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(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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- (21) Appl. No.: **08/621,672**
- (22) Filed: **Mar. 26, 1996**
- (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

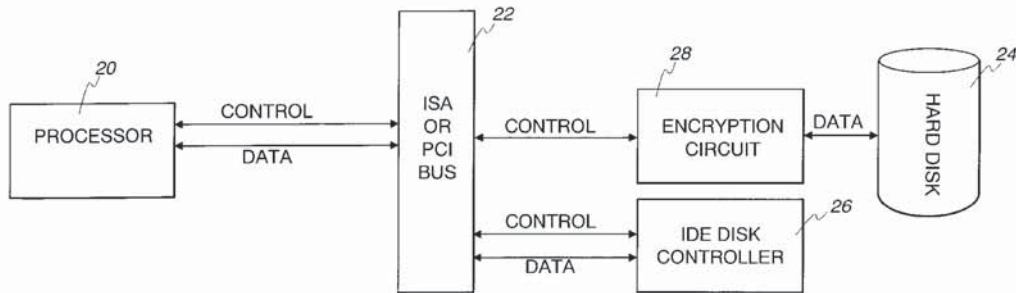
Primary Examiner—Salvatore Cansialosi  
(74) Attorney, Agent, or Firm—Katten Muchin Zavis

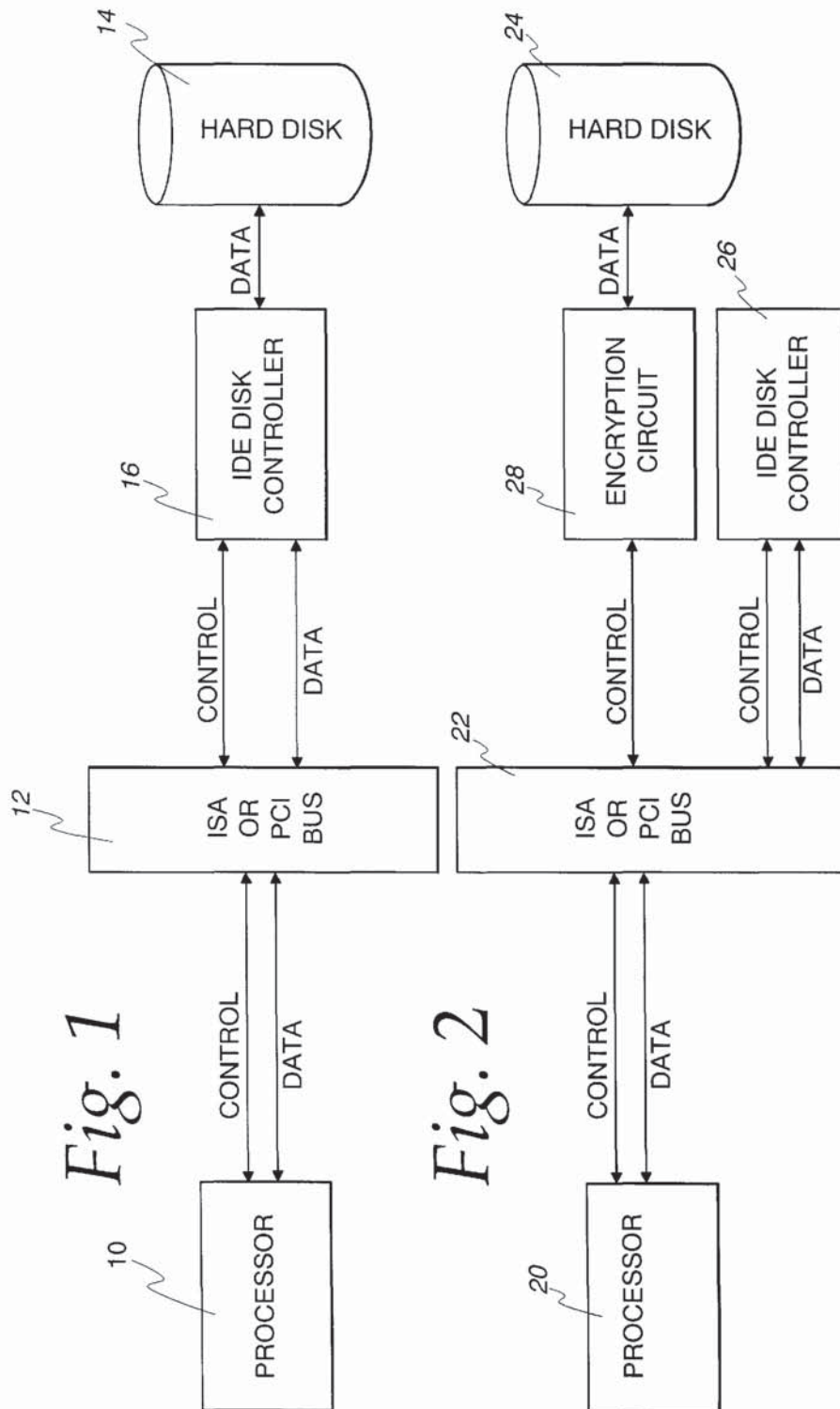
(57) **ABSTRACT**

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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**8 Claims, 5 Drawing Sheets**





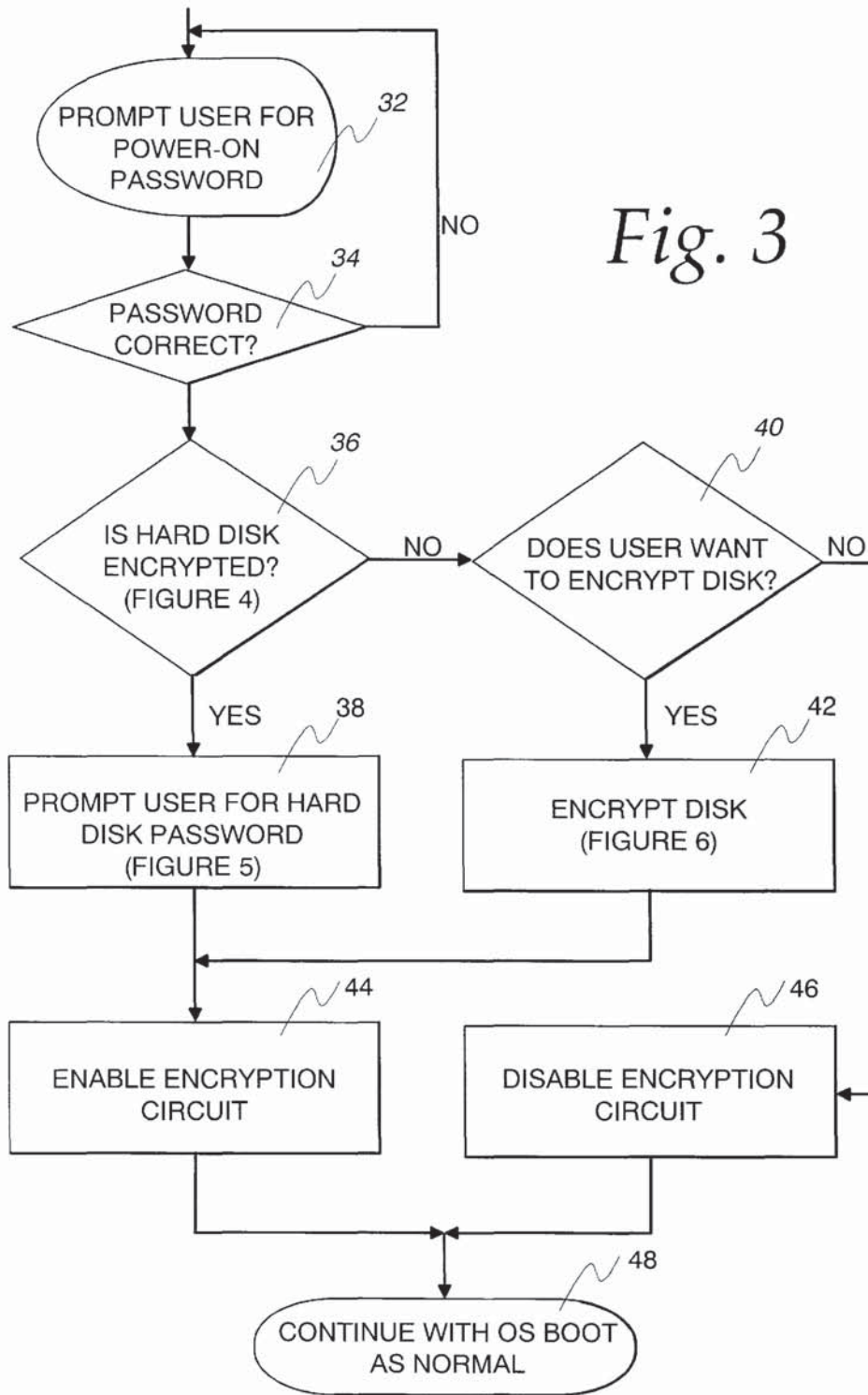


Fig. 3

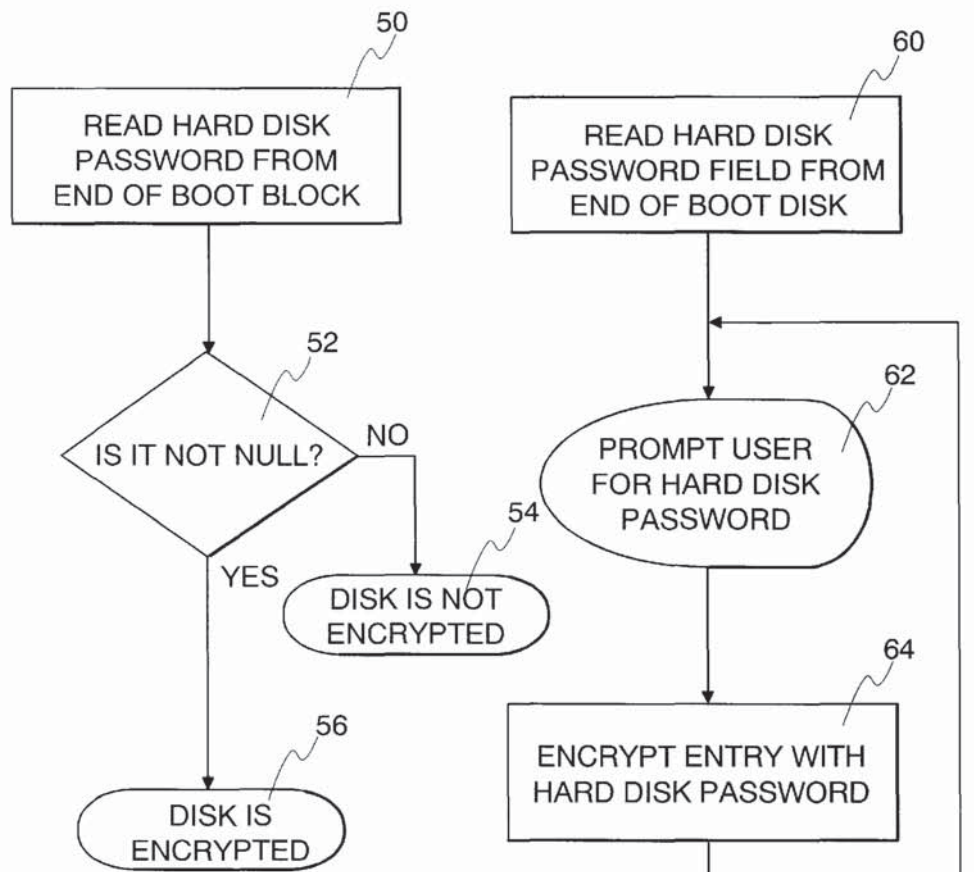


Fig. 4

Fig. 5

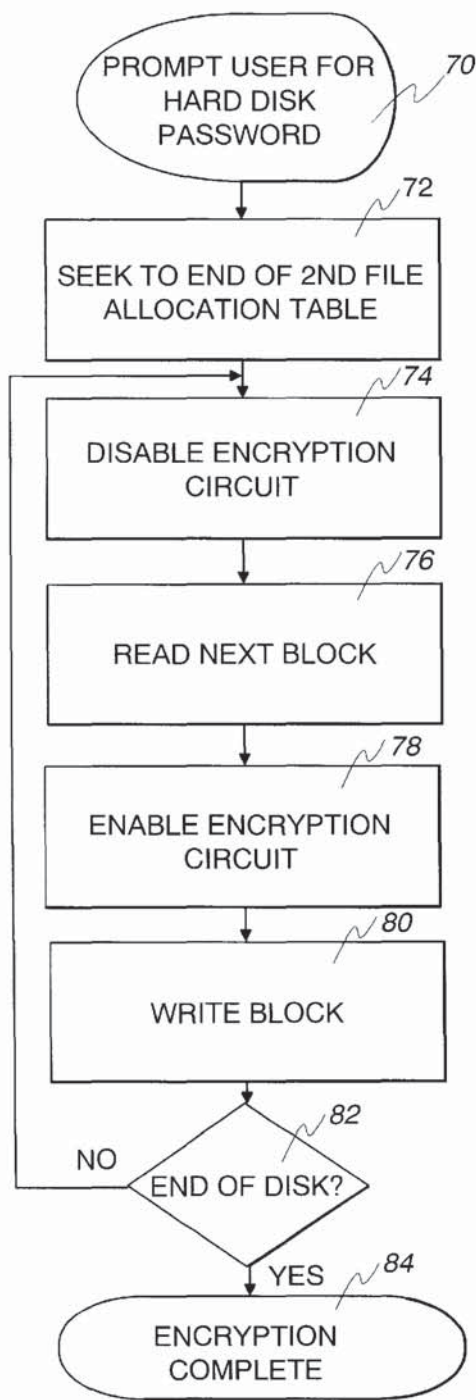


Fig. 6

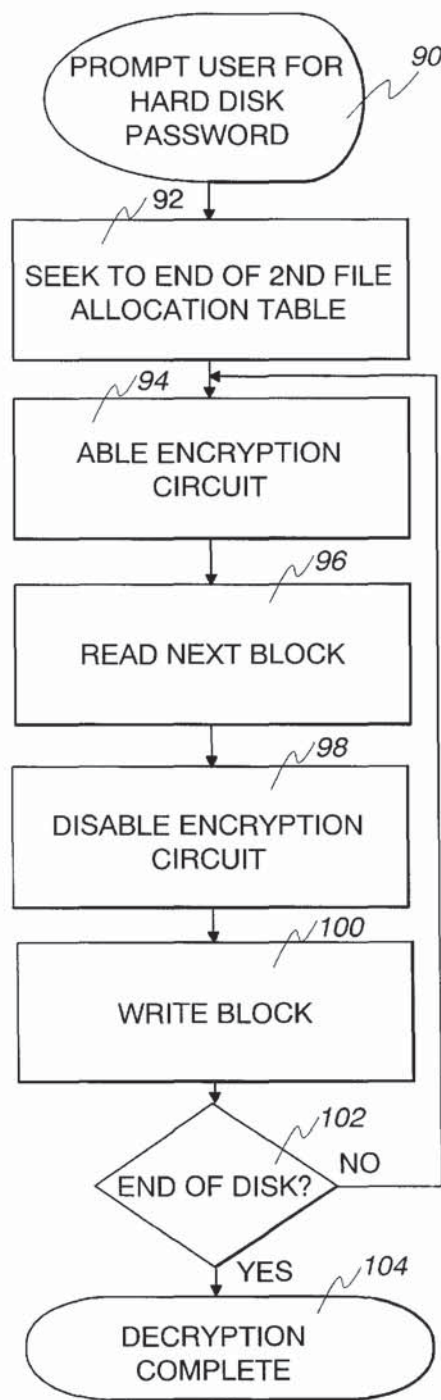


Fig. 7

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