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Ausems et al.

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(54) **PERSONAL DIGITAL ASSISTANT WITH WIRELESS TELEPHONE**

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(52) **U.S. Cl.** **455/556**; 455/569; 455/575

(58) **Field of Search** 455/556, 557, 455/569–575, 90; 248/289.1, 291, 923; 395/2.4; 707/3; 361/610; 364/705.05; 368/10; 379/428, 432, 433

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,959,850	A		9/1990	Marui	379/58
5,100,098	A	*	3/1992	Hawkins	248/917
5,331,138	A		7/1994	Saroya	235/449
5,389,934	A		2/1995	Kass	342/357
5,491,507	A	*	2/1996	Umezawa et al.	348/14
5,497,339	A	*	3/1996	Bernard	364/705.05
5,522,089	A		5/1996	Kikinis et al.	395/893
5,524,101	A	*	6/1996	Thorgersen et al.	368/10
5,524,169	A	*	6/1996	Cohen et al.	395/2.4
5,537,472	A	*	7/1996	Estevez-Alcolado et al.	379/433
5,555,157	A	*	9/1996	Moller et al.	361/683
5,682,418	A	*	10/1997	Ide	379/58
5,715,524	A		2/1998	Jambhekar et al.	455/90
5,748,737	A	*	5/1998	Daggar	380/24
5,749,072	A	*	5/1998	Mazurkiewicz et al.	704/275
5,778,256	A		7/1998	Darbee	395/892
5,787,406	A		7/1998	Arsenault et al.	705/410

(List continued on next page.)

FOREIGN PATENT DOCUMENTS

AT	0933733 A2	*	4/1999	G07F/7/10
AT	0986230 A2	*	3/2000	H04L/29/06
AU	WO9535534 A	*	12/1995	G06F/3/02
DE	0718780 A1	*	6/1996	G06F/15/02

OTHER PUBLICATIONS

Katie Hafner, "Web Phone: The Next Big Thing?", New York Times, Apr. 15, 1999, p. D1 and D7.

Michael Kanellos and Jim Davis, "Qualcomm Merges Phones, Handheld", News.com, Sep. 21, 1998.

Mathew Rose, "Who Wins With the Latest "Smart" Phones and Pagers—R&D Teams or Consumers?", The Wall Street Journal Interactive Edition, Sep. 7, 1998.

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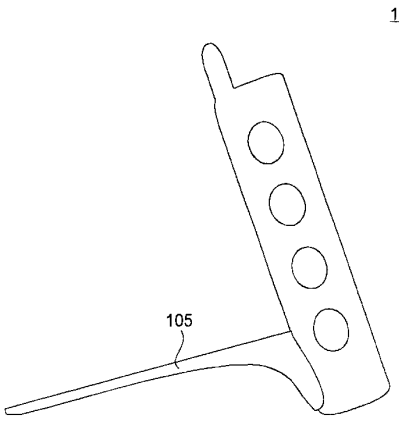
(57) **ABSTRACT**

A wireless telephone engine, smart-card engine and Personal Digital Assistant (PDA) engine are integrated in a single device, wherein an address book is shared by the wireless telephone engine and PDA engine. An associated display unit including a touch screen is coupled to the PDA. The smart-card engine is configured to communicate with external devices via a short-range transceiver. Additionally, the PDA engine is configured to automatically balance an electronic account ledger based upon point of sale transactions, and control a remote device by transmitting signals to the device via the short-wave transceiver and/or the wireless telephone engine. The PDA engine is also configured to receive signals from the remote device regarding the status of the remote device. Further, the PDA engine is configured to exchange data with a remote computer via the wireless telephone engine. The exchanged data includes information stored within the PDA engine and the address book.

23 Claims, 9 Drawing Sheets



U.S. PATENT DOCUMENTS

5,790,659	A	*	8/1998	Strand	379/433
5,797,089	A	*	8/1998	Nguyen	455/403
5,841,119	A	*	11/1998	Rouyrre et al.	235/380
5,845,282	A		12/1998	Alley et al.	707/10
5,859,973	A		1/1999	Carpenter et al.	395/200.33
5,884,156	A	*	3/1999	Gordon	455/350
5,956,656	A	*	9/1999	Yamazaki	455/575
5,983,073	A	*	11/1999	Ditzik	455/11.1
6,024,593	A	*	2/2000	Hyland	439/326
6,026,375	A	*	2/2000	Hall et al.	705/26
6,034,866	A	*	3/2000	Nobuchi et al.	361/681
6,049,796	A	*	4/2000	Siitonen et al.	707/3
6,115,601	A	*	9/2000	Ferreira	455/406
6,128,514	A	*	10/2000	Griffith et al.	455/564
6,133,853	A	*	10/2000	Obradovich et al.	340/905
6,141,540	A	*	10/2000	Richards et al.	455/90
6,167,255	A	*	12/2000	Kennedy, III et al.	455/414
6,178,085	B1	*	1/2001	Leung	361/683
6,215,474	B1	*	4/2001	Shah	345/168

* cited by examiner

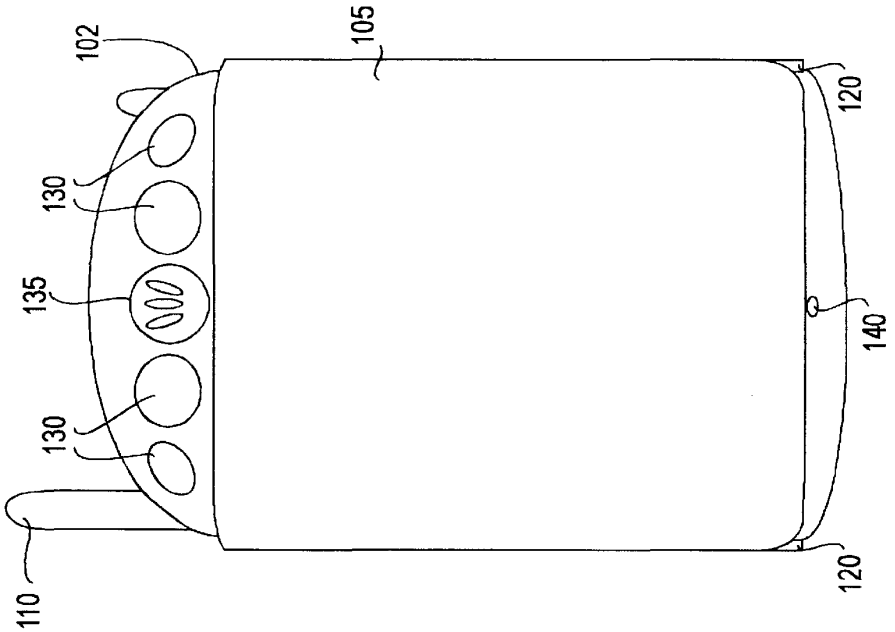


Fig. 1b

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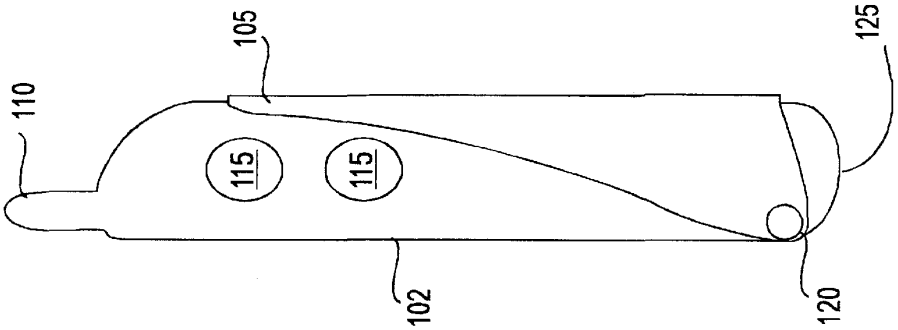

Fig. 1a

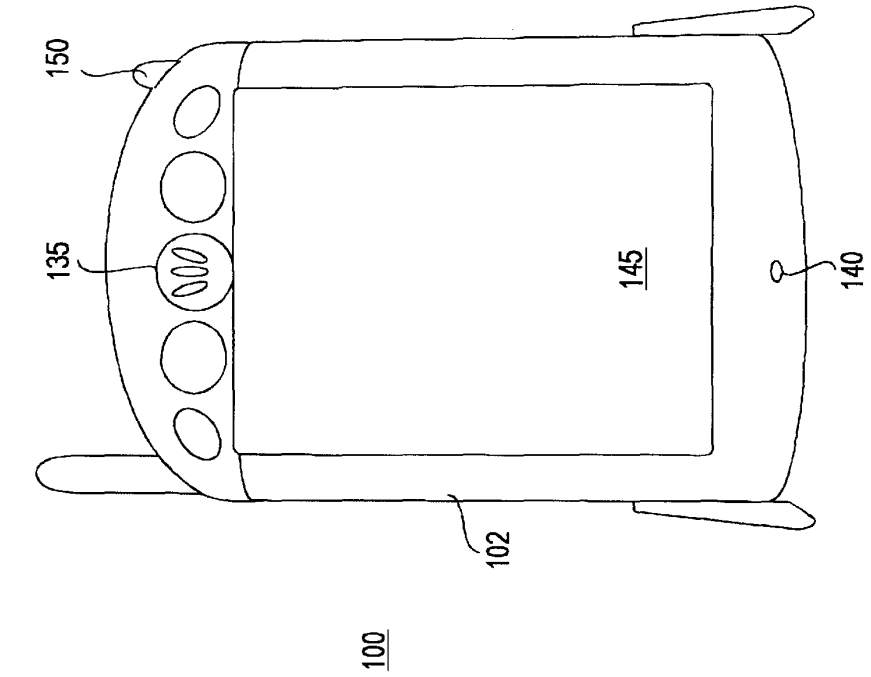

Fig. 1d

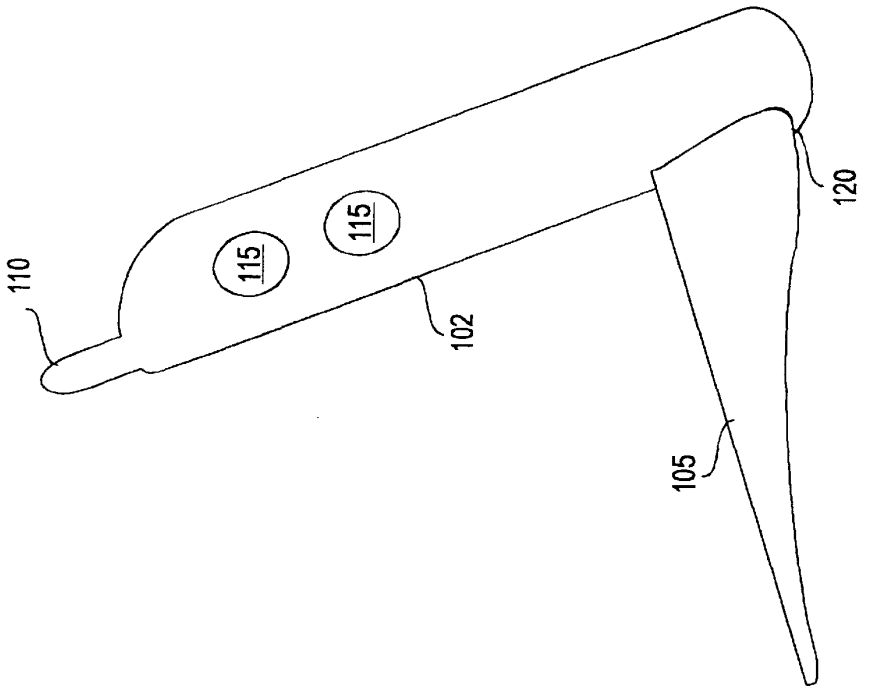

Fig. 1c

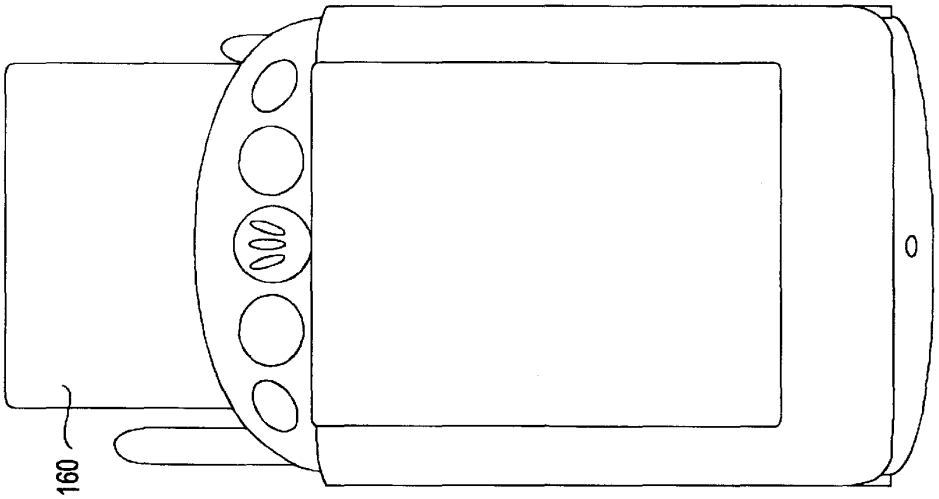

Fig. 1f

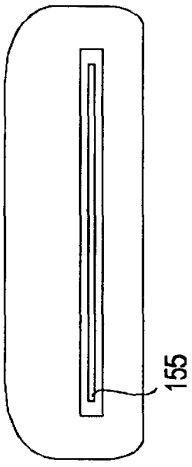

Fig. 1g

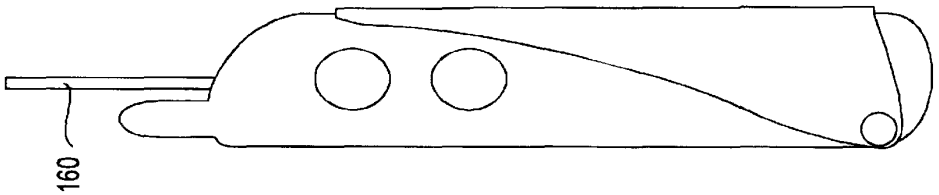

Fig. 1e

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