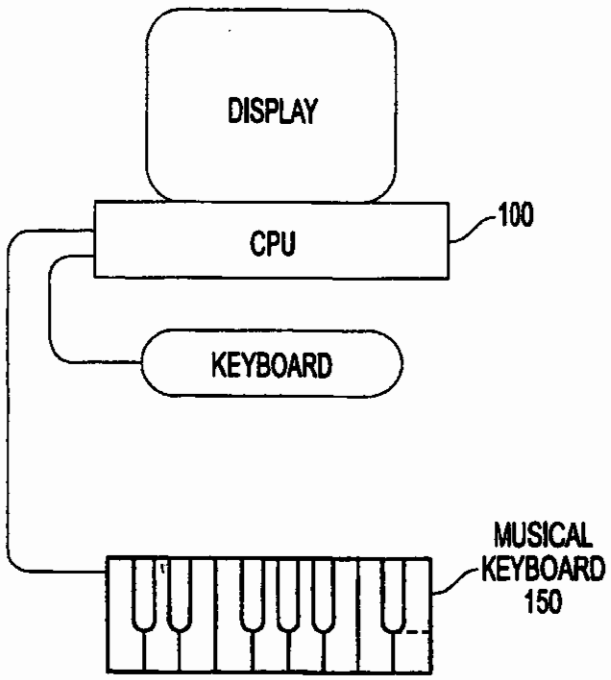


FIG. 1

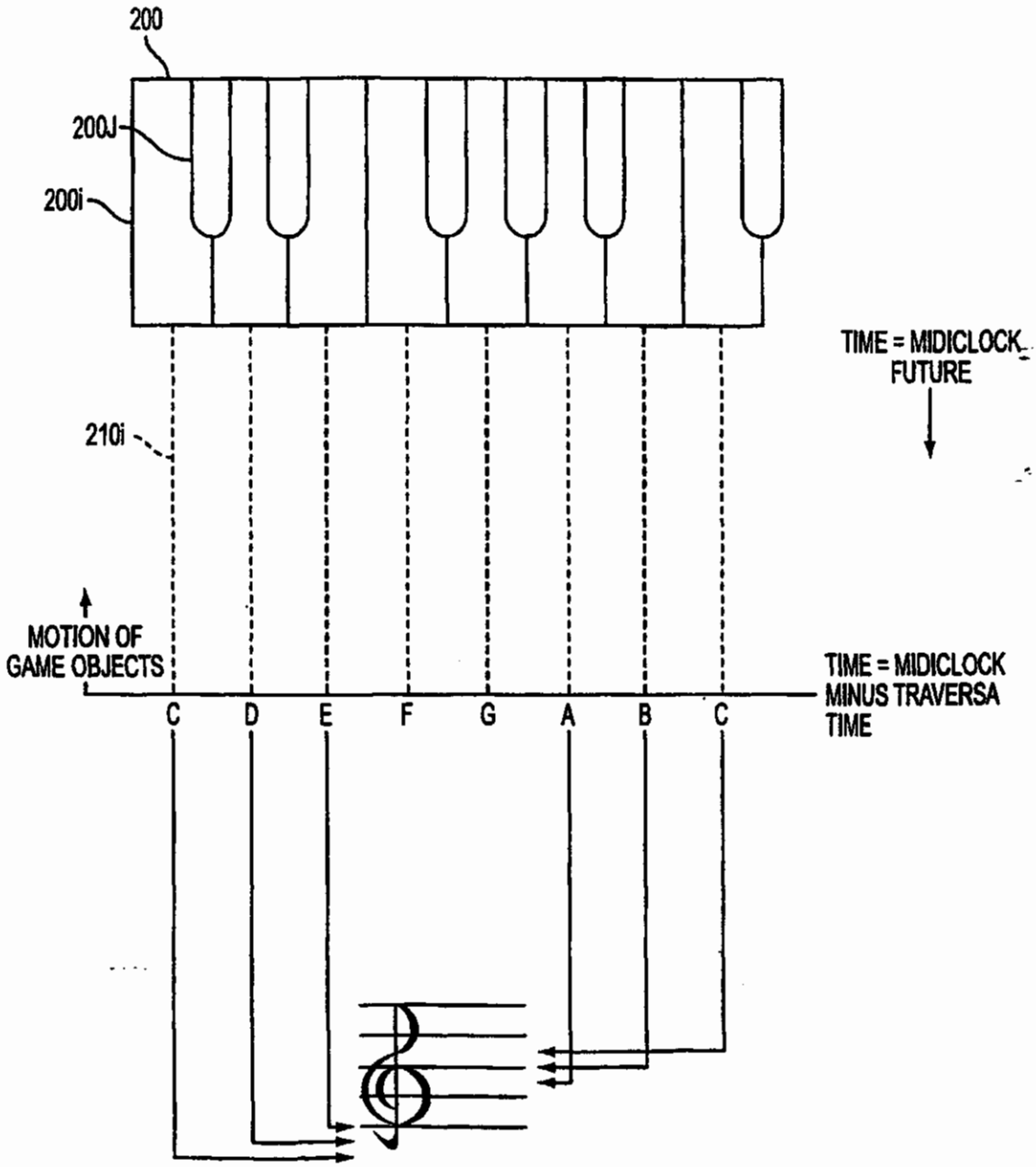

200
200J
200i
210i
TIME = MIDICLOCK
FUTURE
MOTION OF
GAME OBJECTS
TIME = MIDICLOCK
MINUS TRAVERSA
TIME
C
D
E
F
G
A
B
C

FIG. 2

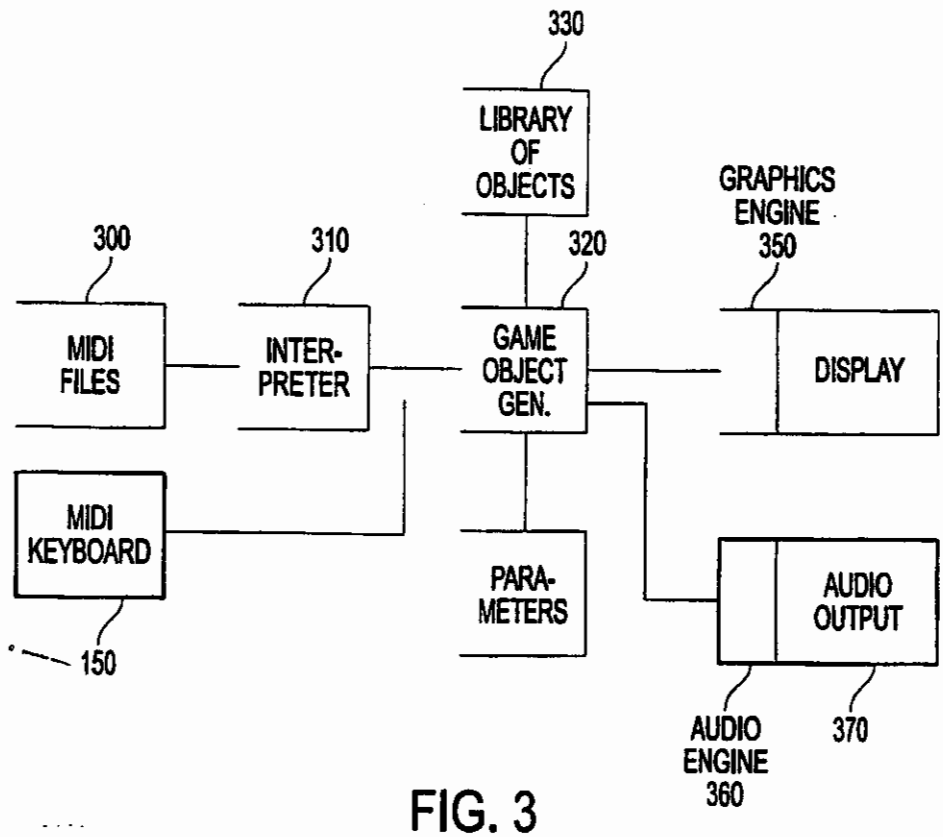

330
LIBRARY OF OBJECTS
GRAPHICS ENGINE 350
300
310
320
MIDI FILES
INTER-PRETER
GAME OBJECT GEN.
DISPLAY
MIDI KEYBOARD
PARA-METERS
AUDIO OUTPUT
150
AUDIO ENGINE 360
370

FIG. 3

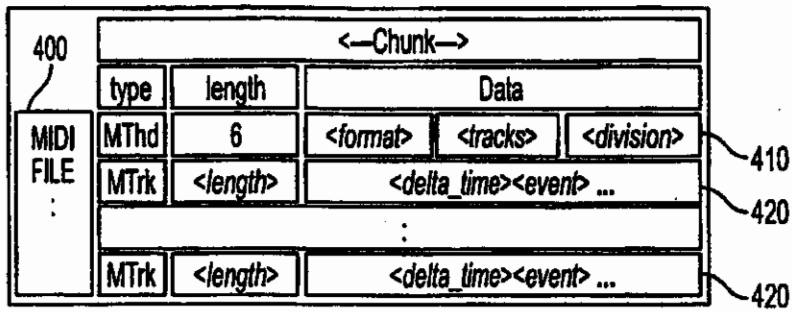


FIG. 4

Header Chunk				
Chunk Type	length	Data		
4 bytes (ascii)	4 bytes (32-bit binary)	<– *length* (= 6 bytes) –>		
		16-bit	16-bit	16-bit
MThd	<length>	<format>	<tracks>	<division>

FIG. 5

Track Chunk		
type	length	Data
4 bytes (ascii)	4 bytes (32-bit binary)	<-- *length* bytes --> (binary data)
MTrk	*<length>*	*<delta_time><event>* ...

FIG. 6

FF <*type*> <*length*> <*data*>

where:

<*type*>
is a single byte, specifying the type of meta-event.
The possible range is 00-7F. Not all values in this range are defined, but programs must be able to cope with (ie ignore) unexpected values by examining the length and skipping over the data portion.

<*length*>
is the number of bytes of <*data*> following.
This is a variable length quantity
0 is a valid <*length*>

<*data*>
zero or more bytes of data

FIG. 7

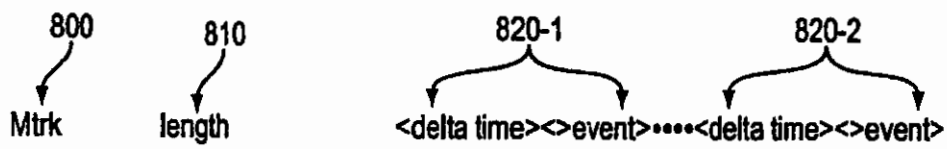

800
810
820-1
820-2
Mtrk
length
<delta time><><event>••••<delta time><><event>

FIG. 8

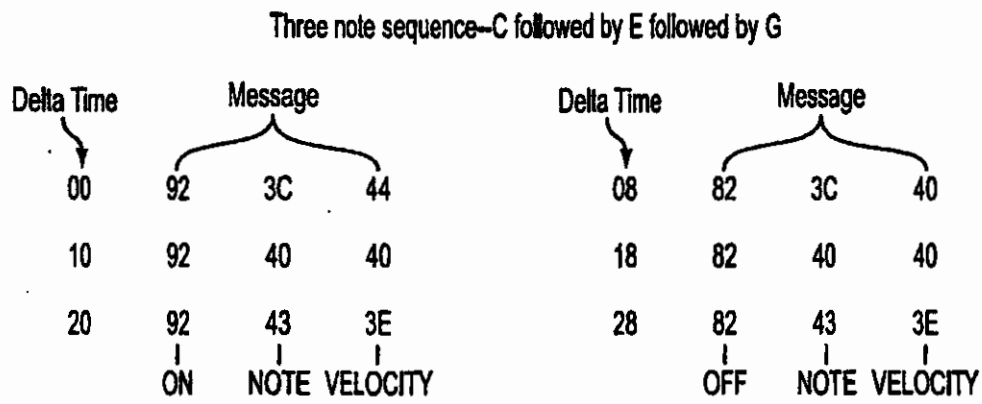

Three note sequence--C followed by E followed by G
Delta Time
Message
00
92
3C
44
10
92
40
40
20
92
43
3E
ON
NOTE
VELOCITY
Delta Time
Message
08
82
3C
40
18
82
40
40
28
82
43
3E
OFF
NOTE
VELOCITY

FIG. 9

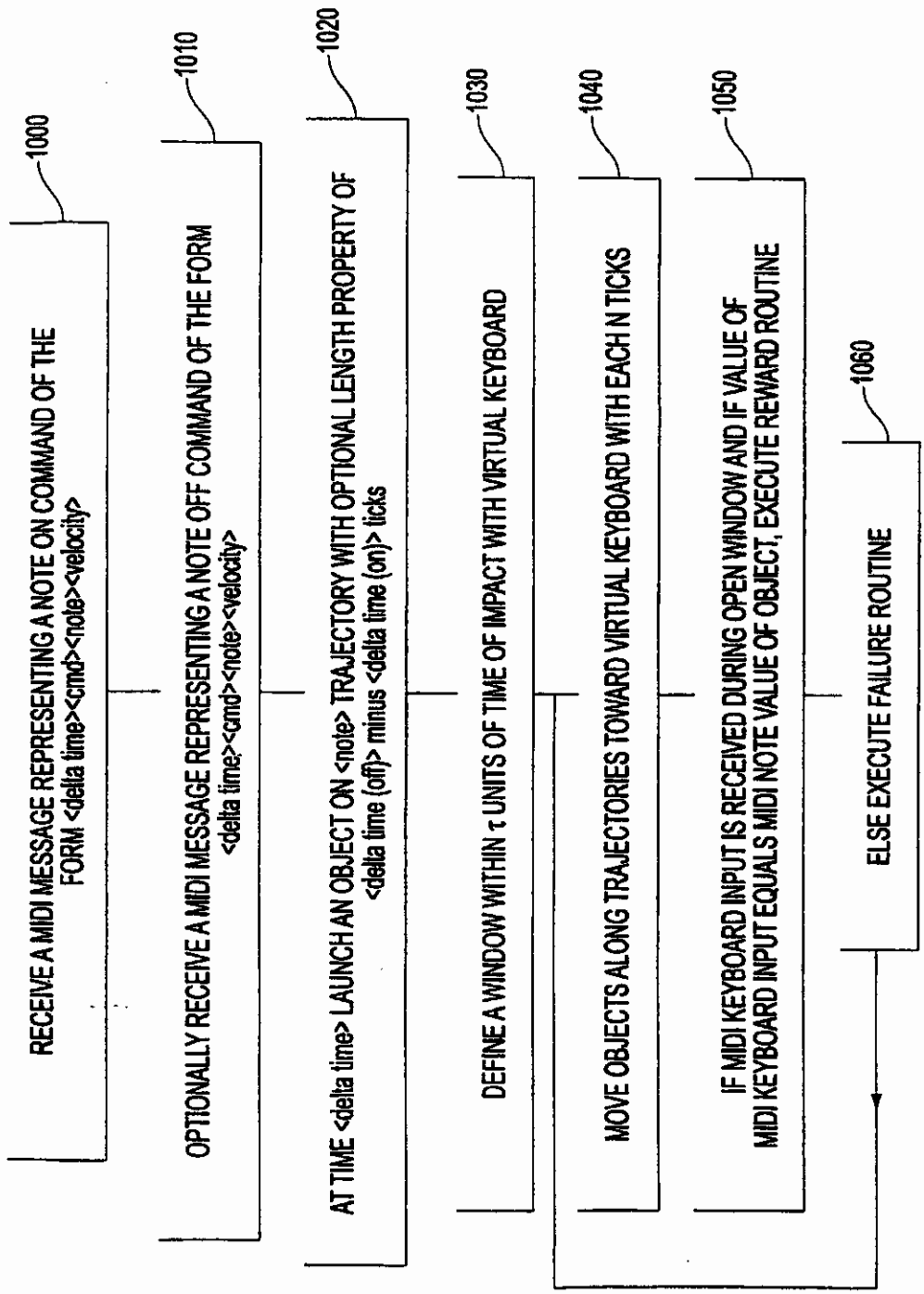

1000
RECEIVE A MIDI MESSAGE REPRESENTING A NOTE ON COMMAND OF THE FORM <delta time><cmd><note><velocity>
1010
OPTIONALLY RECEIVE A MIDI MESSAGE REPRESENTING A NOTE OFF COMMAND OF THE FORM <delta time><cmd><note><velocity>
1020
AT TIME <delta time> LAUNCH AN OBJECT ON <note> TRAJECTORY WITH OPTIONAL LENGTH PROPERTY OF <delta time (off)> minus <delta time (on)> ticks
1030
DEFINE A WINDOW WITHIN τ UNITS OF TIME OF IMPACT WITH VIRTUAL KEYBOARD
1040
MOVE OBJECTS ALONG TRAJECTORIES TOWARD VIRTUAL KEYBOARD WITH EACH N TICKS
1050
IF MIDI KEYBOARD INPUT IS RECEIVED DURING OPEN WINDOW AND IF VALUE OF MIDI KEYBOARD INPUT EQUALS MIDI NOTE VALUE OF OBJECT, EXECUTE REWARD ROUTINE
1060
ELSE EXECUTE FAILURE ROUTINE

FIG. 10

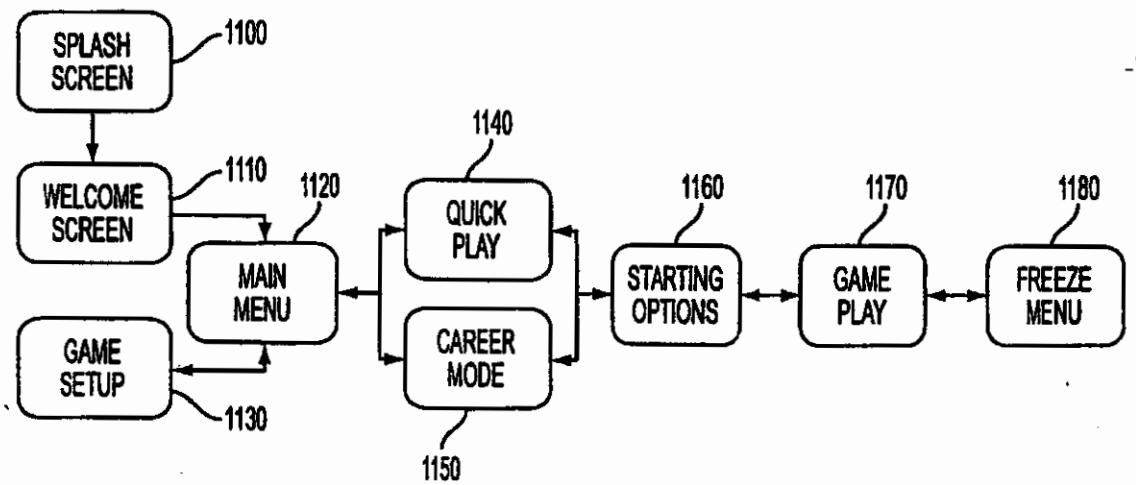

SPLASH SCREEN
1100
WELCOME SCREEN
1110
MAIN MENU
1120
GAME SETUP
1130
1140
QUICK PLAY
CAREER MODE
1150
1160
STARTING OPTIONS
1170
GAME PLAY
1180
FREEZE MENU

FIG. 11

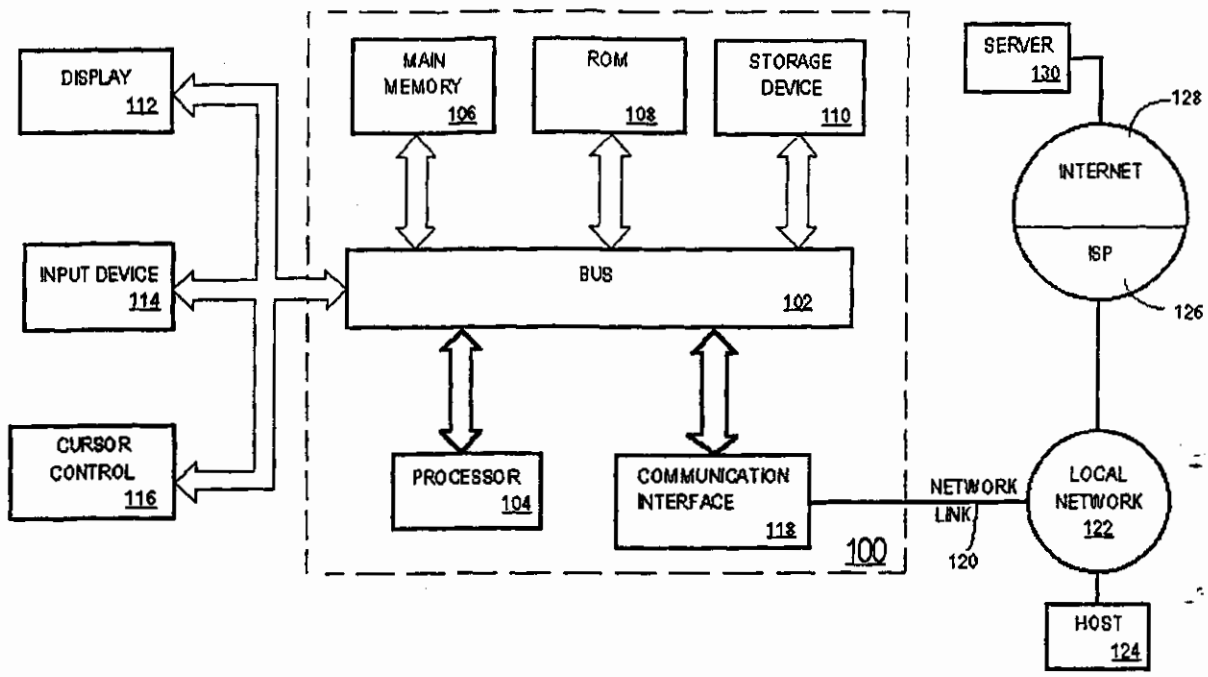

DISPLAY
112
INPUT DEVICE
114
CURSOR
CONTROL
116
MAIN
MEMORY
106
ROM
108
STORAGE
DEVICE
110
BUS
102
PROCESSOR
104
COMMUNICATION
INTERFACE
118
100
NETWORK
LINK
120
SERVER
130
128
INTERNET
ISP
126
LOCAL
NETWORK
122
HOST
124

FIGURE 12

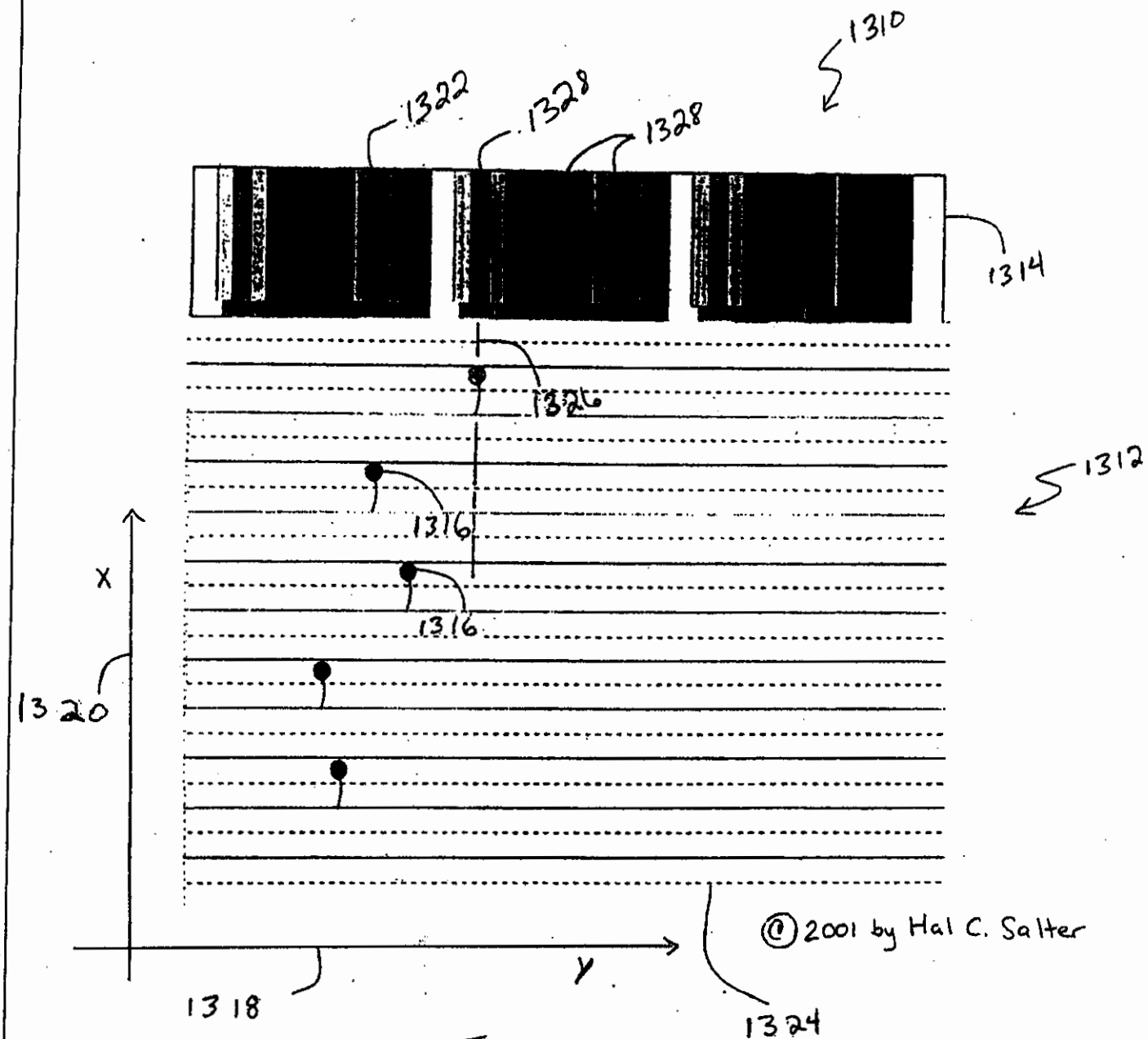

1310
1322
1328
1328
1314
1326
1312
1316
1316
X
1320
Y
1318
1324
© 2001 by Hal C. Salter

Fig. 13

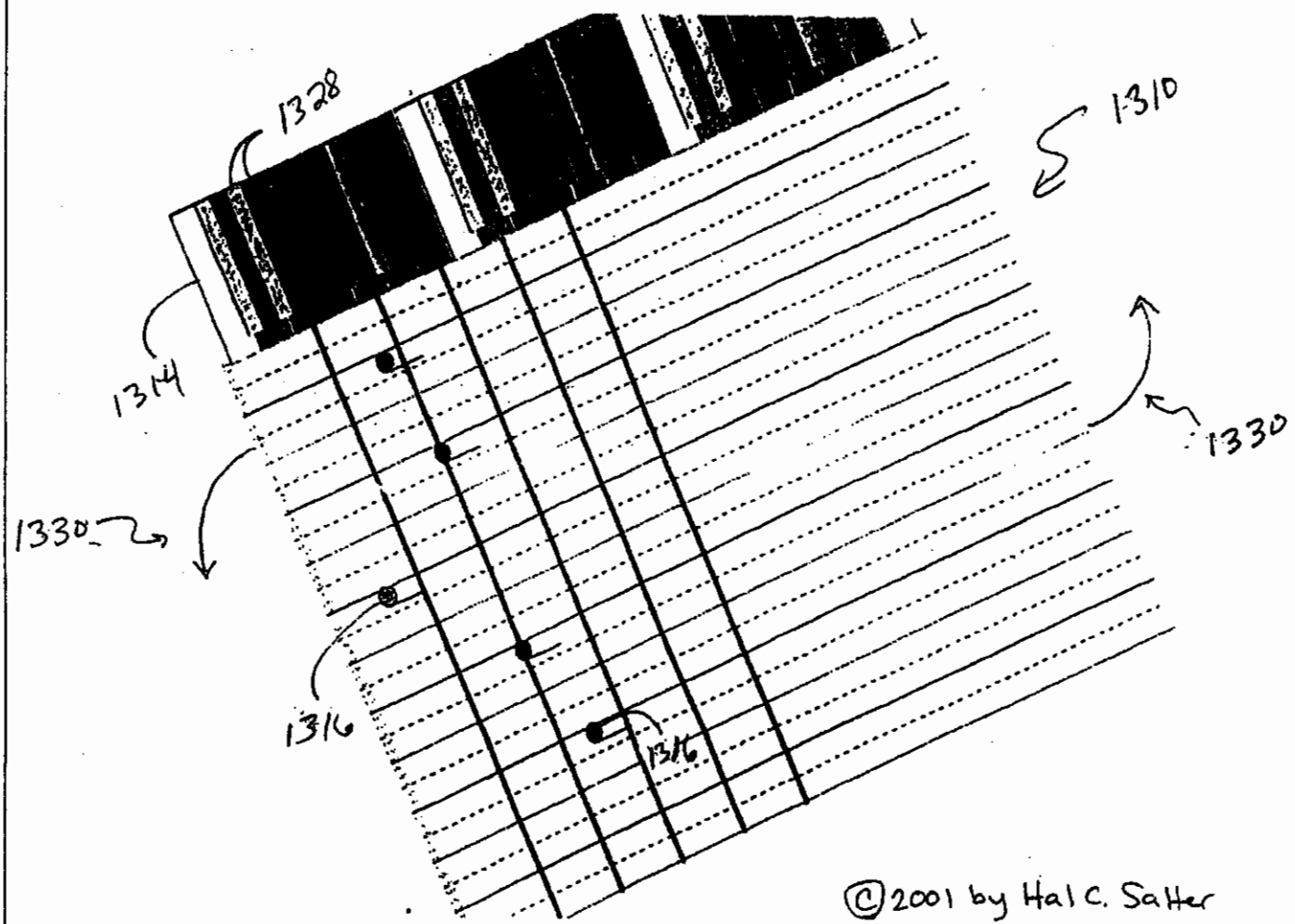


Fig. 14

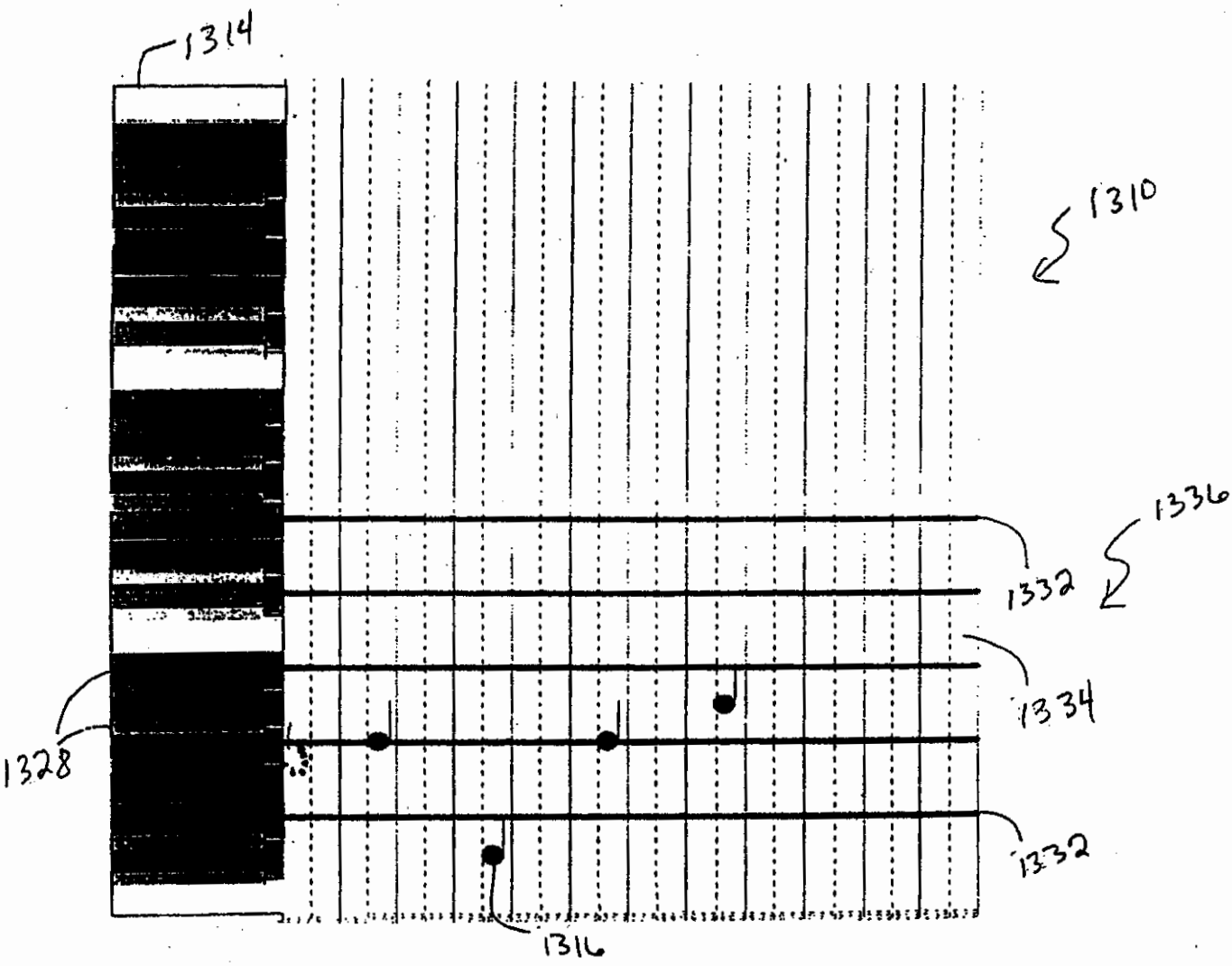


Fig. 15