



(19)

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(11)

EP 0 878 307 A3

(12)

## EUROPEAN PATENT APPLICATION

(88) Date of publication A3:  
23.12.1998 Bulletin 1998/52

(51) Int Cl. 6: B41J 2/175

(43) Date of publication A2:  
18.11.1998 Bulletin 1998/47

(21) Application number: 98303549.4

(22) Date of filing: 06.05.1998

(84) Designated Contracting States:  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU  
MC NL PT SE  
Designated Extension States:  
AL LT LV MK RO SI

(30) Priority: 16.05.1997 US 857722

(71) Applicant: Hewlett-Packard Company  
Palo Alto, California 94304 (US)

(72) Inventors:  
• Childers, Winthrop D.  
San Diego, CA 92127 (US)

- Bullock, Michael L.  
San Diego, CA 92128 (US)
- Underwood, John Anthony  
Vancouver, WA 98686 (US)
- Hmellar, Susan Marie  
Corvallis, OR 97333 (US)
- Merrill, David O.  
Corvallis, OR 97330 (US)

(74) Representative: Colgan, Stephen James et al  
CARPMAELS & RANSFORD  
43 Bloomsbury Square  
London WC1A 2RA (GB)

### (54) Mechanical and electrical keying arrangement for replaceable ink cartridge

(57) A replaceable ink cartridge (12) for an inkjet printer (10) enables both mechanical and electrical keying. The inkjet printer (10) includes a receptacle (14) for receiving the ink cartridge (12), which receptacle (14) includes a fluidic coupler (28), an electrical connection (30), and a mechanical keying feature (66) for accepting only ink cartridges (12) containing a first class of compatible ink types and for rejecting ink cartridges (12) containing a second class of incompatible ink types. The replaceable ink cartridge (12) includes a casing with a fluidic coupler (20), a reservoir (22) connected to the fluidic coupler (20) for holding an ink supply and an electrical connector (24). A memory (26) is coupled to the electrical connector (24) and stores a parameter from which an identity of an ink stored in the reservoir (22) can be identified. A physical key (62,64) is positioned on a leading portion of the casing of the replaceable ink cartridge (12). A successful insertion of the casing into a receptacle (14) in the printer (10) indicates that the ink type in the reservoir (22) is within the first class of compatible ink types, but not that it is usable with the printer (10). The printer (10) determines usability by reading out the parameter from the memory (26) and determining that the ink identity is one that can be used with the printer (10).

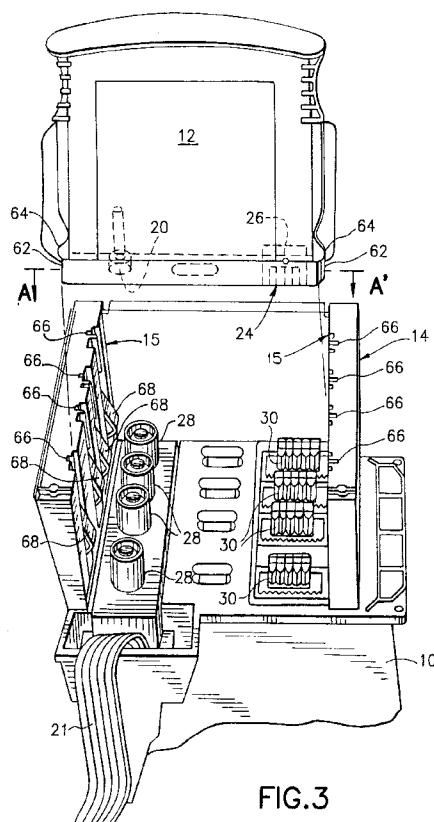


FIG.3



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## EUROPEAN SEARCH REPORT

Application Number

EP 98 30 3549

DOCUMENTS CONSIDERED TO BE RELEVANT		Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
Category	Citation of document with indication, where appropriate, of relevant passages		
D,A	US 5 138 344 A (UJITA TOSHIHIKO) 11 August 1992 * abstract * * column 2, line 35 - column 3, line 48 * * column 3, line 56-63 * * column 5, line 12 - column 8, line 17; figures 4-7 * ---	1,5	B41J2/175
D,A	US 5 365 312 A (HILLMANN RUEDIGER ET AL) 15 November 1994 * abstract * * column 4, line 39-53; figure 2 * ---	1,5	
A	EP 0 412 459 A (CANON KK) 13 February 1991 * abstract * * page 13, line 56 - page 14, line 35; claims 1,8,12; figure 11 * ---	1,5	
A	EP 0 623 471 A (HEWLETT PACKARD CO) 9 November 1994 * abstract * ---	1,5	
A	US 5 530 531 A (GIRARD JAMES J) 25 June 1996 * abstract; figure 3 * ---	1,5	B41J
A	PATENT ABSTRACTS OF JAPAN vol. 017, no. 623 (M-1511), 17 November 1993 & JP 05 193127 A (CANON INC), 3 August 1993 * abstract * ---	1,5	
P,A	EP 0 789 322 A (HEWLETT PACKARD CO) 13 August 1997 * abstract * * column 7, line 17 - column 9, line 39; figures 4-6 * ----	1,5	
The present search report has been drawn up for all claims			
Place of search	Date of completion of the search	Examiner	
BERLIN	3 November 1998	Nielsen, M	
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone	T : theory or principle underlying the invention		
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