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(54) **Recording apparatus with a recording head having a wiring substrate.**

(57) In the wiring portion in the wiring substrate constituting the recording head of a liquid spray type recording apparatus, the electroconductive layers (30, 141) comprises at least two layers, the protective layer of the electroconductive layer includes at least two unit layers (35, 36, 142, 144), one of them being formed so that it has a shape and size different has a size and shape different from those of the through hole(s) (35a, 36a) in remaining unit protective layer(s) (35, 36, 142, 144), thereby assuring the formation of electric connection portion and improving durability of the electric connection portion.

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FIG.5A

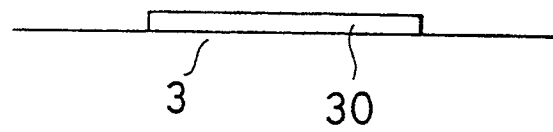


FIG.5B

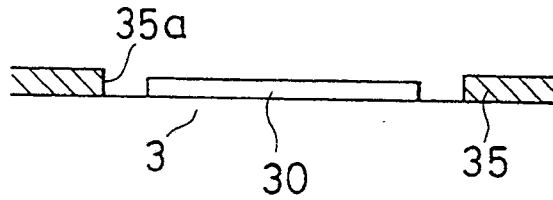


FIG.5C

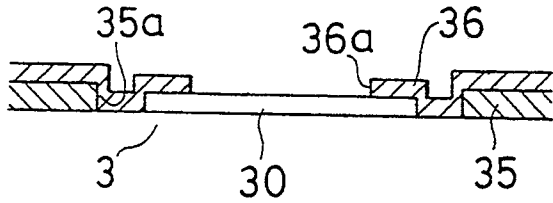


FIG.5D

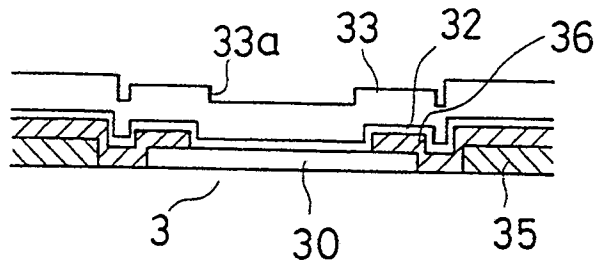


FIG.5E

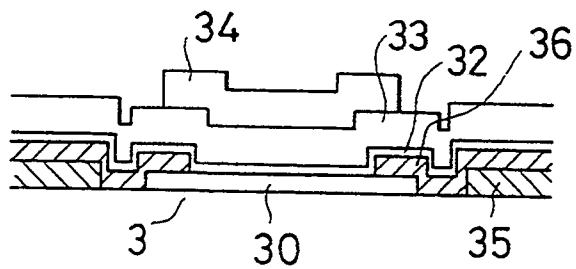


FIG.5F

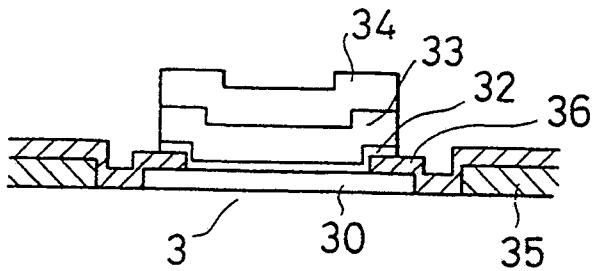
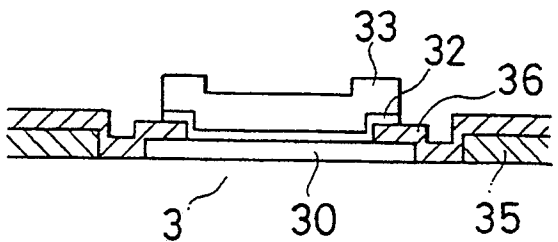


FIG.5G





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EUROPEAN SEARCH REPORT

Application Number

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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.5)
X A	EP-A-0 344 809 (CANON KABUSHIKI KAISHA) * column 4, line 41 - column 5, line 1; figures 7,8 *	19,20 1-9,11, 12,18	B41J2/16
X	PATENT ABSTRACTS OF JAPAN vol. 5, no. 70 (E-56)(742) May 12, 1981 & JP-A-56 019 639 (AKIHIRO TOMOSAWA ET AL) February 24, 1981	19,20	
A	* the whole document *	1-7, 10-14,18	
X	EP-A-352 142 (CANON KABUSHIKI KAISHA) * abstract; figures 15,16; example 7 * * column 7, line 1 - line 62 *	19,20	
A	* column 13, line 55 - column 14, line 52 * * column 23, line 59 - column 25, line 2 *	1-6, 8-13, 15-18	
A,P	EP-A-380 366 (CANON KABUSHIKI KAISHA) * abstract; figures 2-6 * * column 4, line 25 - column 6, line 38 *	1-20	TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			B41J H01L
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 11 OCTOBER 1991	Examiner ROBERTS N.
CATEGORY OF CITED DOCUMENTS		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	
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			

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