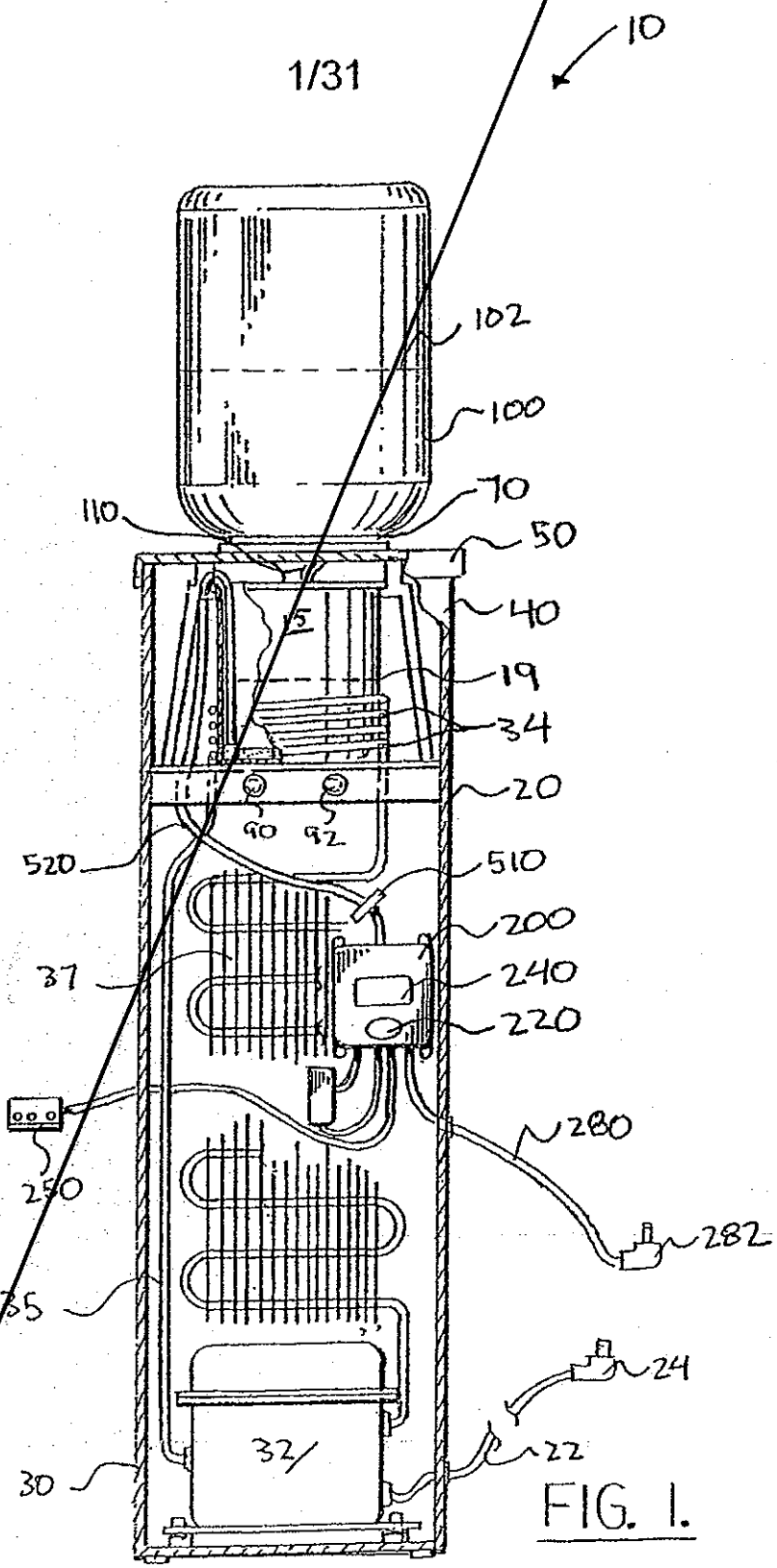

10
102
100
70
110
50
40
5
19
34
20
90
92
520
510
200
37
240
220
280
250
282
35
24
32
22
30

FIG. 1.

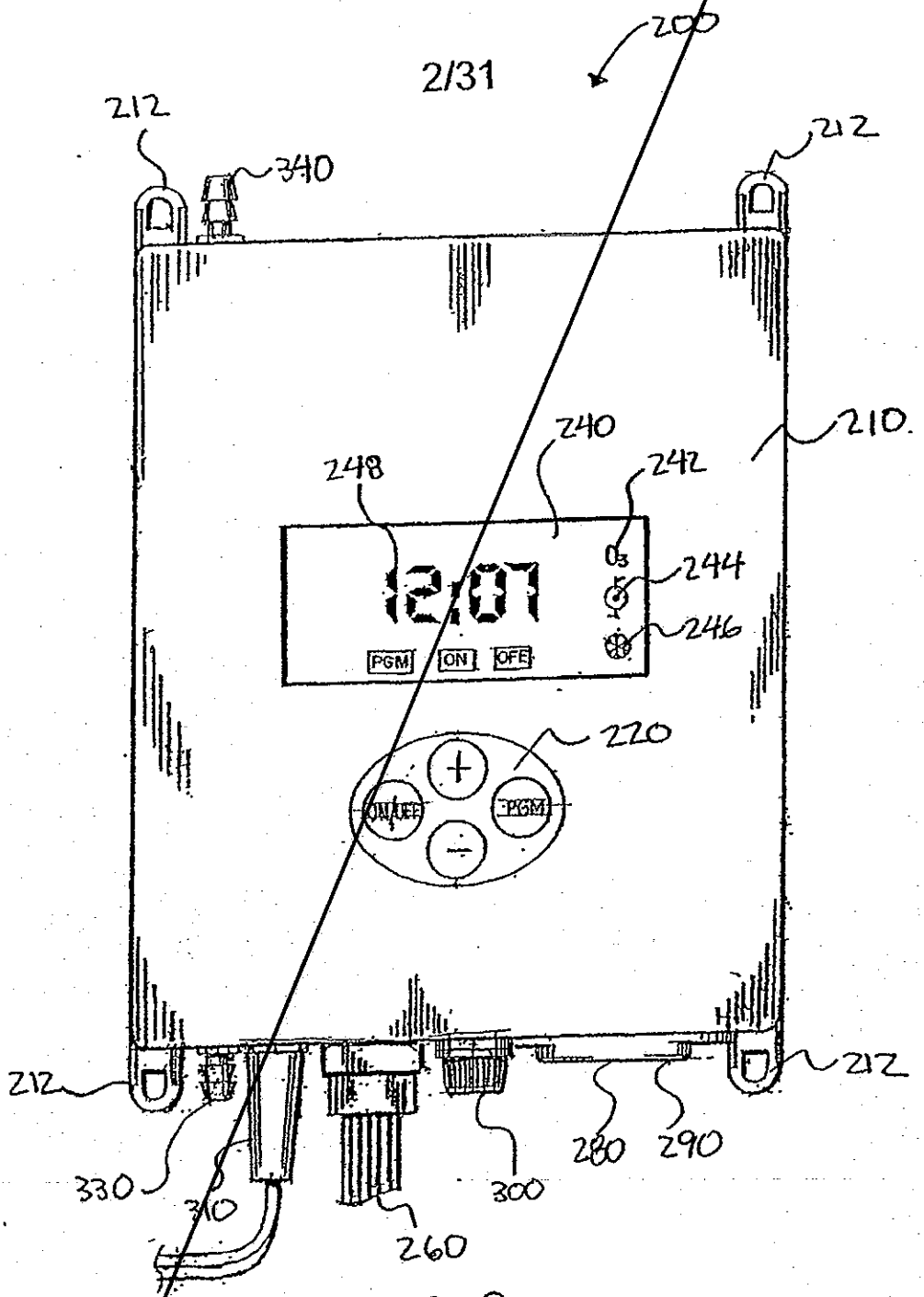

200
212
340
212
210
240
248
242
12:07
PGM
ON
OFF
244
246
220
ON/OFF
PGM
212
212
330
310
260
300
280
290

FIG. 2.

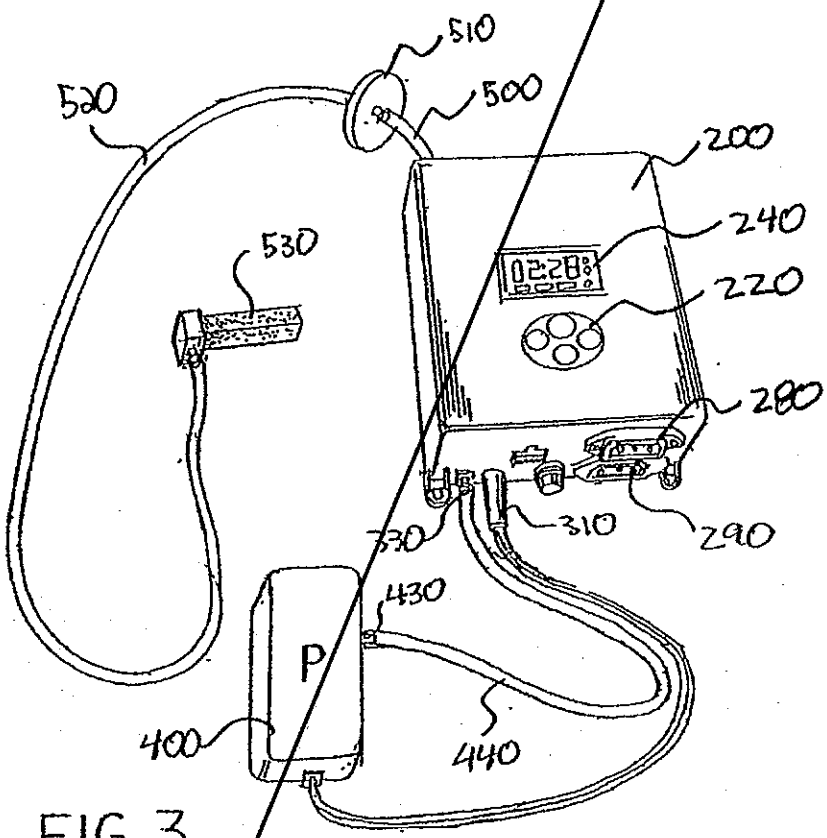

510
500
520
200
240
530
220
280
310
290
430
P
400
440

FIG. 3.

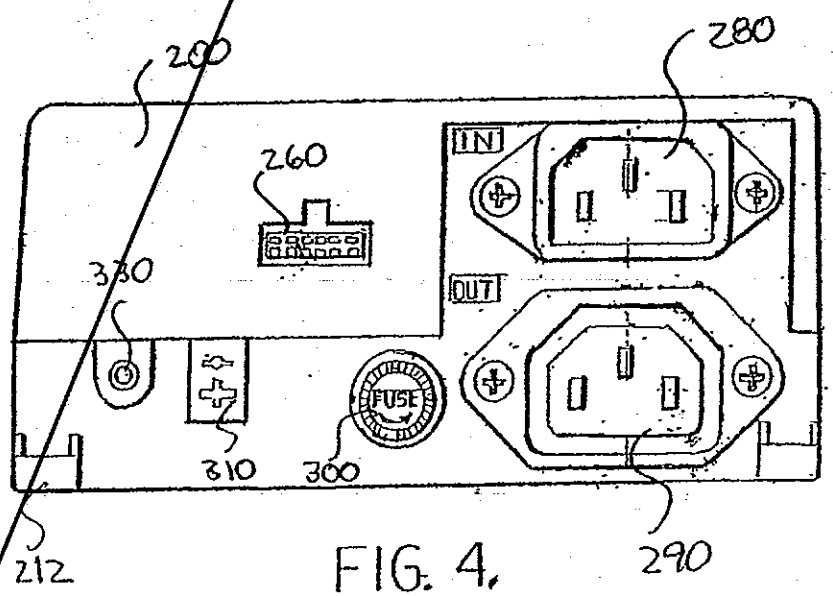

200
280
IN
260
OUT
330
FUSE
310
300
212
290

FIG. 4.

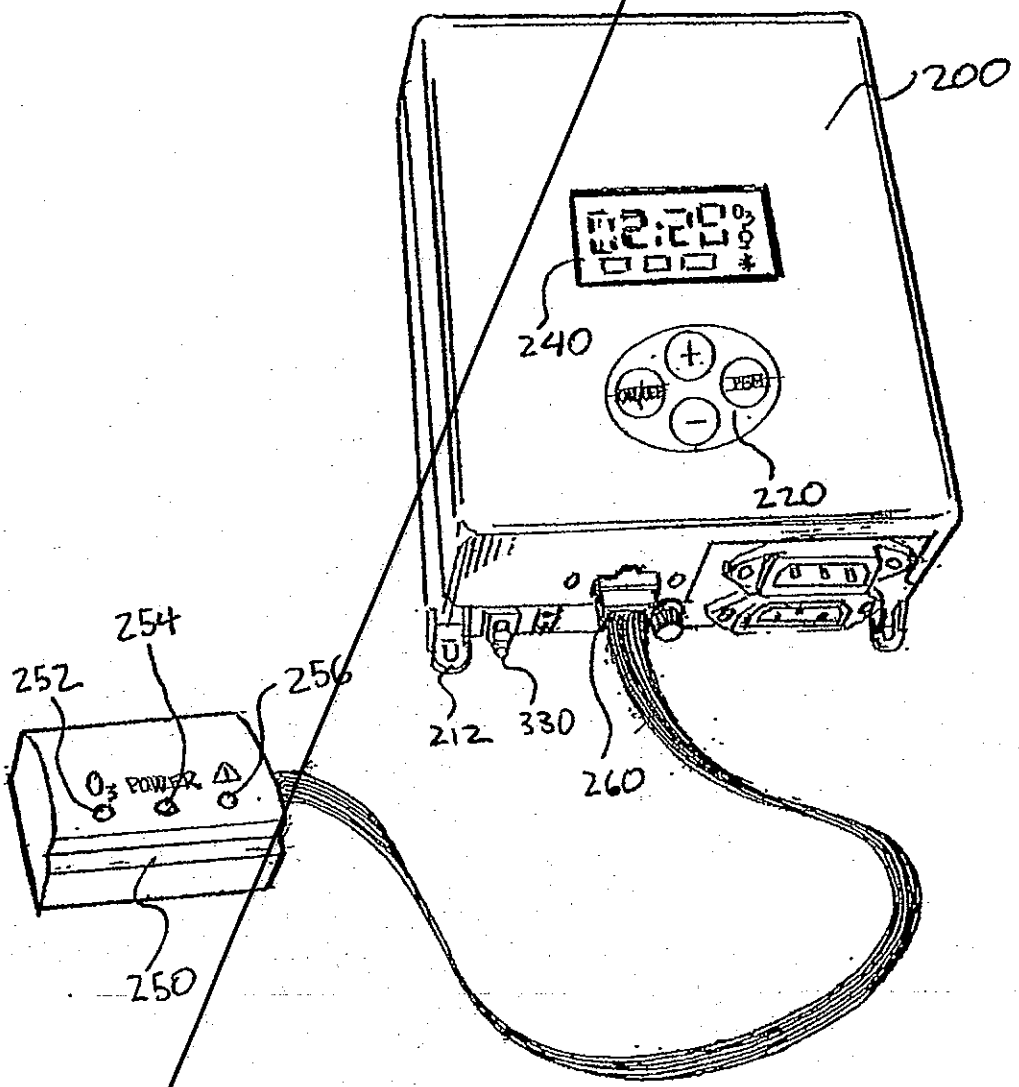


FIG. 5.

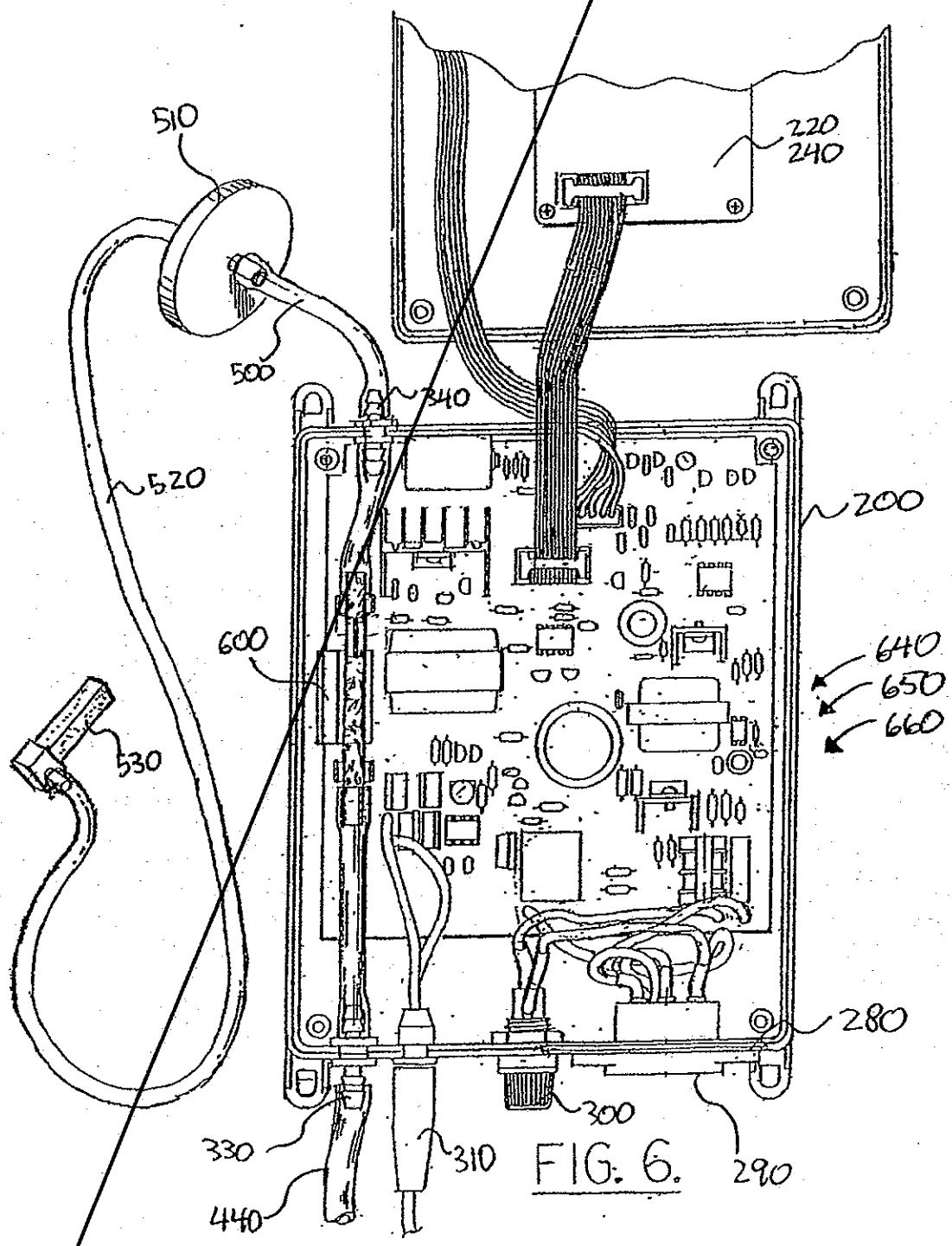

510
220
240
500
340
520
200
600
640
650
660
530
280
300
330
310
290
440

FIG. 6.

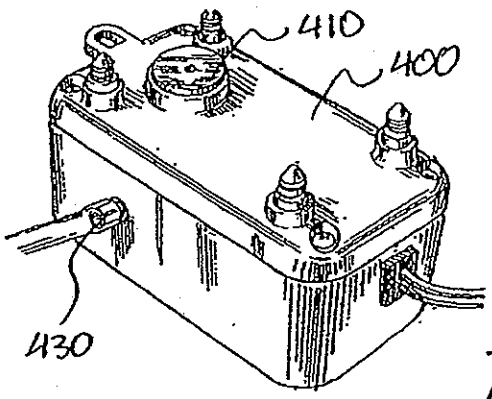


FIG. 7.

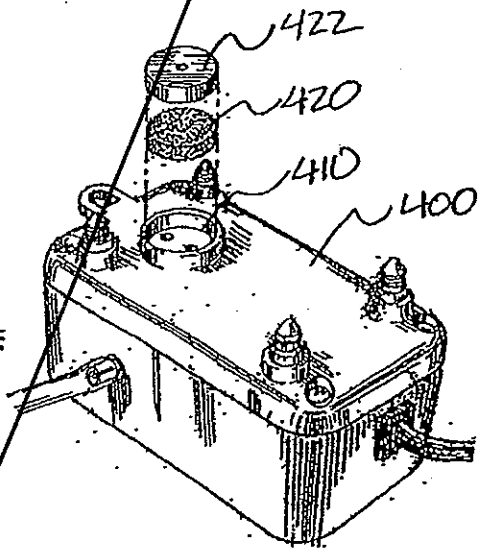


FIG. 8.

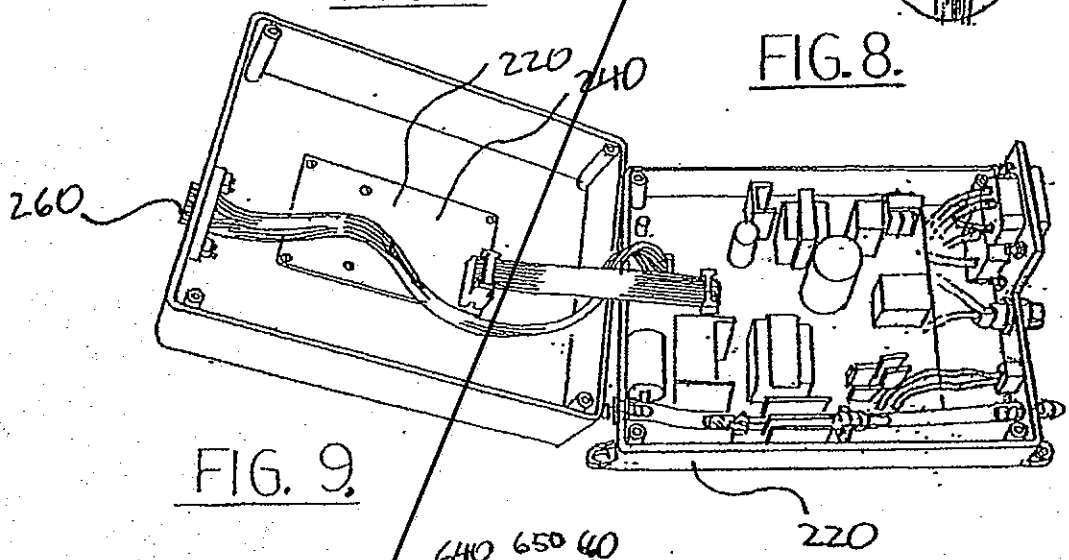


FIG. 9.

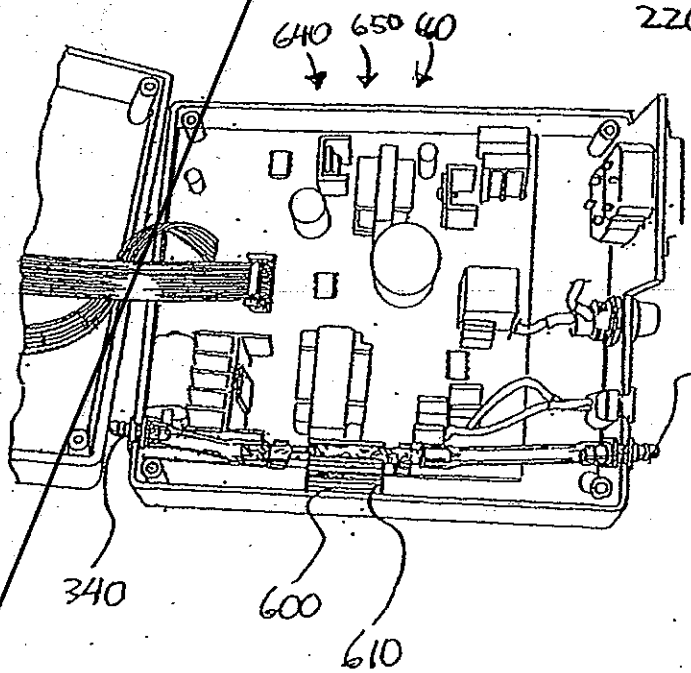


FIG. 10.

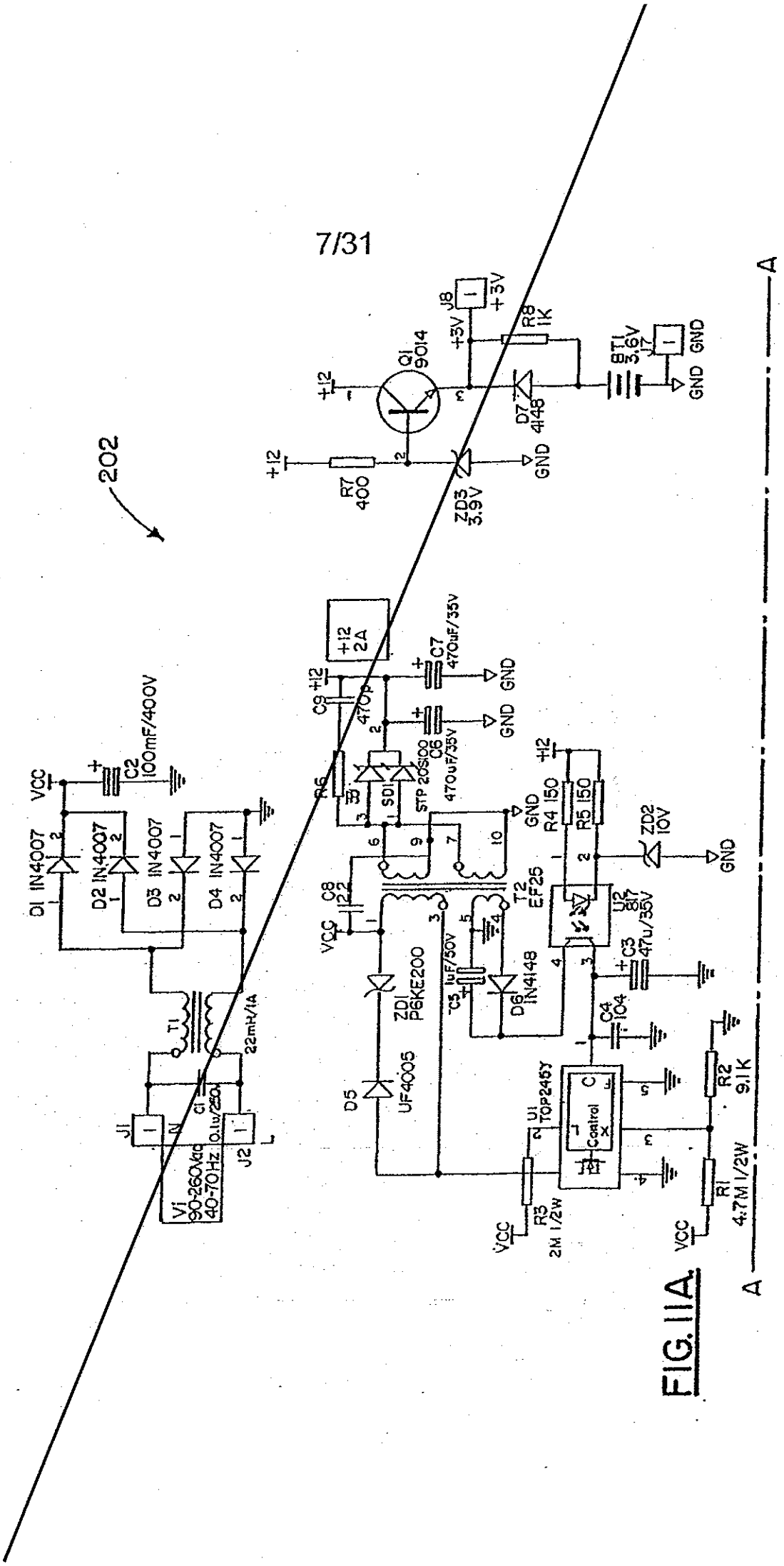

202
VCC
C2 100mF/400V
D1 IN4007
D2 IN4007
D3 IN4007
D4 IN4007
T1
22mH/1A
C1 0.1u/250
J1
J2
VI 90-260Vac 40-70Hz
+12 2A
C7 470uF/35V
C9 470P
C6 470uF/35V
R6 33
SDI STP 20S100
R4 150
R5 150
ZD2 10V
GND
C8 22
T2 EF25
ZD1 P6KE200
D5 UF4005
C5 1uF/50V
D6 IN4148
U2 817
C3 47u/35V
C4 104
U1 TOP245Y
Control
R2 9.1K
R1 4.7M 1/2W
R3 2M 1/2W
Q1 9014
R7 400
ZD3 3.9V
R8 1K
D7 4148
BT1 3.6V
+3V
J8
A
A

FIG. IIA

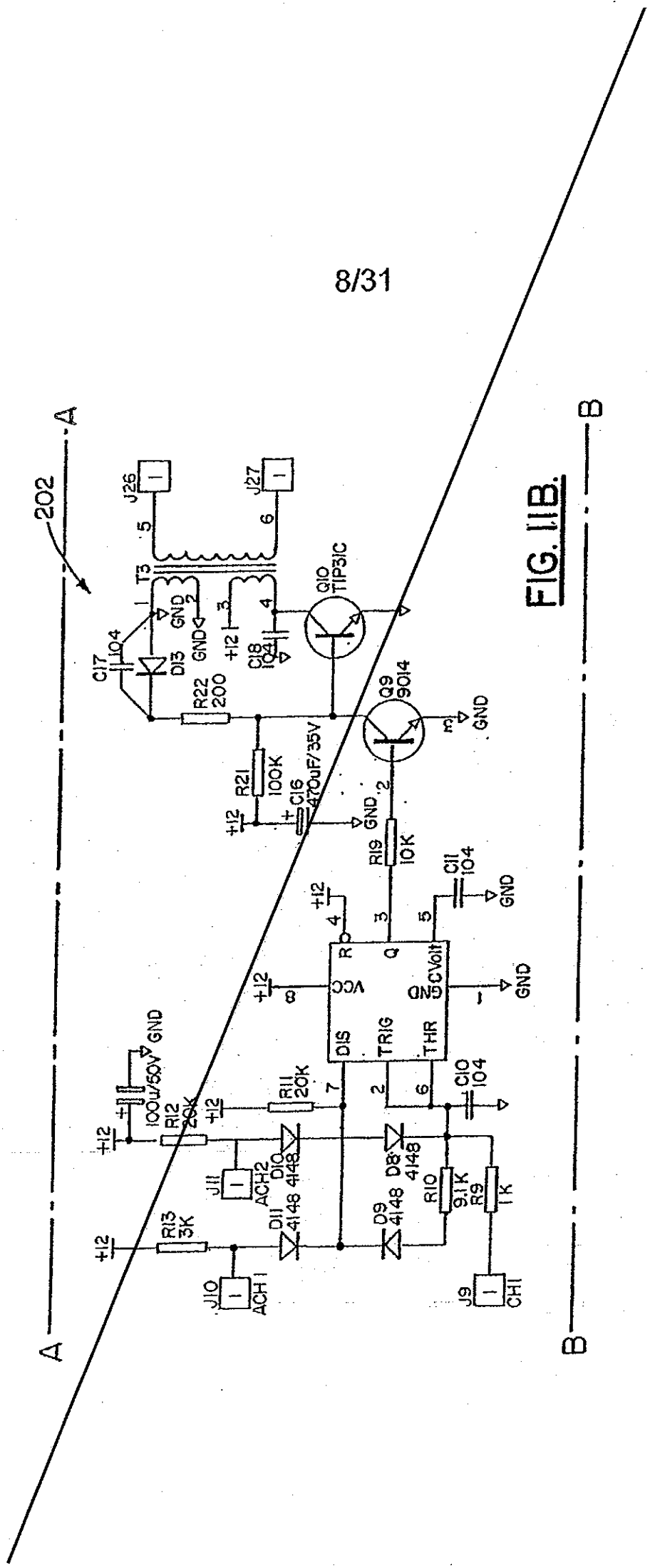

202
A
A
B
B
J26
J27
T3
Q10
TIP31C
C17
104
D13
R22
200
C18
104
Q9
9014
R21
100K
C16
470uF/35V
R19
10K
C11
104
R
Q
VCC
GND
CVolt
DIS
TRIG
THR
C10
104
R11
20K
R12
20K
100u/50V
D10
4148
D11
4148
D8
4148
D9
4148
R10
9.1K
R9
1K
R13
3K
J11
ACH2
J10
ACH1
J9
CH1
+12
GND

FIG. IIB.

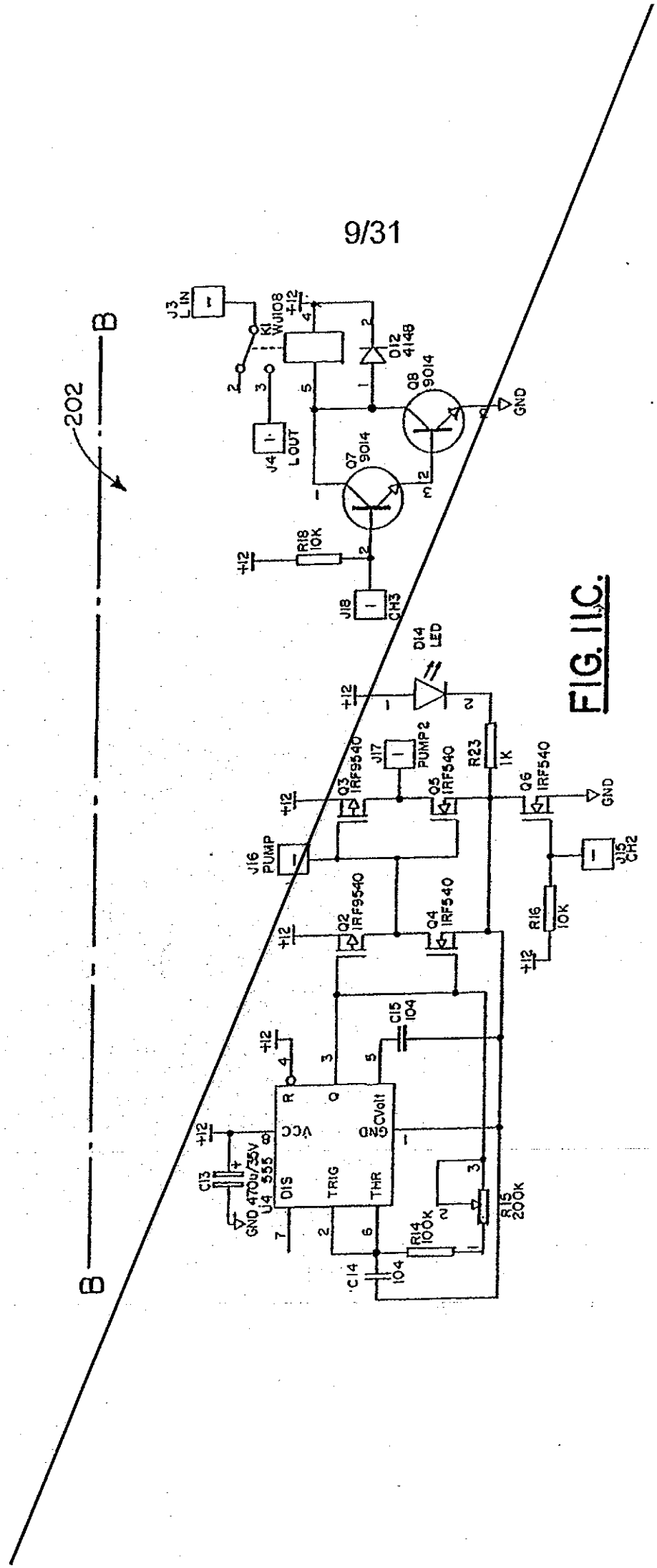

202
B
B
J3 LIN
K1 WJ108
+12
D12 4148
Q8 9014
GND
J4 LOUT
Q7 9014
R18 10K
J18 CH3
D14 LED
J17 PUMP2
R23 1K
Q3 IRF9540
Q5 IRF540
Q6 IRF540
J16 PUMP
J15 CH2
R16 10K
Q2 IRF9540
Q4 IRF540
C15 104
U4 555
R
Q
VCC
CVolt
DIS
TRIG
THR
C13 470u/25V
GND
R14 100K
R15 200K
C14 104

FIG. 11C.

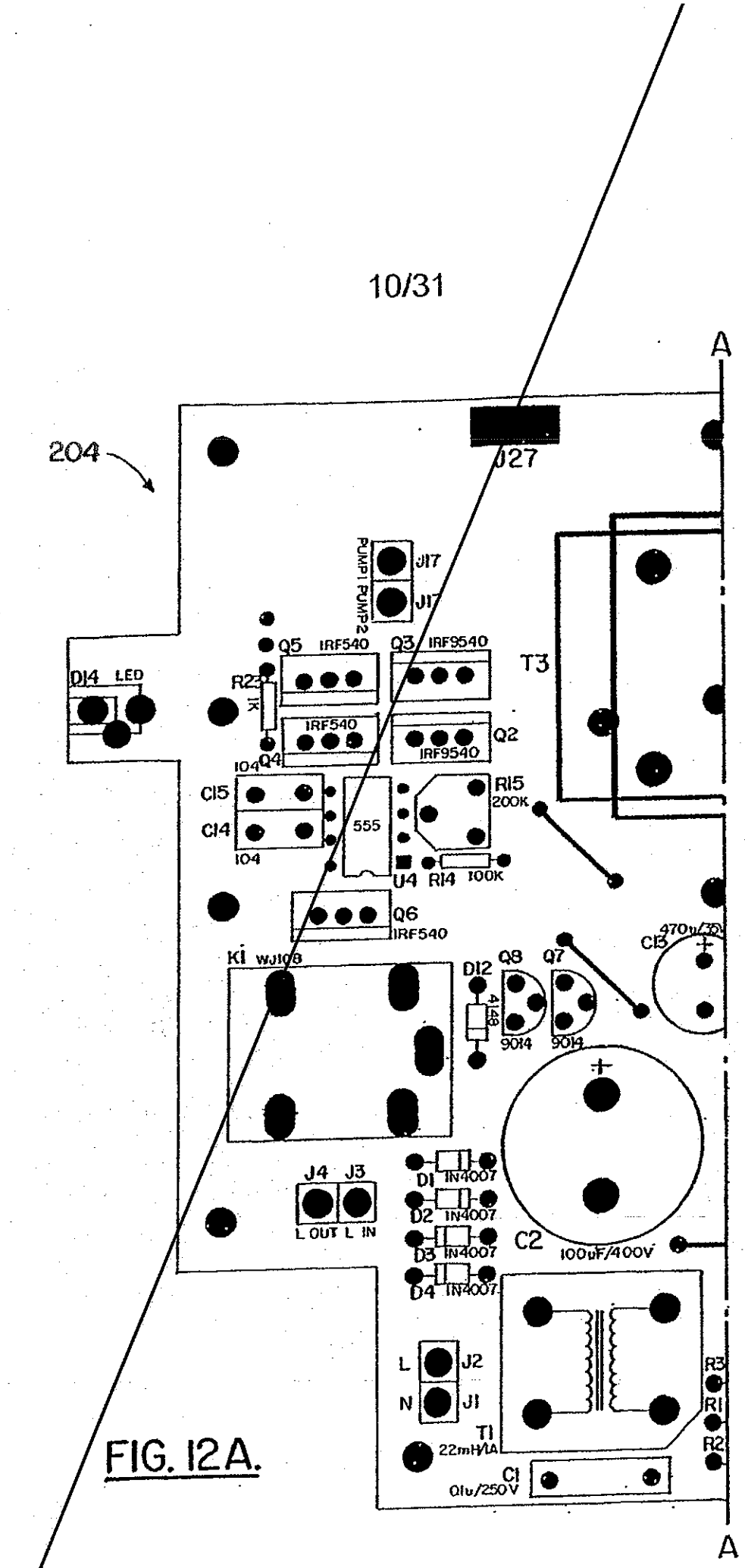

204
A
J27
PUMP1 PUMP2
JI7
JI7
Q5 IRF540
Q3 IRF9540
T3
DI4 LED
R23
1K
IRF540
Q2
IRF9540
IO4
Q4
CI5
CI4
IO4
555
RI5
200K
U4
RI4
100K
Q6
IRF540
KI WJI08
DI2
4148
Q8
9014
Q7
9014
CI3
470u/35
J4 J3
L OUT L IN
DI IN4007
D2 IN4007
D3 IN4007
D4 IN4007
C2
100uF/400V
L
N
J2
JI
TI
22mH/1A
CI
0Iu/250V
R3
RI
R2
A

FIG. 12A.

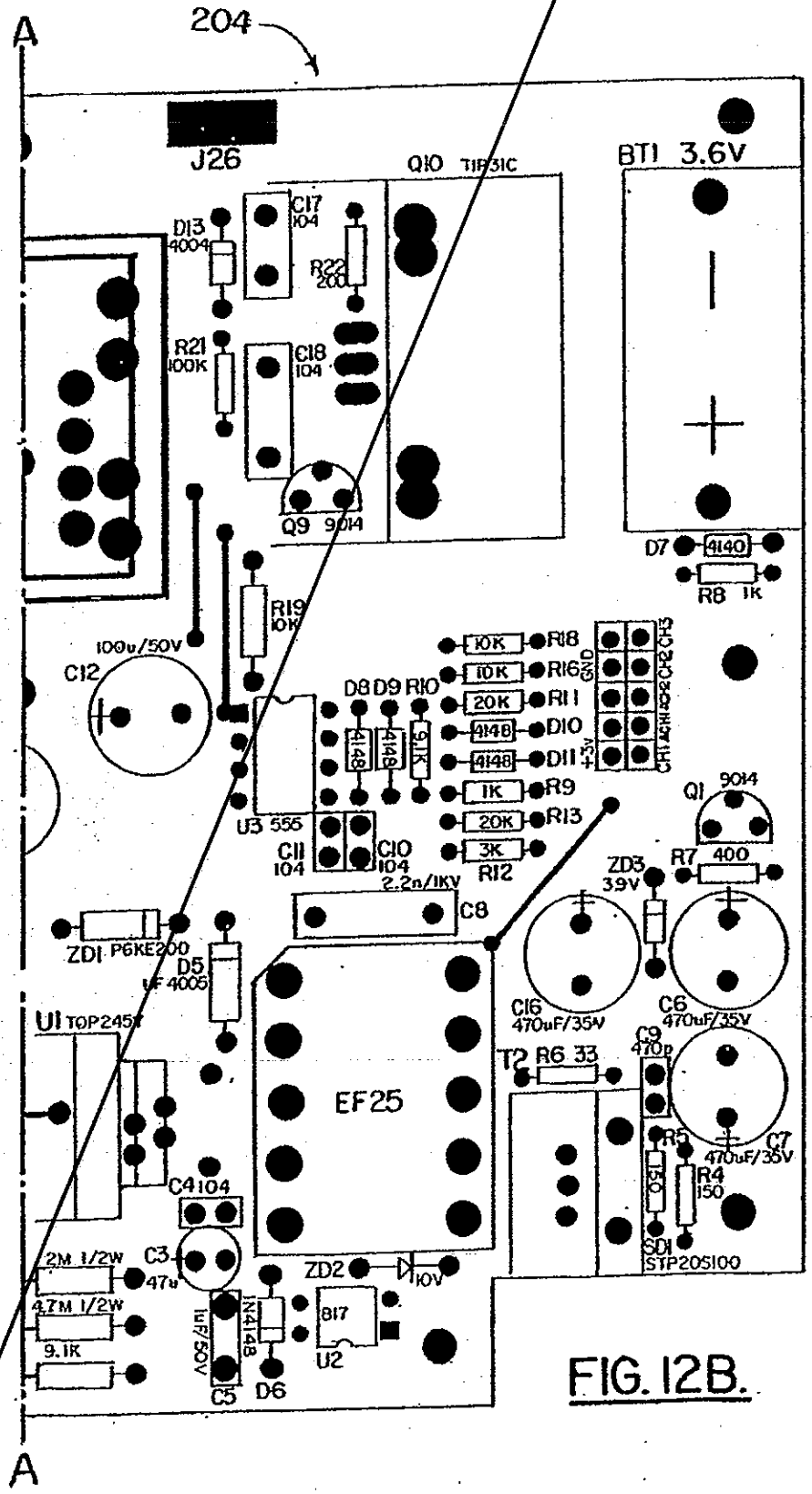

A
204
J26
Q10 TIP31C
BT1 3.6V
D13 4004
CI7 104
R22 200
R21 100K
CI8 104
Q9 9014
D7 4140
R8 1K
R19 10K
100u/50V
C12
D8 D9 R10
4148
4148
9.1K
U3 555
CI1 104
CI0 104 2.2n/1KV
R18 10K
R16 10K
R11 20K
D10 4148
D11 4148
R9 1K
R13 20K
R12 3K
GND
CH1 ACH1 ACH2 CH2 CH3
+5V
Q1 9014
R7 400
ZD3 3.9V
C8
ZD1 P6KE200
D5 UF 4005
U1 TOP245Y
EF25
C16 470uF/35V
C6 470uF/35V
C9 470p
T2 R6 33
R5 150
R4 150
C7 470uF/35V
SD1 STP20S100
C4 104
2M 1/2W
C3 47u
4.7M 1/2W
9.1K
ZD2 10V
1N4148
1uF/50V
C5
D6
817
U2
A

FIG. 12B.

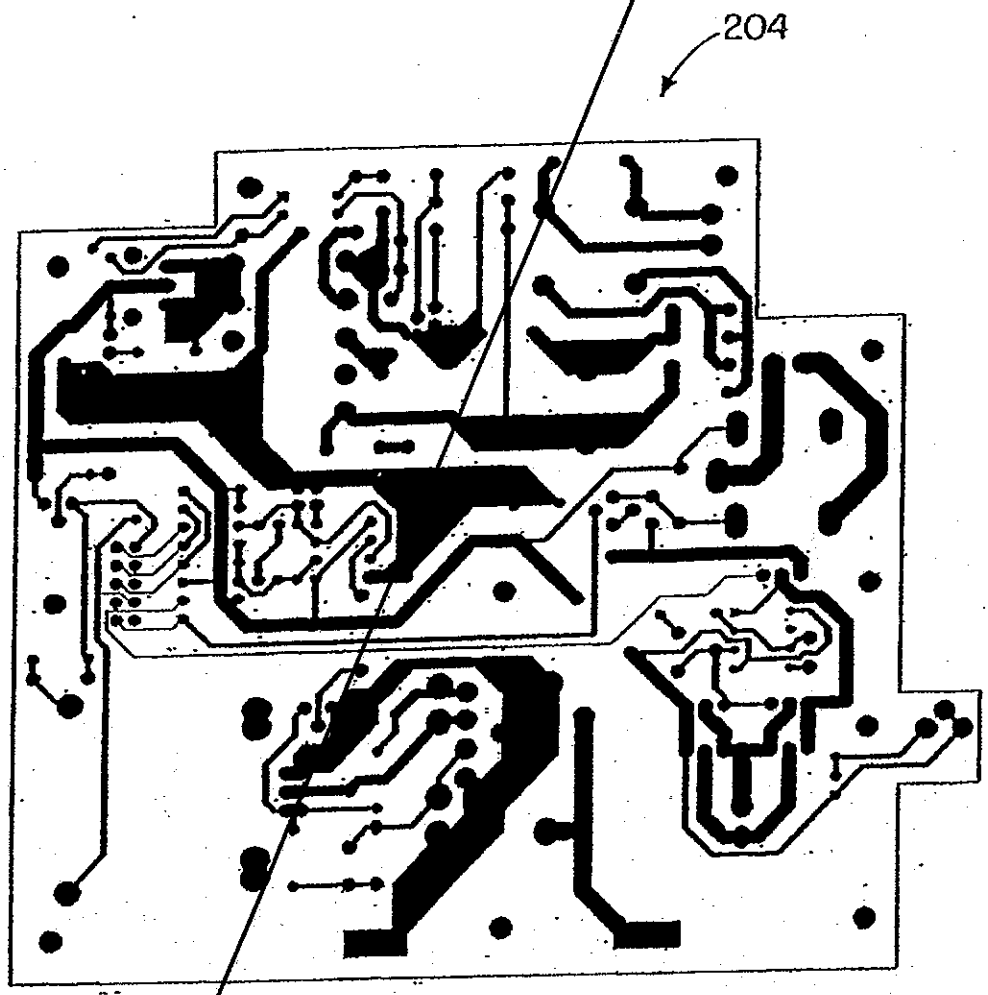


FIG. 13.

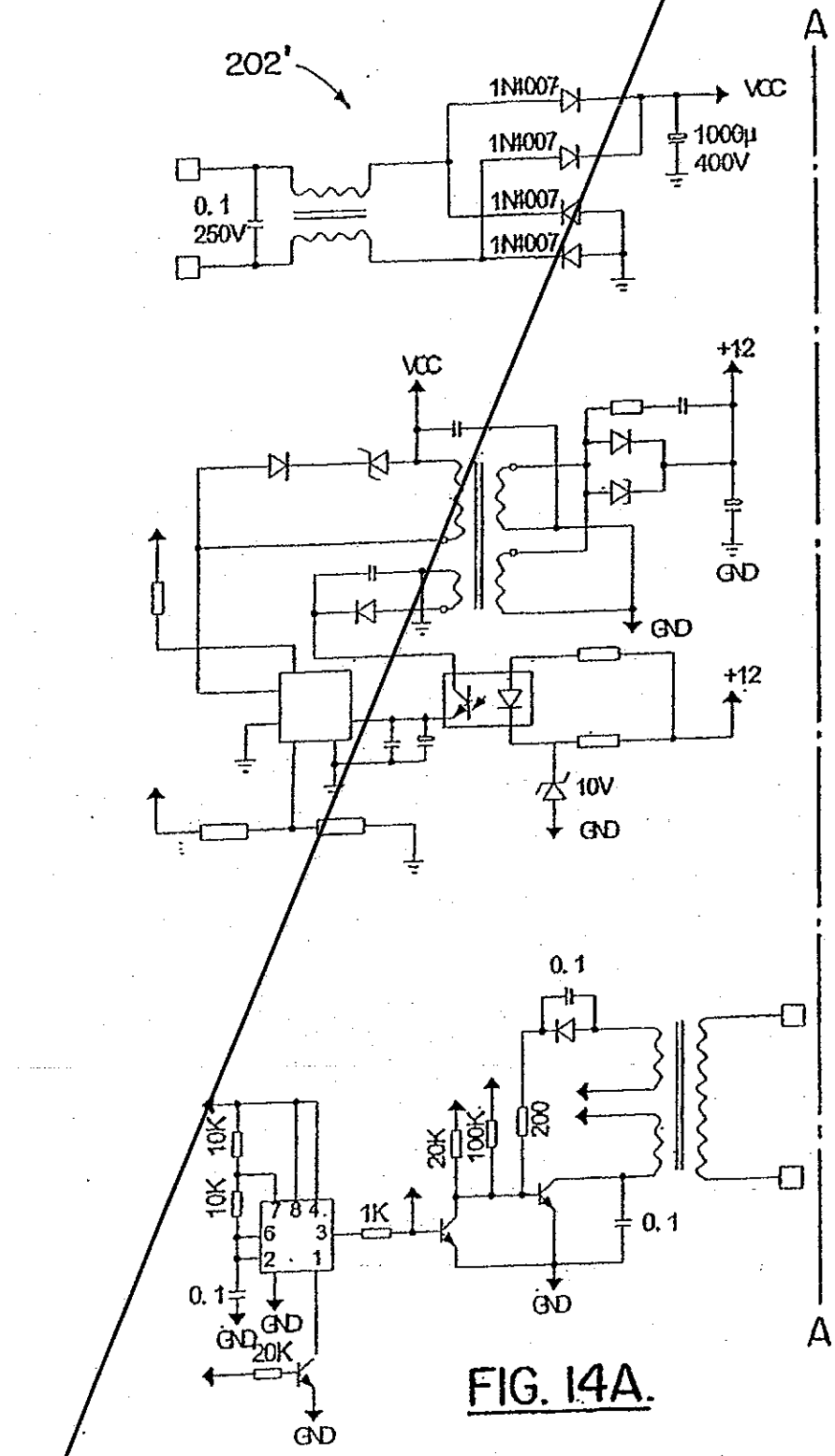

202'
1N4007
1N4007
1N4007
1N4007
VCC
1000µ
400V
0.1
250V
VCC
+12
GND
GND
+12
10V
GND
A
A
0.1
10K
10K
7 8 4
6 3
2 1
1K
20K
100K
200
0.1
0.1
GND
GND
GND
20K
GND

FIG. 14A.

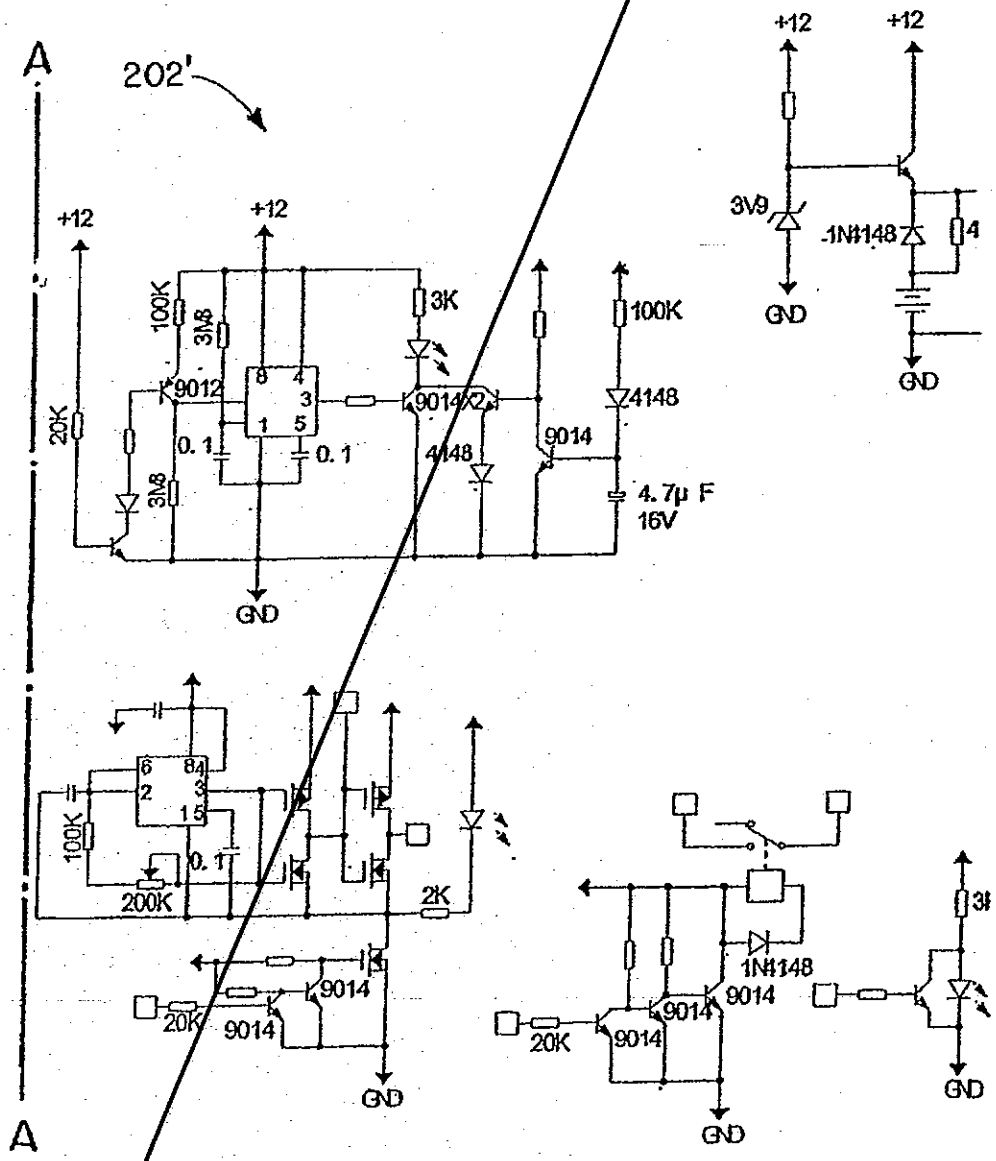

A
202'
+12
+12
100K
3V8
3K
9012
9014/2
100K
4148
20K
0.1
0.1
4148
9014
4.7μ F
16V
3V8
GND
+12
+12
3V9
1N4148
GND
GND
6
8
4
2
3
1
5
100K
0.1
200K
2K
9014
20K
9014
GND
1N4148
9014
9014
20K
9014
GND
GND
A

FIG. 14B.

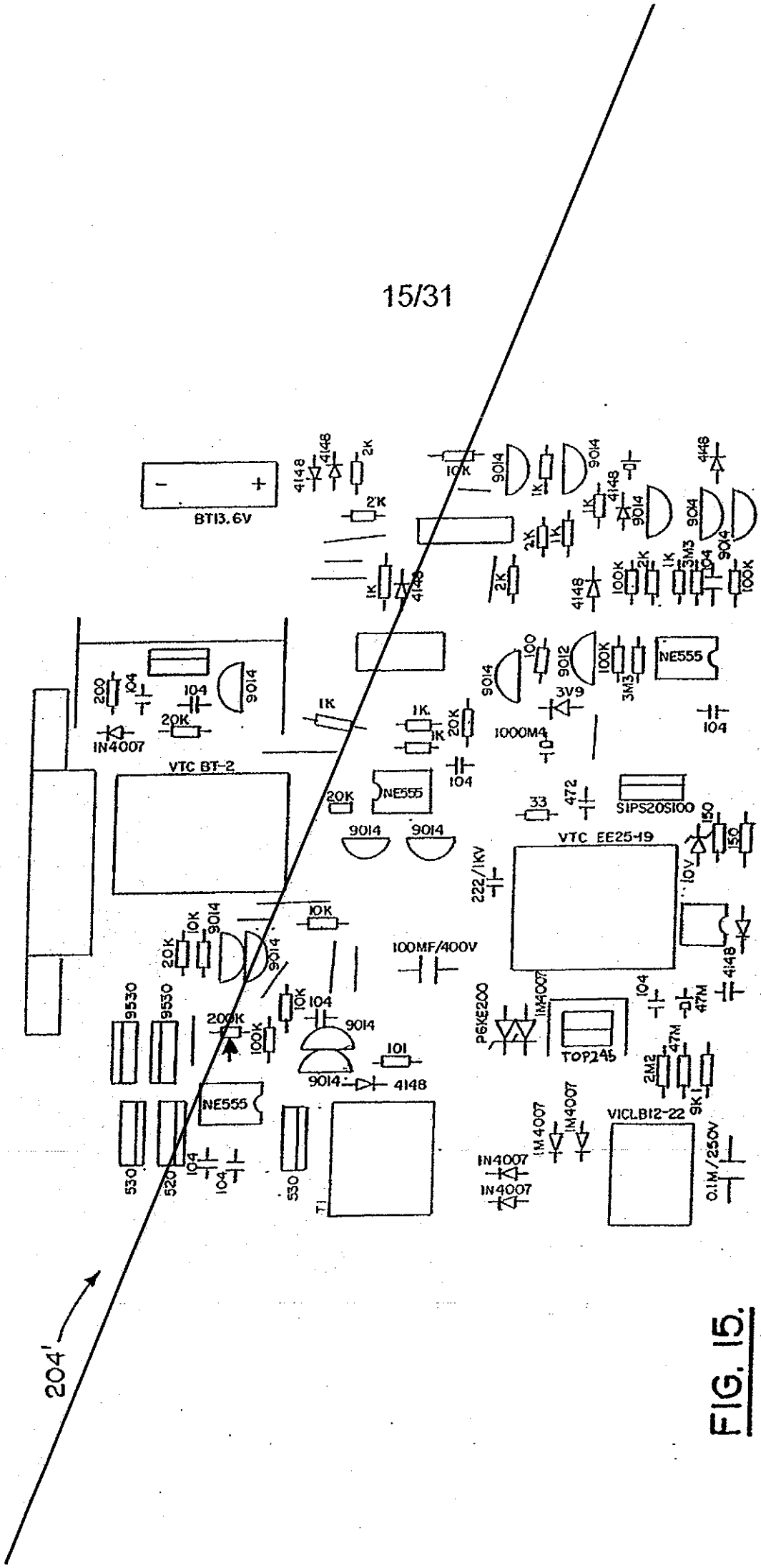

BT13.6V
4148
2K
10K
9014
1K
100K
3M3
104
NE555
3V9
1000M4
VTC BT-2
20K
33
472
S1PS20S100
VTC EE25-19
222/1KV
150
10V
100MF/400V
P6KE200
1M4007
TOP245
47M
2M2
9K1
VICLB12-22
0.1M/250V
IN4007
200K
101
9530
9520
530
T1
204'

FIG. 15.

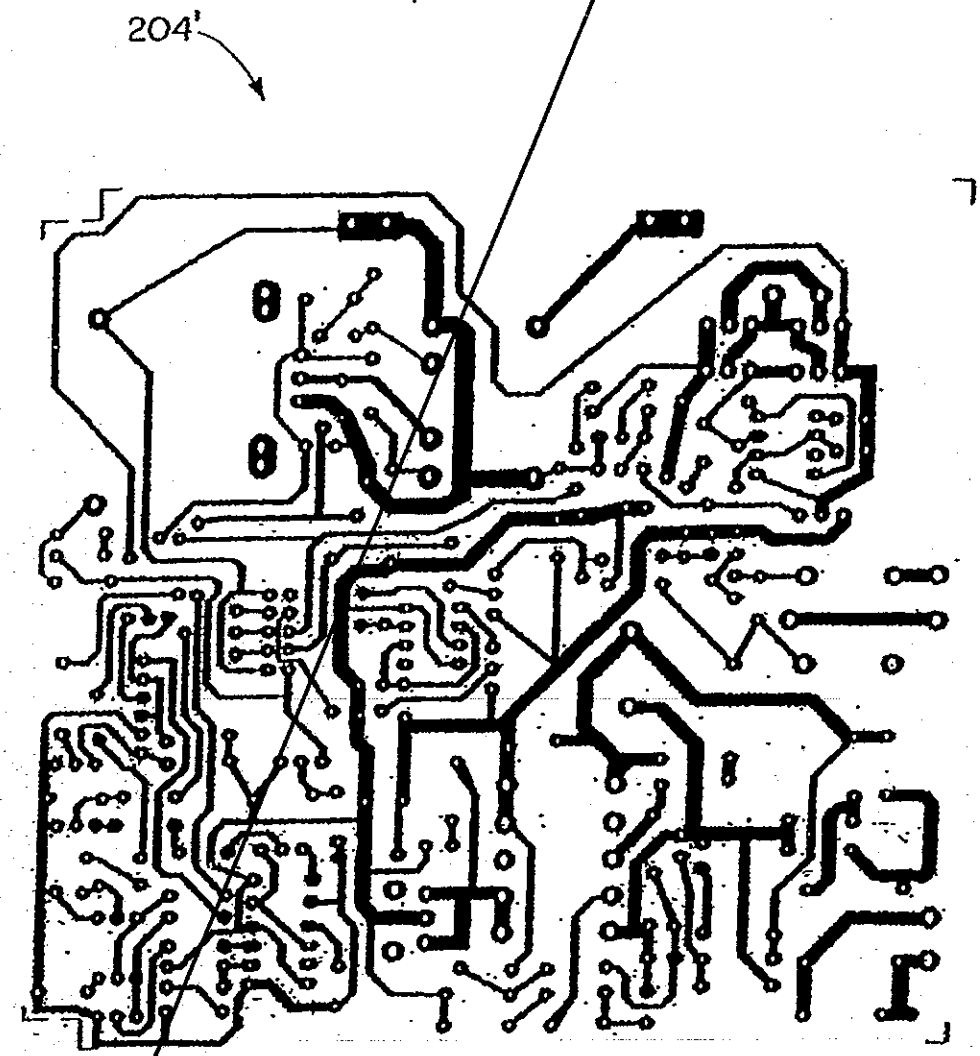


FIG. 16.

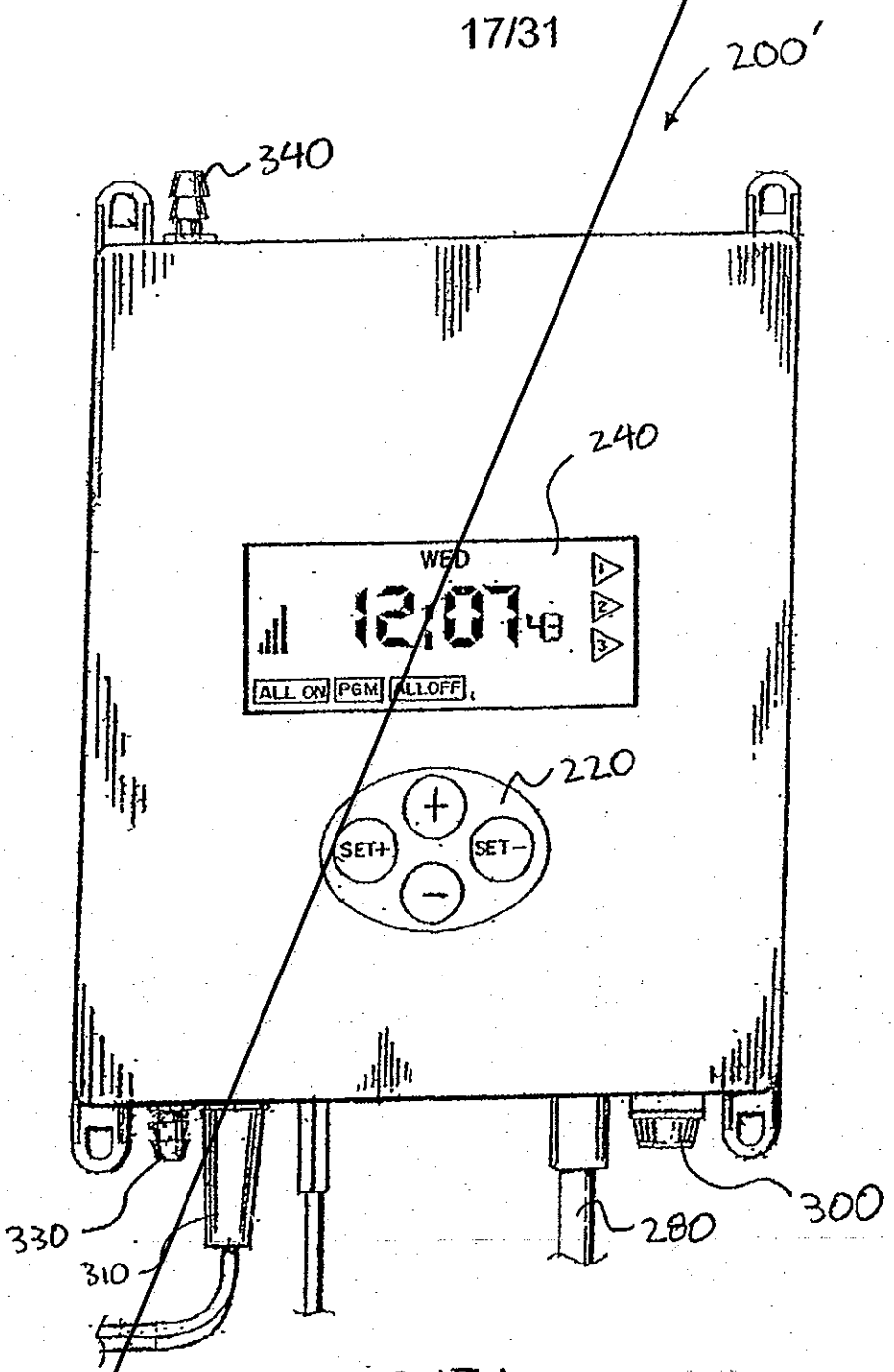

200'
340
240
WED
12:07
ALL ON
PGM
ALL OFF
220
SET+
SET-
330
310
280
300

FIG. 17A.

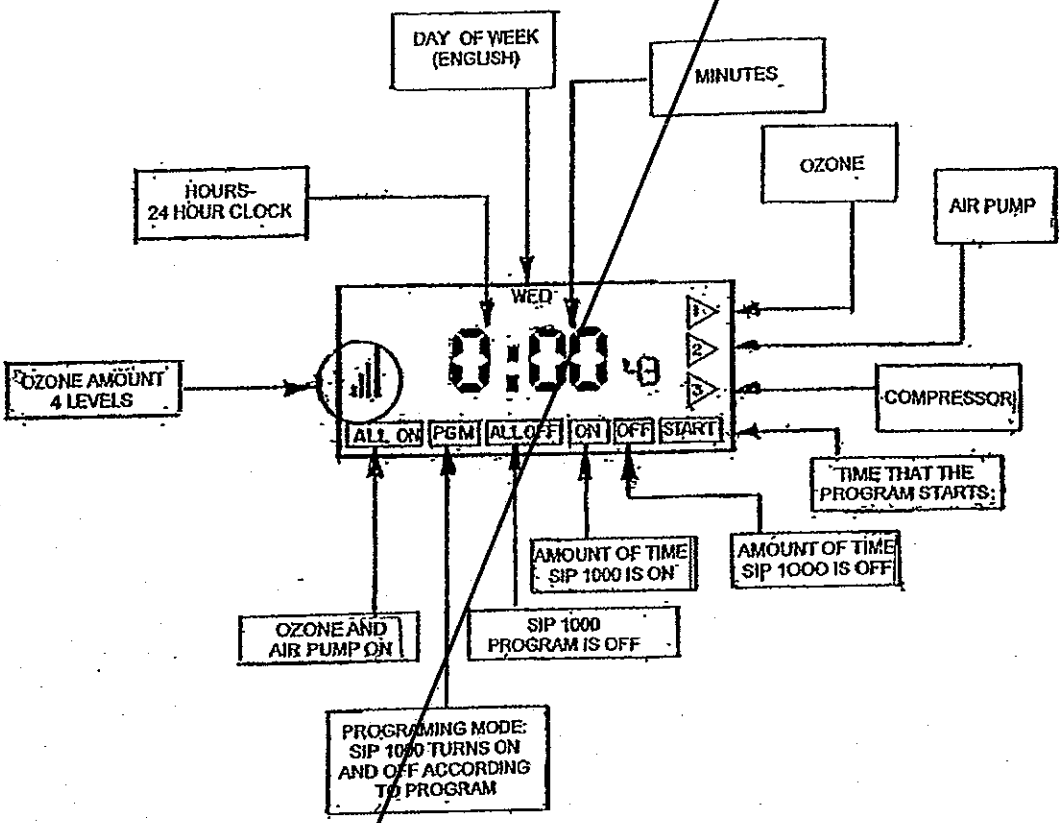


FIG. 17B.

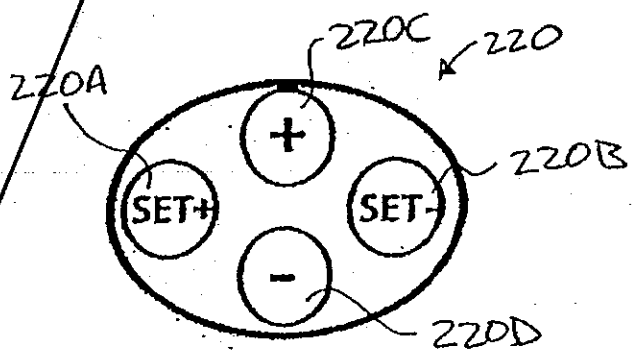


FIG. 17C.

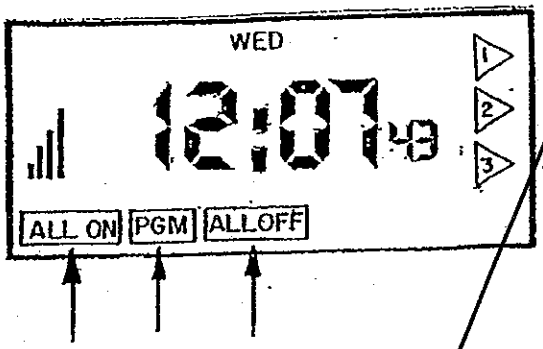


FIG. 18.

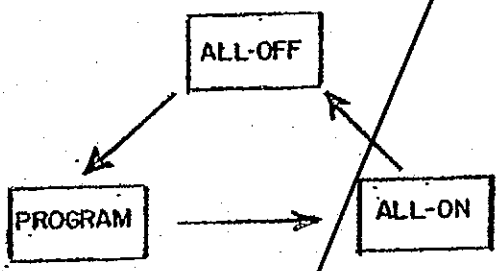


FIG. 19.

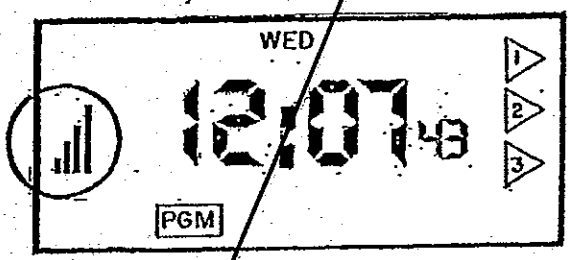


FIG. 20A.

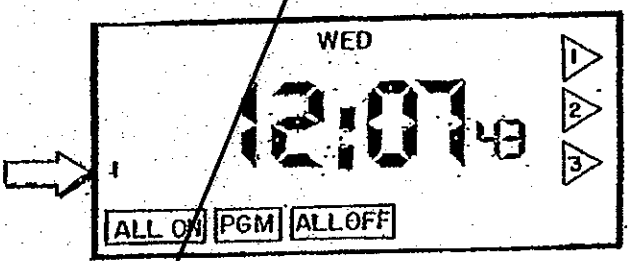


FIG. 20B.

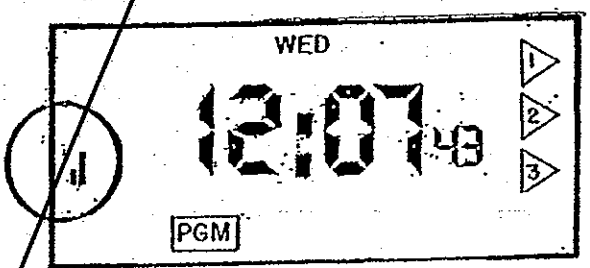


FIG. 20C.

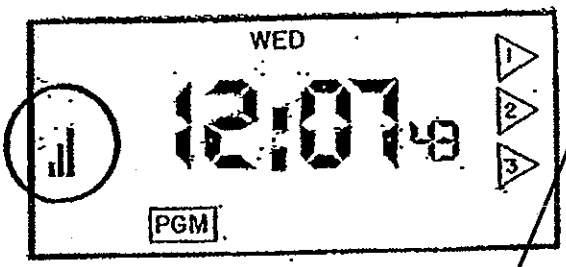


FIG. 20D.

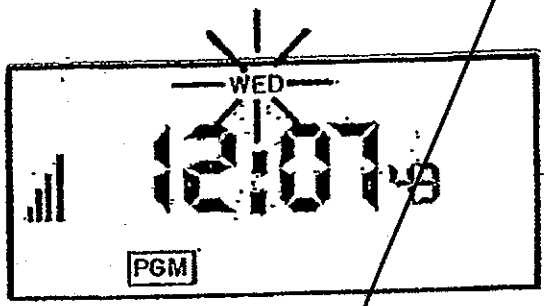


FIG. 21A.

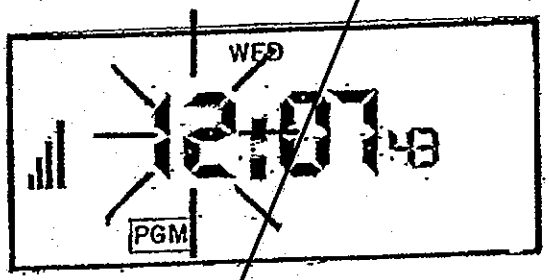


FIG. 21B.

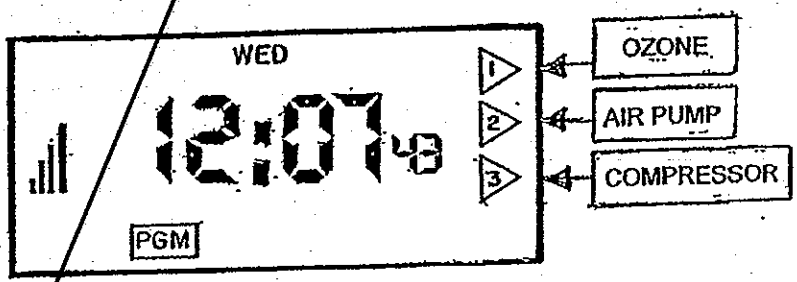


FIG. 22A.

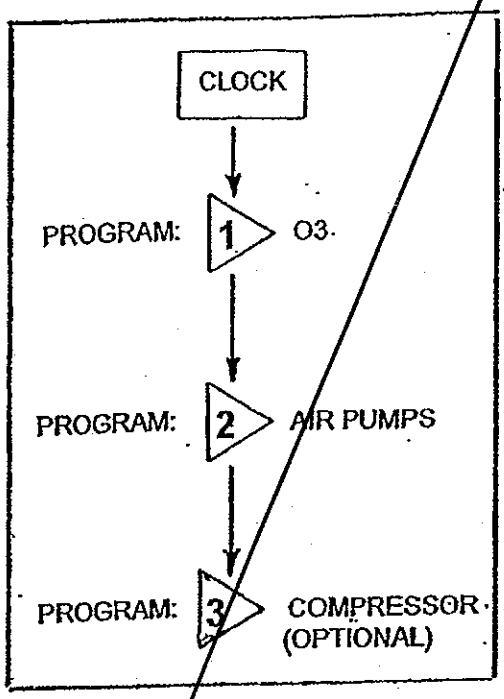


FIG. 22B.

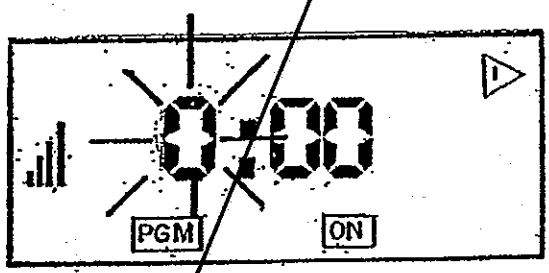


FIG. 23A.

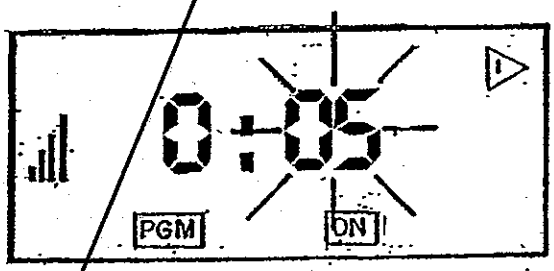


FIG. 23 B.

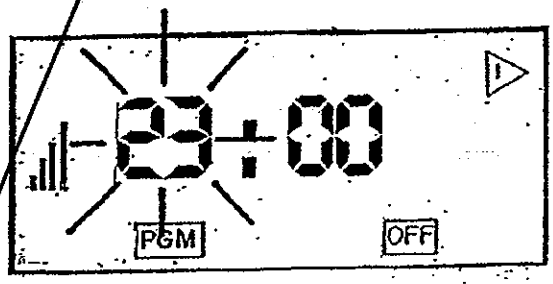


FIG. 23C.

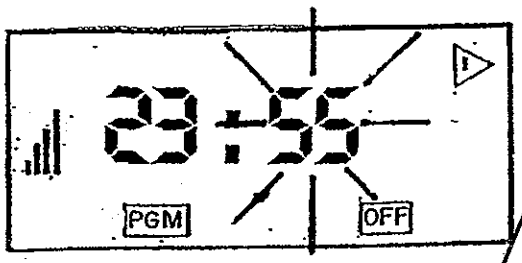


FIG. 23D.

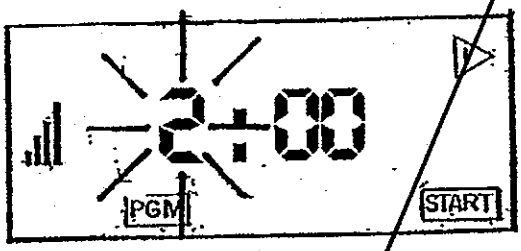


FIG. 23E.

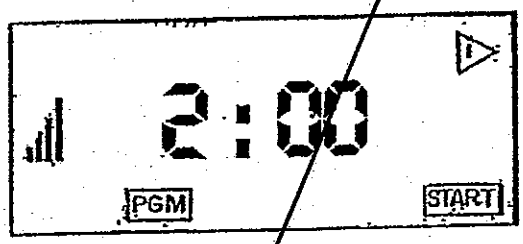


FIG. 23F.

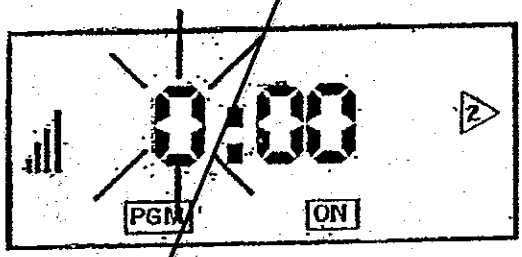


FIG. 24A.

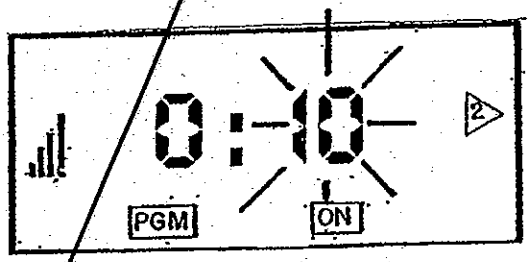


FIG. 24B.

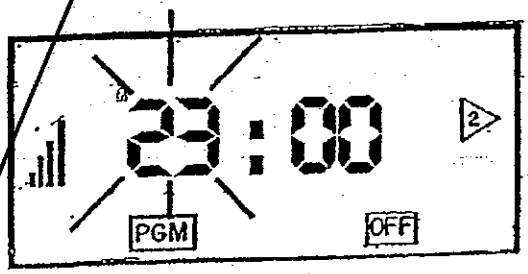


FIG. 24C.

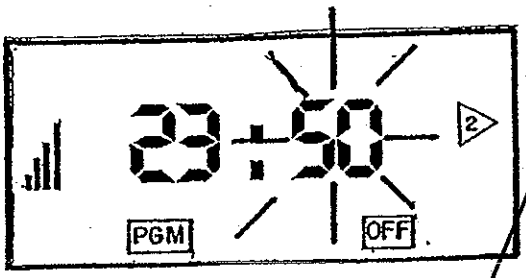


FIG. 24D.

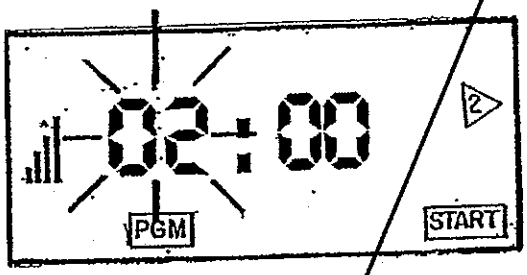


FIG. 24E.

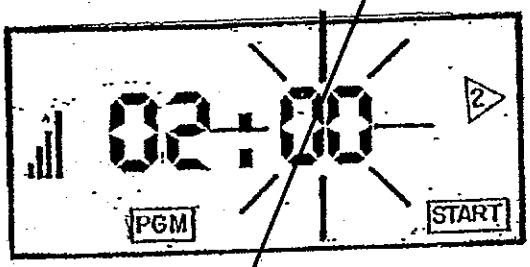


FIG. 24E

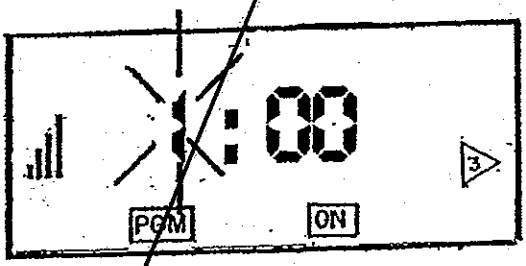


FIG. 25A.

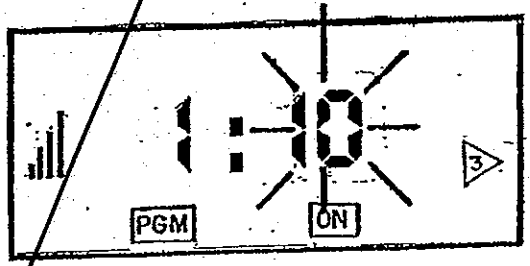


FIG. 25B.

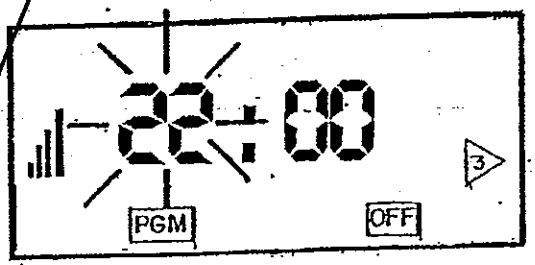


FIG. 25C.

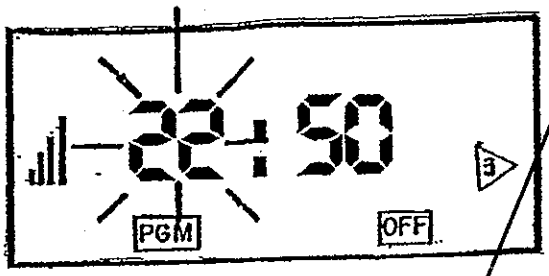


FIG. 25D.

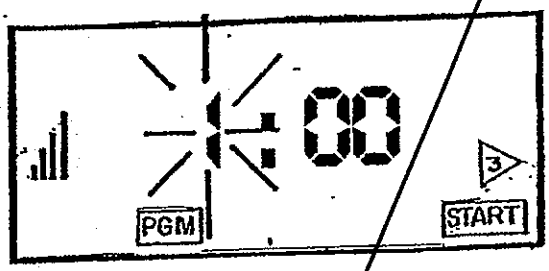


FIG. 25E.

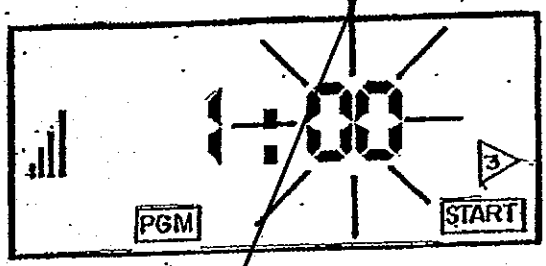


FIG. 25F.

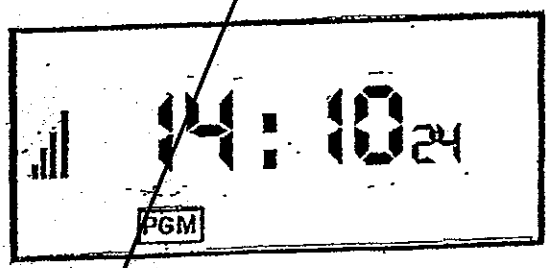


FIG. 25G.

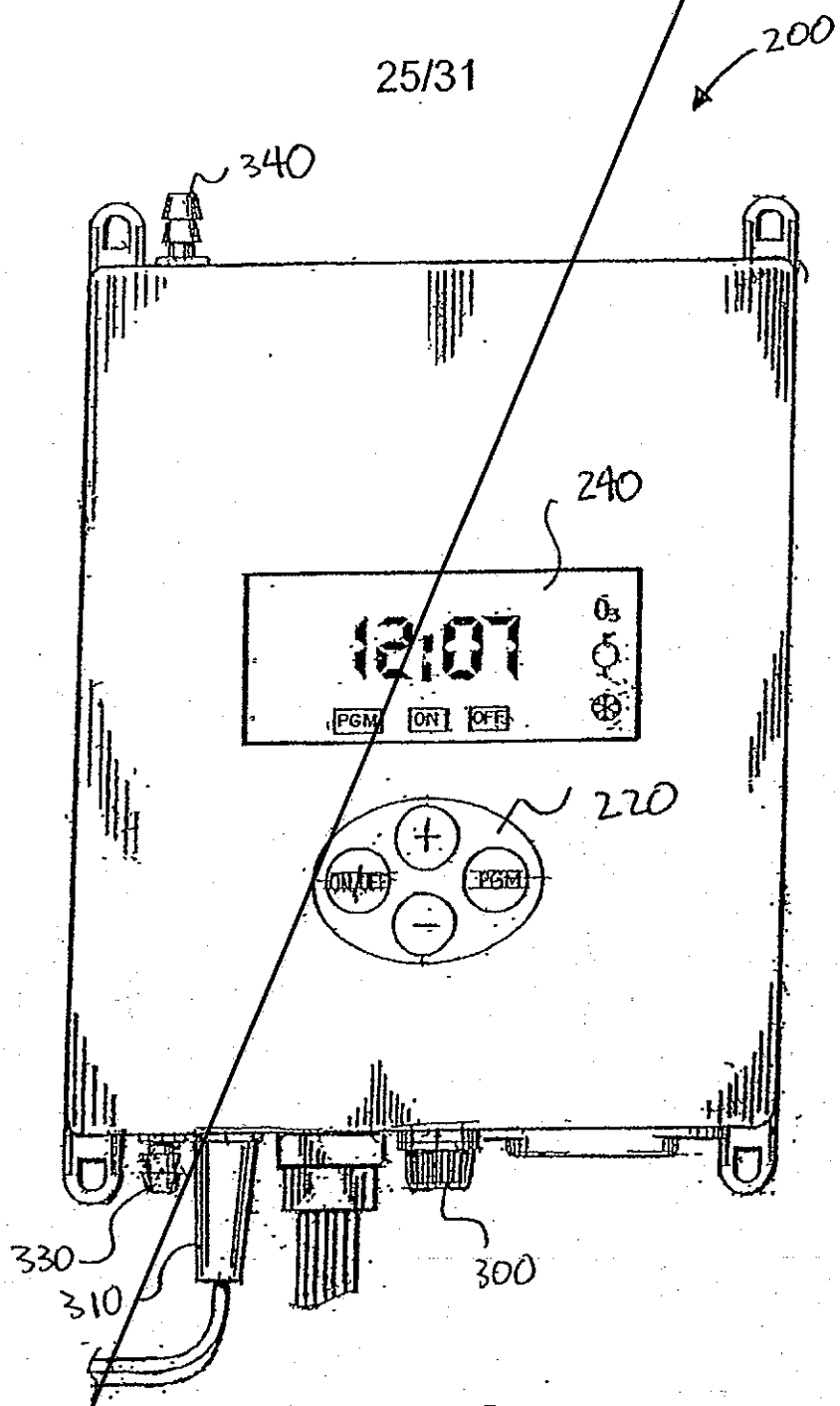


FIG. 26.

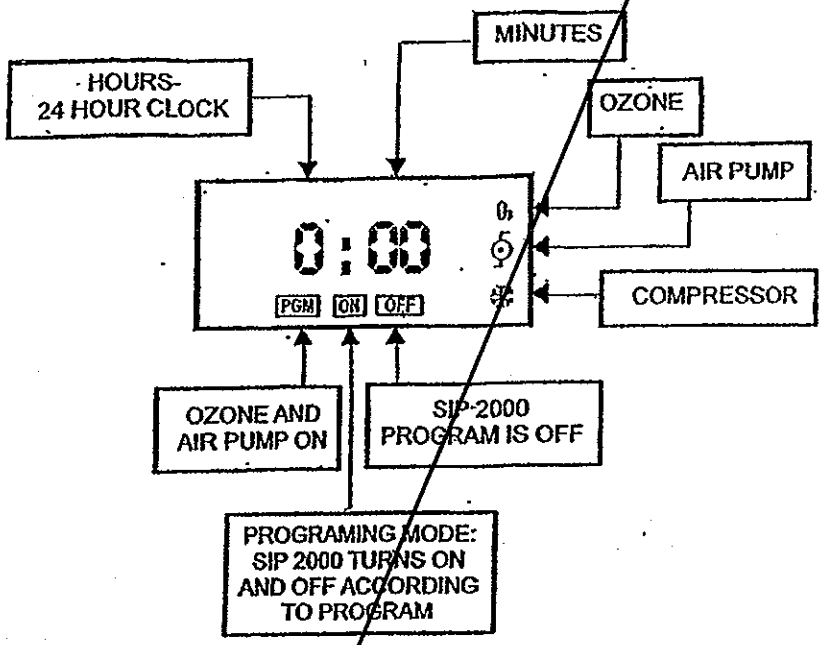

MINUTES
HOURS-
24 HOUR CLOCK
OZONE
AIR PUMP
0:00
PGM
ON
OFF
COMPRESSOR
OZONE AND
AIR PUMP ON
SIP-2000
PROGRAM IS OFF
PROGRAMING MODE:
SIP 2000 TURNS ON
AND OFF ACCORDING
TO PROGRAM

FIG. 27.

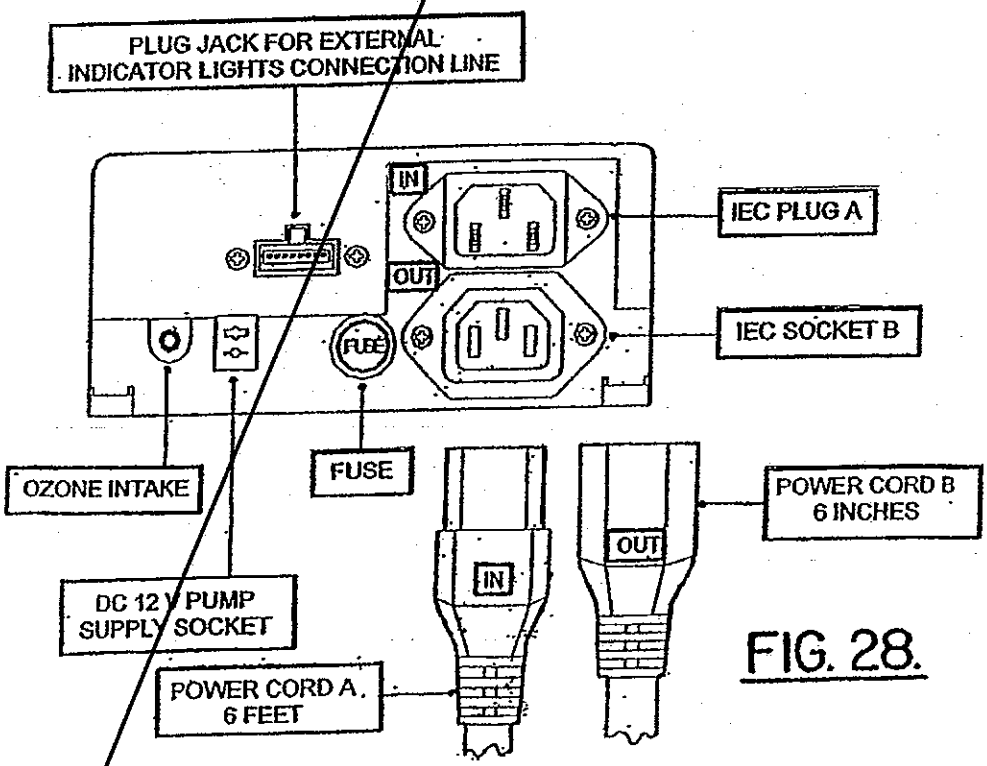

PLUG JACK FOR EXTERNAL
INDICATOR LIGHTS CONNECTION LINE
IN
OUT
IEC PLUG A
IEC SOCKET B
FUSE
OZONE INTAKE
FUSE
POWER CORD B
6 INCHES
OUT
IN
DC 12 V PUMP
SUPPLY SOCKET
POWER CORD A.
6 FEET

FIG. 28.

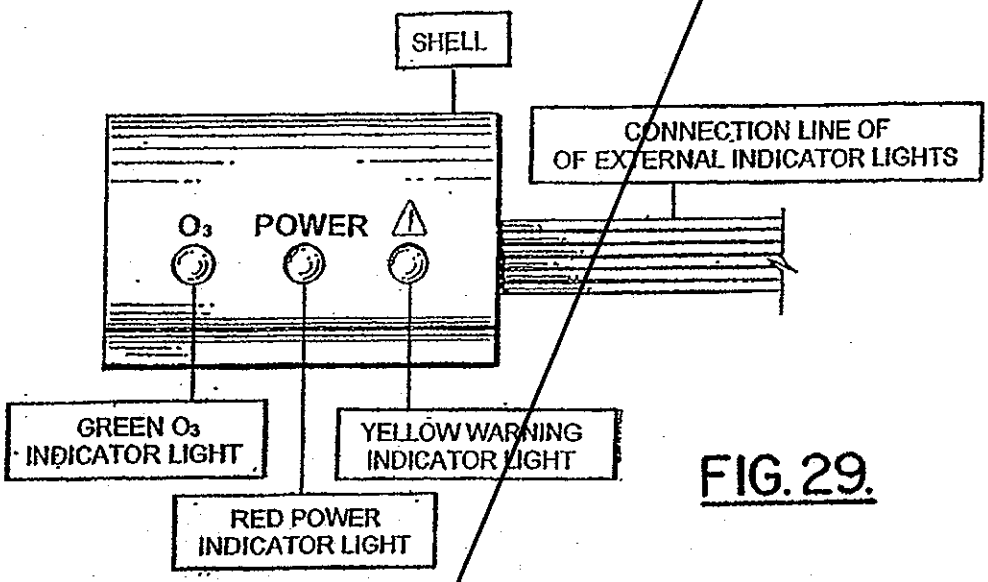


FIG. 29.

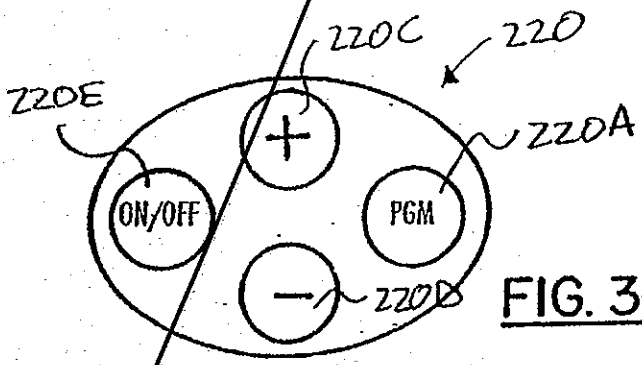


FIG. 30.

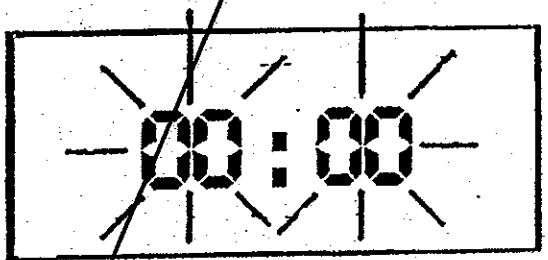


FIG. 31A.

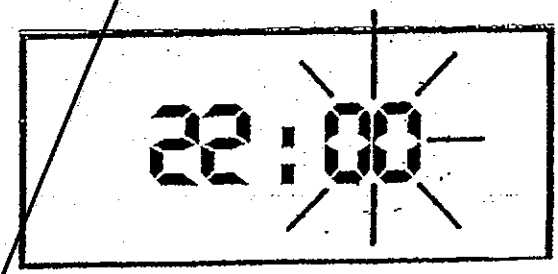


FIG. 31B.

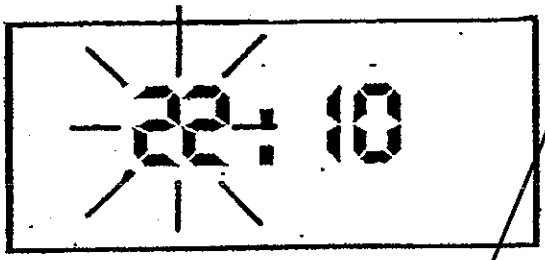


FIG. 31C.

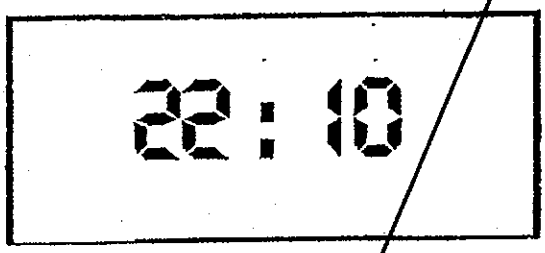


FIG. 31D.

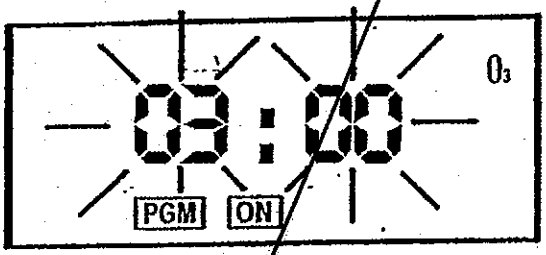


FIG. 32A.

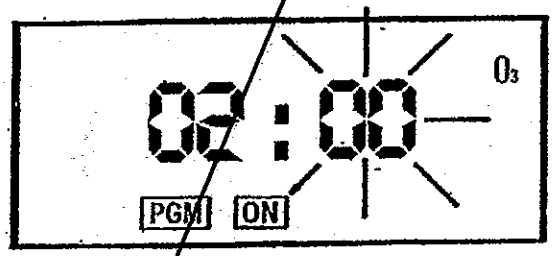


FIG. 32B.

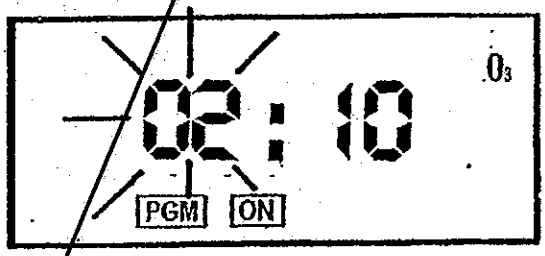


FIG. 32C.

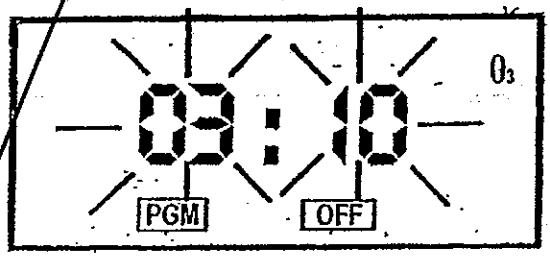


FIG. 32D.

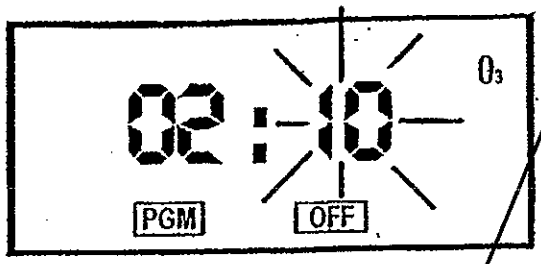


FIG. 32E.

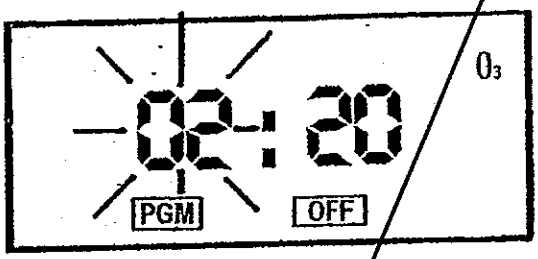


FIG. 32F.

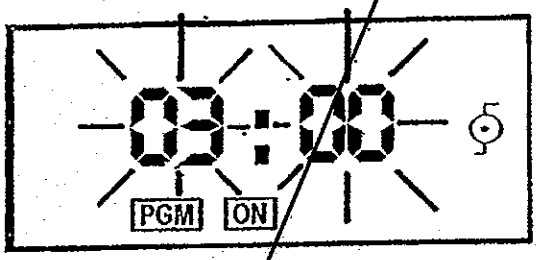


FIG. 33A.

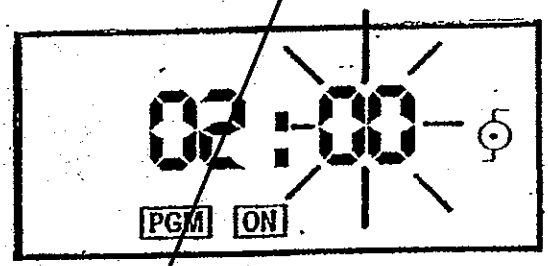


FIG. 33B.

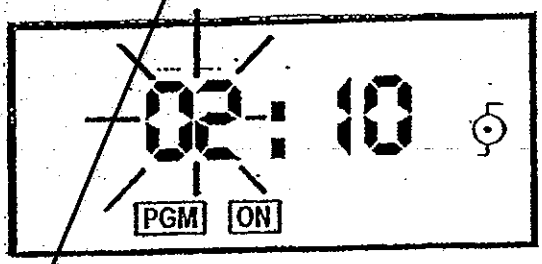


FIG. 33C.

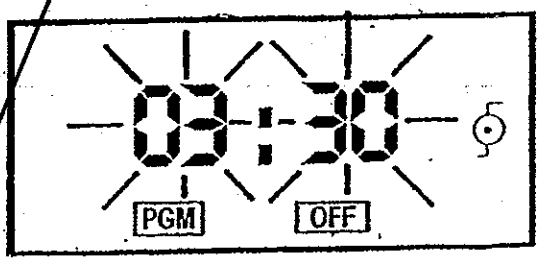


FIG. 33D.

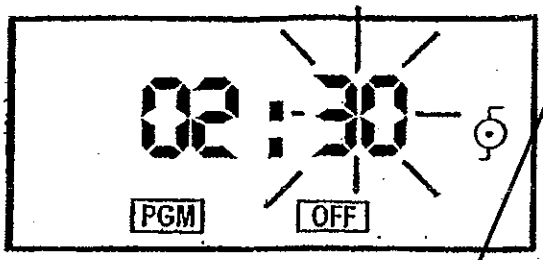


FIG.33E.

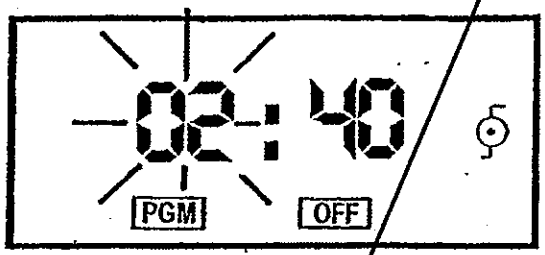


FIG.33F.

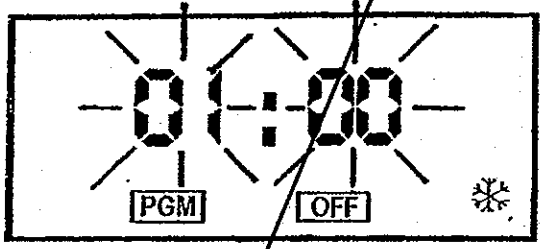


FIG.34A.

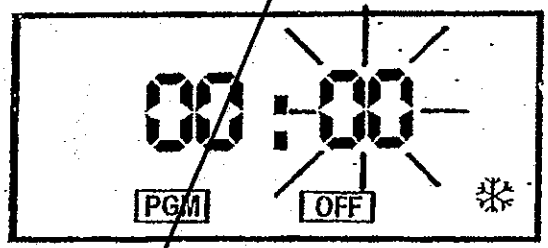


FIG.34B.

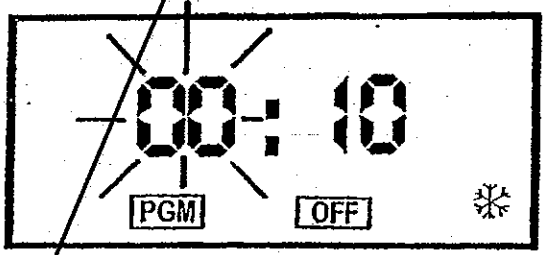


FIG.34C.

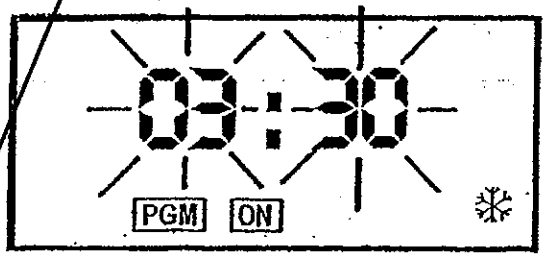


FIG.34D.

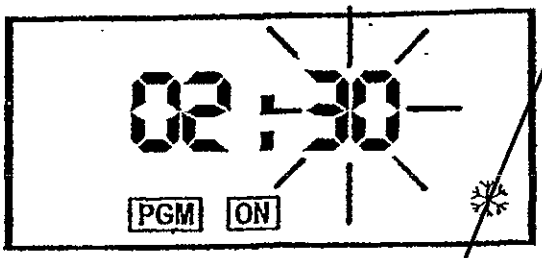


FIG.34E.

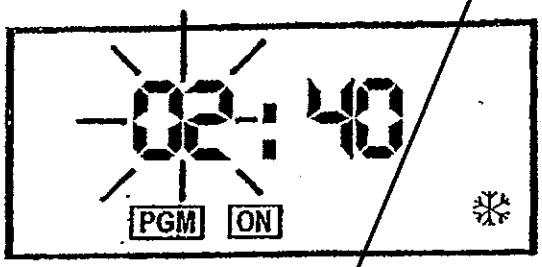


FIG.34F.

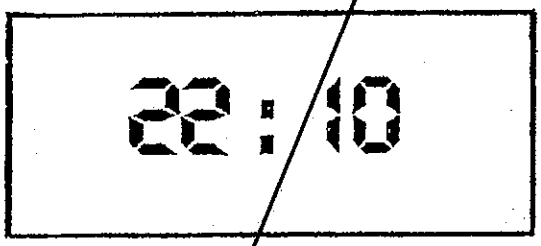


FIG.34G.

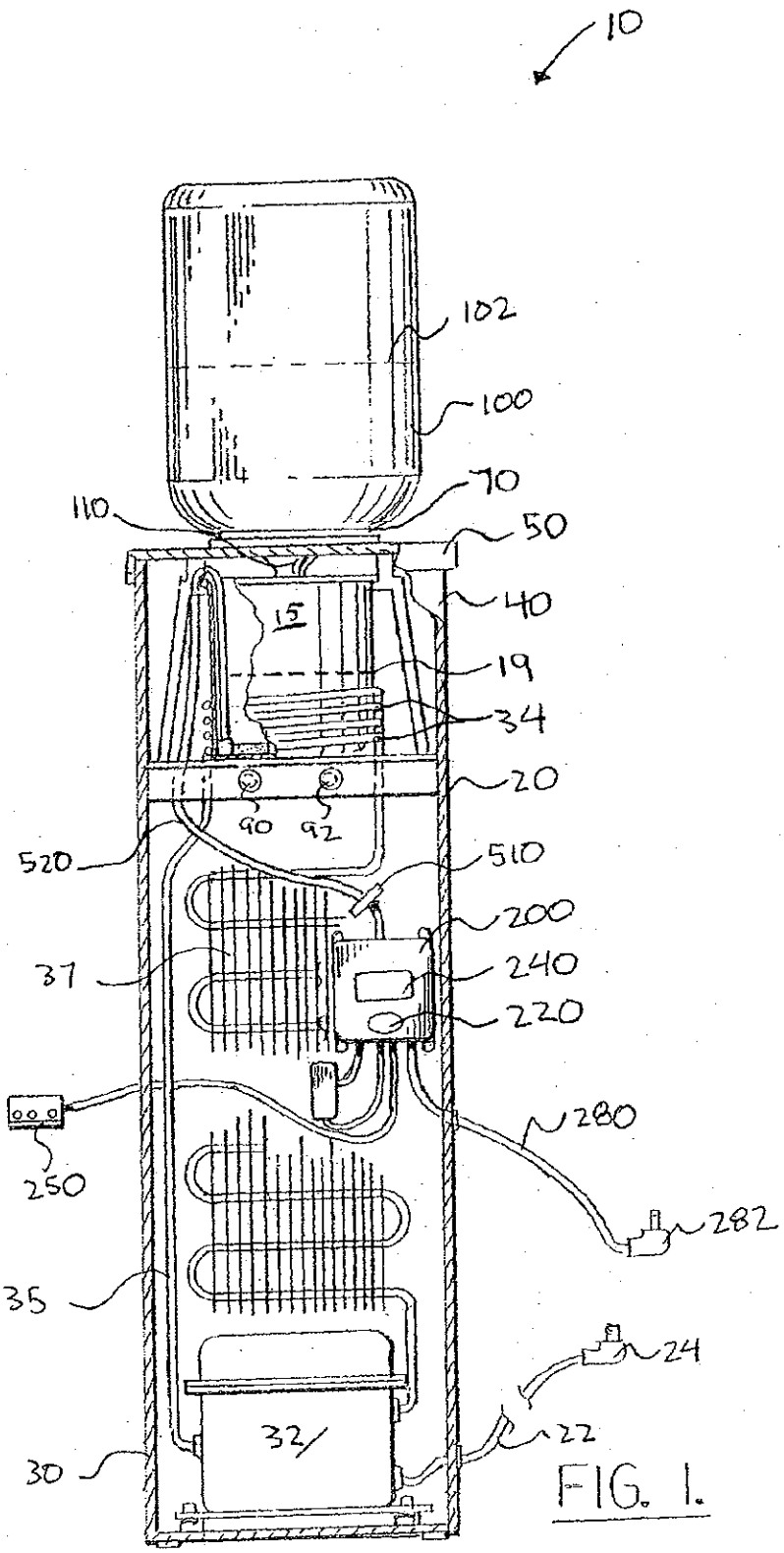

10
102
100
70
110
50
40
15
19
34
20
90
92
520
510
200
37
240
220
280
250
282
35
24
32
22
30

FIG. 1.

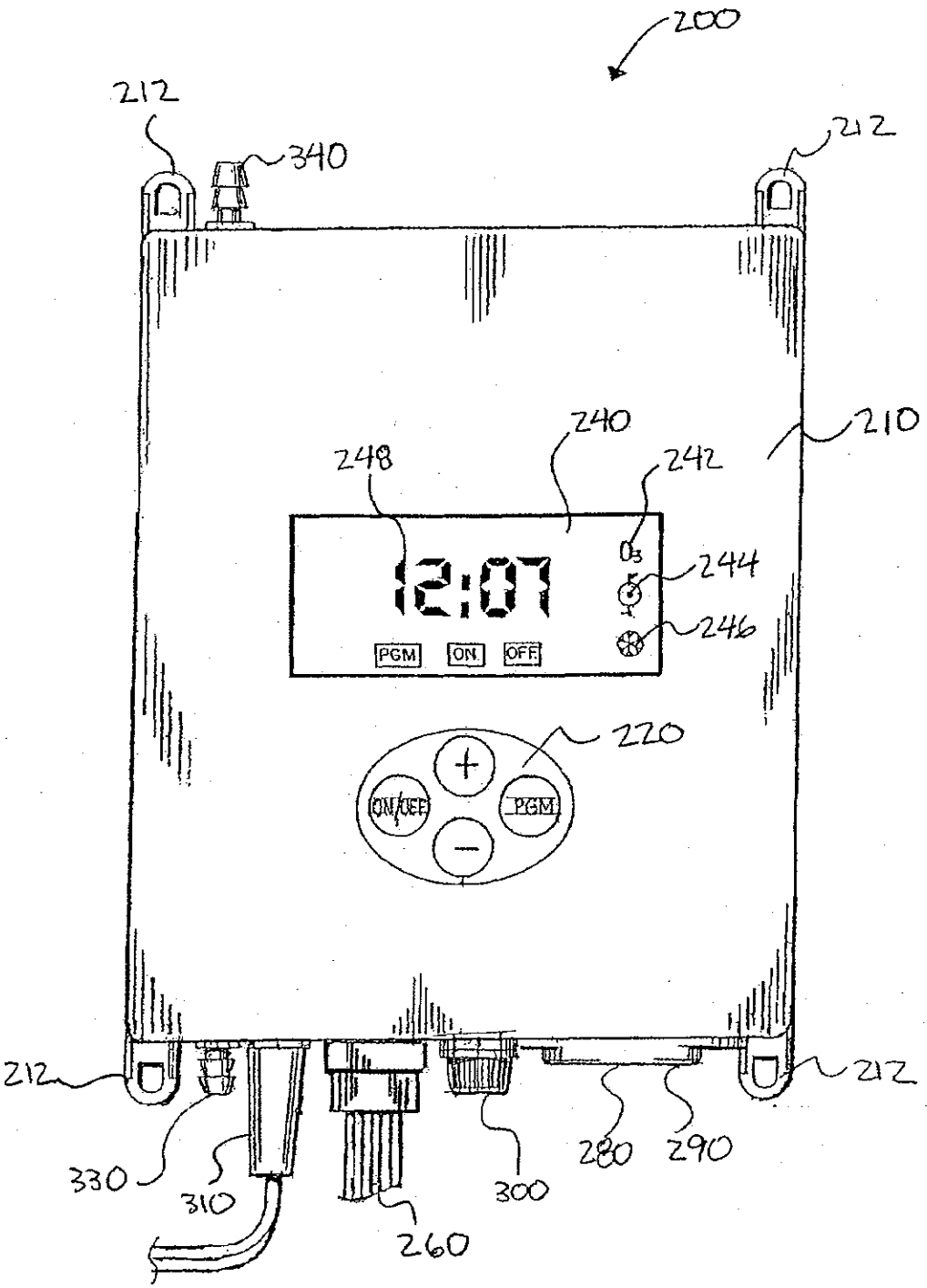

200
212
340
212
240
210
248
242
12:07
244
246
PGM
ON
OFF
220
ON/OFF
PGM
212
212
330
310
260
300
280
290

FIG. 2.

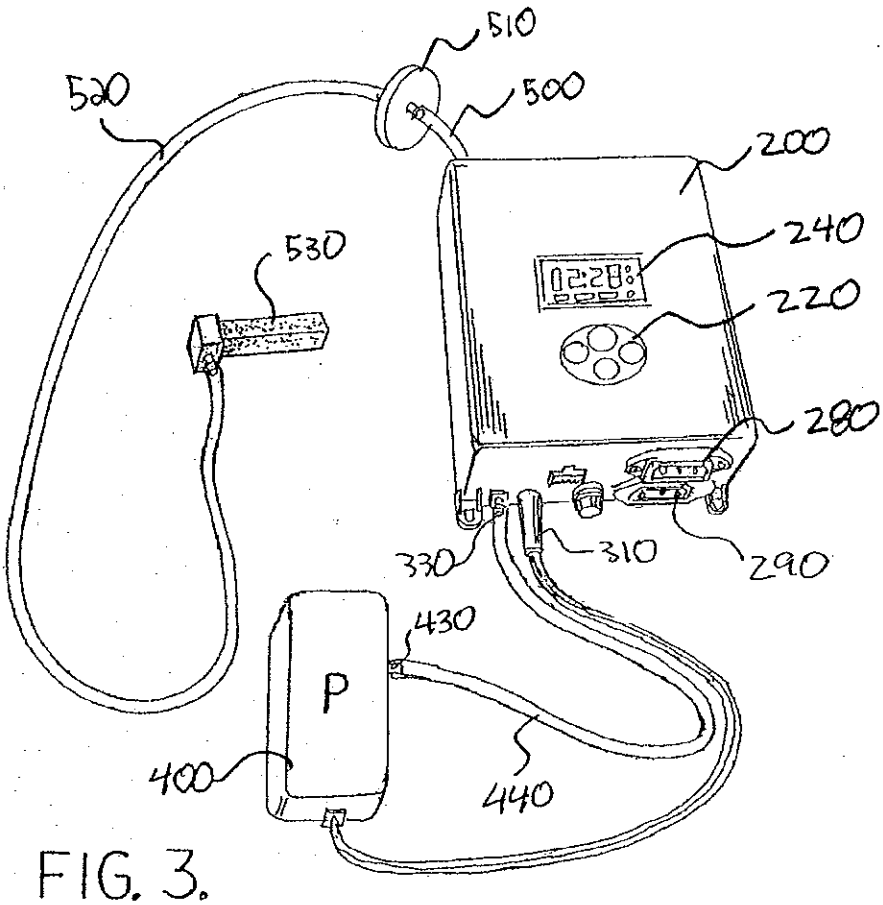

510
500
520
200
530
240
220
280
330
310
290
430
P
400
440

FIG. 3.

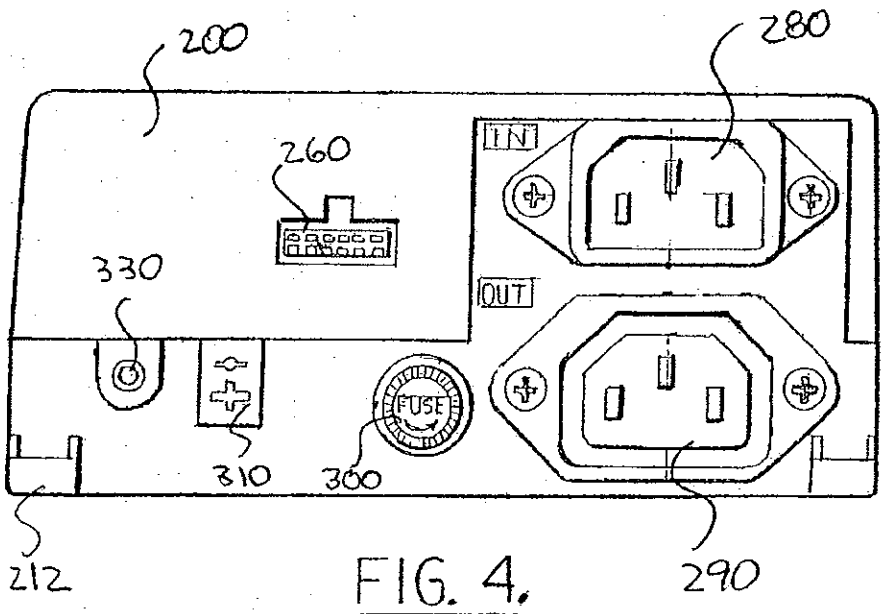

200
280
260
IN
330
OUT
FUSE
310
300
212
290

FIG. 4.

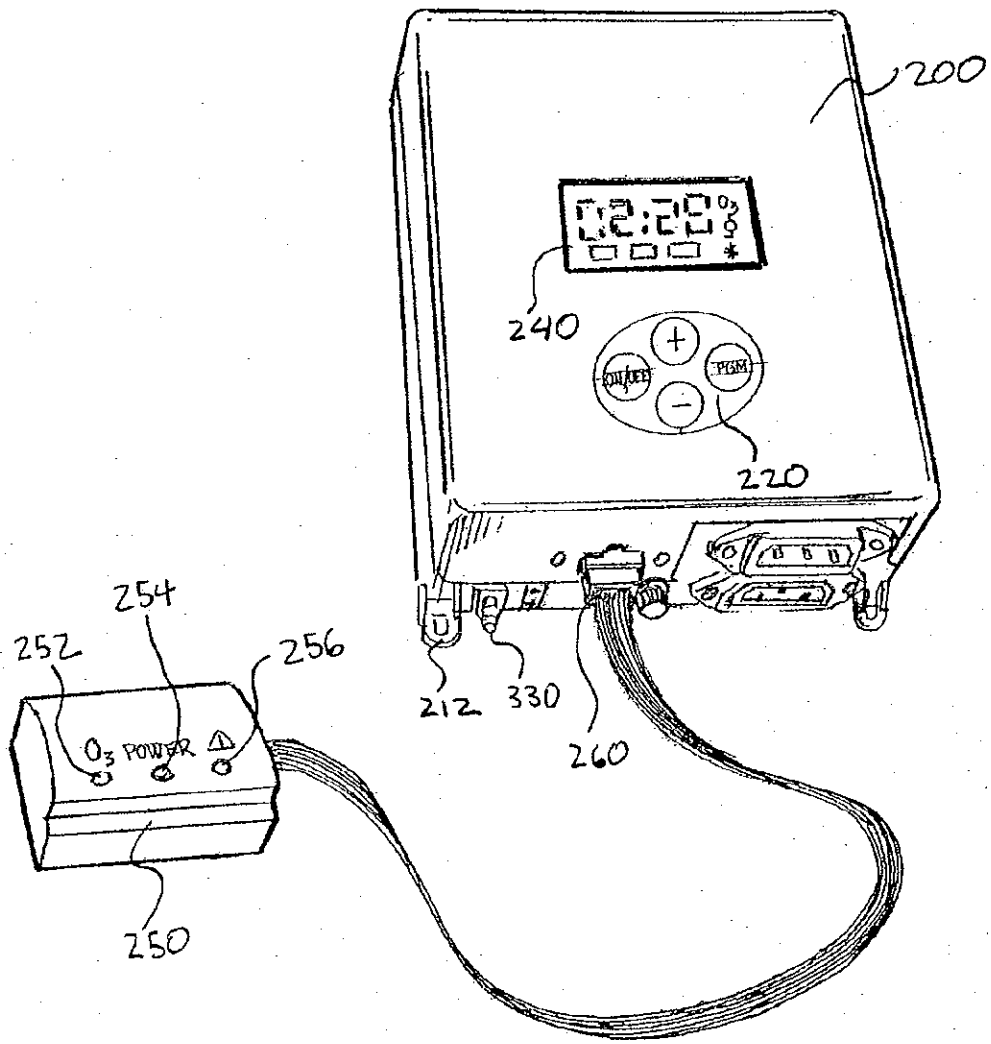


FIG. 5.

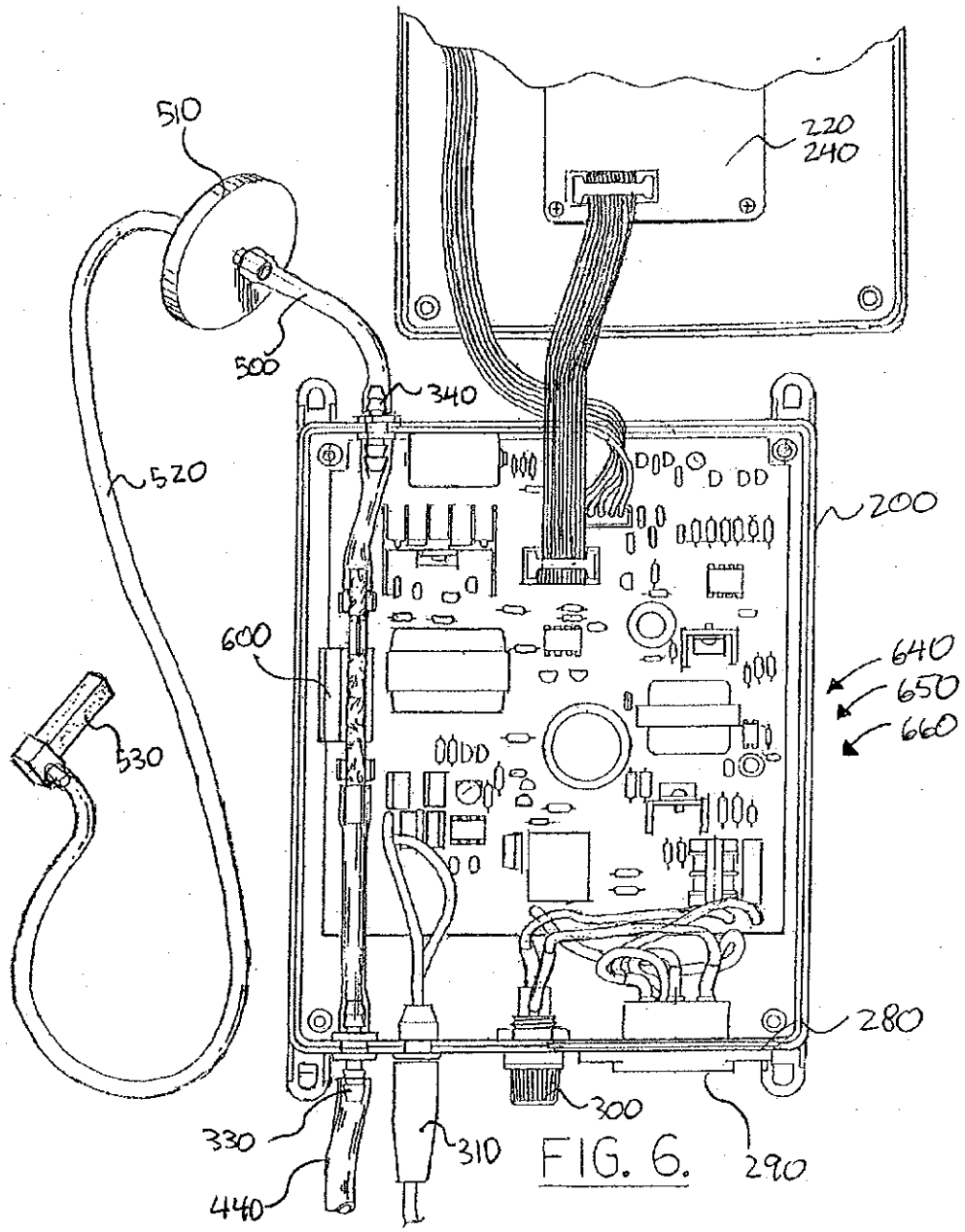

510
220
240
500
340
520
200
600
640
650
660
530
280
330
310
300
290
440

FIG. 6.

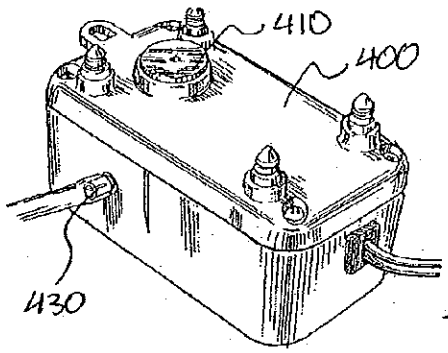


FIG. 7.

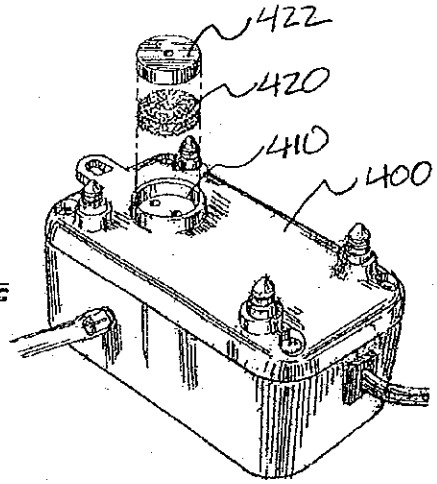


FIG. 8.

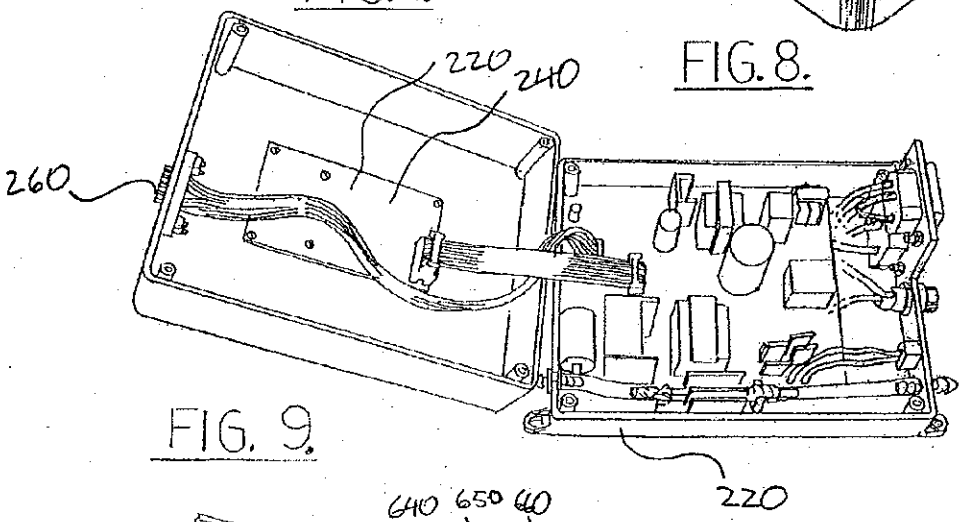


FIG. 9.

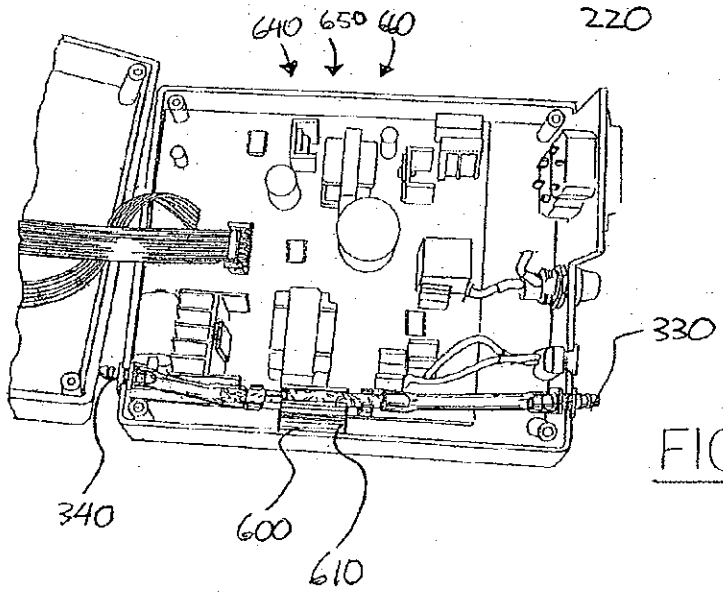


FIG. 10.

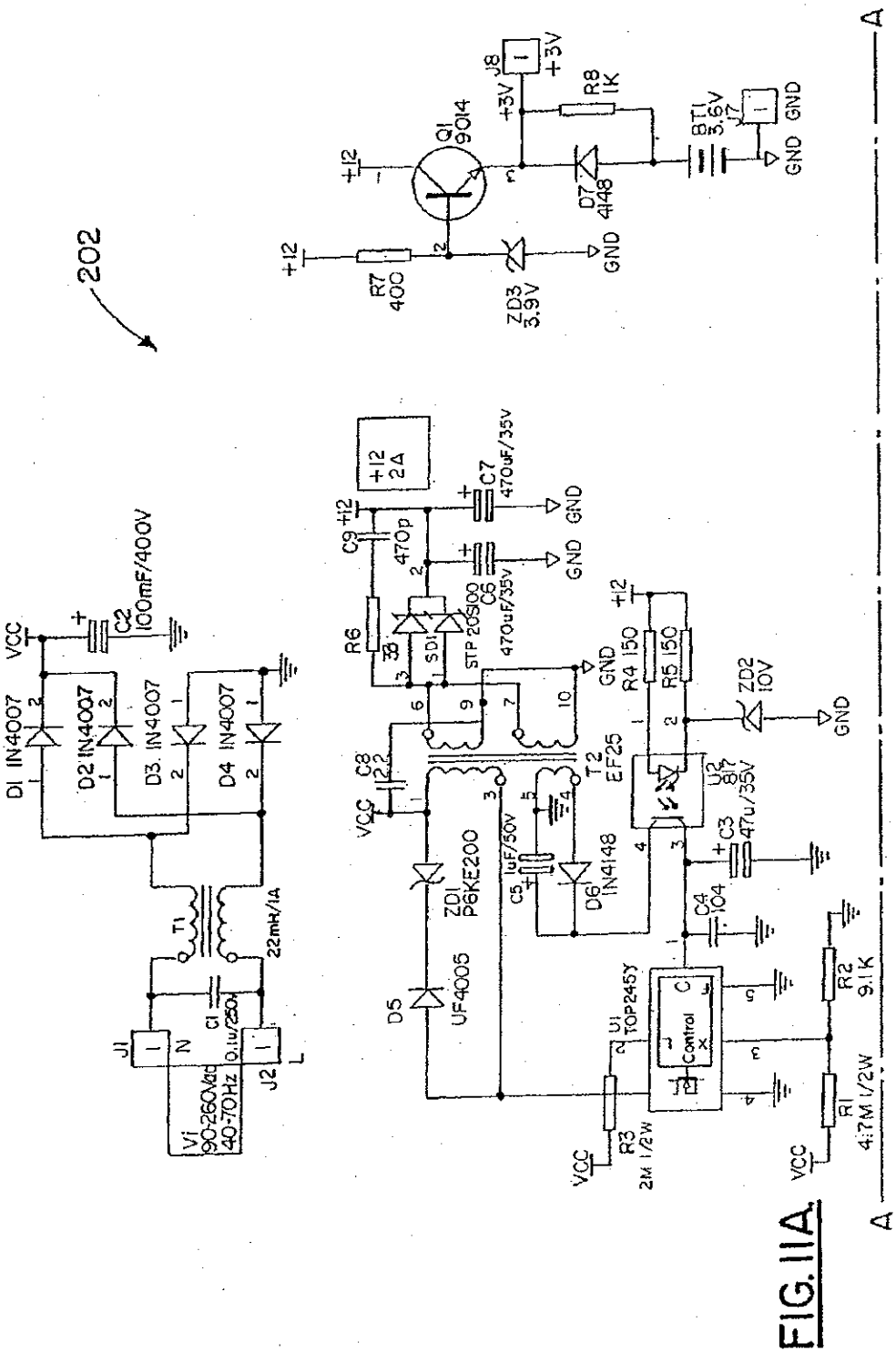

202
A
A
J1
N
L
Vi
90-260Vac
40-70Hz
J2
C1
0.1u/250v
T1
22mH/1A
D1 IN4007
D2 IN4007
D3 IN4007
D4 IN4007
VCC
C2
100mF/400V
ZD1
P6KE200
D5
UF4005
C5
1uF/50V
D6
IN4148
T2
EF25
C8
22
C9
470p
R6
33
SDI
STP 20S100
C6
470uF/35V
C7
470uF/35V
+12
2A
GND
R4
150
R5
150
ZD2
10V
U2
817
C3
47u/35V
C4
104
U1
TOP245Y
Control
R2
9.1K
R1
4.7M 1/2W
R3
2M 1/2W
Q1
9014
R7
400
ZD3
3.9V
J8
+3V
R8
1K
D7
4148
BT1
3.6V
J7
GND

FIG. IIA.

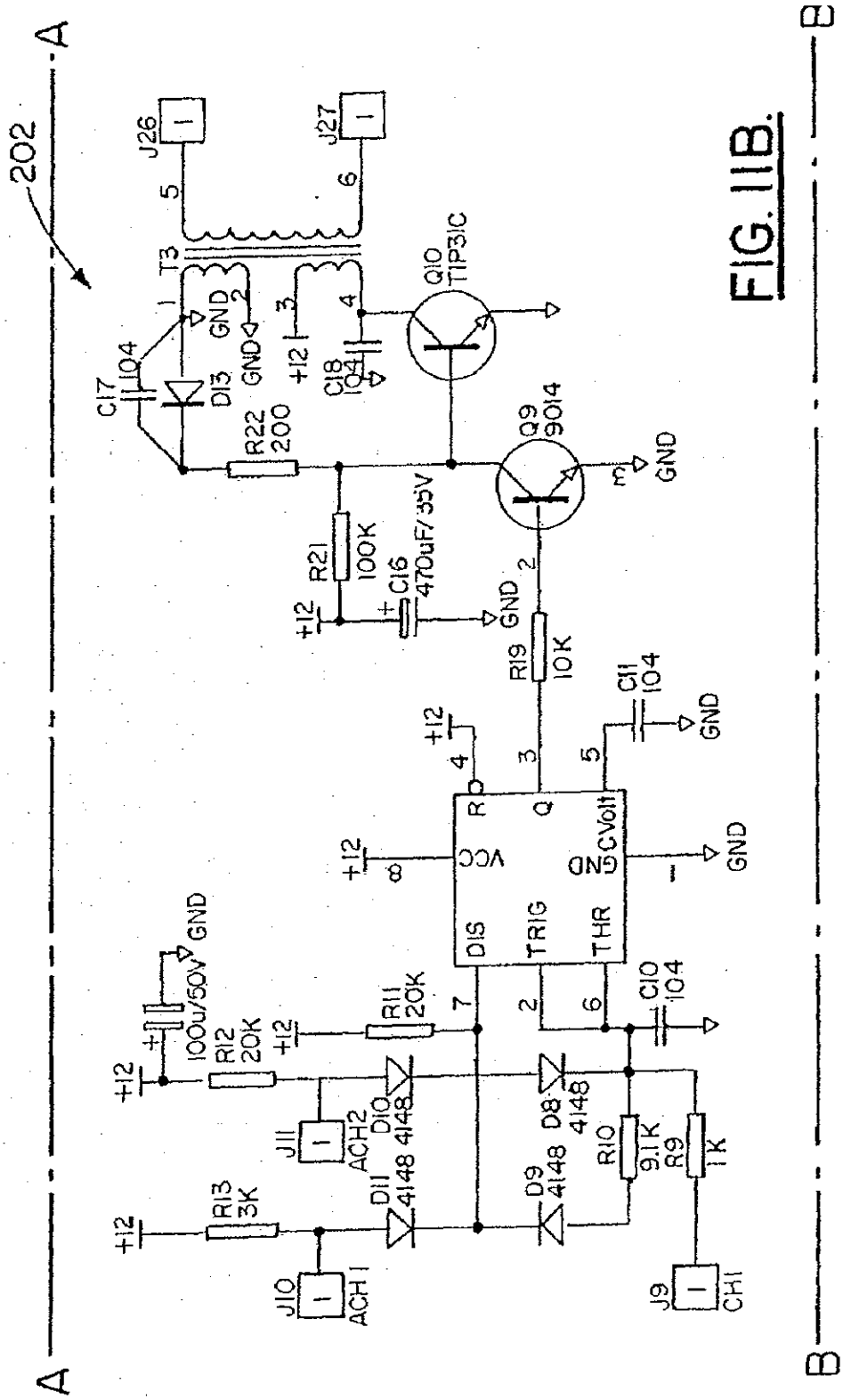

202
A
B
J26
J27
T3
Q10 TIP31C
C17 104
D13
R22 200
C18 104
Q9 9014
R21 100K
C16 470uF/35V
R19 10K
C11 104
C10 104
R11 20K
R12 20K
100u/50V
R13 3K
D10 4148
D11 4148
D8 4148
D9 4148
R10 9.1K
R9 1K
J11 ACH2
J10 ACH1
J9 CH1
+12
GND
R
Q
VCC
GND
CVolt
DIS
TRIG
THR

FIG. 11B.

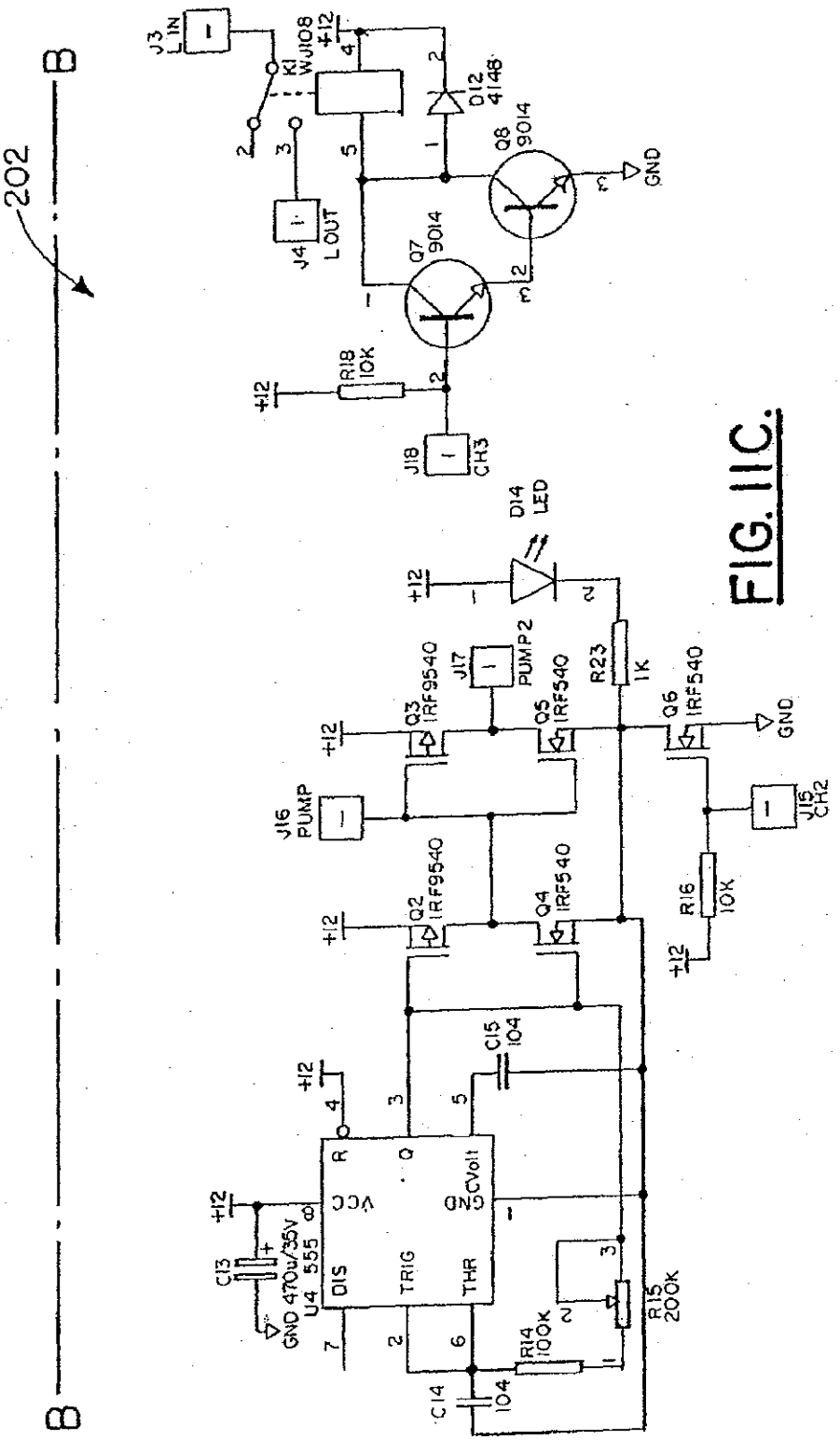

202
B
B
J3 LIN
K1 WJ108
+12
D12 4148
Q8 9014
GND
J4 LOUT
Q7 9014
R18 10K
J18 CH3
D14 LED
J17 PUMP2
R23 1K
Q3 IRF9540
Q5 IRF540
Q6 IRF540
J16 PUMP
J15 CH2
Q2 IRF9540
Q4 IRF540
R16 10K
C15 104
C13 470u/35V
U4 555
R
Q
VCC
GND
CVolt
DIS
TRIG
THR
R14 100K
R15 200K
C14 104

FIG. IIC.

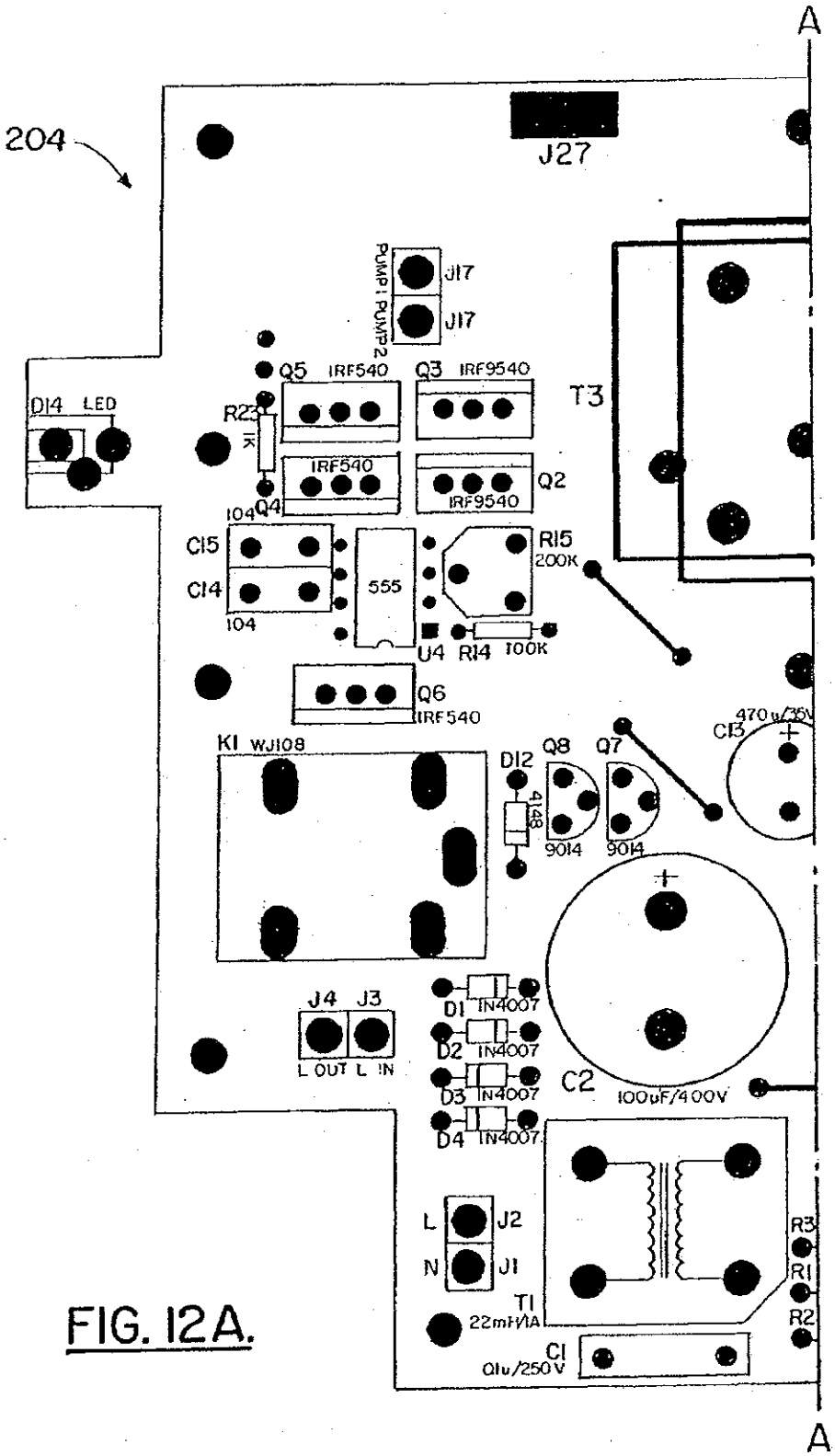
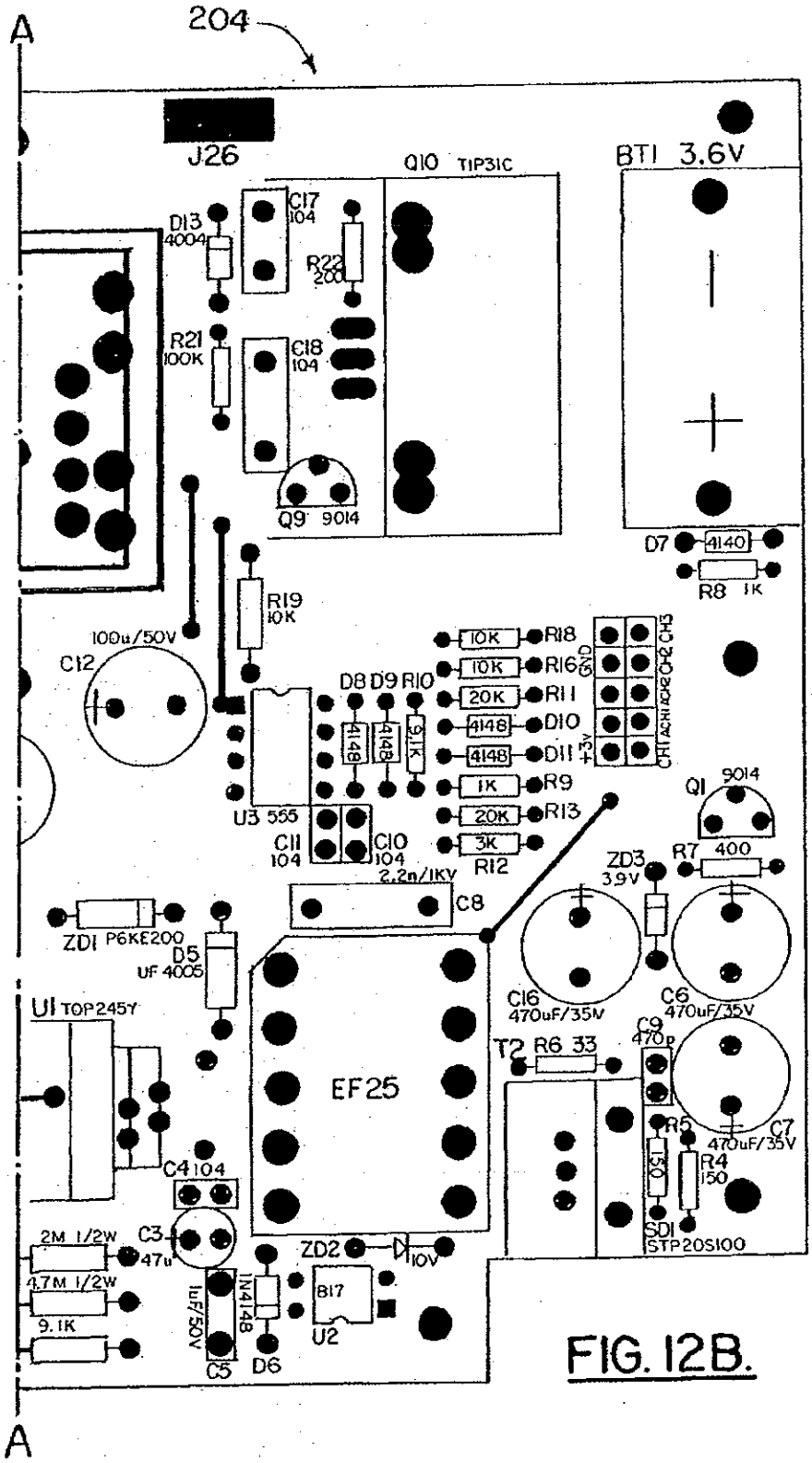

A
204
J27
PUMP1 PUMP2
J17
J17
Q5 IRF540
Q3 IRF9540
T3
D14 LED
R23
1K
IRF540
Q2
IRF9540
104
Q4
C15
C14
104
555
R15
200K
U4
R14
100K
Q6
IRF540
470u/35V
C13
K1 WJ108
D12
4148
Q8
Q7
9014
9014
J4
J3
L OUT
L IN
D1 IN4007
D2 IN4007
D3 IN4007
D4 IN4007
C2
100uF/400V
L
N
J2
J1
T1
22mH/1A
C1
0.1u/250V
R3
R1
R2
A

FIG. 12A.


A
204
J26
Q10 TIP31C
BT1 3.6V
D13 4004
C17 104
R22 200
R21 100K
C18 104
Q9 9014
D7 4140
R8 1K
R19 10K
100u/50V
C12
D8 D9 R10
4148
4148
9.1K
U3 555
C11 104
C10 104 2.2n/1KV
10K R18
10K R16
20K R11
4148 D10
4148 D11
1K R9
20K R13
3K R12
CH1 CH2 CH3 CH4
+5V
Q1 9014
R7 400
ZD3 3.9V
C8
ZD1 P6KE200
D5 UF 4005
U1 TOP245Y
EF25
C16 470uF/35V
C6 470uF/35V
T2 R6 33
C9 470p
R5 150
R4 150
C7 470uF/35V
SD1 STP20S100
C4 104
2M 1/2W
C3 47u
4.7M 1/2W
9.1K
1uF/50V
IN4148
C5
D6
ZD2 10V
817
U2
FIG. 12B.
A

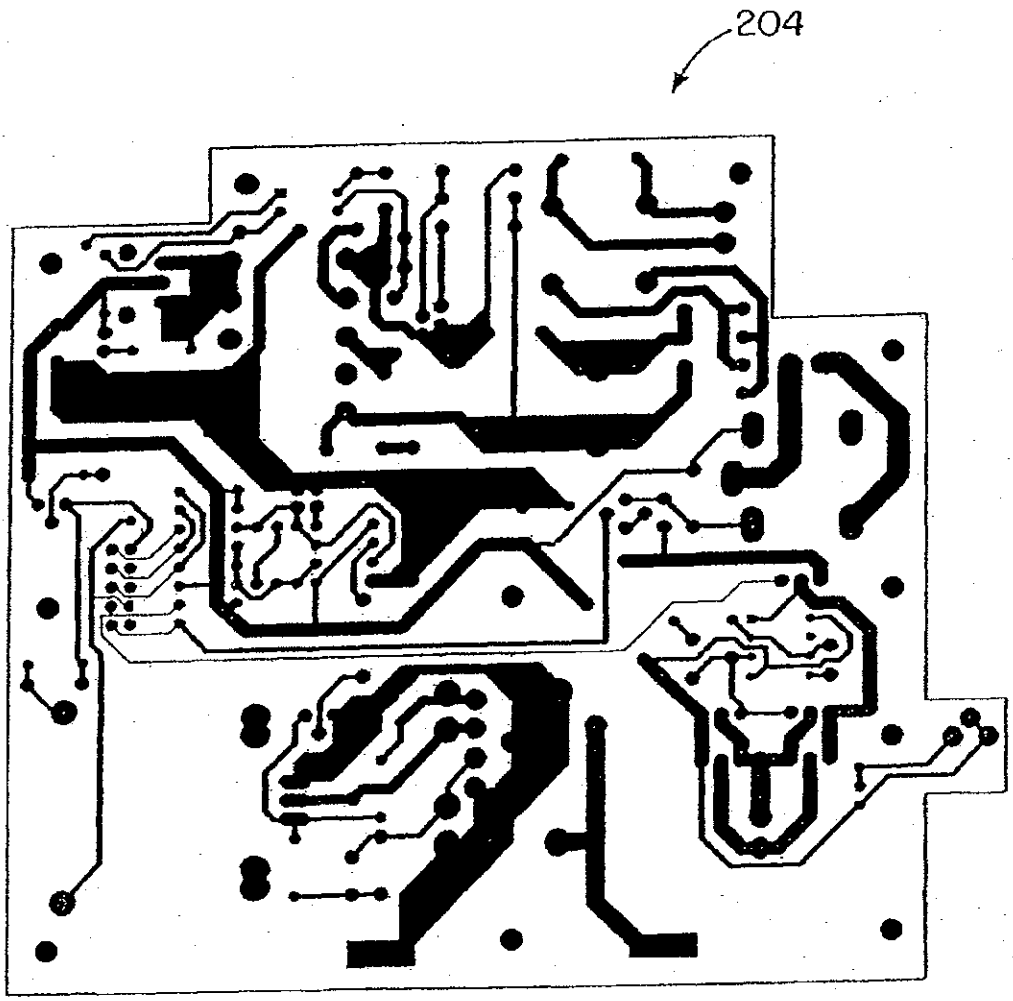


FIG. 13.

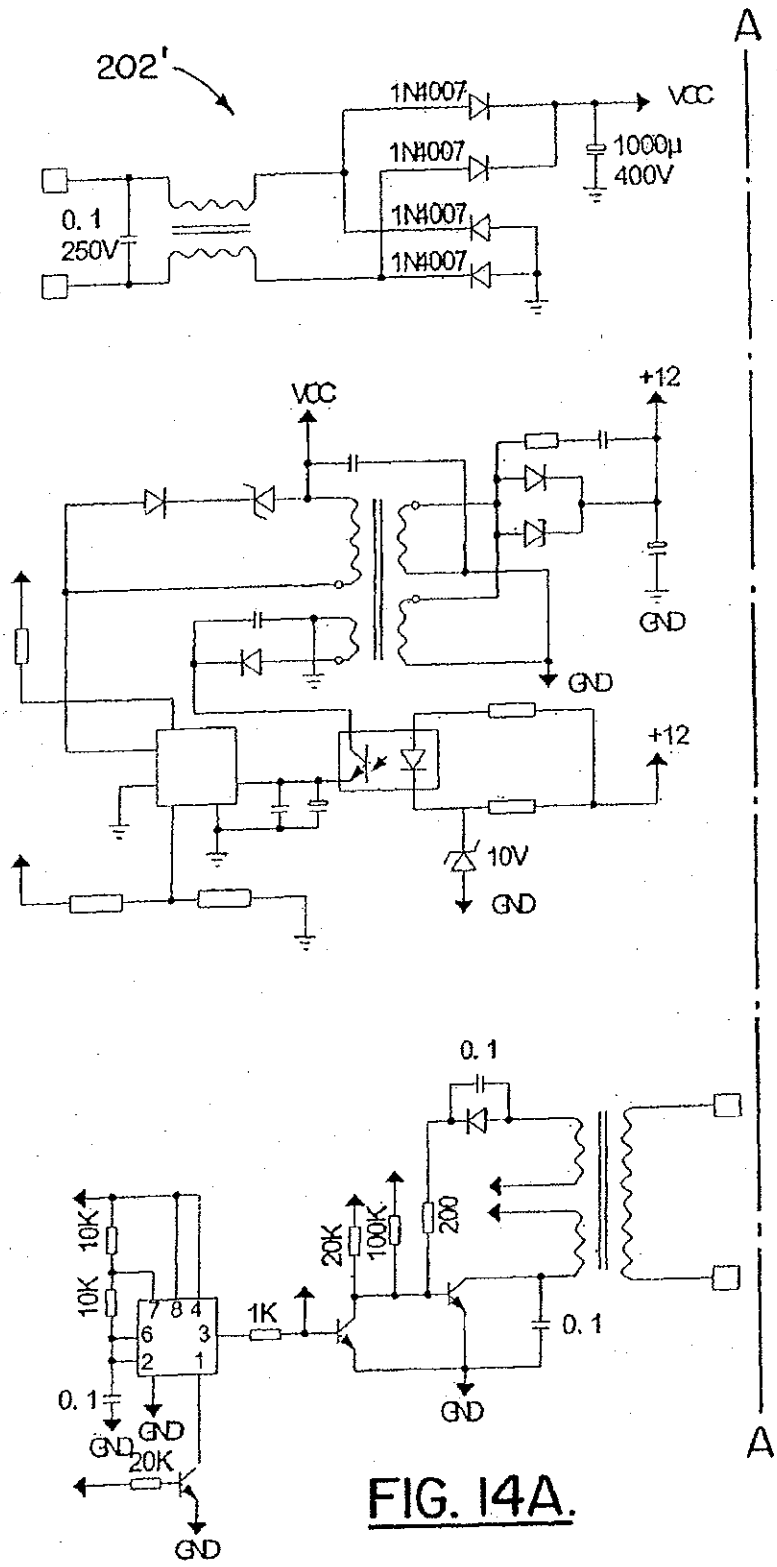

202'
1N4007
1N4007
1N4007
1N4007
VCC
1000μ
400V
0.1
250V
VCC
+12
GND
GND
+12
10V
GND
A
A
0.1
10K
10K
7 8 4
6 3
2 1
1K
20K
100K
200
0.1
0.1
GND
GND
GND
20K
GND

FIG. 14A.

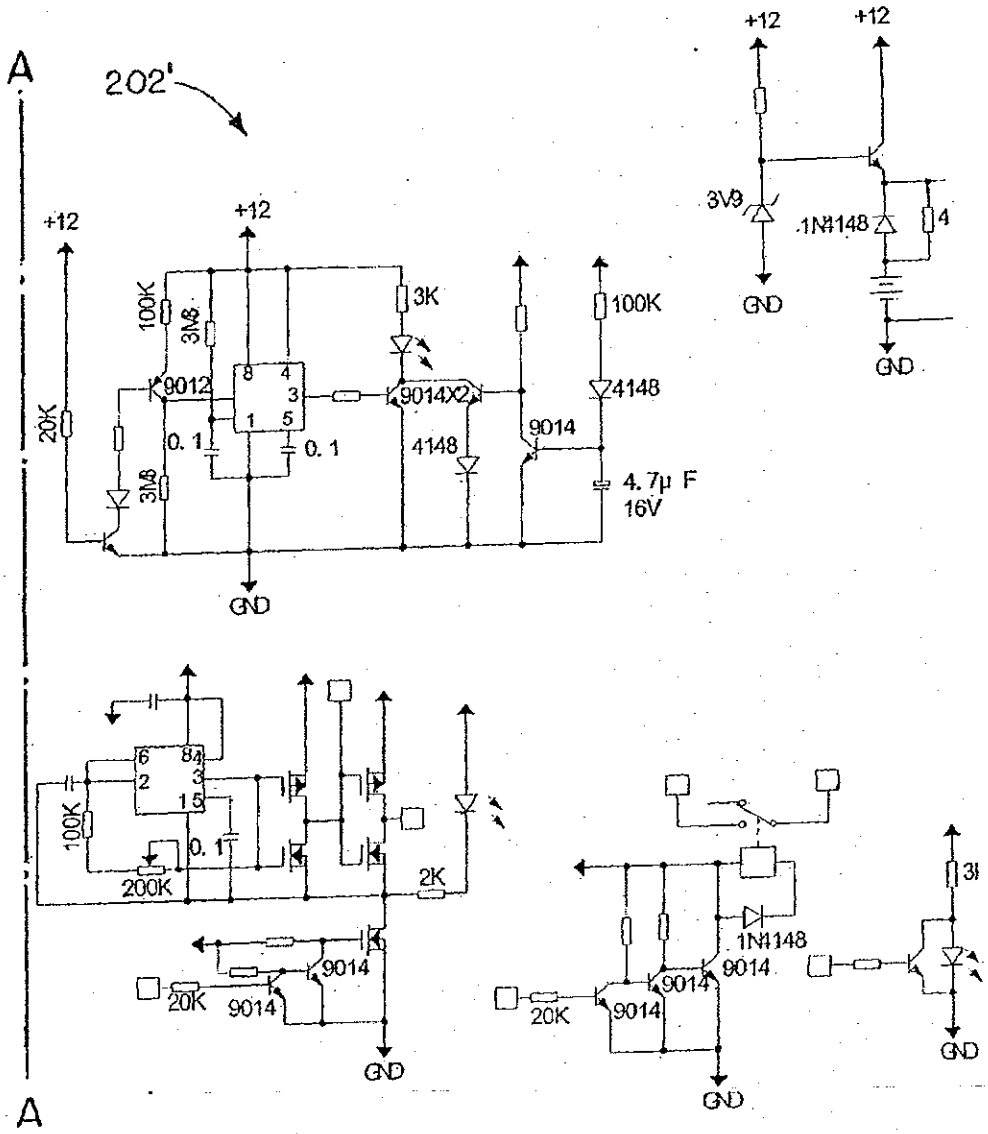
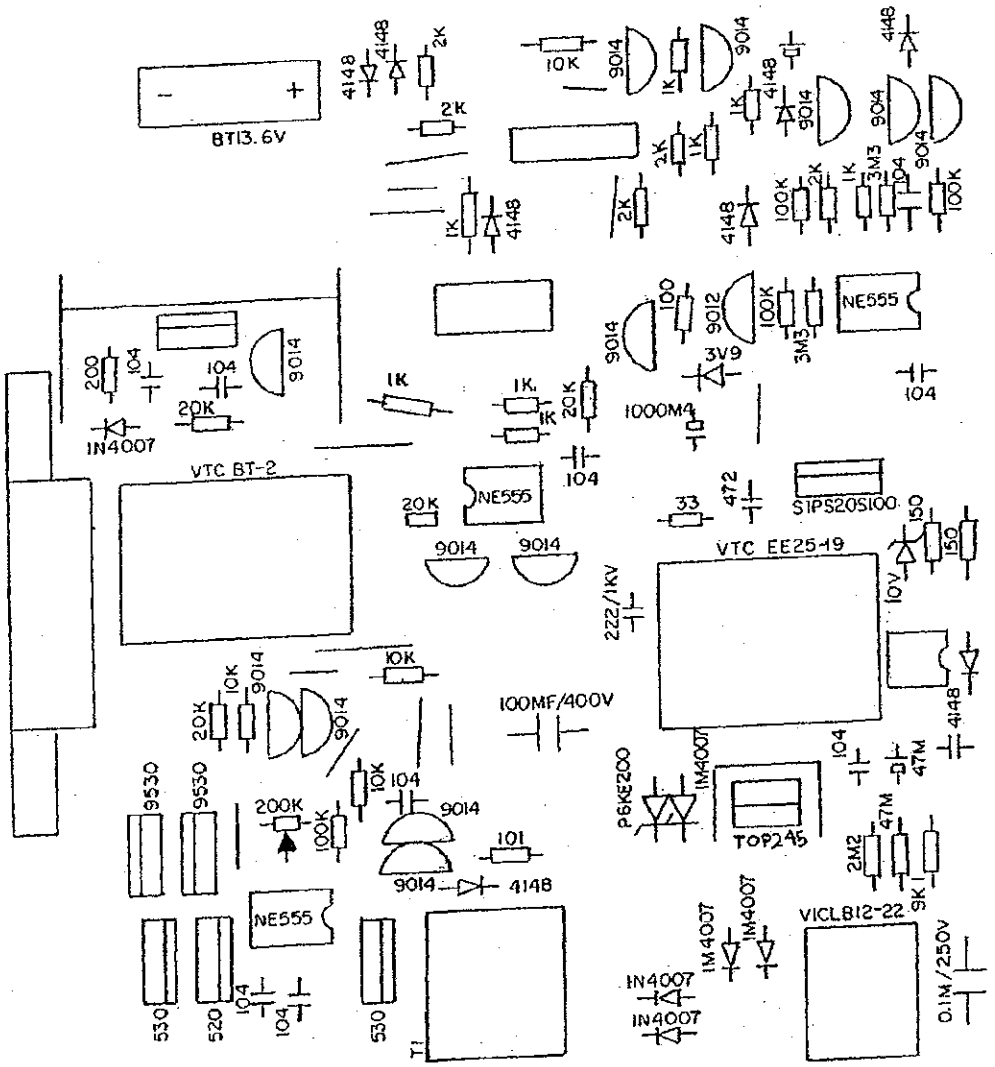

A
202'
+12
+12
100K
3M3
3K
100K
20K
9012
9014X2
4148
0.1
0.1
4148
9014
3M3
4.7μ F
16V
GND
+12
+12
3V9
1N4148
4
GND
GND
6
8
2
3
1
5
100K
0.1
200K
2K
9014
20K
9014
GND
1N4148
9014
9014
20K
9014
GND
3
GND
A

FIG. 14B.


BT13.6V
4148
2K
10K
9014
1K
100K
3M3
104
NE555
3V9
100
9012
200
20K
IN4007
VTC BT-2
1000M4
33
472
S1PS20S100
150
10V
VTC EE2519
222/1KV
100MF/400V
9530
200K
101
P6KE200
TOP245
47M
2M2
9K
VICLB12-22
0.1M/250V
530
520
T1

204'

FIG. 15.

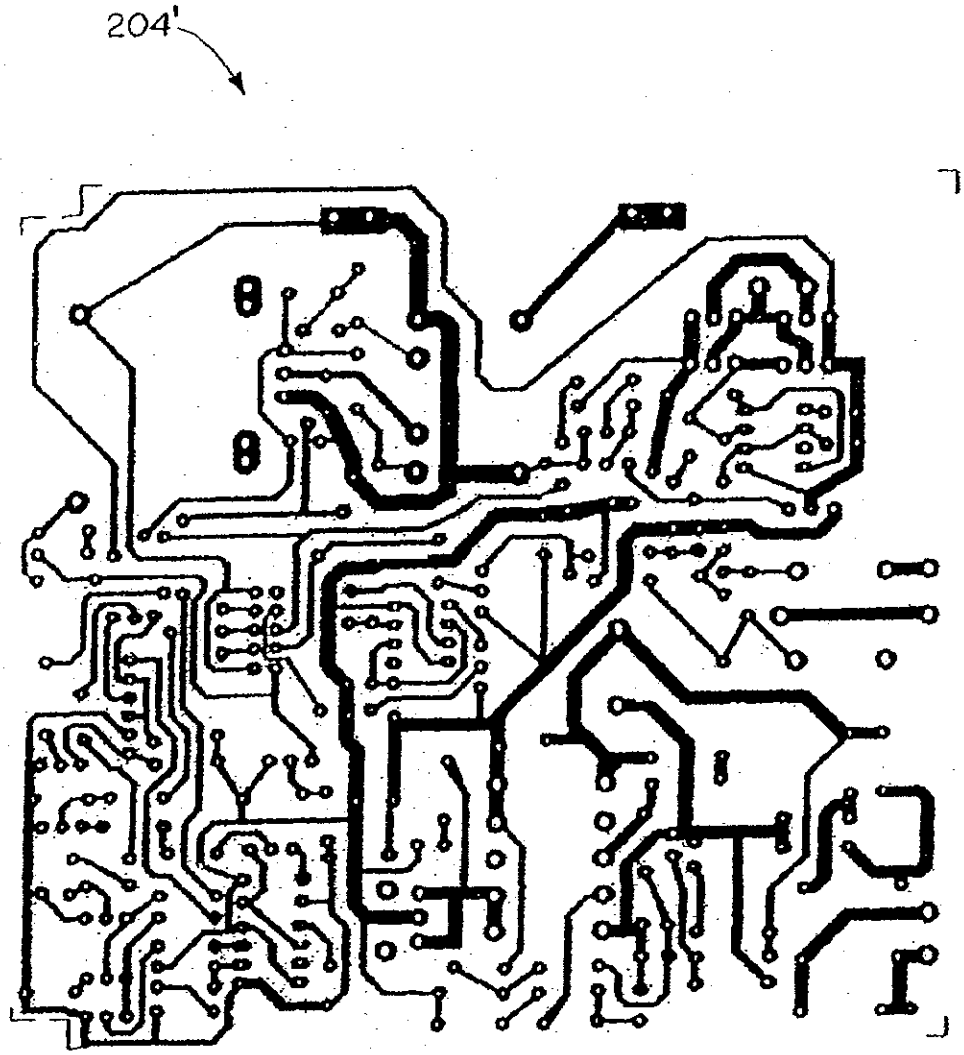


FIG. 16.

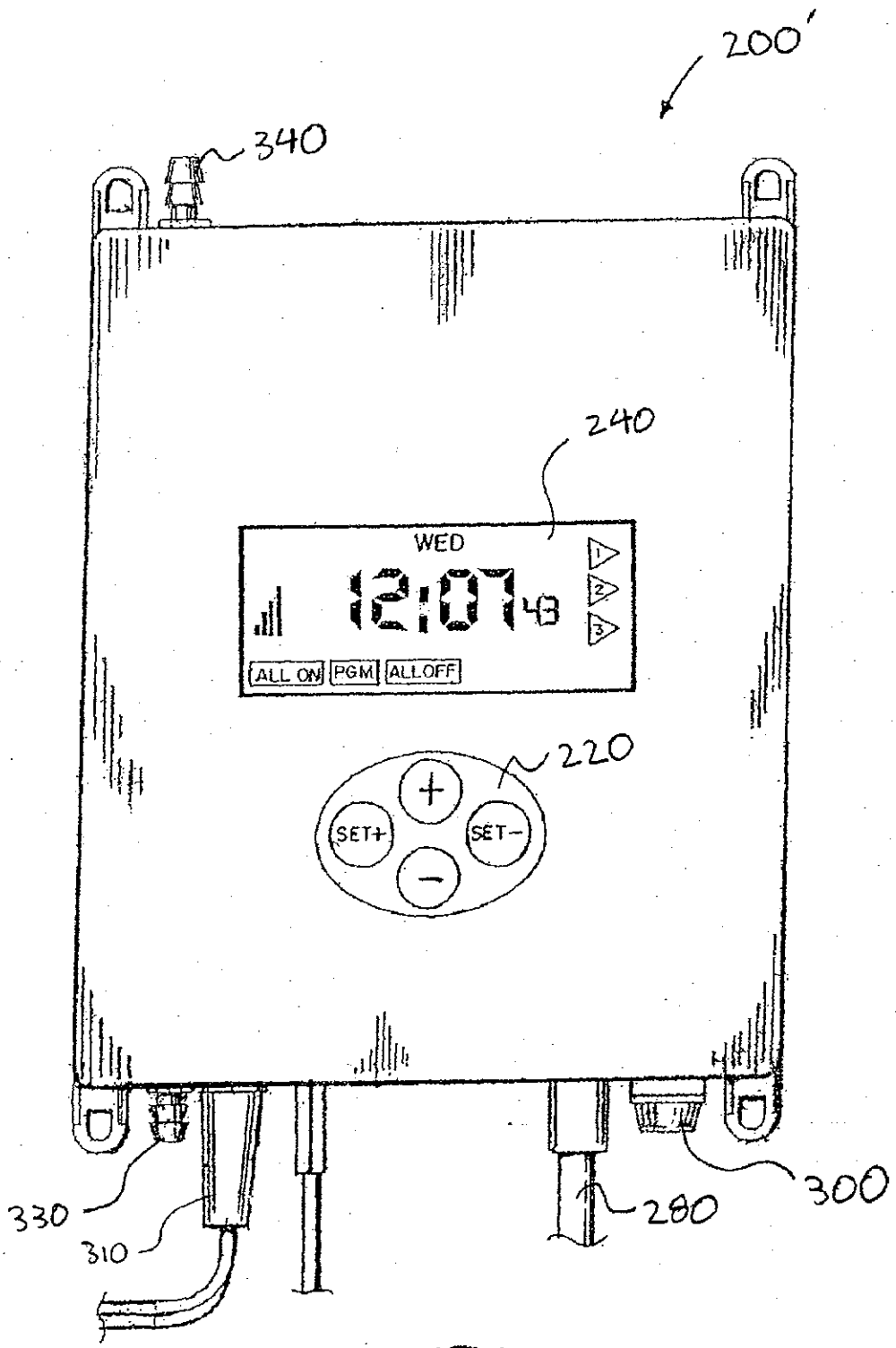

200'
340
240
WED
12:07 43
1
2
3
ALL ON
PGM
ALLOFF
220
+
SET+
SET-
−
330
310
280
300

FIG. 17A.

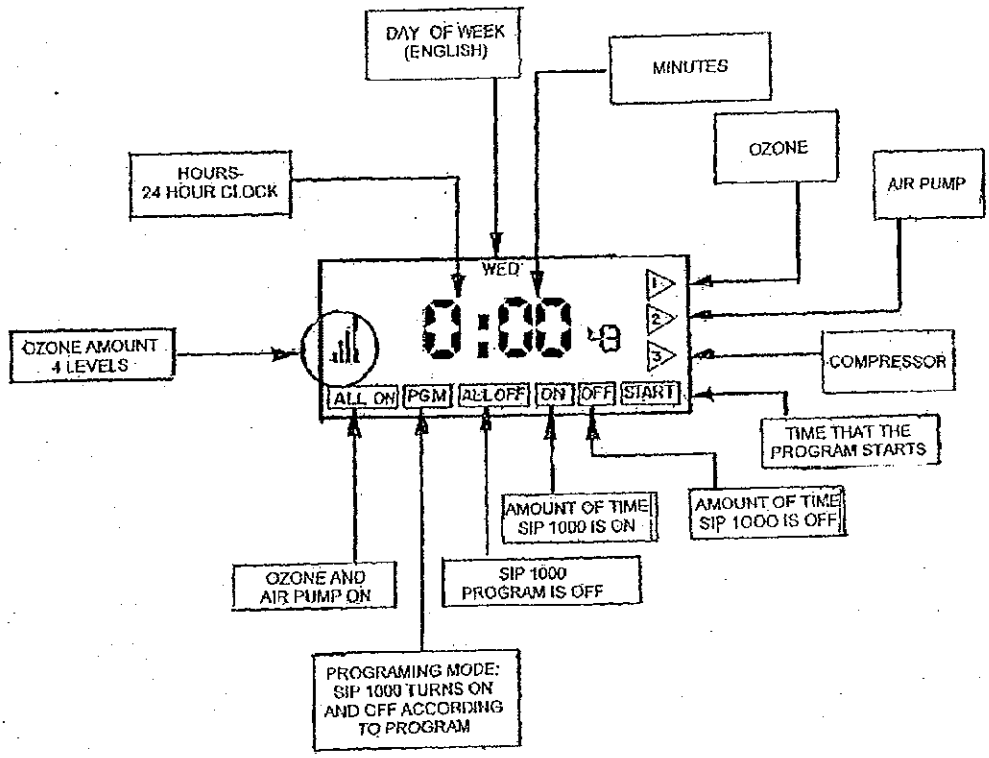


FIG. 17B.

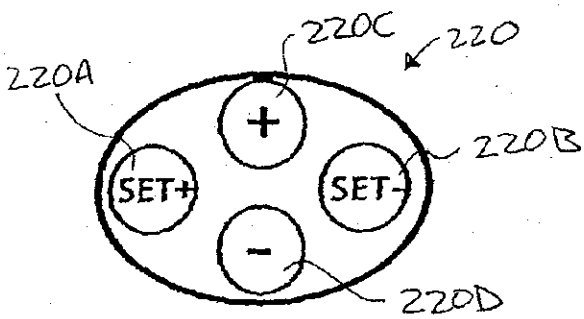


FIG. 17C.

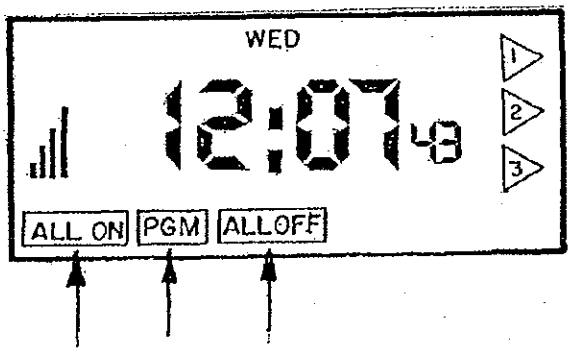


FIG. 18.

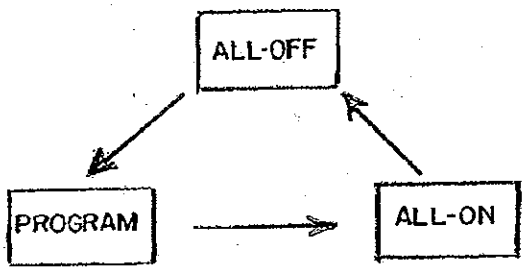


FIG. 19.

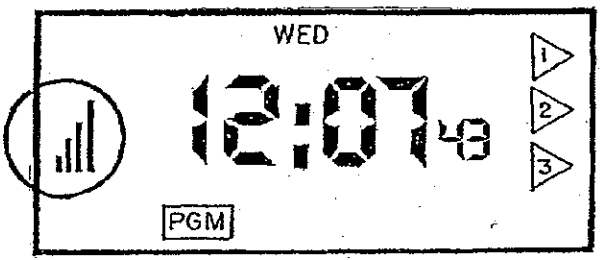


FIG. 20A.

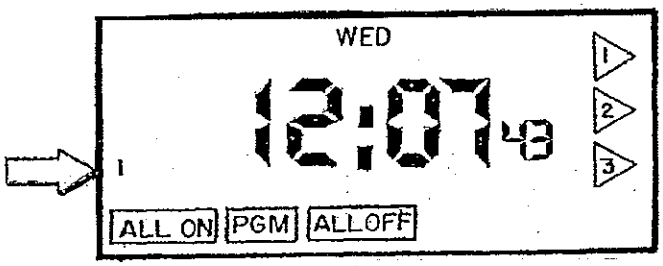


FIG. 20B.

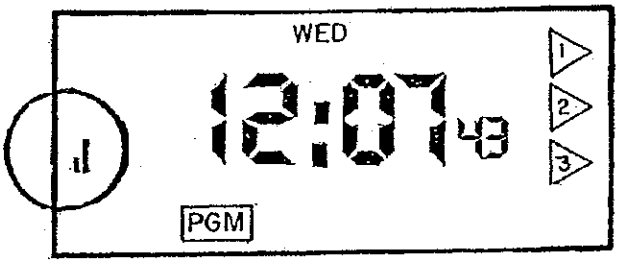


FIG. 20C.

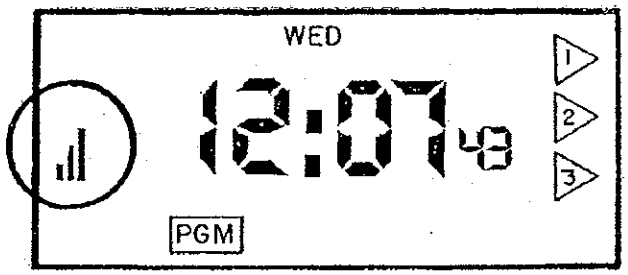


FIG. 20D.

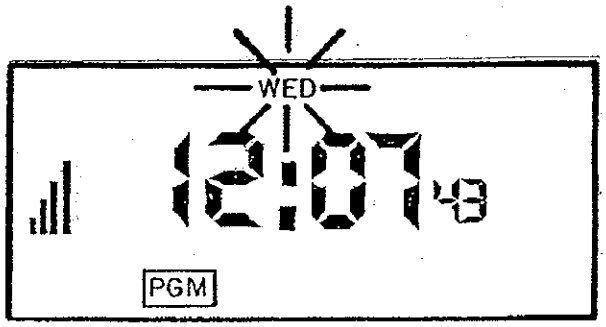


FIG. 21A.

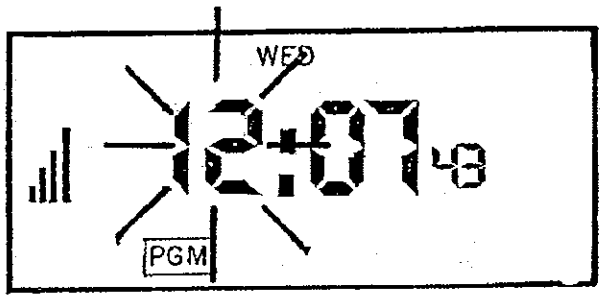


FIG. 21B.

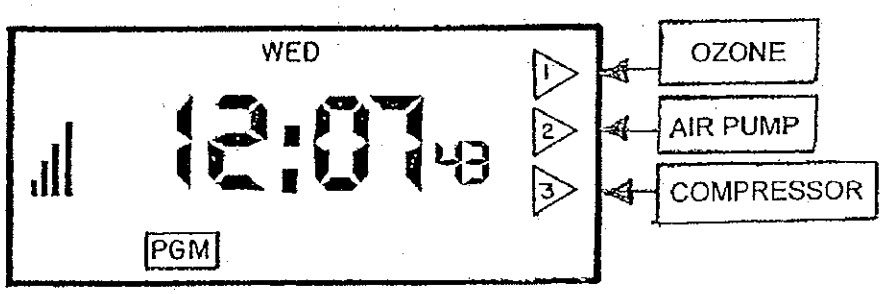


FIG. 22A.

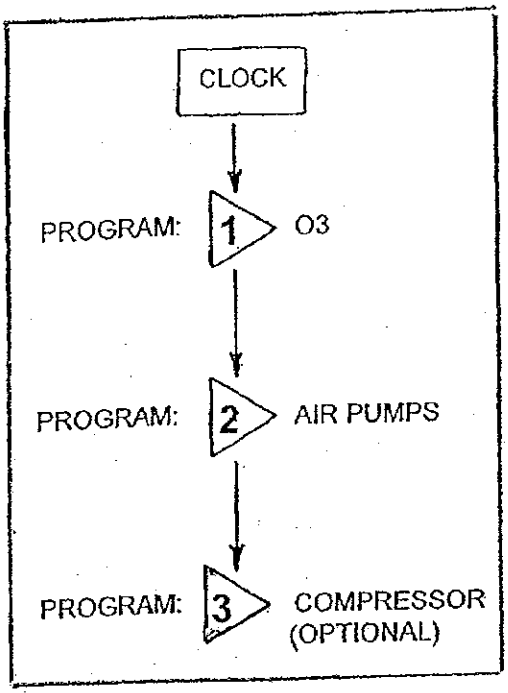


FIG. 22B.

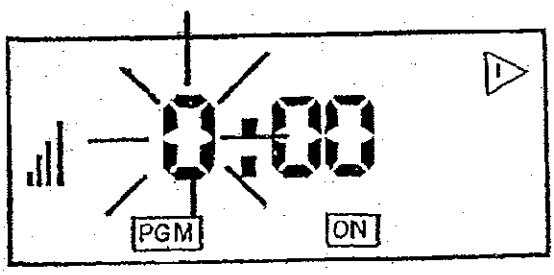


FIG. 23A.

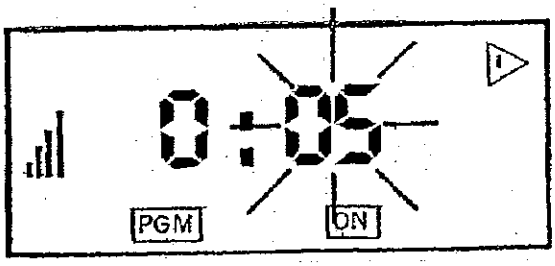


FIG. 23 B.

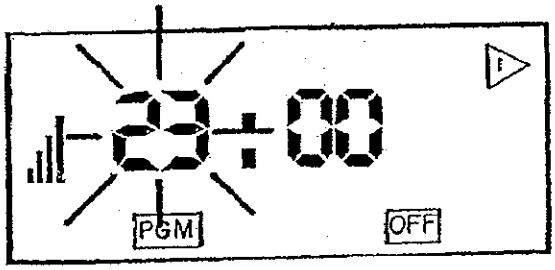


FIG. 23C.

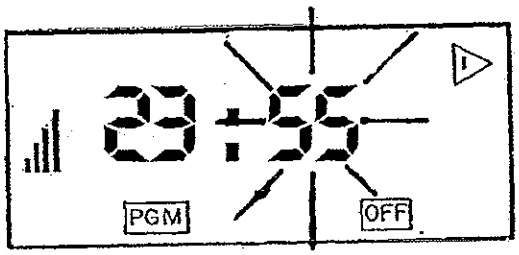


FIG. 23D.

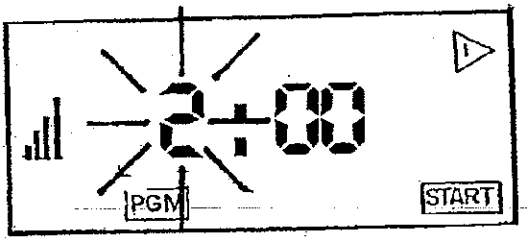


FIG. 23E.

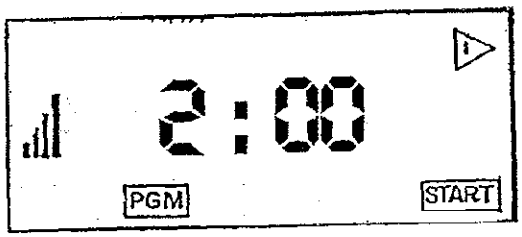


FIG. 23F.

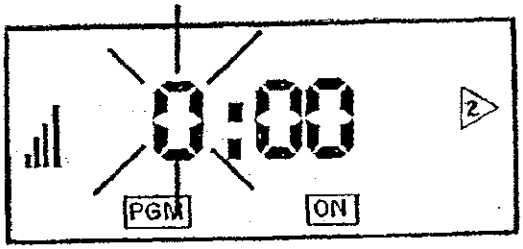


FIG. 24A.

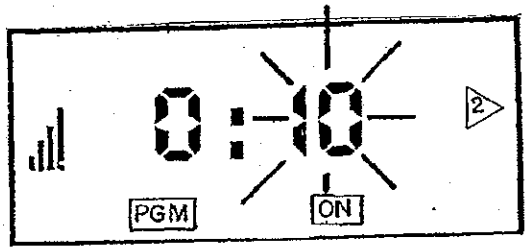


FIG. 24B.

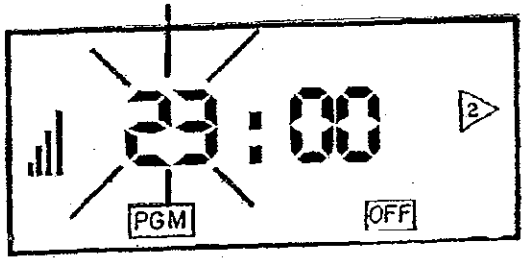


FIG. 24C.

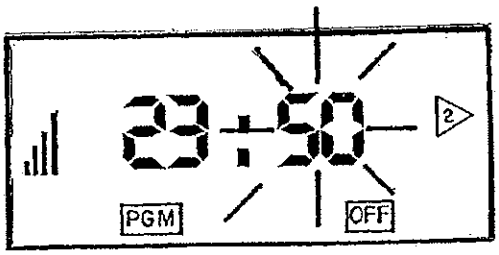


FIG. 24D.

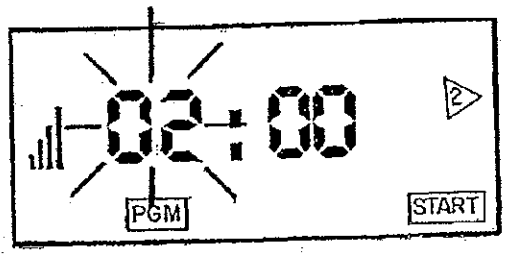


FIG. 24E.

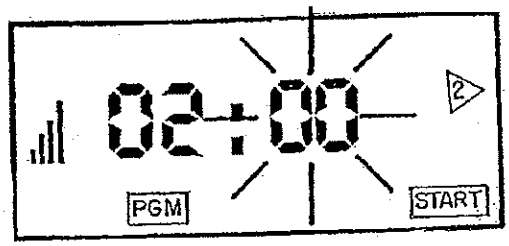


FIG. 24F.

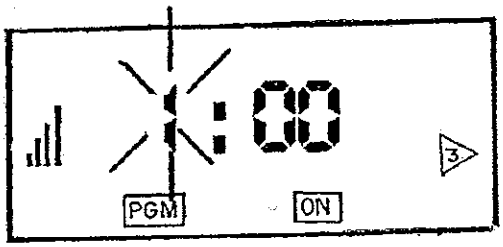


FIG. 25A.

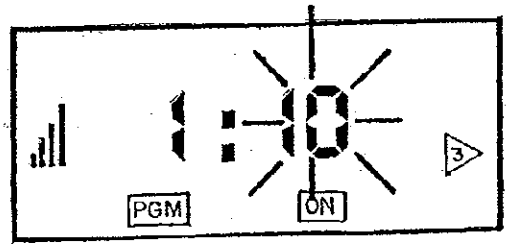


FIG. 25B.

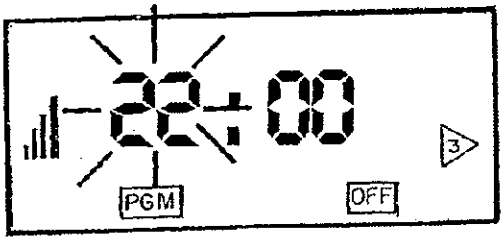


FIG. 25C.

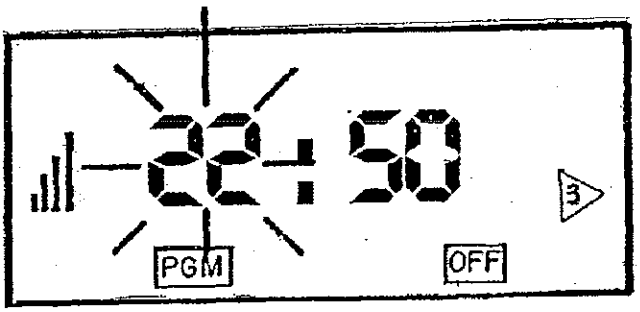


FIG. 25D.

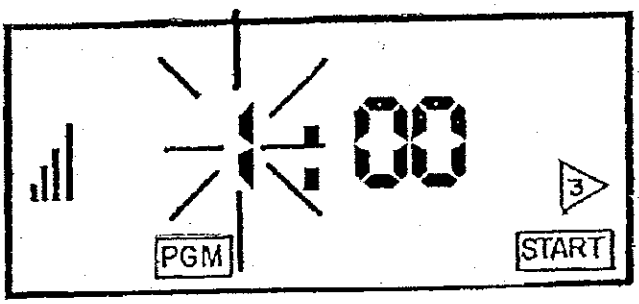


FIG. 25E.

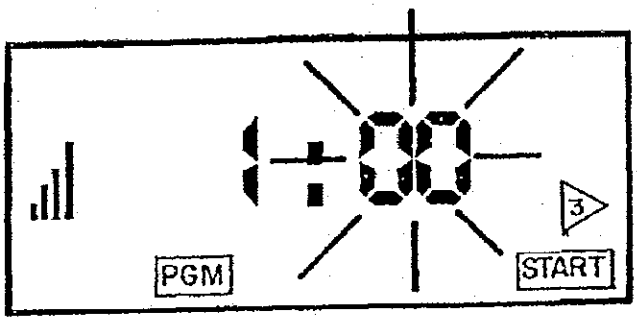


FIG. 25F.

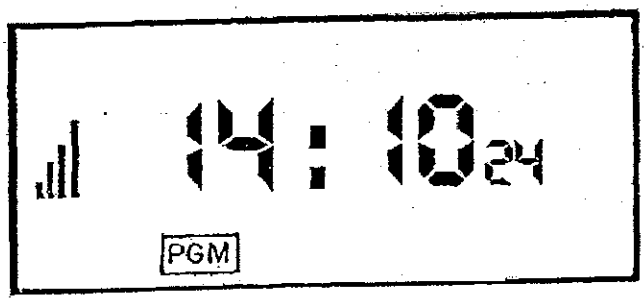


FIG. 25G.

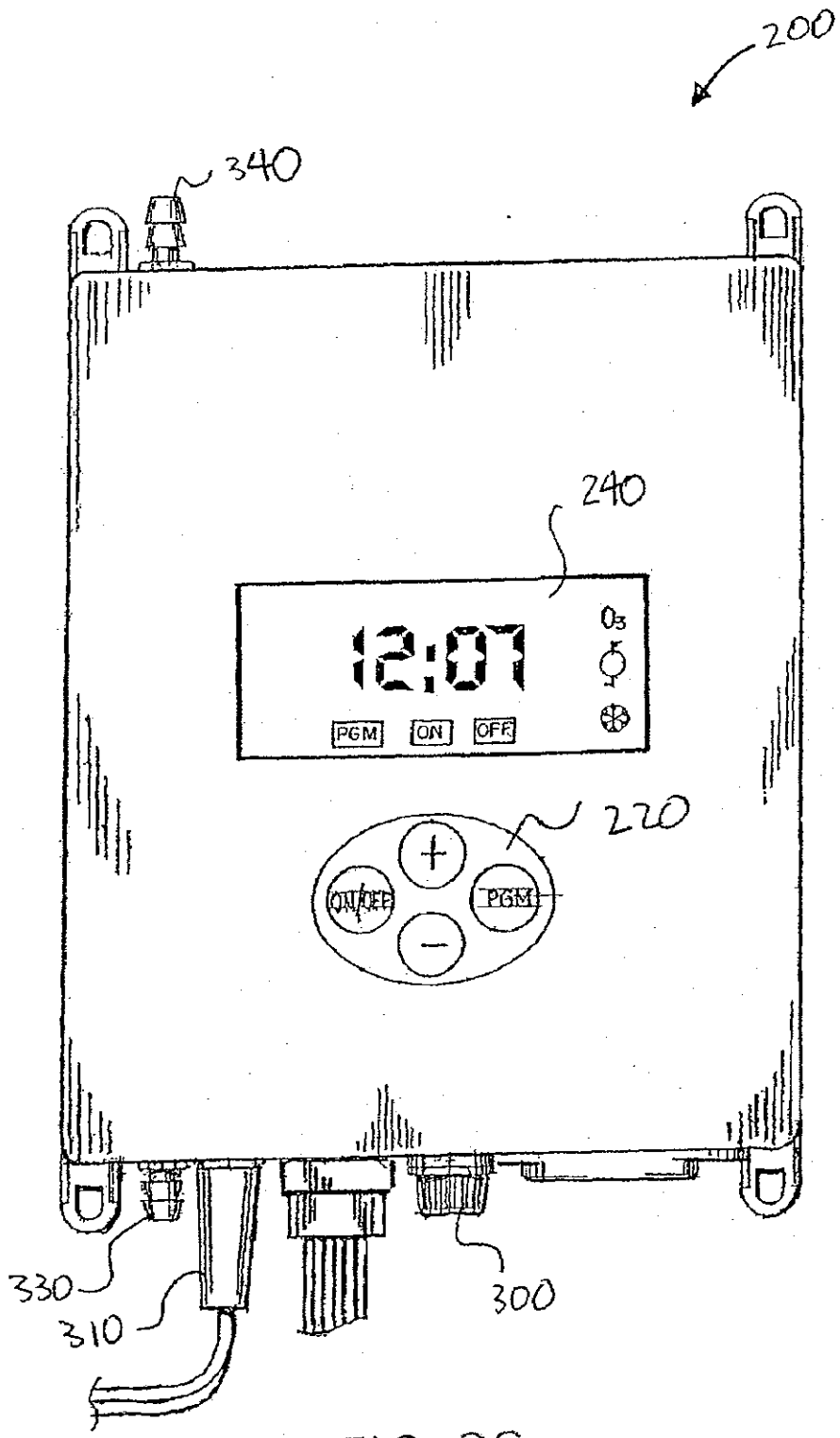


FIG. 26.

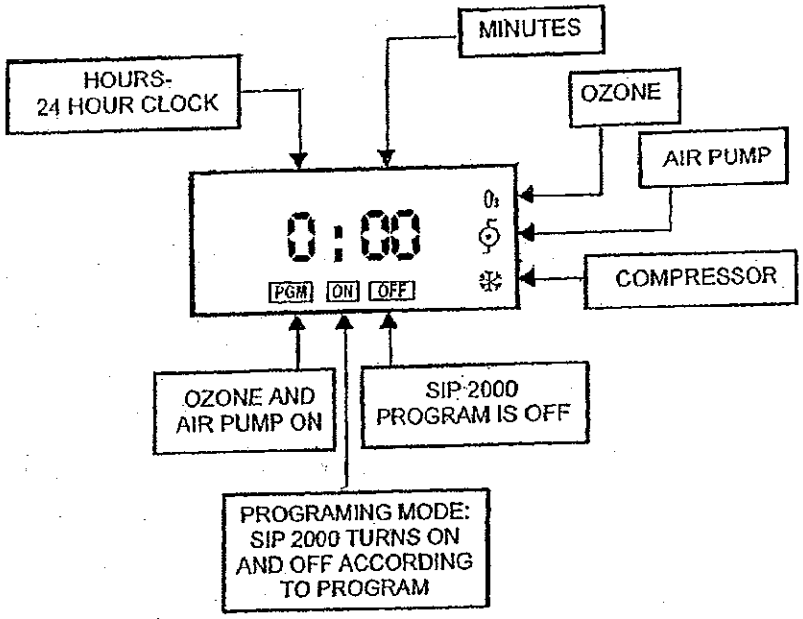

MINUTES
HOURS-
24 HOUR CLOCK
OZONE
AIR PUMP
0 : 00
PGM
ON
OFF
COMPRESSOR
OZONE AND
AIR PUMP ON
SIP 2000
PROGRAM IS OFF
PROGRAMING MODE:
SIP 2000 TURNS ON
AND OFF ACCORDING
TO PROGRAM

FIG. 27.

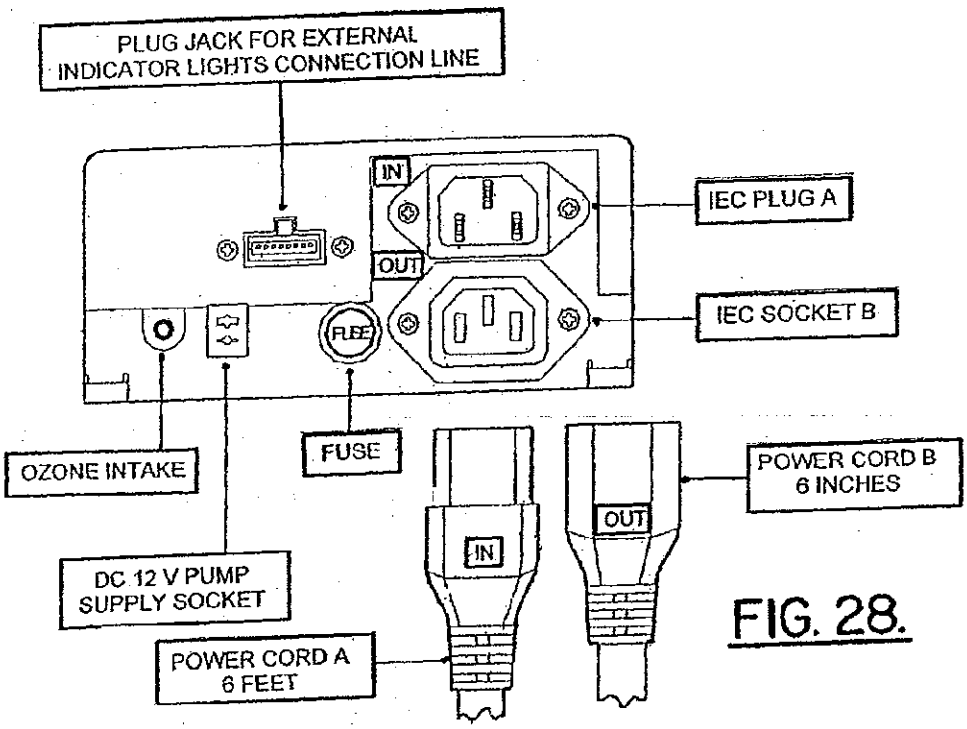

PLUG JACK FOR EXTERNAL
INDICATOR LIGHTS CONNECTION LINE
IN
OUT
IEC PLUG A
IEC SOCKET B
FUSE
OZONE INTAKE
FUSE
POWER CORD B
6 INCHES
IN
OUT
DC 12 V PUMP
SUPPLY SOCKET
POWER CORD A
6 FEET

FIG. 28.

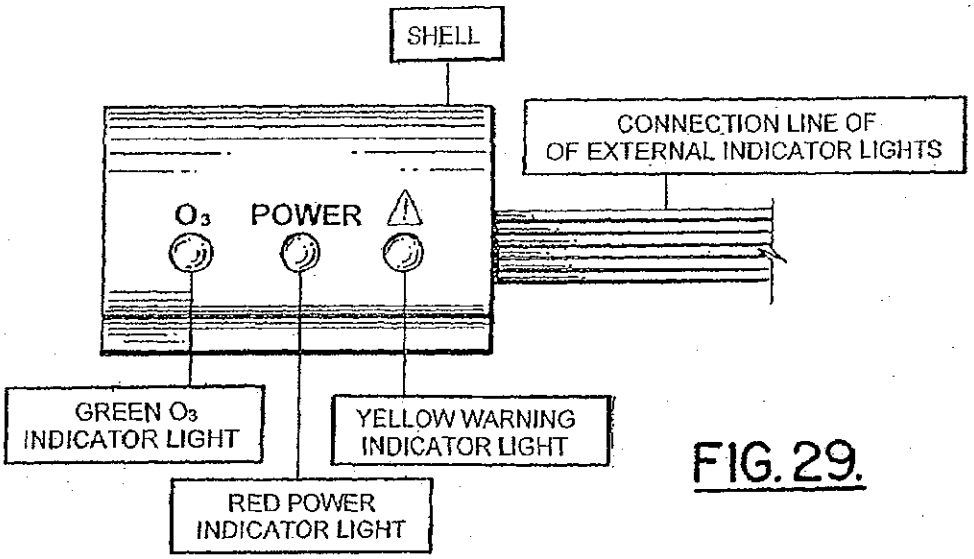


FIG. 29.

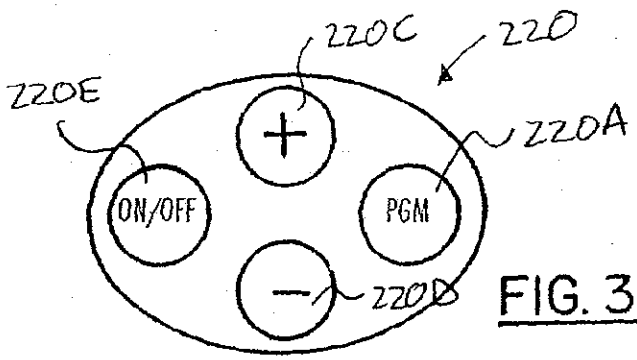


FIG. 30.

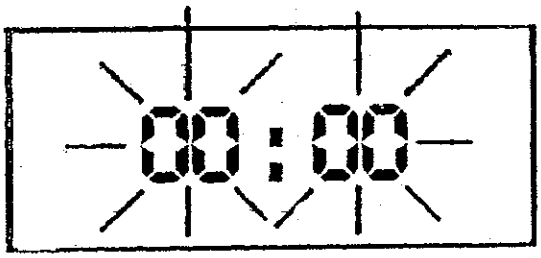


FIG. 31A.

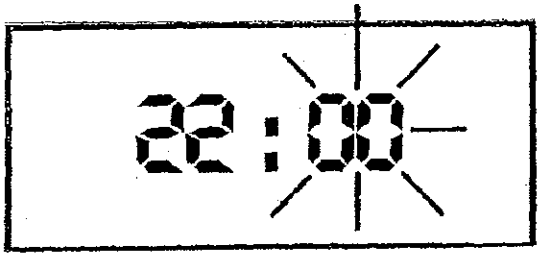


FIG. 31B.

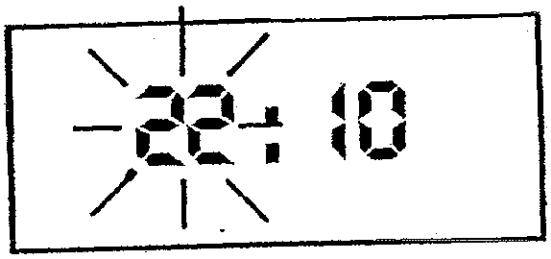


FIG. 31C.

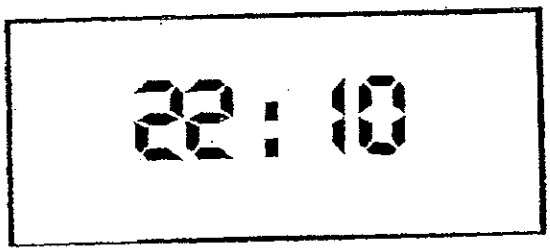


FIG. 31D.

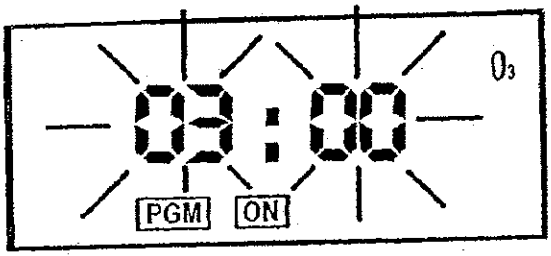


FIG. 32A.

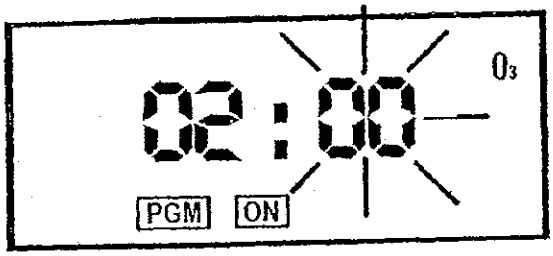


FIG. 32B.

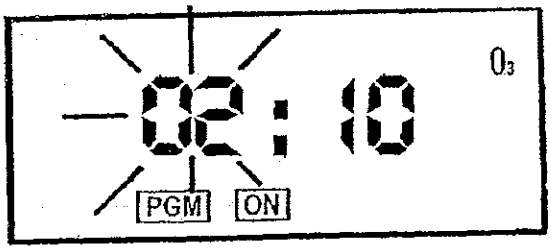


FIG. 32C.

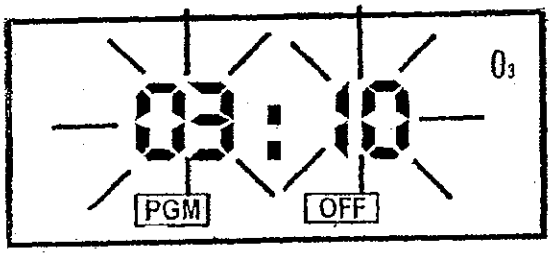


FIG. 32D.

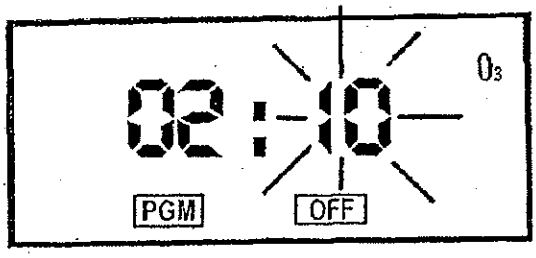


FIG. 32E.

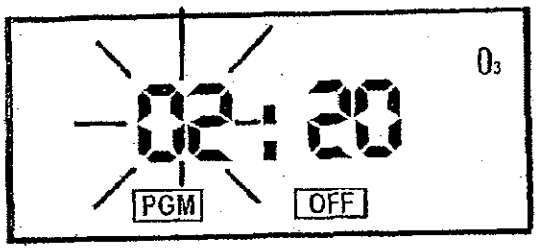


FIG. 32F.

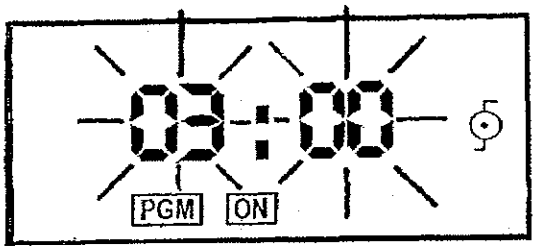


FIG. 33A.

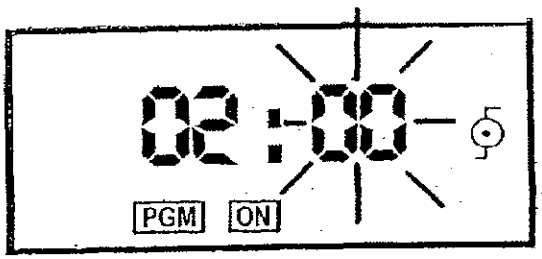


FIG. 33B.

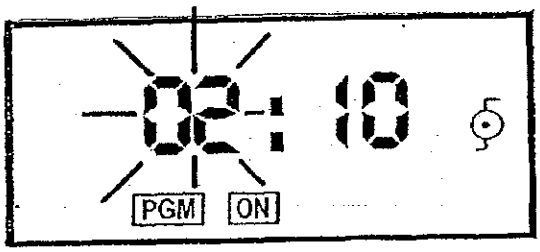


FIG. 33C.

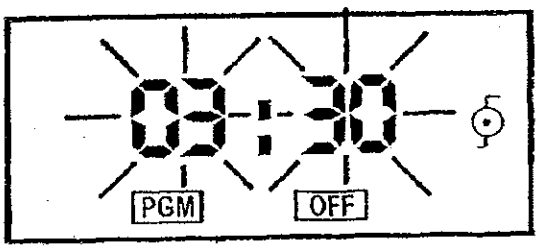


FIG. 33D.

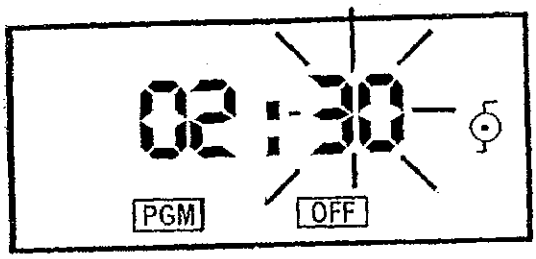


FIG.33E.

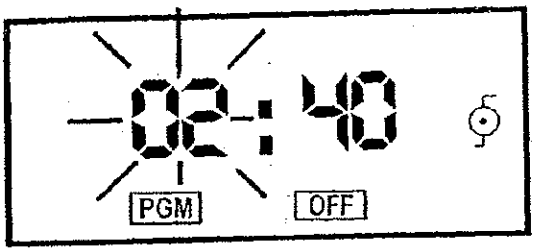


FIG.33F.

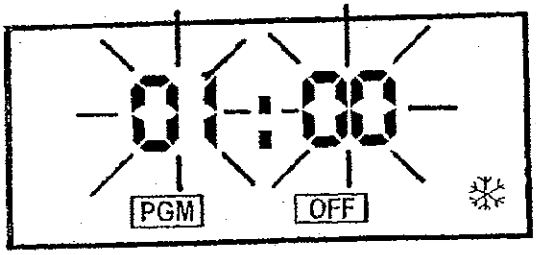


FIG.34A.

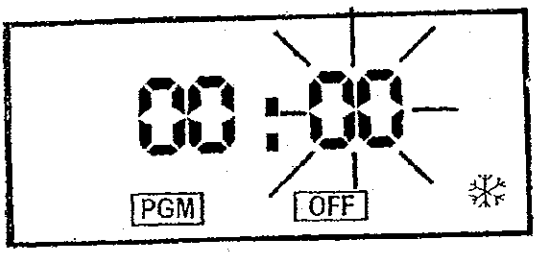


FIG.34B.

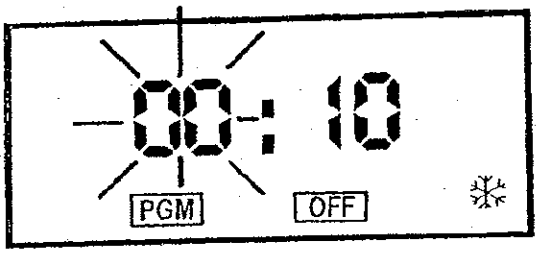


FIG.34C.

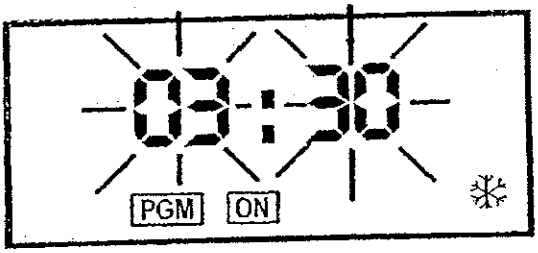


FIG.34D.

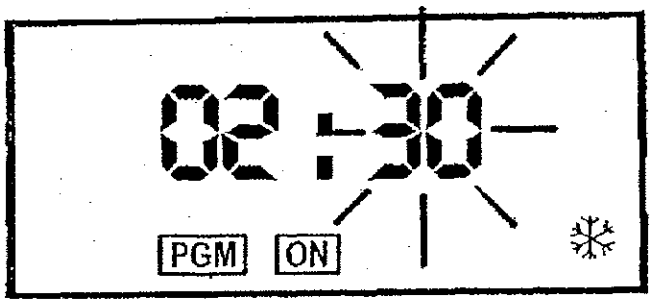


FIG. 34E.

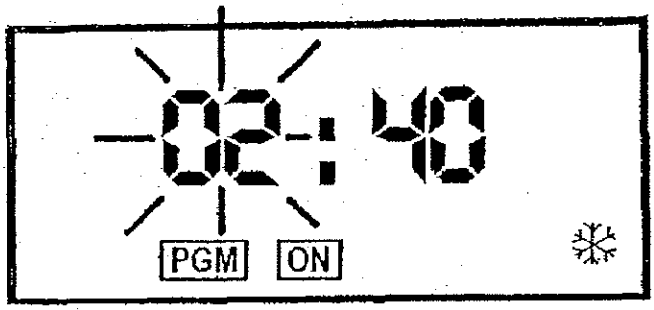


FIG. 34F.

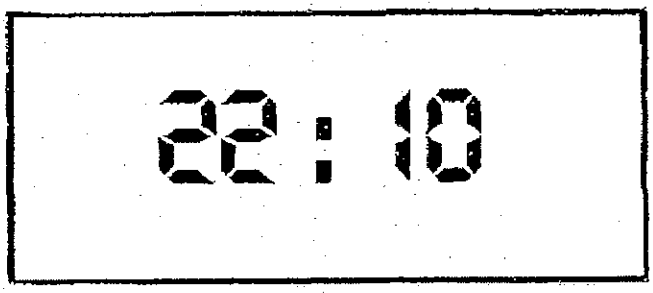


FIG. 34G.