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THERMO FISHER SCIENTIFIC INC. [US/US]; 81
Wyman Street, Waltham, Massachusetts 02454 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **APPEL, Dirk**
[US/US]; 25 Chestnut Street, Salem, Massachusetts 01970
(US). **MARZORATTI, Gaston E.** [AR/US]; 424 Brenda
Lane, Franklin, Massachusetts 02038 (US). **NABAR,**
Shrikrishna H. [IN/US]; 55 Commons Drive, Apt. 38,
Shrewsbury, Massachusetts 01545 (US). **MOURADIAN,**
Robert F. [US/US]; 5 Everendon Road, Canton, Mas-
sachusetts 02021 (US).(74) Agents: **KRIZ, Paul P.** et al.; Westborough Office Park,
1700 West Park Drive, Suite 280, Westborough, Mas-
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Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

[Continued on next page]

(54) Title: GAS ANALYZER SYSTEM

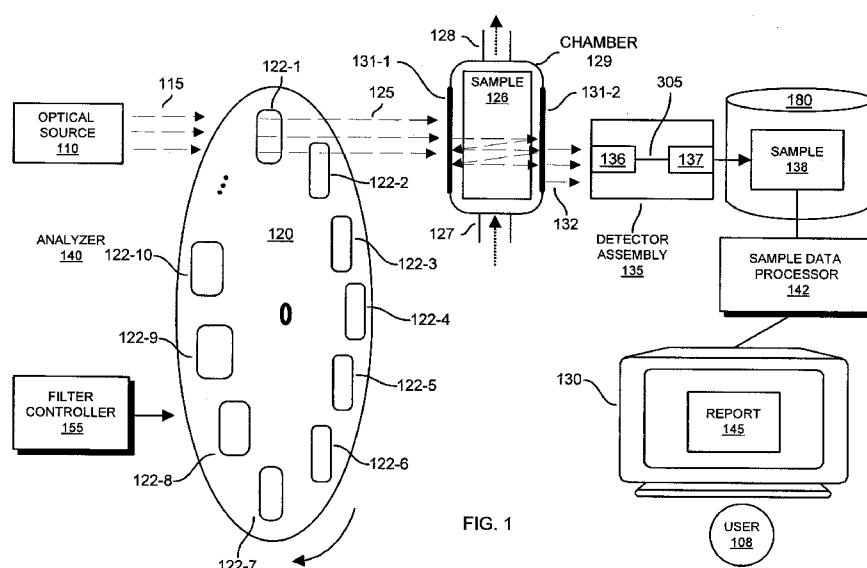


FIG. 1

(57) Abstract: A gas analyzer system includes an optical source, an optical filter assembly, a controller, and an analyzer. The optical source generates an optical signal. The optical filter assembly includes different optical filters in which to filter the optical signal. During operation, the controller selects sequential application of each of the different optical filters in a path of the optical signal to modulate the optical signal using different frequency bands of optical energy. The modulated optical signal passes through an unknown sample. Based on absorption of the optical signal by the sample gas at different frequencies, the optical analyzer detects which types of multiple different gases are present in the sample.

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IPC(8) - G01J 5/02 (2009.01)

USPC - 250/350

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)

IPC(8): G01J 5/02 (2009.01)

USPC: 250/350

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

IPC(8): G01J 5/02 (2009.01) (text search)

USPC: 250/343-345, 349-351 (text search)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PubWEST(USPT,PGPB,EPAB,JPAB); Internet search via Google Web and Google Scholar search engines. Search Terms Used: transmittance transmission optical multiple frequency bands filter concentration wheel sample gas absorbance PWM modulate spectrograph motor concentration amount bandpass UV UVA UVB ultra violet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 2006/0189858 A1 (Sterling et al.) 24 August 2006 (24.08.2006) para. [0006] through [0425], Fig. 1-49	1-29 and 31-42 ----- 30
Y	US 5,451,787 A (Taylor) 19 September 1995 (19.10.1995), col. 5 ln. 58 to col. 6 ln. 3, Fig. 1	30
A	US 5,255,218 A (Yagyu et al.) 19 October 1993 (19.10.1993) entire document	1-42
A	US 5,811,812 A (Williams et al.) 22 September 1998 (22.10.1998) entire document	1-42
A	US 4,549,080 A (BASKINS et al.) 22 October 1985 (22.10.1985), entire document	1-42

☐ Further documents are listed in the continuation of Box C.

* Special categories of cited documents:

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"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

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Authorized officer:

Lee W. Young

PCT Helpdesk: 571-272-4300
PCT OSP: 571-272-7774