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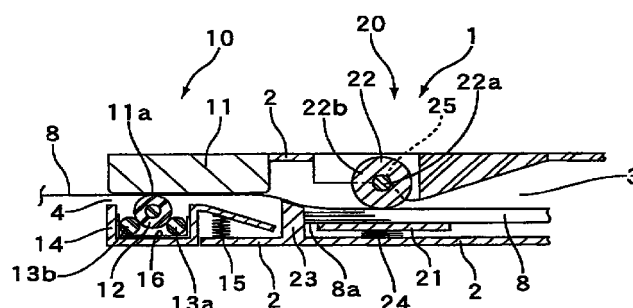
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(54) **Printer assembly and printer**

(57) A printer (1) and a printer assembly (10) of the present invention includes: a line thermal head (11); a platen roller (12) having surface of high coefficient of friction for holding a printing paper between the platen roller and the line thermal head to feed the printing paper; supporting rollers (13a;13b) having surface of low coefficient of friction, disposed at front and rear of the platen roller along a paper feeding direction so as to support the platen roller from a side opposed to the line thermal head; a supporting plate (14) extending along the supporting rollers so as to receive the surfaces of the supporting rollers from a side opposed to the line

thermal head; and pressurizing means for applying pressure between the supporting plate and the line thermal head. The platen roller is supported along its longitudinal direction by the supporting plate via the supporting rollers comprising a small member with low coefficient of friction. Accordingly, even when the diameter of a platen roller is small, it is possible to apply sufficient pressure on to the line thermal head, and thin and compact printer assembly and printer can be provided.

Fig. 2



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EUROPEAN SEARCH REPORT

Application Number
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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)
A	PATENT ABSTRACTS OF JAPAN vol. 1996, no. 11, 29 November 1996 (1996-11-29) -& JP 08 187901 A (NEC CORP), 23 July 1996 (1996-07-23) * abstract *	1	B41J11/04
A	PATENT ABSTRACTS OF JAPAN vol. 006, no. 256 (M-179), 15 December 1982 (1982-12-15) & JP 57 150586 A (FUJI XEROX KK), 17 September 1982 (1982-09-17) * abstract *	1	
A	PATENT ABSTRACTS OF JAPAN vol. 011, no. 158 (M-591), 22 May 1987 (1987-05-22) & JP 61 290072 A (HITACHI LTD), 20 December 1986 (1986-12-20) * abstract *	1	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			B41J
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 21 March 2001	Examiner Wehr, W
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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 00 12 0421

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21-03-2001

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP 08187901 A	23-07-1996	JP 2914202 B	28-06-1999
JP 57150586 A	17-09-1982	NONE	
JP 61290072 A	20-12-1986	NONE	