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# (12) United States Patent

Sears et al.

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### 54) APPARATUS AND METHOD FOR SUPPORTING VERTEBRAL BODIES

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### Related U.S. Application Data

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(51) **Int. Cl.** *A61F 2/44* 

(2006.01)

(52) U.S. Cl.

USPC ...... **623/17.14**; 623/17.11

(58) Field of Classification Search

### (56) References Cited

#### U.S. PATENT DOCUMENTS

4,554,914 A	11/1985	Kapp et al.
4,599,086 A	7/1986	Doty
4,636,217 A	1/1987	Ogilvie et al.
4,759,769 A	7/1988	Hedman et al.

4,904,261	Α		2/1990	Dove et al.		
5,062,850	Α		11/1991	MacMillan et al.		
5,108,395	Α	sk	4/1992	Laurain	606/86 B	
5,192,327	Α		3/1993	Brantigan		
5,336,223	Α		8/1994	Rogers		
5,413,602	Α		5/1995	Metz-Stavenhagen		
5,571,190	Α		11/1996	Ulrich et al.		
5,620,458	Α		4/1997	Green et al.		
5,645,084	Α		7/1997	McKay		
6,086,613	Α		7/2000	Camino et al.		
6,106,557	Α		8/2000	Robioneck et al.		
6,159,211	Α		12/2000	Boriani et al.		
6.193,720	В1		2/2001	Yuan et al.		
6,235,034	В1		5/2001	Bray		
6,296,665			10/2001	Strnad et al.		
6,299,644			10/2001	Vanderschot		
6,375,681				Truscott		
(0 1)						

#### (Continued)

#### FOREIGN PATENT DOCUMENTS

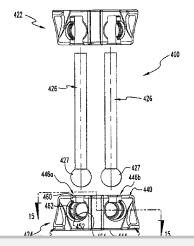
DE	94 13 778 U1	2/1996
EP	1 080 703 A3	1/2002
FR	2636227 A1	3/1990

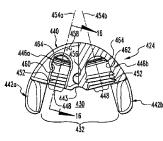
Primary Examiner — Thomas J Sweet
Assistant Examiner — Christopher D Prone

#### (57) ABSTRACT

An apparatus and method for supporting upper and lower vertebral bodies, including first and second end members adapted for engagement with the vertebral bodies, and at least one elongate support member coupled between the end members to maintain an axial space between the vertebral bodies. In one aspect of the invention, each of the end members has a parametrical or horseshoe-shaped configuration extending about an open inner region and defining a lateral passage communicating with the open inner region to facilitate insertion of the apparatus or the individual end members into the intervertebral space via a posterior surgical approach. In a further aspect of the invention, a fusion member is positioned within the axial space to promote bony fusion between the upper and lower vertebral bodies.

# 6 Claims, 10 Drawing Sheets







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(56) References Cited

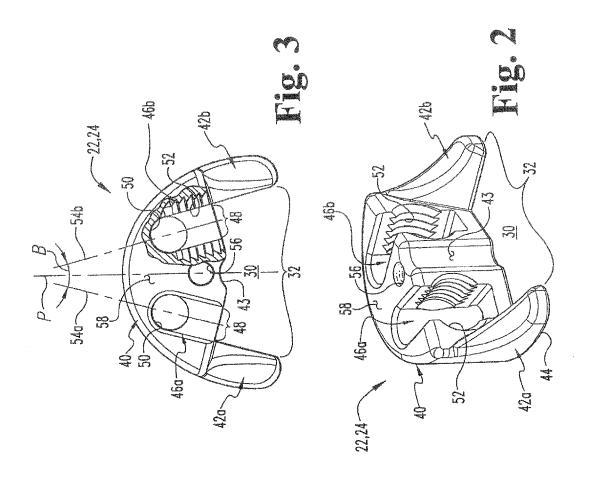
U.S. PATENT DOCUMENTS

6,375,683 B1 4/2002 Crozet et al. 6,626,943 B2 9/2003 Eberlein et al.

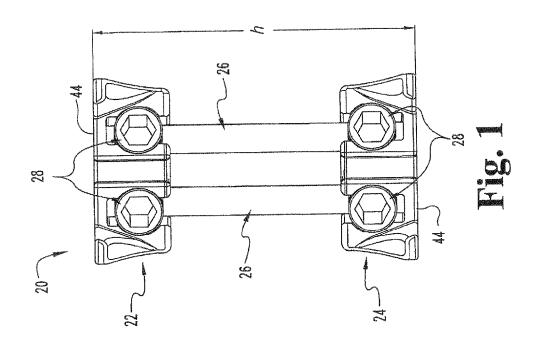
2002/0169508 A1\* 11/2002 Songer et al. ...... 623/17.11

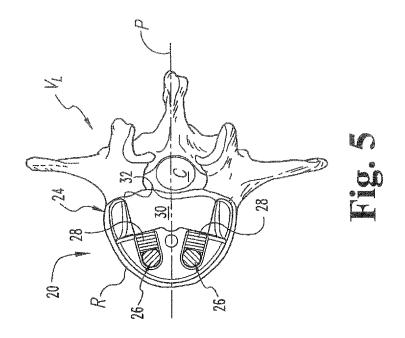
\* cited by examiner

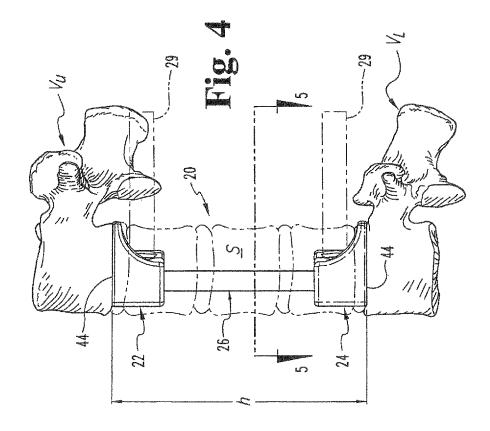




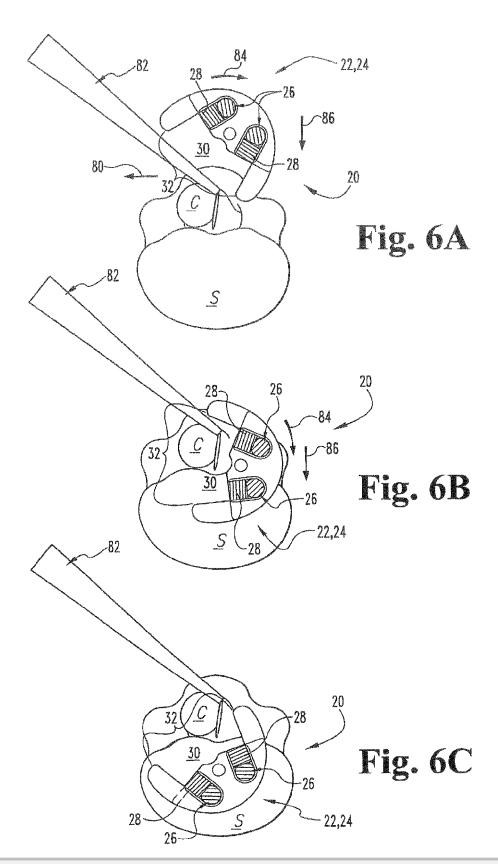
Dec. 24, 2013











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