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### (54) An ink jet printhead including a non-ink priming and coating fluid

(57) An ink jet printhead for use in an ink jet printer, or mounted in an ink jet printer being shipped or being stored. The ink jet printhead (34) consists of a printhead structure having a body including walls having surfaces defining fluid flow channels (44) and fluid ejecting nozzles (62) at the ends of the channels. In order to achieve a successful first time ink wetting and priming of the printhead structure, the channels and the nozzles are filled with a non-ink priming and coating fluid prior to a first time filling thereof with printing ink. The non-ink priming and coating fluid has low surface tension and volatility characteristics for enabling the non-ink priming and coating fluid to spontaneously and quickly move through the channels of the printhead and into the nozzles thereof. The non-ink priming and coating fluid also has surface treating characteristics for wetting and coating the surfaces of the walls of the channels and nozzles in order to clean and lubricate such surfaces, thereby destroying any hydrophobic film on such surfaces, and enabling a successful first time wetting and priming of the channels and nozzles with printing ink.

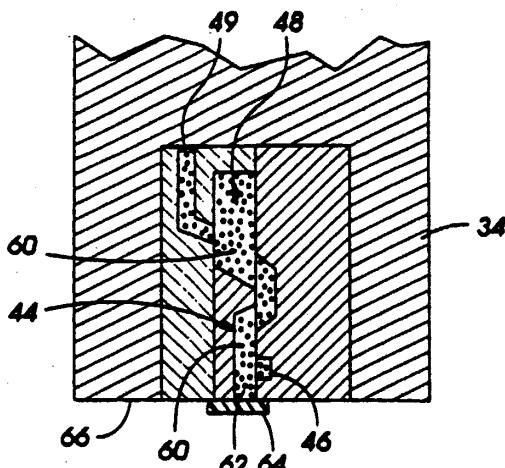


FIG. 2



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## EUROPEAN SEARCH REPORT

Application Number  
EP 98 30 3578

| 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) |
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| Y  | * abstract *<br>* page 2, line 5 - line 8 *<br>* page 2, line 18 - line 19 *<br>* page 3, line 12 - line 18 *<br>---   | 4,5,10                           |  |
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| Y  | JP 09 039260 A (FUJI XEROX CO LTD)<br>10 February 1997   |                                  |  |
| A  | & US 5 825 380 A (NOBUYUKI ICHIZAWA)<br>20 October 1998<br>* abstract *<br>* column 3, line 43 - line 45 *<br>* column 4, line 11 - line 12 *<br>* column 4, line 25 - column 45 *<br>* column 6, line 15 - line 20 *<br>--- | 9                                | TECHNICAL FIELDS<br>SEARCHED (Int.Cl.6)      |
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| Place of search  |  | Date of completion of the search | Examiner                                     |
| THE HAGUE  |  | 4 February 1999                  | Bardet, M                                    |
| CATEGORY OF CITED DOCUMENTS  |  |                                  |  |
| X : particularly relevant if taken alone<br>Y : particularly relevant if combined with another document of the same category<br>A : technological background<br>O : non-written disclosure<br>P : intermediate document  |  |                                  |  |
| T : theory or principle underlying the invention<br>E : earlier patent document, but published on, or after the filing date<br>D : document cited in the application<br>L : document cited for other reasons<br>& : member of the same patent family, corresponding document |  |                                  |  |

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ON EUROPEAN PATENT APPLICATION NO.

EP 98 30 3578

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