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(11) **EP 0 890 437 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
28.07.1999 Bulletin 1999/30

(51) Int. Cl.⁶: **B41J 2/04**, B41J 2/06,
B41J 2/005

(43) Date of publication A2:
13.01.1999 Bulletin 1999/02

(21) Application number: **98119751.0**

(22) Date of filing: **09.04.1996**

(84) Designated Contracting States:
DE FR GB IT

(30) Priority: **12.04.1995 AU PN230895**
12.04.1995 AU PN231095
12.04.1995 AU PN231195
12.04.1995 AU PN231295

(62) Document number(s) of the earlier application(s) in
accordance with Art. 76 EPC:
96911663.1 / 0 765 235

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(54) **A liquid ink printing apparatus and system**

(57) A new printing system is disclosed for drop on demand printing. This printing mechanism divides the printing process into two stages; a drop selection means to select drops to be printed which generates a difference in meniscus position between selected drops and unselected drops of fluidized ink; and a drop separation means, attracting the ink of said drops to a substrate, the attraction being insufficient to overcome the surface tension of drops in an unselected meniscus position but being sufficient to overcome the surface tension of drops in a selected meniscus position so as to cause movement of the drops to the substrate. The drop selection means can produce a difference in meniscus position in the absence of the drop separation means.

The separation of drop selection means from drop separation means significantly reduces the energy required to select which ink drops are to be printed. Only the drop selection means must be driven by individual signals to each nozzle. The drop separation means can be a field or condition applied simultaneously to all nozzles.

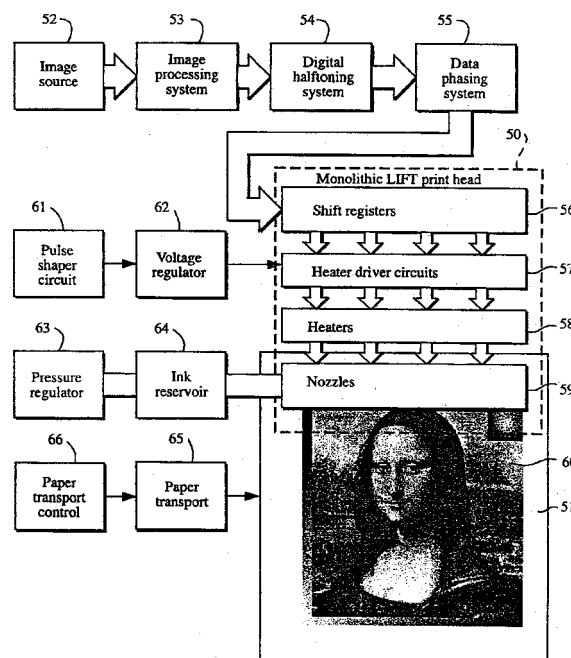


Fig. 6

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EUROPEAN SEARCH REPORT

Application Number
EP 98 11 9751

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Place of search THE HAGUE		Date of completion of the search 7 June 1999	Examiner Meulemans, J-P
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			

EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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