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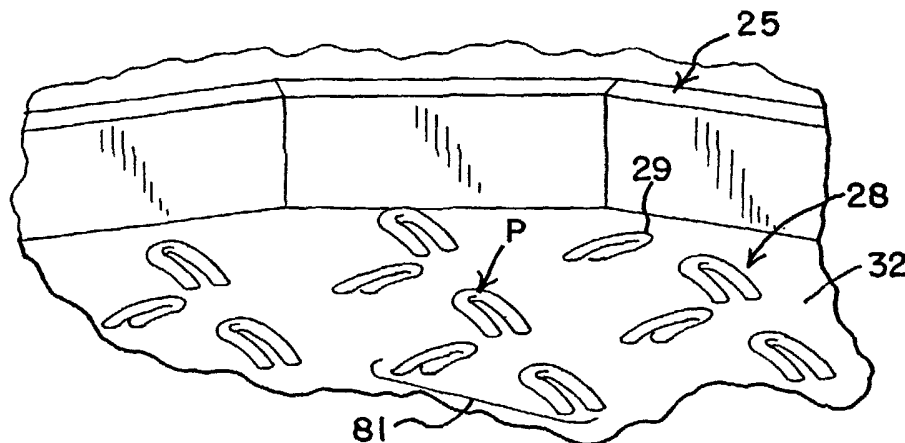
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(54) Title: STITCHED LGA CONNECTOR



(57) Abstract: A land grid array connector is formed by attaching a reinforcing member to a frame and coating the reinforcing member with an elastomeric compound to form a reinforced, flexible body portion of the connector. Conductive wires are inserted in pairs in an array in the fabric extent. Free ends of the wires extend past the elastomeric compound to provide contacts of the connector. The pairs of wires provide redundancy for the contacts to ensure a reliable connection.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H01R13/24 H01R12/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01R

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 425 316 A (IBM) 2 May 1991 (1991-05-02)	1,2,6,7
A	column 4, line 49 -column 5, line 9 column 6, line 44 -column 7, line 32; figure 1 & US 4 998 885 A 12 March 1991 (1991-03-12) cited in the application ----	3-5,8-26
A	US 6 193 524 B1 (CHANG PIERCE) 27 February 2001 (2001-02-27) column 3, line 30 -column 4, line 43; figure 6 ----	1-26
A	EP 1 076 382 A (BERG ELECTRONICS MFG) 14 February 2001 (2001-02-14) column 3, line 4 -column 5, line 29; figure 4 -----	1-26

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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INTERNATIONAL SEARCH REPORT

Information on patent family members

Internat Application No

PCT/US 02/08648

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0425316	A	02-05-1991	US 4998885 A	12-03-1991
			DE 69026188 D1	02-05-1996
			DE 69026188 T2	10-10-1996
			EP 0425316 A2	02-05-1991
			JP 1870571 C	06-09-1994
			JP 3147281 A	24-06-1991
			JP 5082038 B	17-11-1993
<hr/>				
US 6193524	B1	27-02-2001	NONE	
<hr/>				
EP 1076382	A	14-02-2001	EP 1076382 A2	14-02-2001
			JP 2001085131 A	30-03-2001
			US 6375474 B1	23-04-2002
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