

(12) United States Patent Zhou

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AUTHENTICATION OF AUTOMATED VENDING MACHINES BY WIRELESS **COMMUNICATIONS DEVICES**

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patent is extended or adjusted under 35

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(2006.01)G06K 7/08

- **U.S. Cl.** 235/381; 235/379; 713/168; 713/170
- 235/380, Field of Classification Search 235/381, 379

See application file for complete search history.

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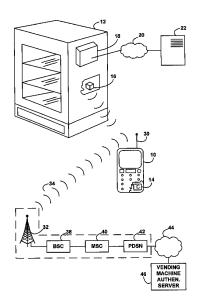
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Primary Examiner—Uyen-Chau N Le

ABSTRACT

A wireless device includes a contactless communications facility such as a contactless Integrated Circuit (IC) card to engage in a transaction with a vending machine. The wireless device obtains credential information from the vending machine and authenticates the vending machine prior to consummation of the transaction. This authentication prevents the users of the wireless devices from transmitting sensitive information (such as credit card data) to the vending machine when the vending machine is in fact a rogue vending machine; i.e., one that purports to vend legitimate products or services but rather is surreptitiously configured to steal sensitive financial information from unsuspecting users.

12 Claims, 4 Drawing Sheets





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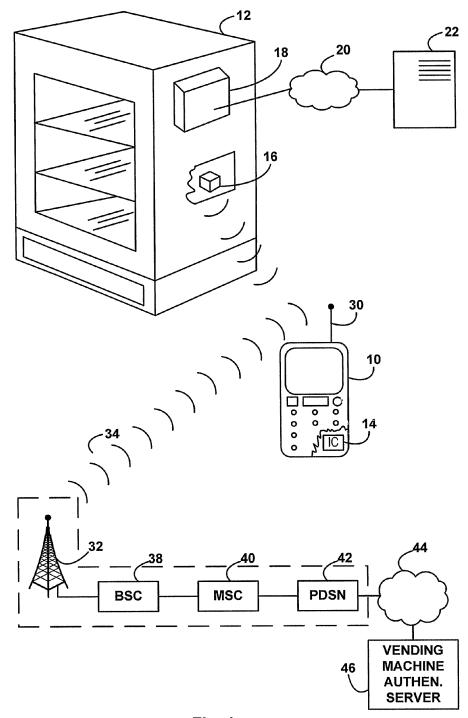


Fig. 1

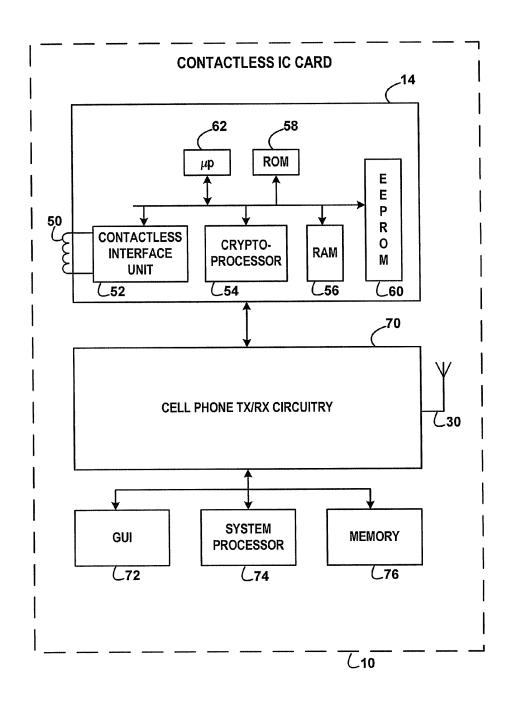


Fig. 2

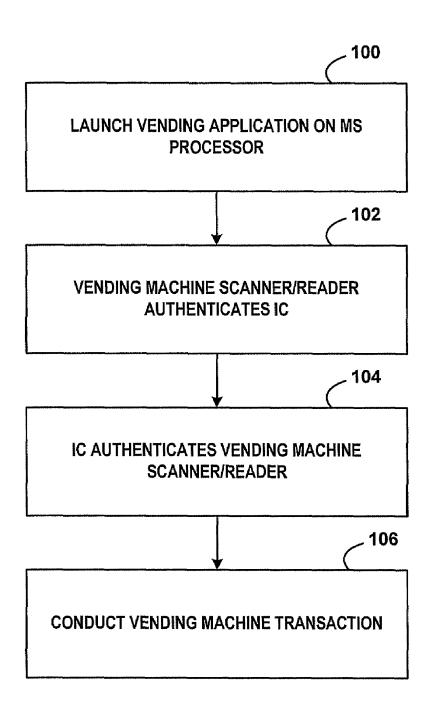


Fig. 3

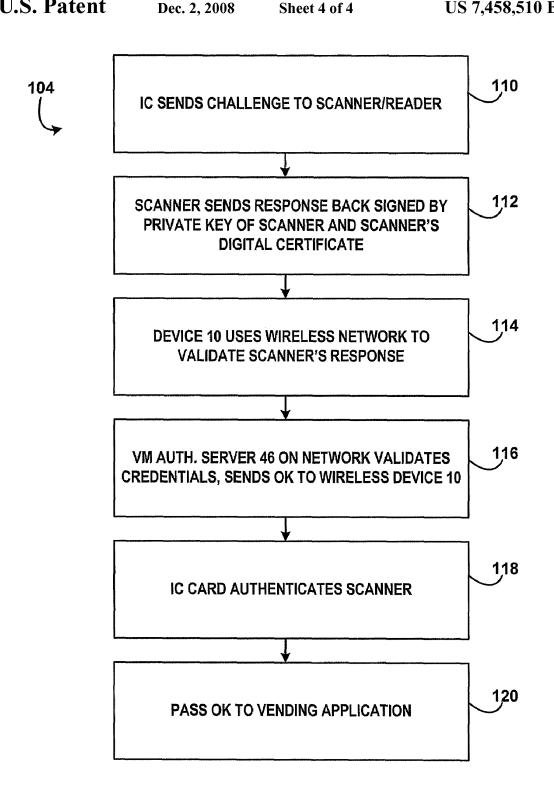


Fig. 4

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