

**ROCK-OLA**

**SERVICE MANUAL**

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**INSTALLATION INSTRUCTIONS**

AND

**PARTS LIST**

FOR

**MODEL 1555**

**200/120 SELECTION WALL BOX**

**ROCK-OLA MANUFACTURING CORPORATION**  
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# MODEL 1555 WALL BOX

The Model 1555 Wall Box operates on 24 volts, 60 cycles, and is supplied from the signal transformer in the receiver unit. The program lights and the select light are type 47 lamps, operated from the 6 volt tap of the auto transformer in the wall box. Power is supplied to the wall box through a three wire cable; two of the three wires supplying power to the gear motor and the auto transformer, and the third wire in conjunction with one of the power circuit wires constitutes the signal circuit that keys the Receiver Unit.

The operation of the three wire system requires intermittent pulsing of the pulse relays in the receiver unit and is accomplished when the grounded contact wiper arm on the wall box gear motor passes over connected contacts on the contact biscuit assembly. A circuit diagram of the wall box is shown in Fig. 2.

The operating elements of the wall box consist of the push button switches, contact wiper arm, gear motor, and the control switches, namely, the motor switch and the accumulator switch. Pressed on the shaft of the gear motor is the cam cluster, consisting of three cams which are used to perform operations as follows: 1. The inside cam operates the push button switch lock bar. 2. The center cam operates the motor switch. 3. The outside cam operates the accumulator assembly.

There are three important positions of the cam cluster for each cycle, namely, the Rest Position, Select Position, and the Locked and Pulsing position. These positions are shown in Fig. 1.

At the Rest Position, in which no credits are established, the selector buttons are free to move in and out, because the lock bar cam is holding the selector switch lock bar up, thereby disengaging the selector keys. Likewise, the motor switch is held open by the motor switch cam.

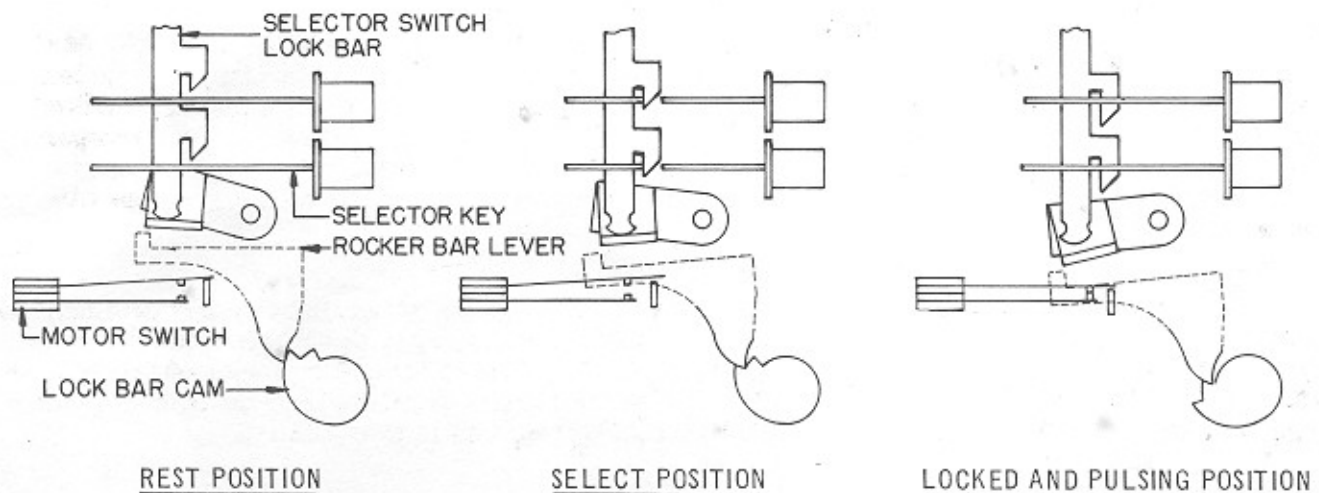


Fig. 1

When a credit is established by a deposited coin, the circuit to the gear motor is completed through the accumulator switch contacts and the grounded contact wiper arm, energizing the gear motor. The contact wiper arm is then rotated away from the contact plate, thereby breaking the circuit to the gear motor. This is the Select Position. The rocker bar lever, through the action of the lock bar cam on the cam cluster has lowered to the Select Position, moving the selector switch lock bar downward. This results in the selector button locking immediately upon being pressed.

As a selector button is pressed, the circuit to the gear motor is again closed, by means of the other accumulator switch and through the center contacts of the selector switch. The gear motor through its train of gears begins to revolve, causing the motor switch cam on the cam cluster to close the circuit of the gear motor through the motor cycle switch, by means of the switch lever. Simultaneously, the lock bar drops to its lowest position. This is the Locked and Pulse position. As the contact wiper arm rotates, a train of pulses corresponding to the selection made, are transmitted to the receiver unit. During the period of the pulse cycle, the accumulator cam of the cam cluster, operates the accumulator lever assembly which removes a credit from the accumulator. In completing its cycle, the lock bar cam on the cam cluster allows the selector key to be released through the action of the rocker bar lever and selector switch lock bar. The switch lever, through the action of the motor switch cam of the cluster opens the circuit to the gear motor by means of the motor switch, which completes the cycle. If only one credit was established, the short contact wiper arm will come to rest about 1/8" before it reaches the edge of the lower left side of the "U" portion of the brass contact plate on the contact biscuit assembly and the cam cluster will assume its Rest Position. On the other hand, if more than one credit was established, the contact wiper arm will not rest on the contact plate, but will move past it and come to rest at the Select Position. The cycle will then again be repeated when a selector button is pressed.

#### **ACCUMULATOR ASSEMBLY**

The accumulator assembly is designed to establish a maximum of twenty-six credits, and it is not necessary to make a selection after each coin deposited.

The 5¢ ratchet is located nearest the base plate, the 10¢-50¢ ratchet is in the center, and the 25¢ ratchet is nearest the top frame plate. The stud which is riveted to the 5¢ ratchet extends through the 10¢-50¢ and 25¢ ratchets. When the electromagnets are energized, they are released in the same manner as the 5¢ ratchet. The stud which is riveted to the 5¢ ratchet, permits the 10¢-50¢ and 25¢ ratchet to rotate a certain number of teeth, depending on the denomination of the deposited coin.

A price option switch is mounted at the rear, allowing the accumulator to be set for 5¢-10¢-25¢ play, or 10¢-25¢-50¢ play by moving the slide switch in the direction indicated on the legend above the slide switch. When the slide switch is in the 10¢-25¢-50¢ position, a 10¢ coin will operate the ratchet nearest the base plate; a 25¢ coin operates the outer ratchet and a 50¢ coin operates the center ratchet. When the slide switch is in the 5¢-10¢-25¢ position, a 5¢ coin operates the ratchet nearest the base plate; a 10¢ coin operates the center ratchet and a 25¢ coin operates the outer ratchet.

The center and outer ratchets have adjustment wafers. Depending upon the play combination desired, it will be necessary to change the settings of either one or both of the adjustment wafers. To do so, insert a pointed tool into the ear on the wafer, raising the wafer pin out of the hole and moving it until it drops into the proper play hole in the ratchet wheel. (Complete coin conversion instructions are outlined in the "Installation Instruction" section in this manual).

The gram pressure of both accumulator switches is 30 grams, and the air gap is .015.

Credits are removed from the 5¢ ratchet by the accumulator lever assembly, which is actuated by the cam cluster. The pawl which is riveted to the accumulator lever assembly, moves the 5¢ ratchet back one tooth for each selection made. If the pawl moves the 5¢ ratchet back two teeth, the condition can be corrected by adjusting the tail of the pawl.

#### **GEAR MOTOR**

The gear motor is designed to operate at a normal speed of 20 revolutions per minute. The acceptable speed tolerances are between 19 and 21 revolutions per minute. If the motor speed is slow, or fast, erratic selection will result. If there are no binds in the motor, and the gear train is free from dirt or foreign material, the gear motor must be replaced. Because of its construction, individual parts cannot be replaced.

The cam cluster of the gear motor should be lubricated with #105 Lubriplate, and the shaft bearings with a drop of S.A.E. 10 motor oil. Never lubricate the motor clutch mechanism.

The contacts of the contact disc assembly must not be lubricated. A lint-free cloth, saturated with carbon tetra-chloride can be used to clean the contact biscuit disc.

The #105 Lubriplate can also be used to lubricate the pivot points of the rocker bar lever, and the switch lever. To reduce friction, use #105 Lubriplate at the point where the rocker bar lever engages the selector switch lock bar.

If it becomes necessary to re-position the contact wiper arm on the contact biscuit assembly, the following procedure is to be followed:

1. Turn the gear motor manually until the rocker bar lever falls into the first notch of the cam farthest away from the contact biscuit assembly. (See "Select Position" of Fig. 1).
2. Set wiper arm on the gear motor shaft so that the center of the contact of the short wiper arm rests on the edge of the lower left side of the "U" portion of the contact plate. Set hub flush with shaft. (See Fig. 2).
3. Tighten the set screws in the collar of the contact wiper arm, and adjust the contact wiper arm pressure to approximately 40 grams on both contacts. (See Fig. 2).
4. The motor switch pressure is 35 grams minimum. The switch should be adjusted to open when the center of the contact of the short wiper arm comes to rest about 1/8" before it reaches the edge of the lower left side of the "U" portion of the brass contact plate. (See Fig. 2).

#### **PROGRAM LEAF SWITCHES**

There are two sections of program leaf switches. Viewing the switches from the front of the wall box, the left hand section is composed of four normally open switches, which control selections from 1 to 100. The air gap of each switch is .020. As a program leaf is turned, a small protrusion on the leaf strikes a particular switch closing it and completing a circuit to a group contact on the contact biscuit disc.



In the right hand section are five normally closed switches, which are held open by the program pages. They control selections from 101 to 200. The contact pressure of each switch against a particular program page is 30 grams minimum. As a program page is rotated away from the switch, the switch closes and completes a circuit to a group contact on the contact biscuit disc. (See schematic wiring diagram).

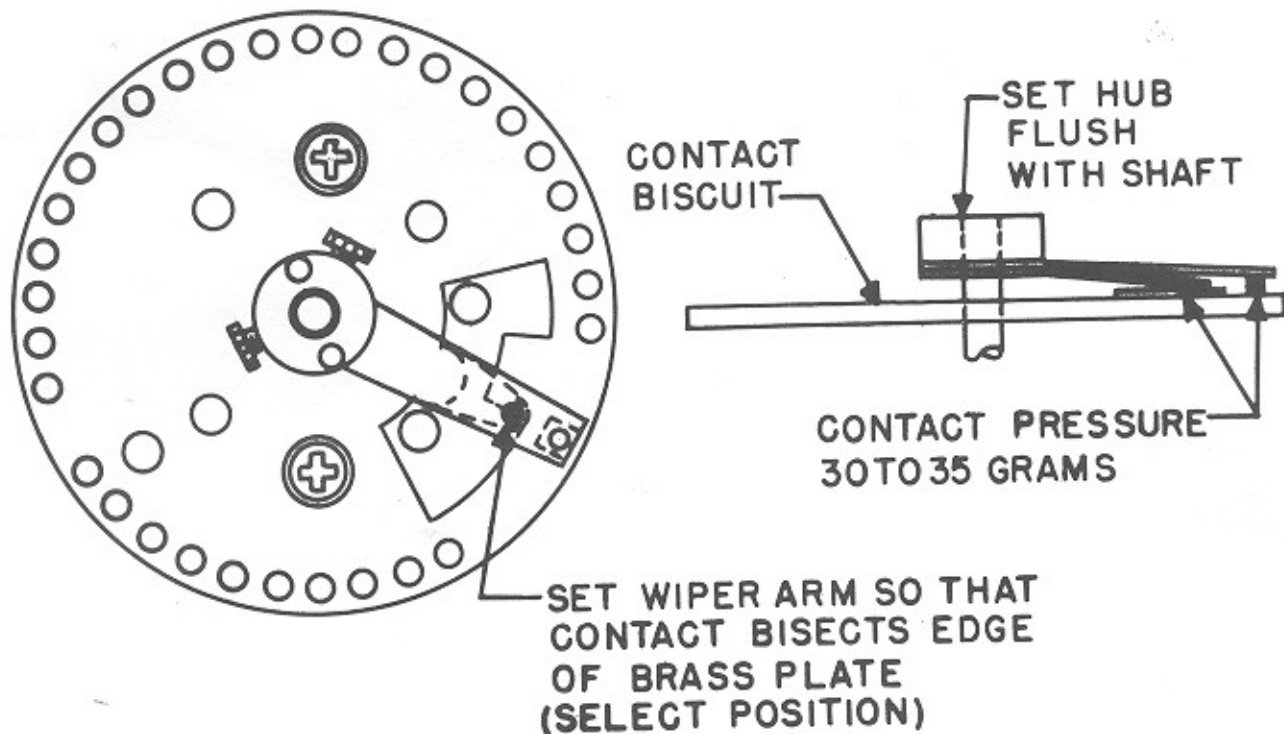


Fig. 2

#### SLUG REJECTOR

The wall box is equipped with two separate slug rejectors mounted in the same housing. A 50¢ rejector is mounted above the regular 5¢-10¢-25¢ rejector. Both rejectors must be cleaned periodically to maintain proper operation. If the rejectors have operated satisfactorily for some period of time and then become erratic in operation, the difficulty can usually be traced to dirt or foreign material in the coin tracks. A lint-free cloth, saturated with carbon tetra-chloride can be used to keep the rejectors clean.

#### CONVERSION FROM 200 TO 120 SELECTIONS

The wall box is designed for 200 selection or 120 selection operation. At the factory, the wall box is set for 200 selection operation. To set the wall box for 120 selection operation, the following procedure is to be followed:

1. Mount a page locking pin into the hole located at the upper right hand side of the front door casting. Secure with lock washer and hex nut.
2. Remove the complete program page holder from the wall box and turn the program pages to selections 101 to 120 inclusive. This will position 4 program pages at the right hand side. Through the hole at the top of the program pages, insert a 5/40 machine screw and secure the 4 program pages to the bracket behind the pages, with a lock washer and nut.
3. At the lower right hand side of the front door, move the slide switch upward to the 120 position.

NOTE: See pictorial diagrams in Fig. 3.

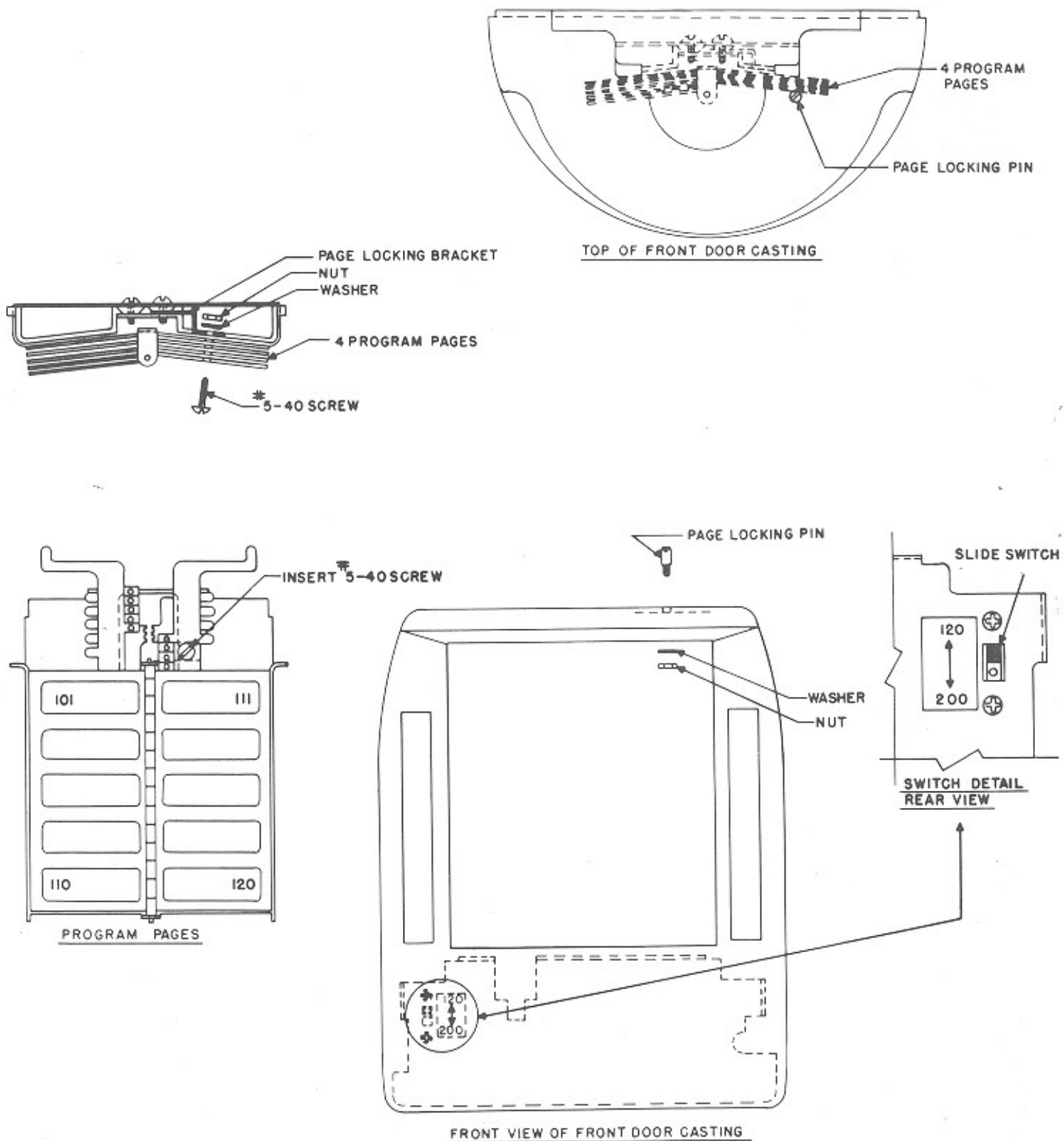


FIG. 3

## INSTALLATION INSTRUCTIONS

FOR

### MODEL 1555 200 / 120 SELECTION - WALL BOX



The Model 1555 Wall Box is designed to operate with all 200 selection and 120 selection phonographs. It is connected to a receiver unit in the phonograph by means of a 3 wire cable and operates at 24 volts A.C. 60 cycle input.

#### WALL BOX INSTALLATION INSTRUCTIONS

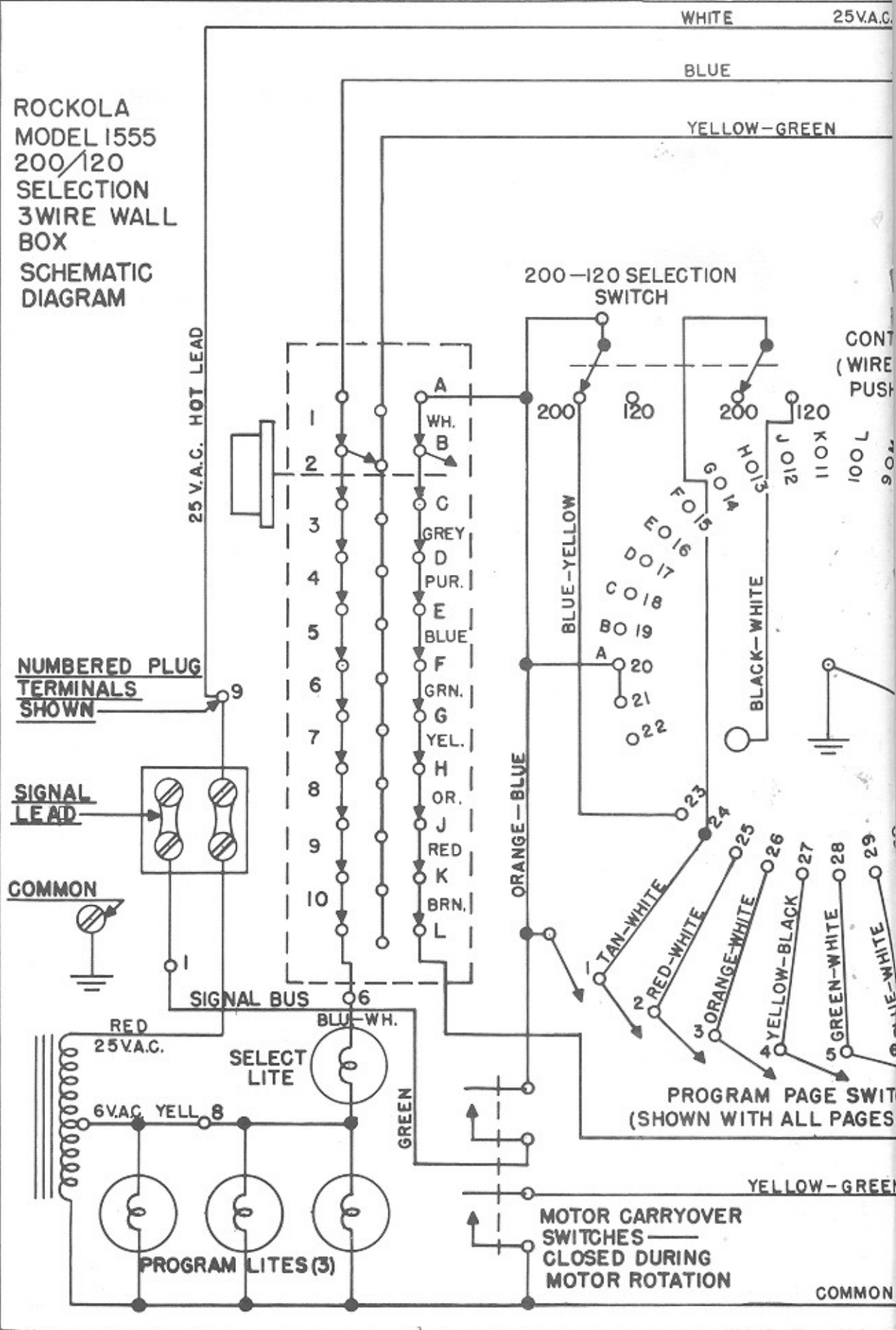
Open the front door by inserting the key and turning it in a clockwise direction to release the locking latch in the wall box. Remove the slug rejector by merely lifting it up slightly to clear the

four mounting studs from the brackets. Also, remove the cash box. This will expose the knockout holes, which are used for mounting the wall box on a bar, counter, table or wall.

**NOTE:** All knockout holes which are provided for mounting the wall box are opened by tapping them out firmly with a blunt punch. The two knockout holes for mounting the wall box on the wall, are located at the top left and right corners of the back casting. Mount two screws in the wall with location corresponding to the two upper holes of the wall box. Place the wall box so that the screws are in the slotted portion of each hole. Now insert a third screw into one of the two lower holes in the back casting for rigid mounting. Before tightening the screws to provide rigid fastening for the wall box, make certain that surface of the wall on which the wall box is mounted, is substantially flat. The back casting should be shimmed with wood or cardboard to provide a flat surface. A curved surface will distort the back casting, and prevent proper operation of the wall box.

All lamps are readily accessible for replacement purposes. **WARNING** - Burned out lamps must be replaced with #47 - .15 amp. lamps only.

ROCKOLA  
 MODEL 1555  
 200/120  
 SELECTION  
 3 WIRE WALL  
 BOX  
 SCHEMATIC  
 DIAGRAM





ACT DISC CONNECTIONS  
COLORS SHOWN ON  
BUTTON SWITCHES)

80N  
TOP  
60R  
50S  
40T  
30U  
20V  
10Y

32  
31  
WHITE-BLACK  
GREY-WHITE  
PURPLE-WHITE  
WHITE-ORANGE  
GREEN-ORANGE

ES  
(N RIGHT SIDE)

US BLACK

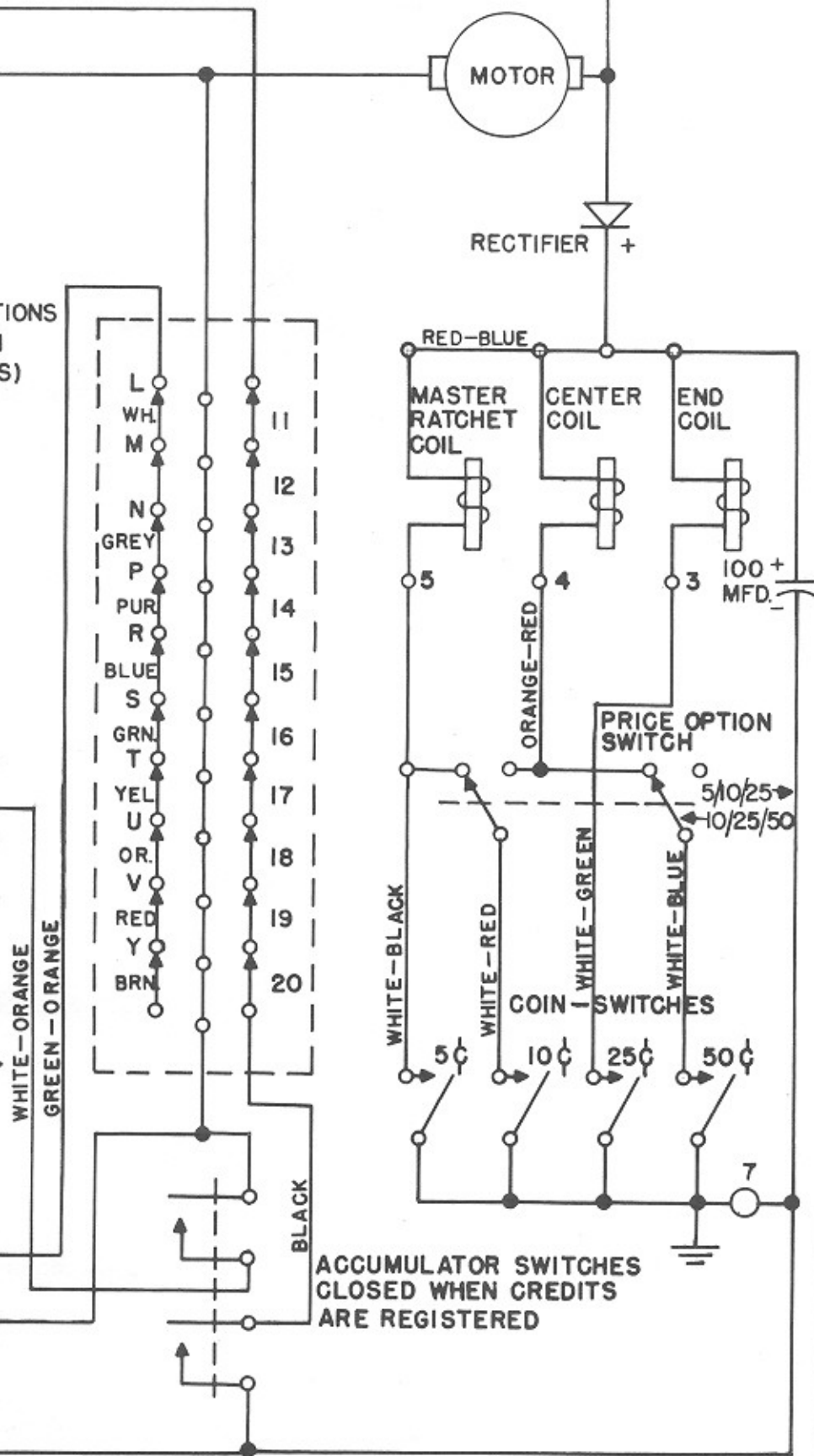


FIG. 4

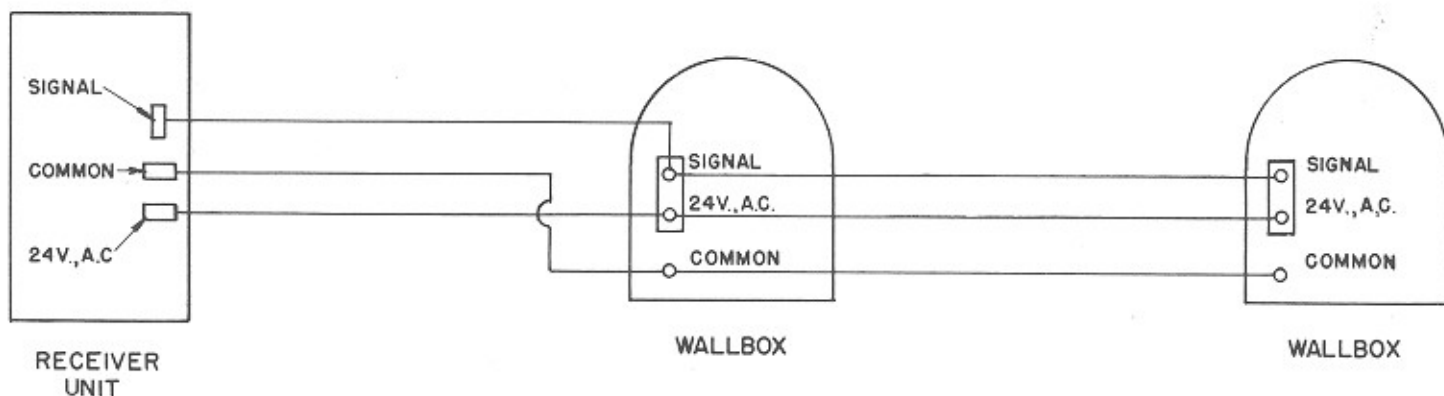
The cash box is located at the lower right side, and is accessible only after the front door is opened. The slug return cup is located on the lower left side.

At the Phonograph, the line switch is used to turn the wall box, off or on. If a coin is deposited with the line switch in "off" position, the coin will be lost and the customer cannot make a selection. The accumulator will add up to a maximum of twenty-six credits. It is not necessary to make a selection after each credit is established.

The Model 1541 Universal Bar Bracket is available for mounting the Wall Box on a counter, bar or table.

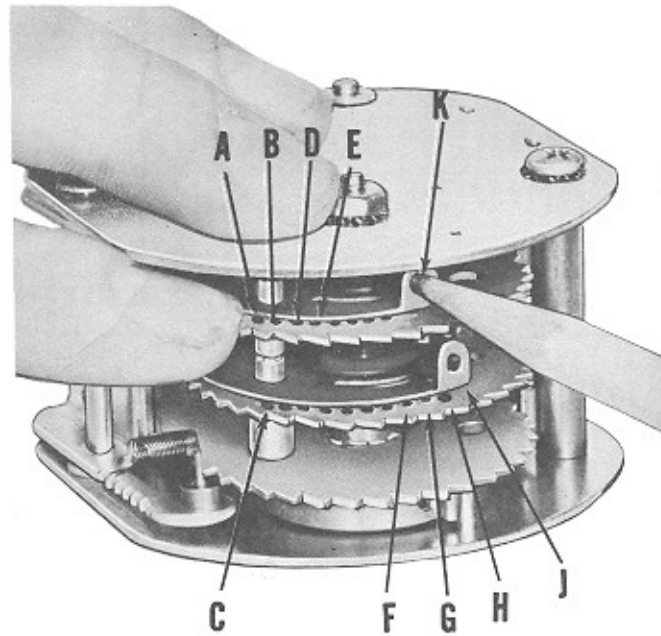
### WALL BOX AND RECEIVER UNIT CONNECTING CABLE INSTRUCTIONS

Solder one end of the 3 wire cable to the 3 terminal Jones plug (Rock-Ola #14215) furnished with each receiver; being sure to note the color coding of the individual 3 wires with respect to the identifying legend stamped on the chassis at the 3 terminal socket, so that the proper connections can be made at the wall boxes. The terminal strip in the wall box has a similar legend, except for the "common" connection, which in the wall box is a grounding lug located below the terminal block. Note that solder lugs are provided for connecting to and from the wall box. USE THESE LUGS; DO NOT CLINCH THE WIRES AROUND THE TERMINAL SCREWS AND THEN TIGHTEN AS THIS WILL RESULT IN A POOR CONNECTION AND CAUSE MALFUNCTIONING. CONNECT ALL WALL BOXES AS SHOWN BELOW. BE SURE THAT ALL THREE WIRES ARE POLARIZED AT THE WALL BOX AND RECEIVER UNIT, OR IMPROPER OPERATION WILL RESULT.

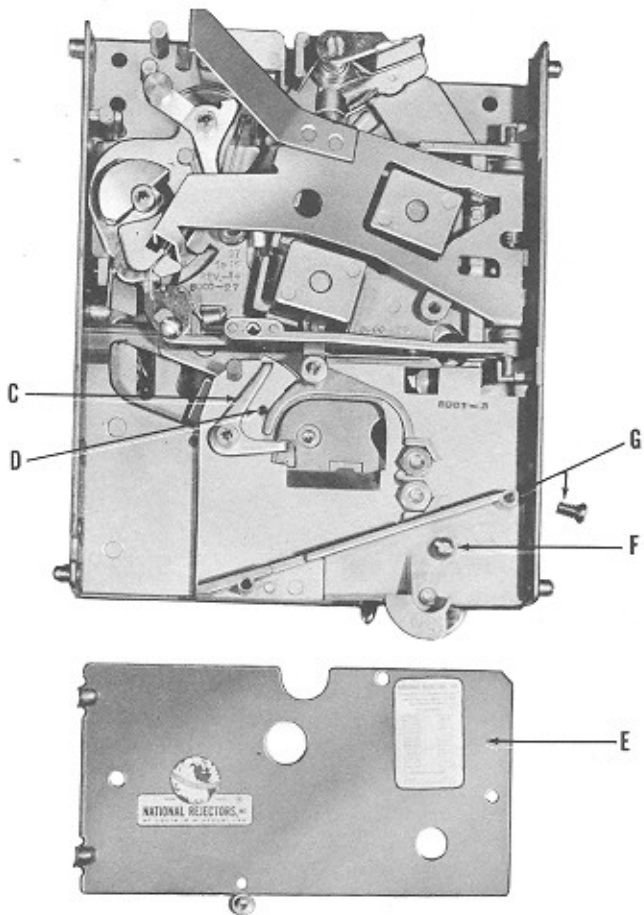


The three wire inter-connecting cable should not be smaller than #18 gauge (for each wire) in order that the voltage drop from the phonograph to the wall boxes be kept to a minimum. Do not use excessively long lengths of cable (80 ft. max. for #18 gauge) and do not connect more than six wall boxes to any one length of cable. The 25 volt signal transformer in the Receiver Unit is capable of supplying power to twelve wall boxes. Using more than this number of boxes may result in burning out the 3 amp. fuse at the receiver unit, or the prolonged heating of the transformer may cause it to fail.

**MODEL 1555 WALL BOX**  
**COIN CONVERSION INSTRUCTIONS**

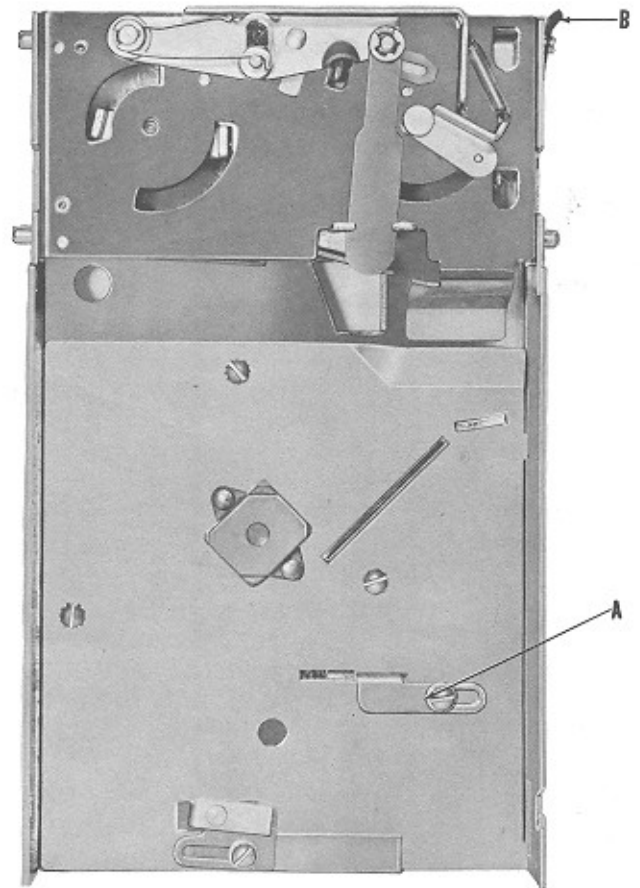


**FIG. 5—View of Accumulator**



5¢-10¢-25¢

**FIG. 6—SLUG REJECTOR**



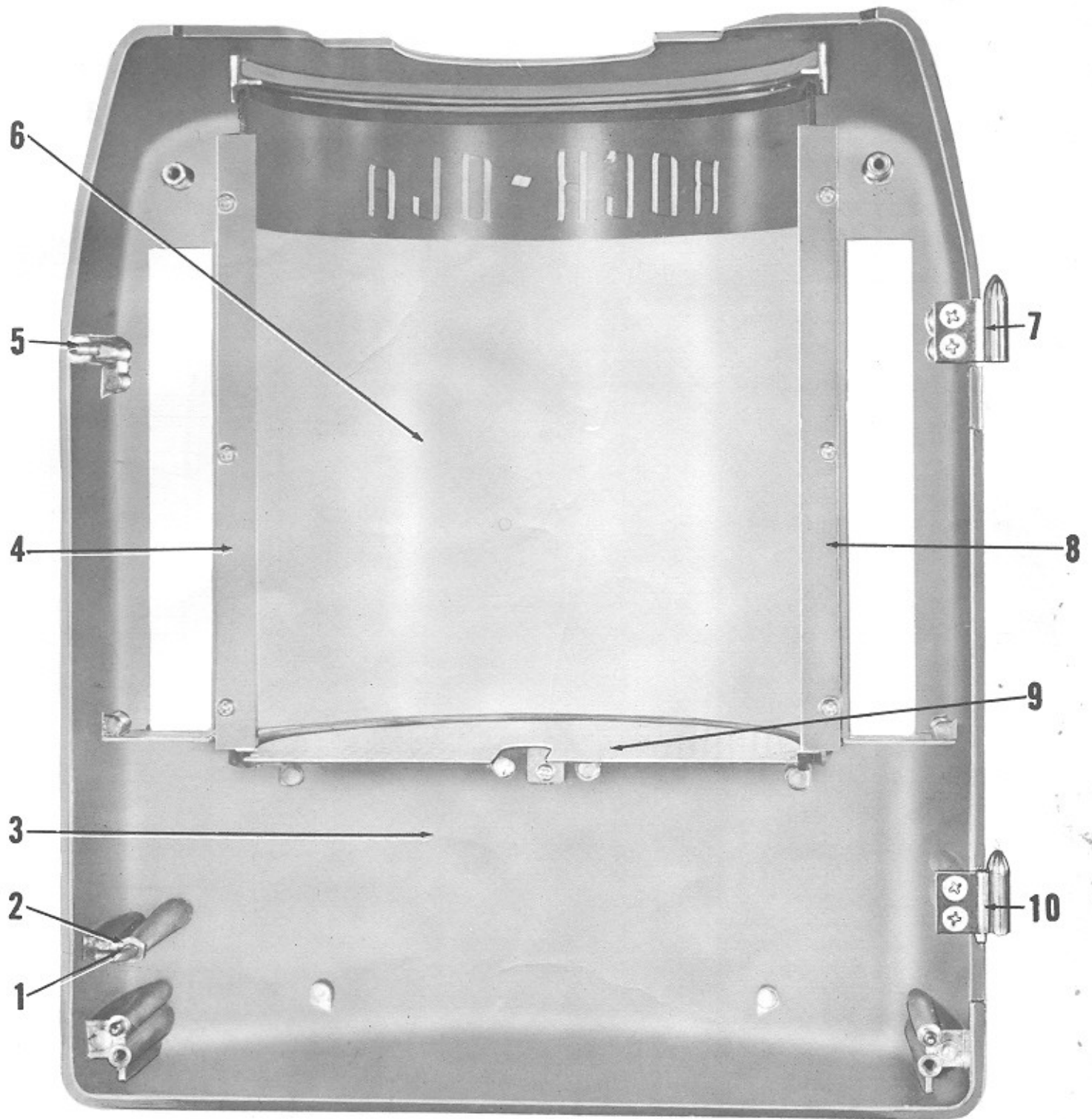
REAR  
 VIEW OF  
 50¢  
 SLUG REJECTOR  
 & HOUSING

**FIG. 7**

NOTE: THE MODEL 1555 IS PRE-SET AT THE FACTORY FOR "ONE PLAY FOR 2 NICKELS OR ONE DIME, THREE PLAYS FOR QUARTER AND SEVEN PLAYS FOR A HALF DOLLAR."

#### TO ADJUST ACCUMULATOR & STUD REJECTOR

1. FOR "1 PLAY FOR 2 NICKELS OR ONE DIME, 3 PLAYS FOR QUARTER AND 8 (9 OR 10) PLAYS FOR A HALF DOLLAR."
  - A. Insert a pointed tool into ear of wafer on center ratchet (J-Fig. 5) lift slightly, raising wafer pin from hole.
  - B. Keep ratchet wheel from rotating and move wafer on center ratchet until pin drops into 8 play hole (F-Fig. 5) or 9 or 10 play holes (G-H Fig. 5).
  - C. Leave pricing switch in 10-25 & 50 position.
  - D. Replace pricing window with one to match the pricing combination.
  
2. FOR "1 PLAY FOR 2 NICKELS OR ONE DIME, 4 PLAYS FOR QUARTER AND 9 (OR 10) PLAYS FOR A HALF DOLLAR."
  - A. Insert a pointed tool into ear of wafer on center ratchet (J-Fig. 5) lift slightly, raising wafer pin from hole.
  - B. Keep ratchet wheel from rotating and move wafer on center ratchet until pin drops into 9 play hole (G-Fig. 5) 9 or 10 play hole (H-Fig. 5).
  - C. Insert a pointed tool into ear of wafer upper ratchet (K-Fig. 5) lift slightly, raising wafer pin from hole.
  - D. Keep ratchet wheel from rotating and move wafer on upper ratchet until pin drops into 4 play hole (B-Fig. 5).
  - E. Leave pricing switch in 10-25 & 50 position.
  - F. Replace pricing window with one to match the pricing combination.
  
3. FOR "1 PLAY FOR 2 NICKELS OR ONE DIME, AND 3 (OR 4) PLAYS FOR QUARTER."
  - A. Remove complete slug rejector unit from wall box.
  - B. Remove top 50¢ rejector unit and lower 5¢-10¢-25¢ unit, exposing the inside housing, which is part of the 50¢ rejector. At (A-Fig. 7) loosen screw and move lever to the extreme left side. This will automatically reject 50¢ coins.
  - C. Replace both rejector units into housing and install complete slug rejector unit into wall box.
  - D. On upper ratchet, lift upper wafer (K-Fig. 5) until pin drops into 3 play hole (A-Fig. 5) or 4 play hole (B-Fig. 5).
  - E. Leave pricing switch in 10 - 25 & 50 position.
  - F. Replace pricing window with one to match the pricing combination.
  
4. FOR "1 PLAY FOR NICKEL, 2 PLAYS FOR DIME AND 5 PLAYS (OR 6) FOR QUARTER."
  - A. Remove complete slug rejector unit from wall box.
  - B. Remove top 50¢ rejector unit and lower 5¢-10¢-25¢ unit, exposing the inside housing, which is part of the 50¢ rejector. At (A-Fig. 7), loosen screw and move lever to the extreme left side. This will automatically reject 50¢ coins.
  - C. On the 5¢-10¢-25¢ slug rejector, transpose screw (G-Fig. 6) with screw (F-Fig. 6). This will cause each 5¢ coin deposited to be registered, as the toggle is now free to operate on every 5¢ coin.
  - D. Replace both rejector units into housing and install complete slug rejector into wall box.
  - E. At the accumulator on the center ratchet, insert a pointed tool into ear of center wafer (J-Fig. 5) lift slightly, raising wafer pin out of hole. Keep ratchet wheel from rotating and move wafer on center ratchet until pin drops into 2 play hole (C-Fig. 5).
  - F. On the upper ratchet, lift upper wafer (K-Fig. 5) slightly, raising wafer pin from hole and moving the wafer until the pin drops into the 5 play (D-Fig. 5) or 6 play (E-Fig. 5) hole.
  - G. Move pricing switch to 5-10 & 25 position.
  - H. Replace pricing window with one to match the pricing combination.



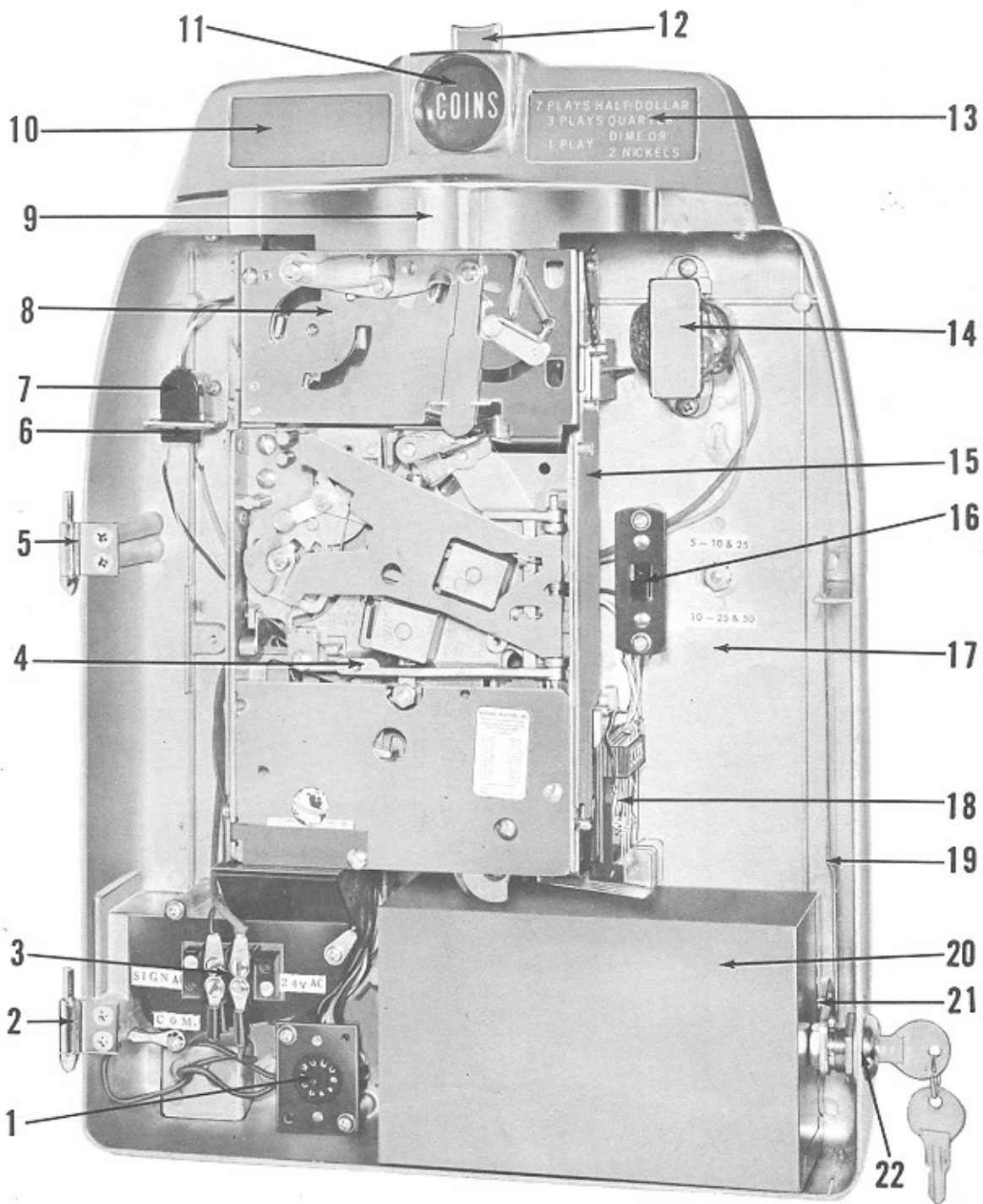
ITEM PART NO. DESCRIPTION

1 14729 Lock Pin  
 2 ST-3409 8-32 Hex Nut  
 3 14710 Wall Box Front  
 4 14744 Window Retainer (L.H.)  
 5 14729 Lock Pin

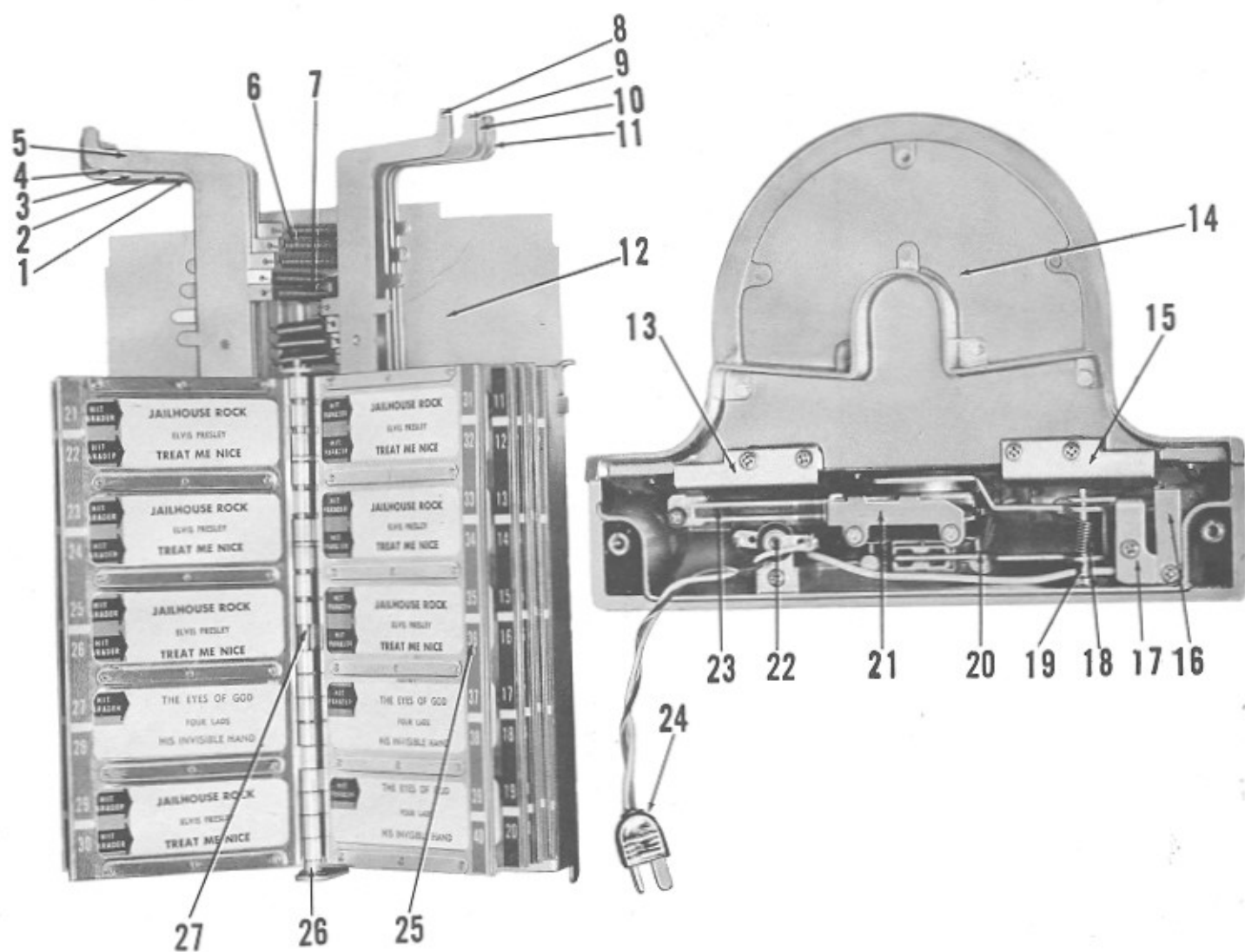
ITEM PART NO. DESCRIPTION

6 14715 Wall Box Window  
 7 ST-5278 Hinge (Male)  
 8 14743 Window Retainer (R.H.)  
 9 14826-A Bottom Plate Assem.  
 10 ST-5278 Hinge (Male)

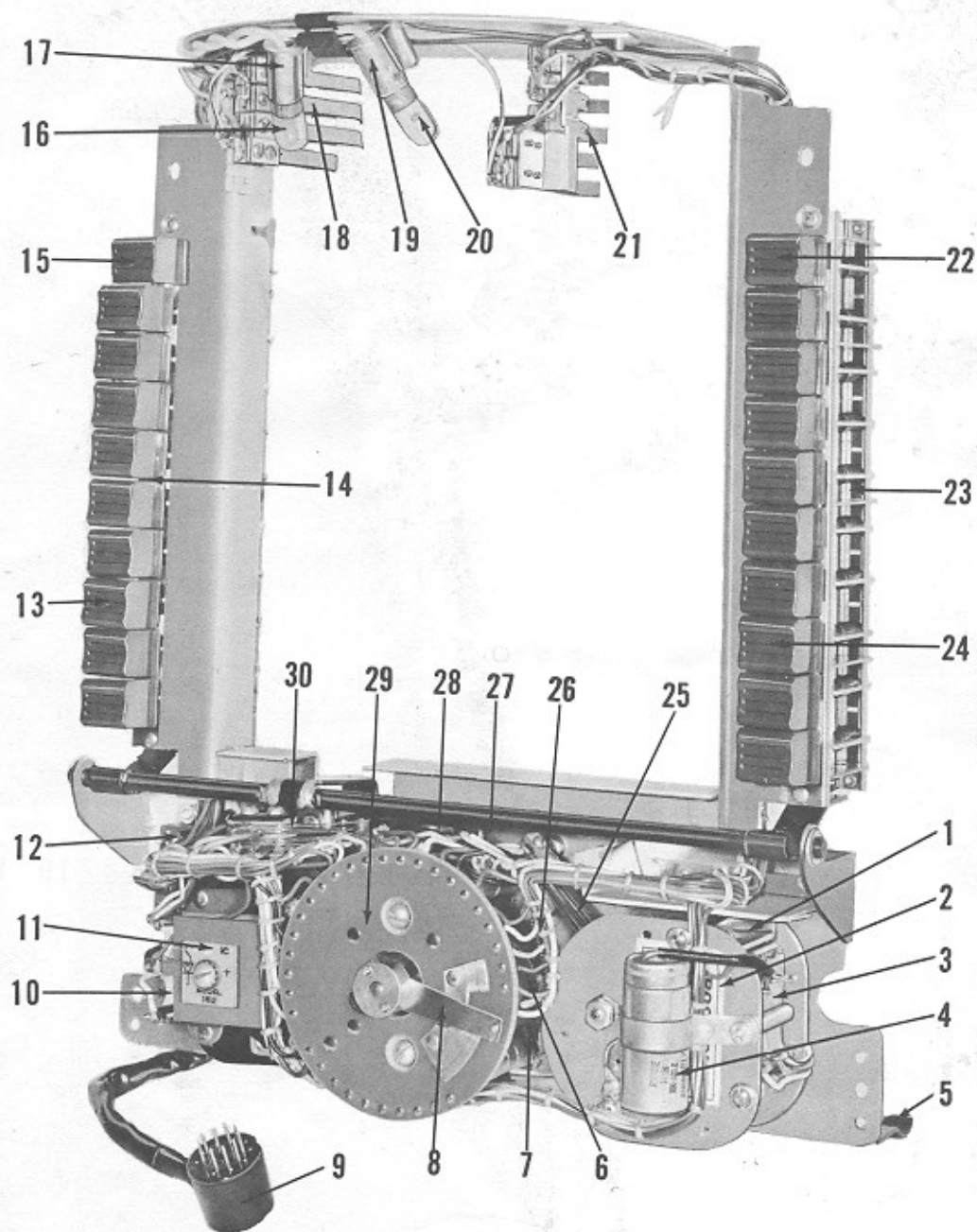




ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION
1	14820-A	9 Contact Socket Riveting Assembly	12	14740	Slug Return Button
2	ST-5278	Hinge (Female)	13	14753	Pricing Window
3	14821-A	Terminal Block Riveting Assembly	14	14814	Wall Box Transformer
4	31317	5¢ - 10¢ - 25¢ Slug Rejector	15	31319	Slug Rejector Housing
5	ST-5278	Hinge (Female)	16	14819-A	Slide Switch Riveting Assem.
6	14818-A	2 Contact Miniature Socket Assembly	17	14714	Wall Box Back
7	14856	2 Conductor Cable and Plug	18	14822-A	Coin Switch and Bracket Assem.
8	31318	50¢ Scavenger Unit	19	14823-A	Lock Bar Riveting Assem.
9	14815	Top Casting	20	14858	Cash Box
10	14754	Select Window	21	14786	Lock Latch
11	14739	Coin Window	22	ST-7404	Lock & Keys



ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION
1	14804-A	#1 Program Leaf Assembly	15	14852	Window Retaining Bracket (R.H.)
2	14805-A	#2 Program Leaf Assembly	16	14785	Pricing Light Socket
3	14806-A	#3 Program Leaf Assembly	17	14787	Reject Lever Shaft Bracket
4	14807-A	#4 Program Leaf Assembly	18	14758	Reject Button Return Spring
5	14808-A	#5 Program Leaf Assembly	19	14737	Reject Lever Arm Shaft
6	14755	Page Spring (1-2-3 and 7-8-9)	20	14733	Reject Lever Arm
7	14756	Page Spring (4-5-6)	21	14738	Coin Window Retainer
8	14809-A	#6 Program Leaf Assembly	22	14784	Select Light Socket
9	14810-A	#7 Program Leaf Assembly	23	14798	Coin Chute Casting
10	14811-A	#8 Program Leaf Assembly	24	14856	2 Conductor Cable and Plug
11	14812-A	#9 Program Leaf Assembly	25	31732	Index Tab (Specify Color)
12	14802-A	Program Holder Back Plate Assembly	26	14731	Leaf Separator Bushing
13	14853	Window Retaining Bracket (L.H.)	27	14720	Program Leaf Pivot Shaft
14	14815	Top Casting			



ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION
1	14579-A	Ratchet Escapement Armature	16	ST-3072	#47 Light Bulb
2	31200-A	Accumulator Assem.	17	14788	Program Light Socket
3	14011	Coil-Accumulator Electromagnet	18	14833	Program Switch and Bracket
4	14206	Wall Box Capacitor	19	14788	Program Light Socket
5	14796	Door Guide Bracket	20	St-3072	#47 Light Bulb
6	14308-A	Accumulator Lever Assembly	21	14832-A	Program Switch and Bracket
7	14276	Accumulator Pawl Spring	22	18091	Key Switch Button (Blue)
8	14795	Wiper Arm	23	14849	Selector Key Switch (R.H.)
9	14867	9 Prong Miniature Plug and Cap	24	18092	Key Switch Button (Red)
10	14834	Gear Motor (with cams)	25	14329	Accumulator Switch and Bracket
11	14572	Selenium Rectifier	26	14275	Accumulator Lever Spring
12	31192	Slide Switch (DPDT)	27	14844-A	Rocker Arm and Shaft Assem.
13	18091	Key Switch Button (Blue)	28	14160	Switch Lever
14	14850	Selector Key Switch (L.H.)	29	14838-A	Biscuit Assembly
15	18092	Key Switch Button (Red)	30	14338	Motor Cycle Switch