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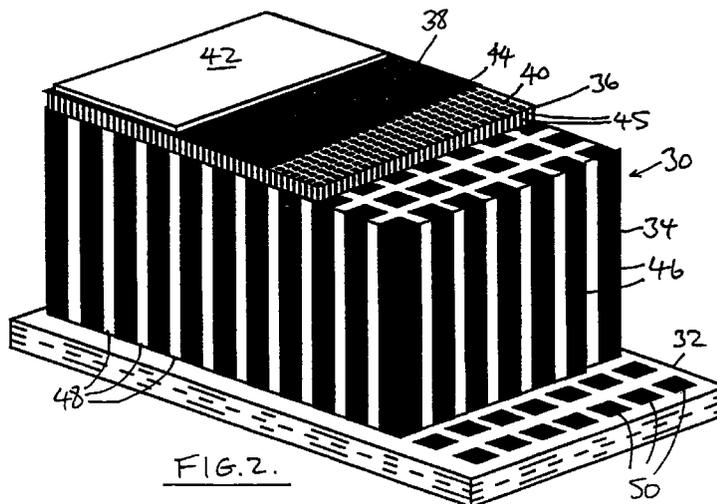
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(54) **Acoustic imaging arrays**

(57) An acoustic imaging system comprises a plurality of piezoelectric elements (45) in a piezoelectric array (36). The elements transmit and receive acoustic energy. The piezoelectric layer (36) is supported by a sound absorbing layer (34) which, in turn, is supported

by a track layer (32) of electrical tracks. The elements (45) are connected to the tracks by means of electrically conducting paths (46) in the absorbing layer (34).



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## EUROPEAN SEARCH REPORT

Application Number  
EP 96 30 8744

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)
X	US 5 329 498 A (GREENSTEIN MICHAEL) 12 July 1994	1-4,8-10	B06B1/06
Y	* abstract; claim 12; figure 1 * * column 1, line 13 - line 55 * * column 2, line 8 - column 4, line 68 * * column 5, line 41 - column 6, line 50 * * column 9, line 27 - line 45 *	5-7	
Y	DE 37 33 776 A (HITACHI LTD ;HITACHI MEDICAL CORP (JP)) 7 April 1988 * abstract; figures 7,5 *	5-7	
X	EP 0 559 963 A (HEWLETT PACKARD CO) 15 September 1993 * column 3, line 1 - column 5, line 22; figure 2 *	1-4	
A	HALL D D N ET AL: "THEORETICAL AND EXPERIMENTAL EVALUATION OF A TWO-DIMENSIONAL COMPOSITE MATRIX ARRAY" IEEE TRANSACTIONS ON ULTRASONICS, FERROELECTRICS AND FREQUENCY CONTROL, vol. 40, no. 6, 1 November 1993, pages 704-709, XP000415584 * figures 1,5 *	5-7	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			B06B
A	GB 1 530 783 A (EMI LTD) 1 November 1978 * page 2, line 121 - line 130; claim 1; figures 1,2 *	9	
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
THE HAGUE		5 September 1997	De Bekker, R
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	

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