(11) **EP 1 327 964 A3**

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3: 29.09.2004 Bulletin 2004/40

(51) Int Cl.⁷: **G07F 5/24**

(43) Date of publication A2: 16.07.2003 Bulletin 2003/29

(21) Application number: 03006998.3

(22) Date of filing: 17.06.1998

(84) Designated Contracting States: **DE ES FR GB**

(30) Priority: **18.06.1997 GB 9712881 07.10.1997 GB 9721252**

(62) Document number(s) of the earlier application(s) in accordance with Art. 76 EPC: 98930872.1 / 0 988 621

(71) Applicant: Mars Incorporated
McLean, Virginia 22101-3883 (US)

(72) Inventors:

 Fletcher, Paul Robert Camberly, Surrey GU15 1DE (GB)

- Billington, Gregory John
 Lower Earley, Reading, Berkshire RG6 3BS (GB)
- Green, Stephen Michael
 Woodley, Reading, Berkshire RG5 4PA (GB)
- Steel, Paul Franklin Barkham, Workingham, Berkshire RG41 4TA (GB)
- (74) Representative:

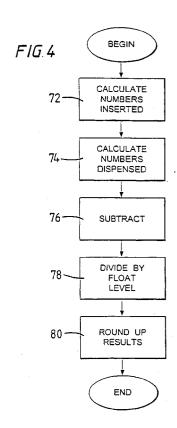
 Whitlock, Holly Elizabeth Ann et al
 R G C Jenkins,

 26 Caxton Street

 London SW1H 0RJ (GB)

(54) Currency handling apparatus

(57) A currency handling apparatus for dispensing currency units from a plurality of stores, each for storing units of currency of a respective denomination, comprises means for predicting the future distribution of currency units to be dispensed and means for outputting a signal representing instructions for changes to the stores in accordance with the predicted future distribution.





EUROPEAN SEARCH REPORT

Application Number EP 03 00 6998

Category	Citation of document with indi of relevant passag	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)		
D,A	GB 2 269 256 A (MARS 2 February 1994 (199 * page 3, last parag * page 14, line 14 -) 4-02-02) raph - page 7, line page 15, line 17 *	2,4-8	G07F5/24	
	* page 17, last para 4-6,8,11-15 *	grapn; claims 			
Α	US 5 595 277 A (HOOR 21 January 1997 (199 * column 2, line 13	7-01-21)	* 2		
Α	FR 2 365 844 A (COMP. D'AUTOMATISME) 21 Ap * page 3, line 18 - * page 3, line 33 -	ril 1978 (1978-04-21 line 21 *	2		
X A·	US 5 356 333 A (BOIN 18 October 1994 (199 * column 3, line 22	4-10-18)	3,5,16, 17,23,2 * 4,6,7		
Х	DE 195 45 417 A (NAT 12 June 1997 (1997-0		3,5,6, 16,17,	TECHNICAL FIELDS SEARCHED (Int.CI.6)	
A	* column 4, line 46 figures 1,2 *	- column 5, line 14	23,24		
Α	EP 0 397 353 A (SAND 14 November 1990 (19 * column 4, line 32 figures 2-4 *	90-11-14)	3,5,16, 17		
X	US 4 763 769 A (LEVA 16 August 1988 (1988 * column 1, line 55 * column 23, line 38 * column 26, line 53	-08-16) - line 68 * - line 58 *	9-17,23 24	,	
	The present search report has be				
	Place of search The Hague	Date of completion of the search	ŀ	Examiner ville, D	
X : par Y : par doo	CATEGORY OF CITED DOCUMENTS ticularly relevant if taken alone ticularly relevant if combined with anothe ument of the same category hnological background	E : earlier pater after the filin or D : document o L : document o	nciple underlying the t document, but pub g date ited in the applicatior ted for other reasons	lished on, or	



EUROPEAN SEARCH REPORT

Application Number EP 03 00 6998

	Citation of document with indicate	tion, where appropriate.	Relevant	CLASSIFICATION OF THE
Category	of relevant passages		to claim	APPLICATION (Int.Cl.6)
A	US 4 520 451 A (MCLAUG 28 May 1985 (1985-05-2 * column 5, line 36 -	·8)	9-15	
Α	US 4 587 984 A (LEVASS 13 May 1986 (1986-05-1 * column 5, line 11 -	.3)	* 16,17	
Α	WO 94/25940 A (CADBURY 10 November 1994 (1994 * page 4, line 19 - li	-11-10)	9	
Α	US 4 272 757 A (MCLAUG 9 June 1981 (1981-06-6 * column 2, line 33 -	19)	9	
X	EP 0 380 097 A (COIN A 1 August 1990 (1990-08 * page 3, line 20 - li * page 10, line 48 - page 14, line 41 - page 14, line 41 - page 14	3-01) ne 43 * Dage 13, line 33 *	18-24	TECHNICAL FIELDS SEARCHED (Int.Cl.6)
	The present search report has been			
	Place of search The Hague	Date of completion of the search	i	ille, D
X : par Y : par doc A : tec O : nor	ATEGORY OF CITED DOCUMENTS ticularly relevant if taken alone ticularly relevant if combined with another ument of the same category hnological background n-written disclosure ermediate document	T : theory or prin E : earlier patent after the filing D : document cit L : document cite	ciple underlying the ir document, but publis	vention thed on, or



Application Number

EP 03 00 6998

CLAIMS INCURRING FEES
The present European patent application comprised at the time of filing more than ten claims.
Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):
No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.
LACK OF UNITY OF INVENTION
The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:
see sheet B
All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:



LACK OF UNITY OF INVENTION SHEET B

Application Number EP 03 00 6998

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-8,16,17,23,24

Arranging a date for a visit by a serviceman. Issuing instructions for changing coin stores. Directing a second denomination to a same store.

1.1. claims: 1,4-7,16,17,23,24

Arranging a date for a visit by a serviceman.

1.2. claims: 2,4-8,16,17,23,24

Issuing instructions for changing coin stores.

1.3. claims: 3-7,16,17,23,24

Directing a second denomination to a same store.

2. claims: 9-17,23,24

Recording short-change events.

3. claims: 18-24

Predicting future sales.

Please note that all inventions mentioned under item 1, although not necessarily linked by a common inventive concept, could be searched without effort justifying an additional fee.

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 03 00 6998

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

26-07-2004

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
GB 2269256	A	02-02-1994	DE DE EP ES WO JP JP US	9403874	T2 A1 T3 A1 T B2	24-10-19 13-02-19 17-05-19 01-11-19 17-02-19 19-10-19 17-02-20 19-03-19
US 5595277	Α	21-01-1997	NONE			
FR 2365844	Α	21-04-1978	FR	2365844	A1	21-04-19
US 5356333	А	18-10-1994	GB AT AU CA CN DE DE EP ES WO I P KR	2236887 116458 6517590 2067190 1051803 69015645 69015645 0495818 2065550 9106073 903644 5501318 9606844	T A A1 A D1 T2 A1 T3 A1 A1	17-04-19 15-01-19 16-05-19 13-04-19 29-05-19 09-02-19 11-05-19 29-07-19 16-02-19 02-05-19 24-04-19 11-03-19
DE 19545417	Α	12-06-1997	DE	19545417	A1	12-06-19
EP 0397353	Α	14-11-1990	JP EP US	2145465 0397353 5181882	A2	10-12-19 14-11-19 26-01-19
US 4763769	Α	16-08-1988	CA JP KR	1281134 63147291 9611502	A	05-03-19 20-06-19 23-08-19
US 4520451	A	28-05-1985	AU CA DK EP ES GB IT JP	550975 8951282 1198214 243083 0089977 8306904 2107096 1152676 4040757	A1 A1 A1 A1 A1 A ,B	10-04-19 27-04-19 17-12-19 30-05-19 05-10-19 16-09-19 20-04-19 07-01-19

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 03 00 6998

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

26-07-2004

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 4520451	A		JP MY WO ZA	58501601 T 10188 A 8301327 A1 8205949 A	22-09-1983 31-12-1988 14-04-1983 27-07-1983
US 4587984	Α	13-05-1986	CA DE GB	1223364 A1 3410924 A1 2140954 A ,B	23-06-1987 06-12-1984 05-12-1984
WO 9425940	Α	10-11-1994	AU WO GB US	6575294 A 9425940 A1 2283354 A ,B 5615759 A	21-11-1994 10-11-1994 03-05-1995 01-04-1997
US 4272757	A	09-06-1981	AT DE EP HK JP JP JP MY SG	8718 T 3068650 D1 0018718 A1 48087 A 1701734 C 3061236 B 56004891 A 71987 A 75986 G	15-08-1984 30-08-1984 12-11-1980 26-06-1987 14-10-1992 19-09-1991 19-01-1981 31-12-1987 03-07-1987
EP 0380097	А	01-08-1990	US US AU AU CA DE DE EP JP KR	5029098 A 5050769 A 651062 B2 4882490 A 2007862 A1 69022435 D1 69022435 T2 0380097 A2 2260095 A 3025281 B2 140200 B1	02-07-1991 24-09-1991 14-07-1994 02-08-1990 27-07-1990 26-10-1995 13-06-1996 01-08-1990 22-10-1990 27-03-2000 15-07-1998

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82