COIN COLLECTORS
50 AND 150 TYPES
DESCRIPTION AND OPERATION

1. GENERAL

1.01 This section gives general information pertaining to multi-slot coin collectors of the 50 and 150 type such as description, use, apparatus and operation.

1.02 Information relative to the installation of these coin collectors and their connections is given in other sections in Division C50.

2. DESCRIPTION

2.01 50 and 150 type coin collectors have a cast-iron back on which a cast-iron or steel coin compartment or lower housing and a cast-iron or steel upper housing are mounted. A switchhook and a connecting block for the wiring are mounted on the cast-iron back. The upper housing which is removable provides mounting space for a transmitter and a dial or an apparatus blank. It is equipped with a coin gauge, a coin chute with runways for nickels, dimes and quarters and audible signaling devices which indicate to the operator the denomination of coins deposited by the user.

2.02 In the case of postpayment service the coin chute runways direct the coins into a coin hopper which is mounted on top of the lower housing and provides a channel for the coins to pass directly into a coin receptacle enclosed in the lower housing. The hopper in 150U and 150W coin collectors is equipped with a device which opens and closes a pair of contacts when a coin passes through the hopper.

2.03 In the case of prepayment service a coin hopper arranged to hold the coins suspended on a coin trap and a coin relay arranged to direct the suspended coins either into the coin receptacle or into the coin return (under the control of the dial central office equipment or the operator) are installed on top of the lower housing. See Figs. 1 to 4 for illustrations of the various apparatus parts of the coin collector.

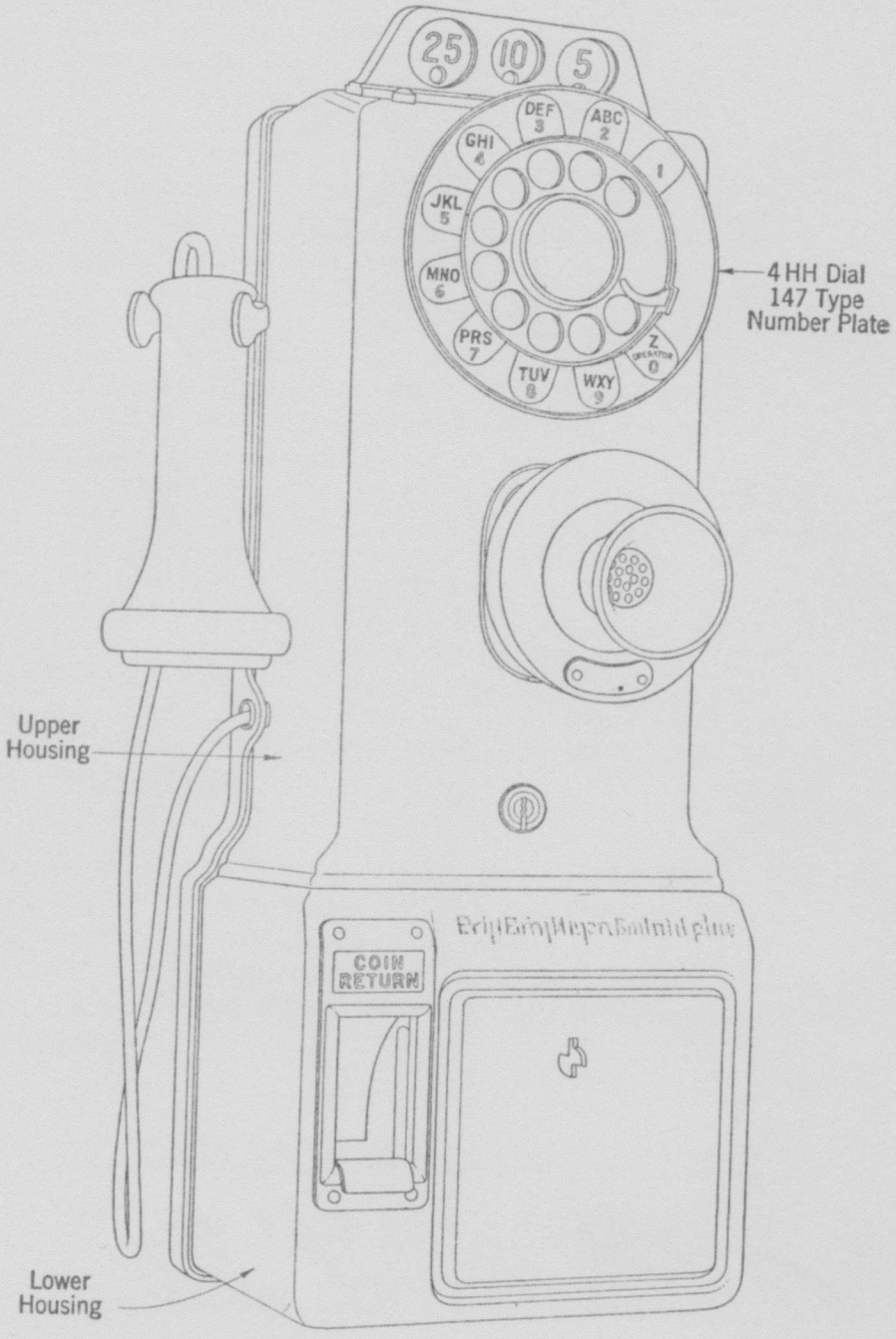
25
10
5
DEF 3
ABC 2
GHI 4
1
JKL 5
MNO 6
PRS 7
TUV 8
WXY 9
Z OPERATOR 0
4 HH Dial
147 Type
Number Plate
Upper
Housing
COIN
RETURN
Lower
Housing

Fig. 1.

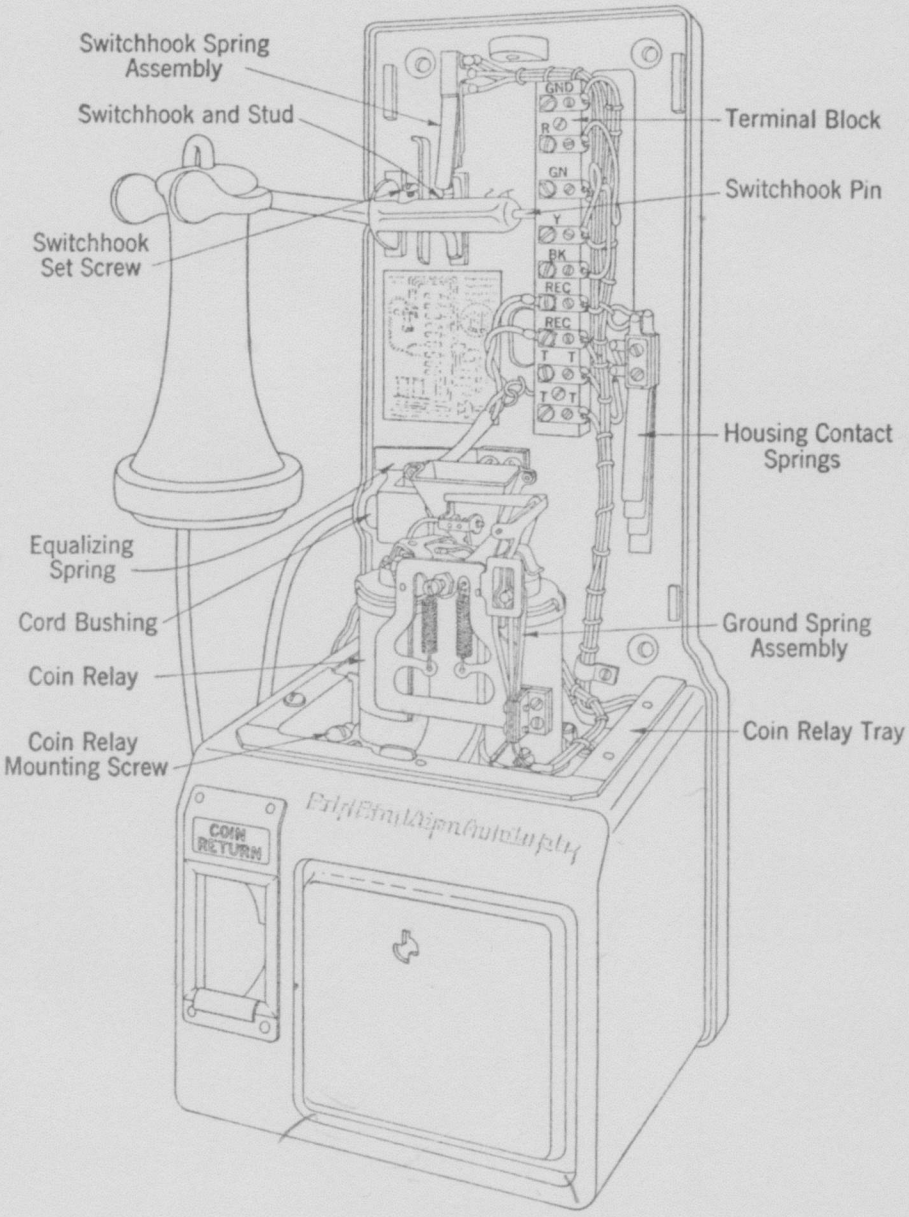

Fig. 2—Coin Collector—Upper Housing Removed.

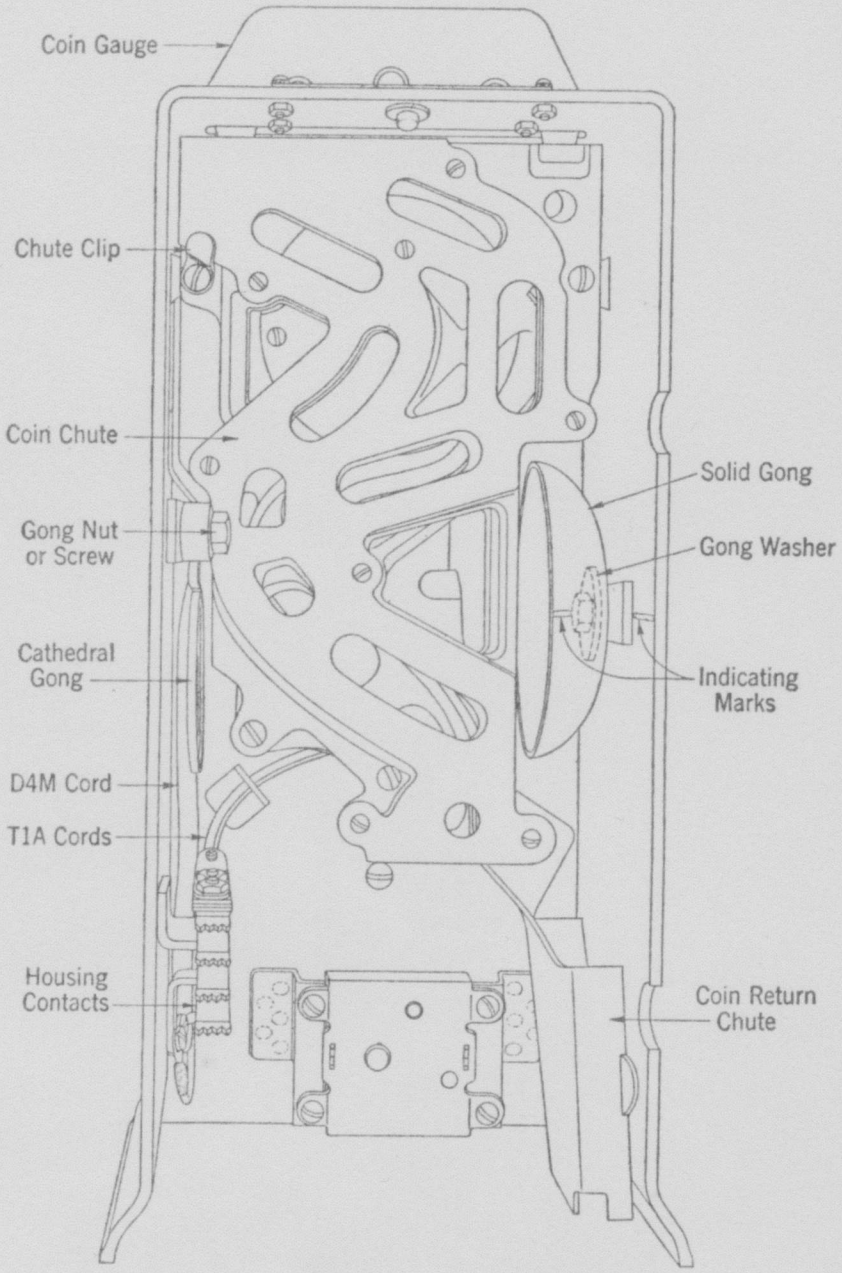

Fig. 3—Coin Collector—Upper Housing.

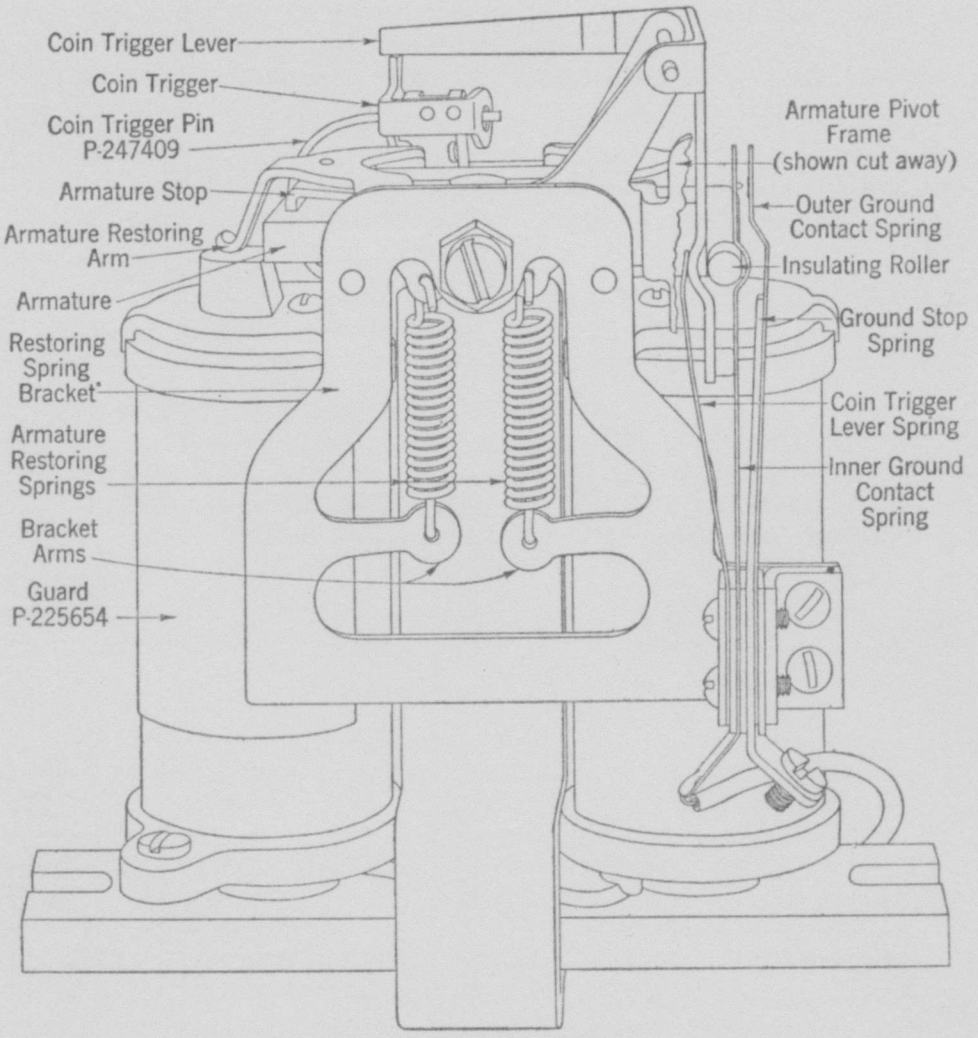

Fig. 4—Coin Relay.

2.04 Coin collectors of the 50 type have a black finish but the 150 type is available in either black or oxidized bronze finish. See Table I for the code numbers, finishes, etc.

2.05 All of the coin collectors are arranged to accept United States nickels, dimes and quarters. Some will also accept Canadian coins of the same denominations. The latter coin collectors are not, however, arranged to accept the small five-cent piece in use in Canada. See Table I for the coin collector code numbers, the coins accepted, etc.

Table I

Code No.	Finish	Service	Coins Accepted
50G	Black	Prepay	U.S.A. Only
50H	Black	Prepay	U.S.A. and Canadian
50K	Black	Postpay	U.S.A. Only
50L	Black	Postpay	U.S.A. and Canadian
150G-3 150G-13	Black Oxidized Bronze	Prepay Prepay	U.S.A. Only U.S.A. Only
150H-3 150H-13	Black Oxidized Bronze	Prepay Prepay	U.S.A. and Canadian U.S.A. and Canadian
150K-3 150K-13	Black Oxidized Bronze	Postpay Postpay	U.S.A. Only U.S.A. Only
150L-3 150L-13	Black Oxidized Bronze	Postpay Postpay	U.S.A. and Canadian U.S.A. and Canadian
150U 150W	Black Black	Postpay Postpay	U.S.A. U.S.A. and Canadian

3. USE

3.01 Prepayment multi-slot coin collectors are intended for use only on individual lines. Postpayment coin collectors can be operated on a manual party line basis, except for the 150U and 150W postpayment dial coin collectors which should be used only on individual lines.

3.02 The use of a bell box with enclosed gongs is required in conjunction with 50 and 150 type coin collectors to provide the ringer induction coil and condenser as these are not included in the coin collector.

3.03 For sidetone connections 534A or 584A subscriber sets may be used either with 50 or 150 type coin collectors. The fourth wire (black lead) provided in the 150 type coin collectors is not used in this case.

3.04 There are two arrangements for providing anti-sidetone connections. The first is to use a 150 type coin collector with either a 634A or a 684A subscriber set. The sec-

ond for use on individual lines only is to use a 50 type coin collector with either of these subscriber sets with the L2Y and BK terminals strapped together in the subscriber set. Under the second arrangement loud ringing bells or other added station bridges are not permissible.

3.05 When local battery talking and common battery signaling is required and so specified by local instructions a 50 type coin collector and a 534Y subscriber set can be used. This arrangement is seldom required for prepayment sevice.

4. APPARATUS

4.01 The following is a list of the apparatus that is associated with or forms a part of 50 and 150 type coin collectors and may be needed in connection with their installation and maintenance or in connection with their conversion from one code to another.

Apparatus

Apparatus Blank:	**50C Type Apparatus Blank.** Used to cover dial hole on coin collectors arranged to mount dials, when these are used at manual stations. Includes instruction card frame and glass or P-243343 card holder assembly.
Card Holder:	**1B Card Holder.** For mounting the instruction card on 50 and 150 type coin collectors operating on a dial basis. Includes instruction card frame and glass or P-243343 card holder assembly.
Card Holder Assembly:	**P-243343.** A cellulose acetate card holder used in 50C type apparatus blanks and 1B card holders instead of glass.
Coin Hopper:	**P-220284.** For use in converting postpayment coin collectors for prepayment operation and for replacement purposes.
Coin Relay:	**P-145749.** For use in converting postpayment coin collectors for prepayment operation and for replacement purposes.
Cords:	**R2B Cord.** Waterproof cord for 144 receiver. (542 cord is equivalent.) **T1A Cord.** Transmitter cord. Two required. **D4M Cord.** Dial cord for coin collectors.
Dial:	**4HH Dial.** Furnished with 132H number plate. Used with a 147 type number plate and a 56A dial adapter.

Dial Adapter: **56A Dial Adapter.** Used for mounting a 147 type number plate and a dial on coin collector.

Guard: **P-225654.** Used to protect left-hand coil of coin relay.

Housing: **Upper Housing.** For use in converting 50A and 50F coin collectors for dial operation.

From	To	Use
50A	50G	P-243236
50F	50H	P-243571

Instruction Cards:

E-158. Used when coin collector is temporarily out of service.

E-350-A. Used at coin collectors where dial tone is received before coin is deposited.

E-350-B. Used at coin collectors where coin must be deposited before dial tone is received.

E-351-A. Used at coin collectors operating on a manual prepayment basis in areas having dial service where coin is returned when the receiver is hung up on an incompleted call.

E-352-A. Used at coin collectors operating on a manual prepayment basis where the coin is not returned on an incompleted call if the subscriber hangs up.

E-353-A. Used at coin collectors operating on a common battery postpayment basis. Replaces Form E-463.

E-354-A. Used at postpayment coin collectors on individual magneto lines.

E-355-A. Used at postpayment coin collectors on magneto party lines.

E-2025. Used at postpayment dial coin collectors.

Label: **Circuit Label:** For use in converting coin collectors as follows:

From	To	Use
50A or K	50G	P-144701
50F or L	50H	P-144701
150K	150G	P-244771
150L	150H	P-244771

Number Plates:	**126A Number Plate.** Used when coin collector is not ready for service.
	147 Type Number Plate. Code number varies with the lettering on the number plate. Use the number plate which has lettering corresponding to that generally used in the central office district where the coin collector is installed.
Receiver:	**144 Receiver.**
Spring Assembly:	**D-22990 Spring Assembly.** Used in converting 50A or F Coin Collectors to 50G or H.
Transmitter:	**323, 329, or 337 Transmitter.** Use in accordance with the approved transmission zoning practices.

5. OPERATION

5.01 The coin chute carries the coin from the coin gauge past the signal gongs to the coin hopper. A nickel strikes the solid gong once, and a dime strikes it twice. A quarter strikes the cathedral gong once. Slugs or coin not of proper size fall out of the coin chute, before reaching the signal gongs and drop into the coin return chute. See Fig. 3.

Prepayment Service

5.02 When a coin drops into the coin hopper it trips the coin trigger and comes to rest on the coin trap where it is held until the coin relay is operated. See Fig. 5. The tripping of the coin trigger permits the coin trigger lever to fall and the coin trigger lever spring then pushes the coin trigger lever against the inner ground contact spring causing this spring to make contact with the outer ground contact spring. This contact closes a circuit from the tip side of the line through the coin relay to ground and is maintained until the armature of the coin relay has operated and has nearly restored. See Fig. 4.

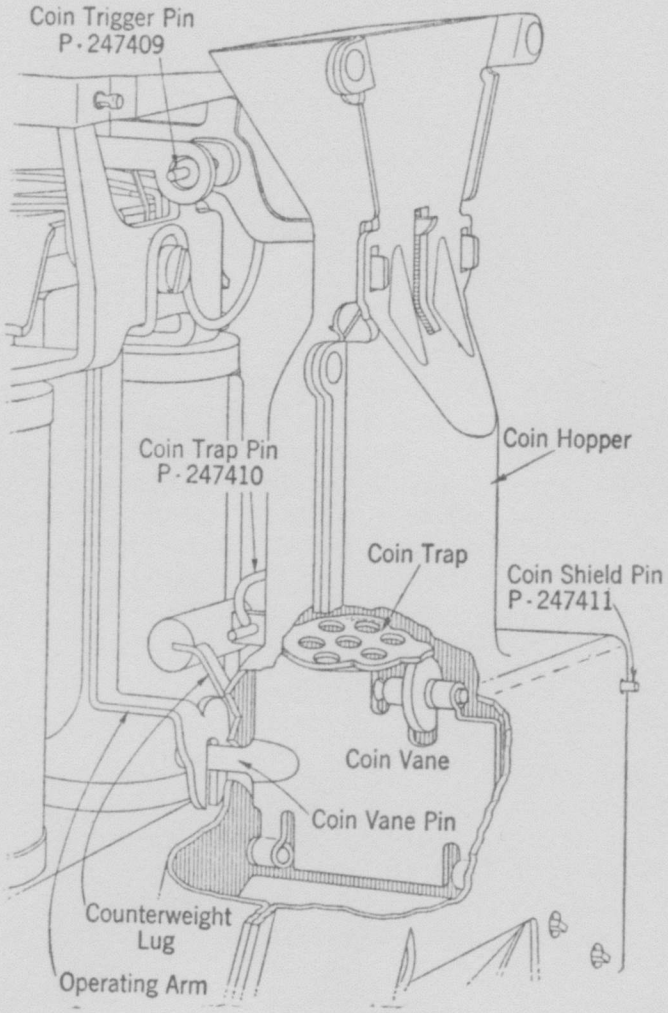

Fig. 5.

5.03 When a coin is to be collected the dial central office equipment or the operator (by depressing a "Collect" key) connects 110 volts positive battery to the line. This operates the coin relay so that the relay armature is drawn toward the right-hand pole piece of the relay. The coin vane pivoted directly beneath the coin trap is at the same time deflected to the left by the operating arm of the relay and the coin trap then swings downward due to the weight of the coin and the coin drops into the coin receptacle.

5.04 When a coin is to be returned the dial central office equipment or the operator (by depressing a "Return" key) connects 110 volts negative battery to the line. This operates the coin relay so that the armature is drawn toward the

left-hand pole piece of the relay and at the same time the operating arm of the relay deflects the coin vane to the right allowing the coin trap to drop the coin into the coin return chute.

5.05 When the collect or return voltage is removed from the line and the coin trap has returned to its normal position after dropping the coin, the armature of the relay aided by the armature restoring springs, returns to its normal position and at the same time the operating arm of the relay restores the coin vane to a vertical position and resets the coin trigger lever. The resetting of the coin trigger lever is accomplished by means of the insulating roller on the operating arm. This roller lifts the coin trigger lever while the relay is being operated allowing the coin trigger to restore and hold the coin trigger lever when the coin relay returns to its normal position. The insulating roller also holds the ground contact springs in contact until the relay has almost completely returned to its normal position.

5.06 The description given in the preceding paragraphs is based on the assumption that 110 volts positive battery will be used to collect coins and 110 volts negative battery will be used to return coins. This is generally the case but in some central office districts the reverse of this arrangement is employed. In these cases it will be necessary to make some wiring changes to reverse the coin relay. To reverse the coin relay connect the yellow wire to the right hand relay coil and the black wire to the left hand relay coil. With this change the coin collector will collect when 110 volts negative battery is applied to the tip side of the line and "return" when 110 volts positive battery is applied. The description given above will be correct for this latter arrangement if in paragraphs 5.03 and 5.04 the words positive and negative are substituted one for the other wherever they appear.

Postpayment Manual Service

5.07 Coins and slugs of proper size strike the signals in the upper housing as covered in 5.01 and then pass into a coin hopper which directs them into the coin receptacle as mentioned in 2.02. Coins should not, of course, be deposited until called for by the operator.

Postpayment Dial Service

5.08 Coins strike the signal gongs and pass into the hopper as in the case of postpayment manual service but in passing through the hopper the coins operate a device similar to the coin trap used in prepayment coin collectors which in

turn operate a pair of contacts which are attached to the hopper.

5.09 For this type of service the patron dials the desired number before depositing a coin. When the called party answers the dial central office equipment automatically splits the connection and sends back dial tone to the calling party. The calling party then deposits a coin which operates the contacts referred to in 5.07. The operation of these contacts places a 4450-ohm resistance in series with the line for about one-tenth of a second. This causes the dial central office equipment to complete the connection and remove the dial tone.