



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

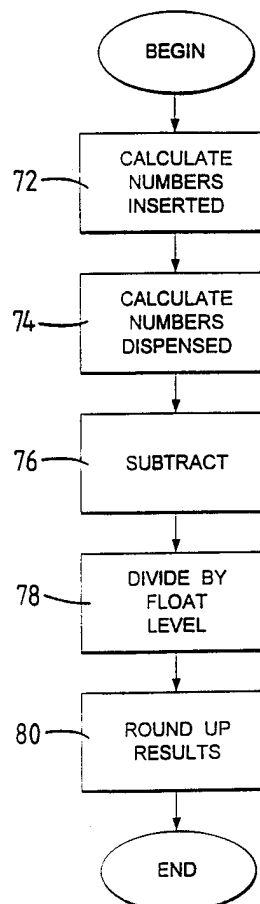
<p>(51) International Patent Classification <sup>6</sup> : <b>G07F 5/24</b></p>	<p>A3</p>	<p>(11) International Publication Number: <b>WO 98/58355</b> (43) International Publication Date: 23 December 1998 (23.12.98)</p>
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<p>(21) International Application Number: PCT/GB98/01760 (22) International Filing Date: 17 June 1998 (17.06.98) (30) Priority Data: 9712881.3 18 June 1997 (18.06.97) GB 9721252.6 7 October 1997 (07.10.97) GB (71) Applicant (for all designated States except US): MARS, INCORPORATED [US/US]; 6885 Elm Street, McLean, VA 22101-3883 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): FLETCHER, Paul, Robert [GB/GB]; 6 Prior Croft Close, Camberley, Surrey GU15 1DE (GB). BILLINGTON, Gregory, John [GB/GB]; 36 Egremont Drive, Lower Earley, Reading, Berkshire RG6 3BS (GB). GREEN, Stephen, Michael [GB/GB]; 9 Vickers Close, Woodley, Reading, Berkshire RG5 4PA (GB). STEEL, Paul, Franklin [GB/GB]; Barkham Coombes House, Hayes Lane, Barkham, Wokingham, Berkshire RG41 4TA (GB). (74) Agents: BURKE, Steven, D. et al.; R.G.C. Jenkins &amp; Co., 26 Caxton Street, London SW1H 0RJ (GB).</p>	<p>(81) Designated States: AL, AM, AT, AT (Utility model), AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ (Utility model), DE, DE (Utility model), DK, DK (Utility model), EE, EE (Utility model), ES, FI, FI (Utility model), GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (Utility model), SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).</p> <p>Published <i>With international search report.</i></p> <p>(88) Date of publication of the international search report: 11 March 1999 (11.03.99)</p>
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(54) Title: CURRENCY HANDLING APPARATUS

(57) Abstract

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.



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INTERNATIONAL SEARCH REPORT

International Application No  
PCT/GB 98/01760

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC 6 G07F5/24				
According to International Patent Classification (IPC) or to both national classification and IPC				
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) IPC 6 G07F				
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched				
Electronic data base consulted during the international search (name of data base and, where practical, search terms used)				
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>				
Category <sup>o</sup>	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
A	GB 2 269 256 A (MARS) 2 February 1994 cited in the application  see page 3, last paragraph - page 7, line 4 see page 14, line 14 - page 15, line 17 see page 17, last paragraph; claims 4-6,8,11-15	1,9-17, 21,22, 40-43		
A	--- US 5 595 277 A (HOORMANN ET AL.) 21 January 1997 see column 2, line 13 - line 35; figure 2	1,2,40, 41		
A	--- FR 2 365 844 A (COMPANGNIE GENERALE D'AUTOMATISME) 21 April 1978 see page 3, line 18 - line 21 see page 3, line 33 - line 35 -----			
<input type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex.				
<sup>o</sup> Special categories of cited documents : <table border="0" style="width:100%"> <tr> <td style="width:50%">                     "A" document defining the general state of the art which is not considered to be of particular relevance                      "E" earlier document but published on or after the international filing date                      "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)                      "O" document referring to an oral disclosure, use, exhibition or other means                      "P" document published prior to the international filing date but later than the priority date claimed                 </td> <td style="width:50%">                     "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention                      "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone                      "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.                      "&amp;" document member of the same patent family                 </td> </tr> </table>			"A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family
"A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family			
Date of the actual completion of the international search  15 October 1998		Date of mailing of the international search report  23.12.98		
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer  NEVILLE, D		

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/GB 98/01760

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos.: **8, 38, 39, 52-54**  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  
  

See annex
  
3.  Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

See annex

1.  As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
3.  As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
  
4.  No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-3, 9-22, 30-32, 40-44

Remark on Protest

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims : 1-3, 9-22, 30-32, 40-44

Instruction for changing coin stores based on prediction of requirements of denominations for change making.

2. Claims : 4-7, 9-20, 30-32, 40, 48-51

A second denomination is directed to a same store.

3. Claims : 23-32, 40

Recording a condition when there is insufficient change.

4. Claims : 33-37, 45-47

Predicting future sales of products.

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Unsearchable claims : 8, 38, 39, 52-54

Claim 8 : The basis or reason and for arranging a date for service by an attendant is not clear.

Claims 38, 39 : The manner of adaptation of both the control board and the processor is not clear.

Claims 52-54 : The currency handling apparatus, vending machine and method of assembly mentioned are not clearly defined.  
Art. 6 PCT.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 98/01760

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 2269256 A	02-02-1994	DE 69304923 D DE 69304923 T EP 0653084 A ES 2091628 T WO 9403874 A JP 7509579 T US 5499944 A	24-10-1996 13-02-1997 17-05-1995 01-11-1996 17-02-1994 19-10-1995 19-03-1996
US 5595277 A	21-01-1997	NONE	
FR 2365844 A	21-04-1978	NONE	