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54 **Time of flight measurement for ink jet printers.**

57 Apparatus for giving an indication of the time of flight of the ink stream of an ink jet printer comprises detector means (16) towards which one or more selected droplets of the ink stream may be directed by a deflection system comprising charging electrode (5) and deflecting electrodes (8). The detector means detects the presence of the selected droplets to give an indication of the time of flight of the said droplets.

The time of flight may be calculated and displayed, or employed to control printing parameters such as ink supply pressure, deflecting charge or the rate at which items to be printed are conveyed past the printer. The time of flight also acts as a useful "state of health" monitor, to detect blockages or other malfunctions of the printer.

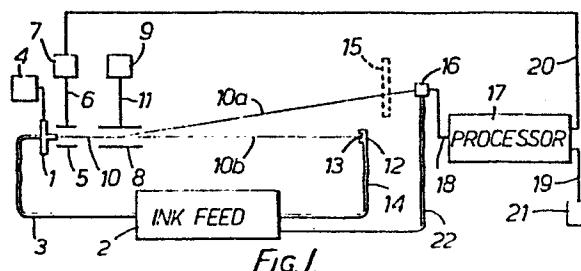


FIG. 1.



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EUROPEAN SEARCH REPORT

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EP 84 30 8201

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. 4)
X	EP-A-0 039 772 (IBM) * Figures 3,4,6,7; page 11, line 1 - page 12, line 10 *	1-4,6, 8,14, 15	B 41 J 3/04
A	--- US-A-4 063 253 (ITO et al.) * Figure 1; column 2, lines 49-62 *	1,10	
A	--- IBM TECHNICAL DISCLOSURE BULLETIN, vol. 16, no. 3, August 1973, page 880, Armonk, New York, US; G.J. FAN: "Phase detection on ink jet droplets"	1,11, 12	
D,A	--- US-A-3 465 351 (KEUR et al.) * Figure 3; column 3, line 65 - column 4, line 6 * -----	1,9	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int. Cl. 4)
			B 41 J G 01 D
Place of search THE HAGUE		Date of completion of the search 18-10-1985	Examiner HERBELET J.C.
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			