

EUROPEAN PATENT APPLICATION

Application number: 83307850.4

Int. Cl.⁴: **B 41 J 3/04**
G 01 D 15/18

Date of filing: 22.12.83

Priority: 27.12.82 US 453295

Date of publication of application:
 08.08.84 Bulletin 84/32

Date of deferred publication of search report: 06.11.85

Designated Contracting States:
 AT CH DE FR GB IT LI NL

Applicant: **Exxon Research and Engineering Company**
P.O.Box 390 180 Park Avenue
Florham Park New Jersey 07932(US)

Inventor: **Liker, Stephen Jay**
15A Reynolds Road
Danbury Connecticut 06810(US)

Representative: **Mitchell, Alan et al,**
ESSO Engineering (Europe) Ltd. Patents & Licences Apex
Tower High Street
New Malden Surrey KT3 4DJ(GB)

Operating an ink jet.

For controlling the volume of ink droplets ejected from a drop on demand ink jet apparatus including a transducer (204) operable for producing a pressure disturbance within an associated ink chamber (200) for ejecting an ink droplet from an associated orifice (202), the transducer (204) is operated in an iterative manner for producing a plurality of successively equal or higher or lower amplitude pressure disturbances, or some combination thereof, within the ink chamber (200), for causing a plurality of successively equal or higher or lower velocity ink droplets, or some combination thereof, to be ejected from the orifice (202) of the ink jet apparatus, within a time period permitting the ink droplets to either merge in flight or upon striking a recording medium.

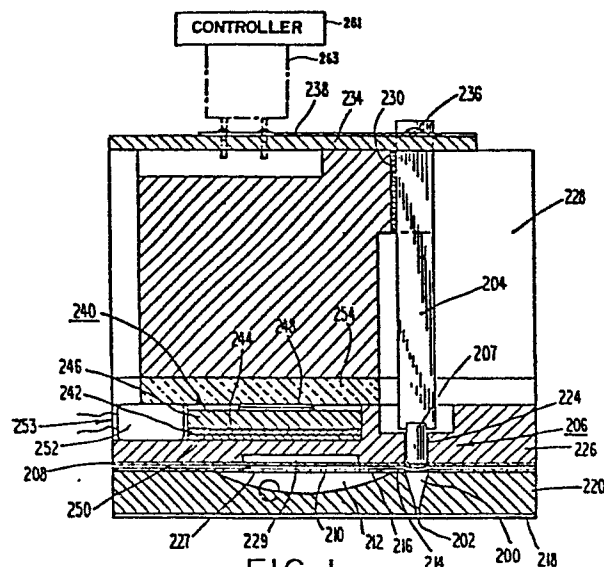
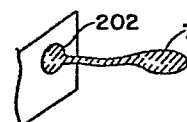


FIG. 1

FIG. 8





European Patent
Office

EUROPEAN SEARCH REPORT

0115180

Application number

DOCUMENTS CONSIDERED TO BE RELEVANT			EP 83307850.4
Category	Citation of document with indication where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int Cl 3)
A	DE - A1 - 2 615 713 (MATSUSHITA ELECTRIC) * Page 4, line 14 - page 6, line 12; fig. 1 *	1-4, 6, 7	B 41 J 3/04 G 01 D 15/18
	--		
A	US - A - 4 184 168 (ISAYAMA) * Fig. 1,2; column 2, line 45 - column 3, line 24 *	1-3, 5, 6, 8, 9	
	--		
A	US - A - 4 222 060 (SATO) * Fig. 4; column 2, lines 45-61 *	1-3, 5, 6, 8	
	--		
A	US - A - 4 112 433 (VERNON) * Fig. 4; abstract *	9, 10	
	--		
A	US - A - 4 266 232 (JULIANA) * Fig. 1; column 1, lines 35-60 *	8	

The present search report has been drawn up for all claims			
Place of search VIENNA		Date of completion of the search 10-07-1985	Examiner DOBNER
<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>			