

OPERATING INSTRUCTIONS

CONFIDENTIAL: DO NOT LEAVE INSTRUCTIONS IN GAME

Bally®

FROLICS



FROLICS by Bally

6-cards replay amusement game

5 balls 5 cents

EXTRA COINS MAY BE PLAYED

(A) FOR SCORING ADVANTAGES

(B) FOR EXTRA BALLS

IN-LINE SCORES: Each of 6 Cards on backglass contains 25 numbers, 1 to 25, arranged in a square 5 numbers wide by 5 numbers high, not in numerical order.

Playfield contains 25 skill-holes, numbered 1 to 25 in numerical order from top to bottom of playfield, and ball-return hole through which balls return for free shots.

When ball is shot into a numbered skill-hole, corresponding number lights in all 6 Cards on backglass.

Object of game is to light 3, 4 or 5 adjoining numbers connected, horizontally, vertically or diagonally, by white line on a selected Card.

6-CARD SELECTIVE PLAY: Player selects FIRST Card by depositing first coin* and may select additional Cards by depositing additional coins*.

GUARANTEED SELECTIONS: Player is guaranteed selection of 1 Card for each coin* deposited, up to 6 Cards for 6 coins*.

FREE SELECTIONS: At mystery-intervals, 2 or more Cards may be selected with 1 coin*.

After a Card is selected (indicated by word FIRST, SECOND, THIRD, etc. lighting above Card), Card remains selected during entire game, regardless of number of coins* deposited.

After Extra Balls Button is pressed, additional coins* do not select Cards.

NEW SUPER-SCORE FEATURE: Word SUPER-SCORE appears in panel above each Card. SUPER-SCORE panels flash for each coin* deposited and, at mystery-intervals, a SUPER-SCORE panel may remain lit during entire game. Additional RED BUTTON PLAY may light additional SUPER-SCORE panels which remain lit.

After selecting all 6 Cards, player may continue to deposit coins* to light SUPER-SCORE panels and to advance Super-Scores.

After Extra Balls Button is pressed, additional coins* do not light SUPER-SCORE panels.

(Continued on next page)

* When replays are registered, Replay Button may be pressed, instead of coin being deposited.

SUPER-SCORES**: Player who lights 3, 4 or 5 numbers in line in a selected Card, when corresponding SUPER-SCORE panel is lit, scores Super-Scores** indicated, instead of regular scores***.

ADVANCING SUPER-SCORES**: Super-Scores** appear in hats, balloons and pedestals of 5 girls pictured at bottom of backglass. Super-Scores** flash for each coin* deposited and advance at mystery-intervals.

After selecting all 6 Cards and lighting all 6 SUPER-SCORE panels, player may continue to deposit coins* to advance Super-Scores** to highest bracket.

GUARANTEED SUPER-SCORES**: Super-Scores** either advance to a higher bracket or remain as high as on previous coin, never drop back to a lower bracket, regardless of number of coins* deposited.

After Extra Ball Button is pressed, additional coins* do not advance Super-Scores**.

NEW NEXT GAME ATTRACTION: Each of 2 skill-rollovers at bottom of play-field is labeled:

HIGHEST SUPER-SCORE NEXT GAME IF HIT WHEN LIT

When player hits either rollover when lit, panel lights on backglass, indicating that Super-Scores** will immediately advance to highest bracket when coin* is deposited to start next game.

(Concluded on next page)

* When replays are registered, Replay Button may be pressed, instead of coin being deposited.

** Super-Scores:

5-IN-LINE (Hats)	:	50	75	100	150	200
4-IN-LINE (Balloons)	:	24	36	48	72	96
3-IN-LINE (Pedestals)	:	4	6	8	12	16

*** Regular scores:

5-IN-LINE:	50
4-IN-LINE:	16
3-IN-LINE:	3

EXTRA-BALLS FEATURE: After shooting first ball, player may press Extra Balls Button and deposit additional coins* to play for extra balls.

At mystery-intervals, after Extra Balls Button is pressed, (1st) lights on backglass, when coin* is deposited. After (1st) is lit, light advances, at mystery-intervals to (EXTRA), when Extra Balls Button is pressed and coin* is deposited. After (1st) (EXTRA) is lit, light advances at mystery-intervals to (BALL), when Extra Balls Button is pressed and coin* is deposited.

When (1st) (EXTRA) (BALL) is completely lit, first extra ball is released to player.

After shooting first extra ball, player may continue to press Extra Ball Button and deposit additional coins* to light (2nd) (EXTRA) (BALL) in order to receive second extra ball.

Coins* deposited to play for extra balls do not (a) select Cards, (b) light SUPER-SCORE panels or (c) advance Super-Scores**.

After playing for extra balls, player may not play to (a) select Cards, (b) light SUPER-SCORE panels or (c) advance Super-Scores**.

* When replays are registered, Replay Button may be pressed, instead of coin being deposited.

** Super-Scores:

5-IN-LINE (Hats)	:	50	75	100	150	200
4-IN-LINE (Balloons)	:	24	36	48	72	96
3-IN-LINE (Pedestals):		4	6	8	12	16

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INSTALLATION & OPERATING INSTRUCTIONS.

Fasten 4 legs to cabinet with bolts and washers furnished. Place back-box in position. Unlock and open back door, and fasten the back-box to cabinet with bolts and washers furnished. Remove top of back-box by opening lock on top, lift out glass and lower insert by raising slide brackets on top. Close back door and lock. Raise insert and lock in place. Replace glass and top of back-box and lock.

Plug power line into 110-115 volt 60 cycle alternating current only. Turn on power by turning toggle switch on in bottom of cabinet (front right).

ACCESS TO MECHANISM

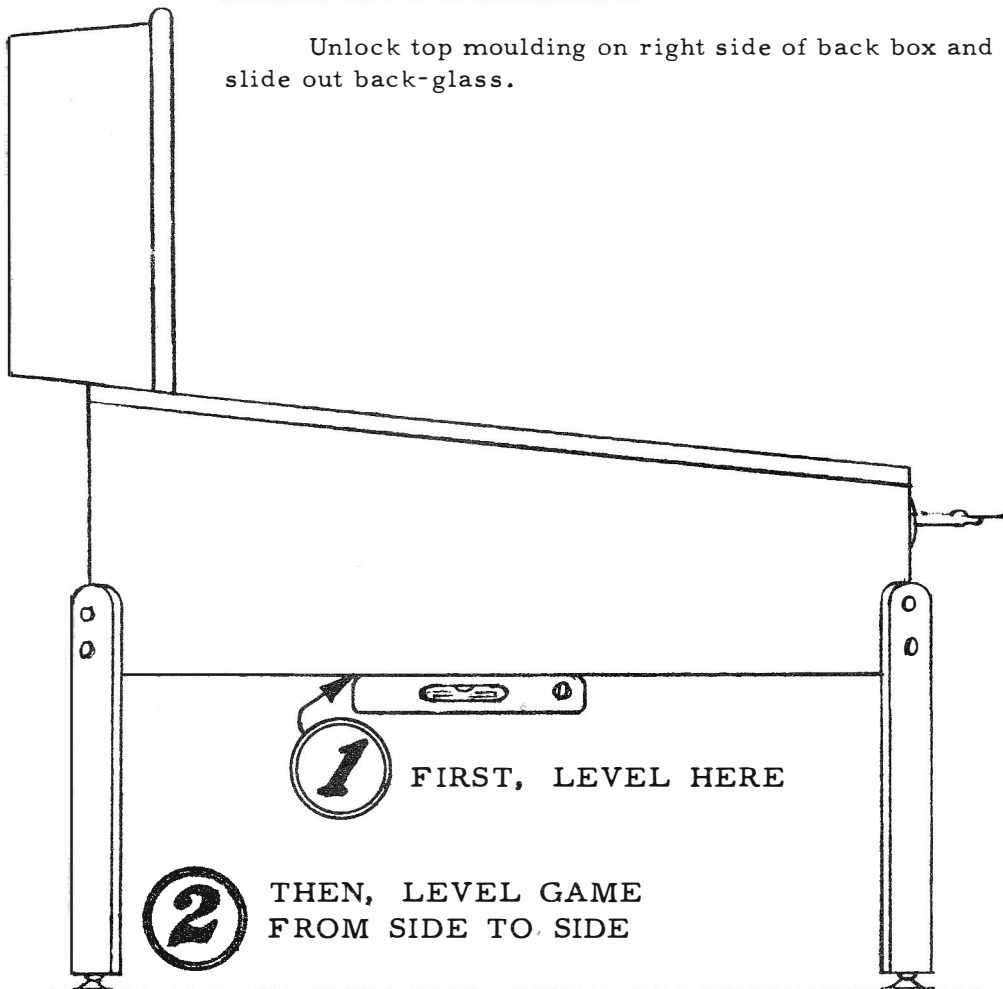
The above paragraph explains access to back box.

NOTE

LOCKS ON BACK DOOR AND TOP OF BACK BOX ARE COMMON AND ANY ONE OF 3 KEYS FURNISHED WILL OPEN BACK DOORS AND TOP MOULDING.

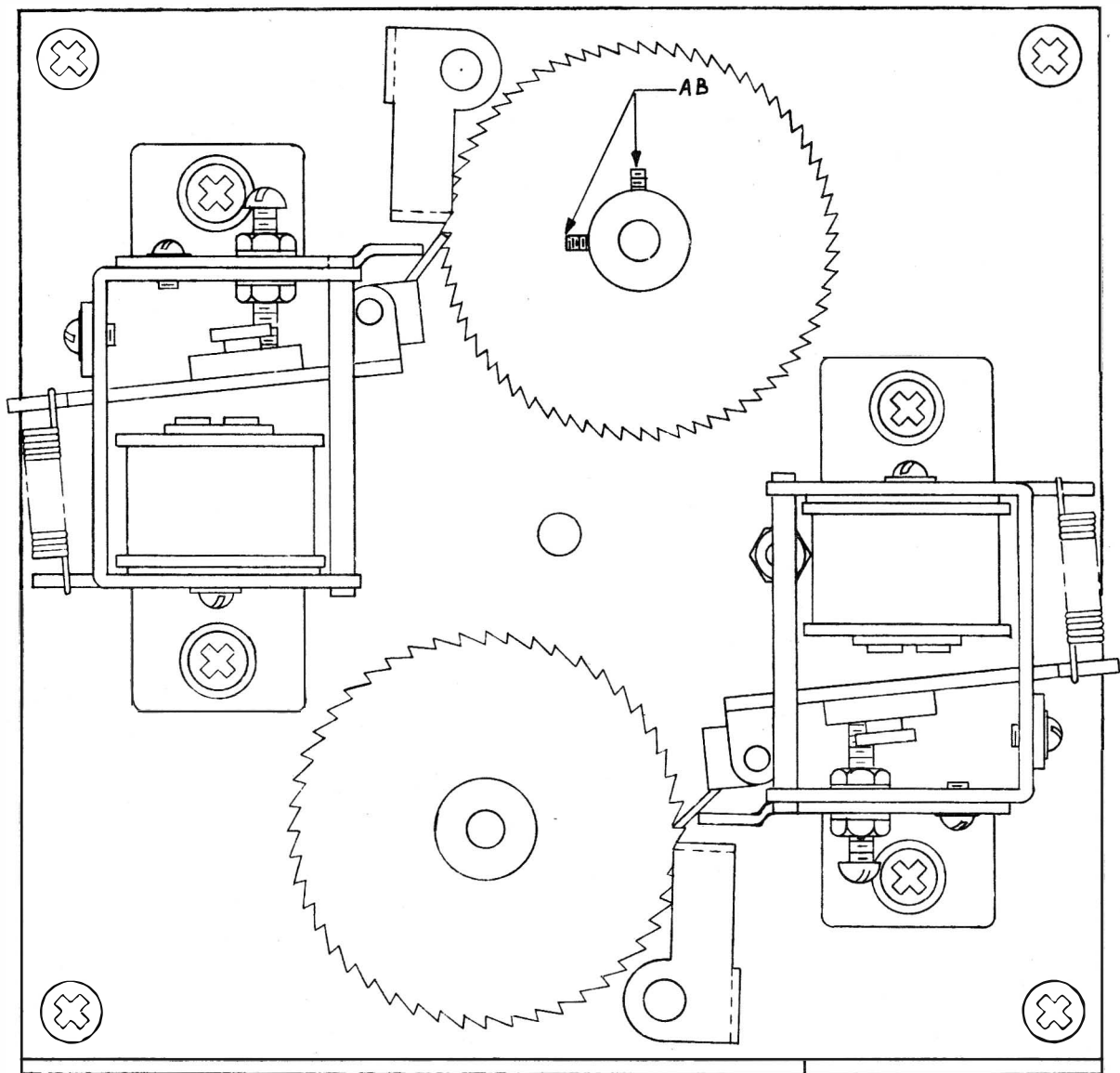
TO SERVICE LIGHT BULBS

Unlock top moulding on right side of back box and slide out back-glass.



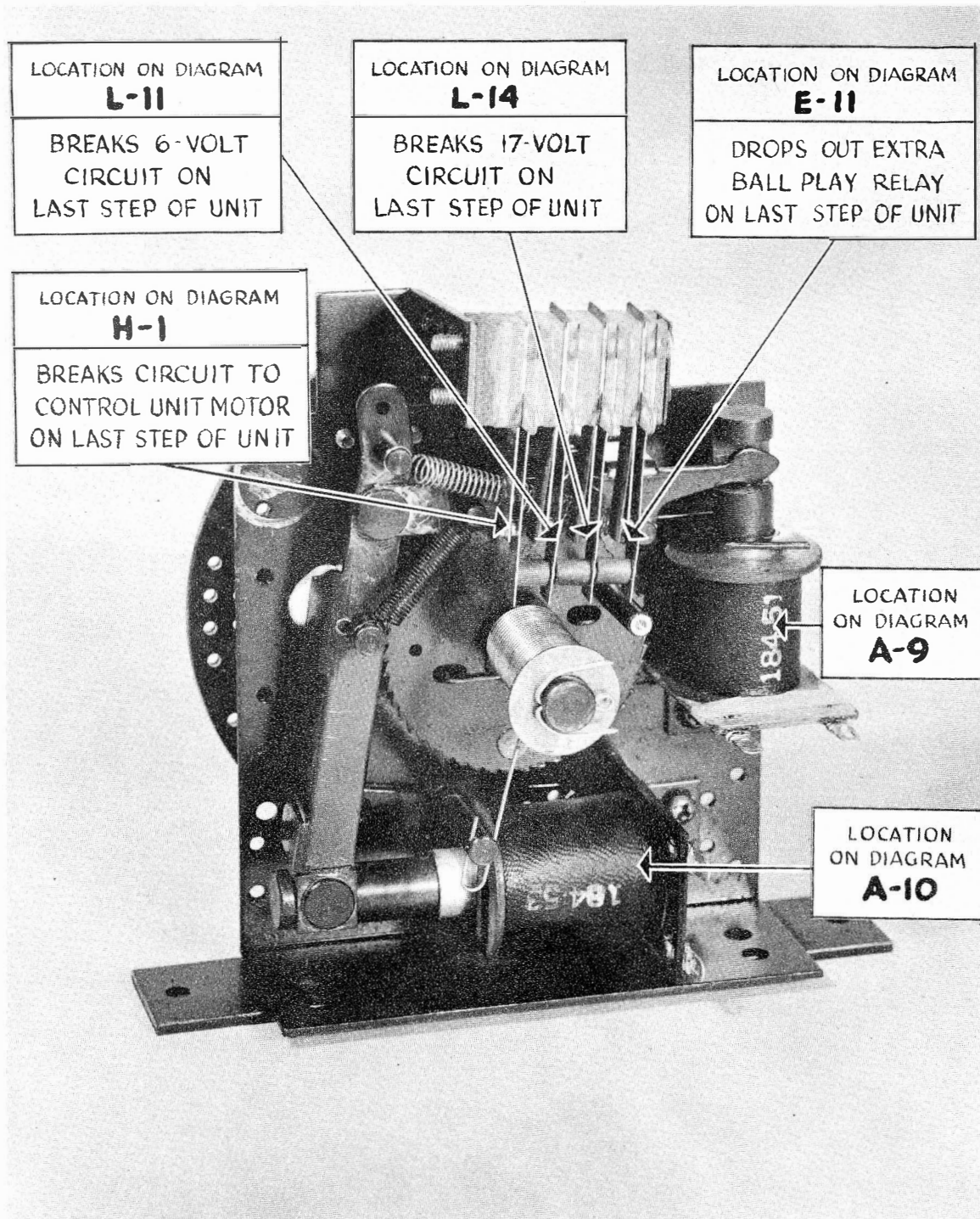
GAME PROPORTIONING

OVERALL PROPORTIONING of game to maintain a maximum amount of play is the function of the REFLEX UNIT which is located on the back door. Two additional ratchets are supplied if the type of play in some locations require a change. See diagram below for location of set screws (A and B) for fastening ratchets.



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TIMER UNIT — SWITCH SIDE



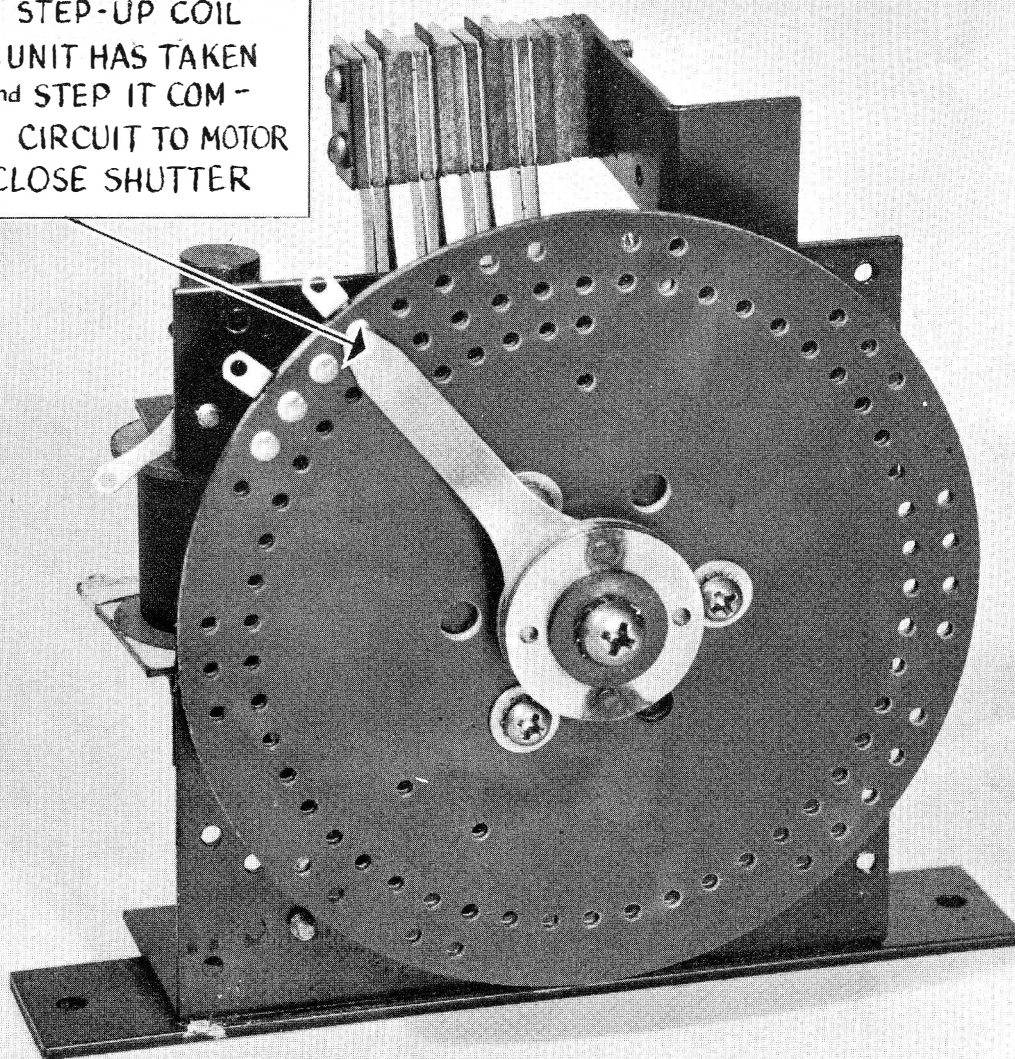
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TIMER UNIT — WIPER SIDE

LOCATION ON DIAGRAM

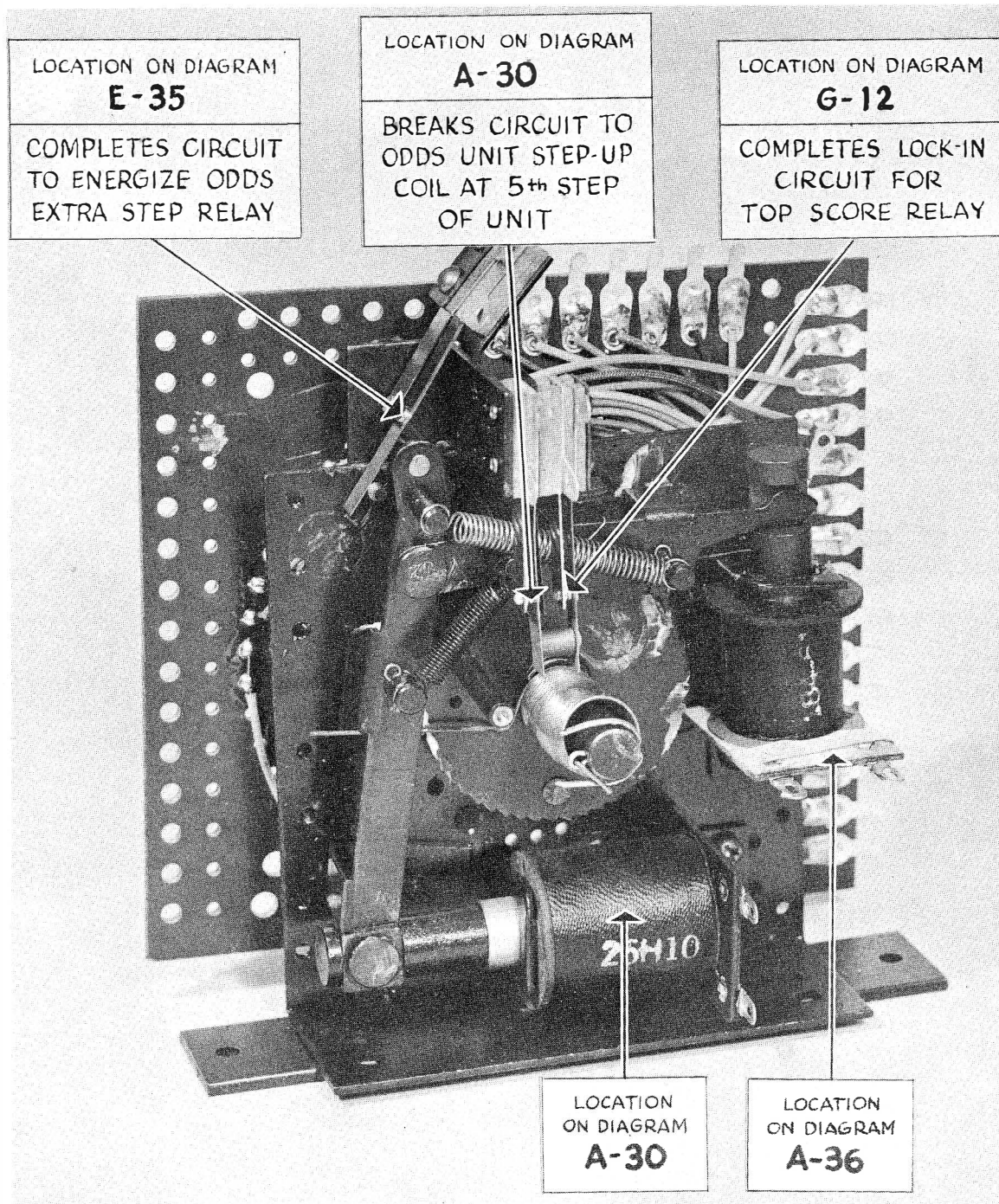
H-15

COMPLETES CIRCUIT TO
TIMER STEP-UP COIL
WHEN UNIT HAS TAKEN
THE 2nd STEP IT COM-
PLETES CIRCUIT TO MOTOR
TO CLOSE SHUTTER



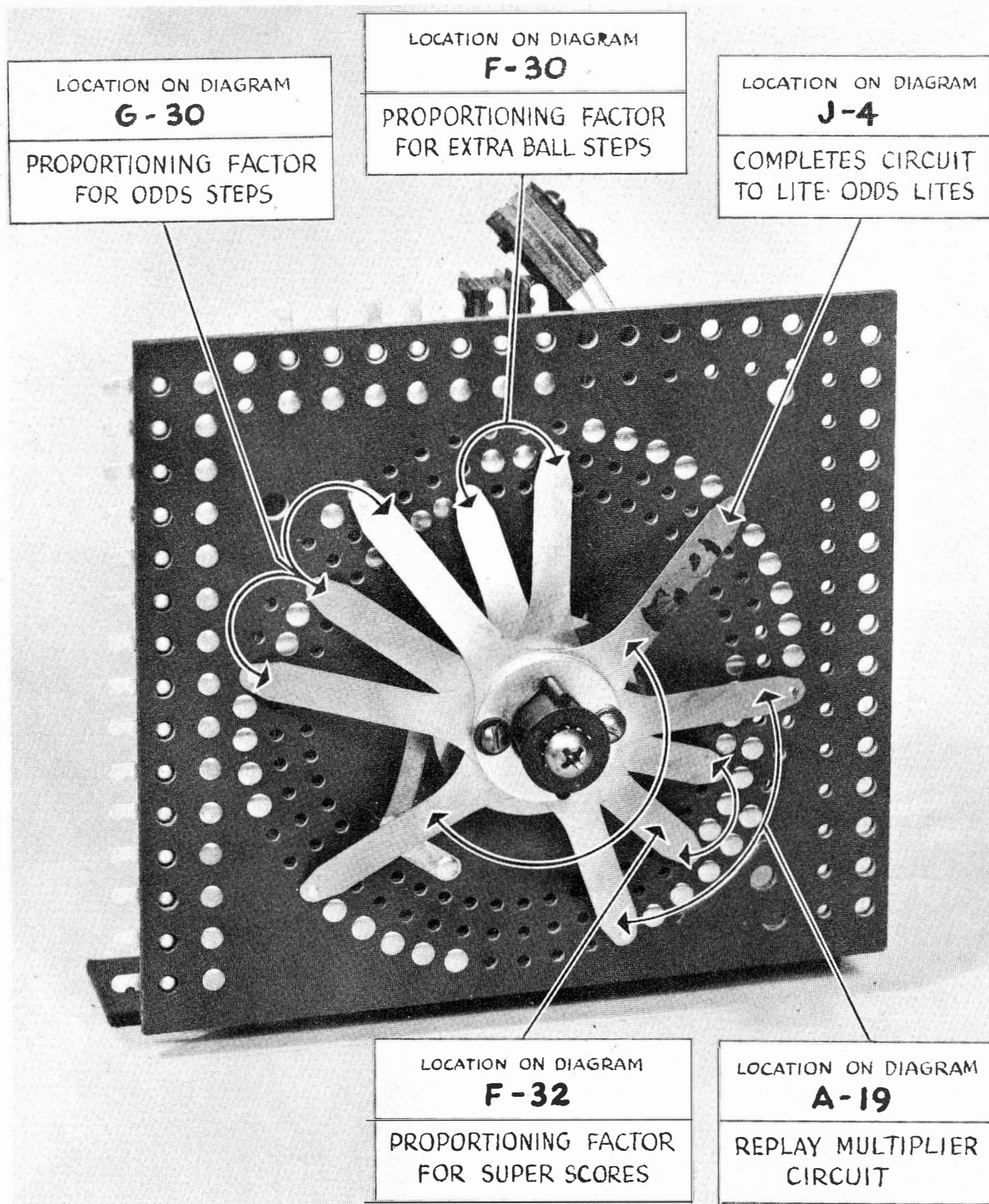
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ODDS UNIT — SWITCH SIDE



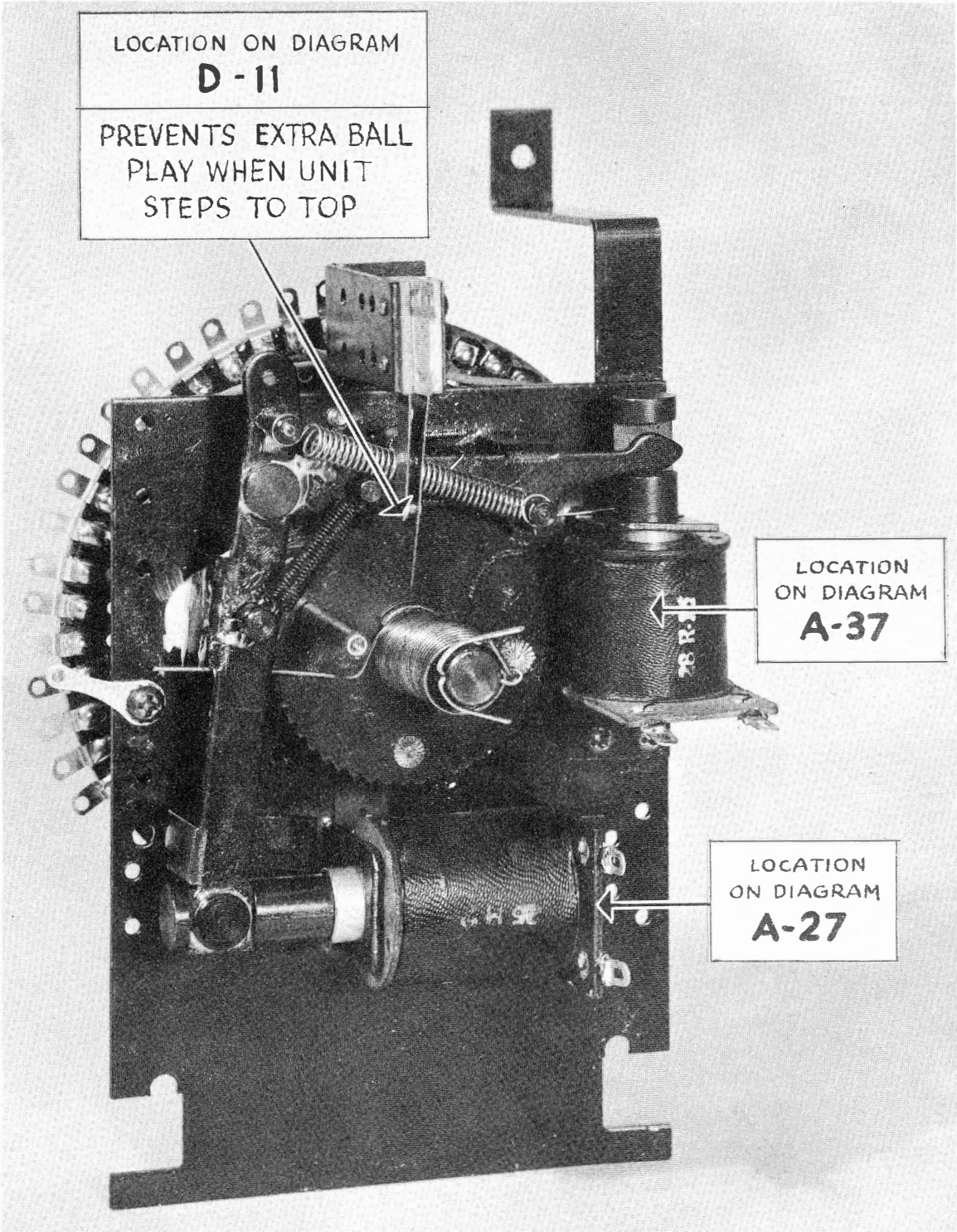
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ODDS UNIT — WIPER SIDE



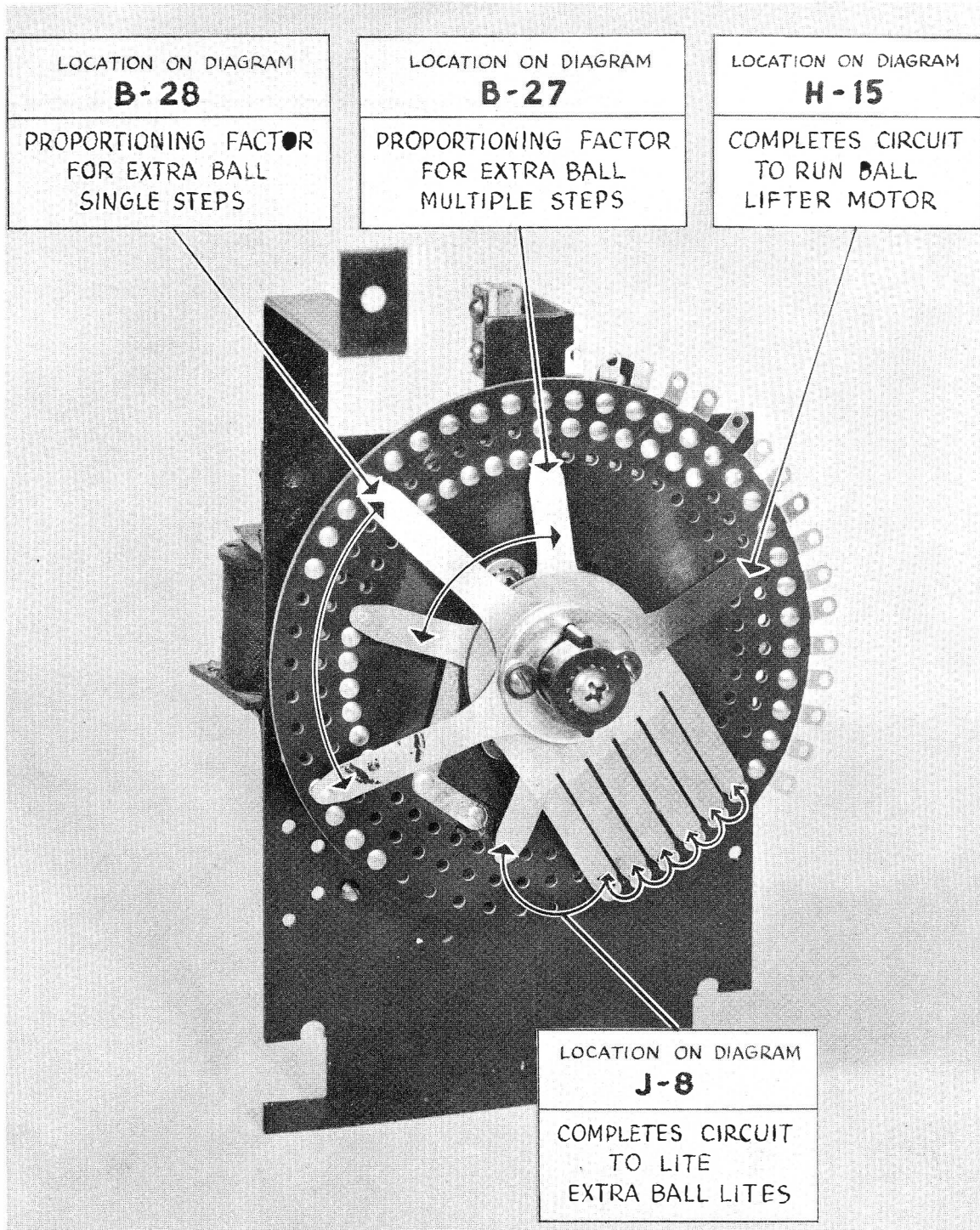
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EXTRA BALL UNIT—SWITCH SIDE



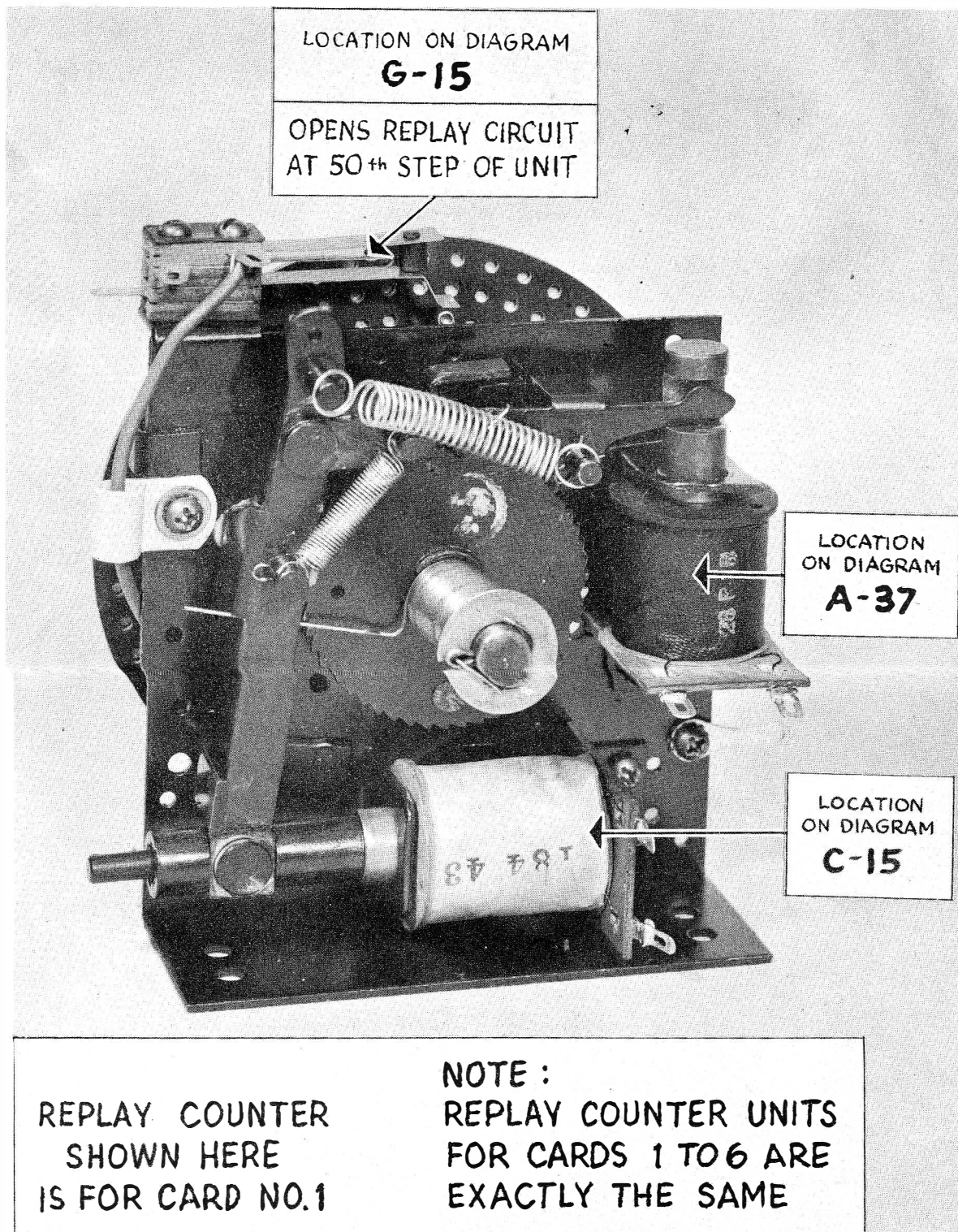
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EXTRA BALL UNIT—WIPER SIDE



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REPLAY COUNTER — SWITCH SIDE



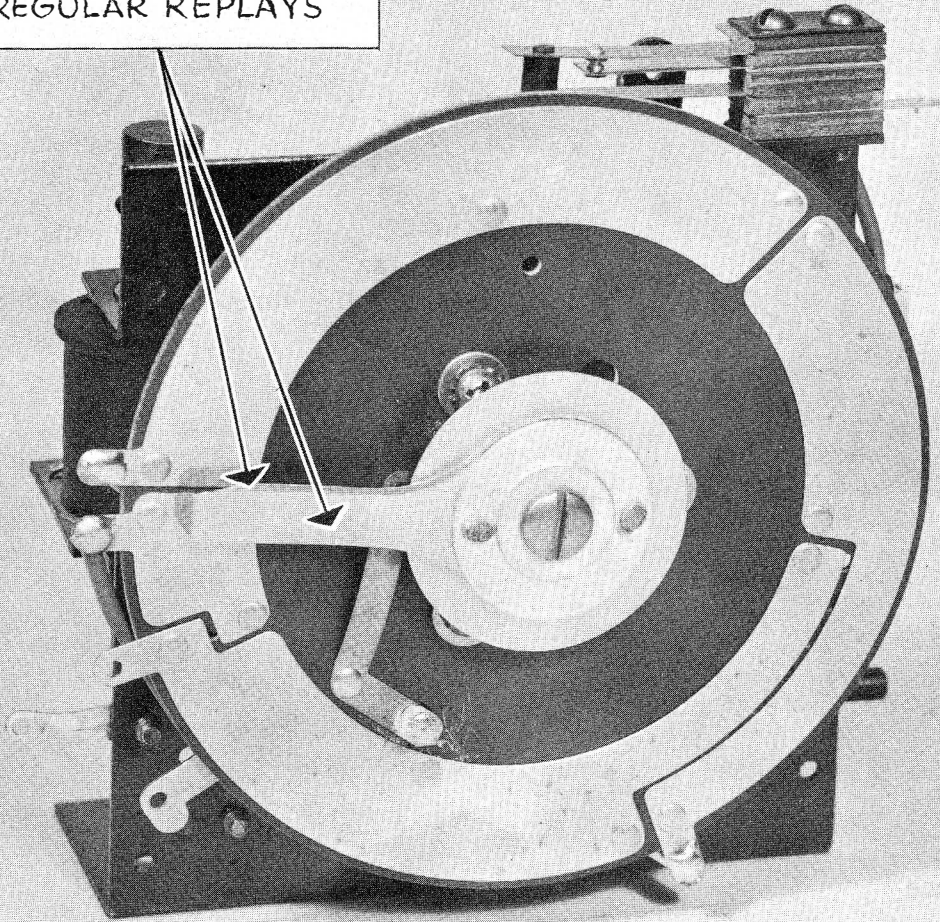
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REPLAY COUNTER — WIPER SIDE

LOCATION ON DIAGRAM

G-15

BOTTOM WIPER COUNTS
SUPER SCORE REPLAYS,
TOP WIPER COUNTS
REGULAR REPLAYS

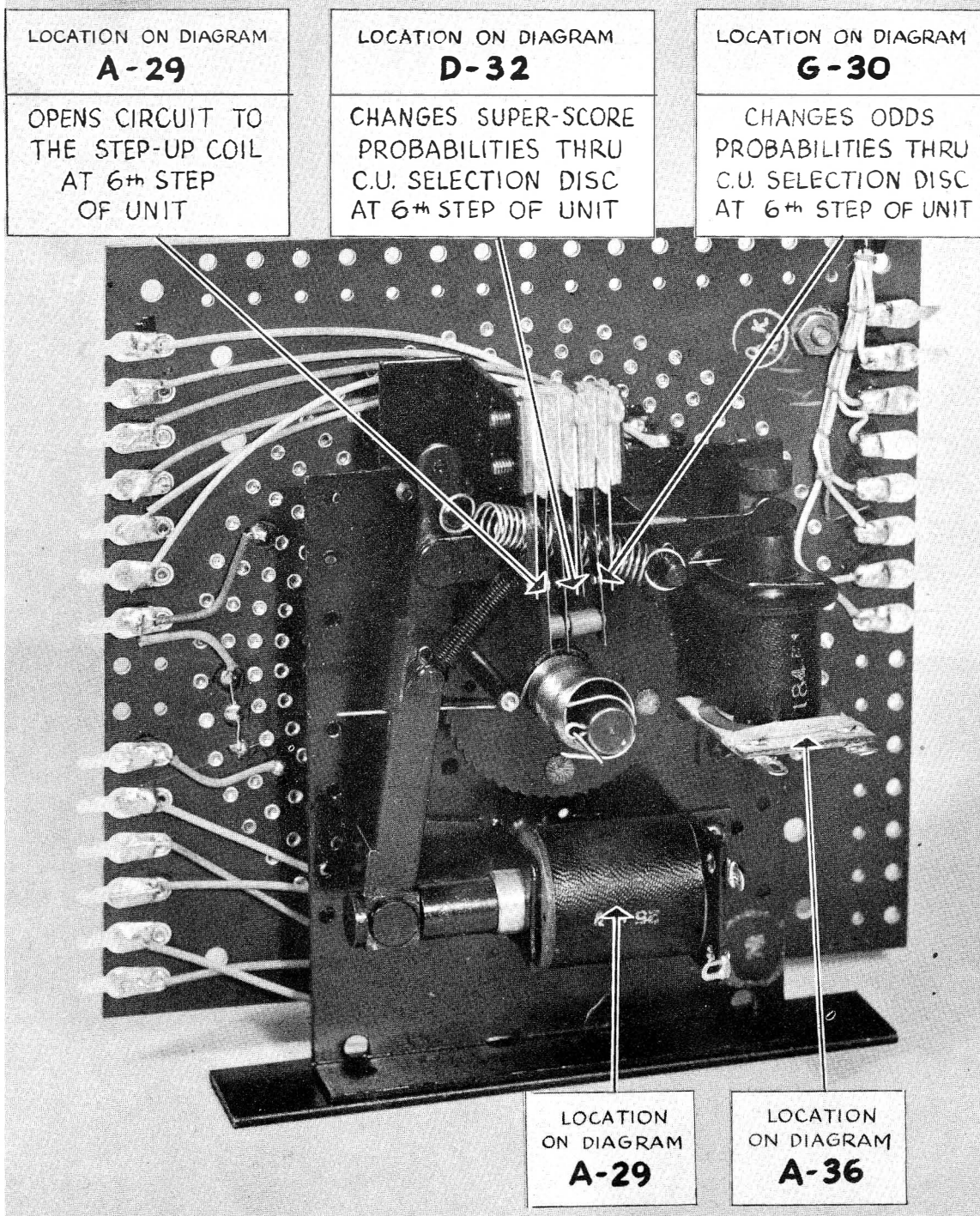


REPLAY COUNTER
SHOWN HERE
IS FOR CARD NO. 1

NOTE:
REPLAY COUNTER UNITS
FOR CARDS 1 TO 6 ARE
EXACTLY THE SAME

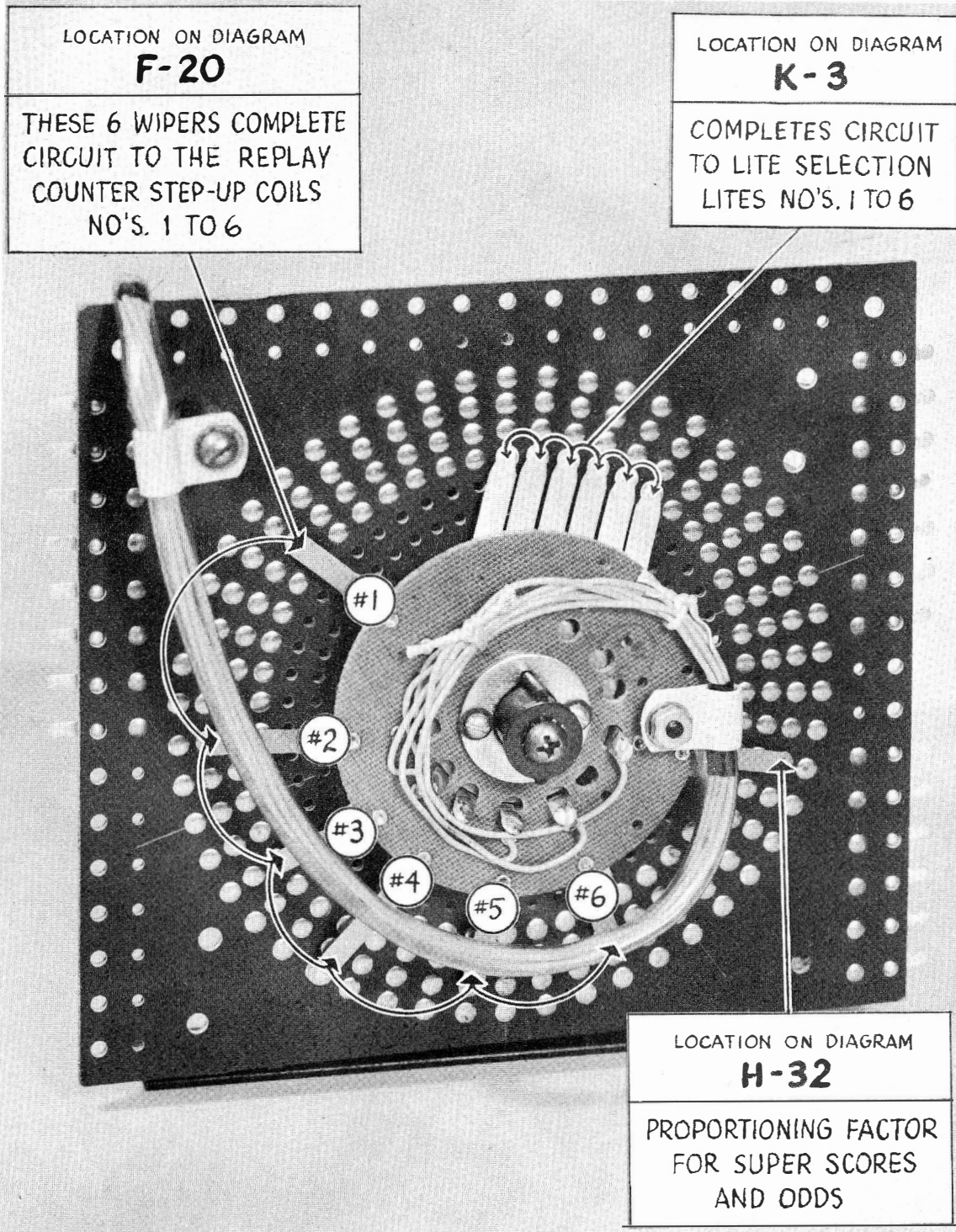
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CARD SELECTION UNIT — SWITCH SIDE



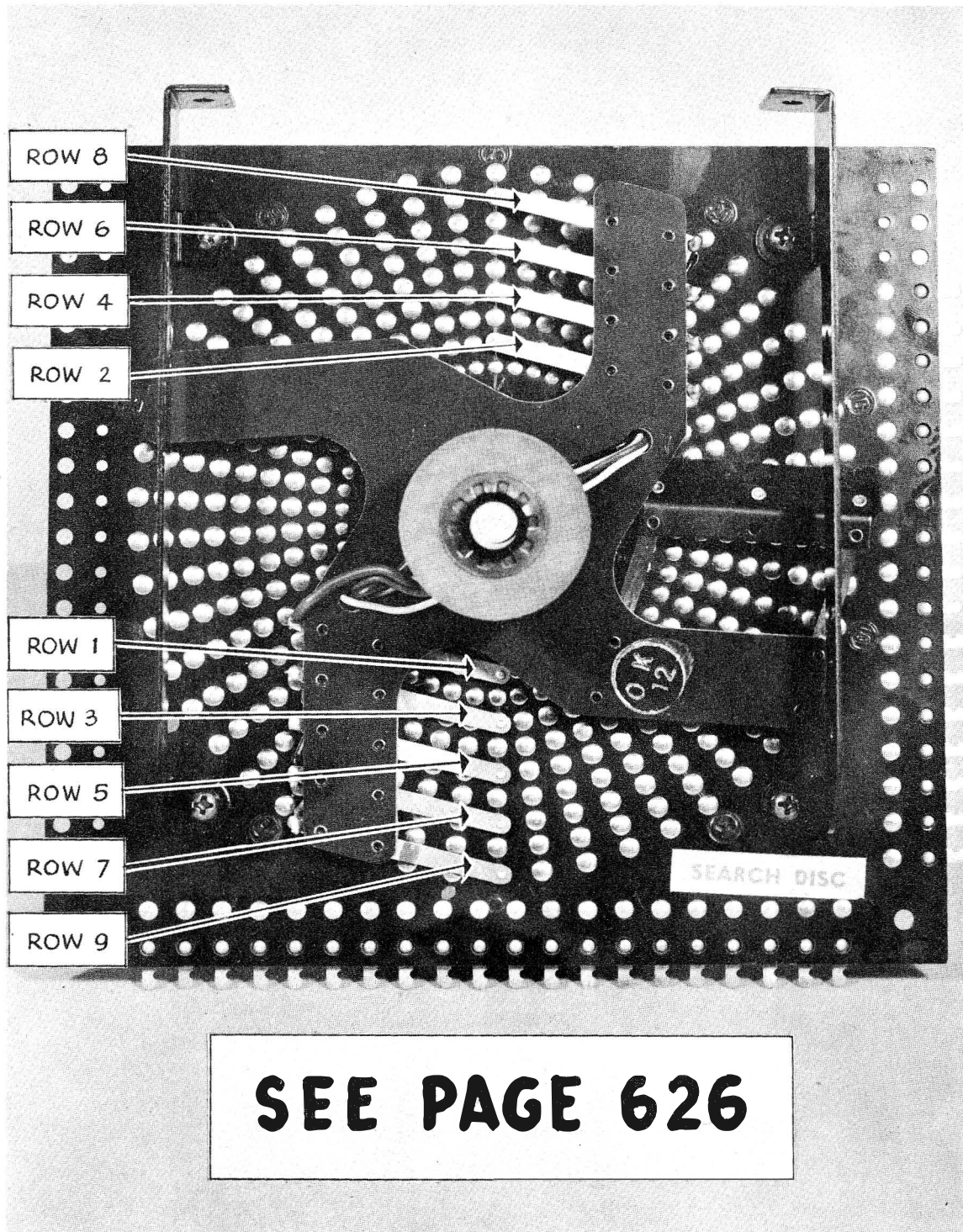
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CARD SELECTION UNIT — WIPER SIDE



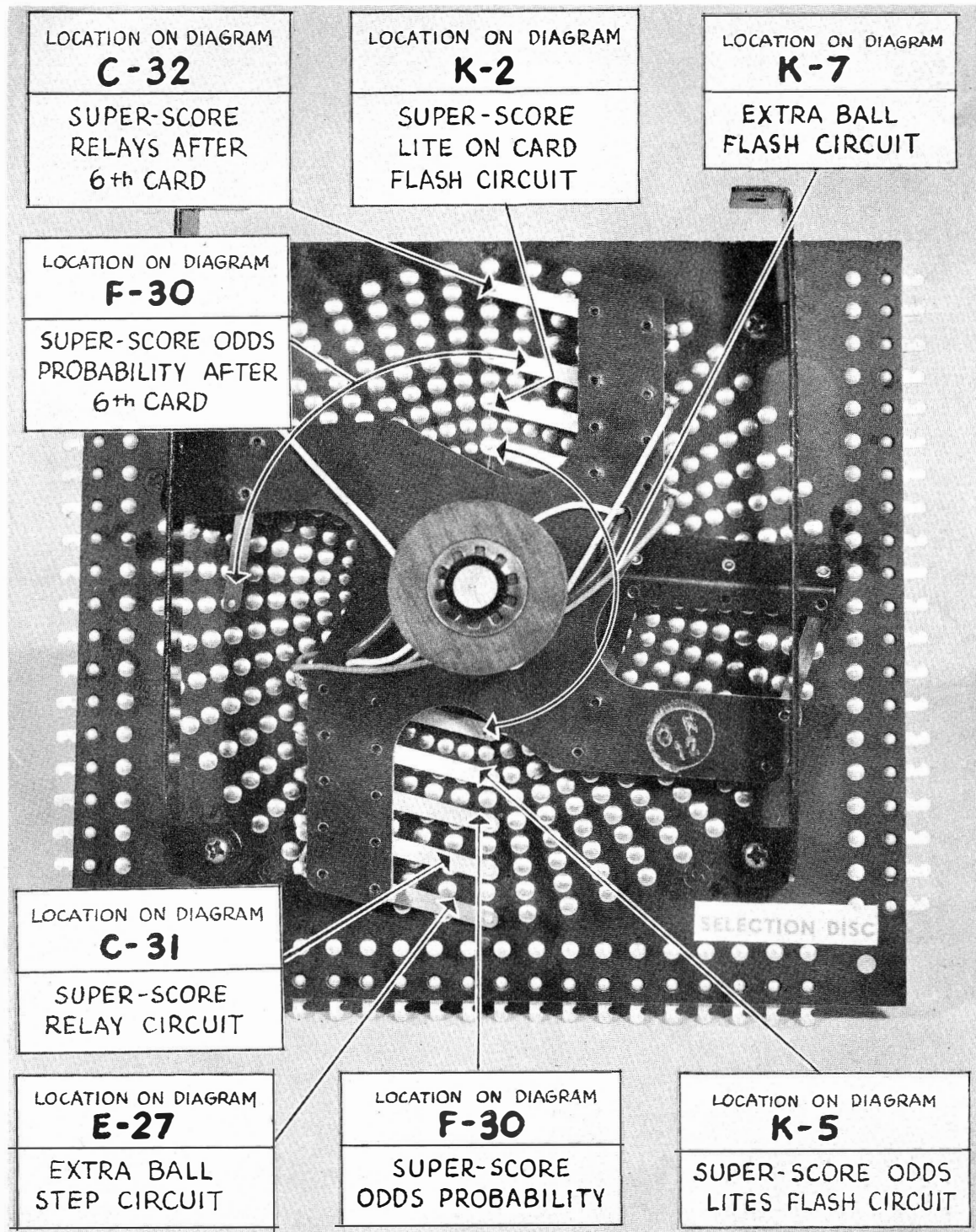
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SEARCH DISC AND WIPERS



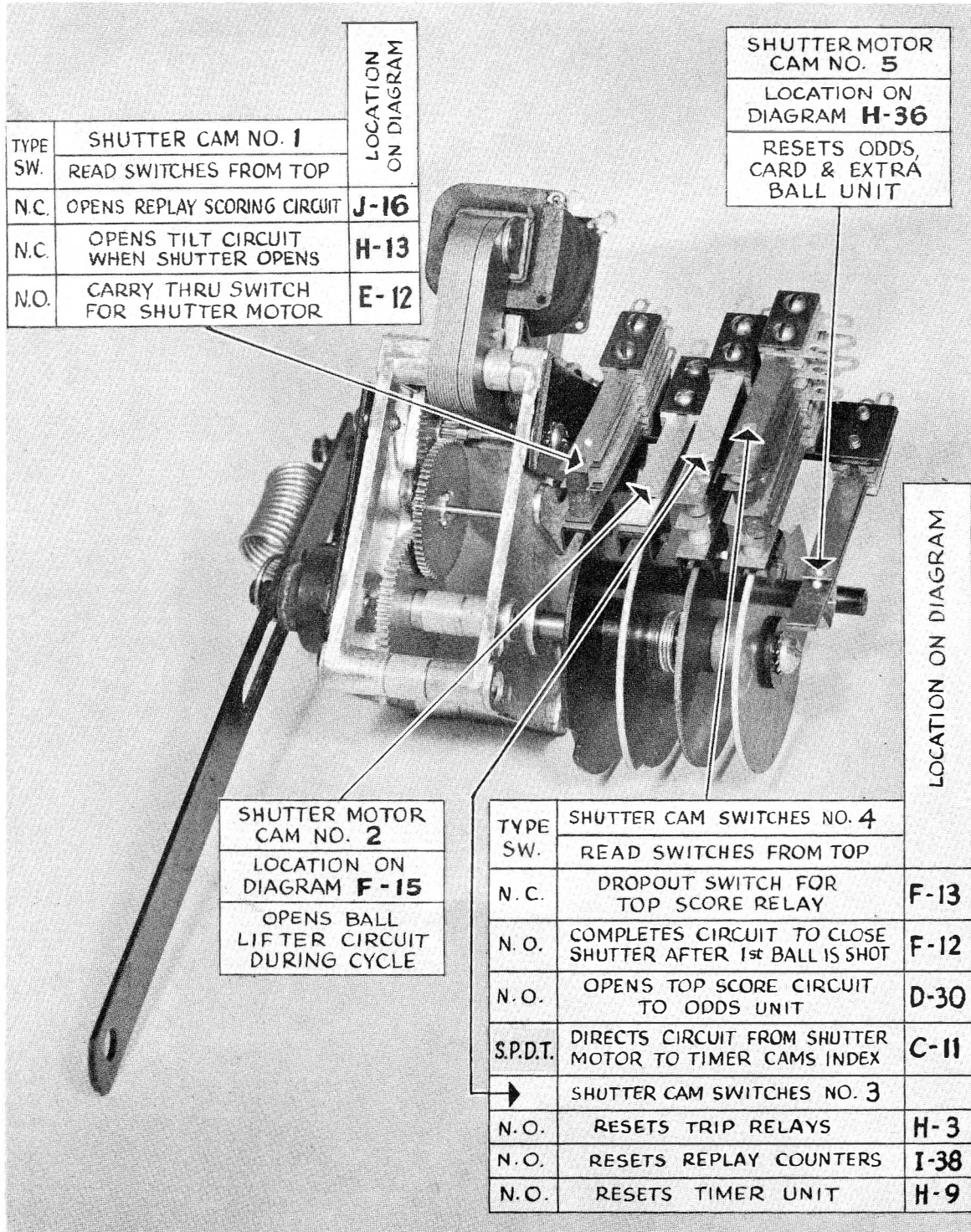
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CONTROL UNIT SELECTION DISC AND WIPERS



FROLICS

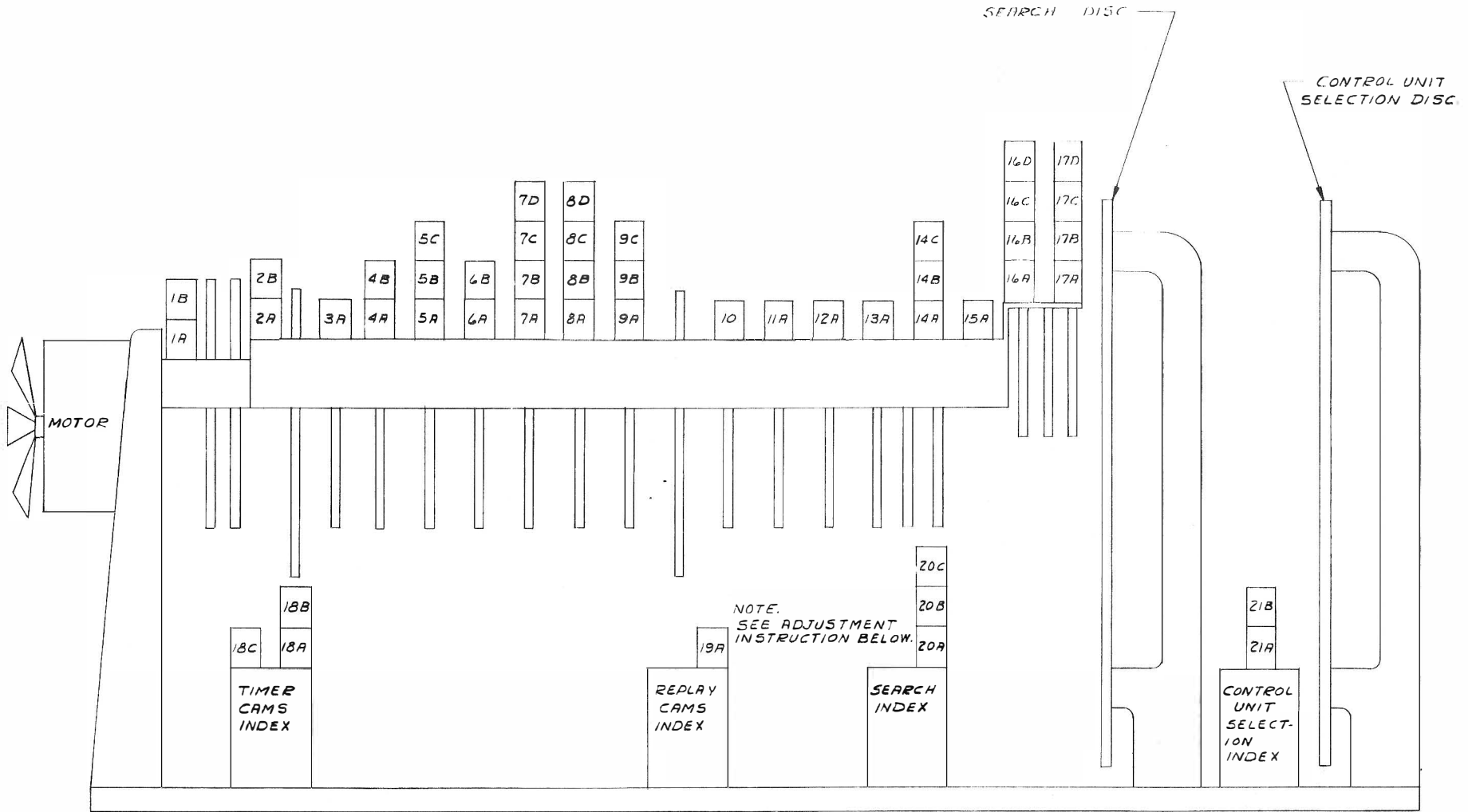
SHUTTER MOTOR



NOTES

NOTES

NOTES



NOTE:

IT IS IMPORTANT TO ADJUST REPLAY CAMS INDEX SWITCH NO 19A, SO THAT IT MAKES ONLY WHEN THE REPLAY CAMS INDEX COIL IS ENERGIZED. WHEN THE REPLAY CAMS INDEX COIL IS DE-ENERGIZED, THIS SWITCH SHOULD OPEN AND REMAIN OPEN, WHILE SWITCH IS RIDING ON OUTER EDGE OF CAM.

CONTROL UNIT PICTORIAL VIEW
NUMBERS CORRESPOND TO SWITCH CHART

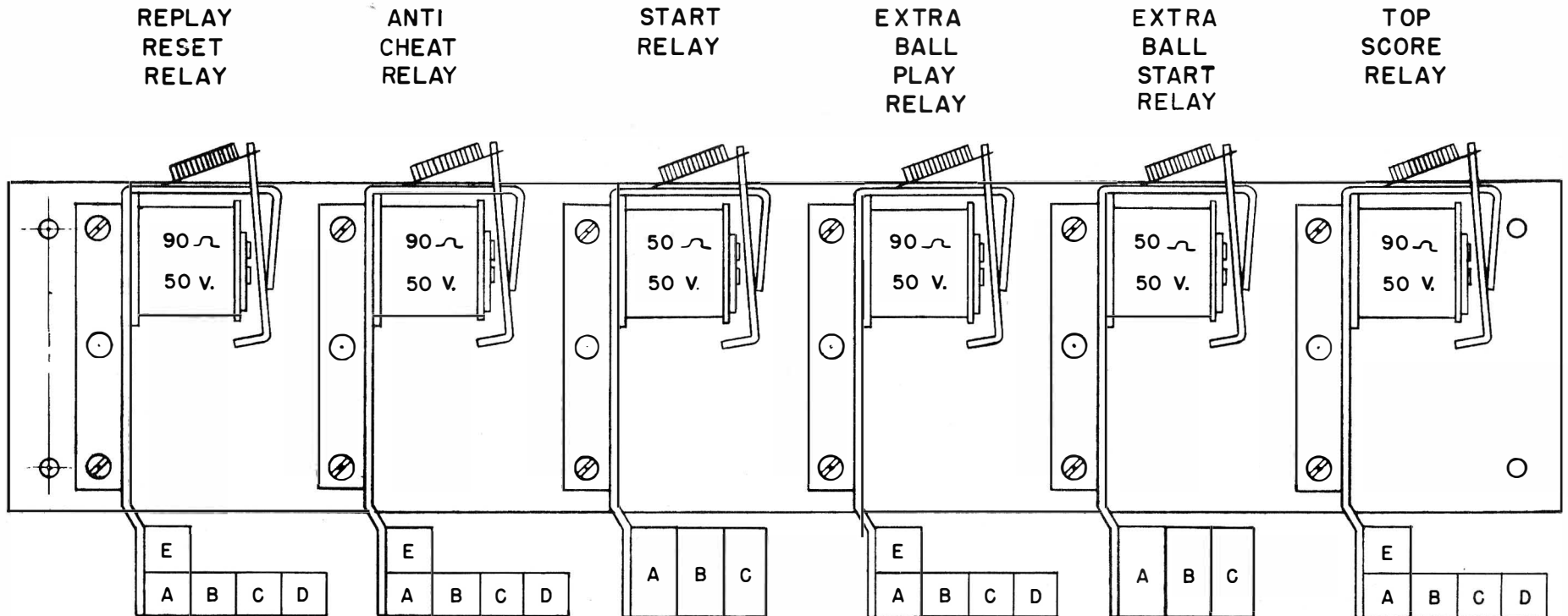
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CONTROL UNIT CAM SWITCHES

FOR POSITION OF SWITCHES
REFER TO PICTORIAL VIEW ABOVE

CODE	
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
M.B.B.	MAKE BEFORE BREAK
S.P.D.T. ..	SINGLE POLE DOUBLE THROW

RELAY SWITCH OR CAM SWITCH	LOCATION ON DIAGRAM	WIRE NUMBER	WIRE COLORS	FUNCTION OF SWITCHES
1A N.O.	G-1	20P 69P	Blue (Plastic) Brown (Plastic)	Prevents control unit motor from stopping while control unit cam 1B is closed.
1B N.O.	G-10	65-2 27-2	Brown-White Blue-Orange	Energizes timer unit step-up coil.
2A N.O.	I-8	30 27-4	Yellow Blue-Orange	Energizes replay register reset coil and reflex play magnet.
2B N.C.	G-11	30 15-2	Yellow Red-White	Drops out extra ball play relay at end of timing cycle.
3 N.C.	I-5	83-3 48-2	Black-Yellow Green-Black	Prevents start relay and extra ball start relay from being pulled in during timing cycle.
4A N.O.	K-7	75 74	Orange-White Orange-Green	Completes circuit for extra ball flash lites.
4B N.O.	D-26	78-4 30	Orange-Black Yellow	Energizes control unit selection index coil and odds extra step index coil.
5A N.O.	G-35	30 25	Yellow Blue-White	Completes circuit to energize anti-cheat relay after power to game has been turned off and then on.
5B N.O.	D-28	21-1 61-2	Blue-Red Brown-Red	Energizes extra ball unit step-up coil. Steps unit from a minus one position to the zero position.
5C N.O.	F-9	71-9 65-2	Orange-Red Brown-White	Energizes timer reset coil, during timing cam cycle.
6A N.C.	B-27	54-9 65-10	White-Green Brown-White	Completes circuit to extra ball unit step-up coil.
6B N.C.	C-29	41 85-1	Green-Red Black-White	Completes circuit to card selection unit step-up coil.
7A N.O.	C-29	60-2 83	Brown Black-Yellow	Energizes card selection unit step-up coil for single steps.
7B N.O.	C-30	31-6 38-6	Yellow-Red Yellow-Black	Energizes odds unit step-up coil for single steps.
7C N.O.	B-28	45-5 63-10	Green-White Brown-Yellow	Energizes extra ball unit step-up coil for single steps.
7D N.O.	F-32	85-4 91-4	Black-White Gray-Red	Pulse switch for energizing all super score trip relays, also red and yellow star trip relays.
8A ALT.	D-27	23-6 53-5	Blue-Yellow White-Yellow	Alternator switch for extra ball proportioning.
8B ALT.	G-34	18-4 98-4	Red-Black Gray-Black	Alternator switch for super score proportioning.
8C ALT.	B-29	85-1 60-2	Black-White Brown	Alternator switch for multiple step proportioning of card selections.
9A N.O.	C-30	21-2 20-2	Blue-Red Blue	Steps odds unit to top when top score relay is energized also trips #6 super score relay.
9B N.O.	A-27	63-10 54-9	Brown-Yellow White-Green	Pulse switch for stepping extra ball step-up unit for multiple steps.
9C N.O.	B-7	75-2 53-2	Orange-White White-Yellow	Pulse switch for operating replay meter and replay register reset coil, when replay reset relay is energized.
10 N.O.	A-20	93-8 70	Gray-Yellow Orange	3 pulse switch for energizing replay counter step-up coils No.'s 1 thru 6, when super score relays are tripped.
11 N.O.	A-19	91-8 70	Gray-Red Orange	4 pulse switch for energizing replay counter step-up coils No.'s 1 thru 6, when super score relays are tripped.
12 N.O.	A-19	90-8 70	Gray Orange	6 pulse switch for energizing replay counter step-up coils No.'s 1 thru 6, when super score relays are tripped.
13 N.O.	A-19	85-8 70	Black-White Orange	8 pulse switch for energizing replay counter step-up coils No.'s 1 thru 6, when super score relays are tripped.
14A N.O.	A-20	81-8 70	Black-Red Orange	12 pulse switch for energizing replay counter step-up coils No.'s 1 thru 6, when super score relays are <u>not</u> tripped.
14B N.O.	A-18	98-8 70	Gray-Black Orange	12 pulse switch for energizing replay counter step-up coils No.'s 1 thru 6, when super score relays are tripped.
14C N.O.	C-24	61-6 38-4	Brown-Red Yellow-Black	12 pulse switch for energizing replay register step-up coil and reflex replay magnet.
15 N.C.	I-17	56-7 93	White-Brown Gray-Yellow	Prevents the start of a second relay scoring until the replay cams are indexed at their normal position.
16A S.P.D.T.	L-27	98-1 20-5 93-1	Gray-Black Blue Gray-Yellow	Completes circuit to energize #1 search relay, when searching thru cards 1-2 and 3. Directs change-over circuit to energize #2 search relay when searching thru cards 4-5 and 6.
16B S.P.D.T.	K-27	41-2 65-7 48-1	Green-Red Brown-White Gray-Black	Completes circuit to energize #2 search relay when searching thru cards 1-2 and 3. Directs change-over circuit to energize #3 search relay when searching thru cards 4-5 and 6.
16C S.P.D.T.	K-28	14-2 60-7 41-2	Red-Green Brown Green-Red	Completes circuit to energize #3 search relay when searching thru cards 1-2 and 3. Directs change-over circuit to energize #5 search relay when searching thru cards 4-5 and 6.
16D S.P.D.T.	K-29	13-2 18-5 14-2	Red-Yellow Red-Black Red-Green	Completes circuit to energize #5 search relay when searching thru cards 1-2 and 3. Directs change-over circuit to energize #4 search relay when searching thru cards 4-5 and 6.
17A N.C.	E-22	50-8 51-8	White White-Red	Completes circuit to No.'s 1-2 and 3 replay counter step-up coils, when searching thru cards 1-2 and 3.
17B N.O.	E-21	52-8 53-8	White-Blue White-Yellow	Completes circuit to No.'s 4-5 and 6 replay counter step-up coils, when searching thru cards 4-5 and 6.
17C S.P.D.T.	E-22	53-8 61-6 51-8	White-Yellow Brown-Red White-Red	Directs circuit to be in series with cam switch #17A (when searching thru cards 1-2 and 3) or cam switch #17B (when searching thru cards 4-5 and 6) to energize the search index coil.
17D S.P.D.T.	K-29	93-1 15-5 13-2	Gray-Yellow Red-White Red-Yellow	Completes circuit to energize #4 search relay when searching thru cards 1-2 and 3. Directs change-over circuit to energize #1 search relay when searching thru cards 4-5 and 6.
TIMER CAMS INDEX COIL	A-11	93-2 70	Gray-Yellow Orange	Energized by switches on start relay and extra ball start relay.
18A N.O.	F-10	81-2 74-2	Black-Red Orange-Green	Completes lock-in circuit for extra ball play relay during timer cams cycle.
18B N.C.	G-7	71-2 14-9	Orange-Red Red-Green	Opens circuit to coin lockout magnet during timer cams cycle.
18C N.O.	G-2	60-P 20-P	Brown (Plastic) Blue (Plastic)	Completes circuit to run control unit motor.
REPLAY CAMS INDEX COIL	A-24	40-4 70	Green Orange	Energized by switch #20A on search index, when 3 or more in line is scored.
19A N.O.	H-17	56-7 93	White-Brown Gray-Yellow	Completes lock-in circuit for search index coil when replay cams index coil is energized. NOTE: See pictorial view above for adjusting this switch.
SEARCH INDEX COIL	A-23	61-6 70	Brown-Red Orange	Energized when 3 or more in line are scored.
20A N.O.	A-24	61-6 40-4	Brown-Red Green	Completes circuit to energize replay cams index coil.
20B N.C.	J-5	30 83-3	Yellow Black-Yellow	Opens circuit to start relay and extra ball start relay while replays are registering.
20C N.C.	C-10	90-9 27-2	Gray Blue-Orange	Opens timer step-up circuit while replays are being scored.
SELECTION INDEX COIL	A-26	78-4 70	Orange-Black Orange	Energized by control unit cam #48.
21A N.O.	J-2	83-4 36-5	Black-Yellow Yellow-Brown	Completes circuit to super score flash lites.
21B N.O.	J-5	13-4 30-5	Red-Yellow Yellow	Completes circuit to odds flash lites, also red and yellow star flash lites.



6 RELAY BANK PICTORIAL VIEW

NUMBERS CORRESPOND TO SWITCH CHART

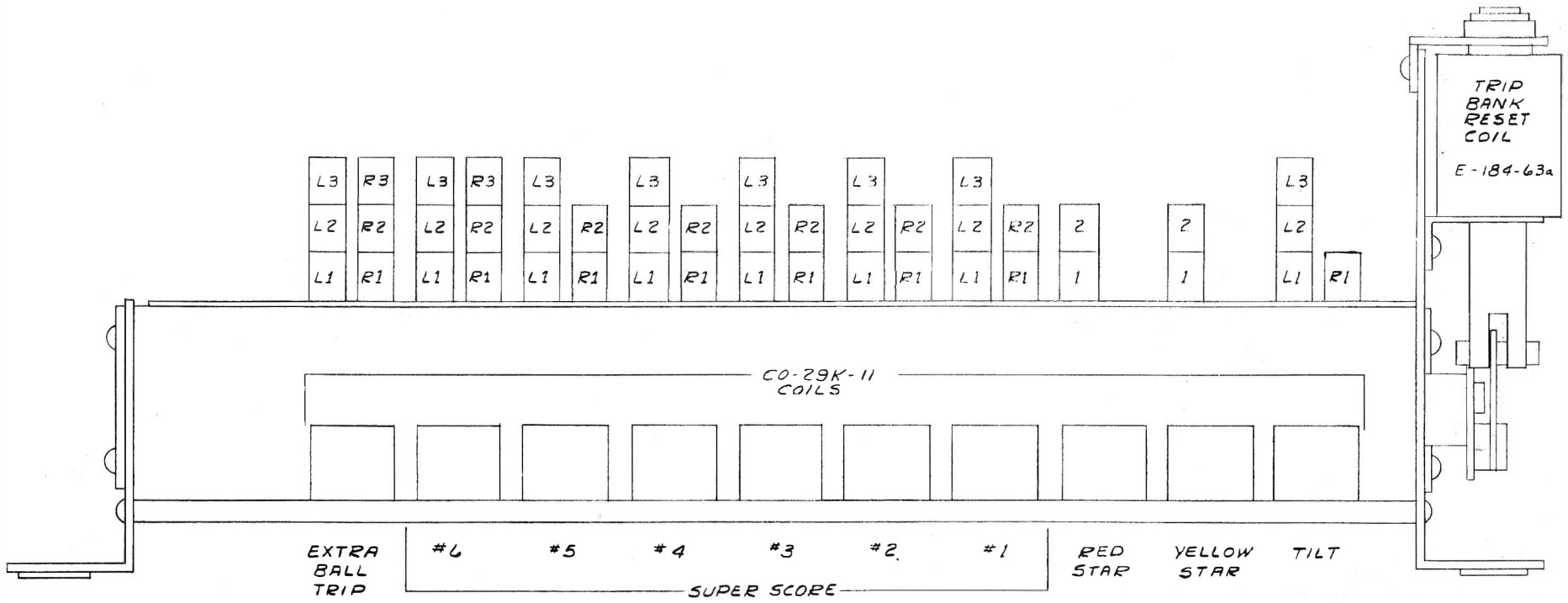
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6 RELAY BANK SWITCHES

FOR POSITION OF SWITCHES
REFER TO PICTORIAL VIEW ABOVE

CODE	
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
M.B.B.	MAKE BEFORE BREAK
S.P.D.T. ..	SINGLE POLE DOUBLE THROW

RELAY SWITCH OR CAM SWITCH	LOCATION ON DIAGRAM	WIRE NUMBER	WIRE COLORS	FUNCTION OF SWITCHES
REPLAY RESET RELAY COIL	A-7	75-2 70	Orange-White Orange	Energizes when replays are cancelled by push button or if anti-cheat relay drops out.
A S.P.D.T.	B-8	53-2 13-9 27-4	White-Yellow Red-Yellow Blue-Orange	Directs circuit to replay meter during replay cancel.
B N.O.	H-2	60-P 20-P	Brown (Plastic) Blue (Plastic)	Operates control unit motor.
C N.O.	F-8	50-2 75-2	White Orange-White	Lock-in switch for replay reset relay.
D N.C.	F-4	21-6 63-2	Blue-Red Brown-Yellow	Opens start circuit during replay cancel.
E N.C.	E-5	20-3 25-10	Blue Blue-White	Opens extra ball trip and extra ball start relays during cancel.
ANTI-CHEAT RELAY COIL	A-35	25 70	Blue-White Orange	Energized thru cam switch 5A, its switches protect replay circuits.
A N.O.	F-7	75-2 50-2	Orange-White White	Energizes replay reset relay when anti-cheat relay drops out.
B N.O.	L-14	56 10	White-Brown Red	Opens 17 volt circuit when relay drops out.
C N.O.	L-10	40 85-7	Green Black-White	Opens 6 volt circuit when relay drops out.
D N.O.	B-10	91-2 93-6	Gray-Red Gray-Yellow	Completes circuit to extra ball play relay.
E N.C.	G-35	25 30	Blue-White Yellow	Lock-in switch for anti-cheat relay.
START RELAY COIL	A-4	21-6 70	Blue-Red Orange	Energizes every time a coin is played or when a red or yellow button is pressed.
A N.C.	B-10	81-2 91-2	Black-Red Gray-Red	Opens circuit to extra ball play relay.
B N.O.	H-4	48-2 63-2	Green-Black Brown-Yellow	Lock-in switch for start relay.
C N.O.	F-11	41-3 13-3	Green-Red Red-Yellow	Completes circuit to timer cam index coil.
EXTRA BALL PLAY RELAY COIL	A-11	93-6 70	Gray-Yellow Orange	Energizes when yellow button is pressed.
A S.P.D.T.	G-5	50-2 51-2 69-2	White White-Red Brown-Yellow	Directs circuit to regular start relay or extra ball start relay.
B S.P.D.T.	G-11	74-2 15-2 41-3	Orange-Green Red-White Green-Red	Lock-in switch for extra ball play relay.
C N.O.	J-10	21-4 30	Blue-Red Yellow	Lights extra ball lite in back box.
D N.O.	G-6	51-2 25-10	White-Red Blue-White	Completes circuit to extra ball start and extra ball trip relay.
E N.C.	J-2	83-4 30	Black-Yellow Yellow	Opens super score flash during extra ball play.
EXTRA BALL START RELAY COIL	A-6	20-3 70	Blue Orange	Energizes when yellow button is pressed.
A N.C.	B-27	65-10 75-6	Brown-White Orange-White	Opens circuit to extra ball step-up coil during spin of control unit.
B N.O.	D-11	74-2 93-2	Orange-Green Gray-Yellow	Operates mixer latch and timer cam index coil during extra ball play.
C N.O.	G-6	25-10 48-2	Blue-White Green-Black	Lock-in switch for extra ball start relay.
TOP SCORE RELAY COIL	A-13	85-9 70	Black-White Orange	Energizes when either red or yellow star is lit and ball hits corresponding rollover.
A N.C.	B-36	98-9 63-3	Gray-Black Brown-Yellow	Opens circuit to odds unit reset coil.
B N.O.	J-10	57-7 30	White-Orange Yellow	Lights "Highest Super Score" lite on back glass.
C N.O.	D-13	15-3 85-9	Red-White Black-White	Lock-in switch for top score relay.
D N.O.	B-30	38-6 21-2	Yellow-Black Blue-Red	Completes circuit to odds unit.
E N.O.	B-30	38-6 74-5	Yellow-Black Orange-Green	Trips #6 super score relay when top score is hit.



TRIP RELAY BANK PICTORIAL VIEW
 NUMBERS CORRESPOND TO SWITCH CHART

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TRIP RELAY BANK CHART

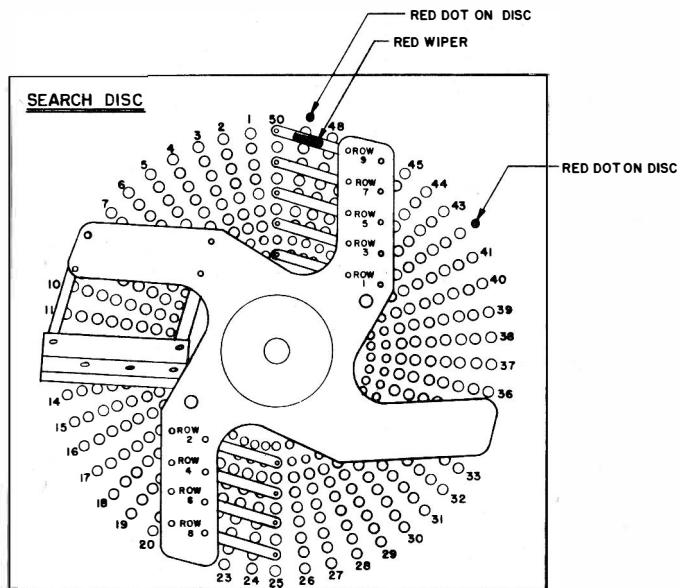
FOR POSITION OF SWITCHES
REFER TO PICTORIAL VIEW ABOVE

CODE	
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
M. B.	MAKE BEFORE BREAK
S.P.D.T. ..	SINGLE POLE DOUBLE THROW

RELAY SWITCH OR CAM SWITCH	LOCATION ON DIAGRAM	WIRE NUMBER	WIRE COLORS	FUNCTION OF SWITCHES
EXTRA BALL TRIP COIL	A-5	13 70	Red-Yellow Orange	Energized by switch on extra ball play relay.
L 1 S.P.D.T.	J-7	13-4 30 75	Red-Yellow Yellow Orange-White	Directs circuit to flash odds lites or extra ball lites.
L 2 S.P.D.T.	G-32	85-4 98-4 18-4	Black-White Gray-Black Red-Black	Breaks circuit to super score relays, also red and yellow star relays, when extra balls are being played.
L 3 N.O.	F-27	52-9 78-1	White-Blue Orange-Black	Completes circuit to extra ball unit step-up coil, when extra balls are being played.
R 1 S.P.D.T.	D-29	83 30 61-2	Black-Yellow Yellow Brown-Red	Breaks circuit to card selection unit step-up coil and completes circuit to step extra ball unit from a minus one position to the zero position.
R 2 N.C.	A-5	20-3 13	Blue Red-Yellow	Breaks circuit to the extra ball trip relay coil, after it has been tripped.
R 3 N.C.	G-29	93-4 80-4	Gray-Yellow Black	Breaks circuit to the odds unit step-up coil, when extra balls are being played.
SUPER SCORE #6 TRIP COIL	A-32	14 70	Red-Green Orange	Energized by control unit cam switch #70, when circuit is complete thru all other factors.
L 1 S.P.D.T.	B-23	81-8 80-8 83-8	Black-Red Black Black-Yellow	Normally directs circuit to control unit cam switch #14A for stepping replay counter #6. When tripped it directs circuit to a multiplier cam, depending on position of odds unit.
L 2 N.C.	H-28	98-4 81-3	Gray-Black Black-Red	Proportioning factor for odds steps, card steps and extra ball steps.
L 3 N.C.	B-33	65-5 57-10	Brown-White White-Orange	Proportioning factor for #3 super score relay.
R 1 N.O.	K-2	45-4 30	Green-White Yellow	Completes circuit to #6 super score lite.
R 2 N.O.	G-23	31-8 20-8	Yellow-Red Blue	Changes replay counter circuit for scoring super score replays.
R 3 N.C.	A-31	74-5 14	Orange-Green Red-Green	Breaks circuit to #6 super score relay after it has been tripped.
SUPER SCORE #5 TRIP COIL	A-32	71-5 70	Orange-Red Orange	Energized by control unit cam switch #70, when circuit is complete thru all other factors.
L 1 S.P.D.T.	B-22	81-8 78-8 83-8	Black-Red Orange-Black Black-Yellow	Normally directs circuit to control unit cam switch #14A for stepping replay counter #5, when tripped it directs circuit to a multiplier cam, depending on position of odds unit.
L 2 N.C.	H-28	98-4 85-3	Gray-Black Black-White	Proportioning factor for odds steps, card steps and extra ball steps.
L 3 N.C.	B-32	63-5 56-10	Brown-Yellow White-Brown	Proportioning factor for #2 super score relay.
R 1 N.O.	K-2	43-4 30	Green-Yellow Yellow	Completes circuit to #5 super score lite.
R 2 N.O.	G-21	18-8 30-8	Red-Black Yellow	Changes replay counter circuit for scoring super score replays.
SUPER SCORE #4 TRIP COIL	A-32	23-4 70	Blue-Yellow Orange	Energized by control unit cam switch #70, when circuit is complete thru all other factors.
L 1 S.P.D.T.	B-20	81-8 75-8 83-8	Black-Red Orange-White Black-Yellow	Normally directs circuit to control unit cam switch #14A for stepping replay counter #4, when tripped it directs circuit to a multiplier cam, depending on position of odds unit.
L 2 N.C.	H-28	98-4 9-3	Gray-Black Gray	Proportioning factor for odds steps, card steps and extra ball steps.
L 3 N.C.	B-33	48-5 54-10	Green-Black White-Green	Proportioning factor for #1 super score relay.
R 1 N.O.	K-1	41-1 30	Green-Red Yellow	Completes circuit to #4 super score lite.
R 2 N.O.	G-20	15-8 27-8	Red-White Blue-Orange	Changes replay counter circuit for scoring super score replays.

SUPER SCORE #3 TRIP COIL	A-33	65-5 70	Brown-White Orange	Energized by control unit cam switch #7D, when circuit is complete thru all other factors.
L 1 S.P.D.T.	B-19	81-8 74-8 83-8	Black-Red Orange-Green Black-Yellow	Normally directs circuit to control unit cam switch #14A for stepping replay counter #3, when tripped it directs circuit to a multiplier cam, depending on position of odds unit.
L 2 N.C.	I-28	98-4 91-3	Gray-Black Gray-Red	Proportioning factor for odds steps, card steps and extra ball steps.
L 3 N.C.	B-32	74-5 53-10	Orange-Green White-Yellow	Proportioning factor for #6 super score relay.
R 1 N.O.	K-1	40-2 30	Green Yellow	Completes circuit to #3 super score lite.
R 2 N.O.	G-18	25-8 14-8	Blue-White Red-Green	Changes replay counter circuit for scoring super score replays.
SUPER SCORE #2 TRIP COIL	A-33	63-5 70	Brown-Yellow Orange	Energized by control unit cam switch #7D, when circuit is complete thru all other factors.
L 1 S.P.D.T.	B-17	81-8 71-8 83-8	Black-Red Orange-Red Black-Yellow	Normally directs circuit to control unit cam switch #14A for stepping replay counter #2. When tripped it directs circuit to a multiplier cam, depending on position of odds unit.
L 2 N.C.	I-28	98-4 93-3	Gray-Black Gray-Yellow	Proportioning factor for odds steps, card steps and extra ball steps.
L 3 N.C.	B-32	71-5 52-10	Orange-Red White-Blue	Proportioning factor for #5 super score relay.
R 1 N.O.	K-1	38-2 30	Yellow-Black Yellow	Completes circuit to #2 super score lite.
R 2 N.O.	G-17	23-8 13-8	Blue-Yellow Red-Yellow	Changes replay counter circuit for scoring super score replays.
SUPER SCORE #1 TRIP COIL	A-33	48-5 70	Green-Black Orange	Energized by control unit cam switch #7D, when circuit is complete thru all other factors.
L 1 S.P.D.T.	B-15	81-8 65-8 83-8	Black-Red Brown-White Black-Yellow	Normally directs circuit to control unit cam switch #14A for stepping replay counter #1. When tripped it directs circuit to a multiplier cam, depending on position of odds unit.
L 2 N.C.	I-27	98-4 98-3	Gray-Black Gray-Black	Proportioning factor for odds steps, card steps and extra ball steps.
L 3 N.C.	B-32	23-4 51-10	Blue-Yellow White-Red	Proportioning factor for #4 super score relay.
R 1 N.O.	K-1	36-2 30	Yellow-Brown Yellow	Completes circuit to #1 super score lite.
R 2 N.O.	G-15	10-8 21-8	Red Blue-Red	Changes replay counter circuit for scoring super score replays.
RED STAR TRIP COIL	A-31	23-2 70	Blue-Yellow Orange	Energized by control unit cam switch #7D, when circuit is complete thru all other factors.
1 N.O.	J-6	53-6 30	White-Yellow Yellow	Completes circuit to red star lite.
2 N.O.	D-13	75-9 85-9	Orange-White Black-White	Completes circuit to energize top score relay when red star roll-over switch is hit.
YELLOW STAR TRIP COIL	A-31	25-3 70	Blue-White Orange	Energized by control unit cam switch #7D, when circuit is complete thru all other factors.
1 N.O.	K-5	52-6 30	White-Blue Yellow	Completes circuit to yellow star lite.
2 N.O.	D-13	78-9 85-9	Orange-Black Black-White	Completes circuit to energize top score relay when yellow star roll-over switch is hit.
TILT TRIP COIL	A-14	23-3 70	Blue-Yellow Orange	Energized by plumb bob tilt in cabinet also by replay reset button switch in cabinet.
L 1 S.P.D.T.	L-11	38 81 41-9	Yellow-Black Black-Red Green-Red	Breaks 6 volt lite circuit and lites tilt lite when relay is tripped.
L 2 N.C.	L-13	45-7 20	Green-White Blue	Breaks 17 volt circuit when relay is tripped.
L 3 N.C.	G-1	10-P 60-P	Red (Plastic) Brown (Plastic)	Breaks circuit to control unit motor when relay is tripped.
R 1 N.C.	I-13	21-3 30	Blue-Red Yellow	Breaks 50 volts to start circuit also to replay circuit.

NOTES



COMPLETE CHANGE OVER OF SEARCH CHANGE OVER SWITCHES (C.U. CAM SWITCHES #16 & #17) MUST TAKE PLACE WHILE RED WIPER IS MOVING BETWEEN 2 RED DOTS PAINTED ON DISC.

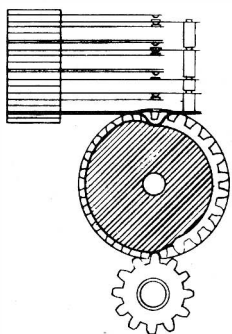


FIG. 1

CHANGE OVER IS FROM THE POSITION SHOWN IN FIGURE 1 TO THE POSITION SHOWN IN FIGURE 2.

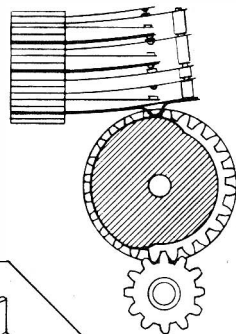
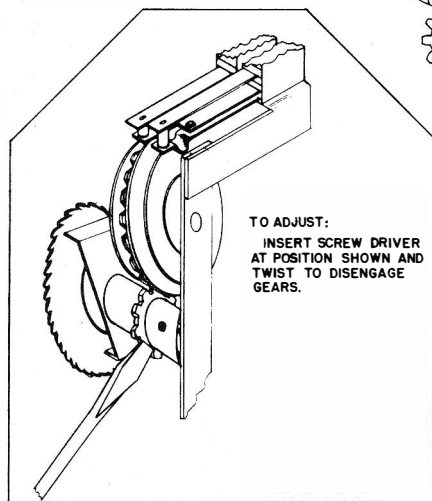


FIG. 2



TO ADJUST: INSERT SCREW DRIVER AT POSITION SHOWN AND TWIST TO DISENGAGE GEARS.

SEARCH POSITION FOR CARDS 1, 2 & 3						
RED WIPER POSITION	ROW 7 SEARCH RELAY #1	ROW 8 SEARCH RELAY #2	ROW 9 SEARCH RELAY #3	ROW 6 SEARCH RELAY #4	ROW 5 SEARCH RELAY #5	
CARD 1						
HORIZONTAL						
1	5	1	9	25	3	
2	8	22	10	19	7	
3	6	18	16	11	17	
4	24	21	14	20	13	
5	12	23	2	4	15	
6	5	8	6	24	12	
7	1	22	18	21	23	
8	9	10	16	14	2	
9	25	19	11	20	4	
10	3	7	17	13	15	
11	3	19	16	21	12	
12	5	22	16	20	15	
13						
14						
CARD 2						
HORIZONTAL						
15	9	24	16	4	6	
16	13	19	14	20	25	
17	2	18	15	12	17	
18	1	22	11	21	8	
19	10	7	5	23	3	
20	9	13	2	1	10	
21	24	19	18	22	7	
22	16	14	15	11	5	
23	4	20	12	21	23	
24	6	25	17	8	3	
25	6	20	15	22	10	
26	9	19	15	21	3	
27						
28						
CARD 3						
HORIZONTAL						
29	3	7	10	4	9	
30	24	21	18	22	8	
31	15	14	17	11	2	
32	13	20	12	19	23	
33	6	25	16	1	5	
34	3	24	15	13	6	
35	7	21	14	20	25	
36	10	18	17	12	16	
37	4	22	11	19	1	
38	9	8	2	23	5	
39	9	22	17	20	6	
40	3	21	17	19	5	
41						
42						
43						
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48						
49						
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SEARCH CHANGE OVER SWITCHES C.U. CAM SW. 16 & 17 ARE RIDING IN NORMAL POSITION ON 2:1 CAMS WHILE SEARCHING CARDS 1, 2, & 3.
FIG. A

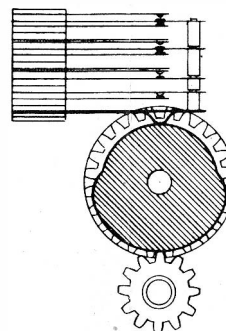


FIG. A

SEARCH POSITION FOR CARDS 4, 5 & 6						
RED WIPER POSITION	ROW 6 SEARCH RELAY #1	ROW 7 SEARCH RELAY #2	ROW 8 SEARCH RELAY #3	ROW 5 SEARCH RELAY #4	ROW 9 SEARCH RELAY #5	
CARD 4						
HORIZONTAL						
1	25	5	1	3	9	
2	19	8	22	7	10	
3	11	6	18	17	16	
4	20	24	21	13	14	
5	4	12	23	15	2	
6	24	5	8	12	6	
7	21	1	22	23	18	
8	14	9	10	2	16	
9	20	25	19	4	11	
10	13	3	7	15	17	
11						
12	20	5	22	15	16	
13	14	3	22	12	11	
14						
CARD 5						
HORIZONTAL						
15	4	9	24	6	16	
16	20	13	19	25	14	
17	12	2	18	17	15	
18	21	1	22	8	11	
19	23	10	7	3	5	
20	1	9	13	10	2	
21	22	24	19	7	18	
22	11	16	14	5	15	
23	21	4	20	23	12	
24	8	6	25	3	17	
25						
26	21	9	19	3	15	
27	11	6	19	10	12	
28						
CARD 6						
HORIZONTAL						
29	4	3	7	9	10	
30	22	24	21	8	18	
31	11	15	14	2	17	
32	19	13	20	23	12	
33	1	6	25	5	16	
34	13	3	24	6	15	
35	20	7	21	25	14	
36	12	10	18	16	17	
37	19	4	22	1	11	
38	23	9	8	5	2	
39						
40	19	3	21	5	17	
41	12	9	21	6	11	
42						
43						
44						
45						
46						
47						
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50						

SEARCH CHANGE OVER SWITCHES C.U. CAM SW. 16 & 17 ARE RIDING ON RISE OF 2:1 CAMS WHILE SEARCHING CARDS 4, 5, & 6.
FIG. B

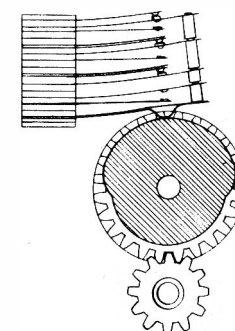


FIG. B