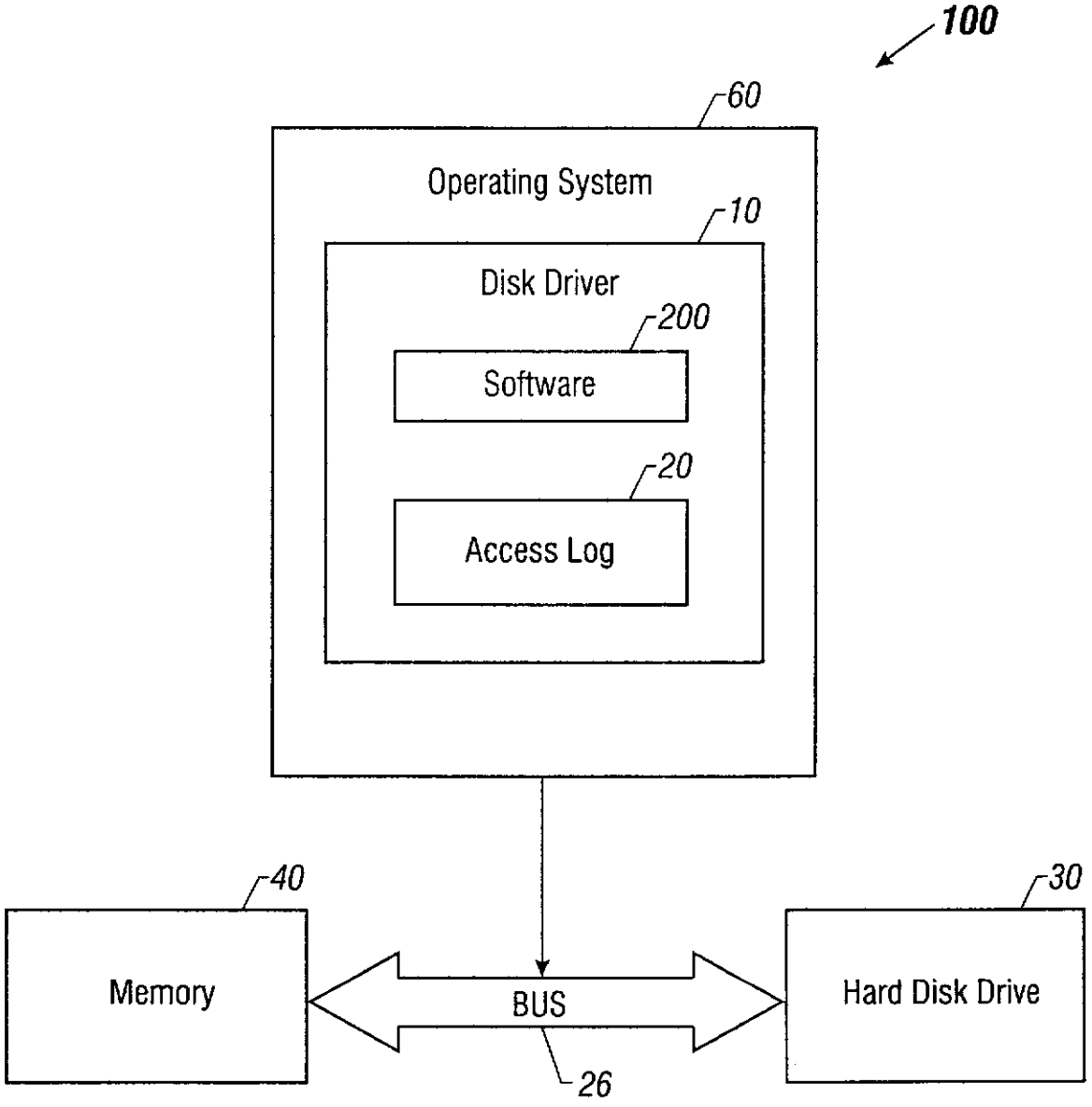

100
60
Operating System
10
Disk Driver
200
Software
20
Access Log
40
Memory
BUS
26
30
Hard Disk Drive

FIGURE 1

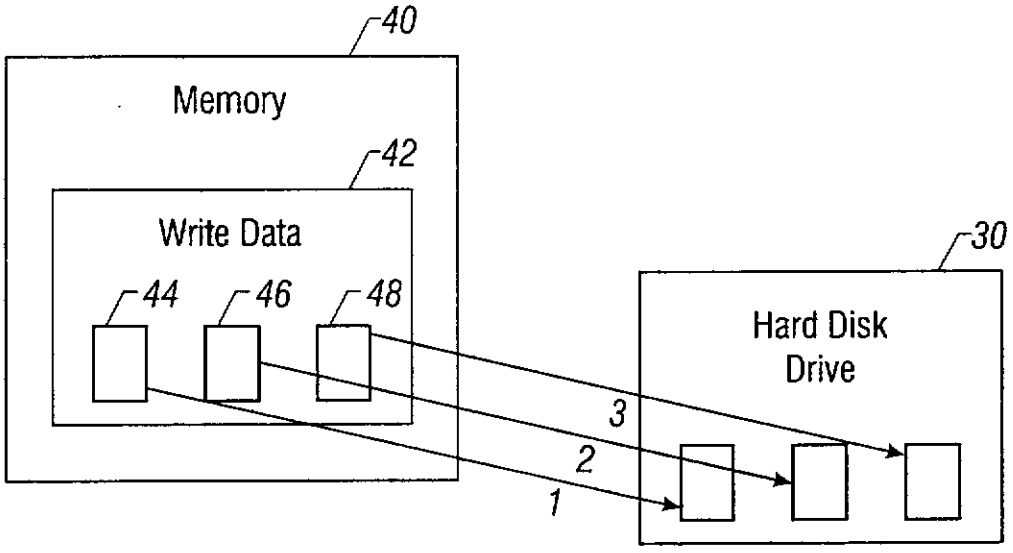


FIGURE 2A

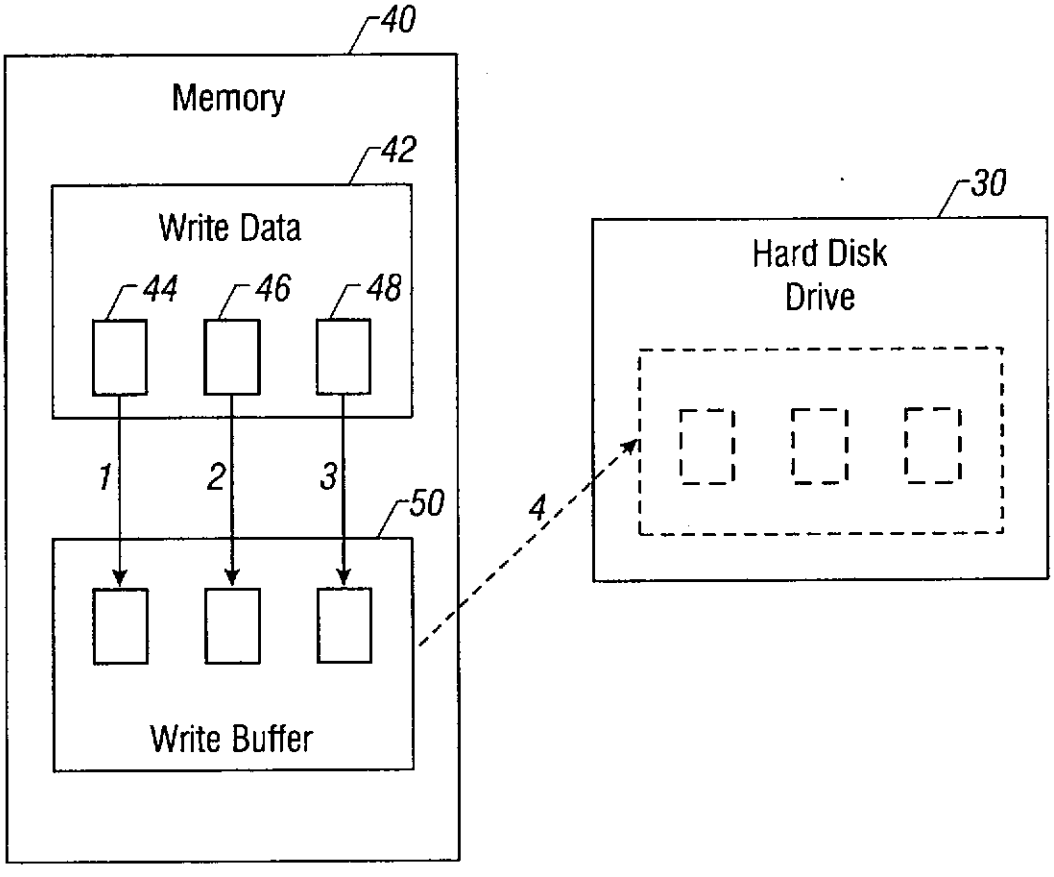


FIGURE 2B

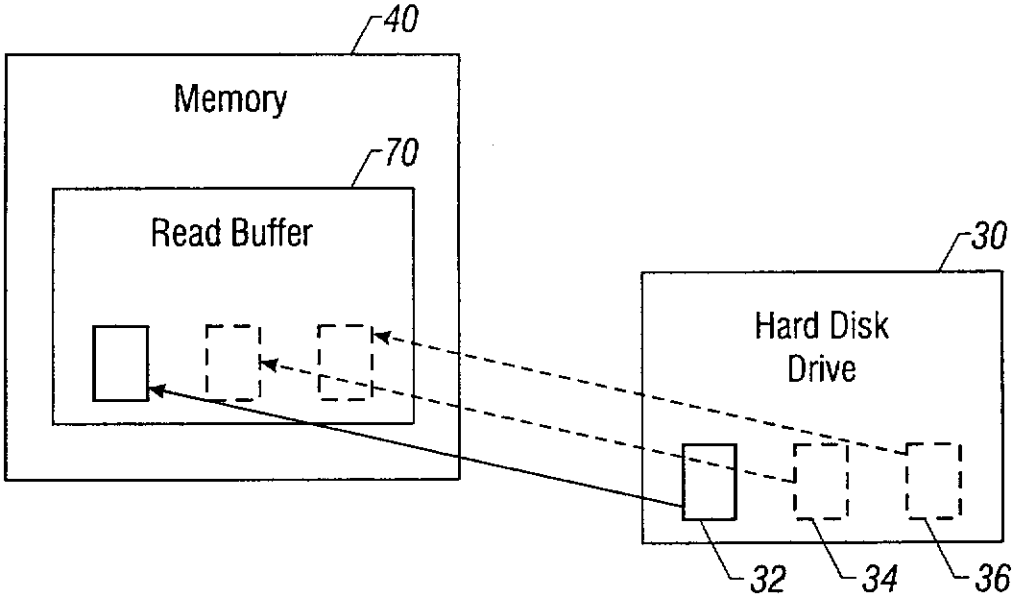


FIGURE 3A

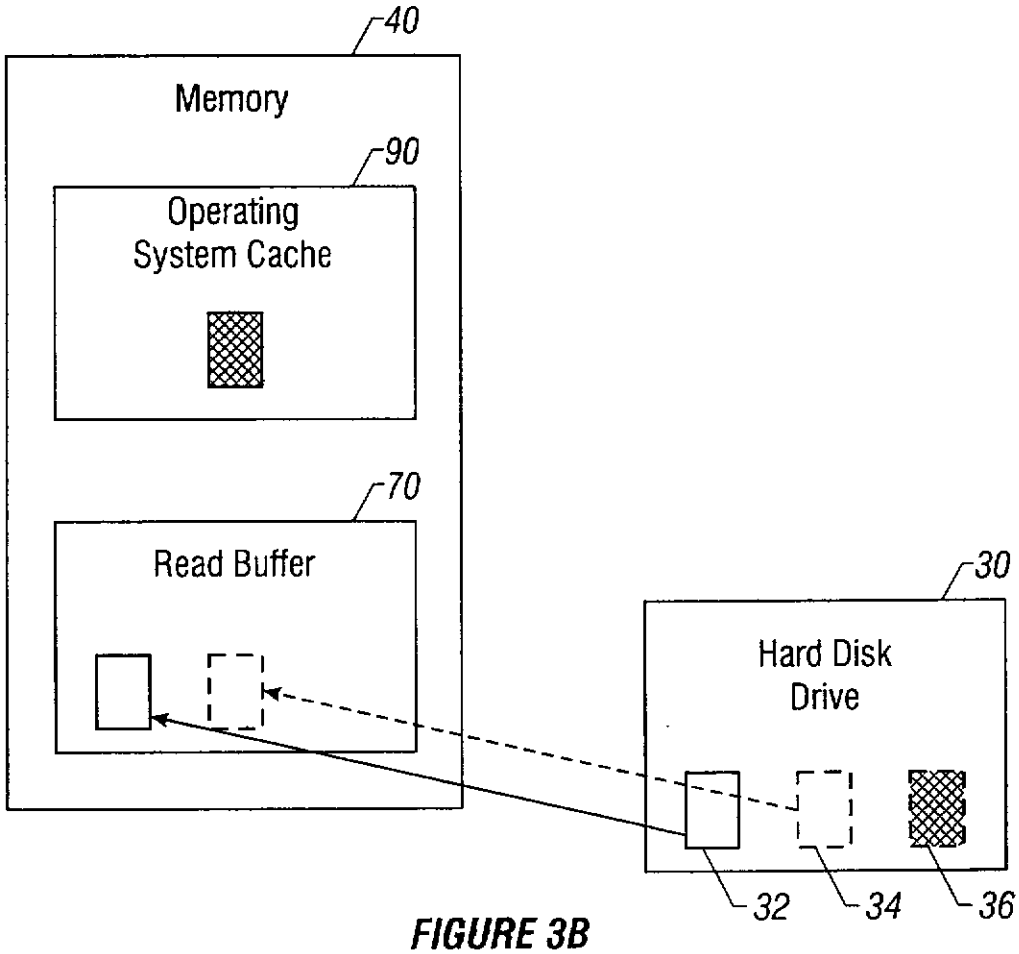


FIGURE 3B

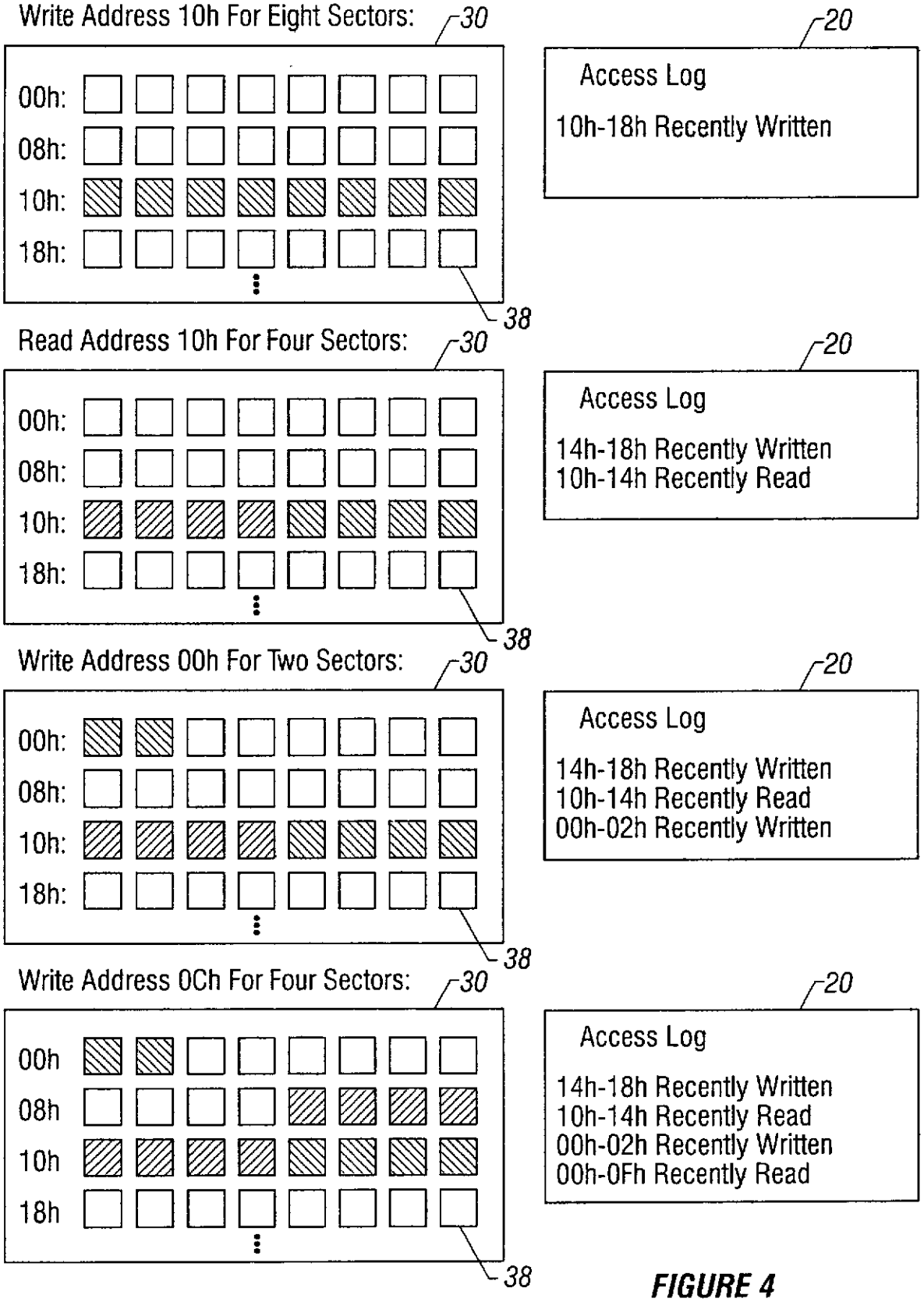

Write Address 10h For Eight Sectors:
30
20
Access Log
10h-18h Recently Written
00h:
08h:
10h:
18h:
38
Read Address 10h For Four Sectors:
30
20
Access Log
14h-18h Recently Written
10h-14h Recently Read
00h:
08h:
10h:
18h:
38
Write Address 00h For Two Sectors:
30
20
Access Log
14h-18h Recently Written
10h-14h Recently Read
00h-02h Recently Written
00h:
08h:
10h:
18h:
38
Write Address 0Ch For Four Sectors:
30
20
Access Log
14h-18h Recently Written
10h-14h Recently Read
00h-02h Recently Written
00h-0Fh Recently Read
00h
08h
10h
18h
38

FIGURE 4

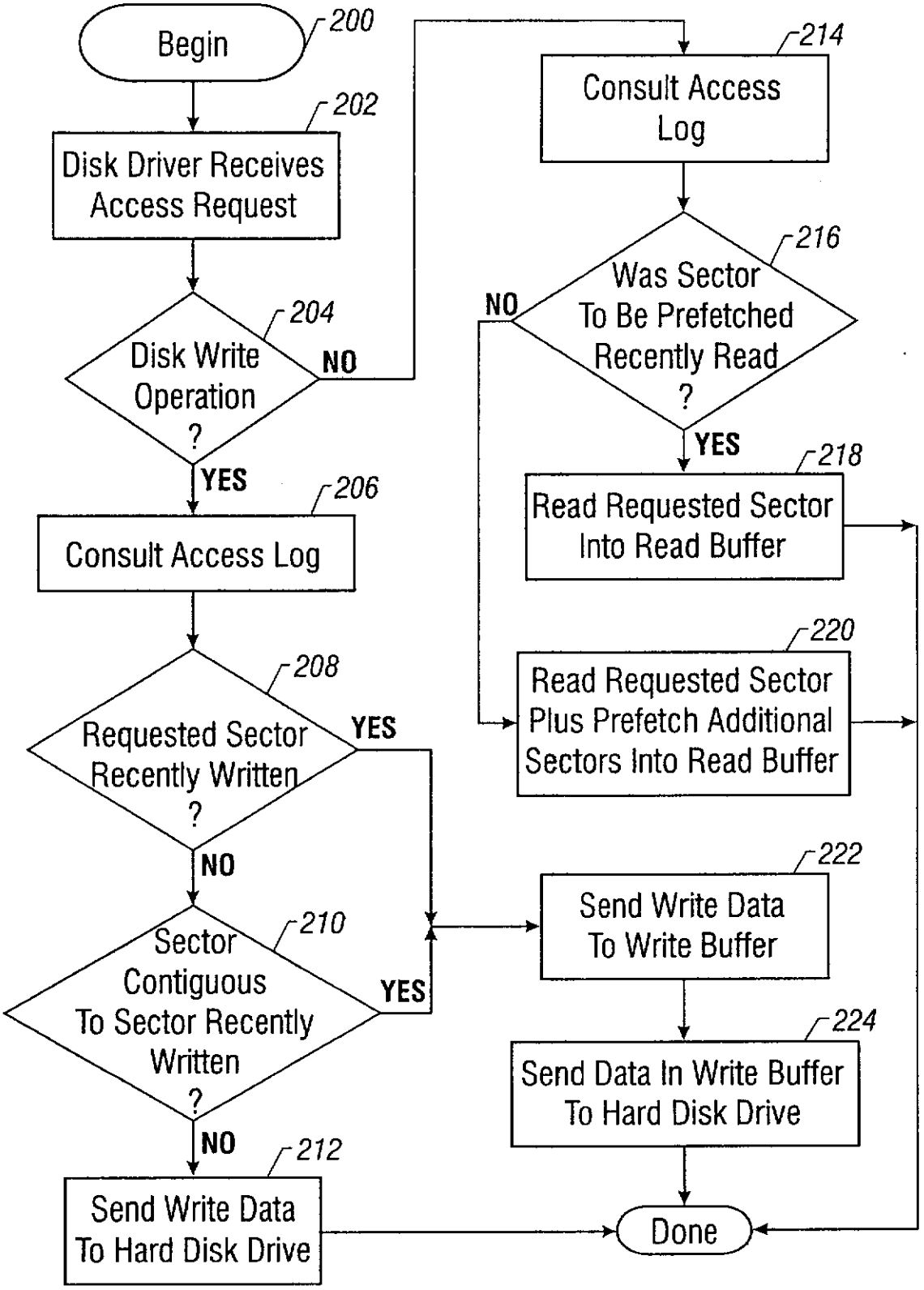

Begin
200
Disk Driver Receives Access Request
202
Disk Write Operation ?
204
NO
YES
Consult Access Log
206
Requested Sector Recently Written ?
208
YES
NO
Sector Contiguous To Sector Recently Written ?
210
YES
NO
Send Write Data To Hard Disk Drive
212
Consult Access Log
214
Was Sector To Be Prefetched Recently Read ?
216
NO
YES
Read Requested Sector Into Read Buffer
218
Read Requested Sector Plus Prefetch Additional Sectors Into Read Buffer
220
Send Write Data To Write Buffer
222
Send Data In Write Buffer To Hard Disk Drive
224
Done

FIGURE 5

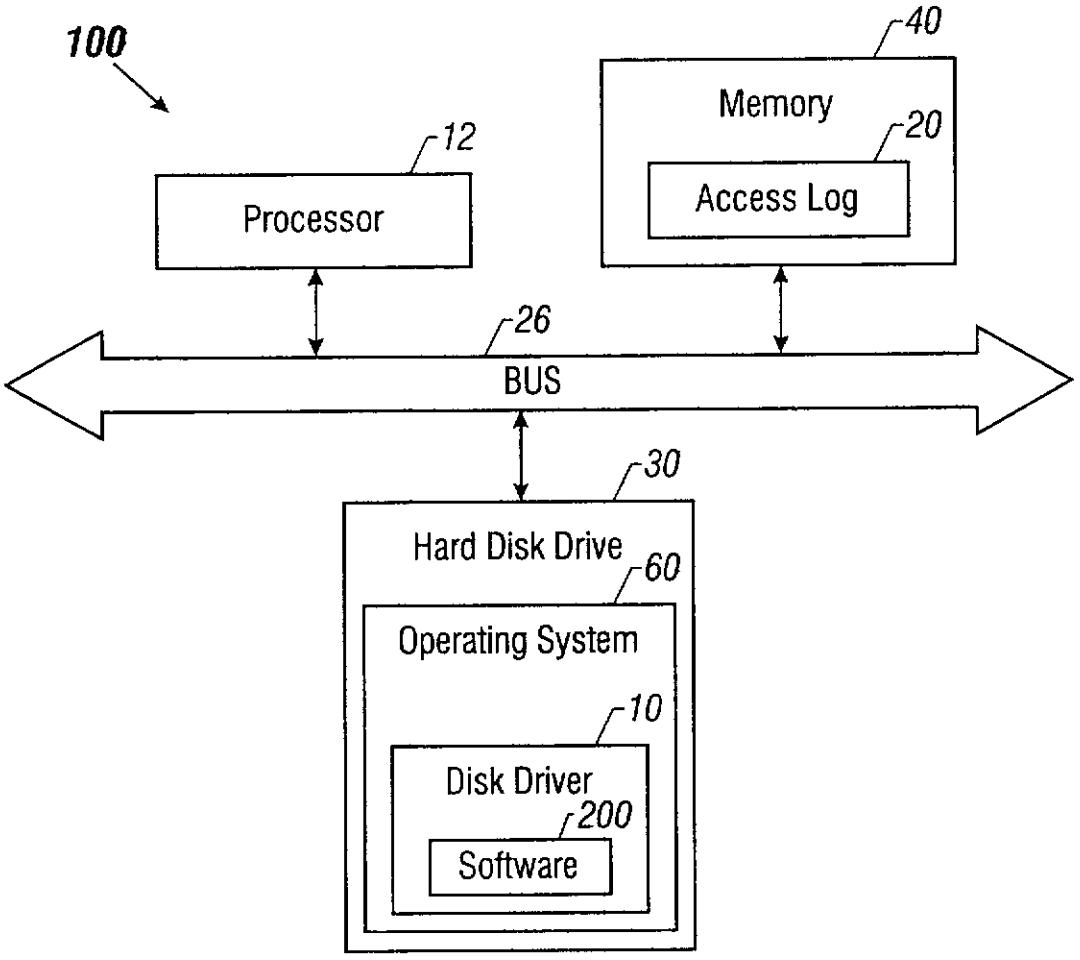

100
40
Memory
20
Access Log
12
Processor
26
BUS
30
Hard Disk Drive
60
Operating System
10
Disk Driver
200
Software

FIGURE 6