos. 216A and 217A switches. No attempt should be made to replace parts not designated. Part 2 also contains explanatory figures showing the different parts. This information is called "Piece Part Data."

1.04 Part 3 of this section covers the approved procedures for the replacement of the parts covered in part 2. This information is called "Replacement Procedures."

#### 2. PIECE PART DATA

2.01 The figures included in this part show the various piece parts in their proper relation to other parts of the switch. The piece part numbers of the various parts are given together with the names of the parts as listed by the Western Electric Company Merchandise Department. When these names differ from those in general use in the field the latter names in some cases are shown in parenthesis.

2.02 When ordering piece parts for replacement purposes, give both the number and name of the piece part. For example: P-466221 Strip. Do not refer to the B.S.P. number or to any information shown in parenthesis following the piece part numbers.

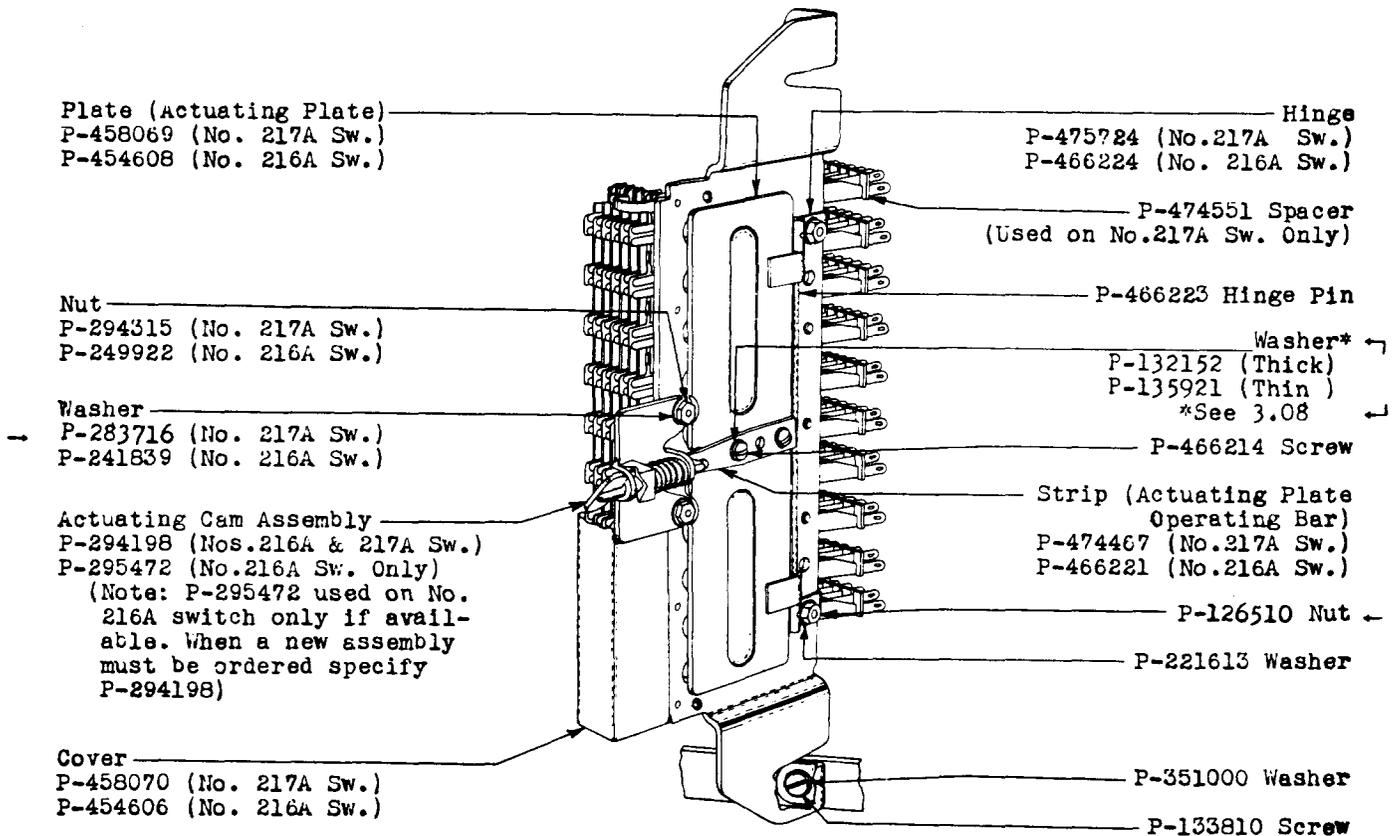


Fig. 1 - Nos. 216A and 217A Switches

**5. REPLACEMENT PROCEDURES****3.01 List of Tools**

<u>Code No.</u>	<u>Description</u>
206	30° Offset Screwdriver
207	90° Offset Screwdriver
485A	Smooth Jaw Pliers
544A	1/4" Hex. Offset Socket Wrench
569A	Spring Support
-	4 Oz. Riveting Hammer
-	Prick Punch
-	4" Regular Screwdriver

3.02 After making any replacement of parts of a No. 216A or 217A switch, the part or parts replaced shall meet the readjust requirements involved as specified in Section 030-712-701.

3.03 No replacement procedures are specified for screws or other small parts where the replacement consists of a single simple operation.

3.04 Do not apply excessive pressure when tightening any screw or nut as the head of the screw may be twisted off or the thread of the nut stripped.

3.05 After replacing any part, operate the switch a few times to insure that the operating studs will assume their correct position against the actuating plate.

3.06 Switch Cover Tightness: When the cover of a No. 216A switch is removed, exercise care to replace the cover on the same switch from which it was removed. If the covers of these switches are interchanged, a loose fit may result. If the cover rattles indicating looseness, this may be corrected by bowing the portion of the cover which is engaged by the cover clamp toward the clamp with the fingers.

3.07 Actuating Cam Assembly: Remove the actuating cam assembly mounting nuts with the No. 544A wrench and remove the washers and actuating cam assembly. Substitute the new part and remount the washers and mounting nuts securely in place.

3.08 Actuating Plate Operating Bar: Remove the actuating plate operating bar mounting screws with the Nos. 206 and 207 offset screwdrivers. Remove the washers and actuating plate operating bar. Substitute the new part and remount the washers and mounting screws securely in place. In case the mounting screws protrude more than .010" beyond the plate assembly, select one washer or a combination of washers to

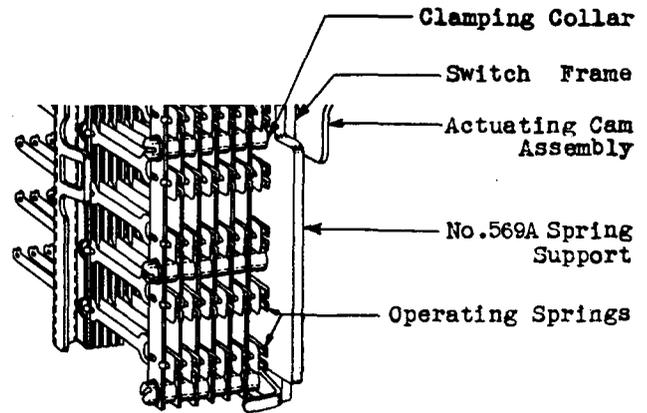


Fig. 2 - Position of Spring Support when Removing and Replacing Actuating Plate

bring the end of the mounting screws approximately flush with the surface of the plate. At least one washer should be used under the head of the mounting screw.

3.09 Hinge, Hinge Pin and Actuating Plate: To replace any of these parts, proceed as follows. Loosen the switch mounting screws of the switch under consideration and the switch to the immediate right with the 4" regular screwdriver and shift the switches so as to allow as much room as possible between them. Take whatever precautions that are necessary to guard against shocks or injury from touching terminals on the rear of the switch under consideration and adjacent switches. Tighten the mounting screws securely. If enough space cannot be obtained in this manner, remove the mounting screws. Place the No. 569A spring support between the switch frame and the operating springs nearer the switch frame as shown in Fig. 2 so that the slots in the spring support engage the spring assembly clamping collars and the beveled edge is toward the contacts. Working from the terminal side, remove the hinge mounting nuts with the No. 544A wrench and remove the washers. Remove the hinges, hinge pin and actuating plate from the switch as an assembly, as follows. Hold the fingers of one hand under the lower end of the actuating plate. Remove the hinges from the hinge screws and place the fingers of the other hand on the top of the plate. Remove the plate from the switch. To replace a hinge, grasp the hinge pin firmly near the hinge to be replaced with the No.485A smooth jaw pliers and rotate the hinge on the pin with a back and forth motion until it can be slid off the hinge pin. Take care in doing this not to bend or damage the hinge pin. To replace the hinge pin, or actuating plate, remove both hinges and slide the hinge pin through the hinges on the actuating plate. When replacing the actuating plate, remove the actuating plate operating bar as outlined in 3.08 and mount the bar securely in place on the new actuating plate.

Substitute the new parts on the hinge pin. Lay the assembly on a smooth flat surface and prick punch the hinge pin through the hole in the hinge with a prick punch and the hammer. This is done to prevent the hinge pin dropping out of the hinge. To remount the assembly on the switch, hold the actuating plate as outlined above and slide the front edge of the actuating plate operating bar under the end of the actuating cam. Move the plate up or down until the plate just covers the top operating stud. Place the lower and then the upper hinge over the associated hinge screws. Mount the washers and mounting nuts securely in place. Remove the No. 569A spring support.

3.10 Terminal Spacer: Unsolder the wires from the terminals associated with the spacer to be replaced and remove all excess solder from the terminals. Then remove the old spacer with a pair of smooth jaw pliers. Hold the new spacer so that the wide surfaces are vertical and the staggered arrangement of slots lines up with the terminal arrangement. Then carefully push the spacer into position making sure that each terminal enters its slot in the spacer. When all terminals are properly engaged use a screwdriver blade to continue pushing the spacer until it is locked behind the embossing on the terminal. Resolder the wires to their proper terminals.