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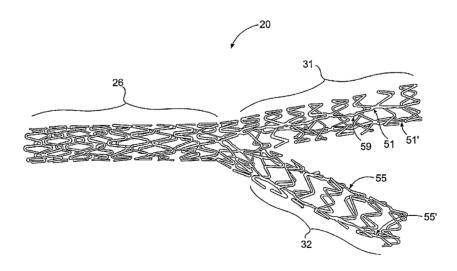
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(54) Title: DEDICATED BIFURCATION STENT APPARATUS AND METHOD



(57) Abstract: The present invention concerns a novel bifurcated (20) stent apparatus for use in treating lesions at or near a bifurcation point in bifurcated vessel. More particularly, a dedicated bifurcation stent apparatus is fabricated from a single tube structure for use in a bifurcated body vessel having a main lumen and a side lumen. The stent apparatus includes a first stent portion (26) comprised of a first stent pattern that is configured for radial expansion into a generally cylindrical main body. A second stent portion is integrally formed with the first stent portion, and includes a second stent pattern configured to form a first branch leg (31) and a second branch leg (32). Collectively, the first stent portion, and the branch legs form a crocodile cut shape. Each branch leg is of a cylindrical shell-shaped arc segment in a first condition, and each of the first branch leg and the second branch leg is patterned for manipulation and radial expansion, in a second condition, into a generally cylindrical first body and a generally cylindrical second body, respectively.



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Electronic da	ata base consulted during the international search (name of data bas	e and, where practical, search terms used)					
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C. DOCUME	ENTS CONSIDERED TO BE RELEVANT		····				
Category*	Citation of document, with indication, where appropriate, of the rele	vant passages	Relevant to claim No.				
х	US 2002/052648 A1 (MCGUCKIN JAMES	F [US]	1-25				
 	ET AL MCGUCKIN JAMES F [US] ET AL)						
	2 May 2002 (2002-05-02)	/					
	paragraphs [0085] - [0087]; figur	es 18-20					
X	WO 99/38453 A (REGENERATION TECH	INC [US];	1,2,12,				
	GROOMS JAMIE [US])	·	20				
	5 August 1999 (1999-08-05)						
	page 16, line 24 - page 17, line	4					
	·						
Furt	her documents are listed in the continuation of Box C.	X See patent family annex.					
Special o	cial categories of cited documents : "T" later document published after the international filing date or priority date and not in conflict with the application but						
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Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 2002052648	A1	02-05-2002	NONE		
WO 9938453	Α	05-08-1999	AU AU CA EP JP US	739684 B2 2349299 A 2319590 A1 1054645 A1 2002501777 T 6290718 B1	18-10-2001 16-08-1999 05-08-1999 29-11-2000 22-01-2002 18-09-2001