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(54) **Mass spectrometer**

(57) An ion guide 1 is disclosed wherein a travelling
DC wave is passed along the length of the ion guide 1

so that ions exit the ion guide 1 having substantially the
same velocity.

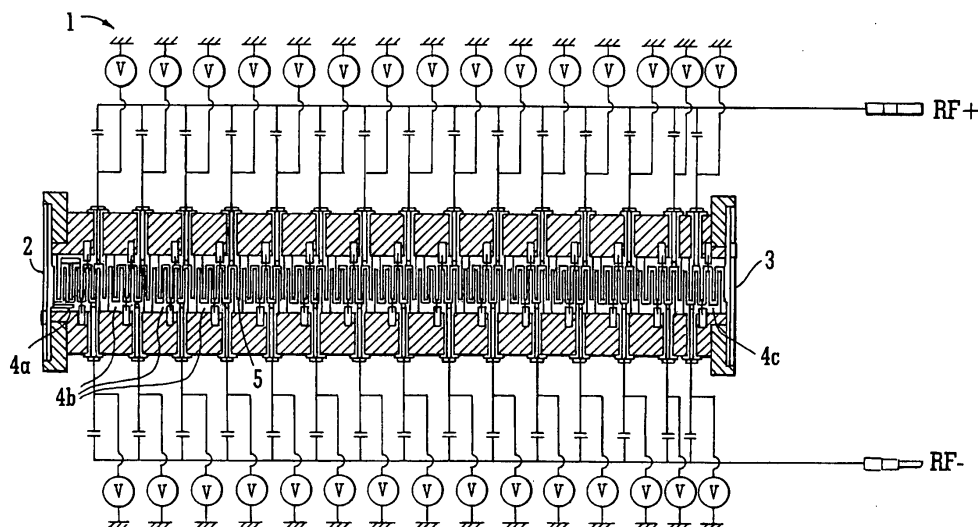


FIG. 1



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 5 206 506 A (KIRCHNER NICHOLAS J) 27 April 1993 (1993-04-27)	1-5,8-10	H01J49/04 H01J49/16 H01J49/40 H01J49/42
Y	* column 9, line 5 - column 31, line 59 * * figures 1-17d *	6,7	
X	----- US 2 758 214 A (JR. WILLIAM E. GLENN,) 7 August 1956 (1956-08-07) * column 4, line 35 - column 5, line 3 * * column 5, line 74 - column 6, line 24 * * figures 1,6 *	1,3-5	
Y	----- US 6 020 586 A (DRESCH ET AL) 1 February 2000 (2000-02-01) * claim 1 * * column 17, lines 51-61 * * figure 1 *	6,7	

			TECHNICAL FIELDS SEARCHED (IPC)
			H01J
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		22 March 2006	Peters, V
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 04 02 9441

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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22-03-2006

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5206506	A	27-04-1993	AU 643653 B2 18-11-1993
			AU 1469392 A 07-09-1992
			CA 2079910 A1 13-08-1992
			DE 69210496 D1 13-06-1996
			DE 69210496 T2 09-01-1997
			EP 0524311 A1 27-01-1993
			JP 2865865 B2 08-03-1999
			JP 5509437 T 22-12-1993
			WO 9214259 A1 20-08-1992
US 2758214	A	07-08-1956	NONE
US 6020586	A	01-02-2000	NONE