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Ogami et al.

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[54] PORTABLE ELECTRONIC APPARATUS HAVING A REMOVABLE HARD DISK DRIVE INCLUDING AN EXTERNALLY OPERABLE LOCK MEMBER 5,315,478 5/1994 Cadwell et al. .... 361/684  
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[75] Inventors: Keizo Ogami; Kohei Wada, both of Tokyo, Japan Japanese Utility Model Appln. Kokai Publication No. 63-39780, Mar. 1988.  
[73] Assignee: Kabushiki Kaisha Toshiba, Kanagawa, Japan Japanese Utility Model Appln. Kokai Publication No. 63-195457, Dec., 1988.  
[\*] Notice: The term of the patent shall not extend beyond the expiration date of Pat. No. 5,264,986. Japanese Utility Model Appln. Kokai Publication No. 63-183673, Nov., 1988.  
[21] Appl. No.: 320,981 Japanese Utility Model Appln. Kokai Publication No. 63-182078, Nov. 1988.  
[22] Filed: Oct. 11, 1994 Japanese Patent Appln. Kokoku Publication No. 62-184687, Aug. 1987.  
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Related U.S. Application Data

[63] Continuation of Ser. No. 195,604, Feb. 14, 1994, abandoned, which is a continuation of Ser. No. 960,590, Oct. 13, 1992, abandoned.

[30] Foreign Application Priority Data

Oct. 14, 1991 [JP] Japan ..... 3-264989

[51] Int. Cl.<sup>6</sup> ..... G06F 1/16; H05K 7/14  
[52] U.S. Cl. .... 361/685; 361/726; 361/740  
[58] Field of Search ..... 364/708.1; 360/137; 312/223.2; 361/683-686, 725-727, 732, 740, 759, 801

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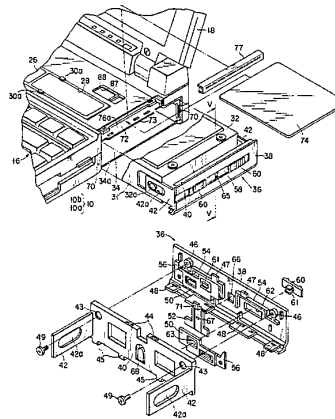
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Primary Examiner—Michael W. Phillips  
Attorney, Agent, or Firm—Limbach & Limbach

[57] ABSTRACT

A portable electronic apparatus includes a housing having a storing section which has an insertion opening opened to the outside the housing. A HDD pack is stored in the storing section and detachable through the insertion opening. A HDD holder is connected to the HDD pack and detachably fitted in the insertion opening. A pair of sliders are provided on the HDD holder and movable between an engaged position where the sliders are engaged engagement holes formed in the housing to hold the HDD holder in the insertion opening and a retreated position where the sliders are disengaged from the engagement holes to allow the HDD holder to come into and out of the insertion opening. A lock member is provided on the HDD holder and movable between a locking position where the sliders are locked in the engaged position and a releasing position where the sliders are allowed to move.

24 Claims, 9 Drawing Sheets



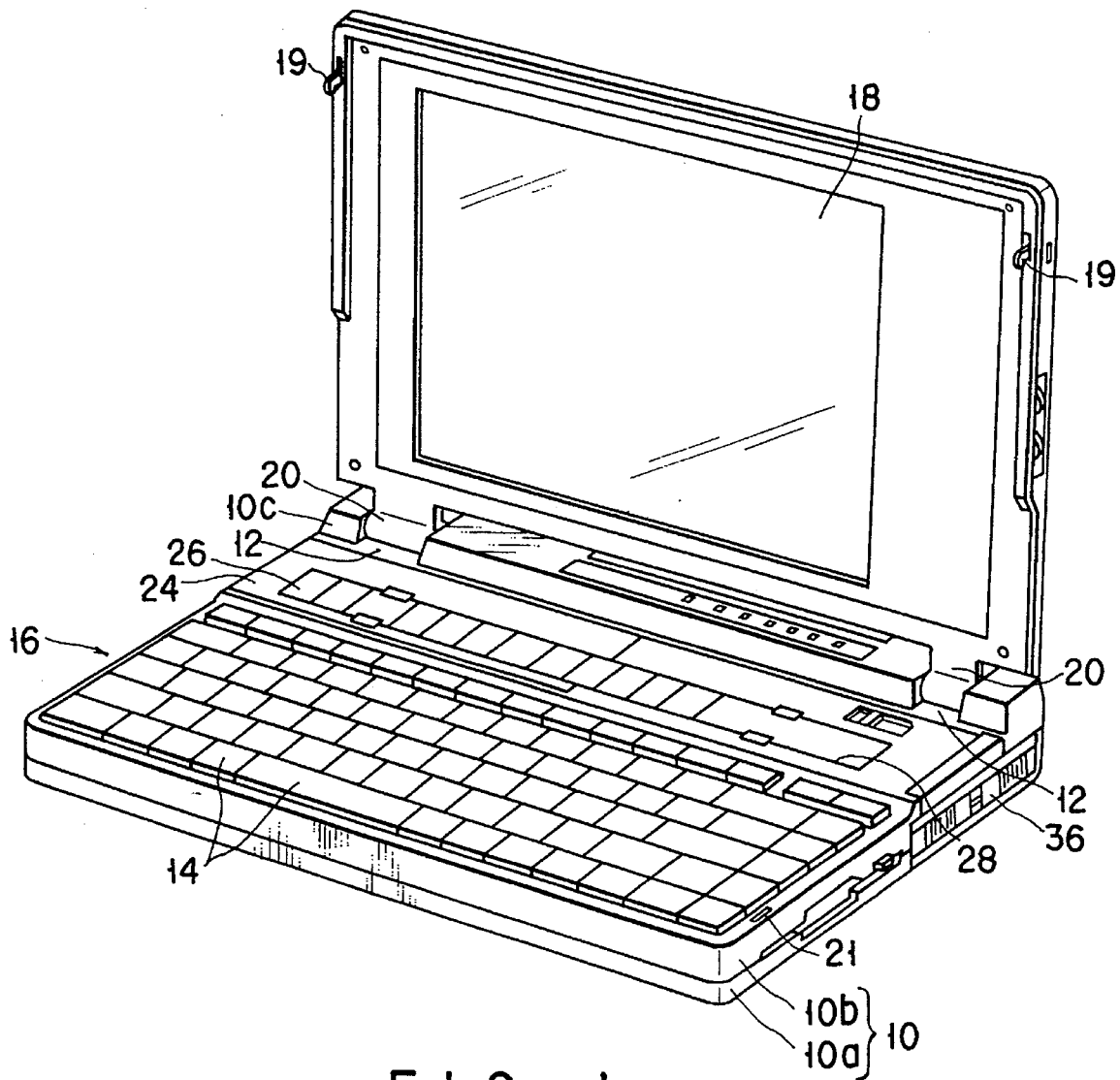


FIG. 1

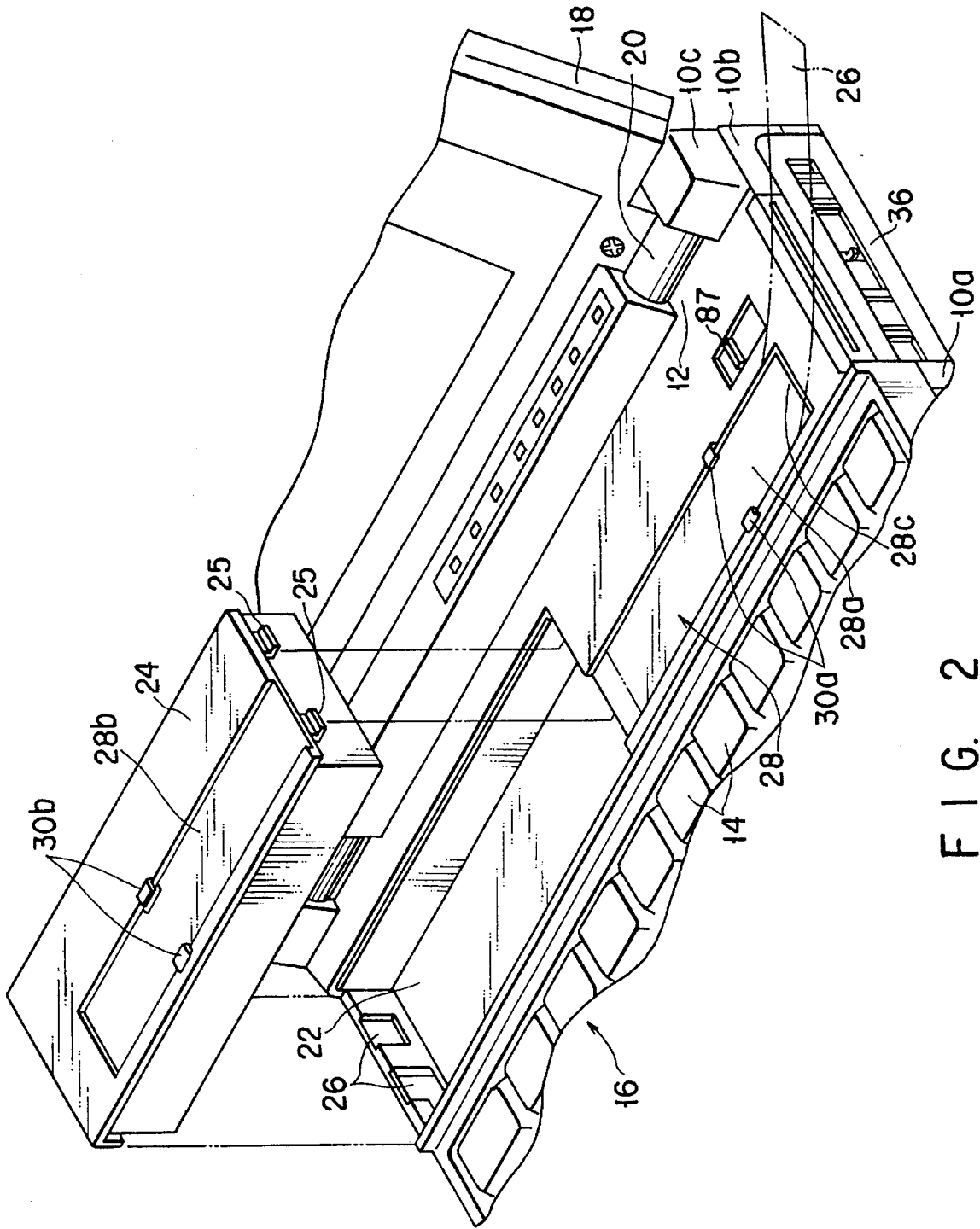


FIG. 2

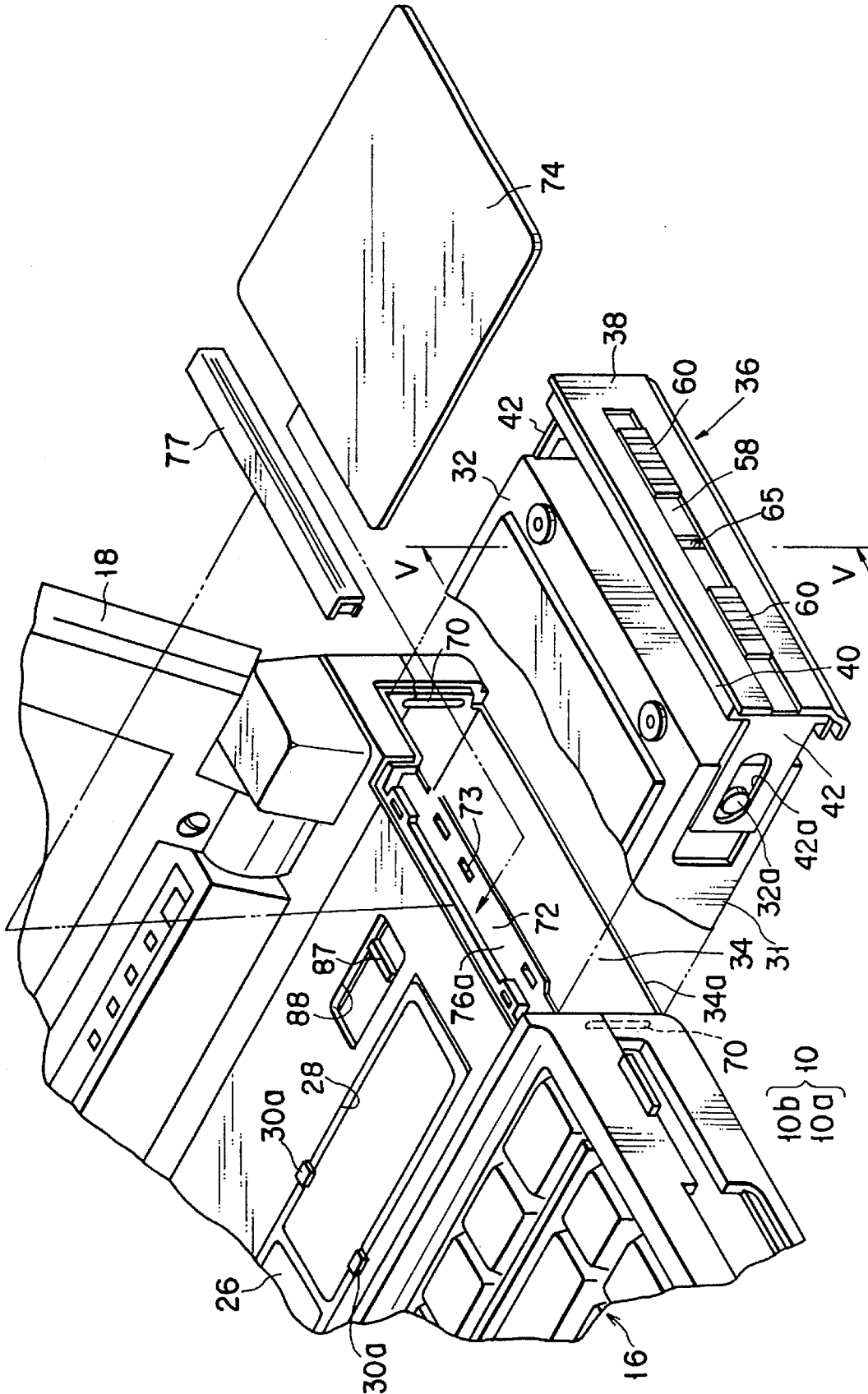


FIG. 3

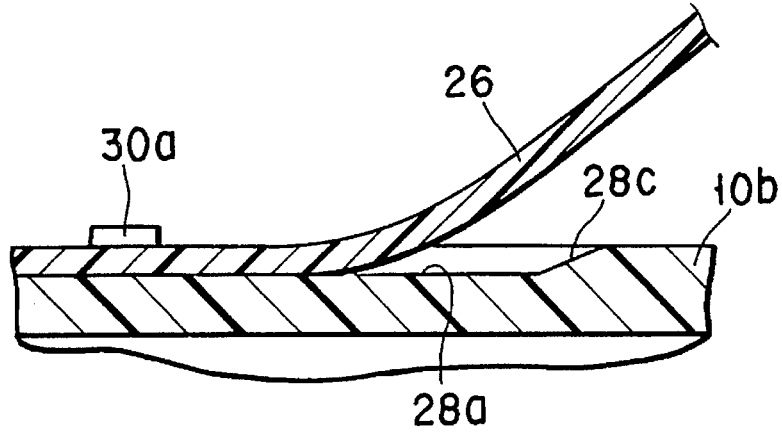


FIG. 4

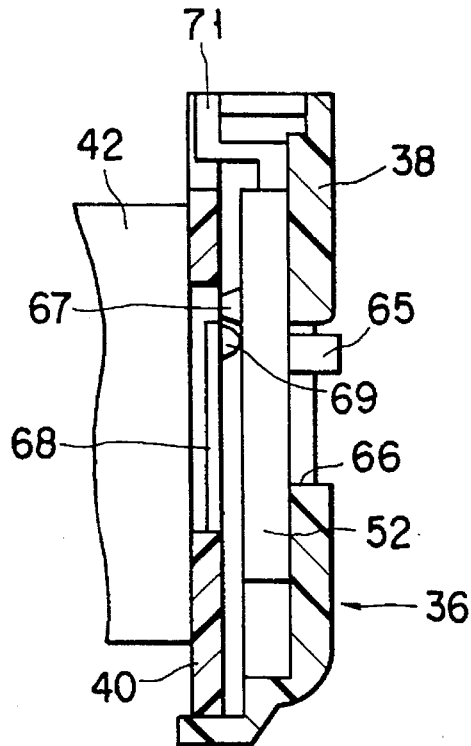


FIG. 5

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