



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
16.05.2007 Bulletin 2007/20

(51) Int Cl.:
B41J 2/175^(2006.01)

(43) Date of publication A2:
11.04.2007 Bulletin 2007/15

(21) Application number: **06013004.4**

(22) Date of filing: **23.06.2006**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR
Designated Extension States:
AL BA HR MK YU

(30) Priority: **29.09.2005 JP 2005284646**
28.11.2005 JP 2005342697
28.12.2005 JP 2005377987
09.03.2006 JP 2006064866
23.03.2006 JP 2006081806

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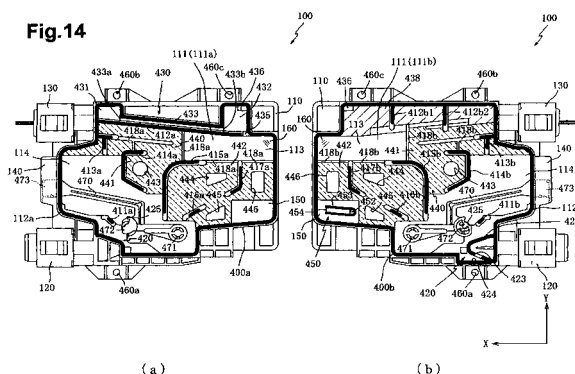
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(54) **Ink cartridge with light-receiving and light-blocking portion**

(57) An ink cartridge (14) for being mounted in the ink-jet recording apparatus (1) comprising:
an ink chamber (111) accommodating ink;
a front wall (210b, 220b) that serves as a front-end wall;
a bottom wall (210a);
an ink supply part (120) provided at the front wall (210b, 220b), an ink supply opening (600) being formed in the ink supply part (120);
an ink supply path located in rear of the ink supply opening (600), the ink supply path communicating the ink supply opening (600) and the ink chamber (111);
a valve mechanism (500) provided in the ink supply path and capable of opening and closing the ink supply path;
a light-receiving part (141) provided at the front wall (210b, 220b) and above the ink supply part (120), an inner space being formed in the light receiving part (141) to communicate with the ink chamber (111), and
a pivot member (470) including:
a light-blocking portion (473c) provided at one end of the pivot member (470) and located in the inner space of the light receiving part (141);
a float (471) provided at the other end of the pivot member

(470) and movable in response to a change in an amount of ink in the ink chamber (111); and
a pivot center provided between the light-blocking portion (473c) and the float (471), the pivot center being located in rear of the ink supply path, the pivot member (470) being pivotable around the pivot center in response to the change in an amount of ink in the ink chamber (111).

Fig.14





European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 06 01 3004

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	EP 1 097 814 A2 (SEIKO EPSON CORP [JP]) 9 May 2001 (2001-05-09) * paragraph [0035] - paragraph [0037]; figure 7 * * paragraph [0065] - paragraph [0069]; figures 21,23 * -----	1,11	INV. B41J2/175
A	US 2005/179752 A1 (ISHIZAWA TAKU [JP] ET AL) 18 August 2005 (2005-08-18) * paragraph [0064]; figure 3 * -----	1,11	
			TECHNICAL FIELDS SEARCHED (IPC)
			B41J
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 28 March 2007	Examiner De Groot, Ronald
CATEGORY OF CITED DOCUMENTS 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		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 & : member of the same patent family, corresponding document	

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EPO FORM 1503 03.92 (P04C01)

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

EP 06 01 3004

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The members are as contained in the European Patent Office EDP file on
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28-03-2007

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 1097814	A2	09-05-2001	AT 269788 T 15-07-2004
		DE 60011733 D1 29-07-2004	
		DE 60011733 T2 14-07-2005	
		US 6378971 B1 30-04-2002	

US 2005179752	A1	18-08-2005	CN 1647931 A 03-08-2005
		JP 2005212379 A 11-08-2005	
