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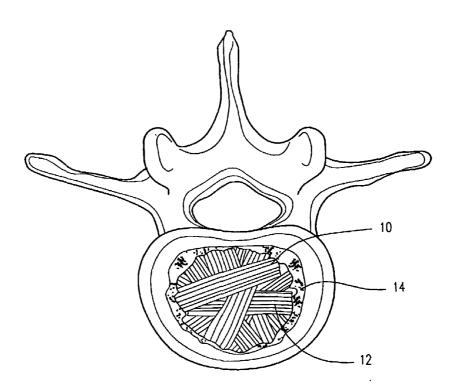
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(54) Title: A SEMI-BIOLOGICAL INTERVERTEBRAL DISC REPLACEMENT SYSTEM



(57) Abstract: The present invention is a system for a partially biological disc replacement that stimulates natural fibrous, cartilaginous or other tissue growth in the DDD cavity (24), resulting in a partial biological disc replacement (10). Multiplicities of fibronous pieces of fribro-cartilaginous tissue promoting material (26) are inserted into the DDD cavity (24) inducing tissue growth. The fibro-cartilaginous tissue

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C. DOCUMENTS CONSIDERED TO BE RELEVANT					
Category *	Citation of document, with indication, where appropriate, of the relevant passages			Relevant to claim No.	
	US 6,183,518 B1 (ROSS ET AL) 06 February 2001 (06.2.2001), see Figures 3 and 4;				
	column 2, lines 45-66.				
	US 5,549,679 A (KUSLICH) 27 August 1996 (27.08.1996), see Figures 5-7b.				
A 0.	1-52 1-52 (AUSLICE) 27 August 1990 (27.08.1990), see Figures 3-70.				
A US	US 2002/0147496 A1 (BELEF ET AL) 10 October 2002 (10.10.2002), see Figures 1a-10c. 1-52				
0.	OS 2002/0147450 AT (BELEEF ET AL) TO OCIODE 2002 (10.10.2002), See Figures 1a-10c.				
A,P US	US 2002/0026195 A1 (LAYNE ET AL) 28 February 2002 (28.02.2002), see Figures 22-27.			1-52	
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