



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 1 013 458 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
08.11.2000 Bulletin 2000/45

(51) Int Cl.7: **B41J 29/02**

(43) Date of publication A2:
28.06.2000 Bulletin 2000/26

(21) Application number: **99309494.5**

(22) Date of filing: **29.11.1999**

(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

(72) Inventor: **Bowling, Bruce A.**
Beavercreek, Ohio 45432 (US)

(74) Representative: **Freed, Arthur Woolf et al**
Reginald W. Barker & Co.,
Cliffords Inn
Fetter Lane
London EC4A 1BY (GB)

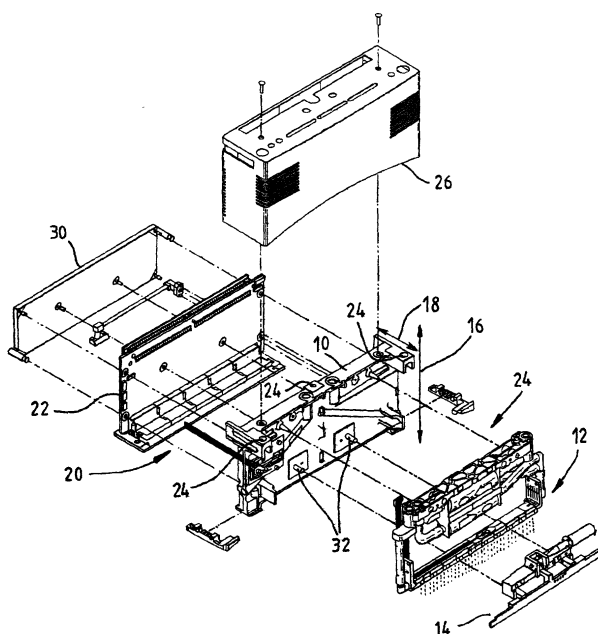
(30) Priority: **14.12.1998 US 211518**

(71) Applicant: **Scitex Digital Printing, Inc.**
Dayton, Ohio 45420-4099 (US)

(54) **Monolithic ink jet printing chassis**

(57) A printhead alignment apparatus is provided for use with a continuous ink jet printer. A single chassis maintains alignment of the droplet generator and the catcher/charge plate assembly (14). Electronic and fluidic components are attached to the single chassis, with the single chassis separating the electronic and fluid related functions of the printhead. Also, mounting features and connections of the electronic and fluid related func-

tions are separated from mounting features of the catcher and the droplet generator. Connections for the electronic and fluid related functions are in a plane parallel to the plane of the catcher. The single chassis also accurately locates an eyelid mechanism relative to the droplet generator and the catcher/charge plate assembly (14). Finally, the single chassis has a z-axis length larger than its x-axis depth, with the z-axis length being perpendicular to a plane of the catcher.



EP 1 013 458 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 99 30 9494

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	EP 0 813 974 A (SCITEX DIGITAL PRINTING INC) 29 December 1997 (1997-12-29) * column 4, line 52 - column 7, line 26; figures 1,2 *	1	B41J29/02
A	----	2-9	
X	WO 98 28146 A (ZABA JERZY MARCIN ;DOMINO PRINTING SCIENCES PLC (GB); FOST IAN MIC) 2 July 1998 (1998-07-02) * page 3, line 29 - page 6, line 2; figures 1-3E *	1	
A	----	2-9	
X	GB 2 139 962 A (RICOH KK) 21 November 1984 (1984-11-21) * page 2, right-hand column, line 118 - page 3, right-hand column, line 94; figures 2,4,6 *	1	
A	----	2-9	
A	US 5 764 265 A (KAWASAKI HIROYUKI ET AL) 9 June 1998 (1998-06-09) * column 8, line 60 - column 10, line 24; figure 11 *	1	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
A	US 5 477 254 A (STEPHENS DAVID J) 19 December 1995 (1995-12-19) * column 2, line 40 - column 4, line 44; figures 1-4 *	1	B41J
A	US 4 743 922 A (REGNAULT LUC ET AL) 10 May 1988 (1988-05-10)		
A	US 4 620 195 A (EBLEN OTTO ET AL) 28 October 1986 (1986-10-28)		
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 14 September 2000	Examiner Adam, E
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons</p> <p>..... & : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03/82 (P04C01)

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

EP 99 30 9494

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.

14-09-2000

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0813974 A	29-12-1997	AU 2493397 A	08-01-1998
		CA 2207800 A	18-12-1997
		JP 10052910 A	24-02-1998
WO 9828146 A	02-07-1998	CN 1247504 A	15-03-2000
		EP 0966357 A	29-12-1999
GB 2139962 A	21-11-1984	JP 59188445 A	25-10-1984
		JP 59188446 A	25-10-1984
		JP 59188443 A	25-10-1984
		JP 59188447 A	25-10-1984
		DE 3413678 A	25-10-1984
		US 4520367 A	28-05-1985
US 5764265 A	09-06-1998	JP 2814885 B	27-10-1998
		JP 7076076 A	20-03-1995
		JP 2755119 B	20-05-1998
		JP 7076096 A	20-03-1995
		EP 0646470 A	05-04-1995
US 5477254 A	19-12-1995	NONE	
US 4743922 A	10-05-1988	FR 2573008 A	16-05-1986
		AU 580819 B	02-02-1989
		AU 5068685 A	03-06-1986
		CA 1264984 A	30-01-1990
		DE 3576140 D	05-04-1990
		EP 0203108 A	03-12-1986
		WO 8602885 A	22-05-1986
		JP 62500779 T	02-04-1987
US 4620195 A	28-10-1986	AT 51583 T	15-04-1990
		BE 901198 A	29-03-1985
		DE 3481833 D	10-05-1990
		EP 0153436 A	04-09-1985