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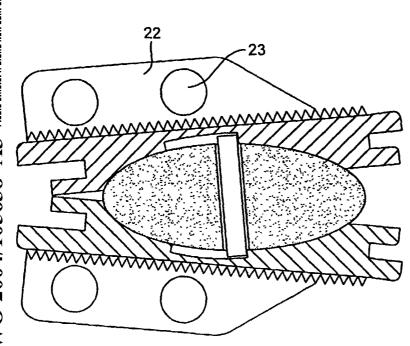
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(54) Title: PROSTHETIC DISC FOR INTERVERTEBRAL INSERTION



(57) Abstract: A prosthetic disc (10) for insertion between adjacent vertebrae includes a core (16) having upper and lower curved surfaces (48,50), upper and lower plates (12,14), and peripheral restraining structure (26) on at least one of the upper plate (12) the lower plate (14) and the core (16). Each plate has an outer surface (18), which engages a vertebra and an inner curved surface (24) which slides over the curved surfaces (48,50) of the core (16). The peripheral restraining structure (26) serves to hold the core (16) against a curved surface (24) of at least one of the plates during sliding movement of the plates over the core.

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Minimum documentation searched (classification system followed by classification symbols)				
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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EAST				
C. DOCUMENTS CONSIDERED TO BE RELEVANT				
Category *	Citation of document, with indication, where appropriate, of the relevant passages			Relevant to claim No.
X	US 5,401,269 A (BUTTNER-JANZ et al.) 20 March 1995 (20.03.1995), See the entire document			1-89,106-116
Α	US 4,759,766 A (BUETTNER-JANZ et al.) 26 July 1988 (26.07.1988), See the entire document			1-116
A,P	US 6,645,248 B2 (CASUTT) 11 November 2003 (11.11.2003), See the entire document			ıt 1-116
A	US 6,416,551 B1 (KELLER) 09 July 2002 (09.07.2002), See the entire document			!-116
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