604-TYPE TOOLS

(TAPE SPLICERS)

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 604-type tools (tape splicers). It also covers approved procedures for replacing these parts.

1.02 This section is reissued to add 1.05, to make corrections to Fig. 1, 2, 3, and 5, and to make other minor changes.

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 the apparatus. No attempt should be made to replace parts not designated. Part 2 also contains explanatory figures showing the different parts.

1.04 Part 3 of this section covers the approved procedures for the replacement of the parts listed under Part 2.

1.05 The 604A tool is rated Manufacture Discontinued and is replaced by the 604D tool.

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 apparatus. 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. Where these names differ from those in general use in the field, the latter names, in some cases, are shown in parentheses.

2.02 When ordering piece parts for replacement purposes, give both the number and the name of the piece part; for example, P-373862 Guard. Do not refer to the BSP number or to any information shown in parentheses following the piece-part numbers.

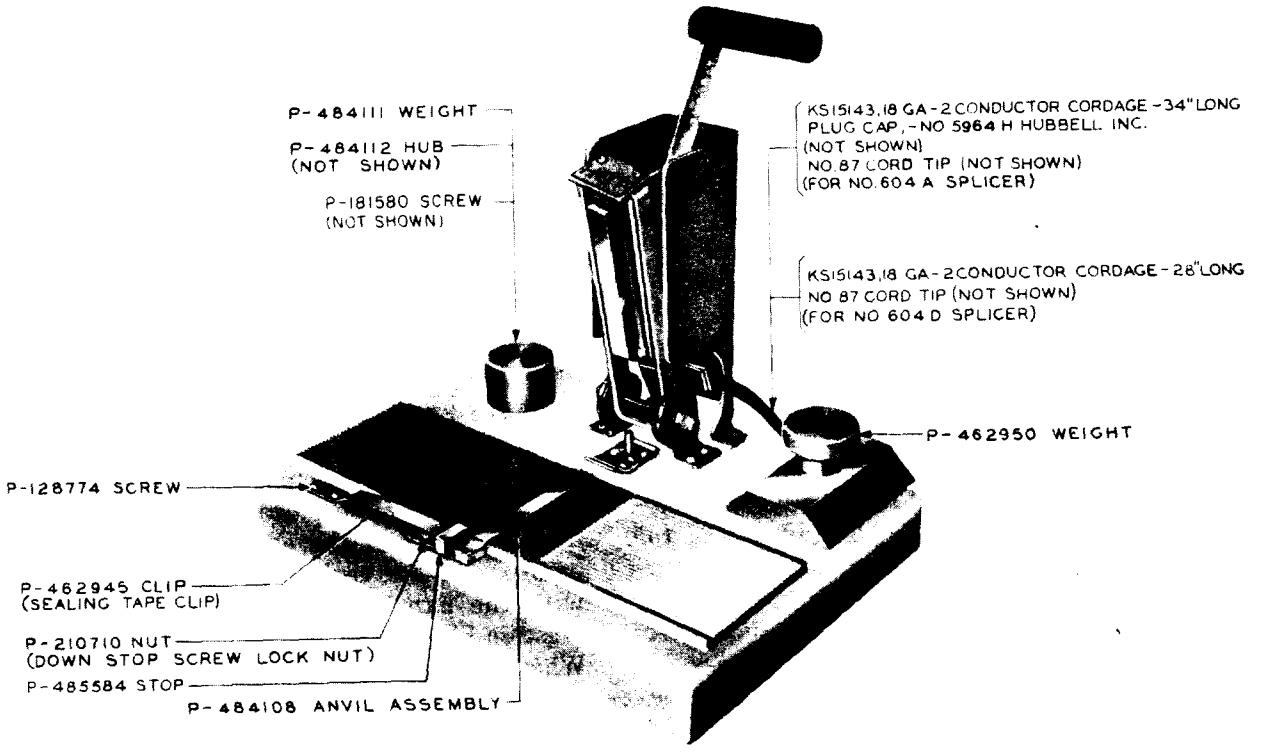

Fig. 1—604A and D Splicers (604D Illustrated)

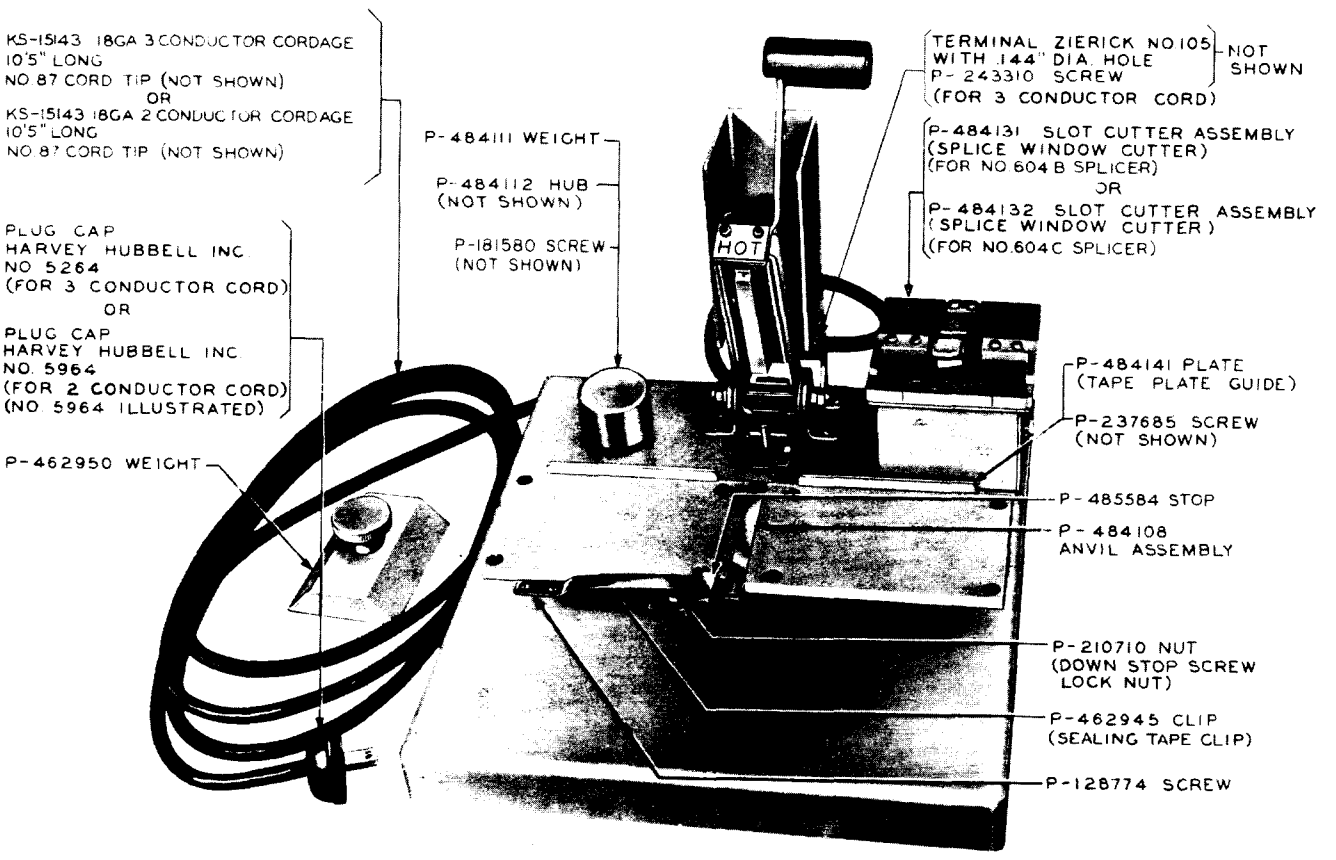

Fig. 2—604B and C Splicers

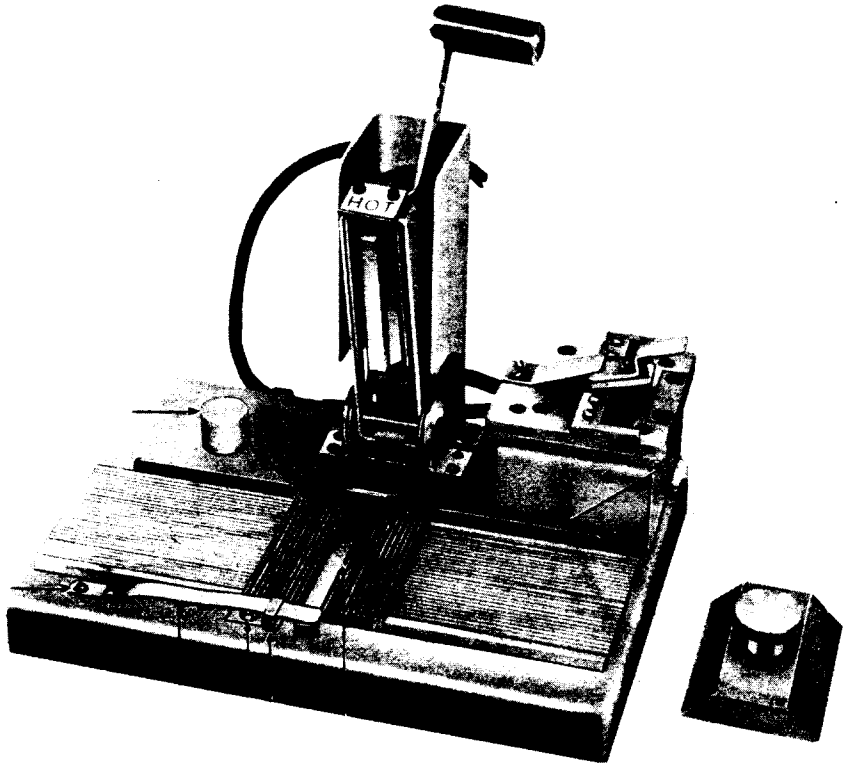

Fig. 3—604E Splicer

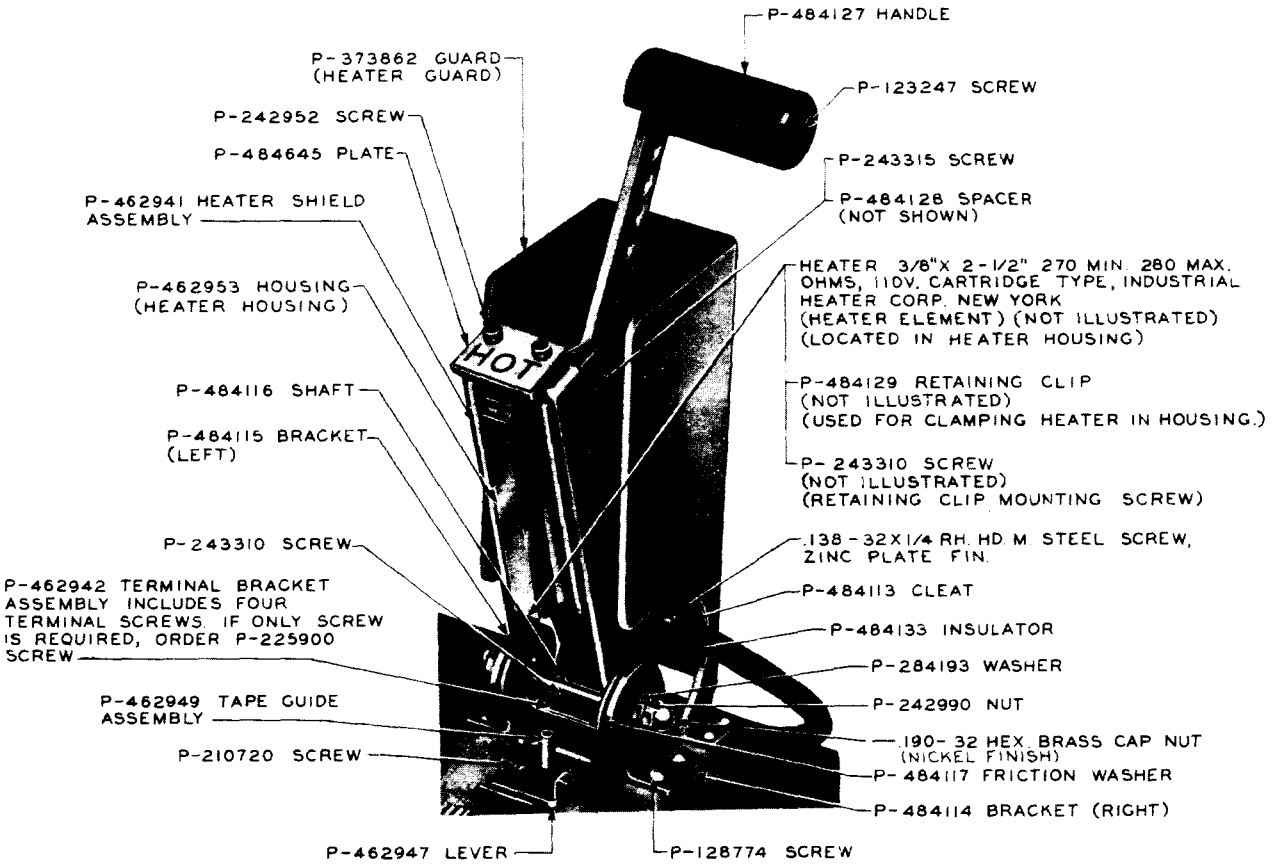

Fig. 4--Heater and Tape Guide Assembly

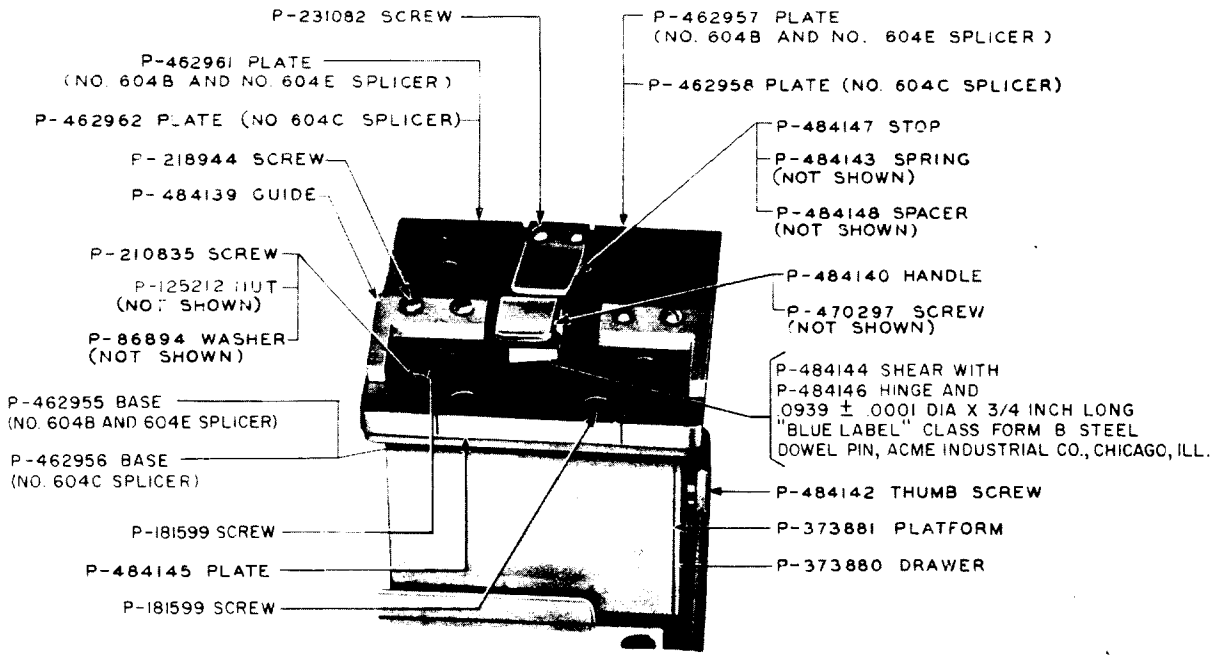

Fig. 5—Slot Cutter Assembly (Splice Window Cutter) (604B, C, and E Splicers)

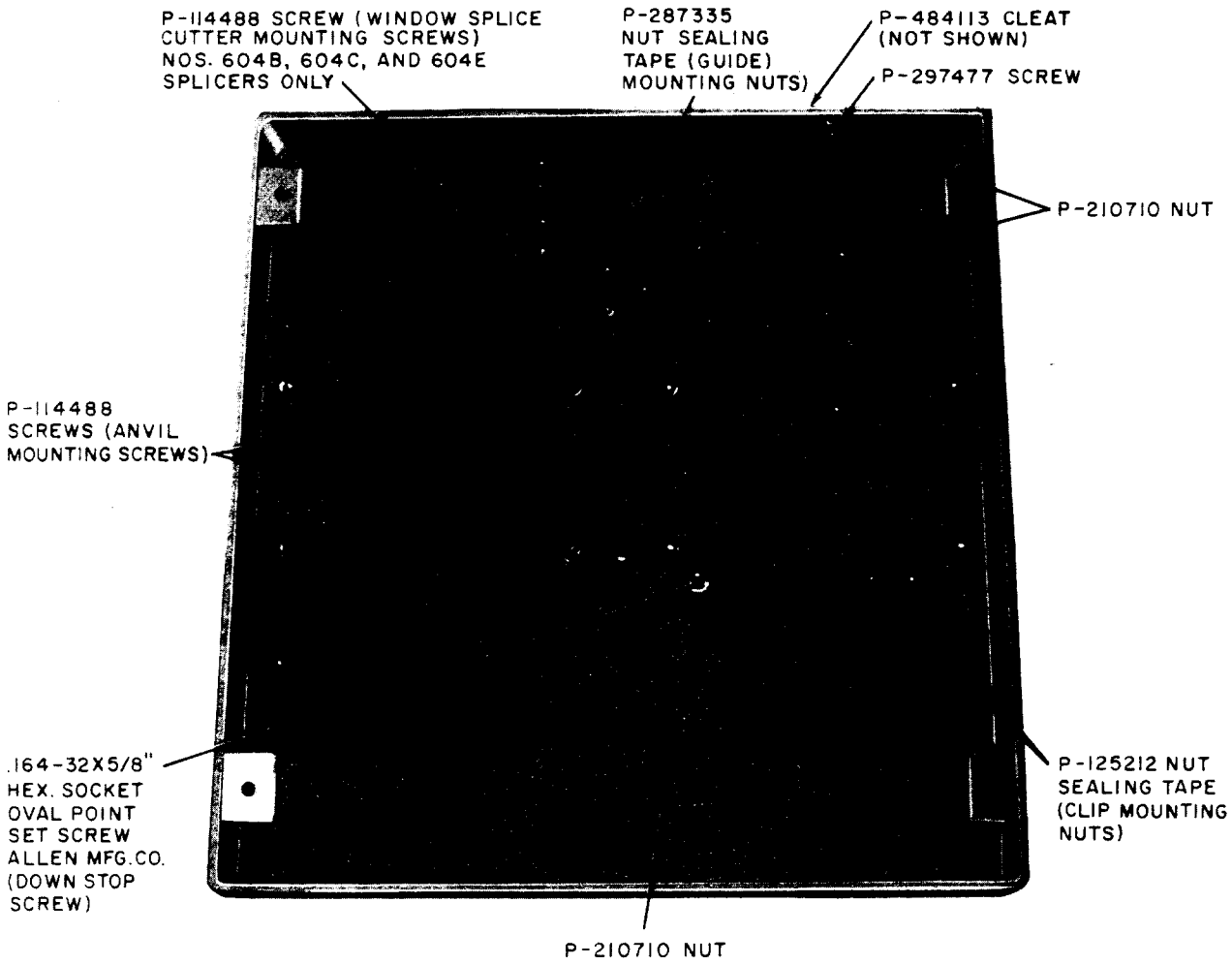

Fig. 6--Base of Splicer (Bottom View)

3. REPLACEMENT PROCEDURES

3.01 *List of Tools*

CODE OR SPEC NO.	DESCRIPTION
TOOLS	
206	Offset screwdriver
417A	1/4- and 3/8-inch hex. open double-end flat wrench (2 required)
418A	5/16- and 7/32-inch hex. open double-end flat wrench
R-2670	3/32-inch Allen socket screw wrench
R-2958	5/64-inch Allen socket screw wrench
▶R-3193	9/32- and 11/32-inch open-end wrench◀
—	▶Diagonal B (V-notch, 5 inch) pliers (AT-7858)◀
—	▶7-inch B long-nose pliers◀
—	3-inch ▶C◀ screwdriver
—	4-inch ▶E◀ screwdriver
—	6-inch tweezers, piano, American Piano Supply Company, No. 91

3.02 No replacement procedures are specified for screws or other parts where the procedure consists of a simple operation.

3.03 Before making any replacement of the parts of a 604-type splicer, remove the power plug or circuit fuses.

3.04 After making any replacement of parts of a splicer, the part or parts replaced shall meet the readjust requirements involved as specified in Section 076-133-701. Other parts, adjustments of which may have been disturbed by the replacing operations, shall be checked to the readjust requirements and an overall operation check shall be made of the splicer before restoring it to service.

3.05 In replacing some parts of the splicer, it may be necessary to remove the splicer from its mounting in order to obtain access to the screws and nuts on the underside of the splicer base. To remove the 604A splicer from its mounting, remove the shaft mounting screws and washers with the 4-inch ▶E◀ screwdriver. Slide the shafts out of their bearings and bushings. To remove the 604B and C splicers from the portable splicing table, remove the splicer mounting screws and washers with the 4-inch ▶E◀ screwdriver. To remove the 604D splicer from the control panel, remove the control panel mounting screws using the 4-inch ▶E◀ screwdriver and remove the panel from the reel table. Tip the control panel so that the splicer mounting screws are accessible, and then remove these screws using the 4-inch ▶E◀ screwdriver. The underside of the 604E splicer is accessible without removing the splicer from the mounting. To remount the 604A splicer, place the splicer on the control panel so that the shaft holes in the front of the base line up approximately with the bearings. Insert the shafts in the rear holes of the base, and tilt the splicer with the rear edge of the base resting on the control panel. Insert the shafts in the bearings, and slide the bushings over the shafts. Place the front edge of the splicer base down on the control panel, and slide the shafts into the holes in the front of the base. Replace and securely tighten the shaft mounting screws at the rear of the base. To remount the other splicers, reassemble the parts and tighten all screws securely.

3.06 ***Heater Element:*** To replace the heater element, lower the heater to the anvil. Remove the cord cleat and terminal insulator mounting screws using the 3-inch ▶C◀ screwdriver and remove the cord cleat and terminal insulator. Loosen the heater element terminal screws with the 3-inch ▶C◀ screwdriver, and remove the heater element leads from under the terminal screws. Remove the inner housing screw and spacer on each side of the heater housing with the R-2670 wrench. Raise the heater to its vertical position, and swing the heater housing out at the bottom. Remove the retaining clip screw and clip with the R-2670 wrench, and withdraw the heater element. Cut the leads of the new heater element to a length of approximately 2 3/4 inches with the 5-inch diagonal pliers, and remove the insulation from

the end of each lead for approximately 3/4 inch, using the ◗B◖ long-nose pliers. Twist the wires in each lead tightly, and bend into loops for mounting under the terminal screws. Do not attempt to solder these leads. Insert the heater element in the housing and position the retaining clip, turning the element so that the leads clear the clip. Clamp the heater element in place with the retaining clip and clip mounting screw using the R-2670 wrench. Swing the housing back to its normal position, and reassemble the inner housing screws and spacers. Lower the heater to the anvil, and clamp the loops of the heater leads under the terminal screws, taking care to position the loops completely under the heads of the screws and to arrange the leads so they lie parallel to each other. Tighten the screws securely on the loops of the heater leads. Reassemble the parts, and securely tighten all other screws.

3.07 ***Cord:*** Remove the cord cleat on the back of the base by removing the cord cleat mounting screws with the 3-inch ◗C◖ screwdriver. Bring the heater down on the anvil, and remove the cord cleat and terminal insulator mounting screws using the 3-inch ◗C◖ screwdriver. Remove the cord cleat and terminal insulator. Loosen the cord terminal screws using the 3-inch ◗C◖ screwdriver, and remove the cord. Remove the outer covering on both ends of the new cord for a distance of 2 1/2 inches, exposing the rubber-covered leads. Remove the insulation from the ends of these leads for 3/16 inch. Where the 2-conductor cord is to be used with the 604A, B, or C splicer, solder an 87 cord tip to one end of each lead and attach a Hubbell 5964 plug cap to the other end of the cord. A 2-conductor cord is used on the 604D and E splicers. Solder an 87 cord tip to one end of each lead, and connect the other end of each lead as shown in Fig. 8 for the 604D splicer and Fig. 9 for the 604E splicer. Where the 3-conductor cord is to be used with the 604B or C splicer, solder 87 cord tips to one end of the black and white leads and a Zierick 105 terminal with a 0.144-inch diameter hole to this end of the green lead. Attach a Hubbell 5264 plug cap to the other end of the leads as shown in Fig. 10. Connect the cord to the splicer, clamping the cord tips firmly under the terminal screws. Place the cleat on the cord and the terminal insulator under the cord. Insert the cleat mounting screws. Arrange the leads neatly in place, and position the cord so that its outer covering projects 1/8 to 1/4 inch beyond the inner side of the cleat. Tighten the screws securely. Mount the second cleat on the rear of the base, making sure there is sufficient slack in the cord between the two cleats to permit free movement of the heater. Insert and securely tighten the mounting screws.

3.08 ***Heater Housing:*** To replace the heater housing, remove the heater element as covered in 3.06. Remove the heater housing by removing the outer and center housing screws and spacers with the R-2670 wrench. Before mounting the new housing in the heater shield, insert the heater element in the housing and position the retaining clip, turning the element so that the leads clear the clip. Clamp the heater element in place as covered in 3.06. Position the housing in the heater shield, and remount the inner housing screws and spacers. Grasp a spacer with the tweezers, and position it between the shield and housing for assembling the associated housing screw. Insert and turn the screw two or three turns into the housing. When all spacers and screws have been assembled, tighten all screws securely. Clamp the heater leads as covered in 3.06, and reassemble the parts.

3.09 ***Terminal Bracket Assembly:*** Remove the cord as covered in 3.07. Remove the heater guard by removing the heater guard mounting screws. Loosen the terminal screws which clamp the leads of the heater unit with the 3-inch ◗C◖ screwdriver. Remove the terminal bracket mounting screws with the R-2670 wrench. Mount the new terminal bracket assembly, and clamp the heater element leads in place as covered in 3.06. Replace the cord as covered in 3.07, and remount the heater guard.

3.10 ***Hinge Bracket or Friction Washer:*** (Fig. 7)—Bring the heater down on the anvil, and remove the hinge bracket mounting screws with the 3-inch ◗C◖ screwdriver. Remove one acorn locknut and adjusting nut with one 417A wrench while holding the other acorn locknut with the other 417A wrench and remove the washer. Replace the hinge bracket or friction washer as required. Reassemble the parts and tighten the screws and acorn locknuts securely.

3.11 ***Heater Shaft:*** (Fig. 7)—Loosen the cleat mounting screws at the rear of the base with the 3-inch ◗C◖ screwdriver. Bring the heater down on the anvil and remove both brackets and friction washers as covered in 3.10. Grasp one

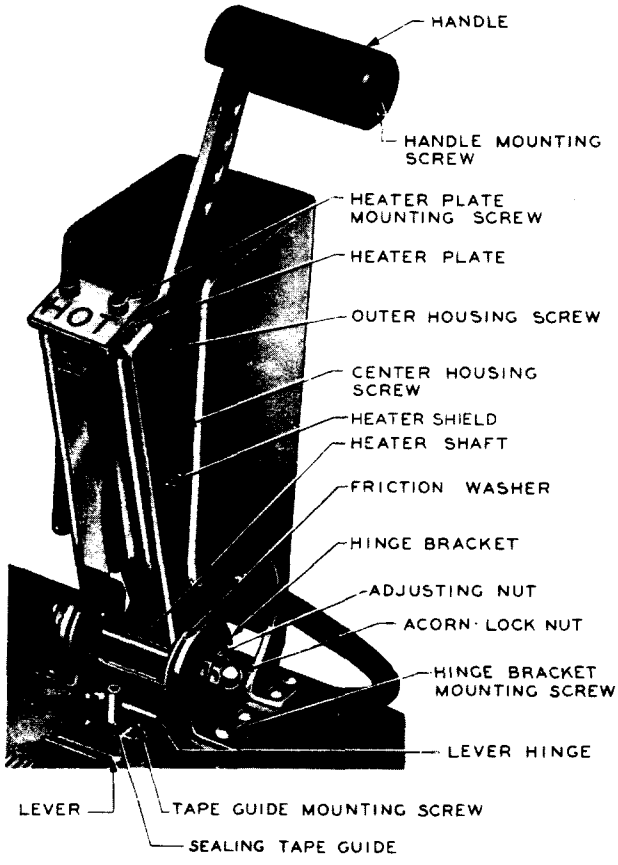

Fig. 7--Heater and Tape Guide Assembly

end of the shaft with the ♦B♦ long-nose pliers, and turn the shaft out of its bearings. Position the new shaft in the heater arm by turning the shaft in with the fingers, taking care not to burr the theaded section of the shaft. Reassemble the parts and tighten the screws and acorn locknuts securely.

3.12 ***Heater Shield:*** (Fig. 7)—Remove the heater housing, terminal bracket, and shaft as covered in 3.08, 3.09, and 3.11, respectively. Remove the handle mounting screw with the 4-inch ♦E♦ screwdriver and remove the handle. Remove the heater plate by removing the heater plate mounting screws with the R-2670 wrench. Replace the heater shield, and reassemble the parts.

3.13 ***Anvil:*** To replace the anvil on the 604A splicer, slide the splicer out from the table; or on the 604B, C, and D splicers, remove the splicer from the mounting as covered in 3.05. The underside of the 604E splicer is accessible without removing the splicer from the mounting. Remove the anvil mounting screws. Lift the sealing tape clip, and remove the anvil. Mount the new anvil in the base slot with the long projection under the clip, and tighten screws securely. Slide the splicer back into position, or remount it on the control panel.

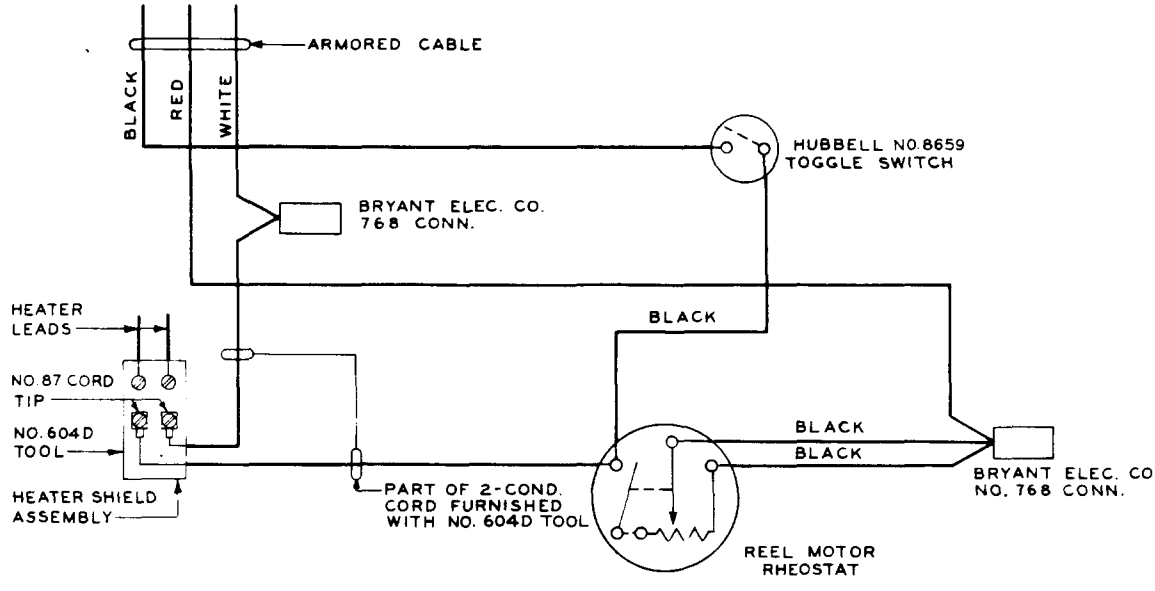

Fig. 8--Wiring Diagram--604D Splicer

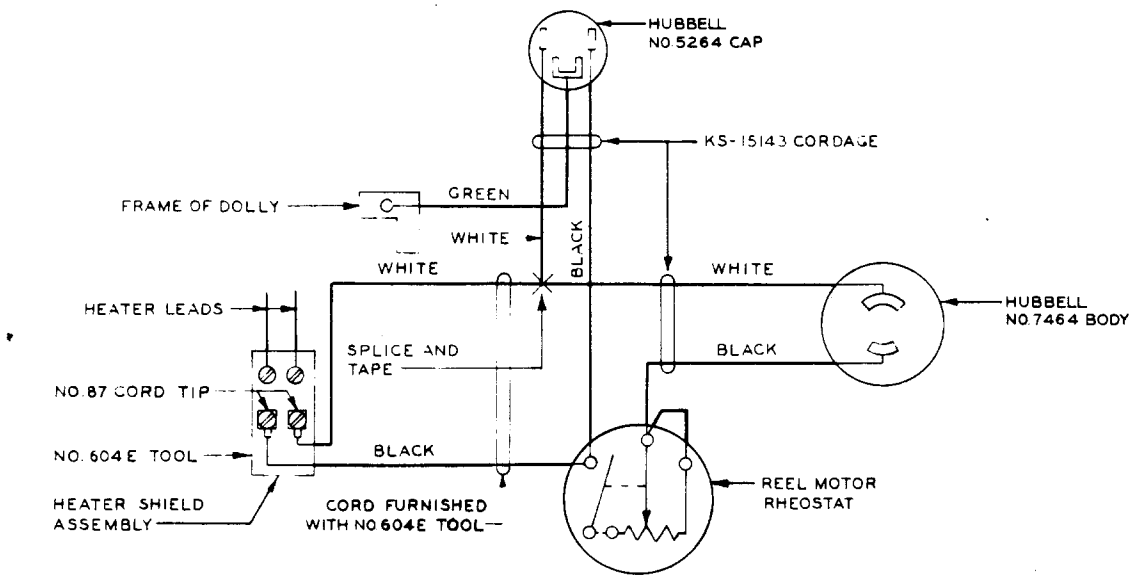

Fig. 9—Wiring Diagram—604E Splicer

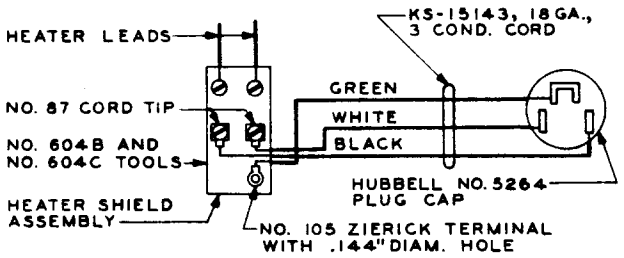

Fig. 10—Wiring Diagram—604B and C Splicers With 3-Conductor Cord

3.14 ***Hub:*** To replace the hub, remove the splicer (except the 604E) from its mounting as covered in 3.05. Remove the hub mounting screw and nut with the 4-inch ▶E◀ screwdriver and the ▶R-3193◀ wrench. Replace the hub and reassemble the parts.

3.15 ***Sealing Tape Clip:*** To replace the sealing tape clip on the 604A splicer, slide the splicer out from the table; or on the 604B, C, and D splicers, remove the splicer from its mounting as covered in 3.05. Remove the sealing tape clip mounting screws and nuts with the 3-inch ▶C◀ screwdriver and the 418A wrench. Replace the sealing tape clip, and reassemble the parts. Slide the splicer back into position, or remount the splicer if it was removed as covered in 3.05.

3.16 ***Downstop Screw:*** Remove the sealing tape clip as covered in 3.15. Remove the downstop locknut with the ▶R-3193◀ wrench; then reaching under the base of the splicer, remove the downstop screw using the R-2958 wrench. Replace the screw and reassemble the parts.

3.17 ***Sealing Tape Guide or Lever:*** (Fig. 7)—Remove the splicer (except the 604E) from its mounting as covered in 3.05. Remove the tape guide mounting screws and nuts with the 3-inch ▶C◀ screwdriver and 417A wrench. Replace the tape guide or lever, as required, and reassemble the parts. Remount the splicer if it was removed.

3.18 ***Tape Plate Guide (604B, C, and E Splicers):*** Remove the mounting screws with the 206 offset screwdriver. Replace the guide, and tighten all screws securely.

Splice Window Cutter (604B, C, and E Splicers) (Fig. 11)

3.19 ***Platform:*** To replace the platform, remove the splicer (except the 604E) from its mounting as covered in 3.05. Loosen the thumbscrew and remove the drawer. Remove the platform mounting screws with the 3-inch ▶C◀ screwdriver. Remove the splice window cutter base mounting screws and nuts with the 3-inch ▶C◀ screwdriver and 418A wrench. Mount the splice window cutter on the

new platform and mount the platform on the splicer base. Remount the splicer and insert the drawer.

3.20 ***Stop, Shear, Spring, or Spacer:*** Remove the mounting screws for the stop, shear, spring, and spacer with the 3-inch ◗C◖ screwdriver, and remove the parts. Replace the part as required. To replace the shear, remove the handle mounting screw and mount the handle on the new shear. Assemble the stop, shear, spring, spacer, and mounting screws before mounting these parts on the base.

3.21 ***Side Cutting Plate:*** Remove the paper guide by removing the paper guide mounting screws with the 3-inch ◗C◖ screwdriver. Remove the cutting plate mounting screws with the 3-inch ◗C◖ screwdriver. Replace the cutting plate and reassemble the parts.

3.22 ***Splice Window Cutter Base:*** Remove the stop, shear, spring, spacer, and side cutting plates as covered in 3.20 and 3.21. Remove the front cutting plate by removing the front cutting plate mounting screws with the 3-inch ◗C◖ screwdriver. Remove the base mounting screws and nuts with the 3-inch ◗C◖ screwdriver and 418A wrench. Replace the base and reassemble all parts.

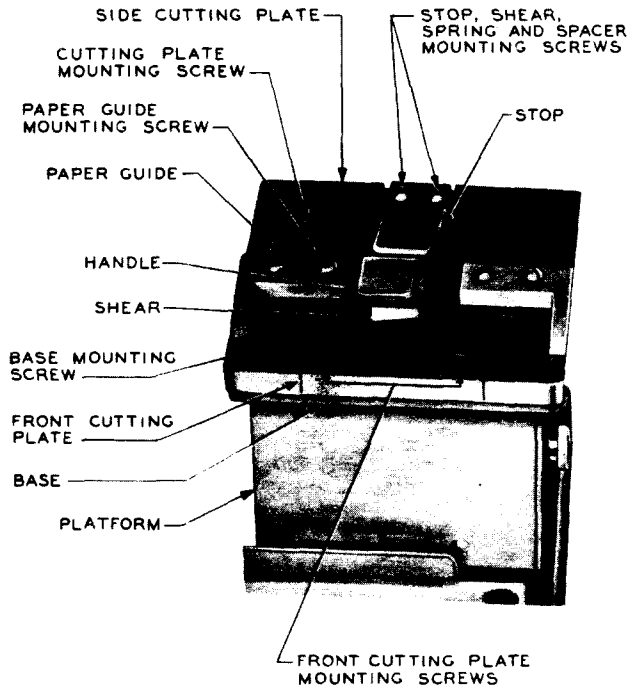

Fig. 11—Slot Cutter (Splice Window Cutter) (604B, C, and E Splicers)