

GAME PLAN, INC.
COCKTAIL PINBALL
(MODEL 110)

PARTS CATALOG

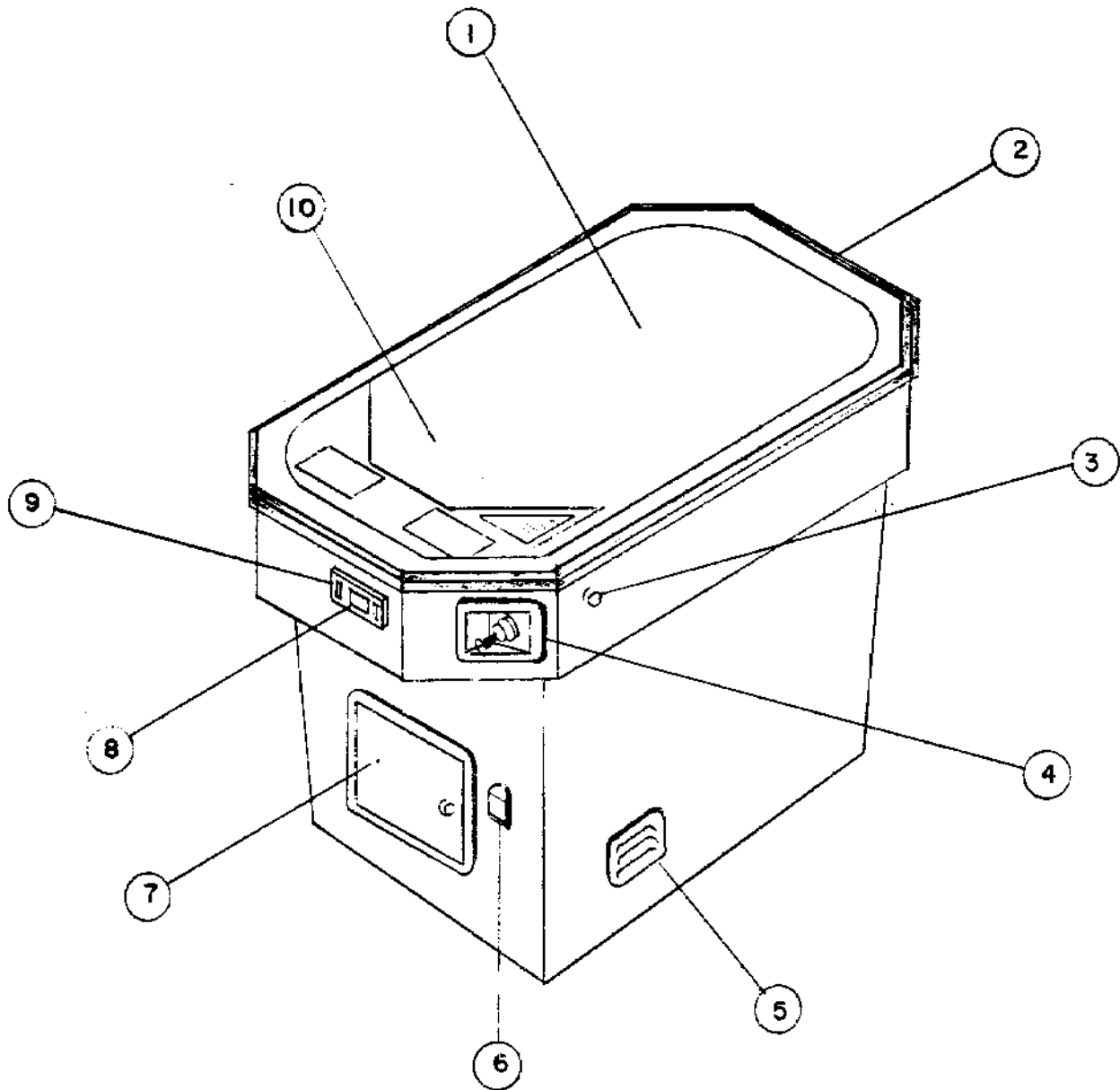
GAME PLAN, INC.
140 LIVELY BOULEVARD
ELK GROVE VILLAGE, IL. 60007

02-30007N

INDEX

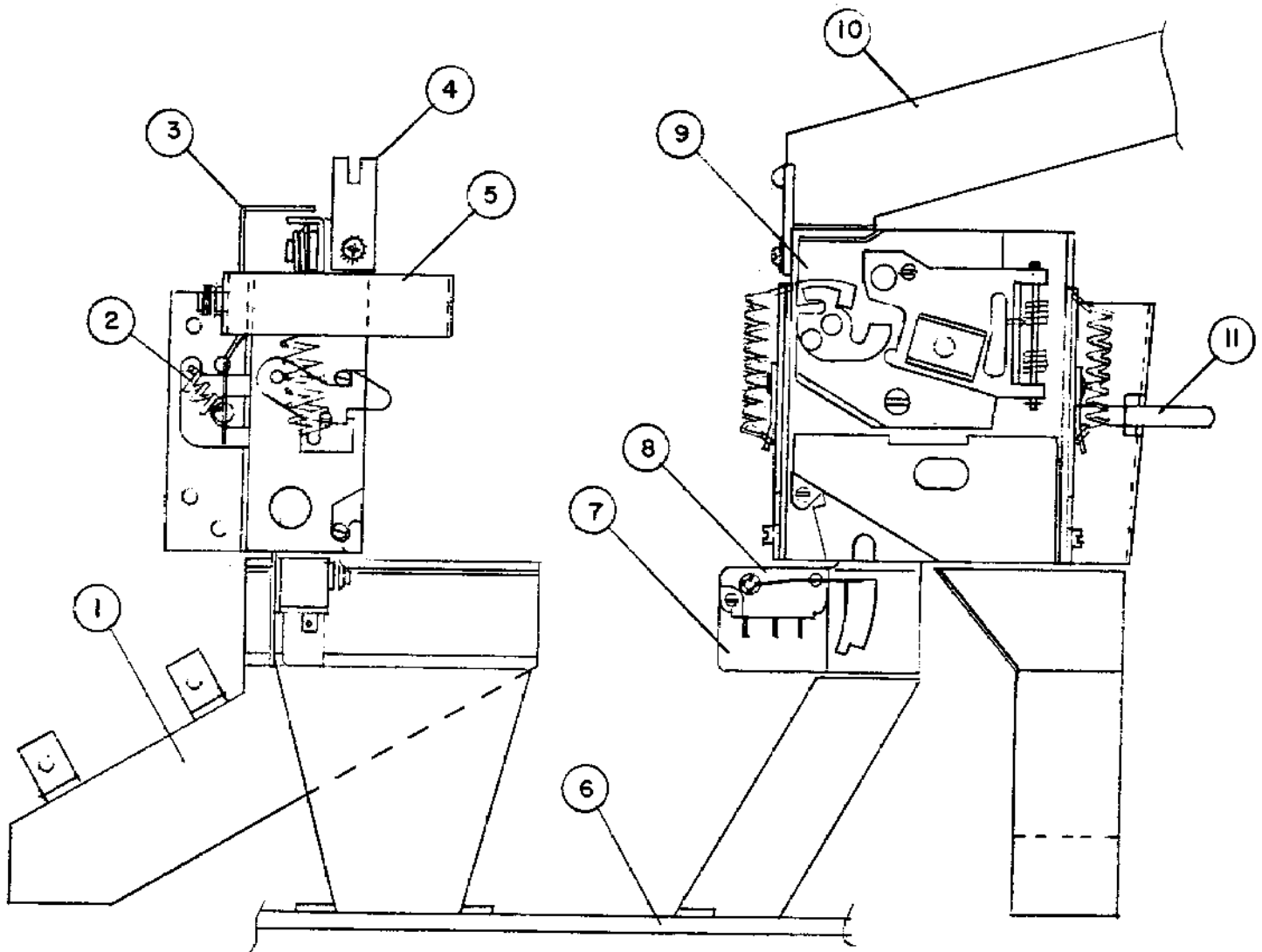
	<u>PAGE</u>
INTRODUCTION-----	1
COMPLETE CABINET-----	3
COIN ACCEPTOR & CHUTE ASSEM.-----	4
BALL KICKER ASSEM.-----	5
PLAYFIELD TOP-----	6
PLAYFIELD TOP PART NUMBERS-----	7
PLAYFIELD BOTTOM-----	8
PLAYFIELD BOTTOM PART NUMBERS-----	9
CHUCK-A-LUCK ASSEM.-----	10
ROLLOVER BUTTON ASSEM.-----	11
TILT BLOCK ASSEM.-----	12
CHIME ASSEM.-----	13
FLIPPER BUTTON-----	14
KNOCKER ASSEM.-----	15
BALL KICKOUT ASSEM.-----	16
BLOWER ASSEM.-----	17
LEFT & RIGHT FLIPPER ASSEM.-----	18
SLING SHOT ASSEM.-----	19
POWER BUMPER ASSEM.-----	20
POWER BUMPER ASSEM. PART NUMBERS-----	21
BALL SHOOTER ASSEM.-----	22
POWER SUPPLY ASSEM.-----	23
LDU-1 LAMP DRIVER ASSEM.-----	24
LDU-1 LAMP DRIVER PART NUMBERS-----	25
SDU-1 SOLENOID DRIVER ASSEM.-----	26
SDU-1 SOLENOID DRIVER PART NUMBERS-----	27
MPU-1 MICRO PROCESSOR UNIT-----	28
MPU-1 MICRO PROCESSOR UNIT PART NUMBERS-----	29
DDU-1 DUAL DISPLAY UNIT-----	30
NOTES -----	31

COMPLETE CABINET



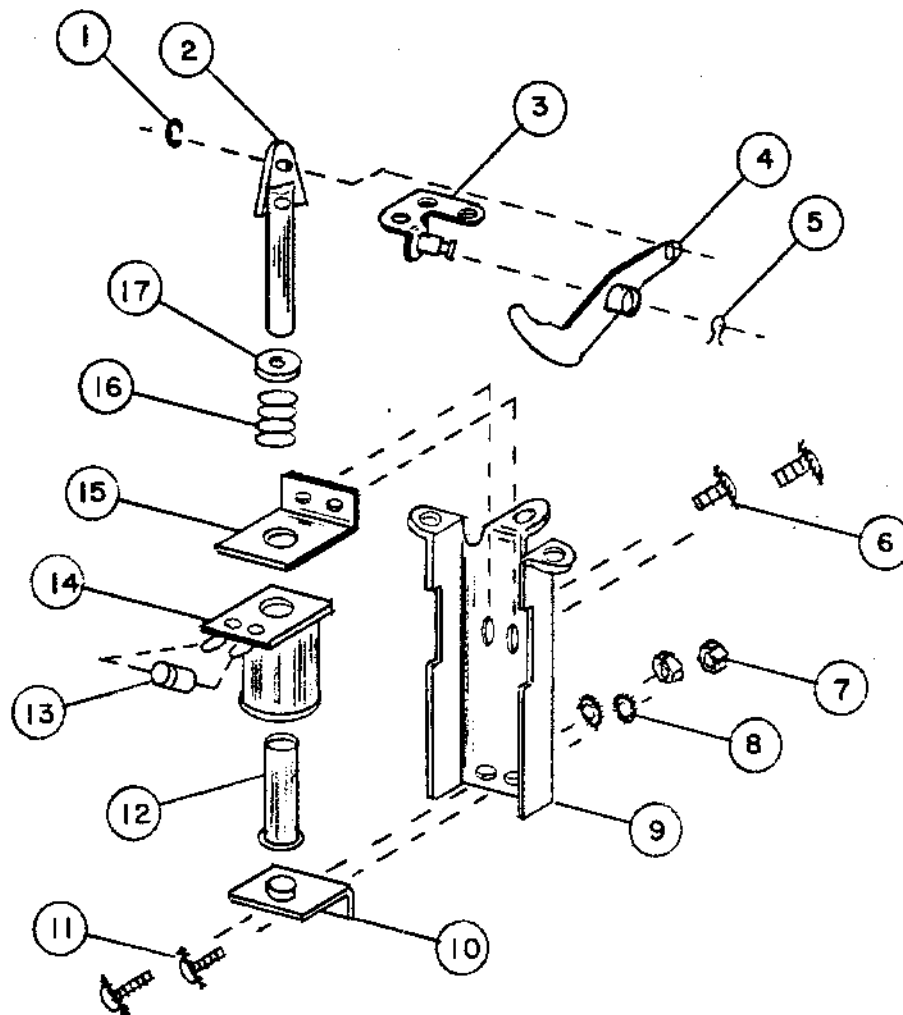
<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	08-10001D	TOP GLASS
2	03-20001D	TOP GLASS MOULDING
3		FLIPPER BUTTON ASSEM.
4	10-10011A	SHOOTER ASSEM.
5	04-00021	LOUVER PLATE
6	03-00003N	COIN RETURN CUP
7	10-00028N	DOOR & FRAME ASSEM.
8	08-20002A	COIN DENOMINATOR
9	03-00002C	COIN ENTRY CASTING
10	10-20001	PLAYFIELD ASSEM.

COIN ACCEPTOR & CHUTE ASSEM.

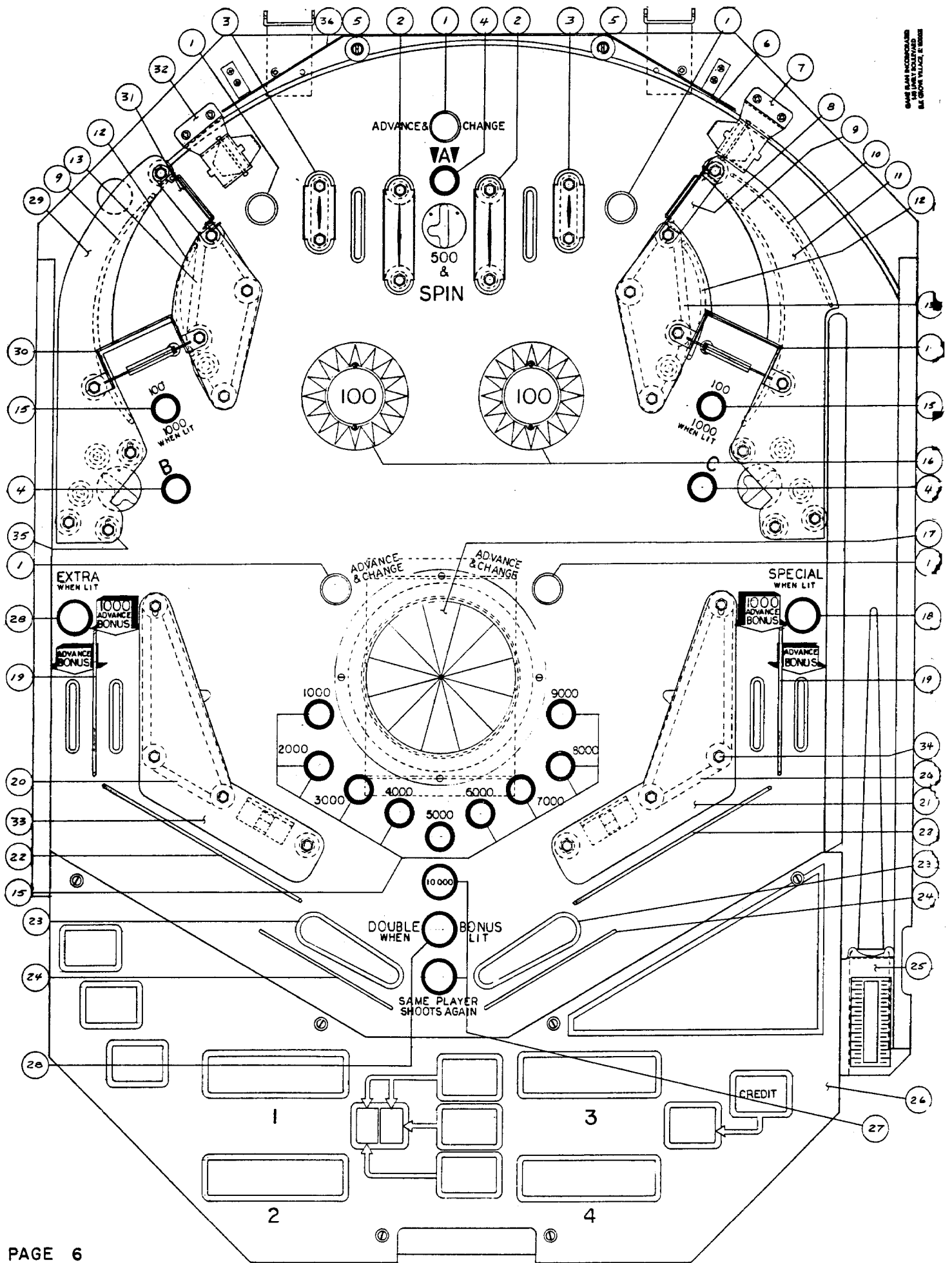


<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	10-00021C	COIN REJECT CHUTE
2	06-20003A	REJECT ARM SPRING
3	04-00051A	REJECT ARM
4	04-00035A	CHUTE ALIGNMENT BRK'T.
5	04-00050A	REJECT ARM EXTENSION
6	10-00027C	CASH BOX MTG. BRK'T. ASSEM.
7	14-00003N	COIN GUIDE BRK'T.
8	14-00004N	25 CENT COIN SW. ASSEM. (SPECIFY COIN)
9	14-30001N	25 CENT COIN ACCEPTOR
10	10-00019B	COIN TRACK
11	05-40004A	REJECT ROD

BALL KICKER ASSEM.

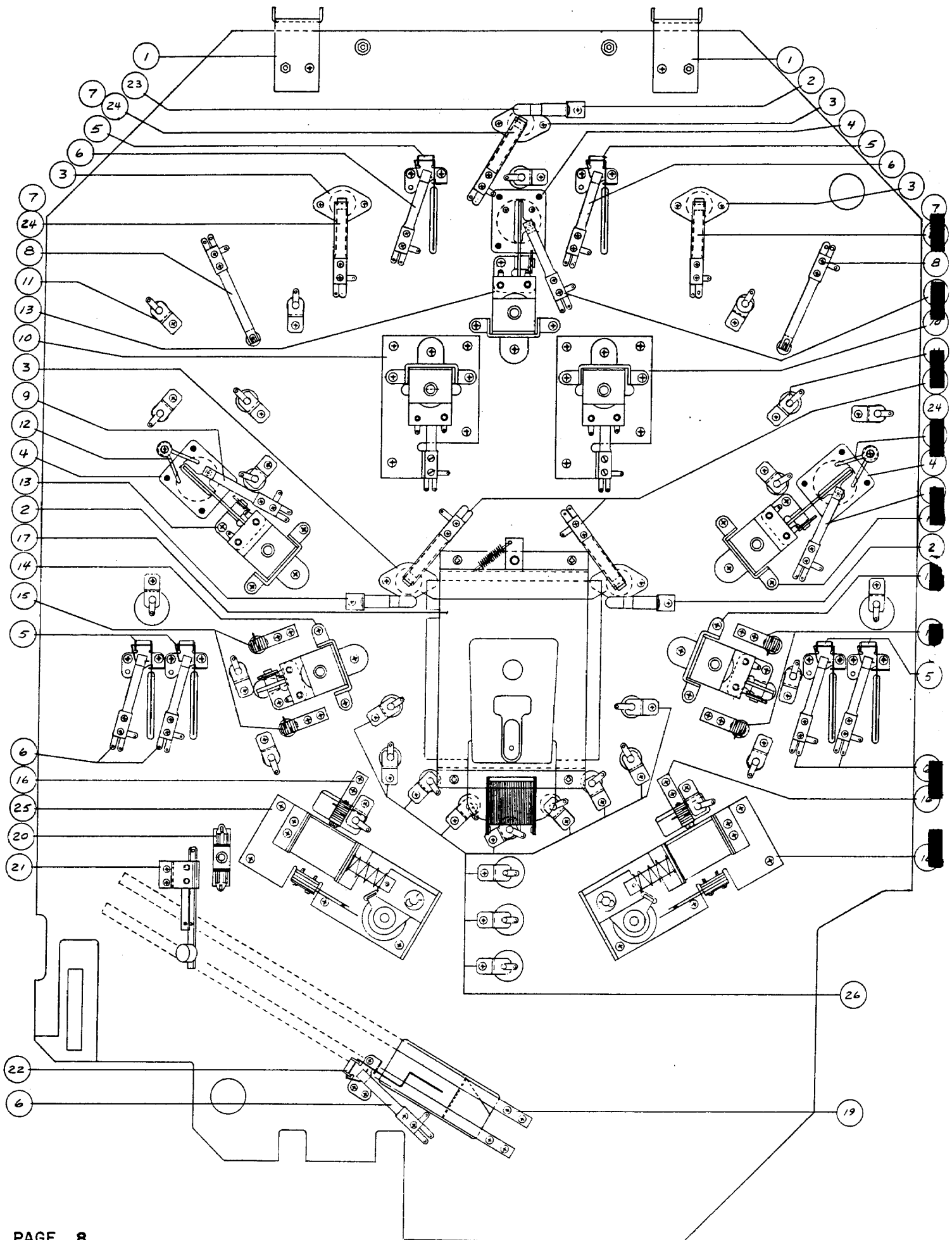


<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	17-10003A	"E" RING	11	11-40004N	6/32X 3/8 P.R.H.M.S.SEMS
2	10-10001A	PLUNGER-LINK ASSEM.	12	03-40008N	SOLENOID TUBE
3	10-00005A	ARM MTG. BRK'T.	13	25-00001N	IN4004 DIODE
4	10-00007A	STUD-HUB	14	21-50001B	SOLENOID
5	17-20001A	SPRING CLIP	15	04-00008A	COIL SUPPORT BRK'T.
6	11-40003N	6/32X1/4 P.R.H.M.S.SEMS	16	06-30004A	SPRING
7	12-00002N	6/32 HEX HD. NUT	17	13-00003A	STEEL WASHER
8	13-10002N	NO.6 EXT. T. LOCKWASHER			
9	04-00026B	COIL MTG. BRK'T.			
10	10-00009A	PLUNGER STOP BRK'T.			



PLAYFIELD TOP

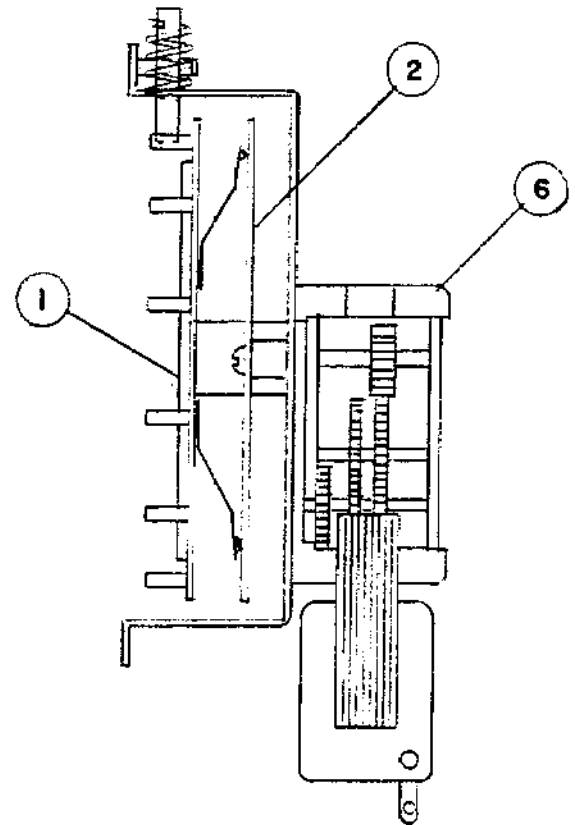
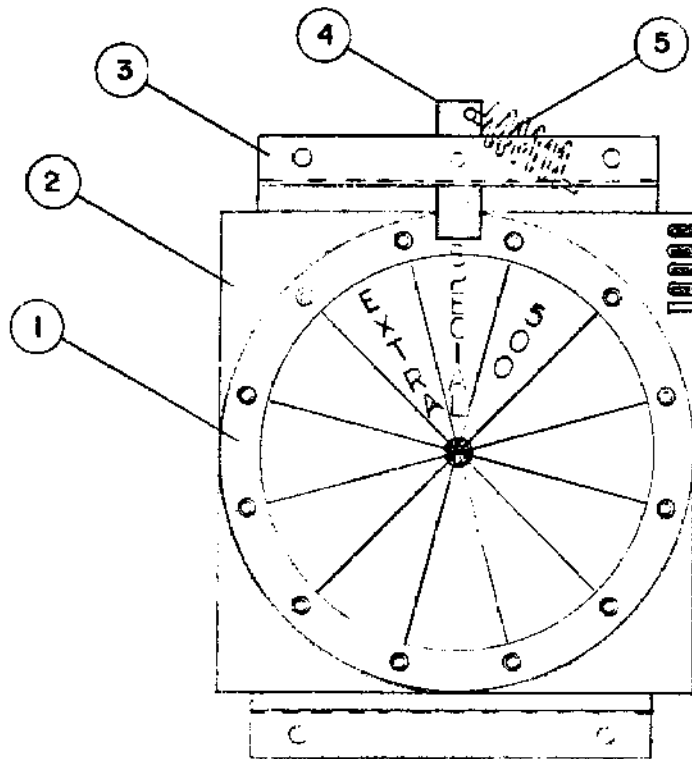
<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	10-10012A	ROLLOVER BUTTON ASSEM.
2	03-40016N	"2½" GUIDE RAIL
3	03-40017N	ONE SIDED GUIDE RAIL - "RED" - 08-30005N - 1" RUBBER
4	03-40019N	3/4" INSERT - "RED"
5	03-40023N	POST "WHITE"
6	06-00014A	BALL GUIDE WIRE
7	10-00003A	BALL GATE ASSEM.
8	10-10019A-R	WIRE GATE REBOUND ASSEM.
9	06-00012A	BALL GUIDE WIRE
10	06-00013A	BALL GUIDE WIRE
11	08-00013C	UPPER RIGHT OVERLAY "REAL"
12	06-00011A	BALL GUIDE WIRE
13	08-30009N	RUBBER RING 2½ - WHITE
14	10-10015A-R	SPINNER TARGET ASSEM.
15	03-40018N	3/4" INSERT - "WHITE"
16	03-40029A	SUNBURST CAP "100"
17	08-20001A	PLAYFIELD SPINNER COVER
18	03-40021N	1" INSERT - "RED"
19	06-00008A	BALL GUIDE WIRE
20	08-30010N	RUBBER RING - 3½ - WHITE
21	08-00017B	LOWER RIGHT OVERLAY "REAL"
22	06-00009A	BALL GUIDE WIRE
23	08-30001N	FLIPPER RUBBER 1½ - "YELLOW"
24	06-00010A	BALL GUIDE WIRE
25	04-00025B	SHOOTER INDICATOR
26	10-10020A	SCORE PANEL ASSEM.
27	03-40020N	1" INSERT "WHITE"
28	03-40022N	1" INSERT "YELLOW"
29	08-00014C	UPPERLEFT OVERLAY "REAL"
30	10-10015A-L	SPINNER TARGET ASSEM.
31	10-10012A-R	WIRE GATE REBOUND ASSEM.
32	10-00004A	BALL REBOUND ASSEM.
33	08-00016B	LOWER LEFT OVERLAY "REAL"
34	12-30001N	PLASTIC ACORN NUT
35	08-30004N	RUBBER RING - 5/16 - WHITE
36	10-00031B	REAR PLAYFIELD SHIELD.



PLAYFIELD BOTTOM

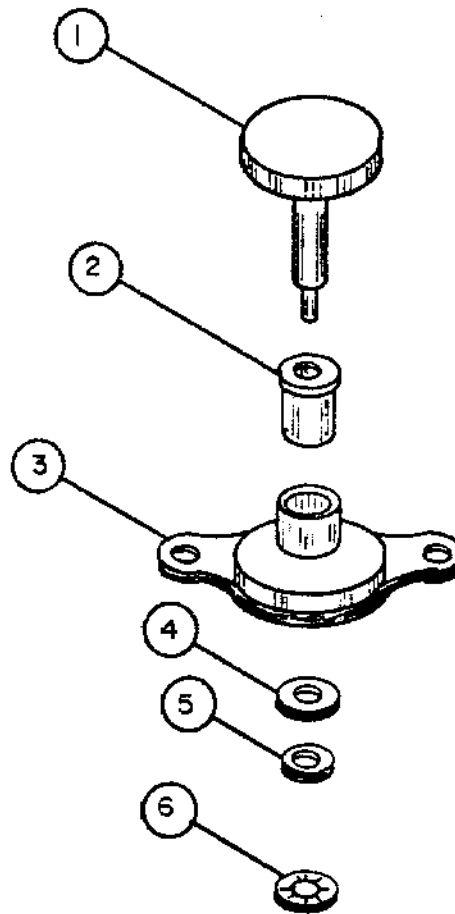
<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	04-00040A	PLAYFIELD HINGE BRKT.
2	29-60004N	MINIATURE LAMP SOCKET
3	10-10012A	ROLLOVER BUTTON ASSEM. SEE PAGE 11
4	03-40024A	KICKER HOLE COVER
5	10-10016A	ROLLOVER WIRE FORM ASSEM.
6	22-00007N	ROLLOVER PLAYFIELD SW.
7	22-00004N	ROLLOVER BUTTON SW.
8	22-00006N	SPINNER SW.
9	22-00005N	KICKER HOLE SW.
10	10-10004B	POWER BUMPER ASSEM. SEE PAGE 20
11	29-60003N	MINIATURE BAYONET SOCKET
12	06-00001A	KICKER HOLE WIRE FORM
13	10-10010B	BALL KICKER ASSEM. SEE PAGE 5
14	10-10009B	SLING SHOT ASSEM. SEE PAGE 19
15	10-00023A	PLAYFIELD SW & BRKT. ASSEM.
16	10-10026A	COMPLETE TARGET SW. ASSEM.
17	10-10018B	CHUCK-A-LUCK ASSEM. SEE PAGE 10
18	10-10005B	LEFT FLIPPER ASSEM. SEE PAGE 18
19	10-00018B	RUNWAY BALL GUIDE ASSEM.
20	30-10002N	1 WAY FUSE HOLDER
21	10-00026A	TILT SW. ASSEM.
22	10-10017A	BALL EJECTOR WIRE FORM ASSEM.
23	31-00001N	# 47 LAMP
24	04-00069A	SWITCH BACKUP PLATE
25	10-10006B	RIGHT FLIPPER ASSEM. SEE PAGE 18
26	29-60002N	MINIATURE LAMP SOCKET

CHUCK-A-LUCK ASSEM.



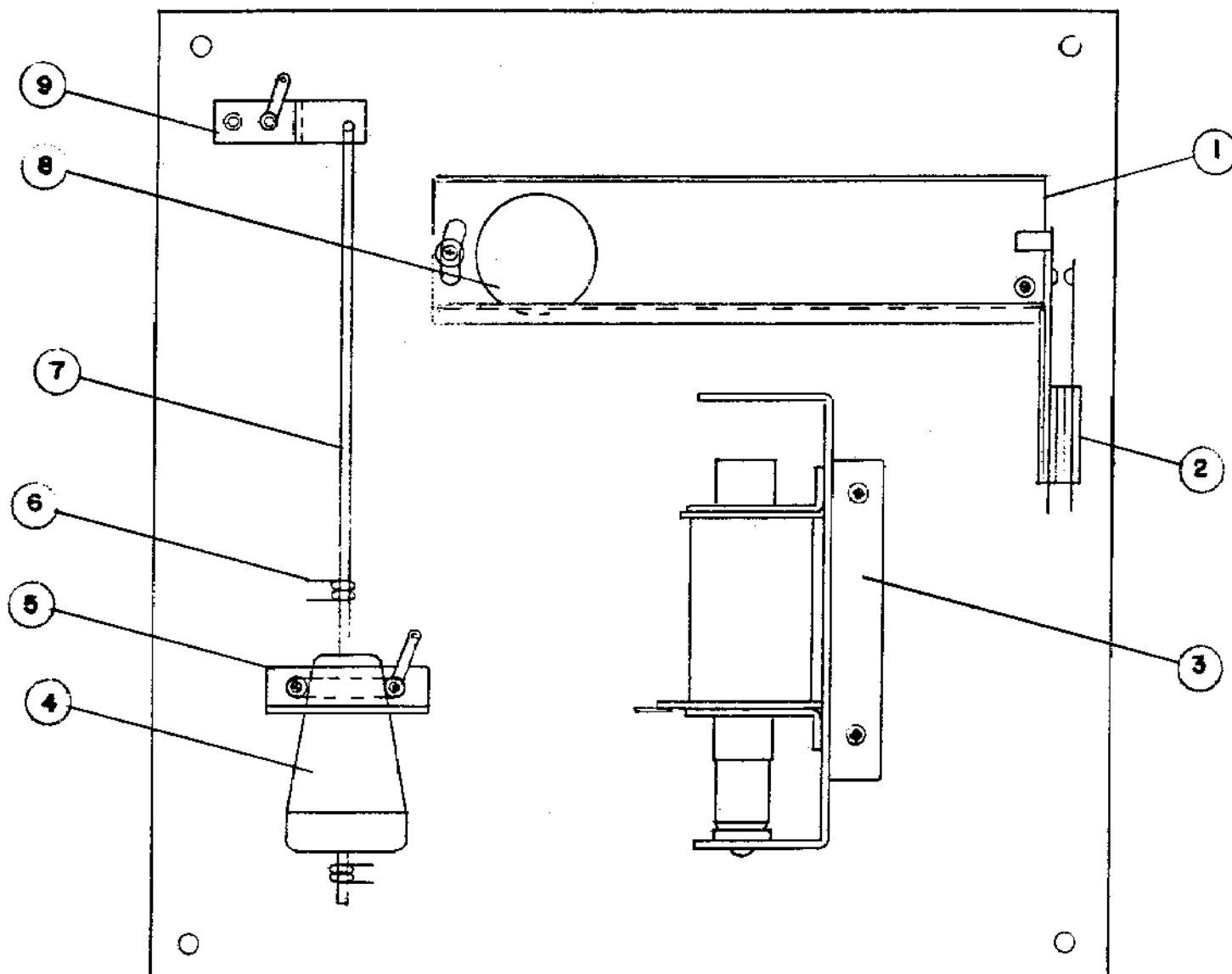
<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	10-00024A	ROTARY DISC ASSEM.
2	20-00001A	CONTACT PLATE
3	10-00017B	MOTOR MTG. PLATE
4	08-50001A	SPINNER DOG
5	06-20001A	SPRING
6	21-10001N	SPINNER MOTOR

ROLLOVER BUTTON ASSEM.



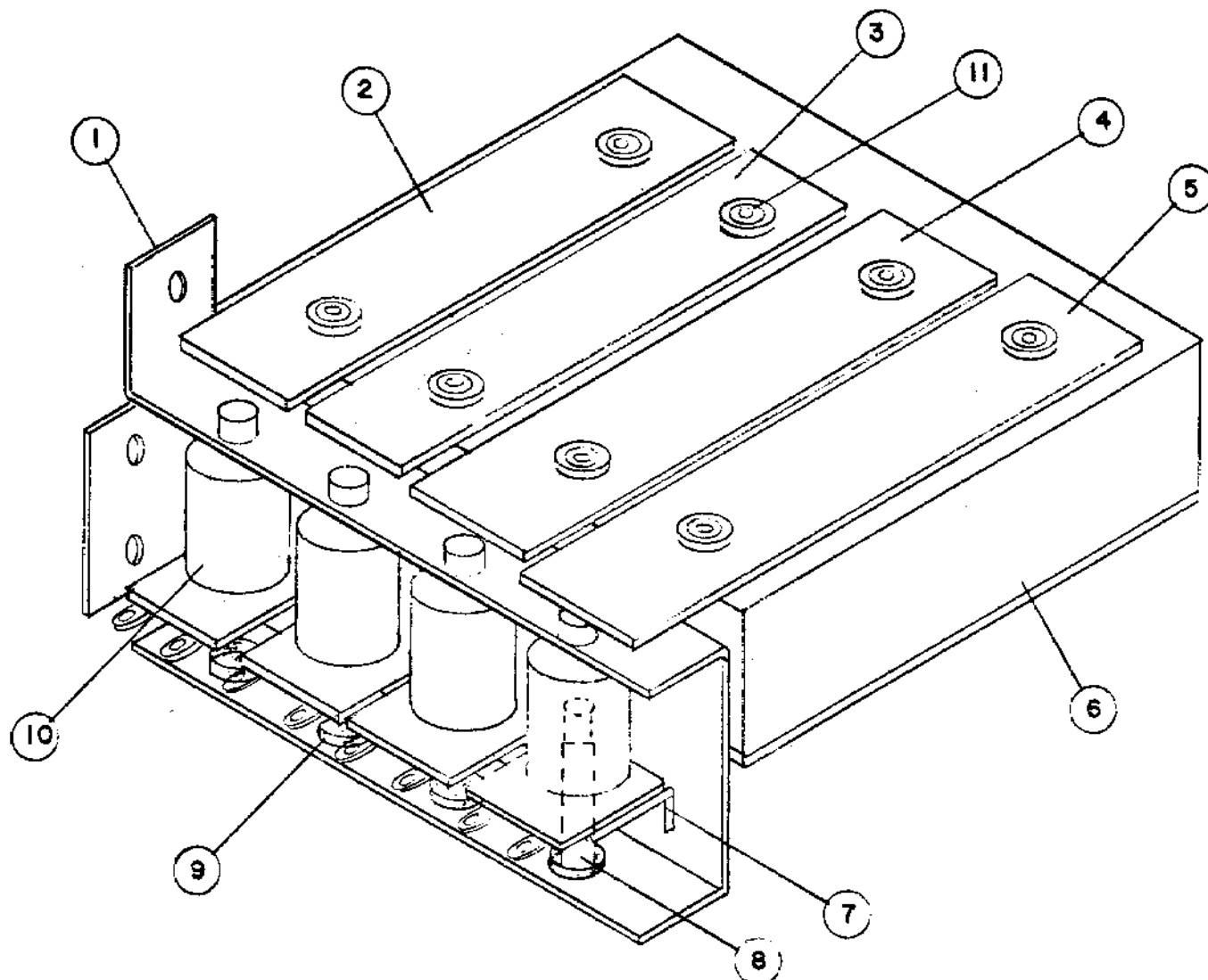
<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	03-40011N	ROLLOVER BUTTON
2	05-10002A	" " BUSHING
3	03-40015N	" " BASE
4	13-00008A	FLAT STEEL WASHER
5	13-00002A	FLAT STEEL WASHER
6	12-20001A	PUSH NUT FASTENER

TILT BLOCK ASSEM.



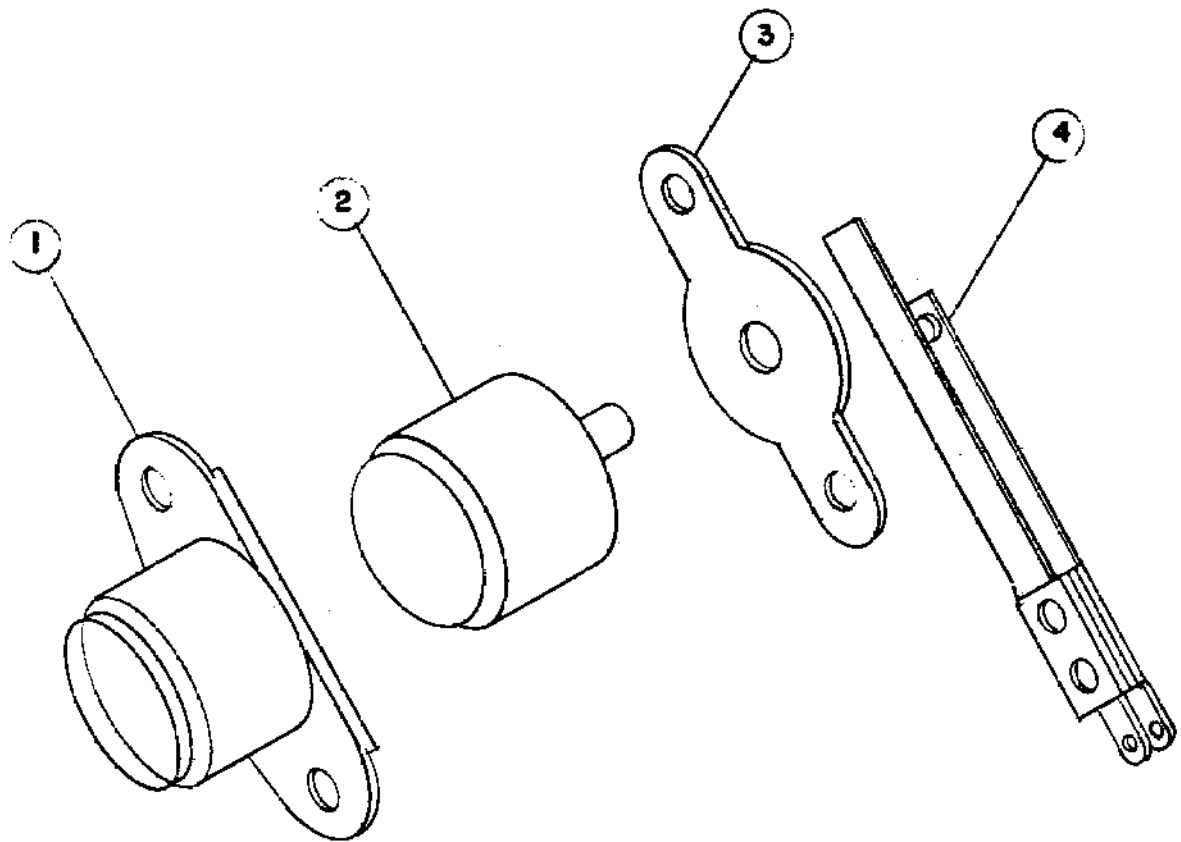
<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	04-00027B	ROLL TILT CAGE
2	22-00003N	SWITCH
3	10-10013B	KNOCKER ASSEM.
4	03-10001A	TILT PLUMB BOB
5	04-40001A	TILT CONTACT PLATE
6	06-40001A	ADJUSTMENT SPRING
7	06-00002A	TILT PLUMB BOB WIRE
8	07-40001N	STEEL BALL
9	04-40002A	TILT PLUMB BOB HANGER

CHIME ASSEM.



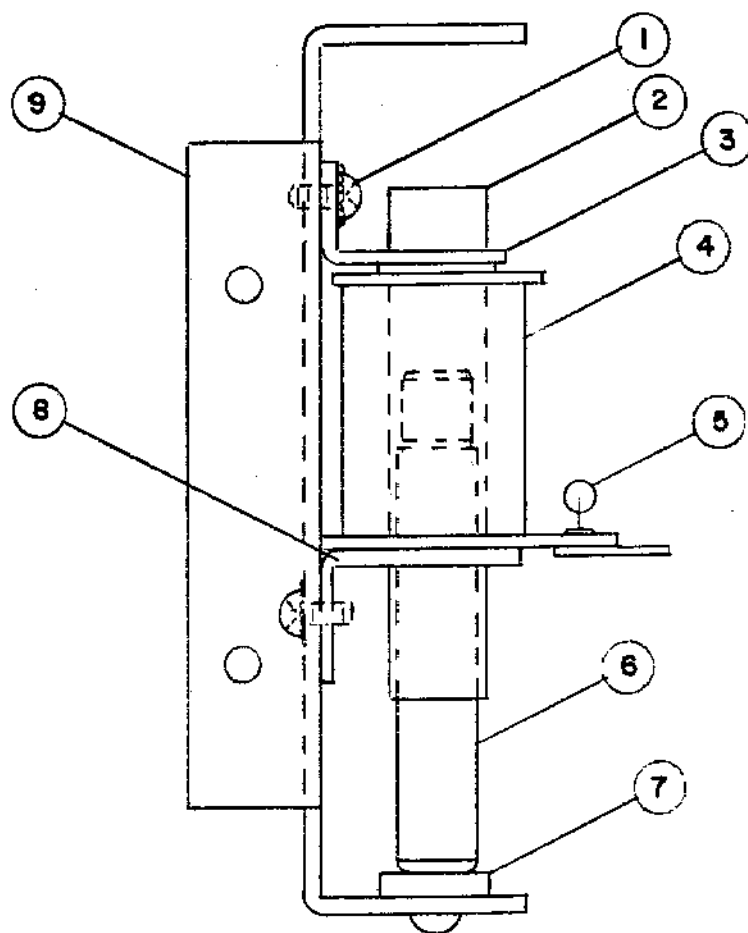
<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	04-00068C	CHIME COIL BRK'T
2	04-20002A	CHIME BAR "A"
3	04-20003A	CHIME BAR "B"
4	04-20004A	CHIME BAR "C"
5	04-20005A	CHIME BAR "D"
6	01-90009C	CHIME BOX
7	04-00008A	COIL SUPPORT BRK'T
8	10-10022A	PLUNGER & TIP ASSEM.
9	08-30003A	RUBBER BUMPER
10	21-50004B	SOLENOID
11	08-30008A	GROMMET

FLIPPER BUTTON



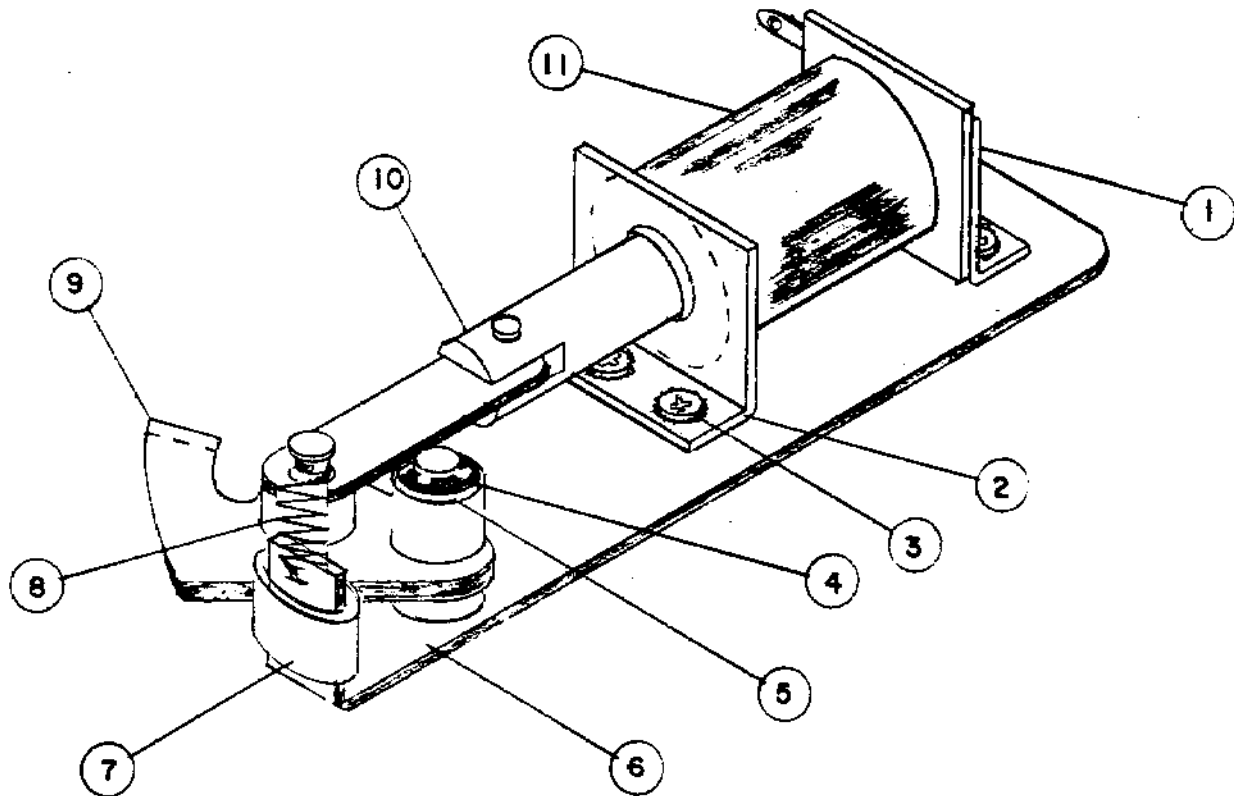
<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	03-40014N	FLIPPER BUTTON HOUSING
2	03-40013N	FLIPPER BUTTON
3	04-00019A	FLIPPER BUTTON PLATE
4	22-00009N	FLIPPER SWITCH

KNOCKER ASSEM.



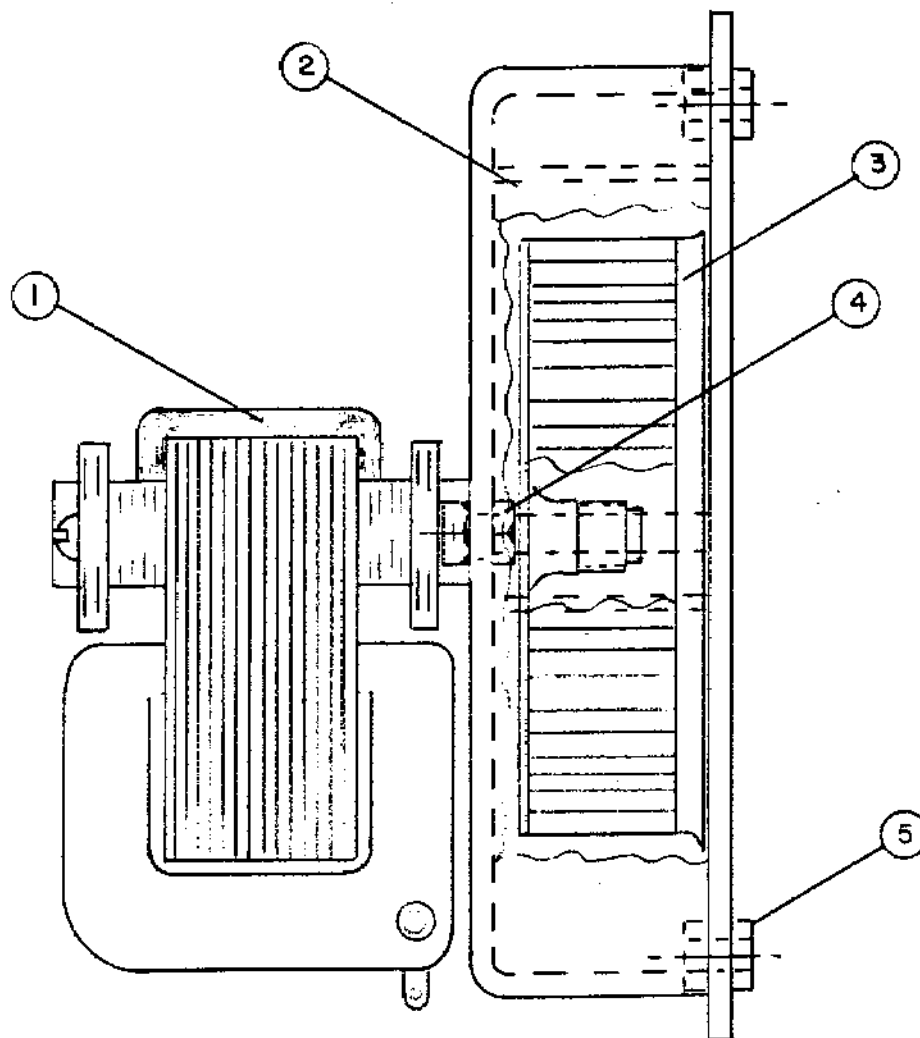
<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	11-40004N	6-32 X 3-8 R.P.H. SEMS
2	03-40012N	SOLENOID TUBE
3	04-00052A	FRONT COIL STOP
4	21-50003B	SOLENOID
5	25-00001N	1N4004 DIODE
6	10-00013A	PLUNGER ASSEM.
7	08-30003A	RUBBER BUMPER
8	04-00008A	COIL SUPPORT BRK'T
9	04-00028B	KNOCKER COIL MTG. BRK'T

BALL KICKOUT ASSEM.



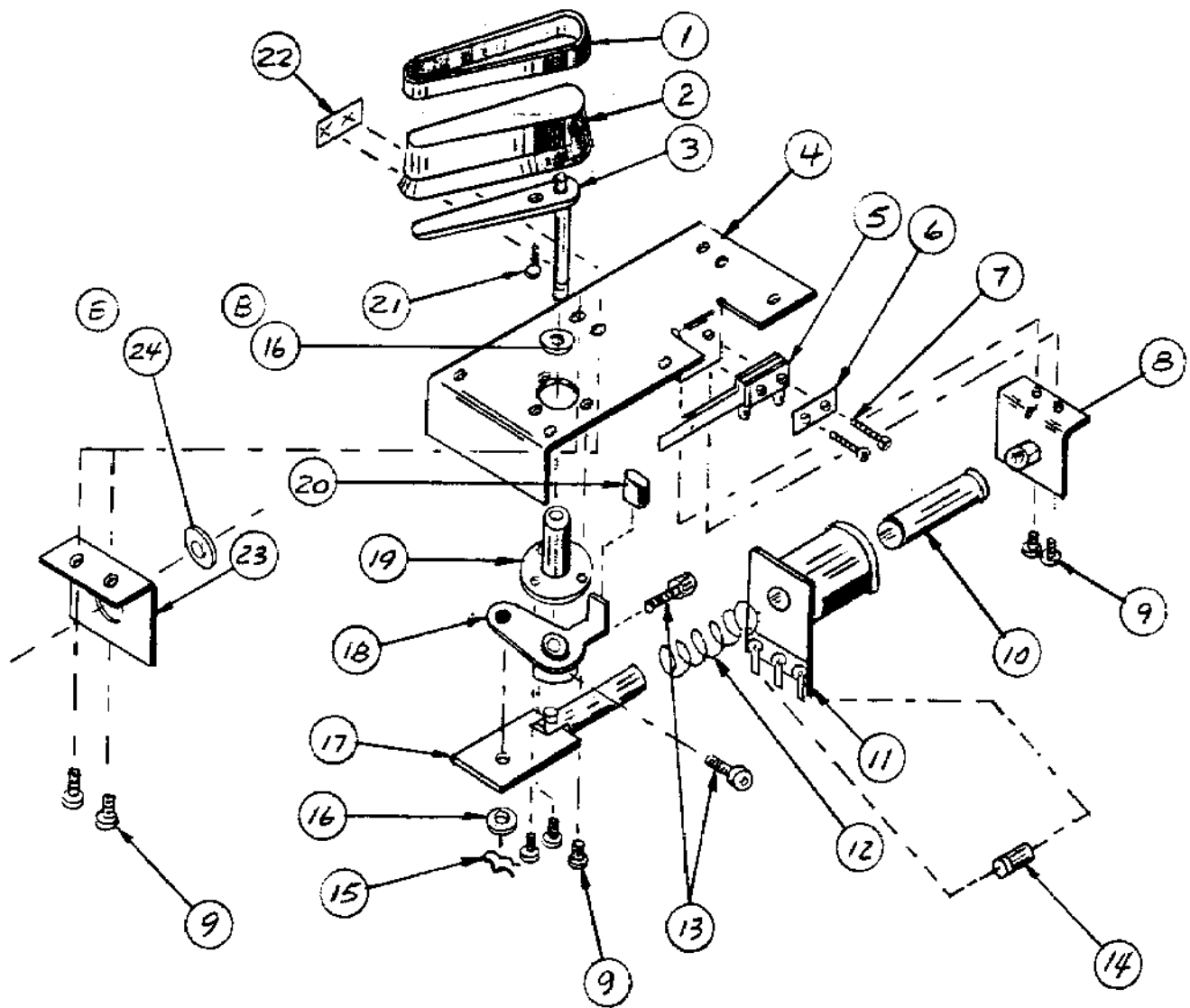
<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	10-00009A	PLUNGER STOP ASSEM.
2	04-00052A	FRONT COIL STOP
3	11-40003N	6-32 X 1-4 P.R.H.M.S. SEMS
4	17-10001A	"E" RING
5	13-00001A	BRASS WASHER
6	10-00001A	MTG. PLATE ASSEM.
7	32-10001A	BALL KICKOUT BUMPER
8	06-20002A	SPRING
9	10-00002A	CAM ARM ASSEM.
10	10-10008A	KICKOUT PLUNGER ASSEM.
11	21-50003B	SOLENOID

BLOWER ASSEM.



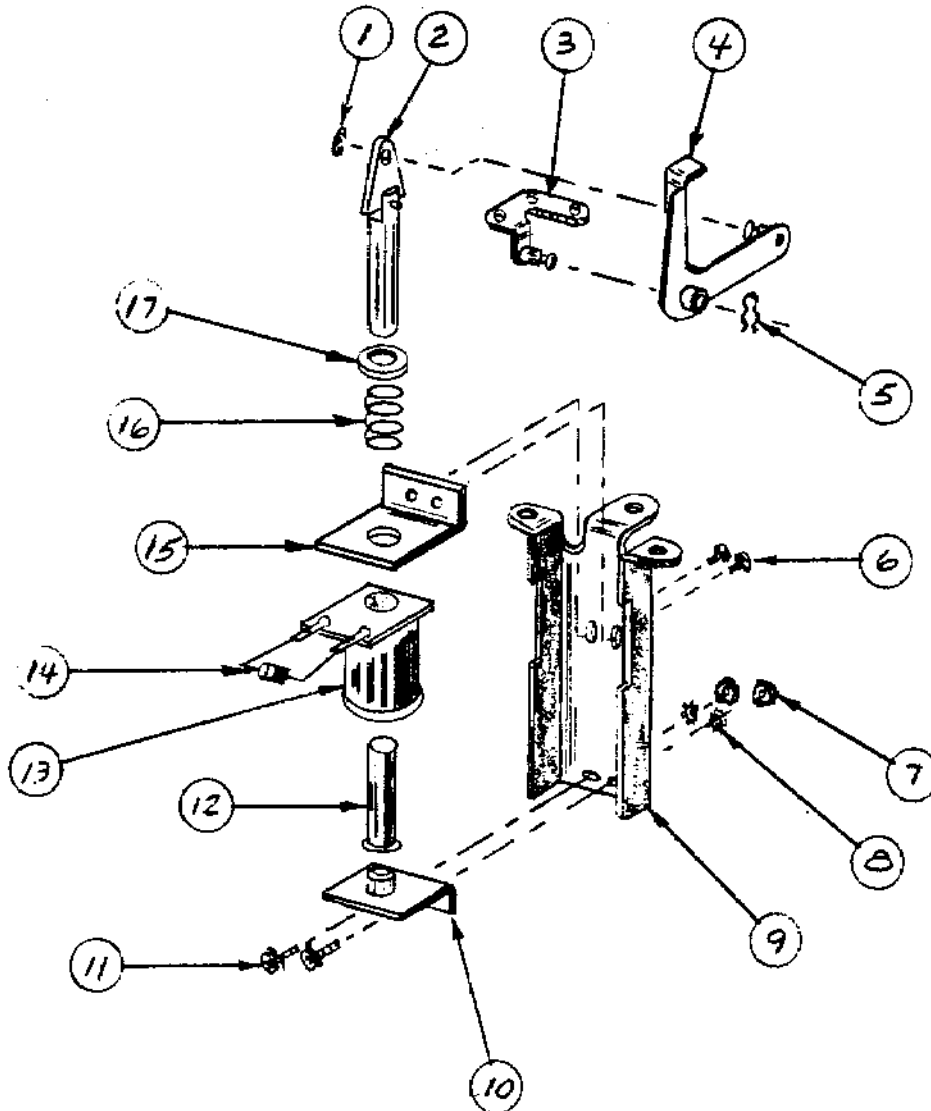
<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	21-10002N	BLOWER MOTOR
2	03-30001C	" HOUSING
3	03-40025N	" WHEEL
4	12-00002N	6/32 HEX HEAD NUT
5	08-30011A	BLOWER GROMMET

LEFT-RIGHT FLIPPER ASSEM.



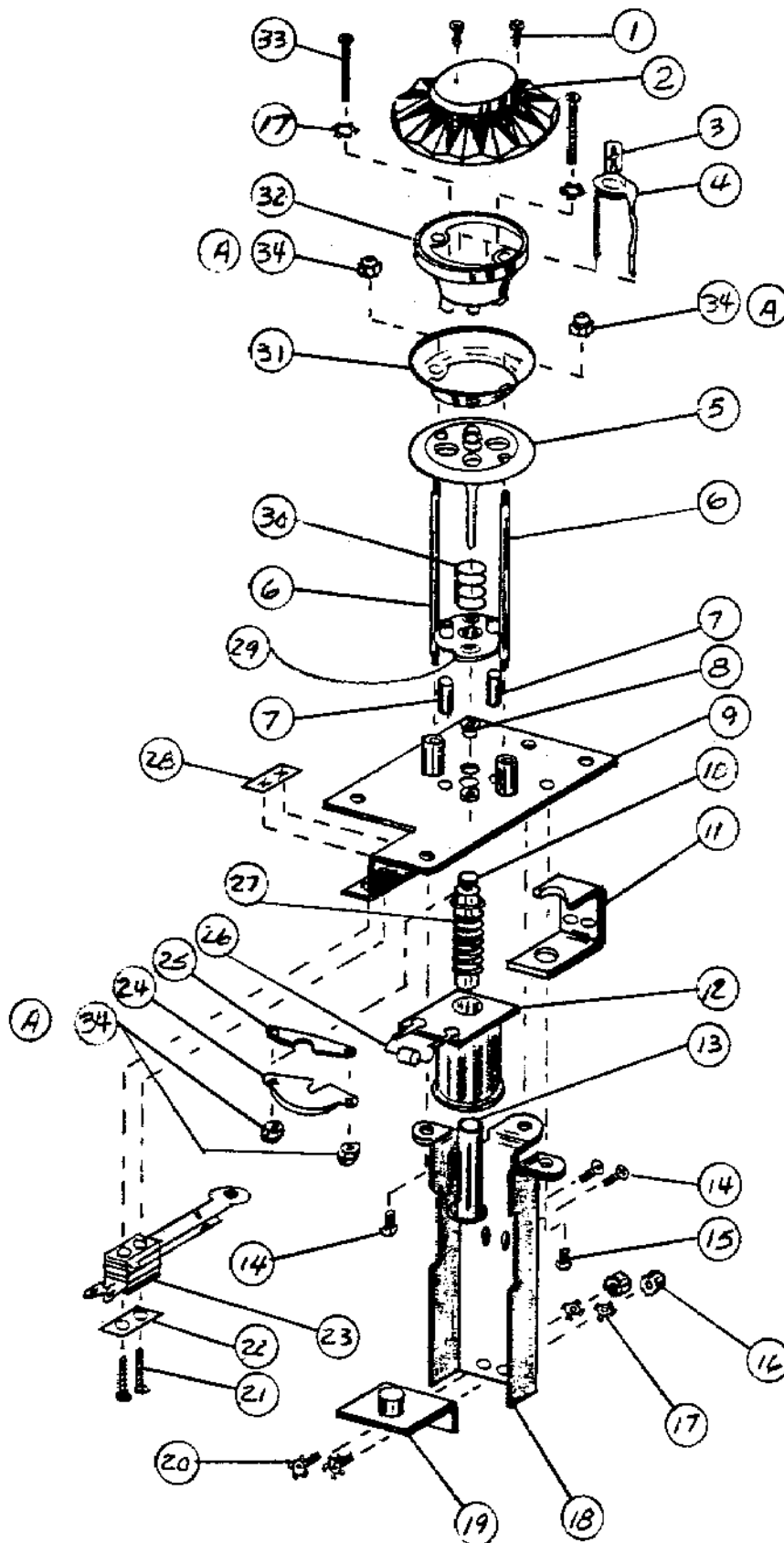
ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION
1	08-3000IN	FLIPPER RUBBER	13	11-2000IN	10/32 SOC.HD.SET SCREW
2	03-40009N	FLIPPER	14	25-0000IN	IN 4004 DIODE
3	10-00010A	FLIPPER SHOE ASS'Y	15	17-20001A	SPRING CLIP
* 4	04-00030C	LEFT FLIPPER MTG. PL.	16	13-00001A	BRASS WASHER
5	22-00002N	FLIPPER BREAK SW.	17	10-10002A	FLIPPER PLUNGER ASS'Y
6	17-90001N	TENSION PLATE	18	10-00011A	LEFT FLIPPER ARM ASS'Y
7	11-10019N	NO.4X5/8S.R.H.S.M.S.TYPE'B'	"	10-00012A	RIGHT " " "
8	10-00009A	PLUNGER STOP ASS'Y	19	03-40001A	FLIPPER BUSHING
9	11-40003N	6/32X1/4RR.H.M.S.SEMS	20	32-10002A	INSULATOR
10	03-40008N	SOLENOID TUBE	21	11-10002N	6/32X1/2 P. TRUSS HD.
11	21-50002B	SOLENOID	22	12-20002N	SPEED NUT
12	06-30004A	PLUNGER RETURN SP.	23	04-00052A	FRONT COIL STOP
* 13	04-00031C	RIGHT FLIPPER PLATE	24	13-00009N	CURVED SPRING WASHER

SLING SHOT ASSEM.



ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION
1	17-10003A	"E" RING	10	10-00009A	PLUNGER STOP BRK'T
2	10-10001A	PLUNGER-LINK ASS'Y	11	11-40004N	6/32X3/8 P.R.HD. SEMS
3	10-00005A	ARM MTG. BRK'T ASS'Y	12	03-40008N	SOLENOID TUBE
4	10-00006A	SLING SHOT ARM ASS'Y	13	21-50001B	SOLENOID
5	17-20001A	SPRING CLIP	14	25-00001N	IN 4004 DIODE
6	11-40003N	6/32X1/4 P.R.HD. SEMS	15	04-00008A	COIL SUPPORT BRK'T
7	12-00002N	6/32 HEX NUT	16	06-30004A	PLUNGER RETURN SPRING
8	13-10002N	NO.6 EXT. T. LOCKWASHER	17	13-00003A	STEEL WASHER
9	04-00026B	COIL MTG. BRK'T			

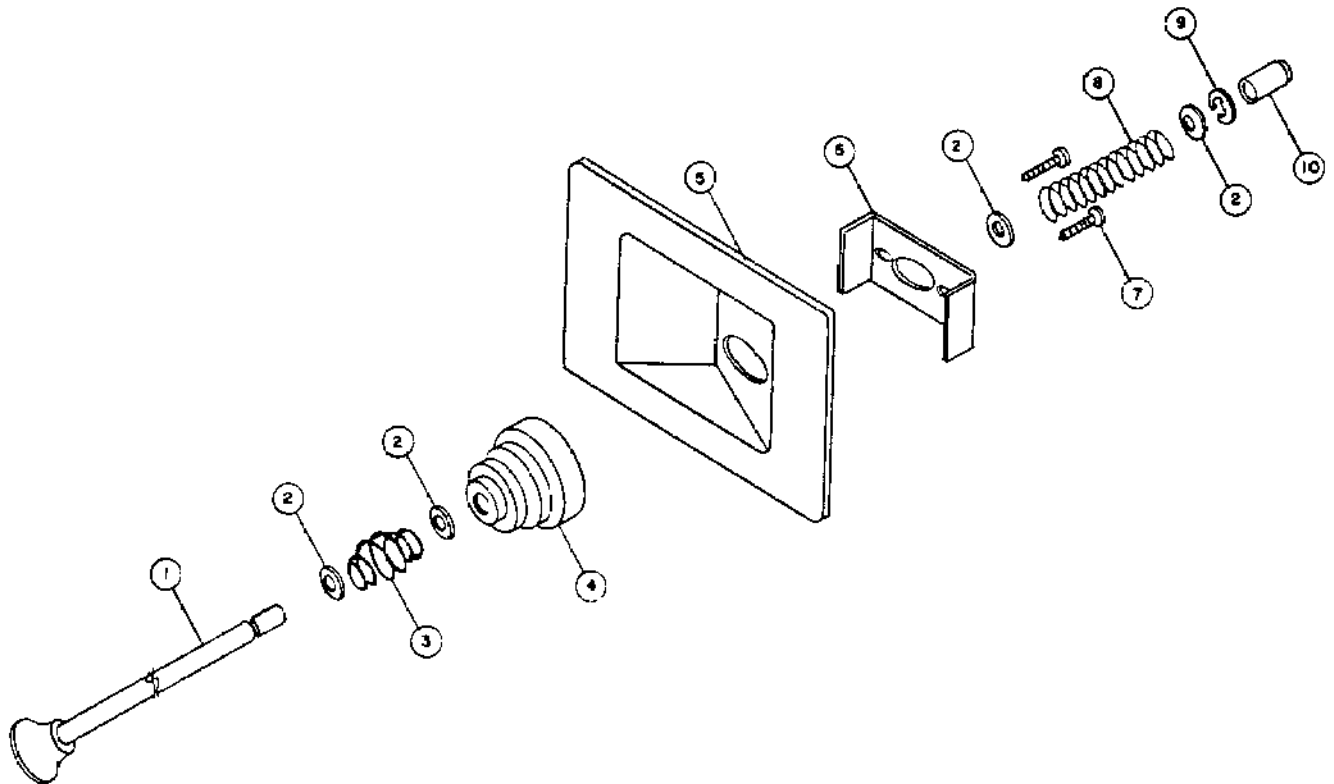
POWER BUMPER



POWER BUMPER ASSEM.

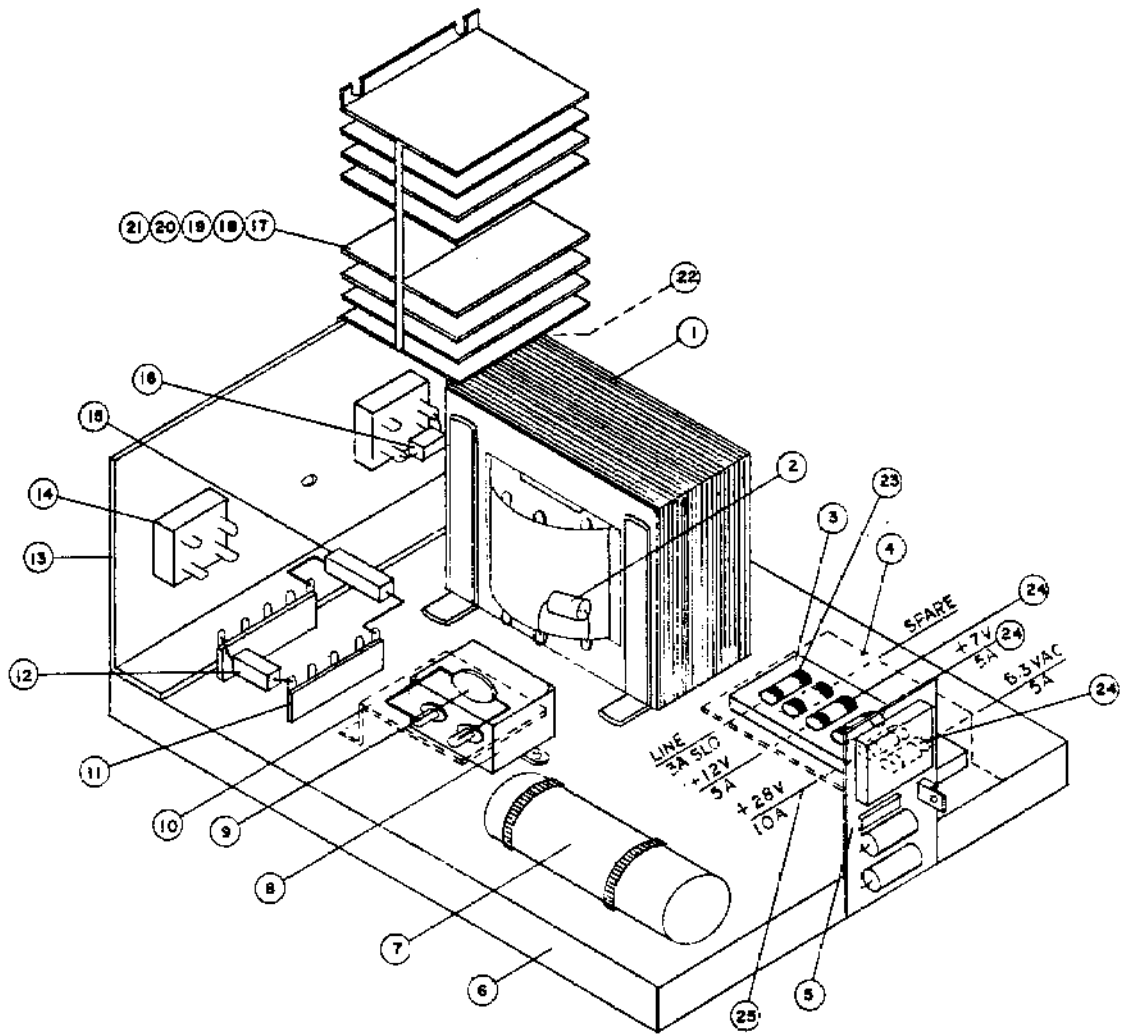
<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	11-10001N	NO.4X1/2 P.R.HD. S.M.S.
2	03-40003N	SUNBURST CAP
3	31-00001N	NO.47 LAMP
4	29-60001N	BUMPER LAMP SOCKET
5	03-40005N	WAFER
6	05-40001A	POWER BUMPER ROD
7	32-40002A	" " SPACER
8	32-40003A	SNAP BUSHING
9	10-00008A	BUMPER MTG. PLATE ASS'Y
10	05-70002A	POWER BUMPER PLUNGER
11	04-00011A	" " COIL STOP
12	21-50001B	SOLENOID
13	03-40008N	" TUBE
14	11-40003N	6/32X1/4 P.R.HD. M.S. SEMS
15	11-40002N	8/32X1/4 P.R.HD. M.S. SEMS
16	12-00002N	6/32 HEX NUT
17	13-10002N	NO.6 EXT. TOOTH LOCKWASHER
18	04-00026B	COIL MTG. BRK'T
19	10-00009A	PLUNGER STOP ASS'Y
20	11-40004A	6/32X3/8 P.R.HD. M.S. SEMS
22	17-90001A	TENSION PLATE
23	22-00001N	POWER BUMPER SWITCH
24	04-30003A	FIBER PLUNGER ARM
25	04-10002A	STAINLESS PLUNGER ARM
26	25-00001N	1N4004 DIODE
27	06-30005A	BUMPER PLUNGER RETURN SPRING
28	12-20002N	SPEED NUT
29	03-40006N	BUMPER BASE
30	06-30001A	POWER BUMPER SPRING
31	04-10001A	" " RING
32	03-40004N	" " BODY
33	11-40001N	6/32X1 1/4 P.R.HD. M.S.
34	12-10001N	6/32 ELASTIC STOP NUT

BALL SHOOTER ASSEM.



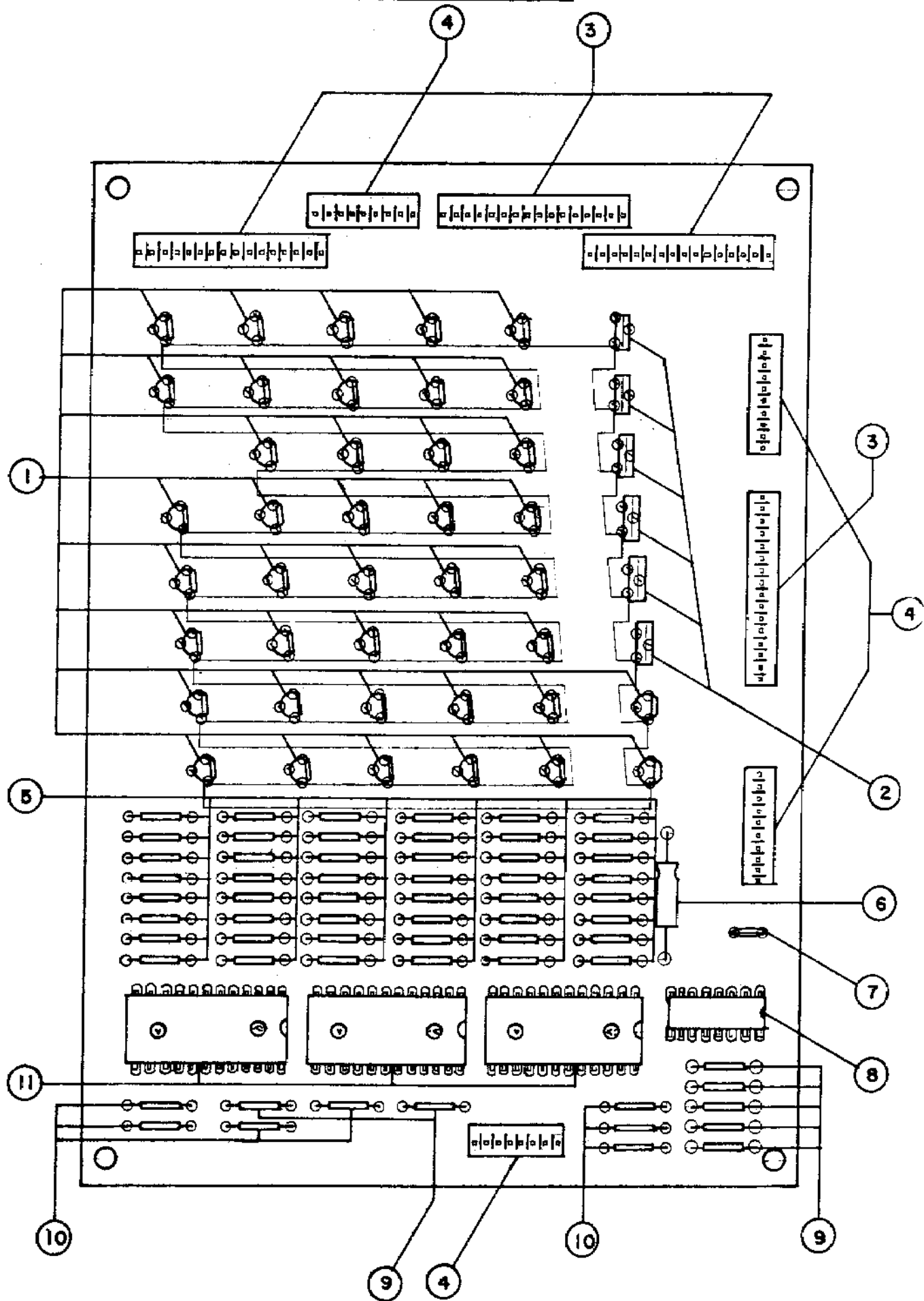
<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	10-00015A	SHOOTER KNOB-SHAFT ASSEM.
2	13-00004A	STEEL WASHER
3	06-30002A	BARREL SPRING
4	03-40010N	BALL SHOOTER HOUSING
5	03-00001C	SHOOTER CASTING
6	04-00036A	SHOOTER HOLD DOWN BRK'T
7	11-10003N	NO.8X1 1/4 RR.HD.S.M.S. TYPE "A"
8	06-30003A	SHOOTER SPRING
9	17-10002A	"E" RING
10	08-30002N	WHITE SHOOTER TIP

POWER SUPPLY ASSEM.



ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION
1	21-30001N	POWER TRANSFORMER	14	25-00003N	25 AMP 200P.V. BRIDGE
2	24-20002N	1mf 200V MYLAR CAP	15	23-50001N	5 OHM 10W RESISTOR
3	30-10001N	6WAY FUSE HOLDER	16	23-40002N	700 OHM 5W RESISTOR
4	08-60003A	FUSE BLOCK COVER	17	32-00001A	HEAT SINK
5	20-10007N	VOLTAGE CONVERTOR	18	26-50001N	VOLTAGE REGULATOR
6	01-90001A	POWER SUPPLY BOARD	19	26-50002N	OVER VOLTAGE PROTECTOR
7	24-10005N	11000mf 25V LYTIC	20	24-30002N	10mf 16V TANTALUM CAP
8	21-70001N	FILTER	21	25-00001N	1N 4004 DIODE
9	25-90001N	130 VAC VARISTOR	22	23-20002N	100 OHM 1W RESISTOR
10	08-60004A	FILTER COVER	23	30-00003N	3A.125V SLOW BLOW FUSE
11	29-30001N	5POS. TERMINAL STRIP	24	30-00002N	5A.125V 3AG FUSE
12	23-40001N	.47 OHM 5W RESISTOR	25	30-00004N	10A.125V 3AG FUSE
13	04-20001A	BRIDGE MTG. BRK'T			

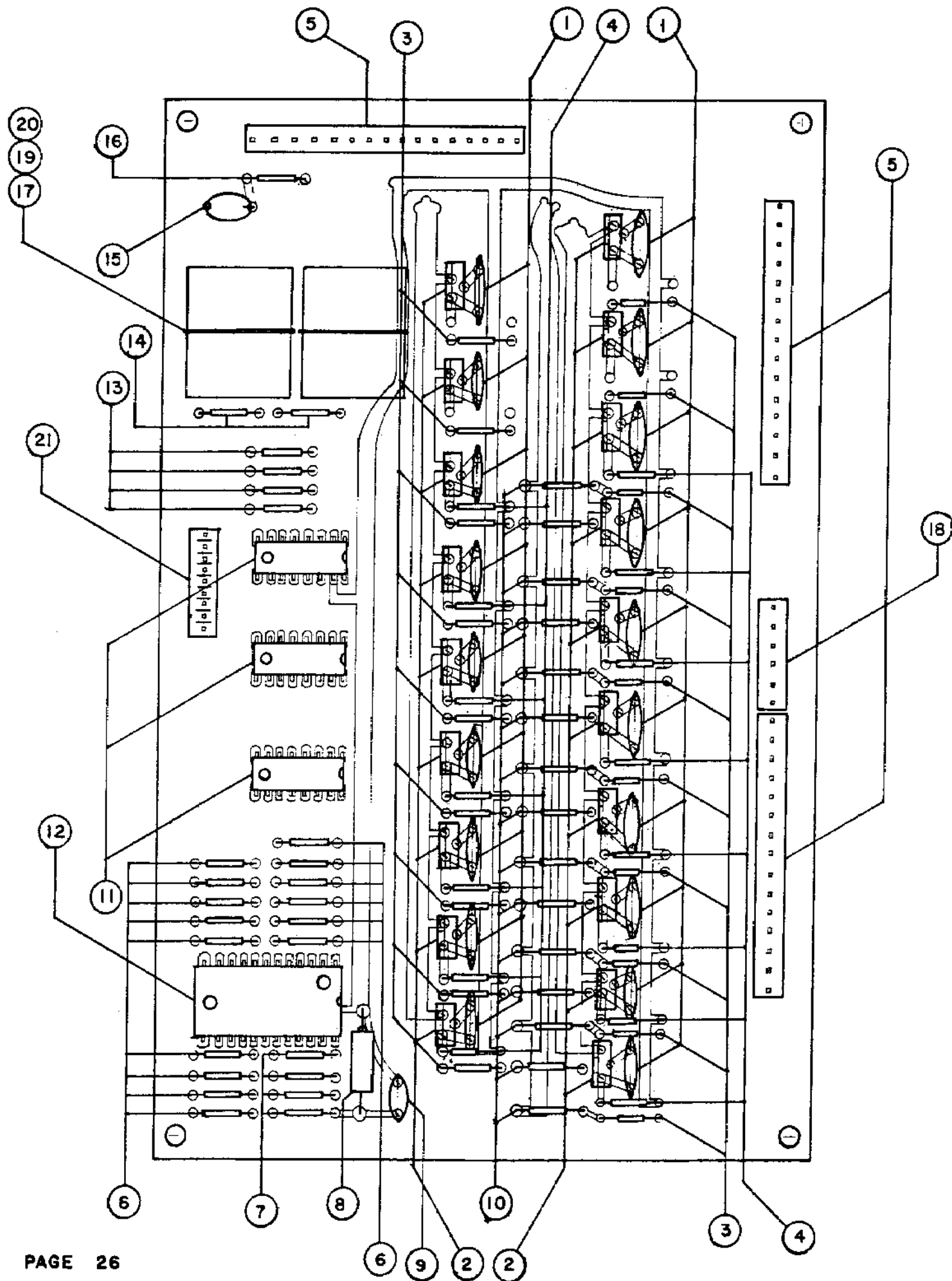
LDU-I-LAMP DRIVER



LDU-1-LAMP DRIVER

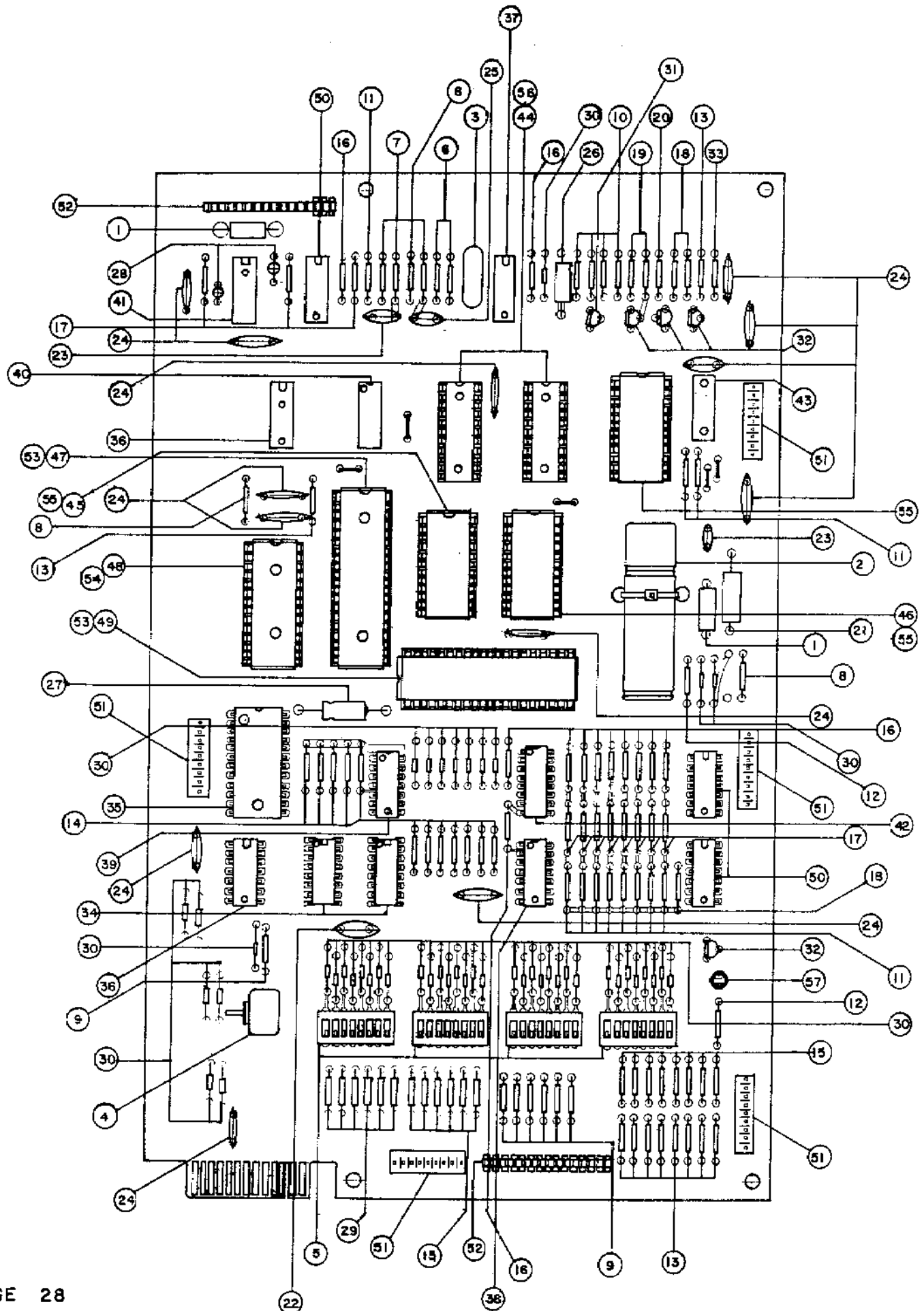
<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	25-20001N	2N5060 S C R
2	25-20002N	MCR 106-1 S C R
3	29-00002N	15 PIN C I S HEADER
4	29-00001N	9 PIN C I S HEADER
5	23-00004N	2.2K ohm $\pm$ 5 % 1/4 WATT RESISTOR
6	24-10001N	10mfd,16 VOLT AXIAL LYTIC CAP
7	24-00001N	.01mfd $\pm$ 10% 50VOLT CERAMIC DISC CAP
8	26-10002N	4050 HEX BUFFER
9	23-00009N	2.2M ohm $\pm$ 5 % 1/4 WATT RESISTOR
10	23-00007N	22K ohm $\pm$ 5 % 1/4 WATT RESISTOR
11	26-10001N	4514 DECODER

SDU-1- SOLENOID DRIVER



SDU - I — SOLENOID DRIVER

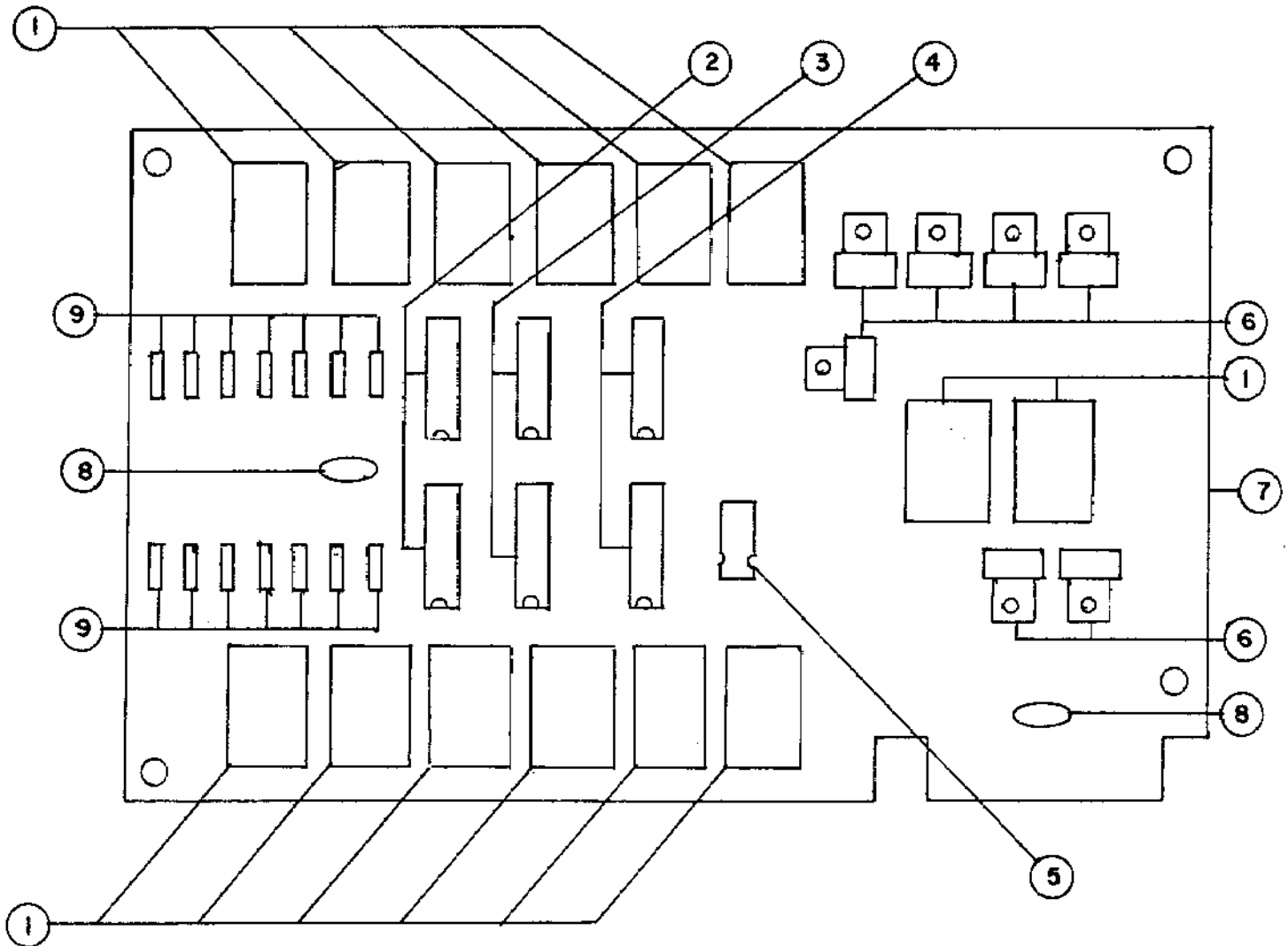
<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	24-00002N	.002mfd. $\pm 10\%$, 1K V. CERAMIC DISC CAP
2	25-10002N	RCA 121 OR SE 9301 TRANSISTOR
3	25-00001N	1N4004 DIODE
4	23-00002N	330 ohm $\pm 5\%$, 1/4 WATT RESISTOR
5	29-00004N	15 PIN HEADER
6	23-00003N	1.2K ohm $\pm 5\%$, 1/4 WATT RESISTOR
7	23-00008N	100K ohm $\pm 5\%$, 1/4 WATT RESISTOR
8	24-10001N	10mfd. 16 VOLT AXIAL LYTIC CAP
9	24-00001N	.01mfd. $\pm 10\%$, 50 VOLT CERAMIC DISC CAP
10	23-10001N	470 ohm $\pm 5\%$, 1/2 WATT RESISTOR
11	26-00005N	CA3081 OR ULN2081 I.C.
12	26-00004N	74154 INTEGRATED CIRCUIT
13	23-00005N	4.7K ohm $\pm 5\%$, 1/4 WATT RESISTOR
14	SEE 3	
15	24-20001N	.1mfd. $\pm 10\%$, 100 VOLT MYLAR CAP
16	23-00006N	100 ohm $\pm 5\%$, 1/4 WATT RESISTOR
17	21-00001N	4 PDT 24 VDC RELAY
18	29-00003N	6 PIN HEADER
19	29-50001N	RELAY SOCKET
20	06-90001N	RELAY HOLD DOWN SPRING
21	29-00001N	9 PIN HEADER

MPU-MICRO PROCESSOR UNIT

MPU-MICRO PROCESSOR UNIT

ITEM	PART NO	DESCRIPTION	ITEM	PART NO	DESCRIPTION
1	21-40002N	RF CHOKE	31	25-10003N	2N 4403 TRANS.
2	21-90002N	BATTERY (3.6V Ni CAD)	32	25-10004N	2N 3904 TRANS.
3	21-90001N	CRYSTAL (2.4576 MHZ)	33	25-30001N	1N 958B ZENER DIODE
4	22-10002N	PUSHBUTTON SWITCH	34	26-00002N	74LS379 I.C.
5	22-50001N	DIP SLIDE SWITCH	35	26-00004N	74LS4 I.C.
6	23-00002N	330 OHM 1/4 W. RES.	36	26-00006N	74LS00 I.C.
7	23-00004N	2.2K OHM "	37	26-00007N	74LS04 I.C.
8	23-00005N	4.7K OHM "	38	26-00008N	74LS6 I.C.
9	23-00006N	100 OHM "	39	26-00009N	74LS7 I.C.
10	23-00007N	22K OHM "	40	26-00010N	74LS32 I.C.
11	23-00008N	100K OHM "	41	26-00011N	74LS123 I.C.
12	23-00010N	270 OHM "	42	26-00012N	74LS138 I.C.
13	23-00011N	1K OHM "	43	26-10004N	74C32 I.C.
14	23-00012N	1.5K OHM "	44	26-30001N	HM 6551-9 CMOS I.C.
15	23-00013N	3.3K OHM "	45	26-30003N	MODEL 110 "A" ROM
16	23-00015N	10K OHM "	46	26-30004N	MODEL 110 "B" ROM
17	23-00016N	220K OHM "	47	26-40001N	Z-80 CPU
18	23-00019N	8.2K OHM "	48	26-40002N	Z-80 CTU
19	23-00020N	47K OHM "	49	26-40003N	8255 PIA
20	23-00021N	120K OHM "	50	26-60001N	LM 339 I.C.
21	23-20002N	100 OHM 1 W. RES.	51	29-00001N	9 PIN HEADER
22	24-00001N	.01 MFD 50V CER. CAP	52	29-00002N	15 PIN HEADER
23	24-00003N	.001 MFD 100V CER. CAP	53	29-50002N	40 PIN I.C. SOCKET
24	24-00005N	.1 MFD 25V CER. CAP	54	29-50003N	28 PIN I.C. SOCKET
25	24-00001N	220 PFD 100V CER. CAP	55	29-50004N	24 PIN I.C. SOCKET
26	24-10001N	10 MFD 16V AX. LYTIC CAP	56	29-50005N	22 PIN I.C. SOCKET
27	24-10004N	22 MFD, 16V AX. LYTIC CAP	57	31-10001N	LED
28	24-30001N	1 MFD 35V DIP. TAN. CAP			
29	25-00001N	1N 4004 DIODE			
30	25-00002N	1N 4148 DIODE			

DDU-1 DUAL DISPLAY UNIT



<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	31-2000IN	.5" 7 SEGMENT COMMON ANODE LED DISPLAY
2	26-00003N	2003 TRANSISTOR ARRAY
3	26-0000IN	74LS48 DECODER DRIVER
4	26-00002N	74LS379 QUAD D FLIP-FLOP
5	24-1000IN	10 mfd, 16V. AXIAL LYTIC CAP
6	25-1000IN	MPS- U45 TRANSISTOR
7	20-00002B	DDU-1 P. C. BOARD
8	24-0000IN	.01 mfd. $\pm 10\%$, 50V. CERAMIC DISC CAP
9	23-0000IN	22 OHM $\pm 10\%$, $\frac{1}{4}$ WATT RESISTOR

DIAGNOSTIC TEST AND ACCOUNTING PROCEDURE

GENERAL DESCRIPTION

The Game Plan Model #110 pinball game is equipped with a computer controlled diagnostic test program and accounting system. The diagnostic program checks all feature lamps, score displays, solenoids, and playfield and cabinet switches. The accounting program monitors the three replay level scores, high score to date, credits, total plays, total replays, number of times "high score to date" beaten, and coin through each coin chute. Access is gained to the diagnostic test and accounting system by depressing the test switch located inside the cash door directly above the cashbox.

NOTE: During the diagnostic and accounting checks, whenever the score display is on, the last digit (units digit) in each player score display will be 0. This is because during game play, these digits are always 0.

DIAGNOSTIC TEST AND ACCOUNTING INSTRUCTIONS

NOTE: The game must be in the game over mode.

1. Depress the test switch one time. The score display will extinguish and all feature lamps will flash. Check for burned out lamps at this time.
2. Depress the test switch again to start the score display checkout. All digits except the units digits will count through 0-9.
3. Depress the test switch again to begin the solenoid checkout. Each solenoid will actuate individually and show its number on the score displays.
4. Depress the test switch again to start the switch checkout. Any closed switch will show its number on the score display.

NOTE: The ball should not be in the outhole during this test.

Step #4 completes the diagnostic section. Step #5 begins the accounting program. Any information displayed during the accounting check may be reset to 000000 by pressing the red momentary pushbutton switch (S33) on the MPC board.

5. Depress the test switch again. The first replay level will be displayed on all four score displays and 05 will show on the match display. The replay level may be increased 2,000 points at a time for each depression of the credit switch.

6. Depressing the test switch again will display the second replay level and 06 in the match window. This level may be adjusted by pressing the credit switch.
7. Depressing the test switch again will display the third replay level and 07 will show in the match window. This level may be adjusted by pressing the credit switch.
8. Depressing the test switch again will display the high score to date and show 08 in the match window. This level may be adjusted by pressing the credit switch.
9. Depressing the test switch again will display the current credits stored in the game and show 09 in the match window. Example: 000120 = 12 credits. Remember the units digits on the score displays always show 0.
10. Depressing the test switch again will display the total plays and show 10 in the match window. To determine the number of total plays subtract 10,000 from the number displayed. Example: 010250 = 25 total plays.
11. Depressing the test switch again will display the total replays and show 11 in the match window. To determine the number of total replays subtract 10,000 from the number displayed. Example: 010450 = 45 replays.
12. Depressing the test switch again will display the total number of times the high score to date is beaten and 12 will show in the match window. Example: 000080 = 8 times.
13. Depressing the test switch again will display the total coins dropped through coin chute #1 and show 13 in the match window. To determine the total number of coins dropped through chute #1, subtract 10,000 from the number displayed. Example: 011140 = 114 coins.
14. Depressing the test switch again will display the total coins dropped through coin chute #2 and show 14 in the match window. To determine the total number of coins dropped through chute #2, subtract 10,000 from the number displayed. Example: 010000 = 0 coins.
15. Depressing the test switch again will display the total coins dropped through coin chute #3 and show 15 in the match window. To determine the total number of coins dropped through chute #3, subtract 10,000 from the number displayed. Example: 013650 = 365 coins.
16. Depressing the test switch one more time will return the game to game over and the game is now ready for play.

SWITCH IDENTIFICATION

In the switch checkout section of the diagnostic routine the number of closed switch is shown in each display. One of the Chuck-A-Luck switches is always closed. Closing any other switch overrides the closed Chuck-A-Luck switch and it's number is displayed. The following list identifies each switch by number:

SWITCH FUNCTION

Diagnostic and Accounting	260
1000 and Advance	180
Advance and Change	200
1000 Rollover	250
Left Spinner	230
Right Spinner	170
'B' 500 and Spin	120
'A' 500 and Spin	240
'C' 500 and Spin	100
Left Thumper	210
Right Thumper	220
Left Slingshot	150
Right Slingshot	130
Left and Right Target	090
Extra when Lit	160
Special when Lit	140
Ball Return	110
Coin Chute 1	070
Coin Chute 2	050
Coin Chute 3	060
Tilt	080
Slam	030
Credit	020
Accounting Reset	010

CHUCK-A-LUCK OUTPUT SWITCHES

Double Bonus	320
Lites Extra	310
500	280
5000	290
1000	270

SOLENOID AND SWITCH IDENTIFICATION

SOLENOID IDENTIFICATION

The solenoid checkout section of the diagnostic routine actuates each solenoid on the playfield. The solenoid number is shown in each display as the solenoid is being actuated.

The following list identifies each solenoid by number:

Ball Return	010
Knocker	020
Chime D	030
Chime C	040
Chime B	050
Chime A	060
"B" Kickout hole	070
"A" Kickout hole	080
"C" Kickout hole	090
Left Thumper	100
Right Thumper	110
Left Slingshot	120
Right Slingshot	130
Flipper Relay Enable	140
Feature Lamps ON	150
Feature Lamps OFF	160

MPU SET UP SWITCHES

The MPU P.C. Board has 32 set up switches that allow play to be customized to the location. The switches are contained in four switch packs numbered S1-8, S9-16, S17-24, and S25-32. Switch selectable options are credits per coin, tune option, maximum credits allowed, 3 or 5 balls per game option, replay or free ball award, match feature, and credits for exceeding high score.

CREDITS/COIN ADJUSTMENT

S9 through S12 select the credits per coin for coin chute 2. Switch setting and resultant credits per coin are as follows:

S12	S11	S10	S9	CREDITS/COIN
OFF	OFF	OFF	OFF	Same as Coin Chute #1 Settings
OFF	OFF	OFF	ON	1/1 Coin
OFF	OFF	ON	OFF	2/1 Coin
OFF	OFF	ON	ON	3/1 Coin
OFF	ON	OFF	OFF	4/1 Coin
OFF	ON	OFF	ON	5/1 Coin
OFF	ON	ON	OFF	6/1 Coin
OFF	ON	ON	ON	7/1 Coin
ON	OFF	OFF	OFF	8/1 Coin
ON	OFF	OFF	ON	9/1 Coin
ON	OFF	ON	OFF	10/1 Coin
ON	OFF	ON	ON	11/1 Coin
ON	ON	OFF	OFF	12/1 Coin
ON	ON	OFF	ON	13/1 Coin
ON	ON	ON	OFF	14/1 Coin
ON	ON	ON	ON	15/1 Coin

S1 through S5 select the credits per coin for coin chute 1. S17 through S21 select the credits per coin for coin chute 3. Switch settings and resultant credits per coin are identical for coin chutes 1 and 3 and are as follows:

CREDITS/COIN ADJUSTMENTS

COIN CHUTE	SWITCHES					CREDITS/COIN
#1 or #3	5	4	3	2	1	
	21	20	19	18	17	
	OFF	OFF	OFF	OFF	OFF	3/2COINS
	OFF	OFF	OFF	OFF	ON	3/2COINS
	OFF	OFF	OFF	ON	OFF	1/COIN
	OFF	OFF	OFF	ON	ON	1/2COINS
	OFF	OFF	ON	OFF	OFF	2/COIN
	OFF	OFF	ON	OFF	ON	2/2 COINS
	OFF	OFF	ON	ON	OFF	3/COIN
	OFF	OFF	ON	ON	ON	3/2COINS
	OFF	ON	OFF	OFF	OFF	4/COIN
	OFF	ON	OFF	OFF	ON	4/2COINS
	OFF	ON	OFF	ON	OFF	5/COIN
	OFF	ON	OFF	ON	ON	5/2COINS
	OFF	ON	ON	OFF	OFF	6/COIN
	OFF	ON	ON	OFF	ON	6/2COIN
	OFF	ON	ON	ON	OFF	7/COIN
	OFF	ON	ON	ON	ON	7/2COINS
	ON	OFF	OFF	OFF	OFF	8 /COIN
	ON	OFF	OFF	OFF	ON	8/2CCINS
	ON	OFF	OFF	ON	OFF	9/COIN
	ON	OFF	OFF	ON	ON	9/2CCINS
	ON	OFF	ON	OFF	OFF	10/COIN
	ON	OFF	ON	ON	ON	10/2COIN
	ON	OFF	ON	ON	OFF	11/COIN
	ON	OFF	ON	OFF	ON	11/2COINS
	ON	ON	OFF	OFF	OFF	12/COIN
	ON	ON	OFF	ON	ON	12/2COIN
	ON	ON	OFF	ON	OFF	13/COIN
	ON	ON	OFF	OFF	ON	13/2COIN
	ON	ON	ON	OFF	OFF	14/COIN
	ON	ON	ON	ON	ON	14/2COINS
	ON	ON	ON	ON	OFF	15/COIN
	ON	ON	ON	ON	ON	15/2COINS

TUNE OPTION

The game is designed to play a tune for each credit incremented from the coin switch, start of game, and power up/game over. The first two tunes are selectable by S16, however the power up/game over tune is always enabled. When the tune switch is off, the coin and start of game tunes are replaced by a single chime.

TUNES	S16
ON	ON
OFF	OFF

MAXIMUM CREDITS

The maximum number of credits that will be accepted by the game either through the coin switch or replay award are controlled by S25, 26, and 27. Switch settings are as follows:

MAXIMUM CREDITS	SWITCHES		
	27	26	25
5	OFF	OFF	OFF
10	OFF	OFF	ON
15	OFF	ON	OFF
20	OFF	ON	ON
25	ON	OFF	OFF
30	ON	OFF	ON
35	ON	ON	OFF
40	ON	ON	ON

BALLS PER GAME OPTION

#BALLS	PER GAME	S28
5		ON
3		OFF

REPLAY OR FREE BALL AWARD

The game is designed to award either a replay or free ball at three selectable score levels or through specials gained during the play of the game.

AWARD	S29
REPLAY	ON
EXTRA BALL	OFF

MATCH FEATURE:

When the match feature is ON, a random number appears in the Ball in Play display at game over. A replay is awarded if the number matches the tens digit in a player's score.

MATCH	S30
ON	ON
OFF	OFF

CREDITS FOR EXCEEDING HIGH SCORE

The game is designed to award replays for beating the previous high score to date.
The winning score becomes the new high score to date.

CREDITS	S32	S31
0	OFF	OFF
1	OFF	ON
2	ON	OFF
3	ON	ON