

BELL SYSTEM PRACTICES
Station Installation and Maintenance

ADDENDUM C42.144
Issue 2, April, 1955
AT&T Co Standard

COIN COLLECTORS

MULTISLOT TYPES

MAINTENANCE

1. GENERAL

1.01 This addendum supplements Section C42.144, Issue 1, and cancels Section C42.145, Issue 1. It is reissued to include information on the following:

- (a) The neoprene cover for the 101-type induction coil.
- (b) The P-14A544 coin deflector.
- (c) The polystyrene coin-relay cover.
- (d) [Procedure for replacing pull buckets and restoring springs on the 195- and 197-type coin collectors.]
- (e) Adjustment of the gate operating arm by using the 178A and 178B gauges.
- (f) Maintenance of the special features of the F-50436, F-50437, 196-, and 197-type coin collectors.
- (g) Conversion of 181-, 191-, and 195-type coin collectors to the 196 and 197 types. Earlier-type coin collectors cannot be converted.

Due to extensive changes, marginal arrows have been omitted.

1.08 Add paragraph as follows: The F-50436, F-50437, 196-, and 197-type coin collectors differ from the 191- and 195-type in that a washer rejector mechanism has been added in the upper housing. A push-button mechanism has also been provided to assist in discharging material that may become struck in the region of the rejector mechanism and the upper portion of the coin chute.

1.09 Add paragraph as follows: The 158B number plate and the 63A dial adapter have been modified as follows:

- (a) The redesigned 158B number plate, identified by a red dot on the back side near the operator position, has larger studs.

- (b) P-18A038 mounting nuts fit the larger studs (three supplied with each 63A adapter).
- (c) The redesigned 63A dial adapter, identified by a 1/8-inch round depression or projection adjacent to the code number, has larger holes. **The adapter with the large holes must be used with the number plate having the large studs.**

2. TOOLS, GAUGES, AND MATERIAL

2.01 Add the following:

178A and 178B Gauge, see 5.24

*TP-75503 Spring Hook (push type), see 5.13

KS-14995 Coin Collector Tool (trap and vane release test), see 5.02

Modified 147A Gauge, see 5.02, 5.06, and 7.03

KS-14164 Brush (cleaning), see 3.12

KS-14774, List 1 Lubricating Grease, 4-ounce tube or 1-pound can

*The following parts may be used for replacement of damaged pull buckets:

P-16A829 Bucket Assembly

P-340416 Shaft

P-340417 Spring (two required)

3. CLEANING

3.09 Change to read as follows: Housing contacts shall be clean. If the contacting surfaces appear dirty or badly tarnished, clean with No. 00 abrasive **or finer** cloth and wipe off with Dextilose paper or a KS-2423 cleaning cloth.

Add the following:

Coin Ejector Mechanism—196- and 197-type Collectors

3.11 Before starting to clean, remove upper housing and coin chute. Check rejector mechanism for damage. If evident, replace upper housing. **Do not attempt to bend or reposition wheels or castings.**

3.12 Clean push button with small amount of KS-7860 petroleum spirits applied with KS-14164 brush, remove excess petroleum spirits and dirt with KS-2423 cloth, wipe dry, and lubricate with small amount of KS-14774 lubricant.

3.13 Remove dust from rejector mechanism with dry KS-14164 brush; if wheels do not operate freely, clean with small amount of KS-7860 petroleum spirits applied with

KS114164 brush; remove excess petroleum spirits and dirt with pipe cleaner or equivalent. If wheels do not move freely after cleaning, replace upper housing. **Do not lubricate.**

3.14 Clean upper mounting screws and springs with KS-2423 cloth moistened with KS-7860 petroleum spirits; clean bushings in coin chute with pipe cleaner or equivalent moistened with petroleum spirits, wipe dry, and lubricate with small amount of KS-14774 lubricant. Reassemble mounting screws and springs; remount coin chute in upper housing. **Do not lubricate lower mounting screw or rubber grommet.**

4. UPPER HOUSING

4.03 Cancel note.

Add the following:

Coin Deflector

4.13 **The P-14A544 coin deflector** which replaces the D-158436 coin deflector is designed for coin collectors equipped with the 5-type dial and the 56A dial adapter. For the coin collectors equipped with a 6-type dial and a 63A dial adapter, the dial adapter provides the necessary deflecting means.

4.14 The P-14A544 deflector consists of a black metal band so formed that it is easily snapped over the top of the 56A dial adapter without removing either screws or nuts.

4.15 Fig. 19 shows the deflector being installed, and Fig. 20 shows it in place.

Interference between Induction Coil and Coin Chute

4.16 196- and 197-type coin collectors manufactured prior to the third quarter of 1954 have a very close tolerance between the induction coil and the coin-chute electromagnet. The time of manufacture is indicated by a marking such as III 54 which means third quarter of 1954. This mark is inside the upper housing near the code number of the coin collector. If there should be any interference when the reject button is pressed, it will be necessary to move the induction coil slightly to the left. This can be done by bending the leg on the induction coil as shown in Fig. 21. **It will be necessary to move the coil only about 3/32 inch.**

Caution: Coil must move straight to the left. Hold down as shown to avoid its bending up or out, as it will then interfere with the coin chute as it is tilted by the coin-release button.

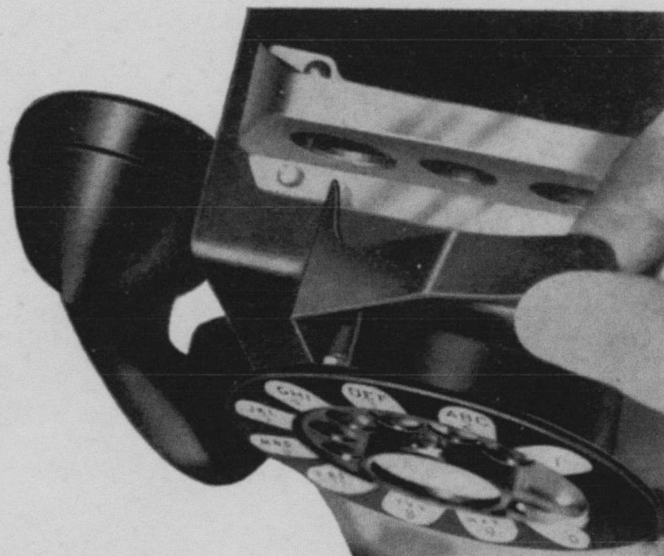


Fig. 19—Installing P-14A544 Coin Deflector

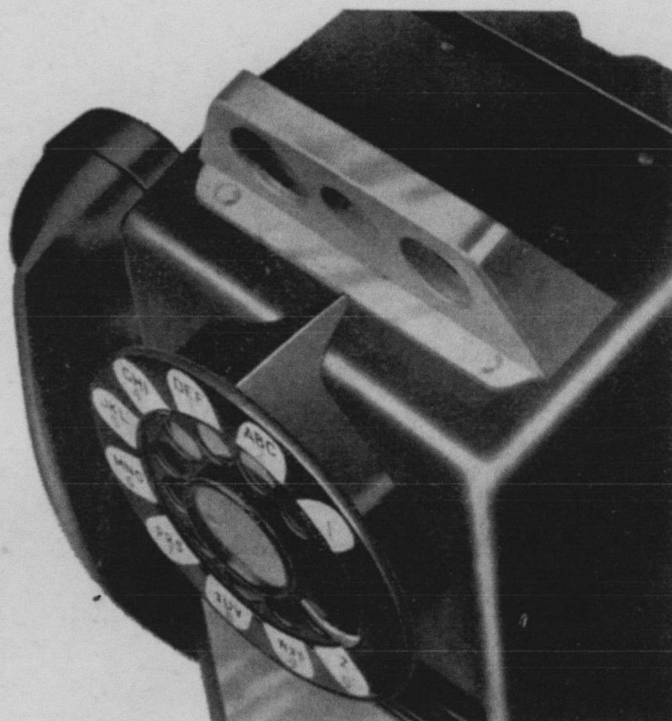


Fig. 20—P-14A544 Coin Deflector

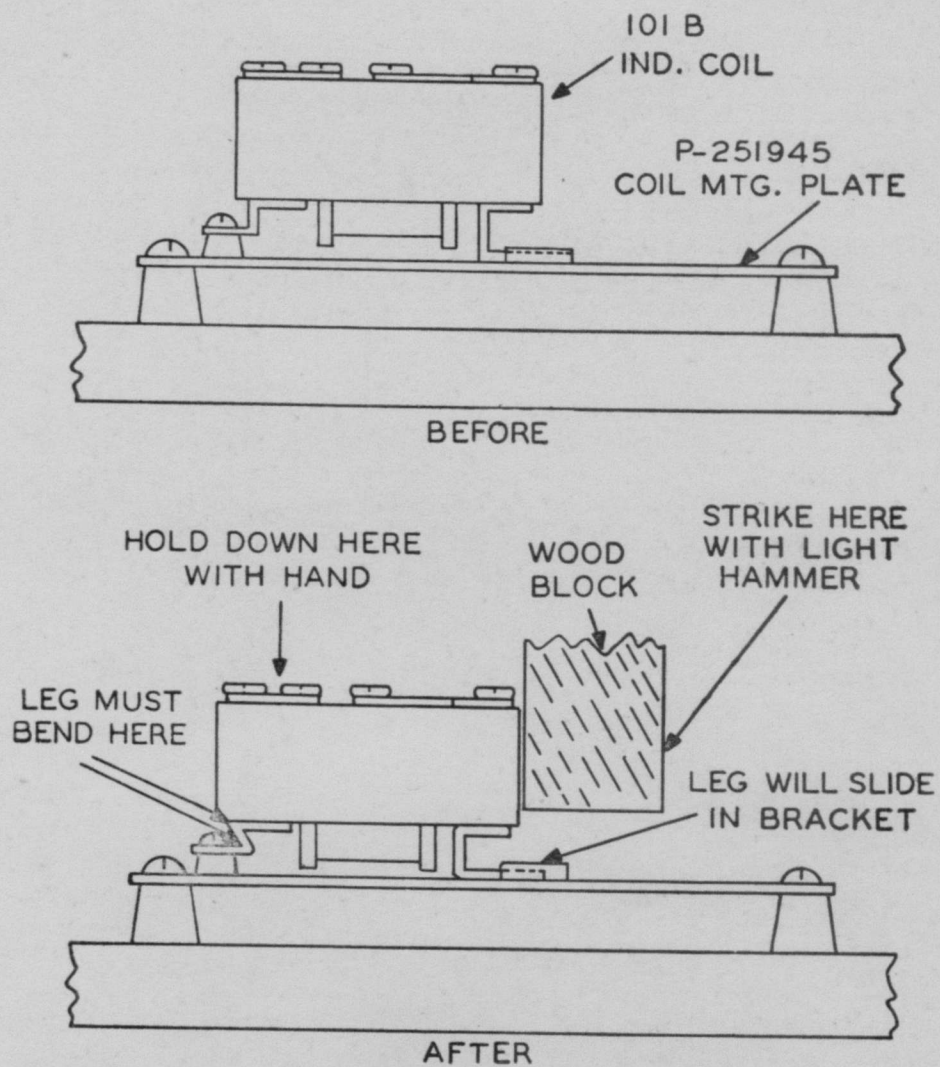


Fig. 21—Moving Induction Coil to Clear Coin Chute Electromagnet

5. LOWER HOUSING AND BACKPLATE ASSEMBLY

5.02 Add new sentence as follows: The 147A gauge has been modified as shown in Fig. 22. The older 147A gauge may be modified in the field as shown in Fig. 22.

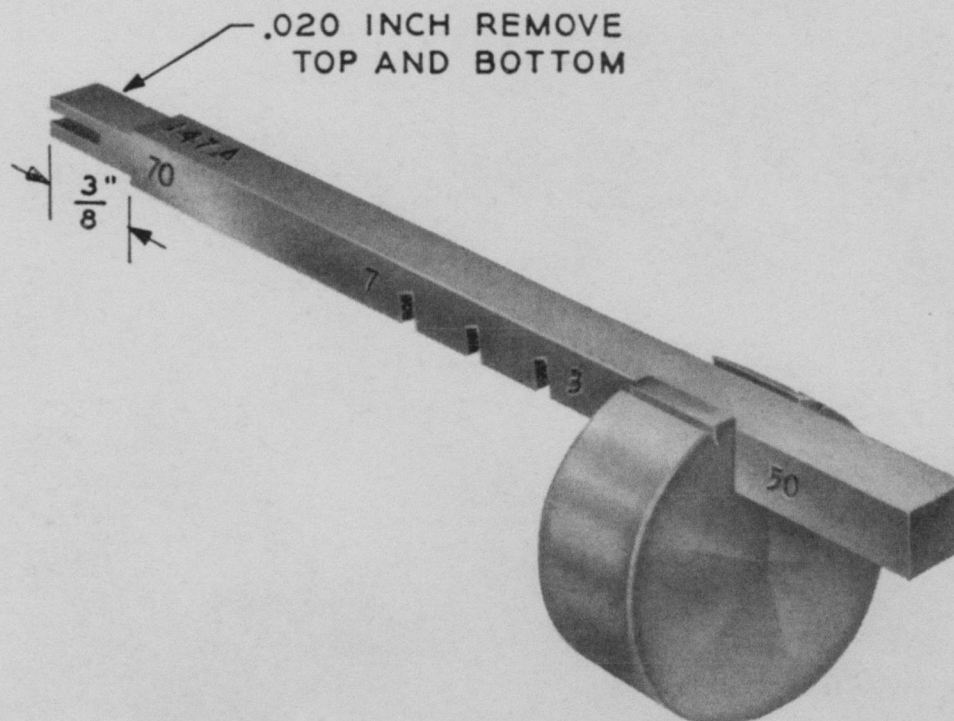


Fig. 22—Modified 147A Gauge

5.13 Change to read as follows: The pull bucket shall operate without binding. It shall not be broken and shall be free from sharp burrs and nicks that could cause personal injury. Bucket shall restore freely to the fully closed position when released slowly from the fully opened position. If necessary to replace bucket or springs, proceed as follows:

- (1) Place a KS-7991 (temporarily out of service) sign, and arrange to have coin compartment unlocked according to local instructions.
- (2) After coin receptacle has been removed, pry up tabs on end of shaft (which appear in coin compartment) with screwdriver and compress with lineman's pliers to line up with shaft. Remove shaft.

- (3) Swing pull bucket to open position and remove from housing by pulling outward. **Do not pry bucket from return chute.**
- (4) Discard old shaft and spring. (May have one or two springs.)

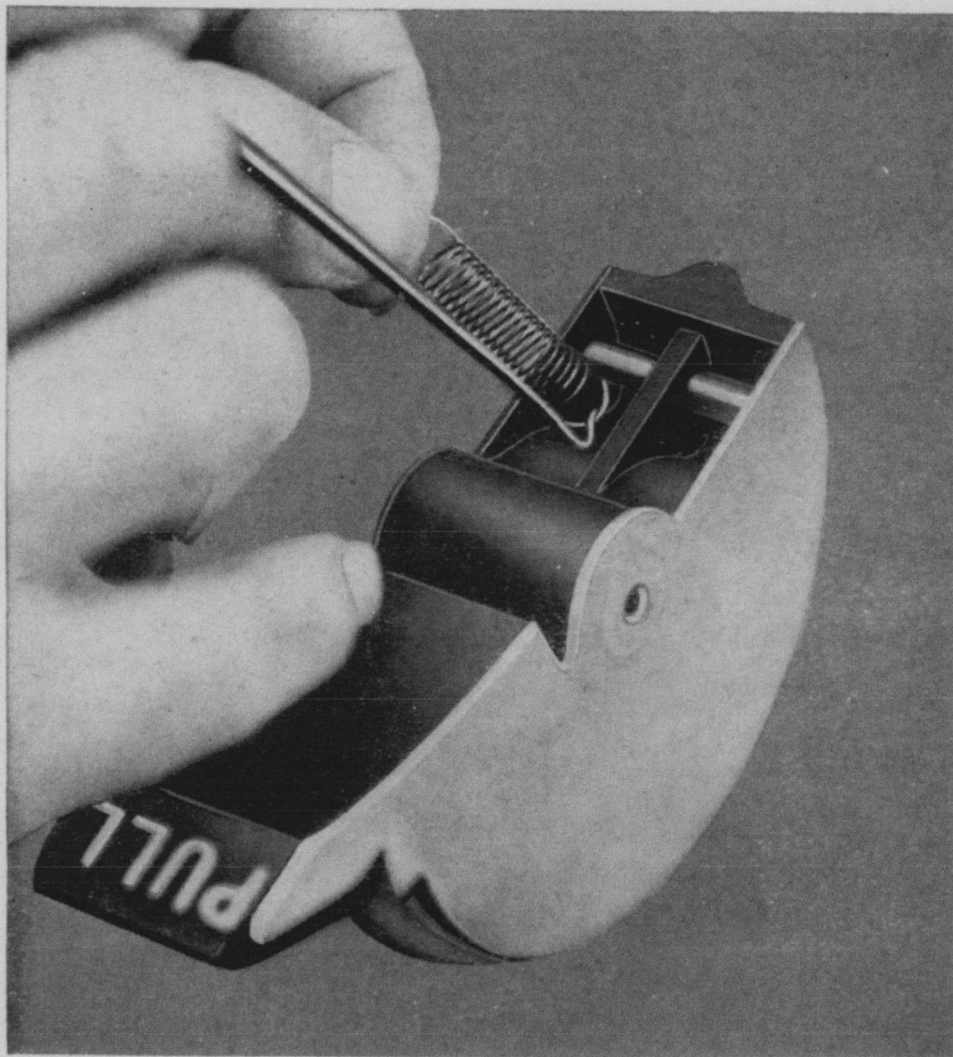


Fig. 23

- (5) Use TP-75503 spring hook to assemble two new springs on pull bucket.

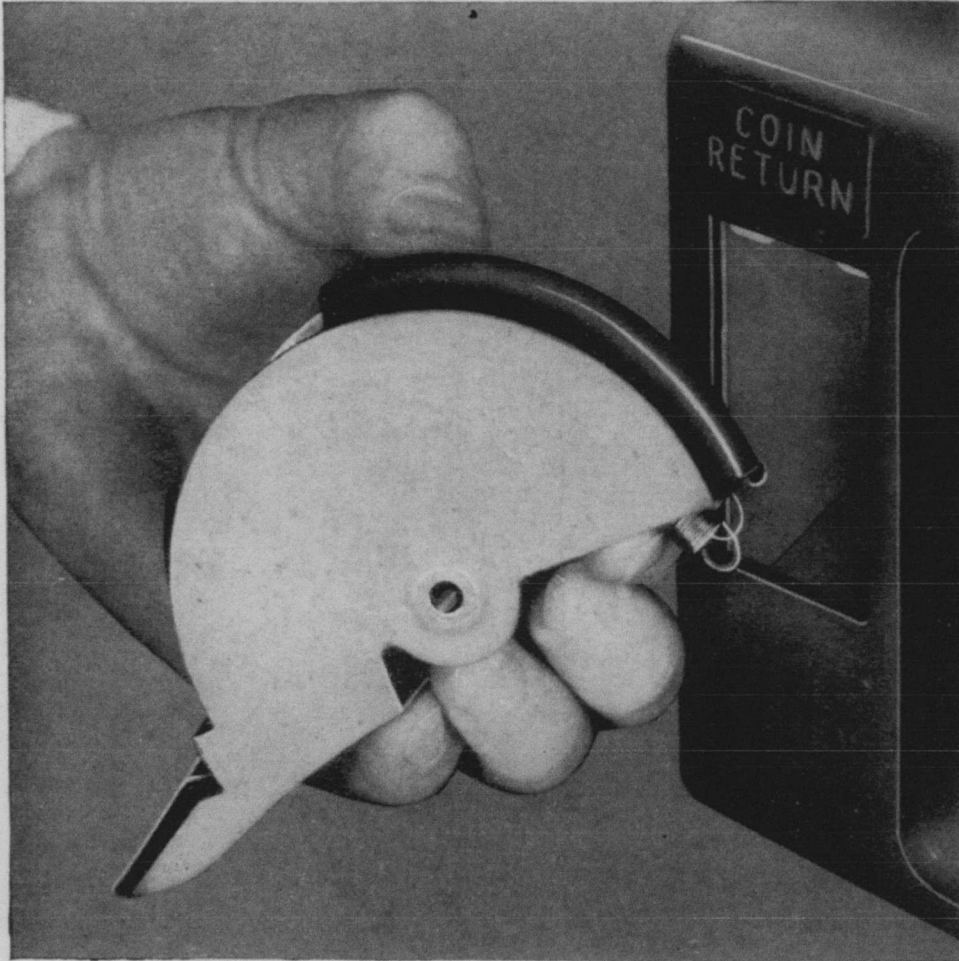


Fig. 24

- (6) Hold bucket as shown in Fig. 24. Support springs with finger so springs extend slightly into chute opening.

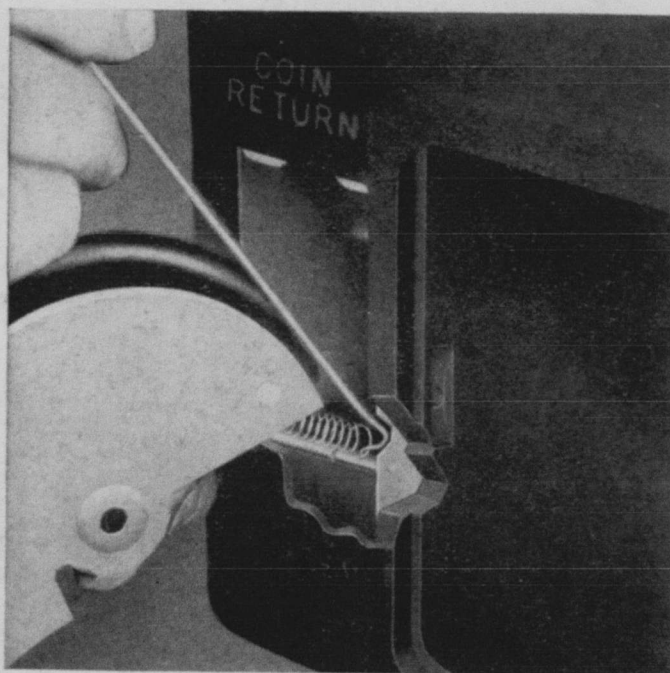


Fig. 25

- (7) Use spring hook to engage both springs with pin in return chute. Use care to prevent distortion or over stretching of the springs.
- (8) Insert and hold pull bucket in normal position in return chute.

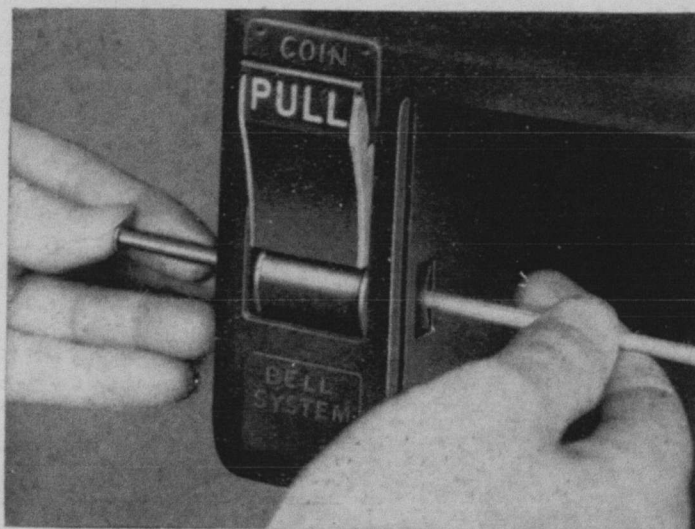


Fig. 26

- (9) Line up holes in bucket and housing with an orange stick or equivalent and insert new shaft.

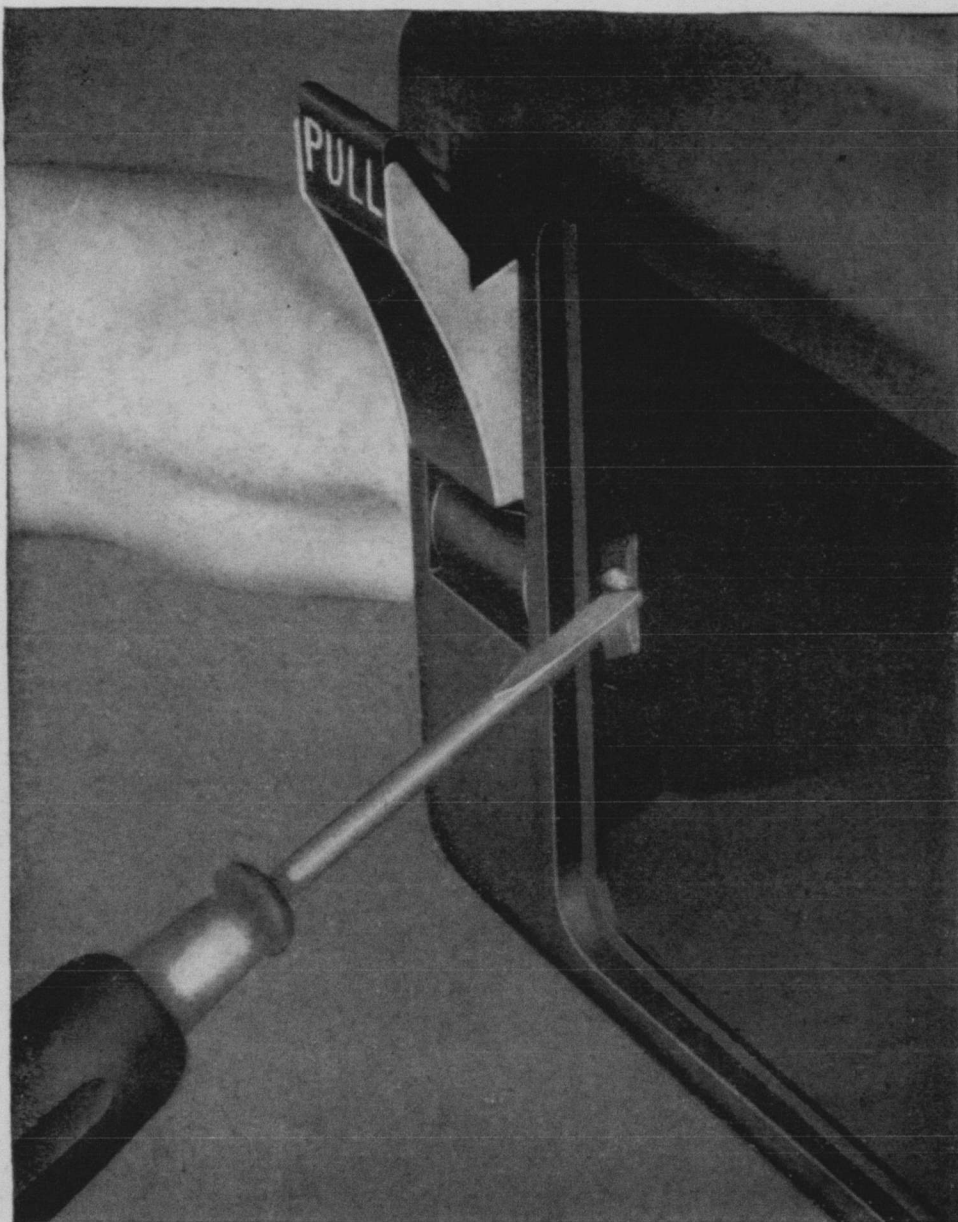


Fig. 27

- (10) Hold shaft in place and spread slotted end with screwdriver. Bind tabs down flush with partition.
- (11) Repeat operation test. If bucket still fails to operate properly, replace the coin collector.

(12) The **coin-return chute** on the later 195- and 197-type coin collectors is designed with embossings at the shaft holes.

(a) The earlier-type **pull bucket** which is embossed **around its shaft holes** shall not be used with these chutes.

(b) The later-type **pull bucket without embossing** may be used with either coin-return chute.

5.14 Change subparagraph (a) to read as follows:

(a) Clean and lubricate the fork and the vane pin. If bearing surfaces of fork are so rough that they cannot readily be made smooth, replace relay, otherwise smooth rough spots using a small piece of No. 00 abrasive **or finer** cloth folded as shown in Fig. 9. Clean off with a KS-2423 cleaning cloth moistened with KS-7860 petroleum spirits. Apply the lead of a grade 2B or softer lead pencil to bearing surfaces of fork slot. Rub the lead on these surfaces so as to deposit as continuous a coating as practicable.

5.16 Change to read as follows: Check that the 37A varistor is present, connected properly as shown in connection practice. Very little clicks should be heard in the receiver when coin relay operates. Add varistor as necessary in all stations. Insulating finish on lead-out terminal (not wire) shall not be badly cracked or chipped. If so, varistor shall be replaced.

5.23 Change to read as follows: [When upper housing is locked in place, with gate in fully closed position, and with switchhook in **up** position, the gate operating arm of the switchhook assembly shall clear roller on gate lever of coin chute. Also arm shall clear induction coil, with cover, if present. When switchhook is operated to its **down** position, the gate operating arm shall open gate 2/3 or more of its full travel. This may be checked in accordance with 5.24.]

5.24 Change to read as follows: [**Arm Adjustment**] [The gate operating arm adjustment may be considered met by using a 178A or 178B gauge as indicated in Fig. 28.

(a) **In the up position**, the bottom surface of the curved end of the arm shall be between the two arcs and between lines C and D.

(b) **In the down position**, the bottom surface of the curved end of the arm shall be between the two arcs and between lines A and B.]

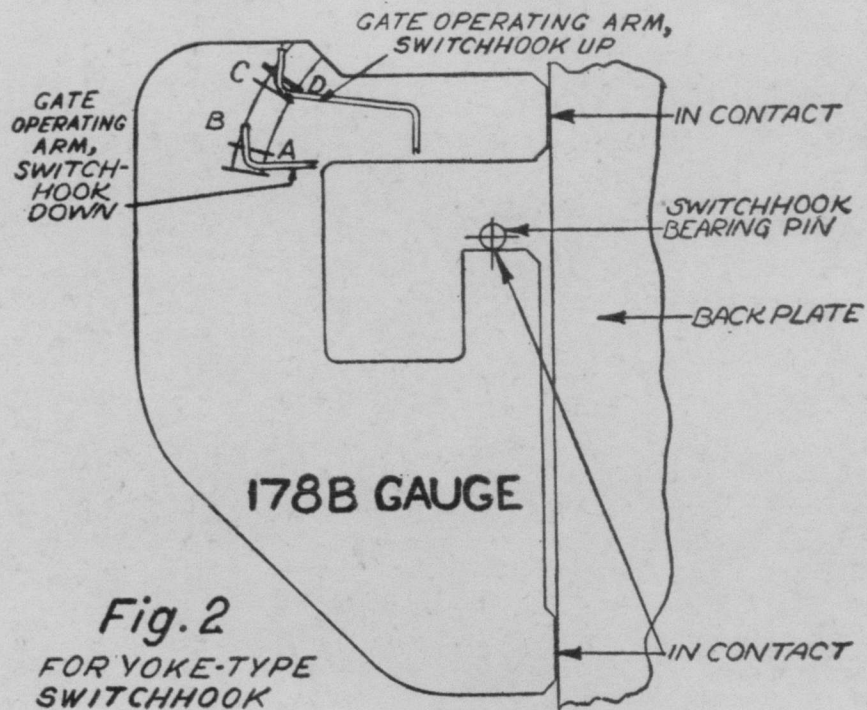
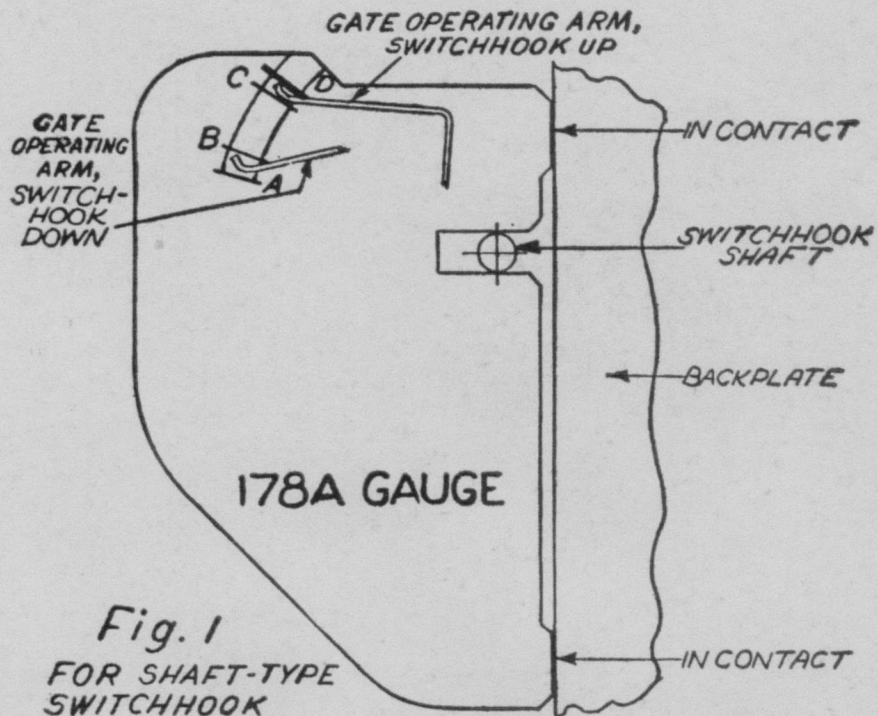


Fig. 28—Gate Operating Arm Assembly

Add the following :

Neoprene Cover 101-type Coils

5.25 **A neoprene cover, P-16A833**, for the 101-type induction shall be used in all coin collectors that are equipped with this type coil and used for 10¢ service.

Caution: When the neoprene coil cover is installed, it may accidentally be placed over the gate operating arm which is directly below the coil. This may be avoided by hanging the handset on the hook before placing the cover. Remove handset before replacing upper housing.

5.26 The wiring on the 101-type induction coil shall be dressed in accordance with Section C42.106, Coin Collectors, Multislot Types, for 10¢ Initial Charge Basis, Cording, before installing the P-16A833 cover.

Polystyrene (Plastic) Shield

5.27 **A coin relay shield P-349486**, molded of polystyrene, replaces the KS-7994 fibre shield. It is held in place with a **P-13A963 hairpin clamp**. To install clamp, grip closed end with long-nose pliers while exerting slight pressure on shield near pivot screw hole, then snap clamp in place between lock-nut and head of coin-relay pivot screw. On coin collectors equipped with a D-95365 contact device, use the new P-16A336 shield which is the same as the P-349486 except that the lower-left corner is cut away so as not to interfere with the contact device. When the new shields are not available, the KS-7994 shields should be used.

Add new part as follows :

13. 196- AND 197-TYPE COIN COLLECTORS

13.01 Maintenance Parts for 196 and 197 Types

P-20A119 Coin Chute

P-12A680 Coin Mounting Screw (two required)

P-12A681 Chute Restoring Spring (two required)

13.02 The following tests apply in addition to the tests specified in Part 4 covering the maintenance of 191- and 195-type coin collectors.

13.03 With the push button in its normal **out** position, there shall be no contact between the gate operating bracket and any part of the gate lever.

13.04 With the push button in its normal **out** position, the coin chute shall rest against both stop surfaces of the frame assembly, not against the push button.

13.05 The push button when fully operated shall cause the coin chute to move approximately 1/4 inch, thus causing the lower roller on the gate lever to contact the stationary bracket and operate the gate lever to within 1/32 inch of its fully operated position. Gauge by eye.

13.06 Release of the push button shall allow the coin chute to move freely to its normal position against its stops on the frame assembly.

Caution: If the adjacent cardholder mounting screw interferes with electromagnet cover, clip off end of screw.

13.07 With upper housing locked in place and the cutover clip removed, deposit nickel in 5¢ slot—coin shall stop at first latch; depress coin-release button—coin shall drop into coin-return chute.

13.08 The push button shall not bind in its fully **out** position, fully **in** position, or at any point over its length of travel.

13.09 If push-button mechanism fails to meet above requirements, clean and lubricate as outlined in Part 3. After cleaning, if trouble is still experienced, replace upper housing or coin collector as required.

Conversion From 191- to 196-type and 195- to 197-type Coin Collectors

13.10 Conversion Parts

P-13A766 Equipped Upper Housing

P-16A833 Induction Coil Cover

*P-251945 Coil Mounting Plate

*P-299453 Coil Mounting Screw

P-122061 Plate Mounting Screw

*101B Induction Coil (modified per drawing B-905000)

* Required only when converting older 191- to 196-type and 195- to 197-type coin collectors.

13.11 Remove upper housing.

13.12 Check induction coil for positions. If GN and R terminals are on the left-hand side, the induction coils should be removed and mounted as shown in Fig. 29. It will be necessary to replace the mounting plate with a P-251945 coil mounting plate.

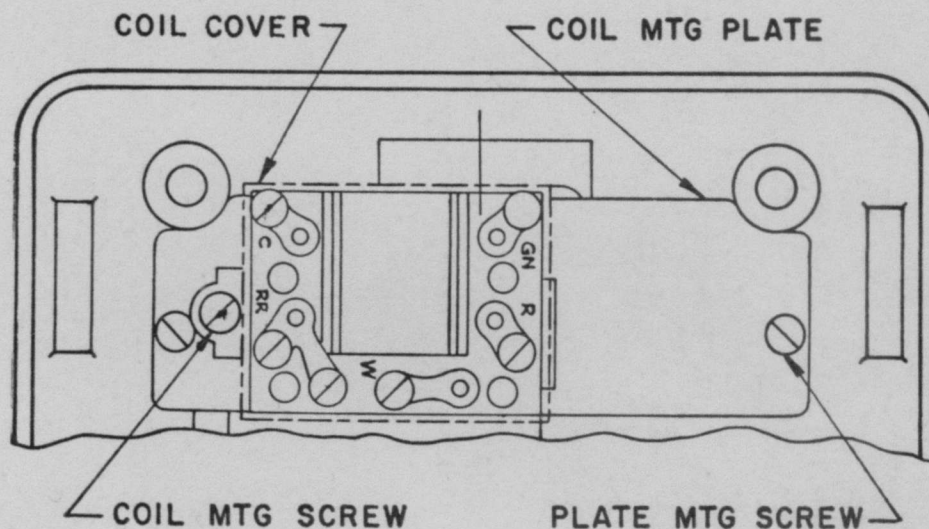


Fig. 29—Induction Coil Mounting

13.13 Conversion of coin collectors manufactured prior to 1953 will require replacing the induction coil with a 101B induction coil modified per drawing B-905000. This modified coil has been lowered to prevent interference with the coin chute when the reject button is pressed.

13.14 Place induction coil cover.

13.15 In 5¢ areas insert cutover clip in chute.

13.16 Place new coin-rejector type upper housing.

13.17 Make the tests covered in 13.02 to 13.09.