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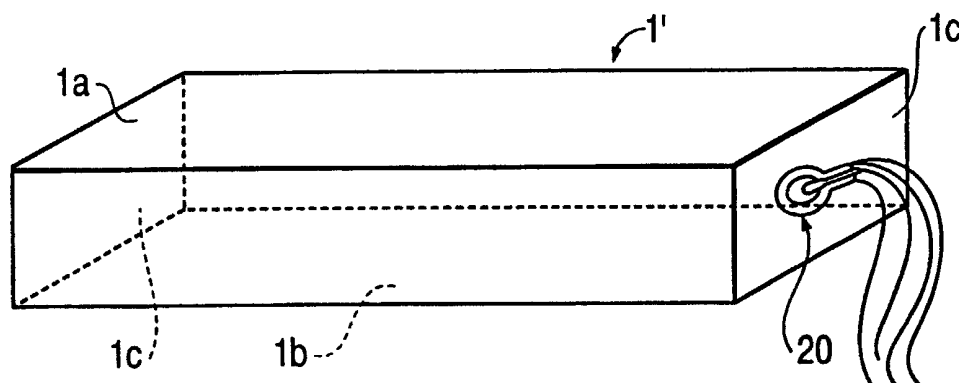
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(54) Title: SENSING PAD ASSEMBLY EMPLOYING VARIABLE COUPLER FIBEROPTIC SENSOR



(57) Abstract: A sensing pad assembly for monitoring acoustic activity or motion of an object supported on the pad utilizes an improved fiberoptic sensor as a pressure transducing element to convert pressure fluctuations due to the acoustic activity or motion to an output that changes in accordance with the pressure fluctuations. The sensor (20) has an improved design that permits deflection of the coupler fusion region (32) without accompanying tension. In a preferred embodiment, the coupler fusion region (32) is arranged substantially in a U-shape so that the fiberoptic leads (34, 36) of the sensor may be located adjacent to each other at one side of the sensor.

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## INTERNATIONAL SEARCH REPORT

 International application No.  
PCT/US99/19259
**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(6) : G02B 6/00

US CL : 385/12, 32, 39; 600/528, 534, 552

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)

U.S. : 385/12, 32, 39; 600/528, 534, 552

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 practicable, search terms used)

USPTO EAST (pressure, optical sensor, fused coupler, fluid, water, gel)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,074,309 A (GERDT) 24 December 1991 (24/12/91) , see entire document.	1-34
Y	US 5,684,460 A (SCANLON) 04 November 1997 (04/11/97), see column 2 lines 36-44 and column 4 lines 1-37.	1-34
Y	US 5,222,165 A (BOHLINGER) 22 June 1993 (22/06/93), see column 6 lines 16-20.	18-34
A	US 4,634,858 A (GERDT ET AL) 06 January 1987 (06/01/87), see entire document.	1-34
A	US 4,947,859 A (BREWER ET AL) 14 August 1990 (14/08/90), see entire document.	1-34

☐ Further documents are listed in the continuation of Box C.
 ☐ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

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