United States Patent [19]

Martinez et al.

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[45] **Date of Patent:** Oct. 24, 2000

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[54] **METHOD AND APPARATUS FOR ALTERING A DISPLAY IN RESPONSE TO CHANGES IN ATTITUDE RELATIVE TO A PLANE**

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[22] Filed: **Oct. 15, 1996**

[51] **Int. Cl.**[7] **G09G 5/34**

[52] **U.S. Cl.** **345/126**; 345/121

[58] **Field of Search** 345/121, 158, 345/126, 352, 348, 115, 905, 681, 145, 51

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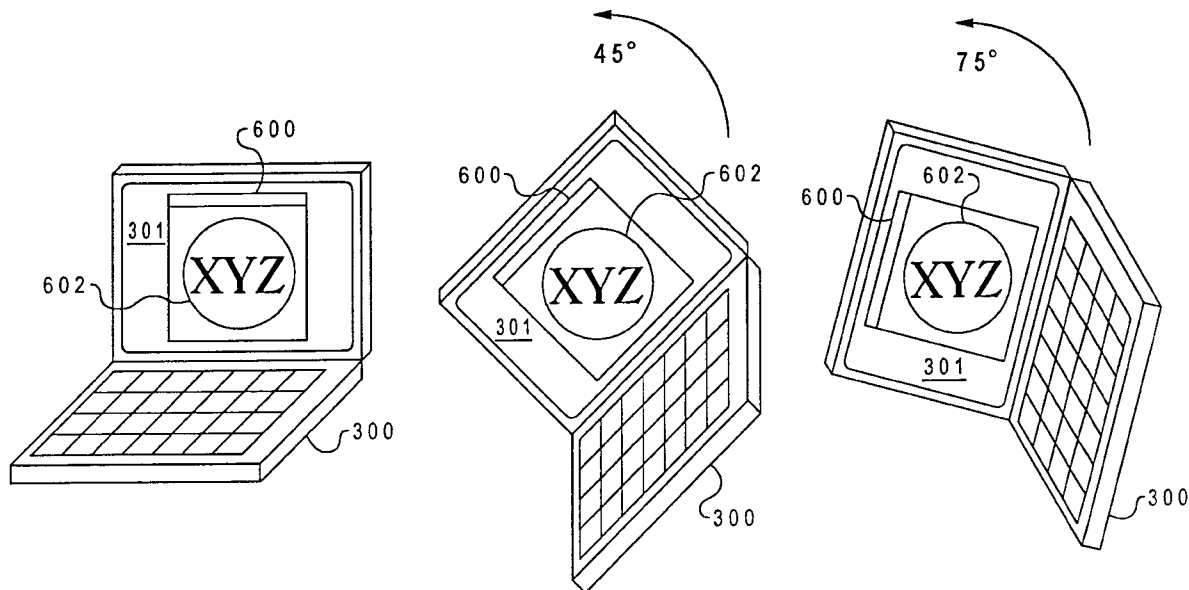
[57] **ABSTRACT**

The present invention provides a method and apparatus for altering the display of an object on a display device in a data processing system. Changes in the attitude of a device within the data processing system are detected relative to a reference plane. The device may be a display device or some other device within the data processing system. The display of the object is altered in response to detecting selected changes in the attitude of the device.
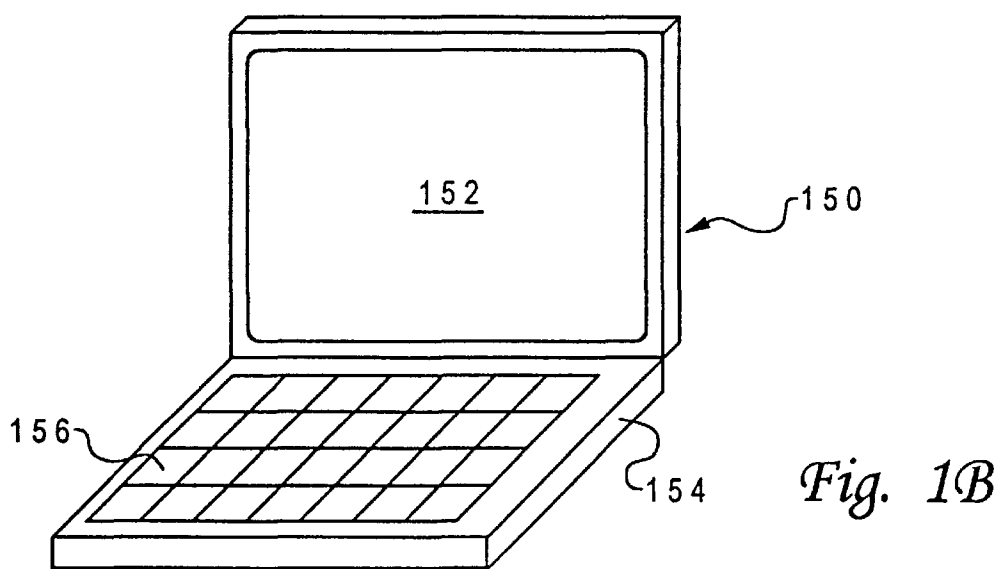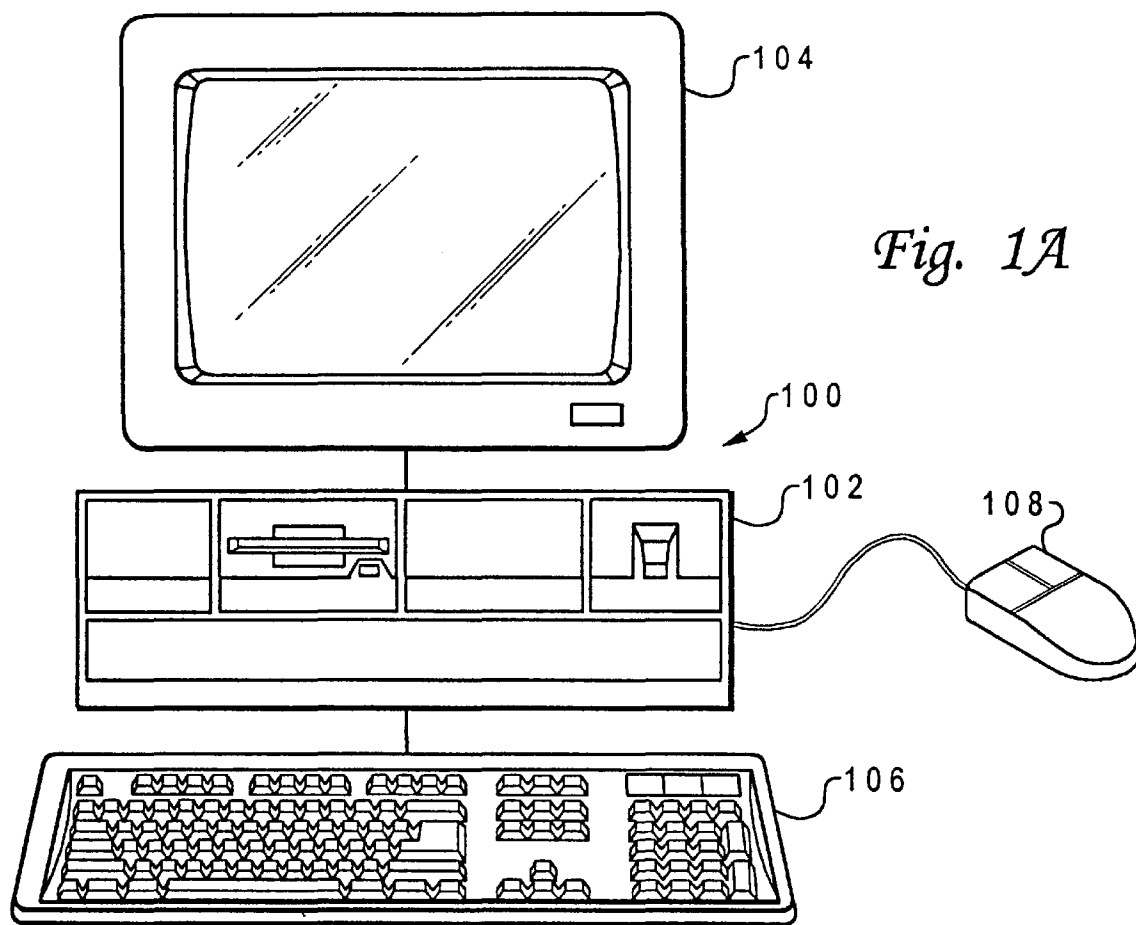
15 Claims, 10 Drawing Sheets

Fig. 1A

Fig. 1B

Fig. 2

SYSTEM PLANAR

RAM 208
ROM 206
CMOS RAM 210

MEMORY CONTROLLER 212
BUS CONTROLLER 214
INTERRUPT CONTROLLER 216
PENTIUM 202

KEYBOARD MOUSE CONTROLLER 218
DMA CONTROLLER 204

SYSTEM BUS

DISKETTE CONTROLLER 234
SERIAL CONTROLLER 232
VGA VIDEO CONTROLLER 220
PARALLEL CONTROLLER 222

236
238
234
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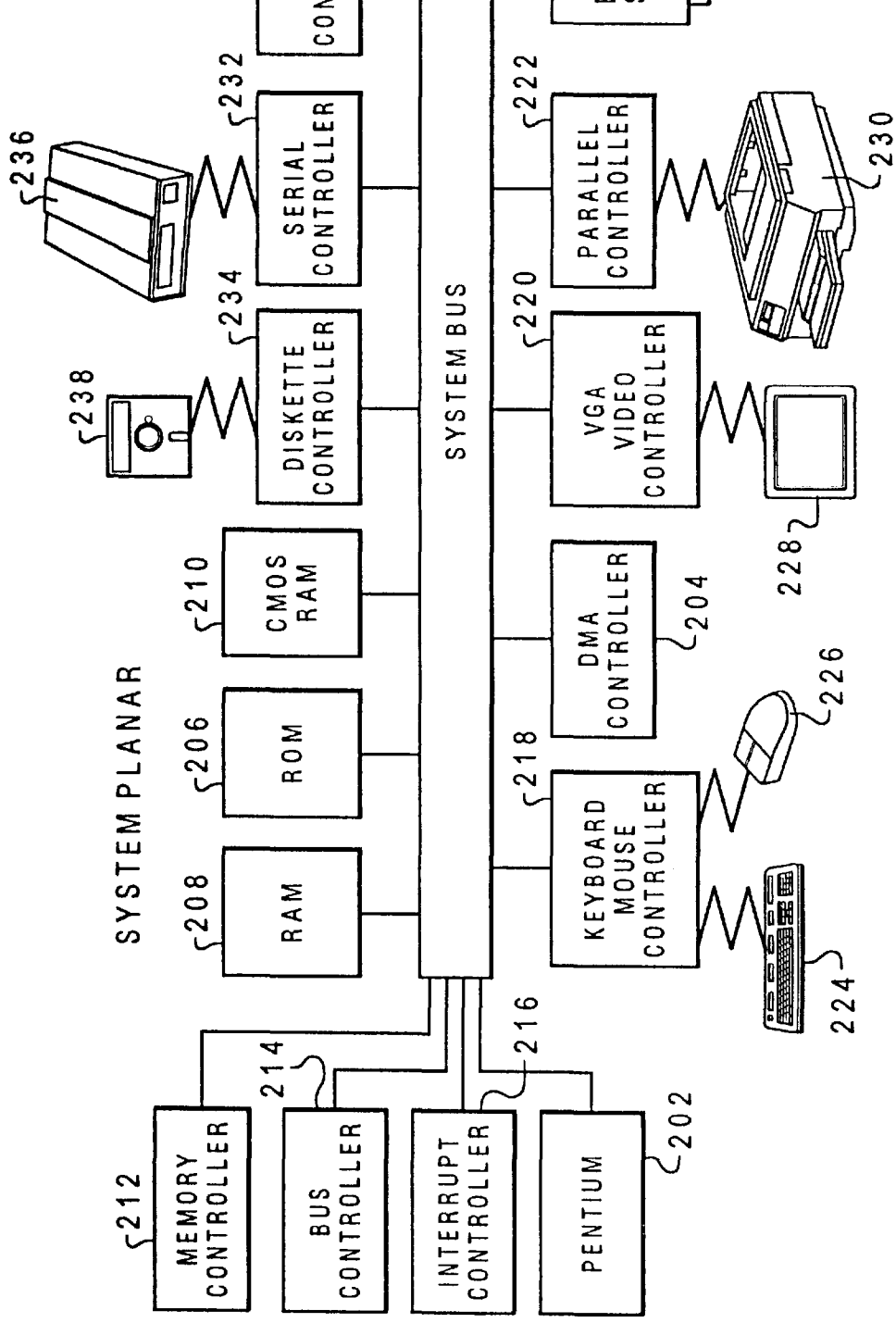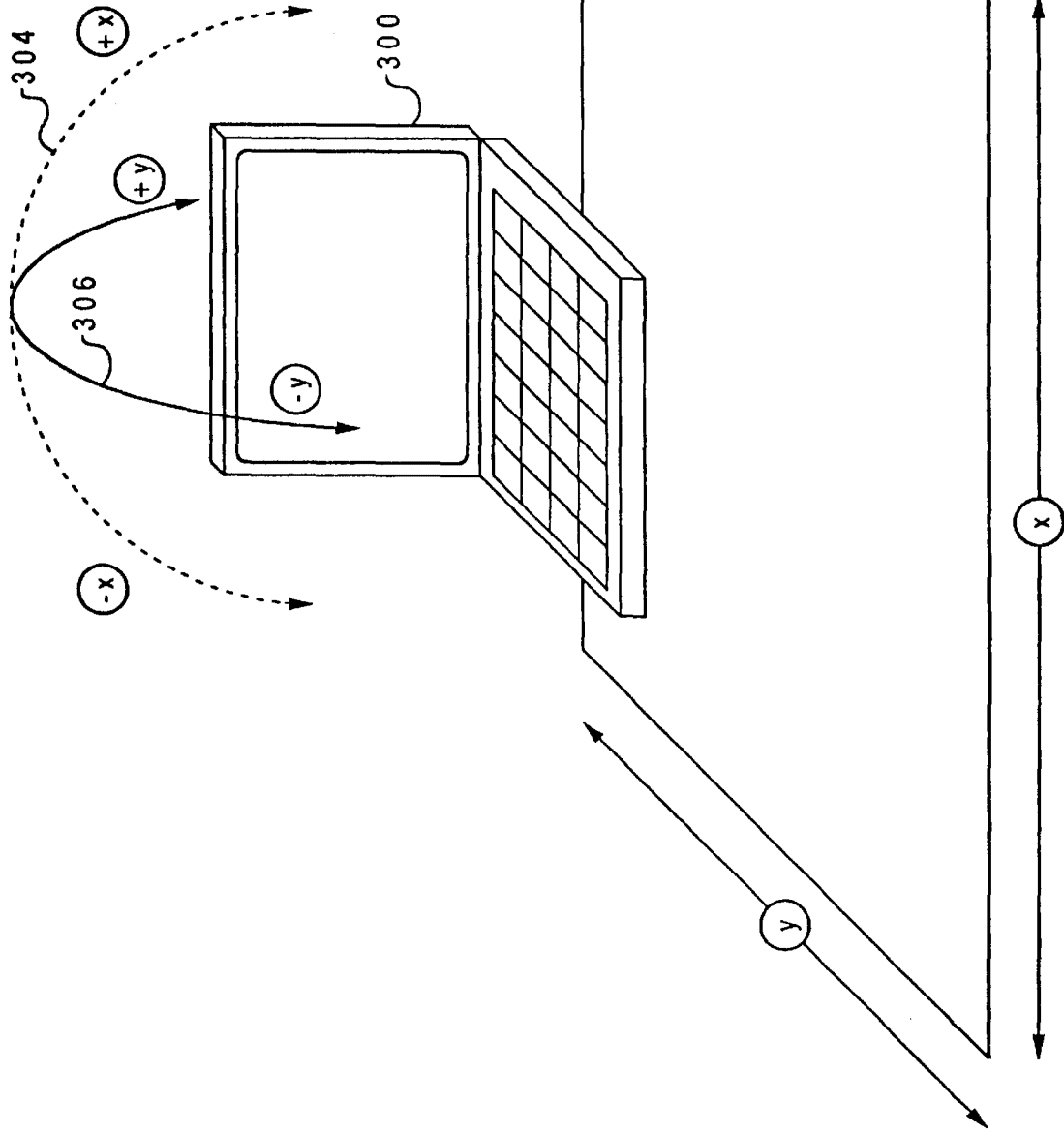
SENSOR READOUT

x = 0
y = 0

~300
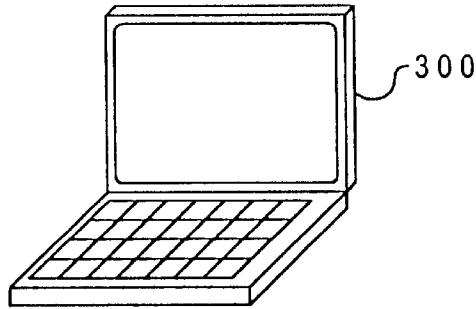
Fig. 4A

x = + 4 5
y = 0
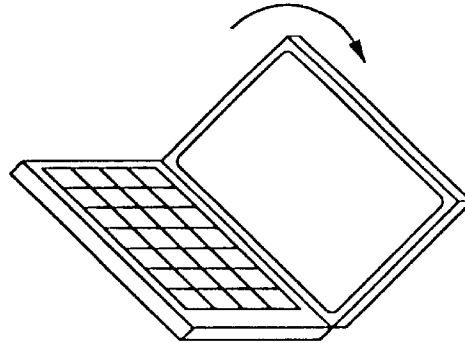
Fig. 4B

x = - 4 5
y = 0

Fig. 4C

x = 0
y = - 9 0

Fig. 4D

DOCKET ALARM
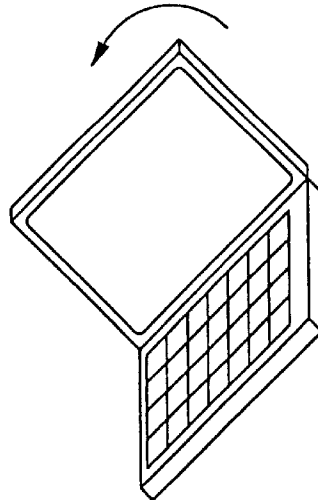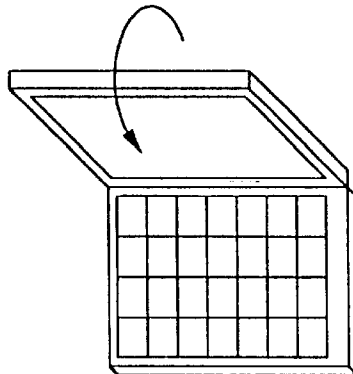
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