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Finn

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(54) **RFID READER WITH MULTIPLE INTERFACES**

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Related U.S. Application Data

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(51) **Int. Cl.**

G06K 5/00 (2006.01)
G06K 7/08 (2006.01)
G06K 19/06 (2006.01)

(52) **U.S. Cl.** **235/380**; 235/375; 235/451; 235/487; 235/492

(58) **Field of Classification Search** 235/451, 235/492, 380, 375
See application file for complete search history.

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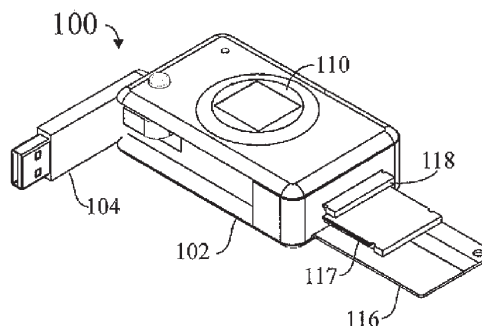
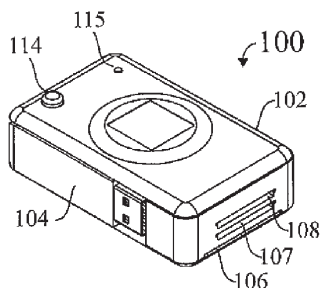
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(57) **ABSTRACT**

A pocket-size RFID reader apparatus having a contactless interface and a slot for insertion of a contactless smart card fob, and having a biometric sensor, thereby providing two levels of personalization. The apparatus may have a wireless interface; and a slot for insertion of a wireless SD I/O device. The apparatus may have a slot for insertion of an external memory device. The apparatus may have a mechanical connection (contact) interface. The apparatus may also have an RF interface for reading an electronic immobilizer within the apparatus.

21 Claims, 4 Drawing Sheets



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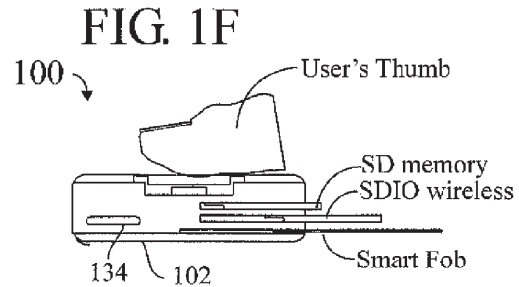
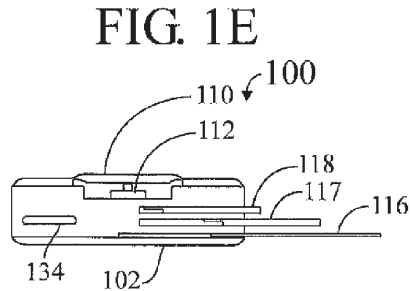
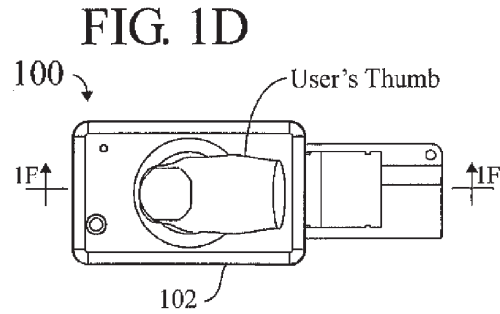
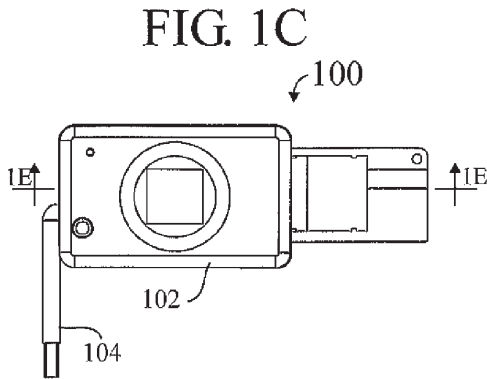
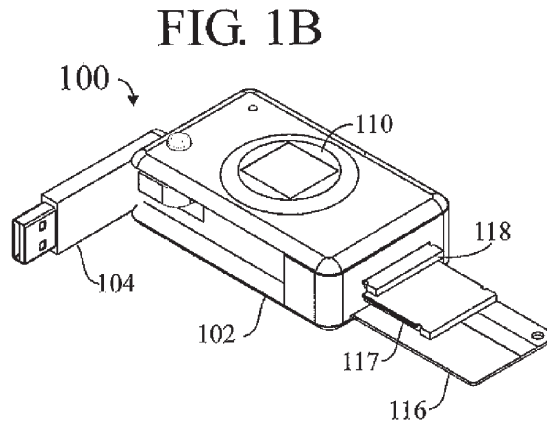
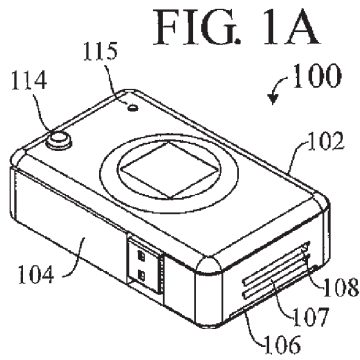


FIG. 1G

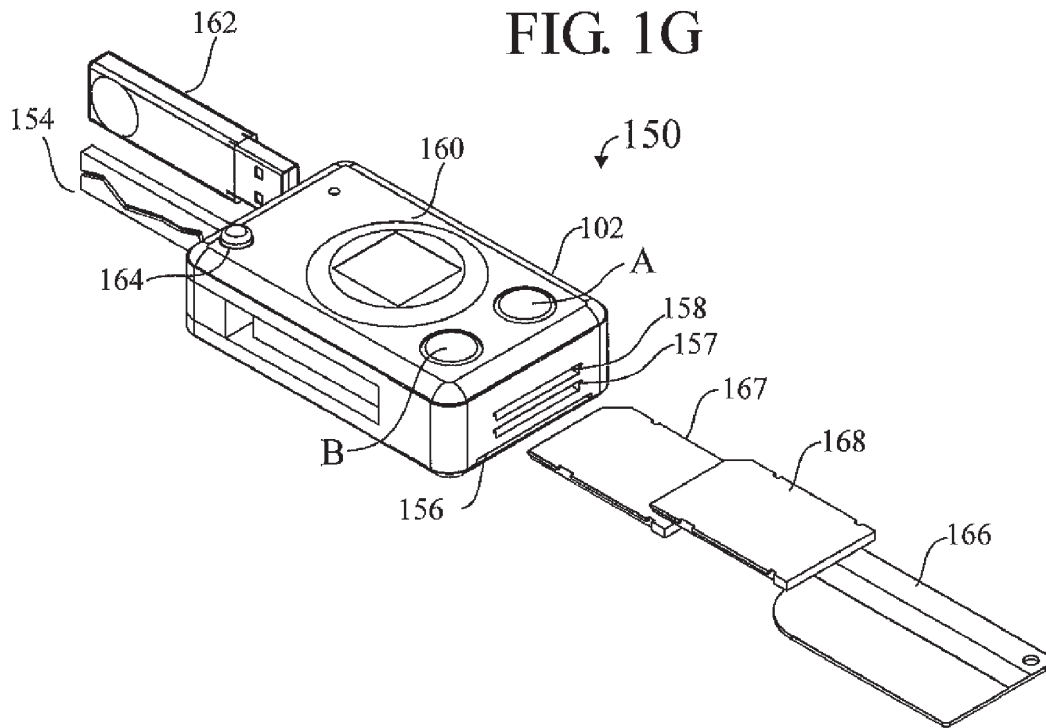


FIG. 4

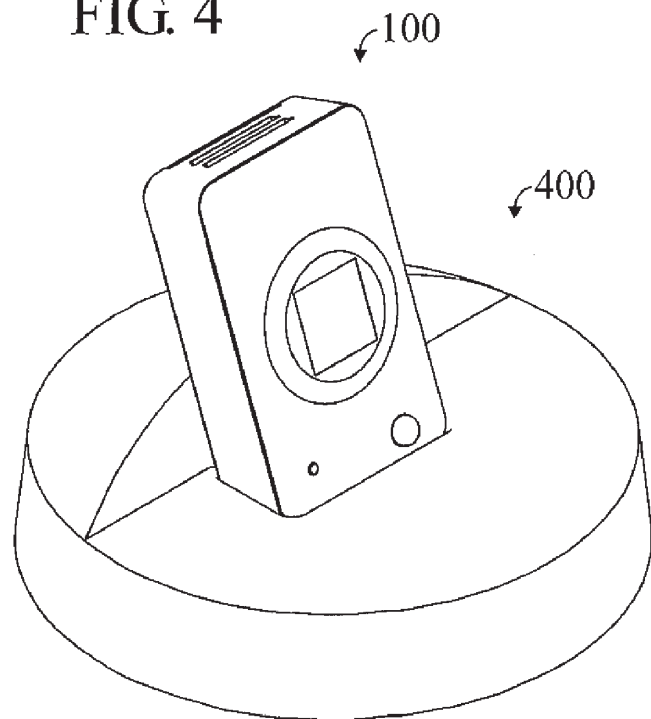


FIG. 2A

RFID Reader

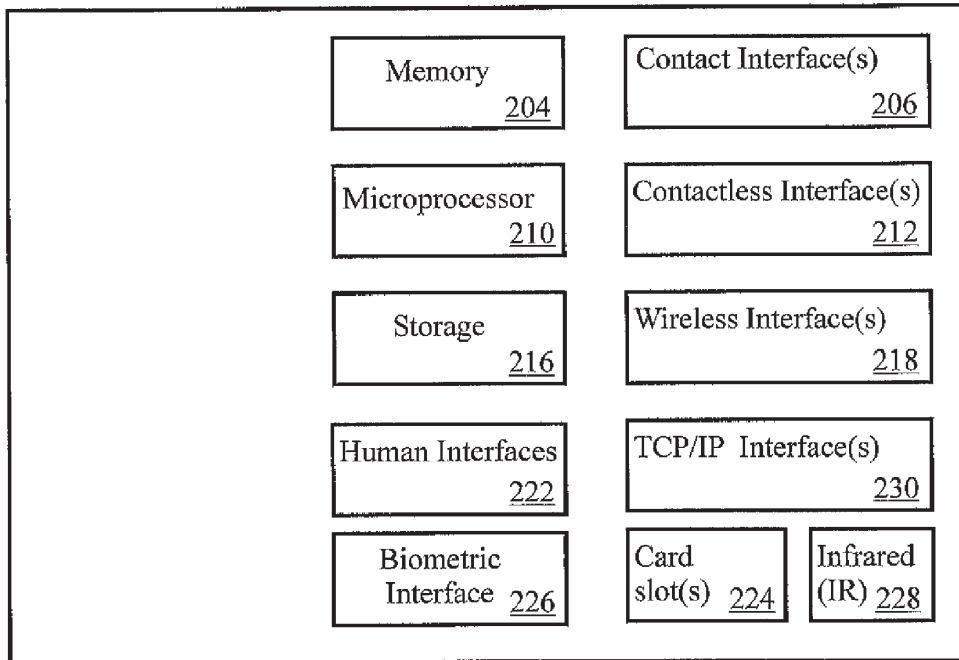
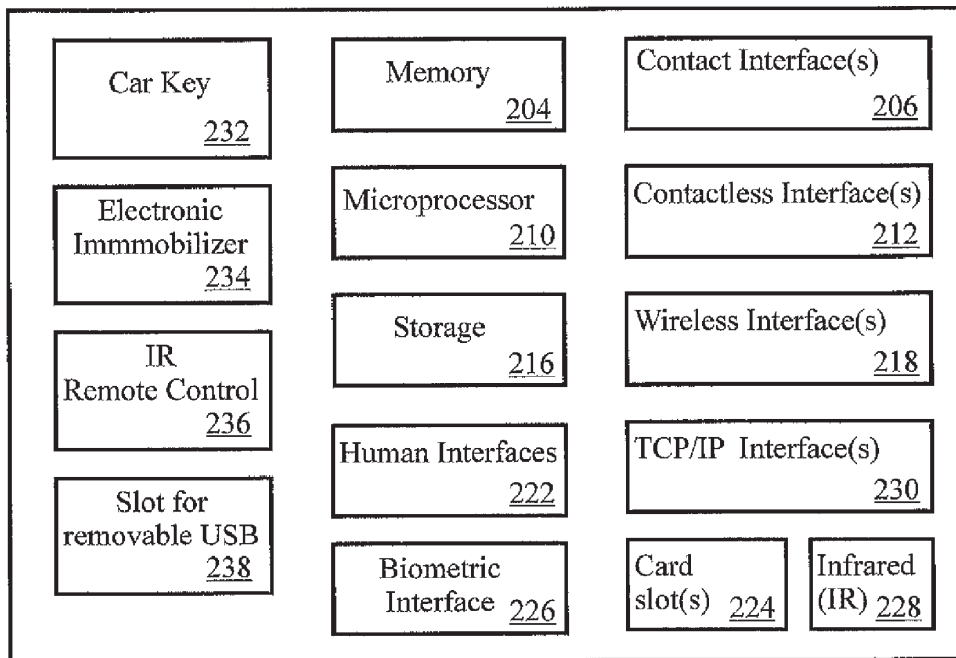


FIG. 2B

Vehicle Immobilizer



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