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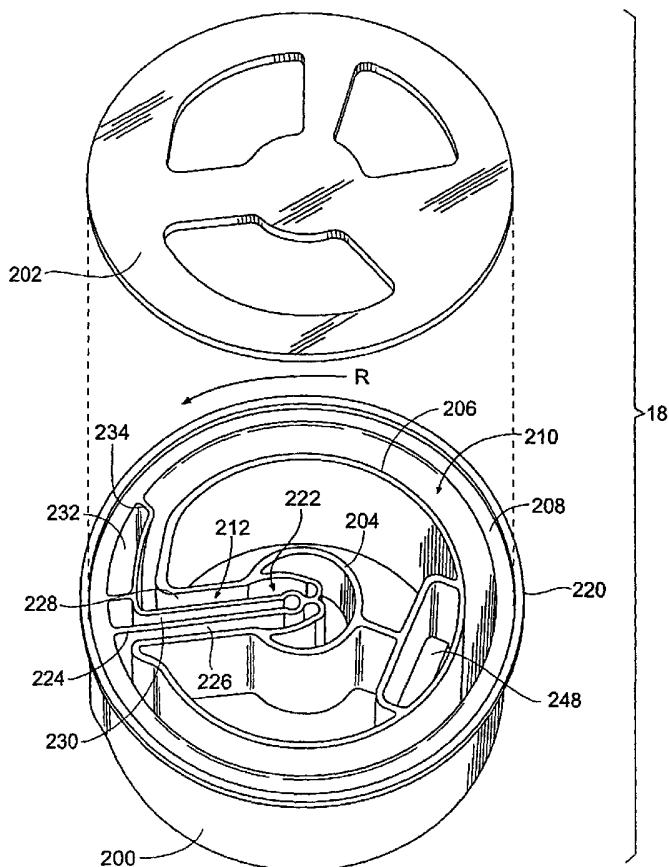
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(54) Title: BLOOD PROCESSING SYSTEMS AND METHODS FOR COLLECTING PLASMA FREE OR ESSENTIALLY  
FREE OF CELLULAR BLOOD COMPONENTS



(57) Abstract: Blood separation systems and methods introduce blood into an annular separation channel between a low-G wall and a high-G wall while rotating the separation channel about an axis, for separation of the blood into blood components. The annular separation channel has an annular boundary wall. The systems and methods direct a first blood component into a constricted channel along the low-G wall. The systems and methods remove the first blood component through a first path that communicates with the separation channel through an opening that adjoins the constricted channel adjacent the low-G wall. The systems and methods direct a second blood component along a surface that extends generally in an axial direction along the high-G wall toward the annular boundary wall. The systems and methods collect the second blood component through a second path that communicates with the separation channel through an opening that adjoins the surface adjacent the high-G wall axially spaced from the annular boundary wall.

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# INTERNATIONAL SEARCH REPORT

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**A. CLASSIFICATION OF SUBJECT MATTER**

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 US CL : 210/782, 787, 789, 512.1; 494/37, 43, 45, 56, 67

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. : 210/782, 787, 789, 512.1; 494/37, 43, 45, 56, 67

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)  
 US-PGPUB; EPO; JPO; DERWENT: blood, separation, chamber, highG and lowG, barrier, dam, constrict, channel

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A, P	US 6,511,411 B1 (BROWN) 28 January 2003, see entire document	1-37
A	US 5,656,163 A (BROWN) 12 August 1997, see entire document	1-37
A, P	US 6,524,231 B1 (WESTBERG et al.) 25 February 2003, see entire document	1-37
A	US 6,053,856 A (HLAVINKA) 25 April 2000, see entire document	1-37
A	US 6,322,488 B1 (WESTBERG et al.) 27 November 2001, see entire document	1-37

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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