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(54) **Length-mode drop-on-demand ink jet printhead for ejecting orthogonally directed droplets at improved operating speeds**

(57) A length-mode ink jet printhead which includes an active lower body portion, a series of active intermediate body portions and an inactive upper body portion which collectively define a series of generally parallel channels which extend between front and rear side surfaces of the printhead. Each channel is bounded by first and second sidewalls, each comprised of a lower body projection and an intermediate body portion conductively mounted thereto. Formed in the upper body portion are a series of ink ejection orifices, each of which extends from the top side surface to a corresponding one of the series of channels and is located midway between the front and rear side surfaces of the printhead. Mounted on the front and rear side surfaces of the printhead are acoustic pressure wave reflection interfaces for respectively reflecting forwardly and rearwardly propagating pressure waves generated in the series of channels. An orthogonally directed droplet of ink is ejected from an ink ejection orifice by imparting an acoustic pressure wave to a selected channel in communication with the ink ejection orifice.

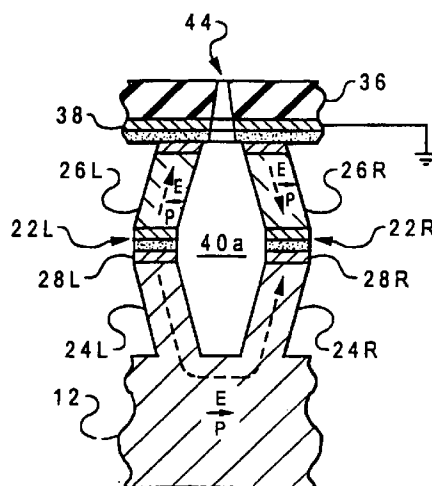


Fig. 5

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EUROPEAN SEARCH REPORT

Application Number
EP 95 30 9100

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	EP 0 595 654 A (CITIZEN WATCH CO LTD) 4 May 1994	1-3,9-18	B41J2/16 B41J2/045
Y	* column 16, line 14-30; figures 17-19,32 *	4-8, 19-24	

Y	EP 0 528 648 A (COMPAQ COMPUTER CORP) 24 February 1993	4-8, 19-24	
	* abstract; figures 4,11A,14 *		
D	& US 5 227 813 A (PIES JOHN R ET AL) 13 July 1993		

			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			B41J
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
THE HAGUE		19 February 1997	Wehr, W
<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 & : member of the same patent family, corresponding document</p>			

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