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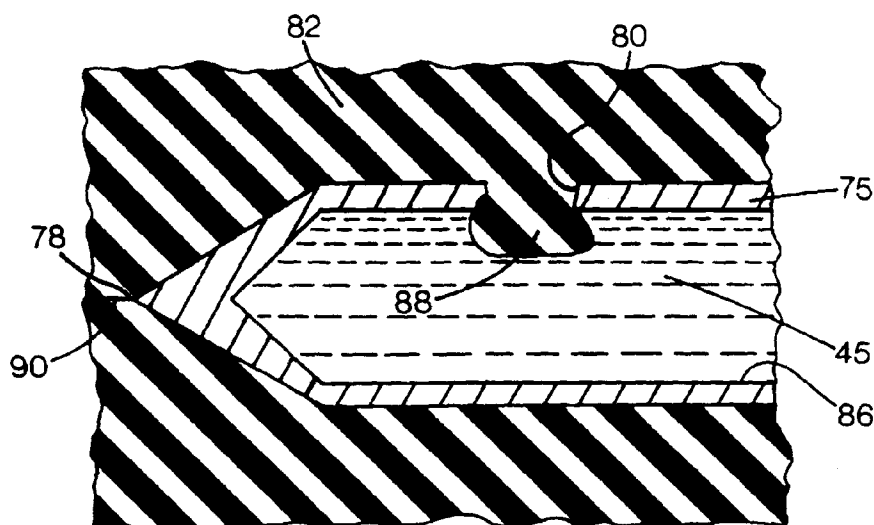
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(54) Ink jet needle humidor sealing system

(57) A sealing apparatus or humidor (50; 200) selectively seals an orifice (80) of a hollow ink needle (75) used to transport ink (45) from a reservoir (40; 40') to a printhead (30; 30') of an inkjet printing mechanism (20). The humidor (50) has a resilient elastomeric body (52) that forms a needle parking core (82; 202) where the body (52) extrudes into the needle orifice (80) to form a pseudopod plug (88) that seals the orifice (80). Alternatively, the humidor body (202) is a foam material surrounded by a substantially moisture impervious skin (205) that defines a humidically isolating parking core.

Inserting the needle (75) through the humidor (50; 200) pierces the body (52, 202) to either extract ink (45) from the reservoir (40; 40') or infuse ink (45) into the printhead (30; 30'). During refilling, or replacement of the reservoir or printhead (40,40'; 30,30'), the needle (75) is retracted into the humidor (50; 200) until the orifice (80) is surrounded by the parking core (82; 202). The humidor body (52; 202) humidically isolates the needle orifice (80), which virtually eliminates ink spills, drying or contamination of the ink (45) within the needle (75), and prevents operator injury by the needle tip (78).

**FIG. 9****EP 0 676 293 A3**



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EUROPEAN SEARCH REPORT

Application Number
EP 95 30 2152

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.6)
X A	DE 34 01 071 A (SIEMENS AG) 25 July 1985 * page 6, line 3 - page 9, line 24; figures 1-4 *	1-4,8-10 5-7	B41J2/175
A	--- PATENT ABSTRACTS OF JAPAN vol. 013, no. 380 (M-863), 23 August 1989 & JP 01 133750 A (SEIKO EPSON CORP), 25 May 1989, * abstract *	1-3,8,9	
A	--- DE 41 39 731 A (INNO-PRINT) 9 June 1993 * column 2, line 2 - line 59; figures 1-5 *	1-4,8-10	
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A	--- PATENT ABSTRACTS OF JAPAN vol. 012, no. 416 (M-759), 4 November 1988 & JP 63 153146 A (RICOH CO LTD), 25 June 1988, * abstract *		TECHNICAL FIELDS SEARCHED (Int.Cl.6)
A	--- EP 0 567 308 A (LEXMARK INT INC) 27 October 1993 -----		B41J
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 5 August 1997	Examiner Adam, E
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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