ROCK-OLA

SERVICE MANUAL

FOR

MODEL 1544 and MODEL 1546

(3 WIRE—120 SELECTION WALL BOX)

AND

MODEL 1717

(3 WIRE—120 SELECTION RECEIVER UNIT)

ROCK-OLA MANUFACTURING CORPORATION
800 NORTH KEDZIE AVENUE
CHICAGO 51, ILLINOIS

MODEL 1544 and 1546 WALL BOXES.

The Model 1544 and 1546 Wall Boxes operate on 24 volts A.C. 60 cycles, and are supplied from the power transformer located in the phonograph power panel. 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 relay 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 consists 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.

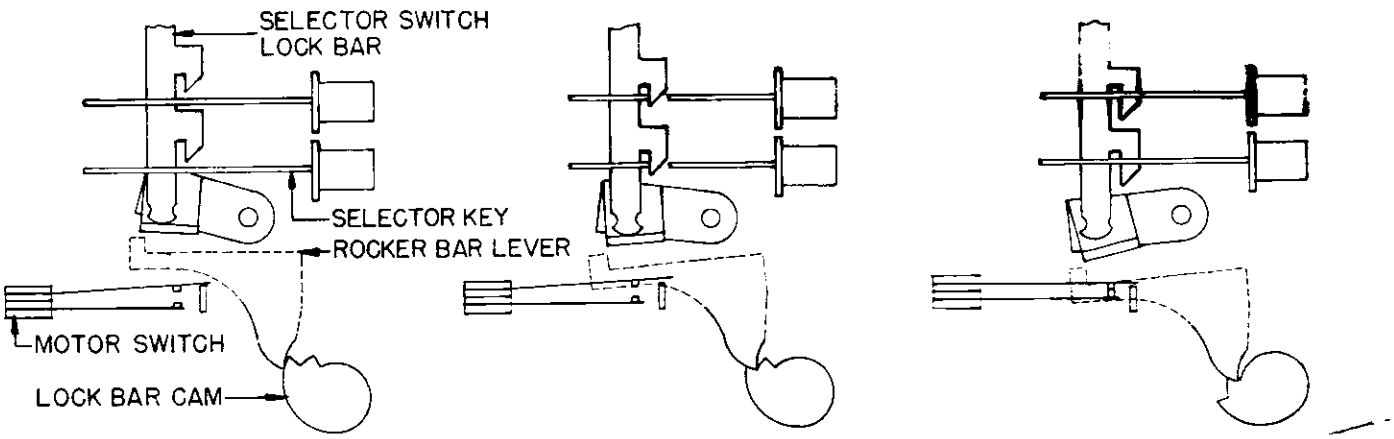


Fig. 1

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 two large contacts, 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 to 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 contact wiper arm will come to rest on the first large contact of the contact disc 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 first large contact, but will move past the second large contact, 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 thirty-three 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¢ 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¢ and 25¢ ratchets. When the 10¢ and 25¢ electromagnets are energized, they are released in the same manner as the 5¢ ratchet. The stud which is riveted to the 5¢ ratchet, permits it to rotate one or three teeth, depending on the denomination of the deposited coin. (Complete coin conversion instructions are outlined in the "Installation Instruction" sheet, which is included with the Wall Box).

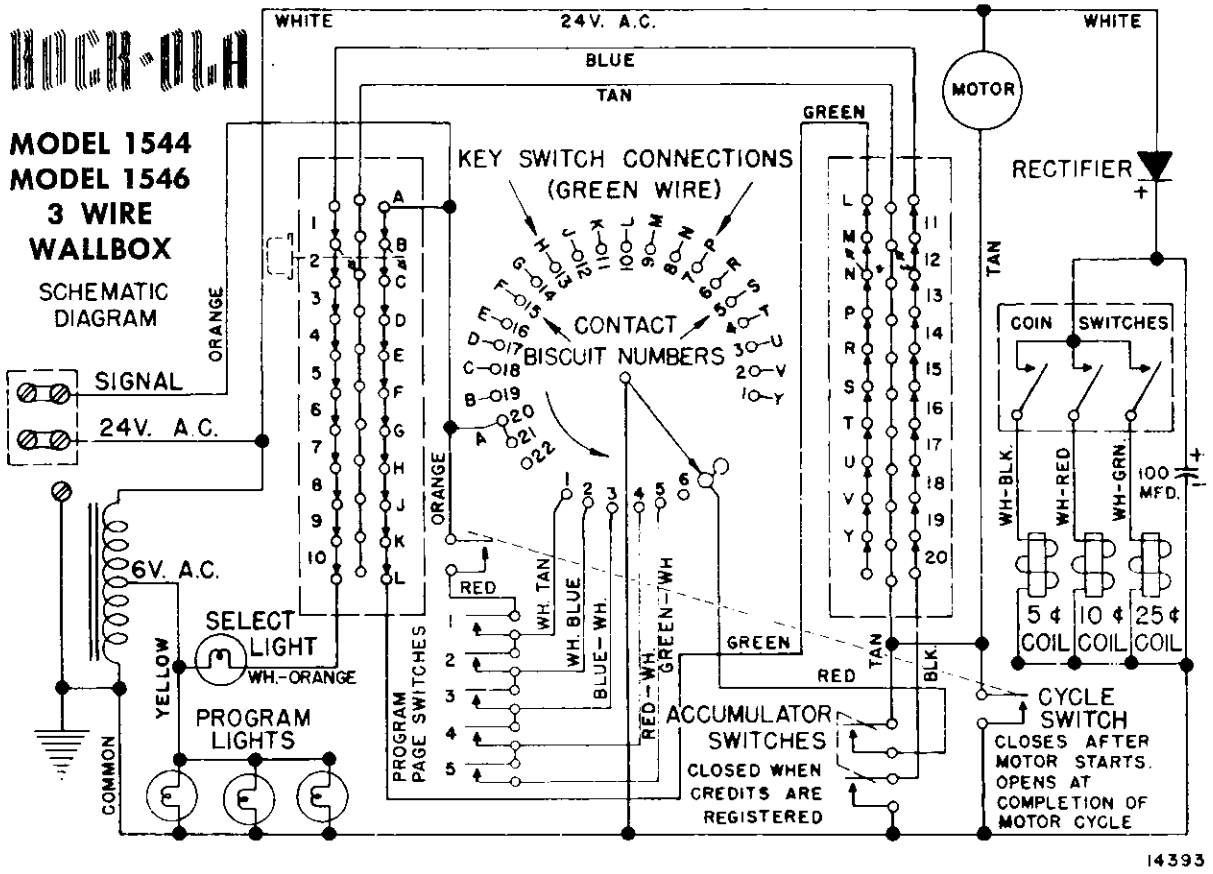


Fig. 2

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 24 revolutions per minute. The acceptable speed tolerances are between 23 and 25 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 the wiper arm on the gear motor shaft, so that the contact rests in the center of the second large disc contact.
3. Tighten the set screw in the collar of the contact wiper arm, and adjust the contact wiper arm pressure to approximately 40 grams.
4. The motor switch pressure is 35 grams minimum and should be adjusted to open so that the wiper comes to rest in the center of the first large contact.

PROGRAM LEAF SWITCHES.

The contact pressure of the five program leaf switches is between 30 and 35 grams. The air gap is from 1/32 inch to 1/16 inch when the program page leaf engages the lower curved blade of the program leaf switch. Caution must be taken to see that the program leaf switches do not obstruct the program pages from fully closing.

SELECTOR SWITCH LOCK BAR.

The selector switch lock bar has three positions which correspond to the three steps on the lock bar cam of the cam cluster. (See Fig. 1). In "rest position" (no credit) the selector keys are free to move in and out. In this position, the rocker bar lever engages the selector lock bar, so that the selector keys move midway in the openings of the lock bar. In "select position" (credit established) the rocker bar lever engages the selector lock bar so that the selector keys strike midway on the angle portion of the lock bar. The selector keys when fully depressed are then latched behind the lock bar. In "locked and pulse position" the rocker bar lever will lower the lock bar, and the selector keys strike the top portion of the lock bar. This will not allow any keys to be depressed while the contact wiper arm rotates, and holds the latched key in locked position.

The rocker bar lever extension which engages the lock bar can be bent up or down at either end to satisfy these conditions.

SLUG REJECTOR.

The National Rejectors, Inc. Type 2660 slug rejector must be cleaned periodically to maintain proper operation. If the slug rejector has operated satisfactorily for some period of time, and then becomes 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 slug rejector clean.

CAUTION:

Do not use roach powders in this equipment. Their highly corrosive action causes switch failure.

MODEL 1717 RECEIVER UNIT.

The Wallbox receiver is used to translate the information which the wallbox signal circuit provides into an impulse which energizes the proper solenoid on the phonograph selector bank in accordance with the selection made at the MODEL 1544 and 1546 Wall Boxes.

GENERAL INFORMATION.

Whenever a selection is made at the wallbox, the wallbox motor rotates a wiper arm one revolution over a contact disc, thereby causing intermittent grounding of the signal line which in turn actuates the "Pulse" relay in the receiver. The grounding pulses occur in either one or two "trains" or "series" depending upon whether the selection made is number 20 or less; or greater

NO. OF PULSES IN 2nd. TRAIN

NUMBER OF PULSES IN 1st. TRAIN	0	1	2	3	4	5
2	1	21	41	61	81	101
3	2	22	42	62	82	102
4	3	23	43	63	83	103
5	4	24	44	64	84	104
6	5	25	45	65	85	105
7	6	26	46	66	86	106
8	7	27	47	67	87	107
9	8	28	48	68	88	108
10	9	29	49	69	89	109
11	10	30	50	70	90	110
12	11	31	51	71	91	111
13	12	32	52	72	92	112
14	13	33	53	73	93	113
15	14	34	54	74	94	114
16	15	35	55	75	95	115
17	16	36	56	76	96	116
18	17	37	57	77	97	117
19	18	38	58	78	98	118
20	19	39	59	79	99	119
21	20	40	60	80	100	120

SELECTION NUMBERS

Fig. 3

than number 20. For selection numbers 1 thru 20, only one pulse train is produced, and for selections greater than 20, two pulse trains, separated by a 200 millisecond time interval, are produced. The number of pulses in the first train is determined by the selector button that is depressed, and the number of pulses in the second train is determined by the position of the program "pages" or "leaves". In the special case of selections 1 thru 20, the second pulse train does not exist. The exact relation between the selection number and the number of pulses in the first and second trains is given in Fig. 3.

EXAMPLE: Determine number of pulses in each train for selection 89.

SOLUTION: Locate selection 89. Reading to the left indicates the number of pulses in 1st train as ten (10). Reading to the top gives the number of pulses in the 2nd train as four (4).

SEQUENCE OF OPERATIONS.

COUNTING SEQUENCE.

In the normal rest position of the receiver (no active wallbox), all relays are in their relaxed positions and both step switches are in the "home" positions. As a selection is made, the first pulse of the first train causes the following to occur: (Refer to schematic diagram Fig. 4).

1. The pulse relay energizes, closing contacts "A" and "B".

2A. D. C. current flows thru "A" thru the back contact "G" of the switch on "Group" Stepper release armature, and energizes the No. 1 Time Delay Relay (TD Relay #1).

2B. Simultaneously, current flows thru "B" thru the back contact "J" of the Transfer relay and energizes the rotary step-switch coil. (Note: This type of step-switch is spring-driven and does not move its wipers until the power is removed from the coil. Energizing the coil "cocks" the spring driving mechanism).

3. TD relay #1 which was energized (item 2-A) closes contact "C", thereby energizing Time Delay Relay No. 2. (TD relay #2).

At the end of the first pulse; the following occurs:

4. The Pulse relay relaxes, opening contacts "A" and "B".

5. The opening of "B" removes coil power from the rotary step-switch and the 4 ganged wiper arms move one position.

TD Relay #1 has delayed release characteristics and will remain in the energized position for a considerable period after the first pulse ceases. Before it can release, the next pulse operates the Pulse relay which re-energizes TD Relay #1 thru contact "A". Thus, for all succeeding pulses in the 1st train, the following conditions prevail:

ROCK-OLA

MODEL 1717

3 WIRE RECEIVER SCHEMATIC DIAGRAM

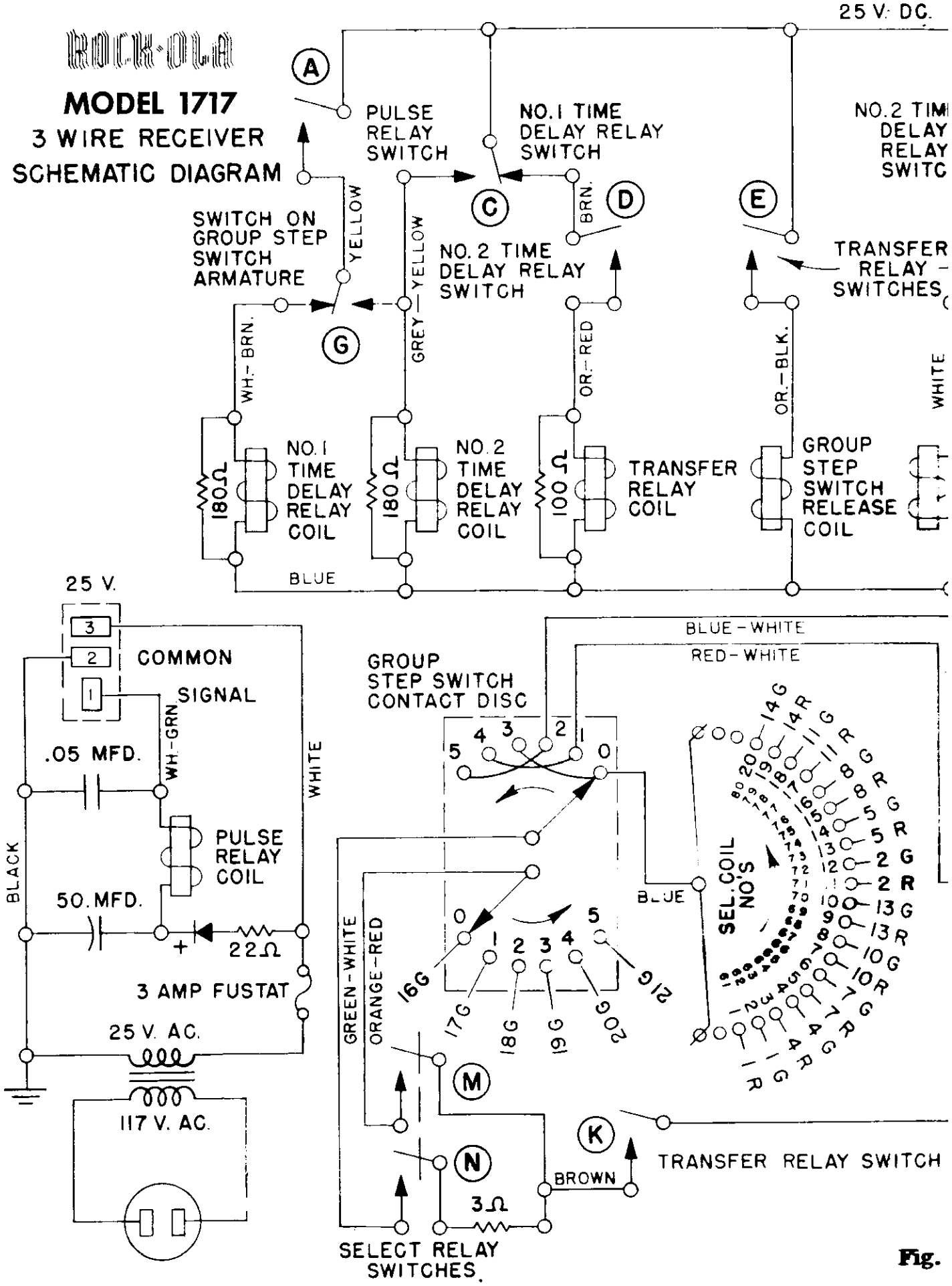
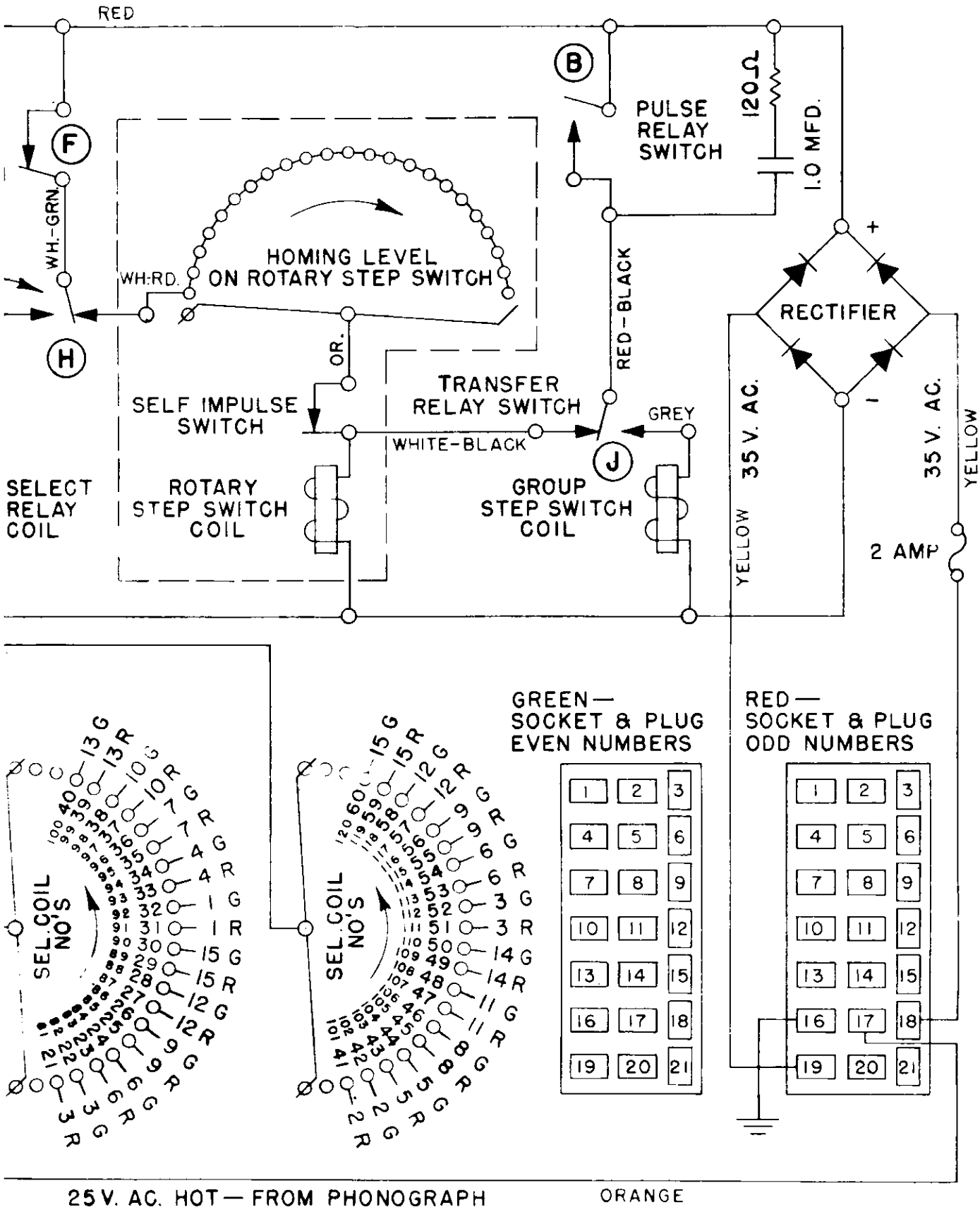


Fig.


RED
B
PULSE RELAY SWITCH
120Ω
1.0 MFD.
F
WH.-GRN.
HOMING LEVEL ON ROTARY STEP SWITCH
WH:RD.
H
OR.
RED-BLACK
+
RECTIFIER
-
TRANSFER RELAY SWITCH
SELF IMPULSE SWITCH
GREY
WHITE-BLACK
J
35 V. AC.
YELLOW
35 V. AC.
YELLOW
2 AMP
SELECT RELAY COIL
ROTARY STEP SWITCH COIL
GROUP STEP SWITCH COIL
SEL. COIL NO'S
SEL. COIL NO'S
GREEN— SOCKET & PLUG EVEN NUMBERS
RED— SOCKET & PLUG ODD NUMBERS
25 V. AC. HOT— FROM PHONOGRAPH
ORANGE

6. The Pulse relay operates for each pulse keyed by the wallbox wiper blade.

7. The intermittent operation of contact "B" steps the rotary step-switch the same number of times as there are pulses.

8. **The intermittent operation of contact "A" keeps TD relay #1 in the energized position thruout the entire 1st pulse train.**

9. **TD Relay #2 remains energized thru the forward contact "C" thruout the entire 1st pulse train.**

The 200 millisecond interval between the 1st & 2nd pulse trains is great enough so that the open contact "A" on the Pulse relay allows TD Relay #1 to relax. However, TD relay #2 receives its coil power thru contact "C" on TD Relay #1, thus its delay interval does not begin until after contact "C" opens. This addition of the time delays of the two relays is sufficiently long for TD relay #2 to remain in the energized position over the entire interval between the two pulse trains. The next action to occur therefore is:

10. **TD relay #1 relaxes, closing the back contact "C".**

11. Since TD relay #2 has a delayed release, current flows thru contacts "C" and "D" and energizes the Transfer relay.

12. Transfer relay contacts "H" and "J" move to the forward position and contacts "E" and "K" close.

13. The closure of contact "E" energizes the Group Step-Switch release coil which moves contact "G" to the forward position and also allows the detent pawl to engage the step-switch ratchet.

The above steps all occur in the interval between the pulse trains and no further action ensues until the 1st pulse in the second train occurs. (The special case of "NO SECOND PULSE TRAIN" will be treated later).

The 1st pulse in the 2nd train causes the following to take place:

14. **Contacts "A" and "B" close.**

15A. **Current flows thru "A" and the forward contact of "G" and re-energizes TD relay #2 thus keeping it in the closed position.**

15B. Current simultaneously flows thru "B" and the forward contact of "J" and energizes the group step switch coil.

16. This causes the Group Step-switch to advance one position.

The above steps 14 thru 16 continue for as many pulses as are in the 2nd train. The number

of these pulses, as previously stated, is determined by the position of the wallbox program pages, and for the MODEL 1544 and 1546 Wall Boxes, may be any number from 0 thru 5.

SELECTION SEQUENCE.

After all pulses have ceased and both step-switches have assumed the positions which connect to the proper commoning relay and selector coil in the phonograph selector unit, the selection sequence takes place as follows:

17. TD relay #2 relaxes closing contact "F" and opening contact "D".

18. Although contact "D" opens, the resistor across the transfer relay coil causes the magnetic flux in the coil to decay much more slowly than would ordinarily be the case and causes the relay to have delayed release characteristics. Therefore, current flows thru contact "F" and the forward contact of "H" and energizes the Select relay.

19. 25 VAC current from the phonograph transformer flows thru contacts K, M, and N and operates the proper commoning relay and selector coil in the selector unit, and causes a selection lever to be set up.

RESET SEQUENCE

20. At the end of its delayed release the Transfer relay relaxes, opening contact "K", which interrupts the commoning relay and selector coil power.

20A. Simultaneously contact "E" opens, breaking the group step switch release coil circuit and allowing the group step-switch wiper arm to return to zero.

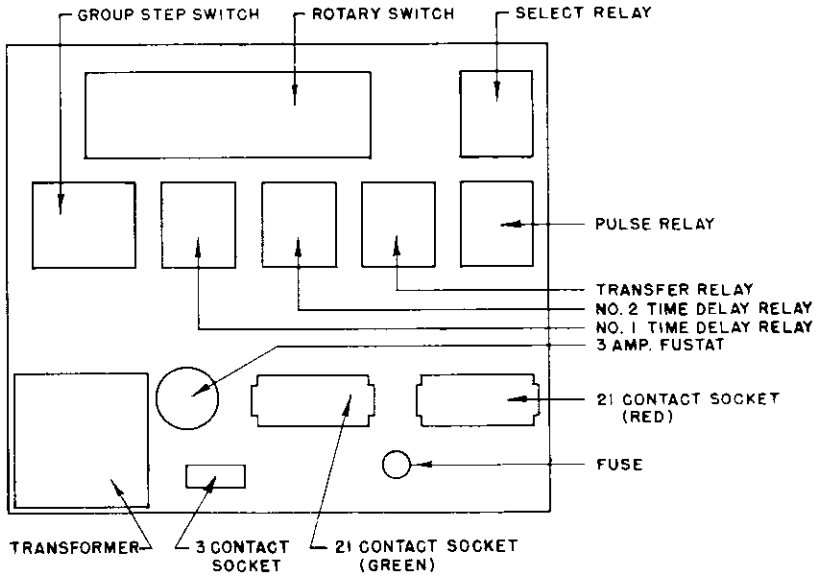
20B. Simultaneously contact "H" relaxes, opening the Select relay circuit, and completing a circuit thru "F", thru the "Homing level" and "Self-impulsing" contacts of the rotary step-switch, to its coil. The rotary step-switch has the ability to "step itself" if operated thru a set of self-impulsing contacts which are located adjacent to the drive pawl. Thus the switch will operate at a very high speed until it returns to its original "home" or rest position, at which time the contact which wipes over the "homing level" moves to an open contact, thereby disconnecting the step coil and causing the switch to stop.

SPECIAL CASE OF NO SECOND PULSE TRAIN:

In the event that selections 1 thru 20 are made at the wallbox, there is no need of a 2nd pulse train, as the selections can be counted up directly. Therefore, operations #14 thru #16 are

omitted and the receiver sequences move directly from operation #13 to #17 and continue on as in the above. Note that although the group step-switch release coil is energized, the step-switch is not moved from its zero position. The release coil is allowed to energize merely for the purpose of circuit convenience.

The pictorial diagram in Fig. 5 shows the relative position of the relays on the Receiver unit.



PICTORIAL DIAGRAM OF RECEIVER UNIT

Fig. 5

MAINTAINANCE AND LUBRICATION.

GROUP STEP SWITCH (14351)

The ratchet return spring which is coiled around the ratchet shaft, must have sufficient tension to return the ratchet from the first contact. However, the tension must not be so great that the ratchet will not step to the sixth contact. The loop end of the spring can be placed into any of the five holes in the mounting plate, to obtain the necessary spring tension.

The brass step up pawl guide is adjusted so that the pawl will strike the bottom of the ratchet tooth, when the pawl moves down to engage the ratchet.

The wiper blades are adjusted for 20 grams pressure, and must move freely over the contacts. If the contacts become dirty or tarnished, they can be cleaned with a clean cloth which was moistened slightly with a light oil. The contacts must not be cleaned with emery cloth or sandpaper, and are not to be lubricated with grease, oil or vaseline.

The ratchet stop pawl must work freely and not bind, so that it will engage the ratchet teeth when the level step-switch release coil is energized.

The following points should be lubricated with watch oil at the end of the following number of plays from the wall box system:

25,000

75,000

150,000

250,000

and at the end of every 250,000 plays thereafter.

1. Ratchet teeth which are engaged by the step up pawl.
2. Pivot point of the ratchet stop pawl.
3. Ratchet shaft bearings.
4. Relay hinges.
5. Sliding surface of step up pawl on relay armatures, and pawl pivots.

ROTARY SWITCH (14350)

LUBRICATION

For proper operation during service and to insure long life, the following lubrication routine shall be followed at the end of the following number of plays from the wall box system:

25,000

75,000

150,000

250,000

and at the end of every 250,000 plays thereafter. The switch shall be lubricated with a #4 Artists Sable Rigger brush. One dip of oil shall be the amount retained on the brush when it is dipped into the oil and scraped on the edge of the container to remove excess. In no case shall there be sufficient oil remaining on the brush to form a drop.

Watch oil shall be applied as follows:

1. Apply one dip of oil to wipers and banks, distributed between the three pairs of wiper tips. Both ends of the wiper springs must be oiled. After applying the lubricant, rotate the wipers to distribute the oil on the banks.

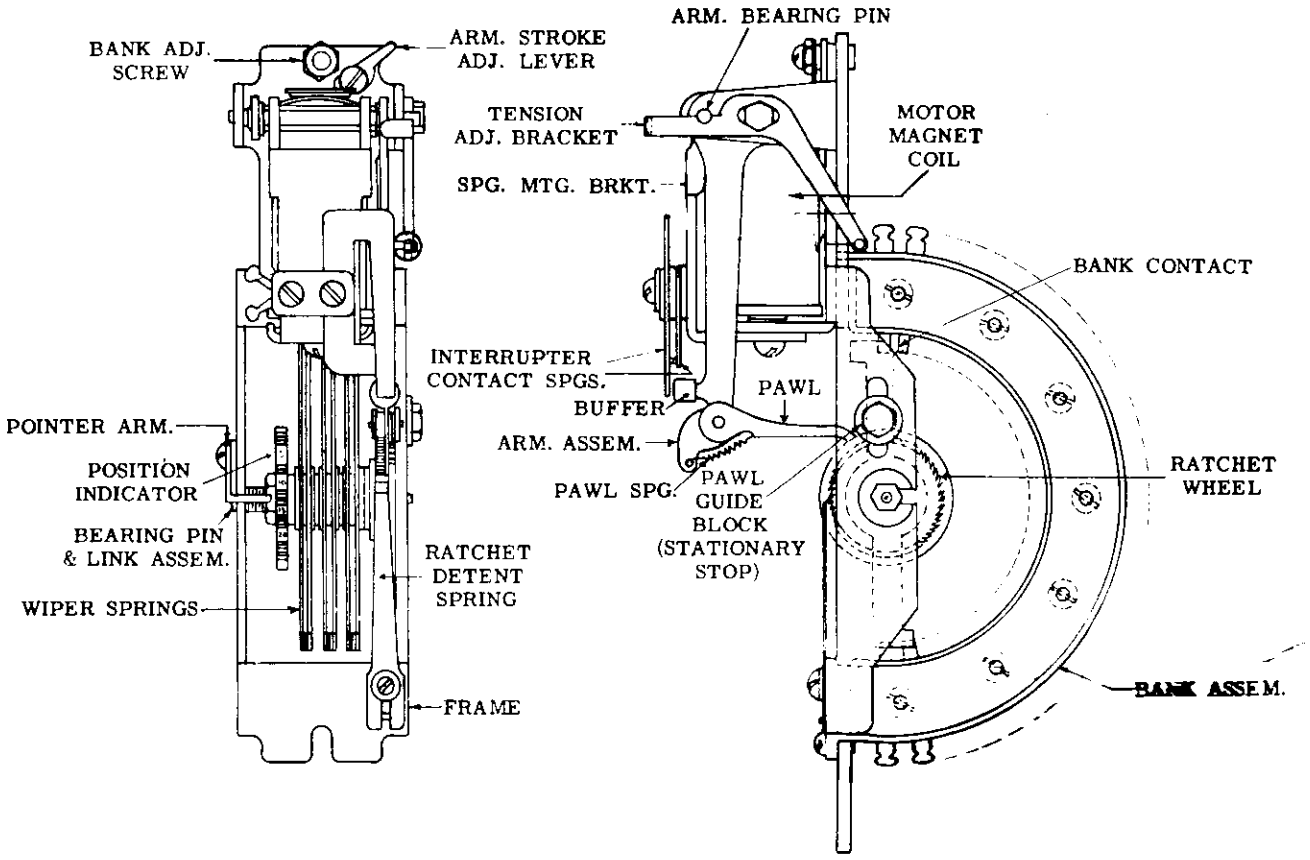
   Light mineral oil shall be applied as follows:

2. Armature bearings - 4 drops of oil.
3. The lubrication of the bearing pin during manufacture should be sufficient for the life of the switch. If excessive friction is noted, the bearing may be lubricated by applying a drop of oil between the frame and the wiper assembly shaft at each end.

4. Pawl bearing - one drop of oil.

A 50-50 mixture (by volume) of powdered mica and watch oil shall be applied as follows:

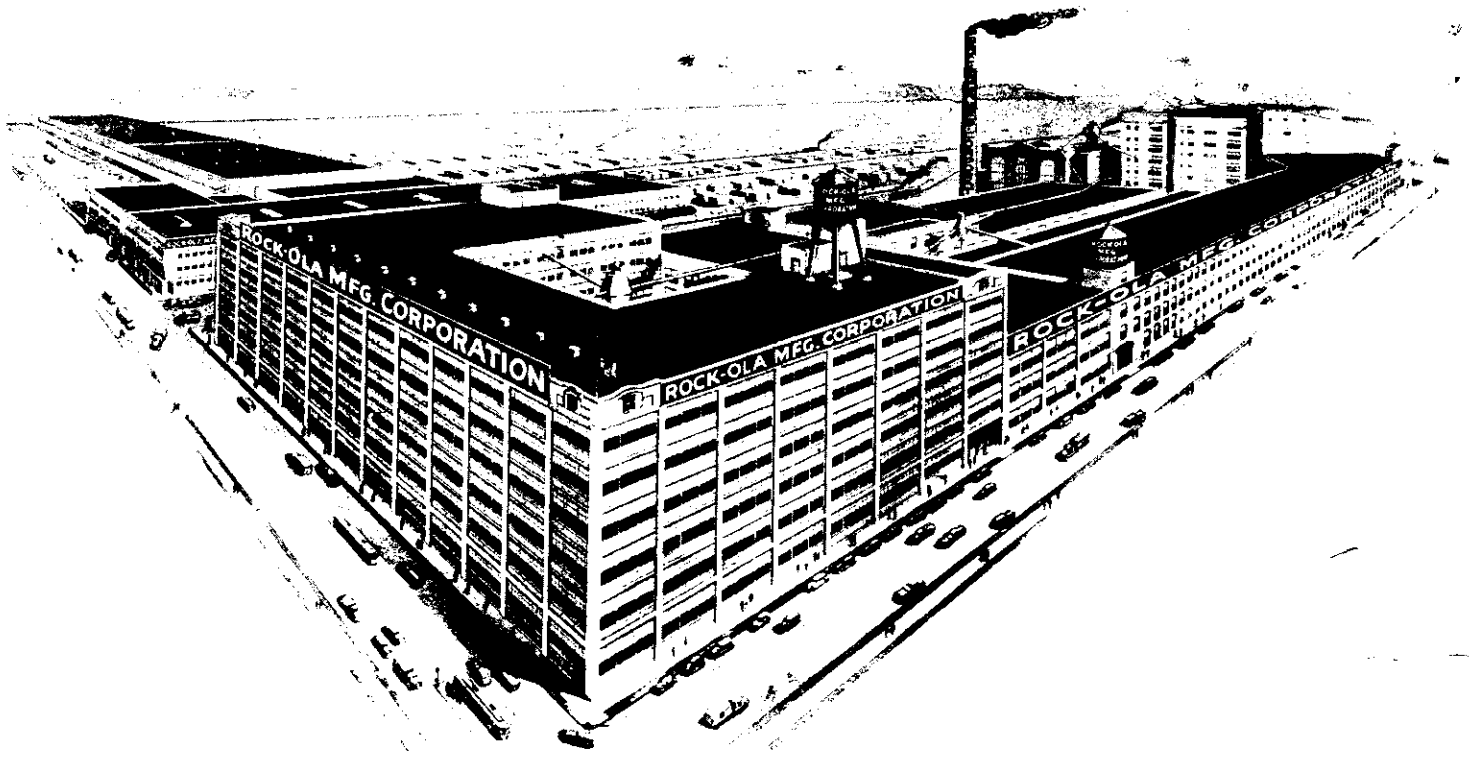
5. Ratchet teeth - two dips of mixture applied with wiper assembly rotating, to distribute the lubricant.



Type 13 Rotary Switch - Assembly Details

Fig. 6

THE HOME OF ROCK-OLA BUILT PRODUCTS, ONE OF THE LARGEST FACTORIES IN THE COIN MACHINE INDUSTRY



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PARTS LIST

FOR

MODEL 1544 and MODEL 1546

(3 WIRE—120 SELECTION WALL BOX)

AND

MODEL 1717

(3 WIRE—120 SELECTION RECEIVER UNIT)

ROCK-OLA MANUFACTURING CORPORATION

800 NORTH KEDZIE AVENUE • CHICAGO 51, ILLINOIS

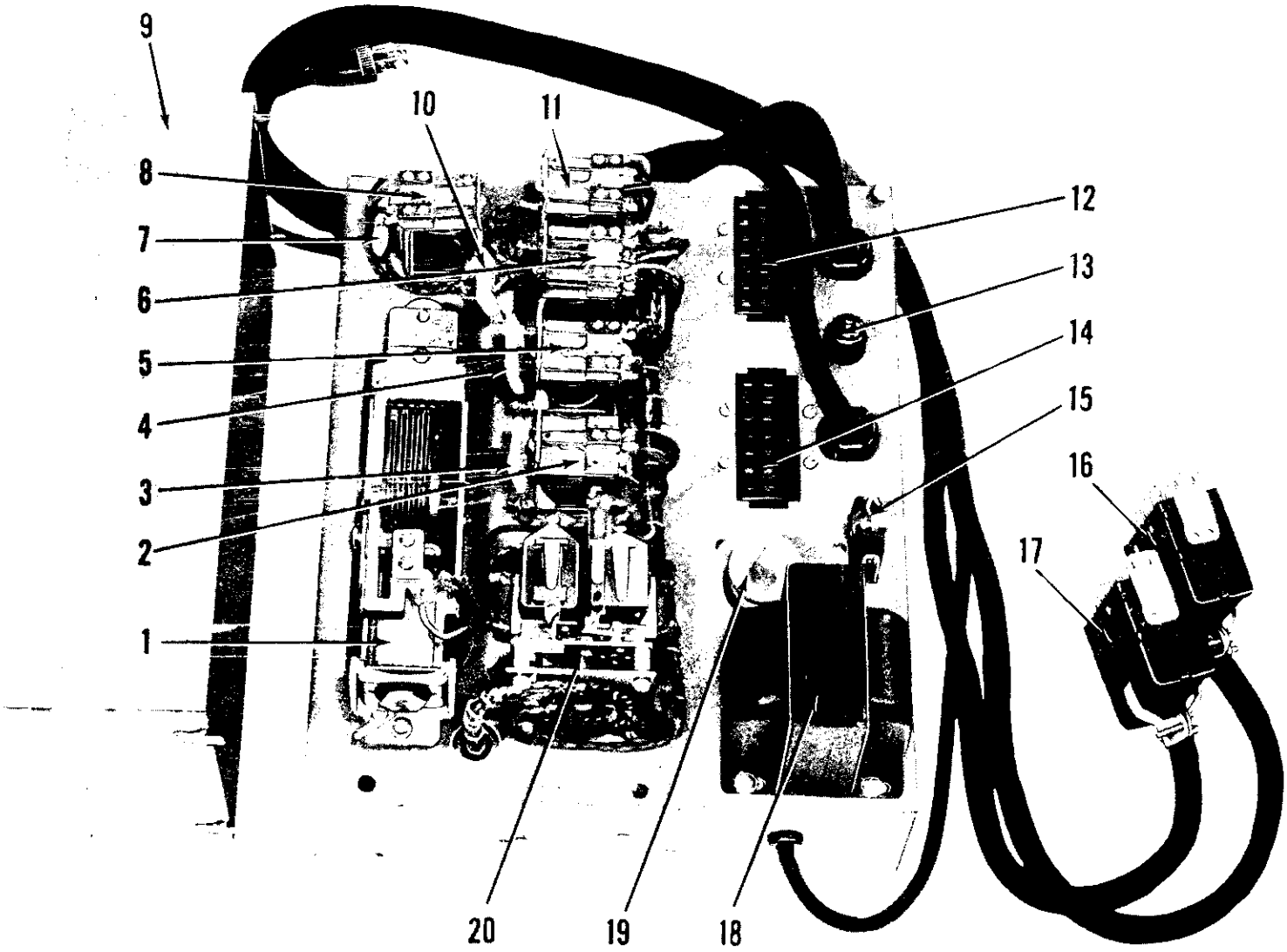

Fig. 1

ITEM	PART NO.	DESCRIPTION
1	14350	Rotary Switch
2	14353	Time Delay Relay No. 1'
3	14233	180 OHM 3 Watt Resistor
4	14233	180 OHM 3 Watt Resistor
5	14352	Time Delay Relay No. 2
6	14354	Transfer Relay
7	14363	3 OHM 3 Watt Resistor
8	14137	Select Relay
9	14438-A	Receiver Cover Assembly
10	14362	100 OHM 3 Watt Resistor
11	14137	Pulse Relay
12	16853	21 Contact Jones Socket
13	ST-4314	2 Amp. 250 Volt Fuse
14	16853	21 Contact Jones Socket
15	14215	3 Contact Plug
16	16854	21 Position Jones Plug
17	16854	21 Position Jones Plug
18	14360	Signal Transformer
19	12942	3 Amp. Fusetat
20	14351	Group Step Switch

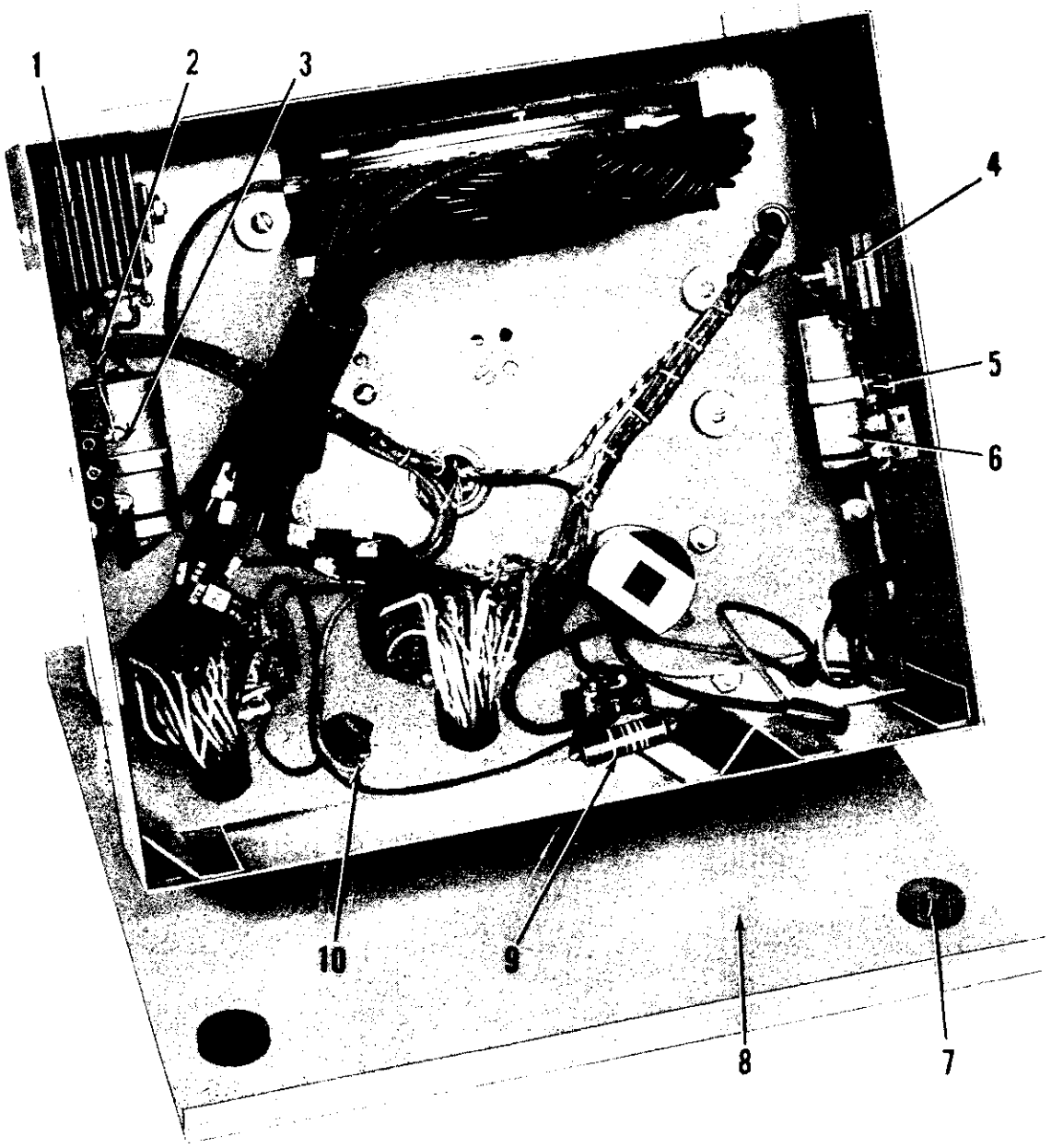

Fig. 2

ITEM	PART NO.	DESCRIPTION
1	14143	Rectifier
2	14364	120 OHM 1/2 Watt Resistor
3	14235	1.0 Mfd. 200 Volt Condenser
4	16153	Selenium Rectifier
5	14234	220 OHM Resistor
6	PH-3177	50 Mfd. 50 Volt Condenser
7	PH-7943	Grommet
8	14437	Receiver Bottom Plate
9	14365	.05 Mfd. 400 Volt Condenser
10	11555	Fuse Holder

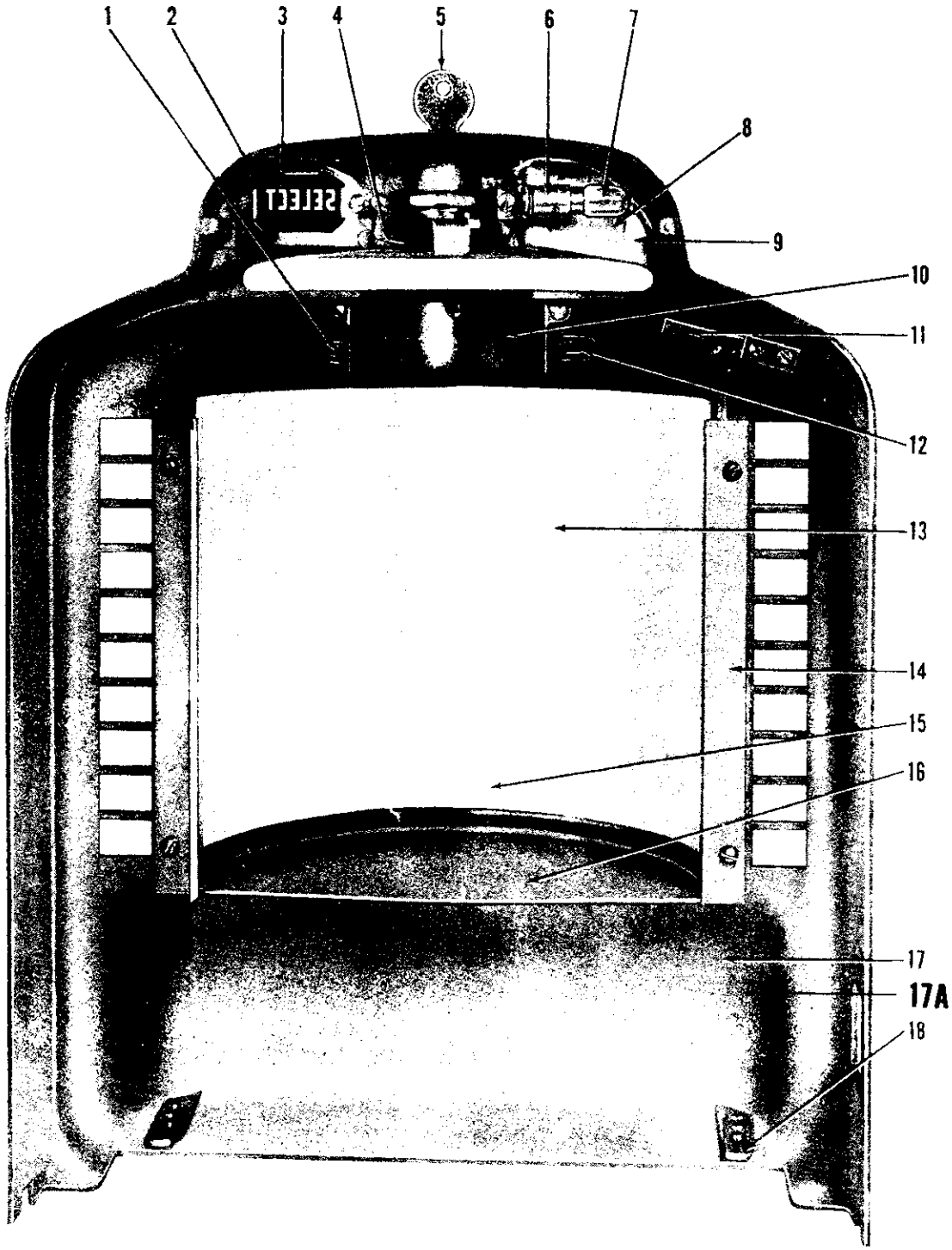

Fig. 3

ITEM	PART NO.	DESCRIPTION
1	ST-3072	#47 Lamp - 6.3 Volt
2	14223	Make Selection Clamp
3	14190	Select Window
4	14278	Reject Button Spring
5	ST-7379	Wall Box Lock
6	14218	"Coins" Light Socket
7	ST-3072	#47 Lamp - 6.3 Volt
8	14272	Coin Insert Window
9	14267	Coin Insert Clamp

ITEM	PART NO.	DESCRIPTION
10	14173	Light Deflector
11	14208	Wall Box Cover Contact Switch
12	ST-3072	#47 Lamp - 6.3 Volt
13	14189	Wall Box Window
14	14168	Window Retainer
15	14392	Wall Box Decal
16	14347	Instruction Plate
17	14144	Wall Box Front
17A	14442	Wall Box Front (Chrome Finish)
18	14186	Cover Locator Bracket

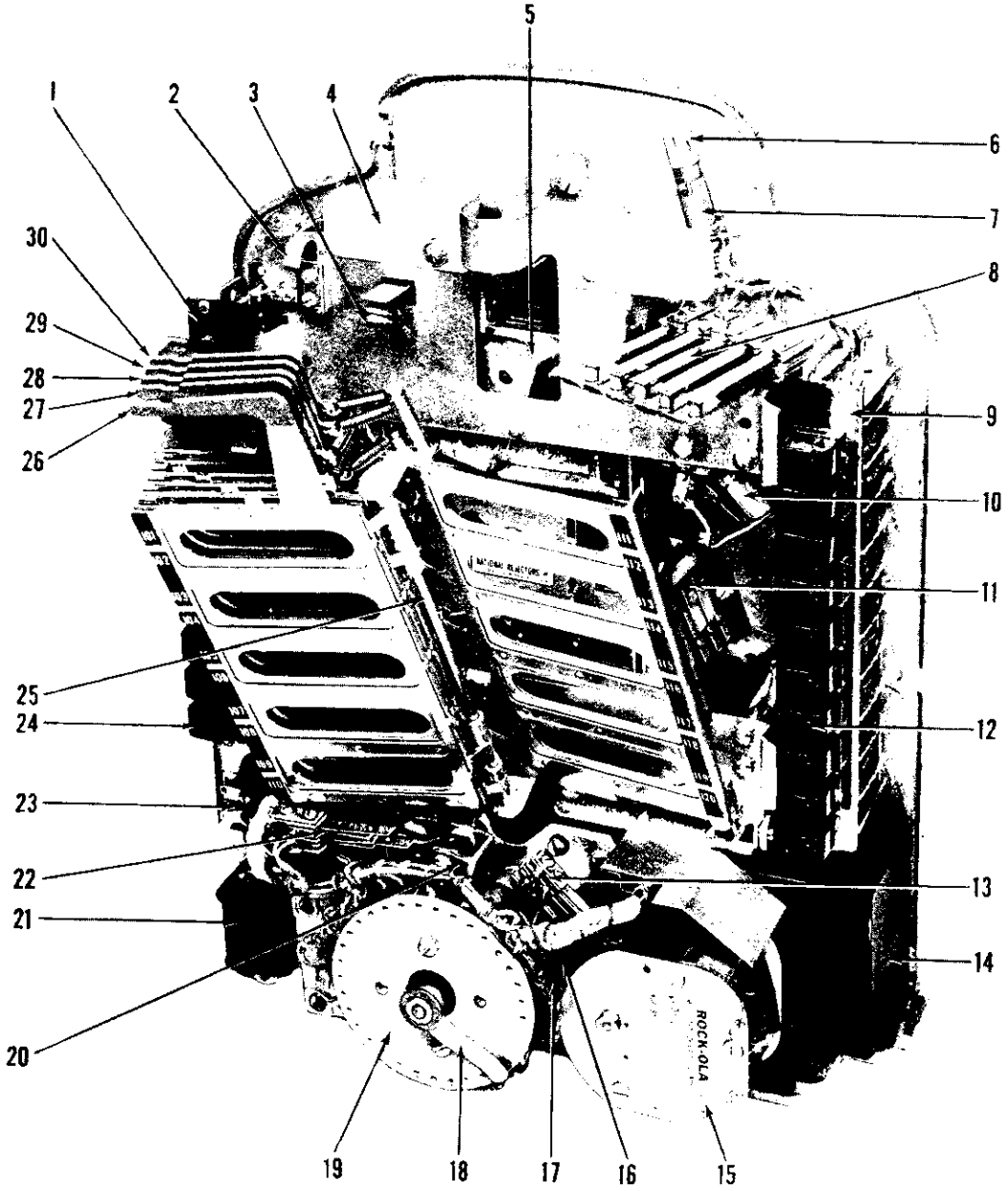

Fig. 4

ITEM	PART NO.	DESCRIPTION
1	14151	Push Button Switch (L.H.)
2	14209	Program Holder Contact Switch
3	14156	Program Holder Latch Spring
4	14171	Light Baffle
5	14312-A	Slug Rejector Assembly
6	ST-3072	#47 Lamp - 6.3 Volt
7	14219	"Make Selection" Light Socket
8	14210	Program Leaf Switch
9	14150	Push Button Switch (R.H.)
10	14206	Wall Box Capacitor
11	14072	Coin Switch
12	14148	Wall Box Button
13	14211	Accumulator Switch
14	14220	Cash Box
15	14132-A	Accumulator Assembly
16	14275	Accumulator Lever Spring
17	14308-A	Accumulator
18	14162	Wiper Arm
19	14322-A	Biscuit Riveting Assembly
20	14159	Rocker Bar Lever
21	14149	Gear Motor (with Cams)
22	14338	Motor Cycle Switch
23	14217	Terminal Block
24	14148	Wall Box Button
25	14317-A	Program Leaf Pivot Shaft Assembly
26	14407-A	#5 Program Leaf Assembly
27	14316-A	#4 Program Leaf Assembly
28	14406-A	#3 Program Leaf Assembly
29	14315-A	#2 Program Leaf Assembly
30	14405-A	#1 Program Leaf Assembly

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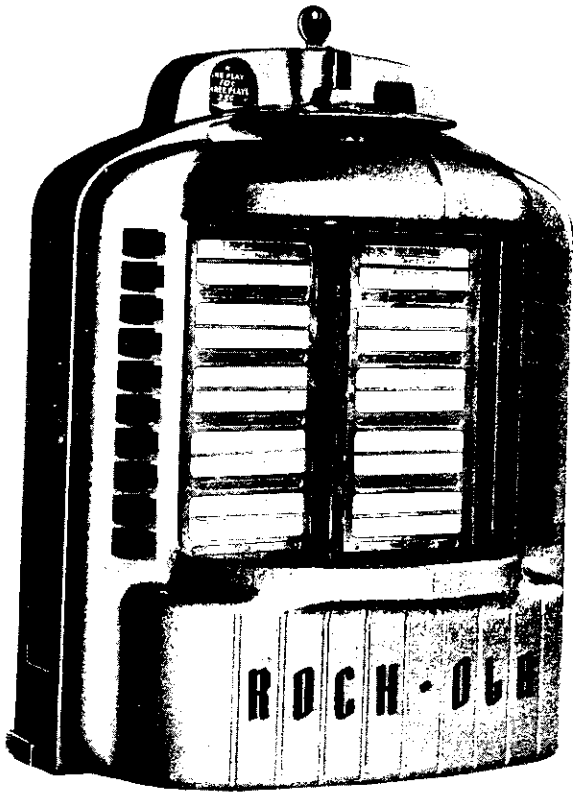
INSTALLATION INSTRUCTIONS
FOR
MODEL 1544 and MODEL 1546--THREE WIRE, 120 SELECTION--WALLBOX, and MODEL 1717 RECEIVER UNIT



Model 1544 and 1546 Wall Boxes and Model 1717 Receiver Unit are designed to operate with Model 1436, 1436-A, 1438 Phonographs. The Model 1544 and 1546 Wall Boxes operate at 25 volts A.C. 60 cycles input, and the Model 1717 Receiver Unit at 117 volts A.C. cycles input.

WALL BOX INSTALLATION INSTRUCTIONS.

Remove the front case by inserting the key and turning it in a counter-clockwise direction to release the locking latch in the Wall Box. Remove the program holder by lifting the locking catch at the top left side of the program holder, and pull the program holder forward, and out of the wall box. Remove the slug rejector by merely lifting it up and out of the wall box. This will expose the knockout holes, which are used for mounting the wall box on a bar, counter or table.

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. 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.

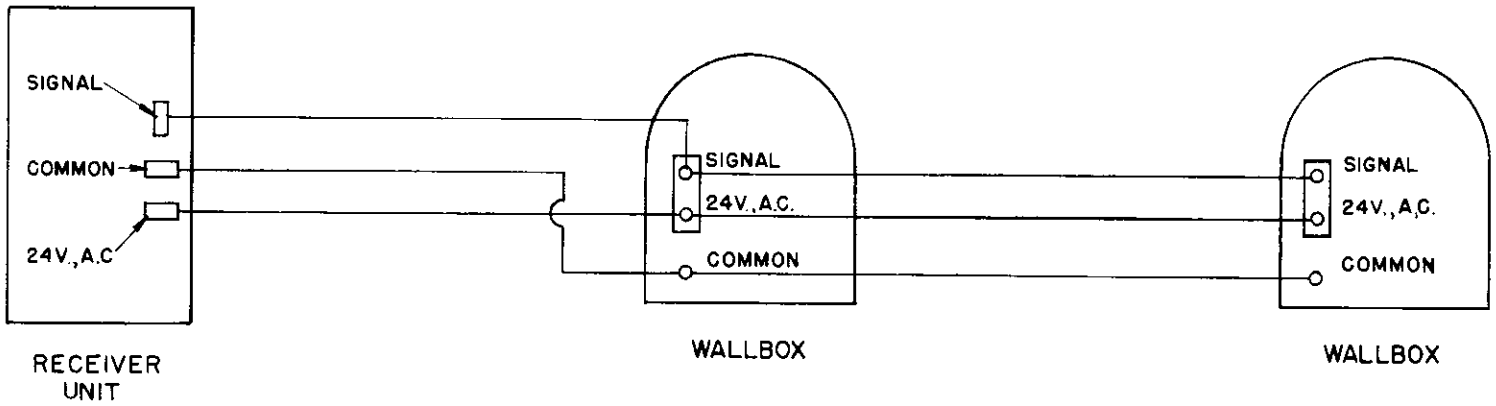
The cash box is located at the lower right side, and is accessible only after the front case is removed. The slug return cup is located on the lower left side.

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 thirty-three credits. It is not necessary to make a selection after each credit is established.

Model 1540, DeLuxe Bar Bracket, and Model 1539, Universal Bar Bracket, are 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.



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 Model 1717 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. fusetat on the receiver unit, or the prolonged heating of the transformer may cause it to fail.

RECEIVER INSTALLATION INSTRUCTIONS.

Note: Positions referred to in the following, are viewed from the rear of the phonograph.

1. Remove the bottom plate from the receiver unit by loosening the two round head mounting bolts. The bolts are visible from the top side of the receiver unit, and are located at the edge of the housing. Place the bottom plate over the four locating holes in the bottom of the cabinet, with the two slots in the bottom plate facing the front of the phonograph.
   Fasten the bottom plate with wood screws, placing washers under heads of screws. (Screws and washers are supplied with receiver unit.)
2. Place receiver on bottom plate (transformer facing rear of phonograph) by sliding the lugs which extend from the bottom of the receiver unit into the two slots in the bottom plate. Fasten the receiver unit to the bottom plate with the two round head bolts which were previously removed.

3. Disconnect the phonograph from the power line by means of the master switch, located in the rear of the phonograph.
4. Remove the two selector cable plugs (Red and Green) from the front door of the phonograph, and press them firmly into the Red and Green sockets in the receiver unit.
5. Insert the Red and Green receiver plugs into the corresponding sockets on the front door of the phonograph.
6. Solder a three wire cable to the Jones socket provided with the receiver. BE SURE ALL THREE WIRES ARE PROPERLY POLARIZED WITH THE WALL BOXES, OR IMPROPER OPERATION WILL RESULT.
7. Plug the receiver AC cord into the Service Outlet on the amplifier.

MODEL 1544 and 1546 (3 WIRE - 120 SELECTION) WALL BOX COIN CONVERSION INSTRUCTIONS.

ONE PLAY 5¢ - TWO PLAYS 10¢ - SIX PLAYS 25¢ ONE PLAY 10¢ - AND THREE PLAYS 25¢.

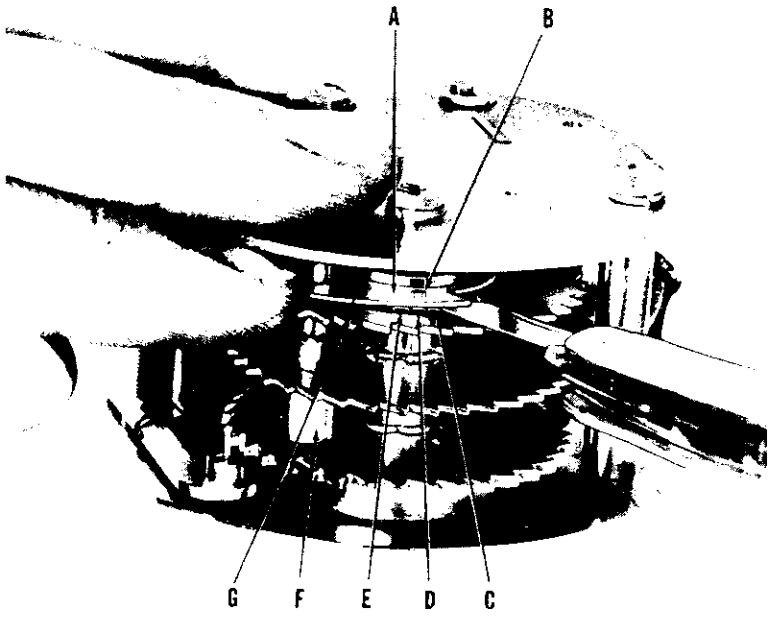


FIG. 1 - VIEW OF ACCUMULATOR

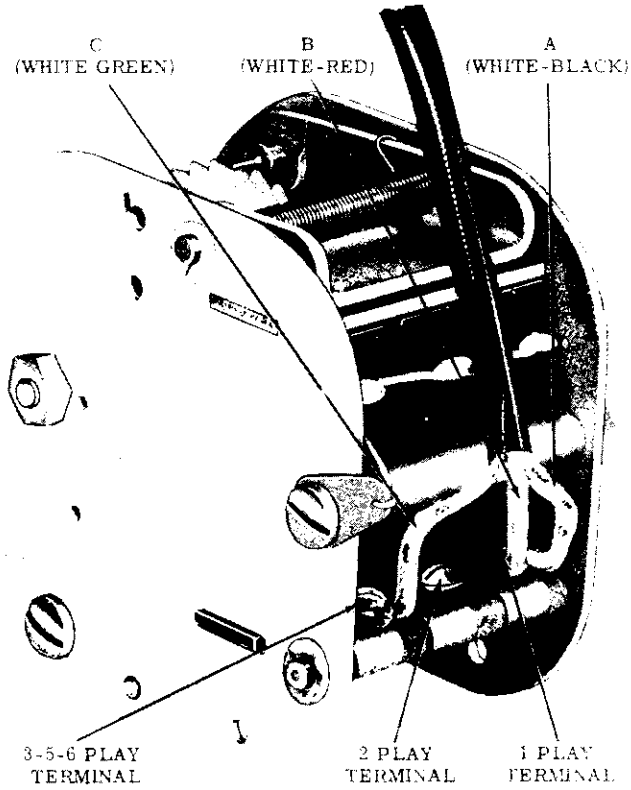


FIG. 2 - VIEW OF ACCUMULATOR

NOTE: ALL ROCK-OLA MODEL 1544 - 1546 (3 WIRE, 120 SELECTION) WALL BOXES ARE SET FOR ONE PLAY 5¢ - TWO PLAYS 10¢ - FIVE PLAYS 25¢ - OPERATION. For example, accumulator in Fig. 2 has been wired to show position of wiring for 1 play 10¢ and 3 plays for 25¢ operation.

TO ADJUST ACCUMULATOR AND SLUG REJECTOR.

1. FOR ONE PLAY 10¢ AND THREE PLAYS 25¢ OPERATION.
   - A. Insert thin blade of pocket knife under quarter wafer (A-Fig. 1), twist slightly, raising wafer pin (B-Fig. 1) from hole.
   - B. Keep quarter ratchet wheel from rotating and move quarter wafer until pin drops into three play hole (E-Fig. 1) closest to ratchet spring stud (F-Fig. 1).
   - C. Remove white-red tracer wire (B-Fig. 2) from two play terminal on accumulator, and solder to one play terminal where white-black tractor wire (A-Fig. 2) is already connected.
   - D To reject 5¢ coins, remove cover plate on slug rejector (A-Fig. 3) after first removing slug rejector from Wall Box.

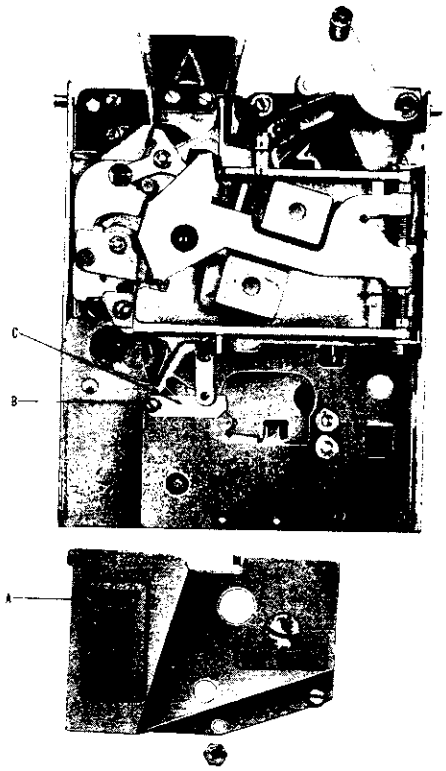


FIG. 3 - SLUG REJECTOR UNIT

E. Loosen screw (B-Fig. 3) and insert 5¢ coin stop (C-Fig. 3) which is included in the Wall Box under head of screw (B-Fig. 3) and tighten screw. Replace cover plate (A-Fig. 3) and insert slug rejector unto Wall Box.

F. Replace plastic coin instruction plate on Wall Box with properly designated one.

2. FOR ONE PLAY 5¢, TWO PLAYS 10¢ AND SIX PLAYS 25¢ OPERATION.

A. Same as 1-A above.

B. Keep quarter ratchet wheel from rotating and move quarter wafer until pin drops into six play hole (C-Fig. 1) farthest from ratchet spring stud (F-Fig. 1).

C. Same as 1-F.