

SERVICE

SECURITY DEVICES

1. GENERAL

1.01 This section contains identification and installation information on security devices for coin collectors and coin telephone sets.

1.02 This section is reissued to:

- Revise information on coin relay antidrill guard assembly and dust cover
- Add information on 840360184 knob and shaft assembly

1.03 Security devices are added to standard equipment to discourage thievery, vandalism, and strong arm attack.

2. SECURITY DEVICES

2.01 Security devices include locks, studs, special backplates, covers, ring seals, armored cords, a switchhook kit, and special tools needed to handle them.



Locks and keys will be shipped only on orders that specify authorized recipients.

Upper Housing and Cover Assembly Locks

2.02 Two models of locks may be used for upper housings and cover assemblies: the 10-type and 29-type (Fig. 1). Both are lever tumbler-type locks requiring a corrugated key.

2.03 The 10-type lock has been used in upper housing assemblies of 190 and 200 series coin collectors.

2.04 The 29-type lock is used in cover assemblies of 1- and 2-type coin telephone sets and in 235- and 1235-type coin collectors.

KS-19277 Lock and Associated Parts

2.05 The KS-19277 lock and associated parts (Fig. 2) give additional security to the upper housing. They consist of a screw type lock and appropriate fasteners which secure an upper housing to either backplate or mounting surface.

2.06 The lock mounts in a specially provided hole in the lower right side of the upper housing (Fig. 3) and is held in place by a spring steel washer and heavy steel nut (Fig. 4). Use of a tubular key permits the back of the lock to rotate and screw onto the end of a security bolt or stud fastener.

2.07 The lock cannot be used on coin collectors equipped with 2-coil relays, those not having a lower right security stud hole, or panel coin phones.

2.08 The P-13A091 (BKK) terminal assembly (Fig. 5) must be replaced with a P-25E300 terminal assembly to provide clearance of fasteners (Fig. 6 and 7).

2.09 One of three different fasteners may be used with the KS-19277 lock (Fig. 2).

- (a) P-25E301 bolt fastener—short shoulder; for use with 3/16-inch thick backboards.
- (b) P-25E302 bolt fastener—long shoulder; for use with 5/16-inch thick backboards.
- (c) P-25E303 stud fastener—for use where security studs are not required.

2.10 Two methods can be used to determine if existing coin collector backboards are equipped with keyhole slots without removing the coin collector from its mounting:

- If a security stud is present in the lower right security stud hole of the backplate (Fig. 5), the appropriate bolt fastener (2.09)

may be installed in place of the security stud.

- If there is no security stud in the lower right security stud hole of the backplate, place a small-bladed screwdriver in the hole (Fig. 8). If blade enters to a depth of at least 3/4-inch, a keyhole slot is present in the backboard (Fig. 9) and the appropriate bolt fastener can be used.

2.11 Use of bolt fasteners is limited by the surface (backboards, shelf, or booth) upon which the coin collector is mounted.



In vulnerable locations where prying of upper housing is likely, always use bolt fastener where possible.

2.12 The P-25E301 and P-25E302 bolt fasteners screw from the rear into the lower right security stud hole of the coin collector backplate (Fig. 7). The coin collector is installed in the same manner as any other coin collector equipped with security studs.

2.13 To install a bolt fastener at existing installations, disconnect and remove the coin collector from its mounting.

2.14 Use the P-25E303 stud fastener (Fig. 6) where a bolt fastener is not required, but where protection is desired against unauthorized use of the 10-type upper housing key.

2.15 The stud fastener can be installed without removing the backplate assembly from its mounting surface.

2.16 Use a P-25E351 insulator on either the bolt or stud fastener (Fig. 6 and 7) to prevent it from grounding against the lower lug of the housing contacts. To install, start at the BKX terminal and wind in "barber pole fashion" around the stud or bolt. Do not cover the threads on the exposed end of the stud or bolt. Redress wiring to upper housing contacts (Fig. 10).

2.17 After the bolt or stud fastener is properly installed, fasten upper housing as follows:

- (a) Insert the tubular key into the KS-19277 lock.

(b) Apply and maintain a slight forward pressure on the key while rotating it in a clockwise direction ***until the key is hand tight***. Do not force the key beyond this point. To remove the key, maintain a forward pressure, turn counterclockwise to the first release position and pull the key away from the lock.



Do not use pliers or other unauthorized tools on the handle of the key. Do not file tab off end of key. Once the upper cover assembly has been drawn to the backplate assembly so that the upper cover assembly lock can be engaged, there is no need to further tighten the KS-19277 lock.

2.18 When an upper housing is equipped with a KS-19277 lock and is removed for maintenance, apply a coating of KS-19094 antiseize compound to the threaded area of the bolt or stud fastener which engages the security lock to prevent binding or "freezing" of parts.

Security Studs

2.19 Security studs provide added strength to the mounting of a coin collector or coin telephone set on a backboard. Four versions are available as shown in Fig. 11.



Security studs can be used only if the backboard has key-hole slots which align with the coin collector security stud mounting holes.

2.20 The P-10E070 and P-12E798 studs are used with the 190, 200, and 1200 series coin collectors and panel coin phones. The P-40Y060 and P-40Y061 studs are used with the 1A- and 1C-type coin telephone sets.

2.21 Security studs with long shoulders are used with 5/16-inch thick backboards. Those with short shoulders are used with 3/16-inch thick backboards.

719A Tool

2.22 A 719A tool (Fig. 12) is required to release or engage the locking mechanism on both of the 1- and 2-type coin telephone sets and 235/1235-type coin collectors.

1A Backplate

2.23 The 1A backplate made of sheet steel (Fig. 13), is intended for use on coin collectors equipped with aluminum backplates to reduce the possibility of breaking away the lower housing by means of a pry bar.

2.24 The 1A backplate is provided with clearance holes for security studs and mounting screws. It is fastened to the coin collector backplate by replacing the four lower housing assembly screws with one P-12E799 and three P-13E656 high-strength flathead steel screws (Fig. 14). Replacement screws must be ordered separately.

Note: The 1A backplate cannot be used with 139A backboards or 19-type shelves.

Armored Cords

2.25 All current coin collectors and coin telephone sets are equipped with armored handset cords (Fig. 15). Transmitter and receiver caps are cemented to the handset handle. Refer to Section 501-210-102 for complete information on handsets.♦

2.26 Use the following procedures to equip existing coin collectors in the field with G3-type, G13-type, or FIL handset.

- (1) Remove the upper housing from the coin collector.
- (2) Disconnect the handset cord conductors and cord fasteners. Before removing old cord from the cord entrance hole, attach a pull wire to the old cord. This will aid in pulling in the new cord.



Cover the coin relay, hopper, and return chute with a piece of plastic, cloth, or other suitable material to prevent metal drill shavings from falling into them.

- (3) Using a small center punch and hammer, mark hole to be drilled and tapped in the coin collector backplate. This hole is to be located in the cord entrance tube halfway between the outer beveled edge of the coin collector and the left edge of the cord chamber (Fig. 16).

- (4) Drill hole with a No. 7 drill (.201 inch).



When drilling aluminum backplates do not exert too much pressure on drill. This may cause drill to cut too fast, thus making hole oversized.

- (5) Tap the hole using a 1/4-20 tap with a Greenfield T-Handle tap wrench or equivalent.

Caution: The tap wrench should be long enough to permit the wrench handle to be turned without injury to the installer or possible damage to the coin relay.

- (6) Clean metal shavings from the cord entrance hole.
- (7) Using the pull-in wire placed in step 2, pull in the new cord.
- (8) Remove the pull wire from new cord and fasten a P-12A096 clamp over the cord (Fig. 17).
- (9) A P-26E084 1/4-20 by 5/16-inch self-locking setscrew is used to secure the cord to the coin collector backplate (Fig. 17). A flat surface is located approximately 1/4-inch from the set end of the stainless steel flexible hose. Using a 1/8-inch Allen wrench, screw the socket setscrew into the hole drilled in step 4 until it just makes contact with the flat surface of the metal hose. Give the setscrew a minimum of 1/4 turn and a maximum of 1/2 turn. This should hold the cord firmly in the coin collector.

Caution: Screwing the socket setscrew down more than one turn against the steel flexible hose may damage the cord conductors.

- (10) Remove the protective covering placed during drilling and replace the upper housing.

Caution: Carefully brush out all metal shavings from the coin collector, and dispose of them so that they will not cause injury or damage equipment.

- 2.27** Refer to Fig. 18 for routing and securing handset cord in 1-type coin telephone sets.

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2.28 Refer to Fig. 19 for routing and securing handset cord in 2-type coin telephone sets.

2.29 ♦Refer to Fig. 20 for routing and securing handset cord to 235/1235-type coin collectors.♦

D-180009 Switchhook Conversion Kit

2.30 The D-180009 switchhook conversion kit (Fig. 21) is designed to reduce switchhook blocking and permit a simple adjustment of switchhook travel. The conversion kit can be used for field conversion of 200-type and 1234-type coin collectors.

2.31 Two types of switchhooks *may be found* in the field: A one-piece switchhook with a long shaft and a two-piece switchhook with a short shaft and an adapter.

2.32 To remove a one-piece switchhook:

- (1) Remove and retain hex head machine screw, lockwashers, tension spring, switchhook arm assembly, and any spacing washer that may be present, from right end of shaft (Fig. 22).

- (2) Slide switchhook to the left and out of bearings.

2.33 If coin collector is mounted in a corner, a one-piece switchhook may be removed without removing the coin collector from backboard as follows:

- (1) Perform operations outlined in 2.32 (1).
- (2) Place the larger notch of a 710A bending tool on the switchhook hub as shown in Fig. 23, View A. Apply force on the tool as shown and move the switchhook out, bending it slightly.
- (3) Having partially bent the shaft, move the switchhook to the left. Place the smaller notch of the bending tool over the shaft as shown in Fig. 23, View B. Apply force on the tool as shown.
- (4) Continue moving the switchhook to the left and applying additional bends as needed to remove the switchhook.

2.34 To remove a two-piece switchhook:

- (1) Perform operations outlined in 2.32 (1).

- (2) Loosen the flathead screw which secures P-12E828 adapter (Fig. 24) to the switchhook shaft.

- (3) Slide switchhooks to left and out of bearing.

- (4) Slide adapter to left and out of bearing.

2.35 Remove wire guide clamp (Fig. 22).

2.36 To install new switchhook kit:

- (1) Install P-20F161 wire guide clamp (Fig. 25) on backplate. Ensure that wiring is routed as shown.

- (2) Select correct bushing (Fig. 21) and slide over shaft of switchhook.

- (3) Secure bushing on shaft with a cotter pin (Fig. 26).

- (4) Slide the P-20F155 adapter assembly into right bearing (Fig. 26).

- (5) Slide switchhook assembly with bushing installed through left bearing to mate with adapter assembly.

- (6) Secure adapter to shaft with hex socket head cap screw (Fig. 27) which is furnished with kit.

- (7) Install P-297872 spring washers as required to reduce excessive end play. End play of switchhook shaft shall not exceed 1/32-inch.

- (8) Place switchhook arm assembly (Fig. 28) retained in 2.32 over switchhook shaft and secure to end of adapter shaft with lockwasher and hex head machine screw. Install tension spring.

2.37 Adjust switchhook travel with the two adjusting screws (Fig. 28) to meet contact spring pile up requirements and check switchhook operation per Section 506-310-100.

2.38 Ensure that all wires are clear of adapter travel and adjusting screws.

Coin Relay Guard Assembly

2.39 A special case-hardened steel antidrill guard assembly (KS-20892) is available to prevent fraudulent operation of coin relay in single slot coin telephone sets (Fig. 29). The guard assembly must be ordered separately.

2.40 When the antidrill guard assembly is used, the existing coin relay plastic dust cover must be trimmed to fit around the guard assembly. Trim the dust cover per Fig. 30 using electrician scissors or side cutters.

Note: Currently manufactured dust covers are provided with guide lines to follow when cutting. When these lines are provided, disregard Fig. 30.

2.41 Secure the antidrill guard assembly to the set using the existing return chute assembly mounting screw (Fig. 29).

840360184 Knob and Shaft Assembly

2.42 The 840360184 knob and shaft assembly (Fig. 31) is designed as a replacement for the lever-type coin release handle and shaft assembly on single slot coin telephone sets in areas where a high rate of vandalism has resulted in serious damage to internal linkage and other chute actuating components.

2.43 A built-in clutch arrangement ensures that the chute actuating components are neither damaged nor destroyed if the knob is forcibly turned beyond its normal rotational limit.

2.44 Notches and indentations on the sloped turning surface minimize slippage of the fingers.

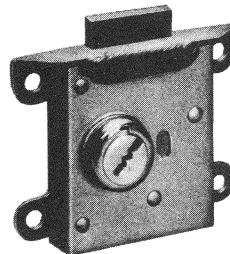
2.45 To replace the lever-type coin release with the knob-type (Fig. 32):

- (1) Remove cover unit assembly (1-type set) or open door and faceplate assembly (2-type set).
- (2) Remove and retain RM-651418 screw which secures link and lever assembly to coin release lever shaft. Remove lever and shaft assembly.

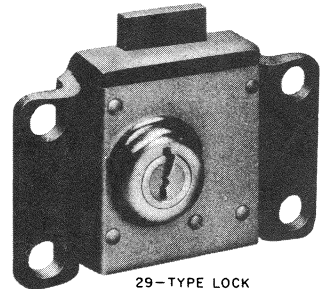
- (3) Insert knob and shaft assembly and ensure that arrow on knob is oriented as shown.
- (4) On a panel coin telephone set, the steel spacer must be used.

Note: Do not use spacer on a 1-type set.

- (5) Place link and lever assembly over rear of shaft and secure with the RM-651418 screw retained in (2).



10-TYPE LOCK



29-TYPE LOCK

Fig. 1—Upper Housing and Cover Assembly Locks

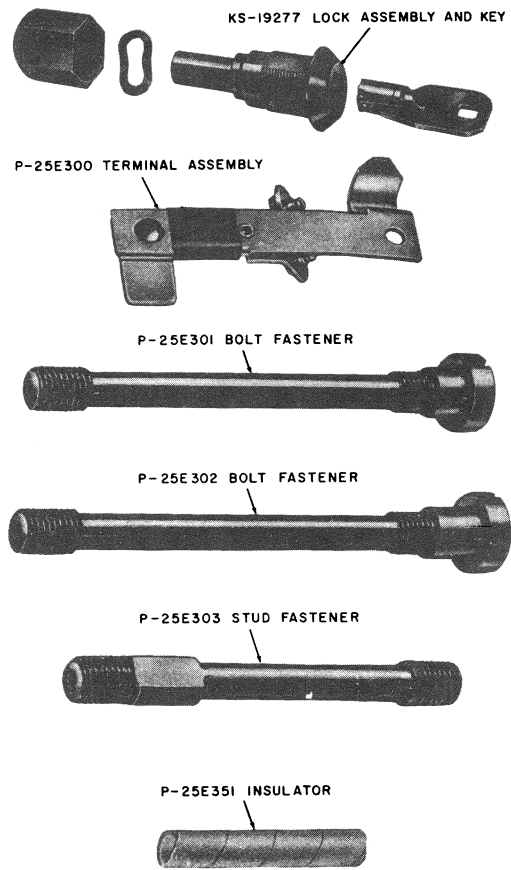


Fig. 2—KS-19277 Lock and Associated Parts

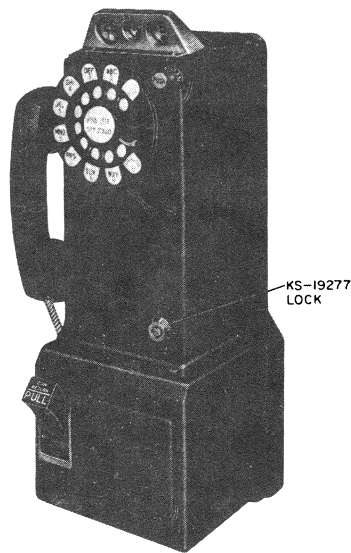


Fig. 3—Coin Collector Equipped With KS-19277 Lock

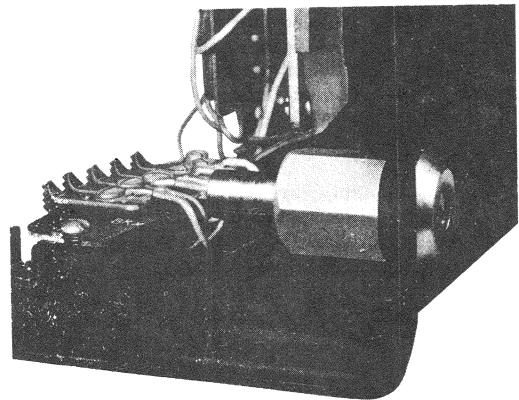


Fig. 4—KS-19277 Lock Installed in Upper Housing

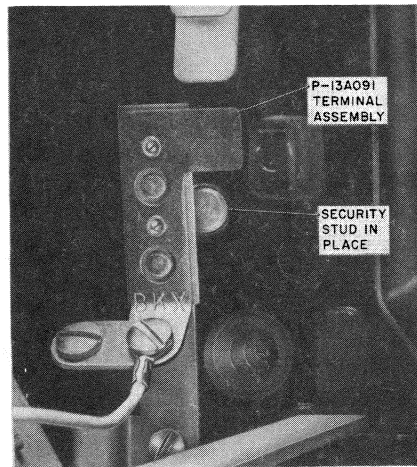


Fig. 5—P-13A091 Terminal Assembly with Security Stud Installed

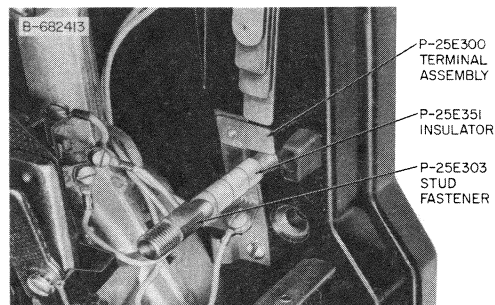


Fig. 6—Terminal Assembly, Insulator, and Stud Fastener

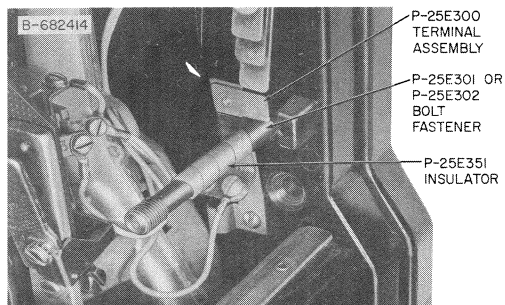


Fig. 7—Terminal Assembly, Insulator, and Bolt Fastener

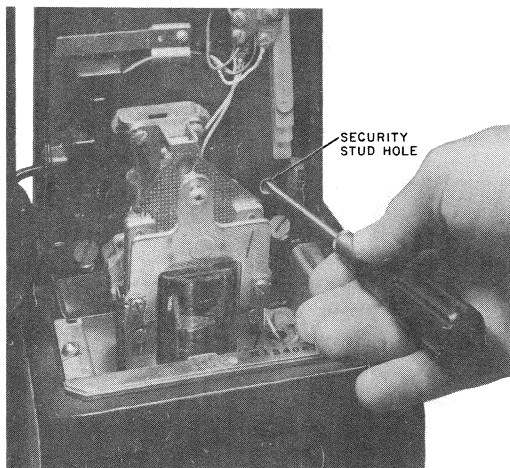


Fig. 8—Determining Presence of Keyhole Slots

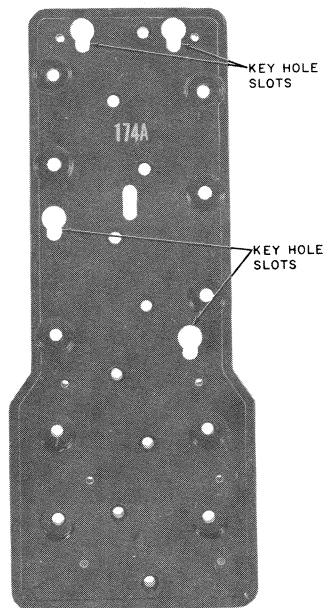


Fig. 9—174A Backboard with Keyhole Slots for Security Studs and Bolt Fastener

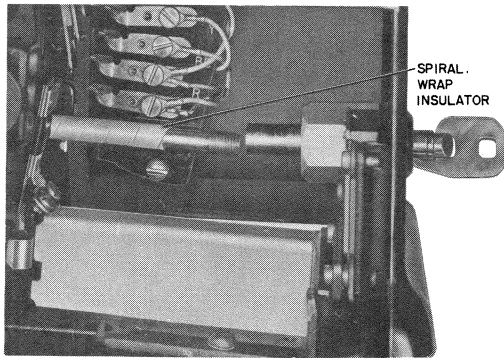


Fig. 10—Cutaway Section of Upper Housing Showing Mating of Bolt Fastener and KS-19277 Lock

NOTE:

ALL DIMENSIONS SHOWN ARE IN INCHES.

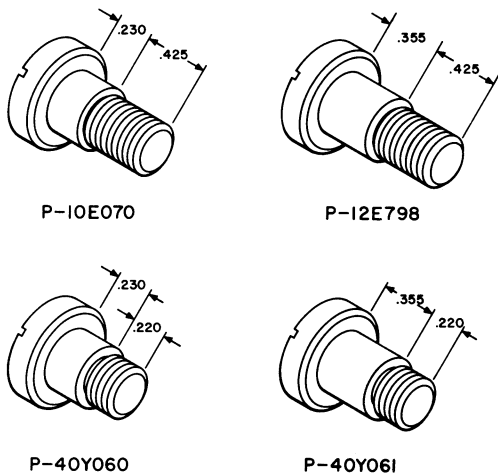


Fig. 11—Security Studs

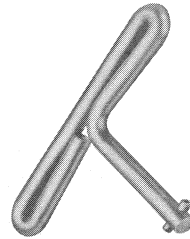


Fig. 12—719A Tool

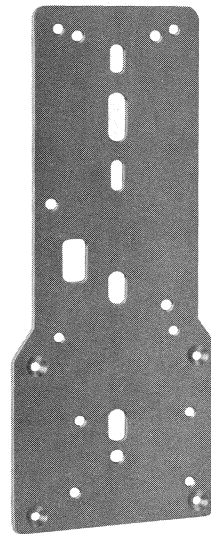


Fig. 13—1A Backplate

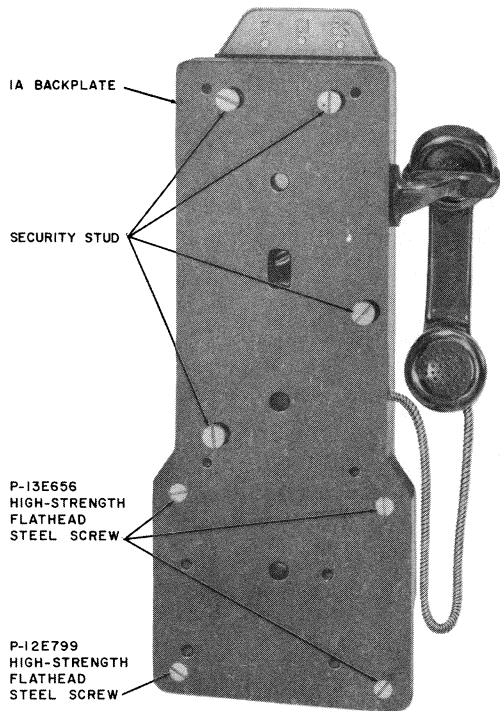


Fig. 14—Rear View of Coin Collector with 1A Backplate Attached

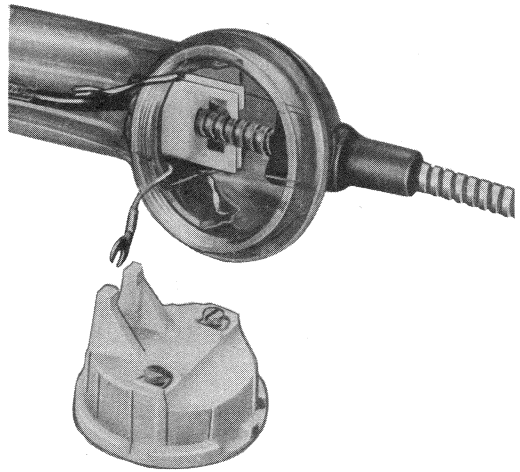


Fig. 15—Handset with Armored Cable

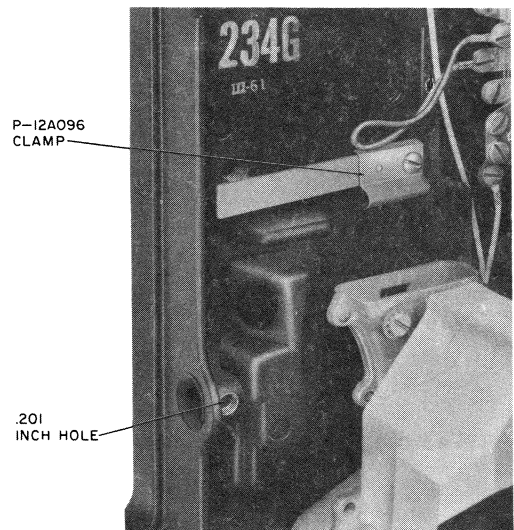


Fig. 16—Location of .201 Inch Hole

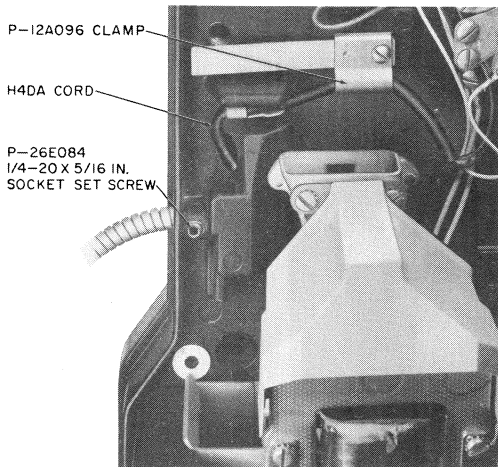


Fig. 17—Installation of Armored Cord

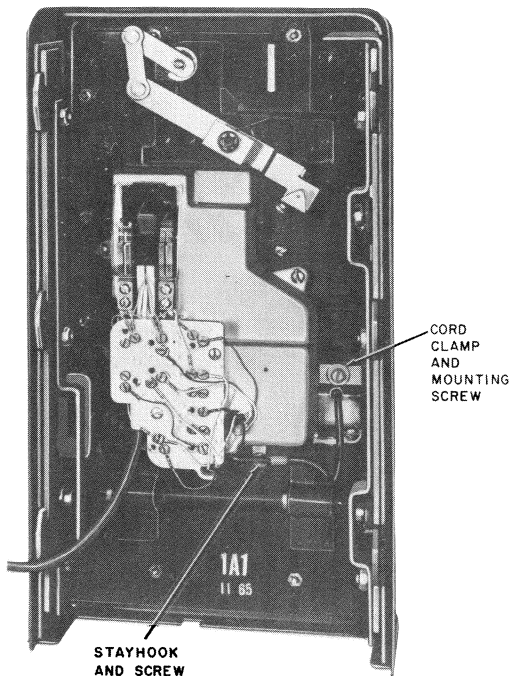


Fig. 18—Location of Armored Cord Mounting Hardware in 1A/1C-Type Coin Telephone Set

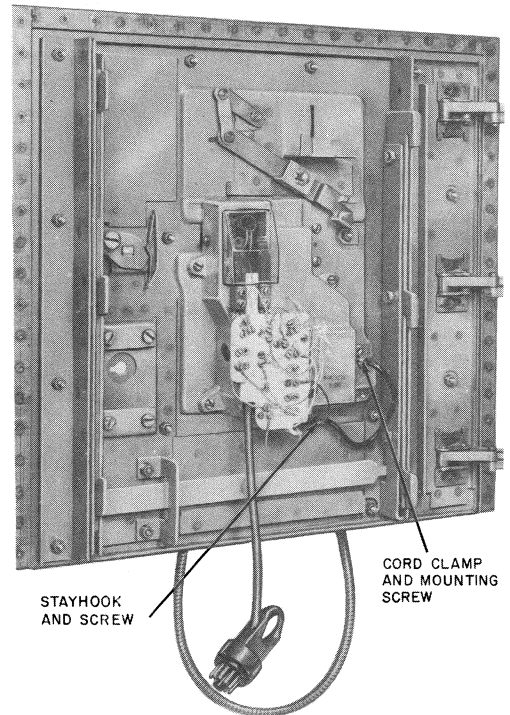


Fig. 19—Location of Armored Cord and Mounting Hardware in 2A/2C-Type Coin Telephone Set

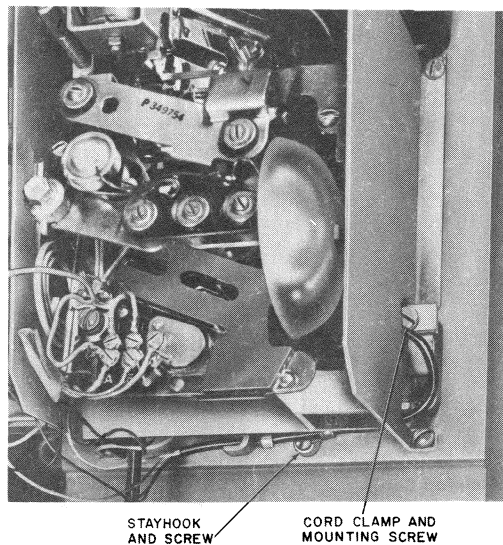


Fig. 20—Location of Armored Cord and Mounting Hardware in 235/1235-Type Coin Collector

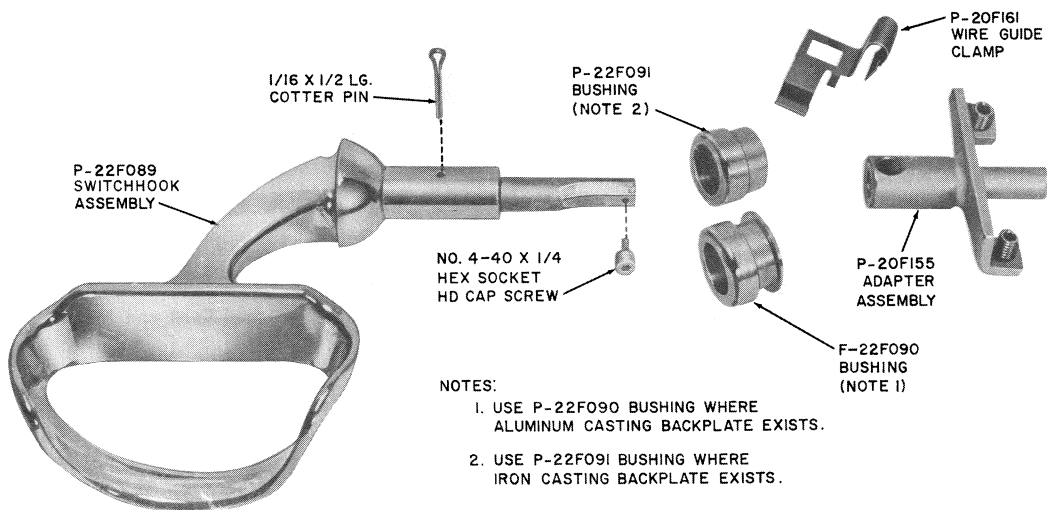


Fig. 21—D-180009 Switchhook Kit

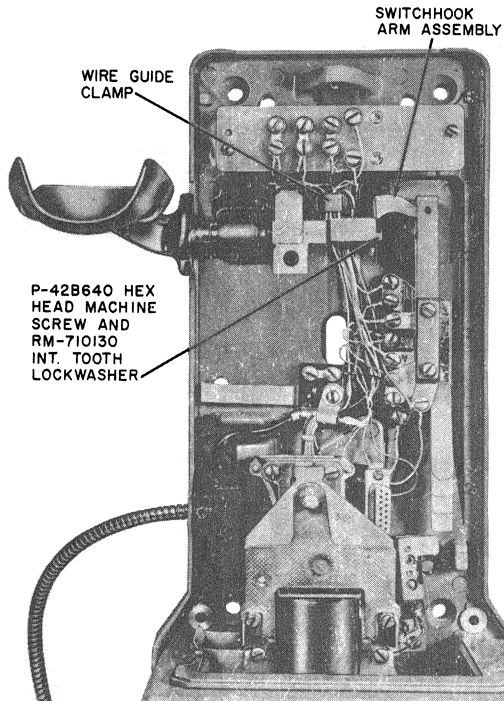


Fig. 22—Switchhook Installed

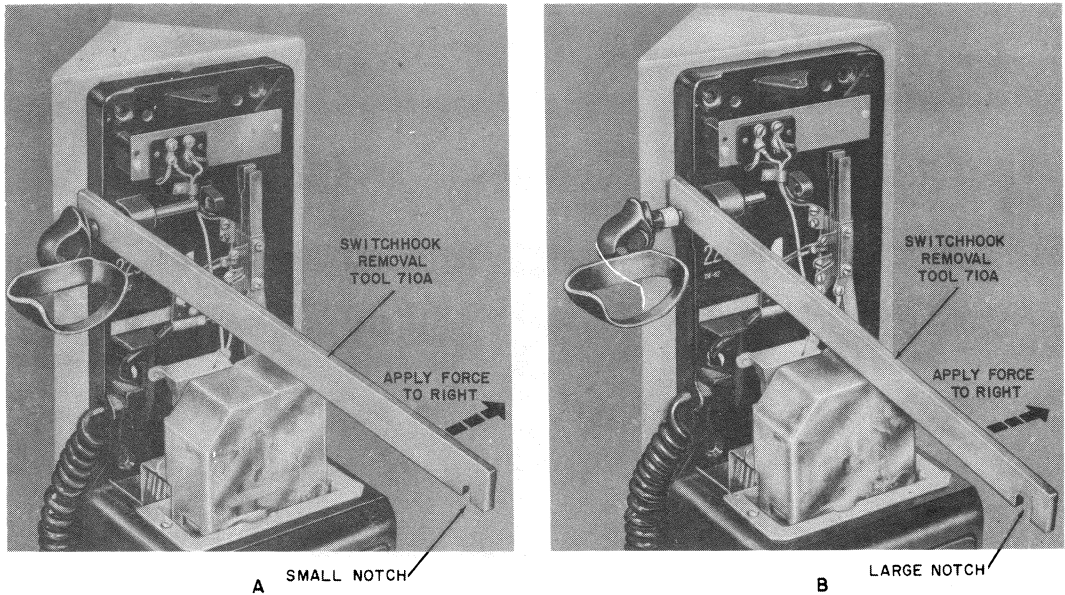


Fig. 23—Removal of One-Piece Switchhook Located in Corner

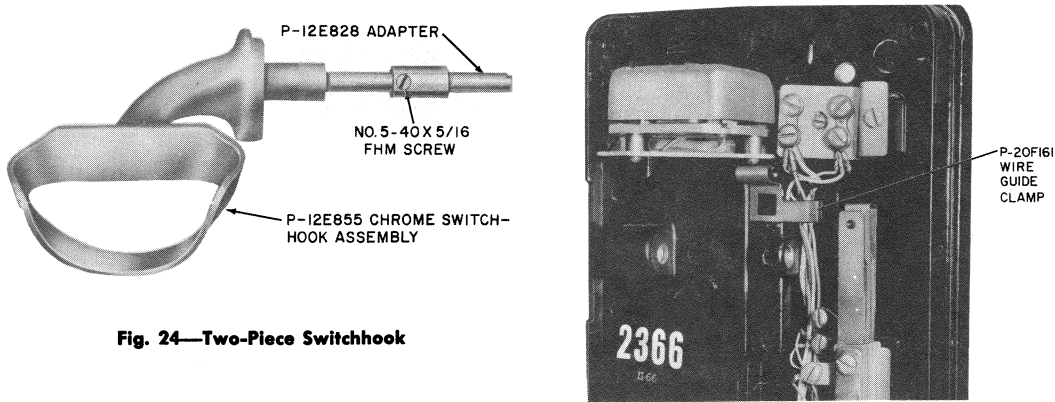


Fig. 24—Two-Piece Switchhook

Fig. 25—Installation of Wire Guide Clamp

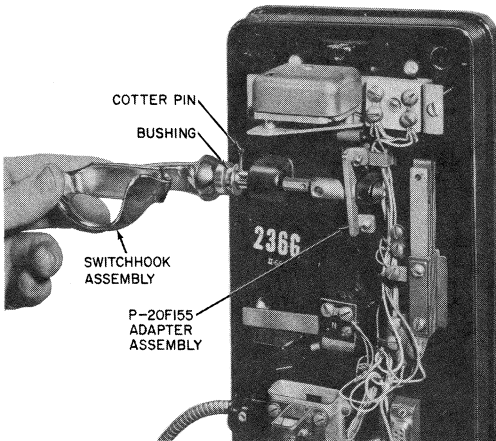


Fig. 26—Installation of Adapter Assembly and Switchhook Assembly

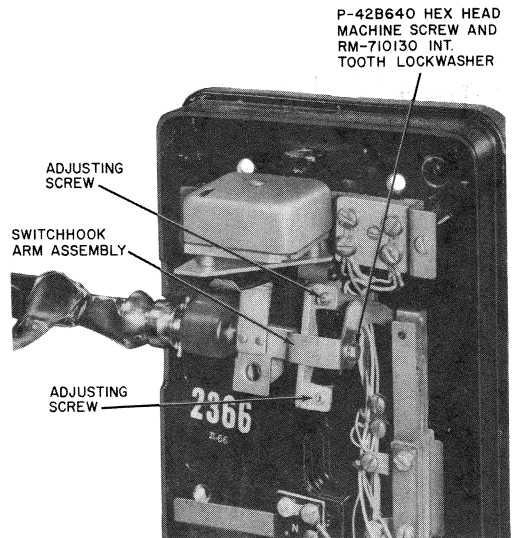


Fig. 28—Installation of Switchhook Arm Assembly

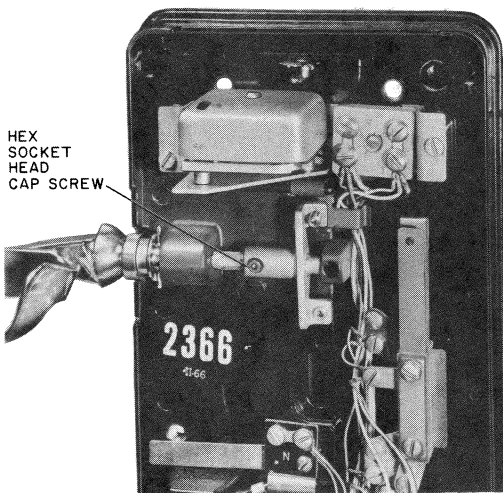


Fig. 27—Method of Securing Adapter to Switchhook Assembly

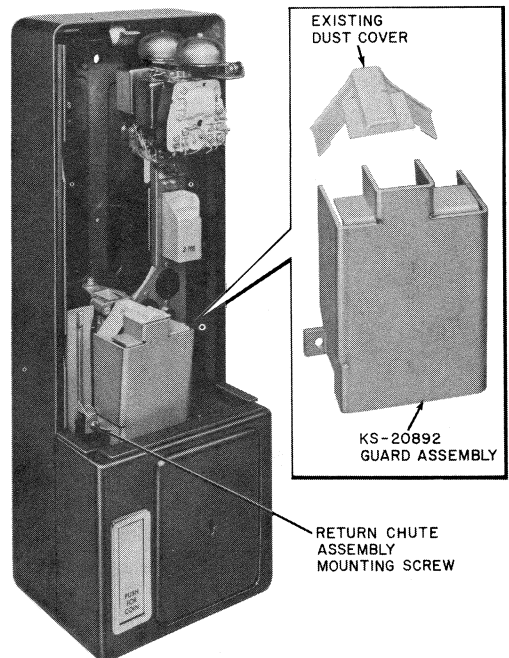
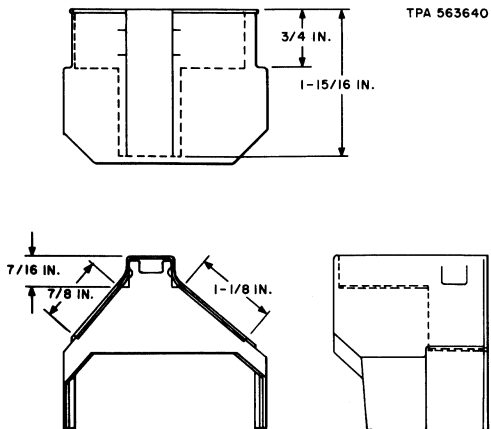
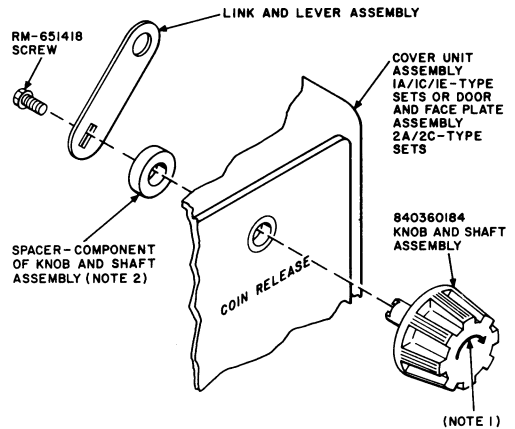


Fig. 29—Relay Antidrill Guard Arrangement



- NOTES:
1. CUT ON DASHED LINES TO DIMENSIONS SHOWN.
 2. CURRENT DUST COVERS ARE PROVIDED WITH DASHED LINES.

Fig. 30—Outline for Cutting Dust Cover



- NOTES:
1. INSTALL KNOB WITH ARROW IN THIS POSITION.
 2. USE THIS SPACER ON 2A/2C-TYPE SETS ONLY.

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Fig. 32—Installation of 840360184 Knob and Shaft Assembly

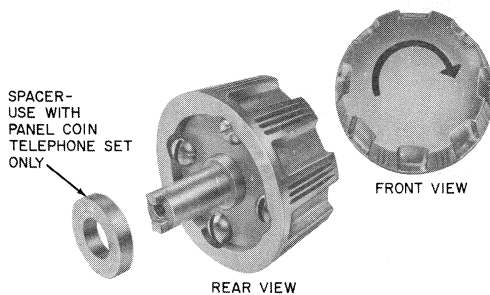


Fig. 31—840360184 Knob and Shaft Assembly