

**(12) United States Patent**  
**Dumas et al.**

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(54) **HARD DISK PASSWORD LOCK**

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(73) Assignee: **NEC Corporation**, Tokyo (JP)

(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(51) Int. Cl.<sup>7</sup> ..... **H04K 1/00**

(52) U.S. Cl. .... **713/183; 713/184**

(58) Field of Search ..... 380/44, 94; 713/183, 713/184

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**(57) ABSTRACT**

The invention provides an encryption circuit for encrypting and decrypting data as it travels to and from a hard disk. The encryption circuit can be turned on or off under control of the BIOS program and a user supplied password. With the present invention, a removed hard disk cannot be read without the user supplied password and a similar encryption circuit.

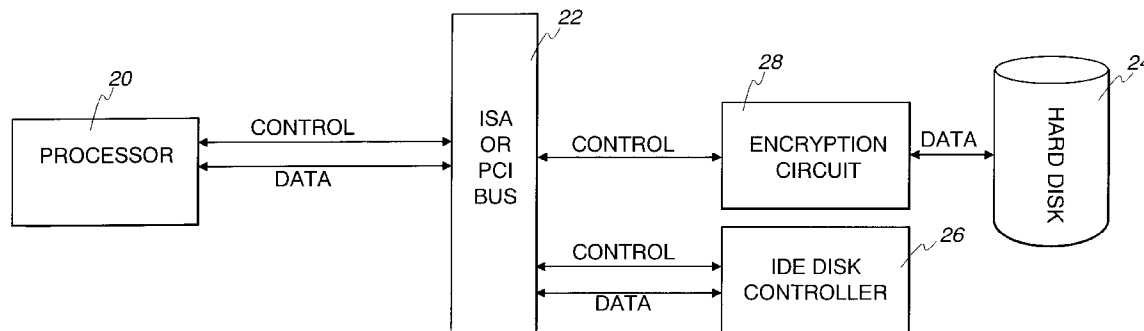
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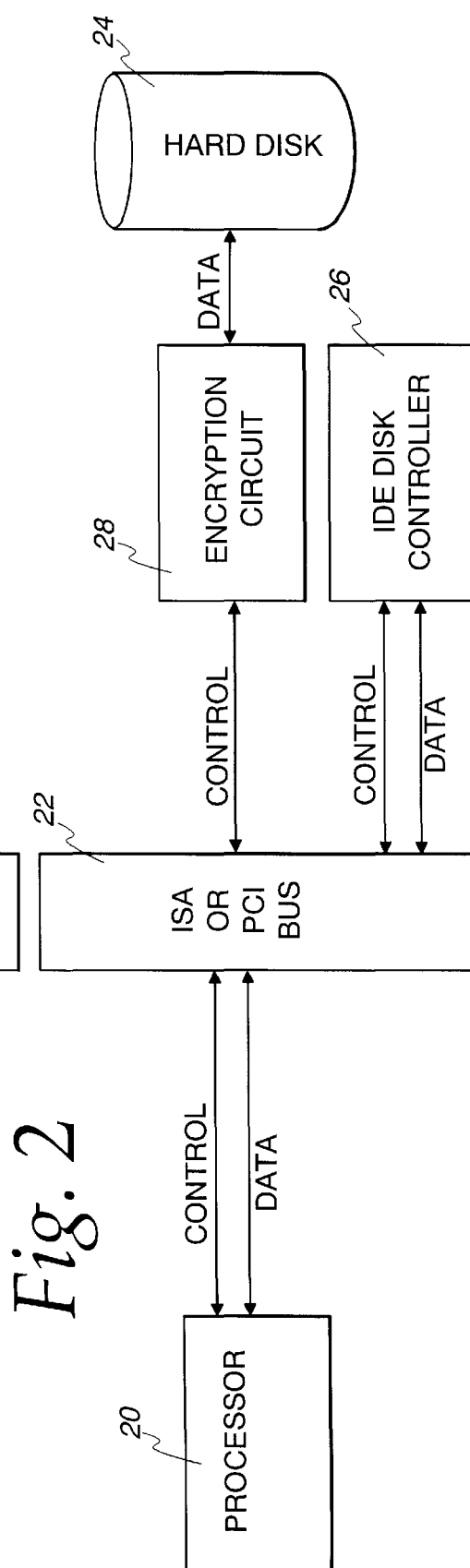
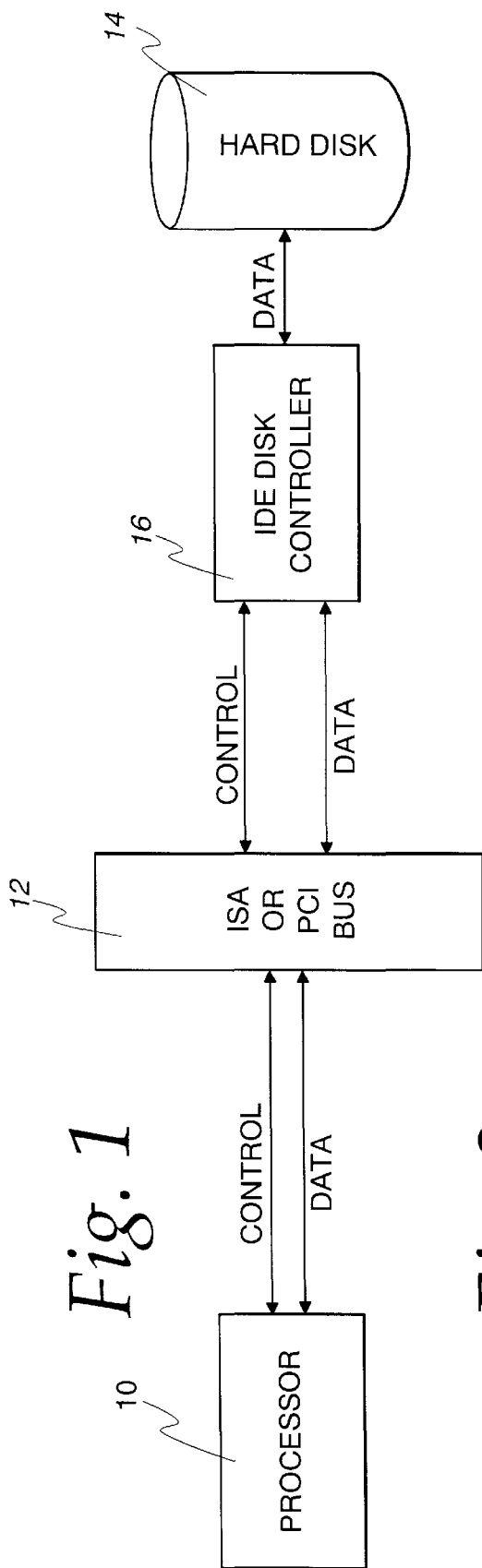
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**8 Claims, 5 Drawing Sheets**





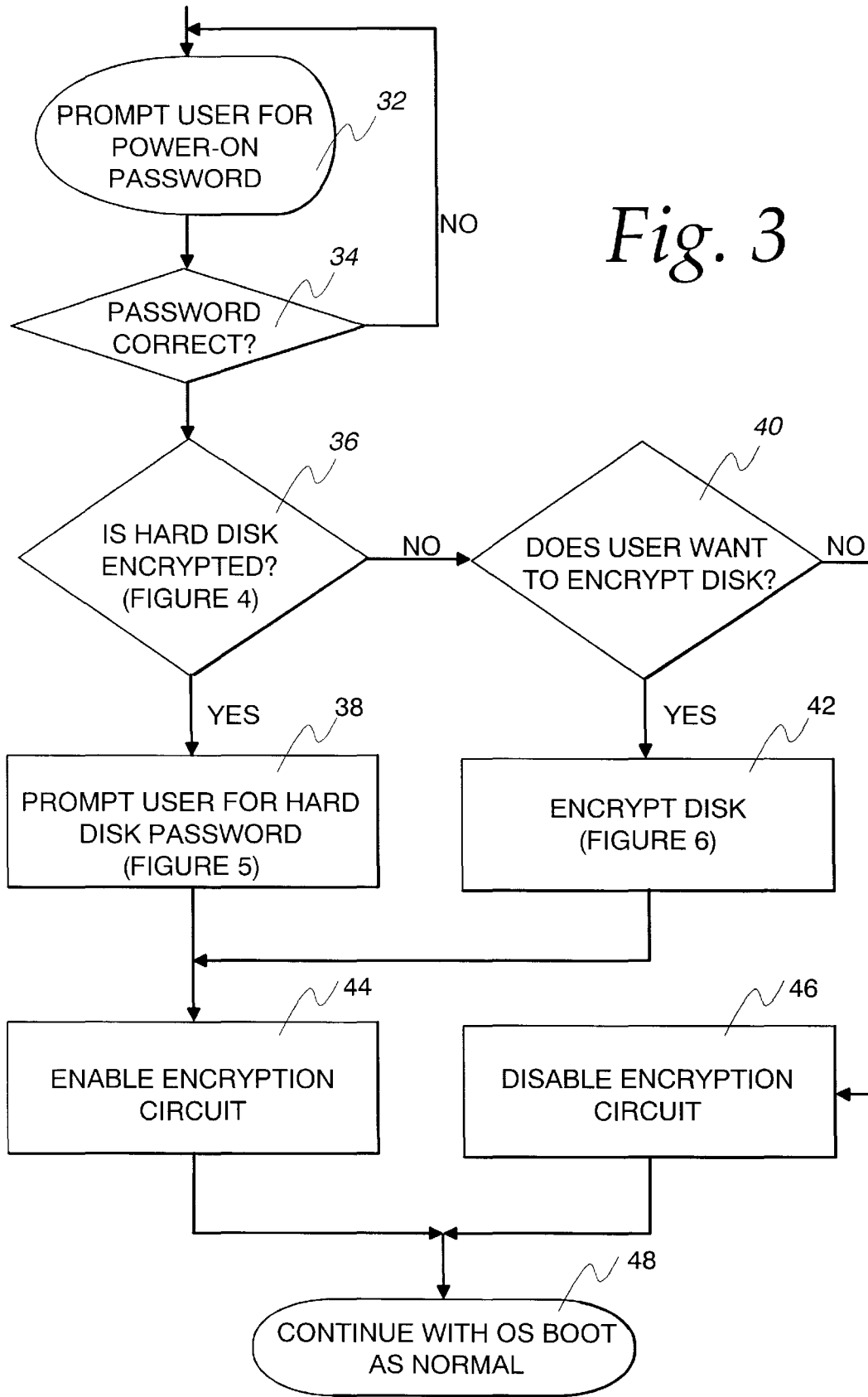


Fig. 3

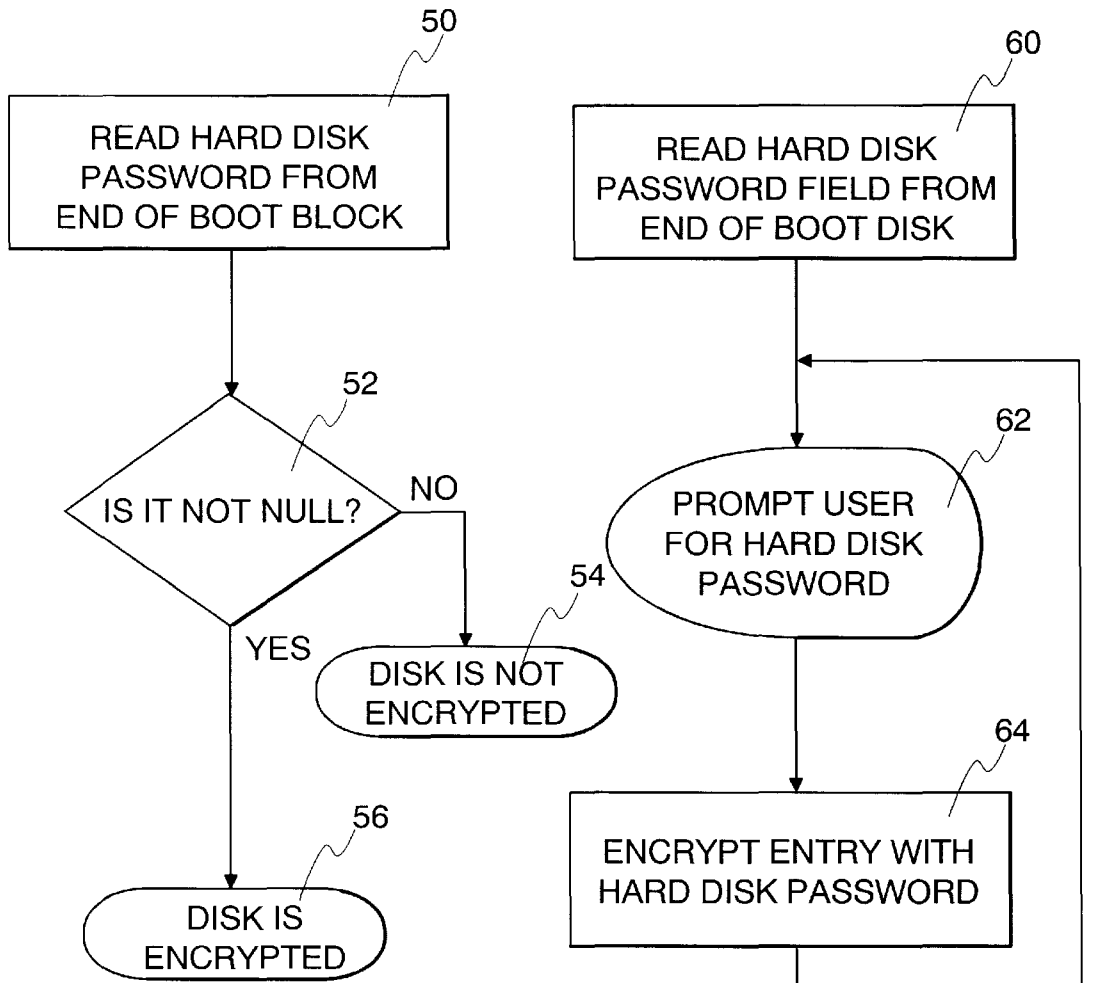


Fig. 4

Fig. 5

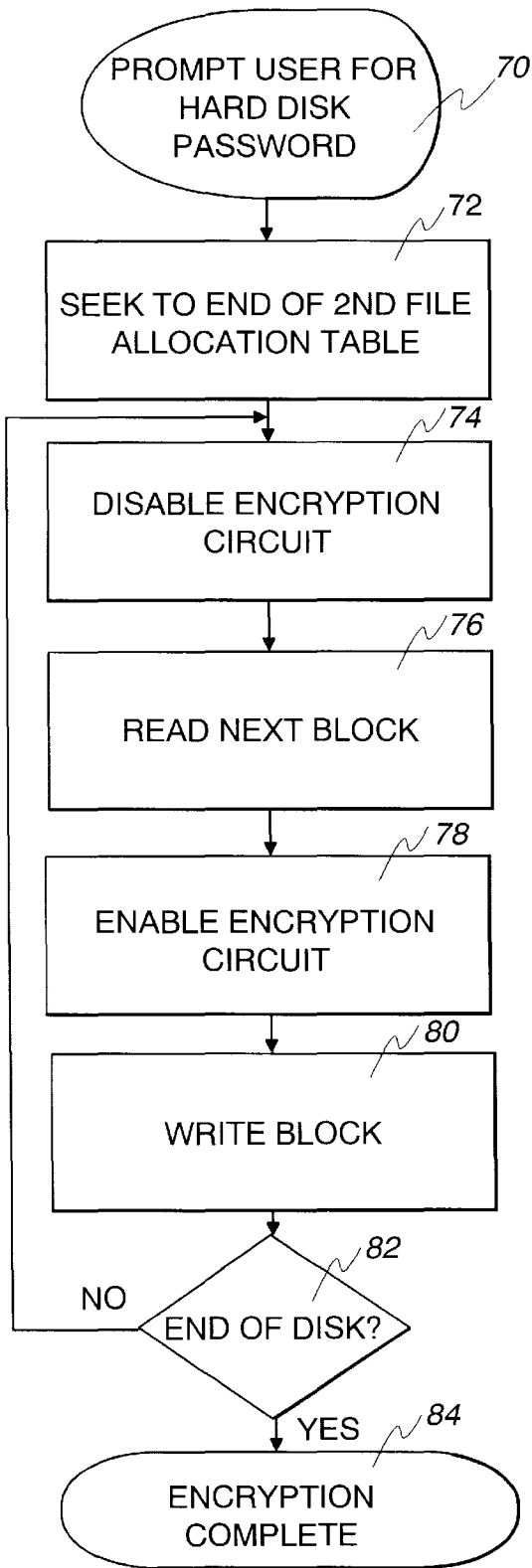


Fig. 6

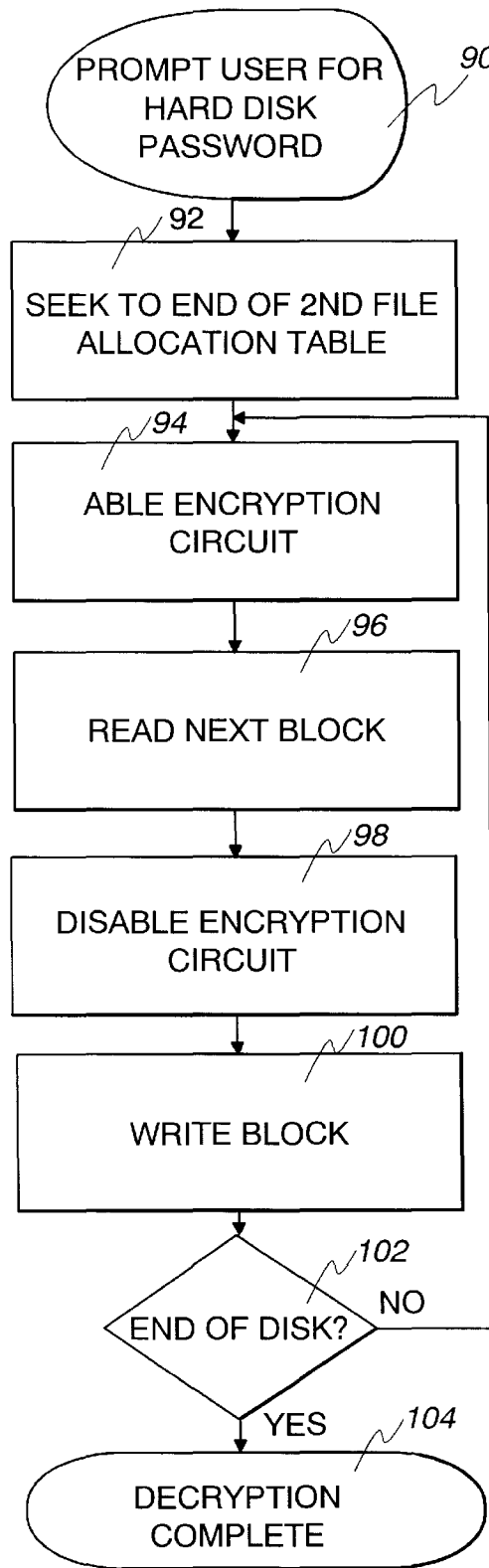


Fig. 7

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