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— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

[Continued on next page]

(54) **Title**: MASS SPECTROMETER HAVING AN ION GUIDE WITH AN AXIAL FIELD

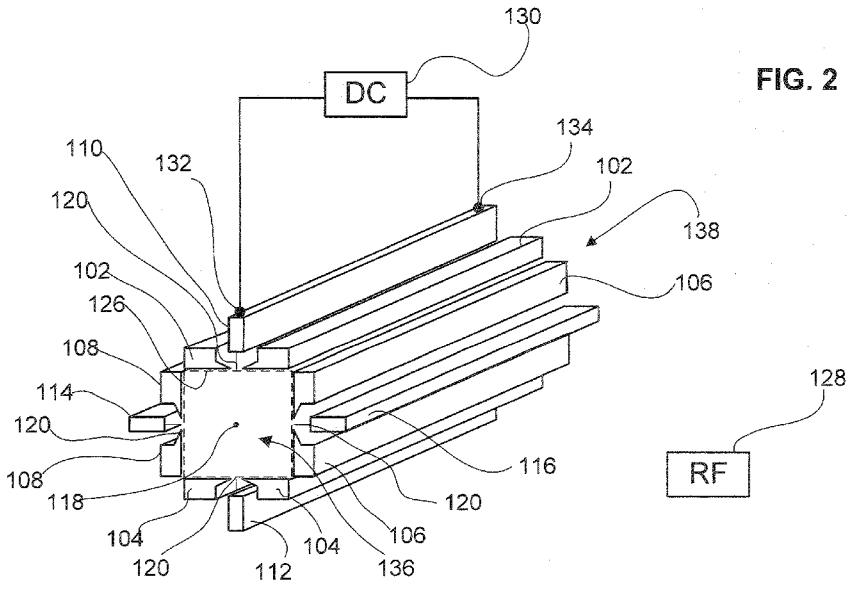

FIG. 2

(57) **Abstract**: A mass spectrometer having an ion guide with an axial field is described. The ion guide includes electrodes with longitudinally extending gaps and resistive inserts configured to be proximate to the gaps. RF voltage is applied to the electrodes to radially confine ions. DC voltage is applied to the resistive inserts to establish an axial electric field gradient.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
INV. H01J49/06
ADD.

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)
H01J

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)
EPO-Internal, INSPEC, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 847 386 A (THOMSON BRUCE A [CA] ET AL) 8 December 1998 (1998-12-08) cited in the application column 9, line 45 - column 10, line 15; figures 21-23 column 15, lines 45-59	1-27
X	US 2009/294641 A1 (KONICEK MICHAEL [US] ET AL) 3 December 2009 (2009-12-03) cited in the application paragraphs [0039], [0040]; figures 5, 6 paragraphs [0033], [0034]; figures 2, 3	1,23,24, 26
A	US 2003/183759 A1 (SCHWARTZ JAE C [US] ET AL) 2 October 2003 (2003-10-02) abstract; figure 1 paragraph [0041]; figure 9	1-27

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[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
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Name and mailing address of the ISA/	Authorized officer
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Box No. IV Text of the abstract (Continuation of item 5 of the first sheet)

MASS SPECTROMETER HAVING AN ION GUIDE WITH AN AXIAL FIELD

ABSTRACT OF THE DISCLOSURE

A mass spectrometer having an ion guide with an axial field is described. The ion guide includes electrodes with longitudinally extending gaps and resistive inserts configured to be proximate to the gaps. RF voltage is applied to the electrodes to radially confine ions. DC voltage is applied to the resistive inserts to establish an axial electric field gradient.

INTERNATIONAL SEARCH REPORT

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2008/067342 A1 (DING CHUAN-FAN [CA]) 20 March 2008 (2008-03-20) the whole document -----	1-27

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
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