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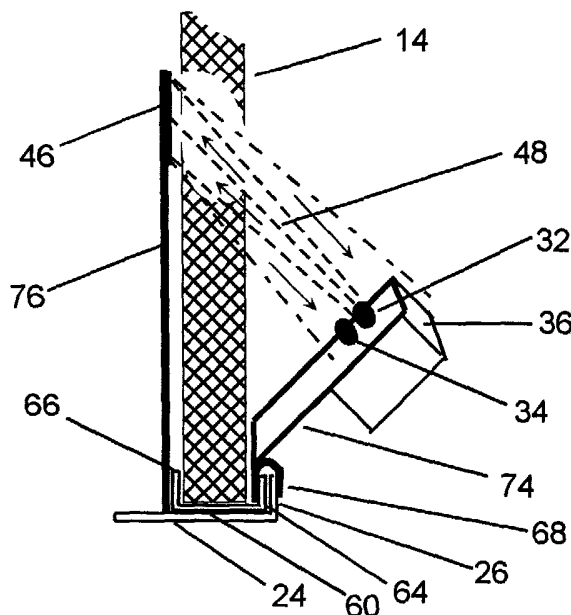
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(54) Title: CLOGGED FILTER DETECTOR



(57) Abstract: A clogged filter detection system has an optical transmitter (32) aligned to pass light through an air filter (14) of an HVAC air flow plenum, a receiver (34) including a sensor and positioned to receive the transmitted light (48) directly or from a reflector (42), a processing assembly (35) receiving signals from the sensor and communicating a visual (104) or audible (106) indication when an accumulated level of obscuration exceeds a predetermined level and a component support structure. The support structure uses a "U" or "L" shaped bracket (60,63) attached to peripheral structure of a filter receptacle frame (12) and one or more side plates (24,26) of the bracket are connected to an arm (74,76) on which components are carried. The transmitter (32) and receiver (34) may be located on opposite sides of the filter (14) or on the same side, with a retroreflector (46) on the other side. The processing assembly includes a microprocessor (94) and related devices.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G01N 21/00

US CL : 356/239.1

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. : 356/239.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,141,309 A (WORWAG) 25 August 1992 (25.08.1992), see entire document.	1-4,6-10,13,15-20
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A		5,11,12,14



Further documents are listed in the continuation of Box C.



See patent family annex.

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"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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"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed		

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