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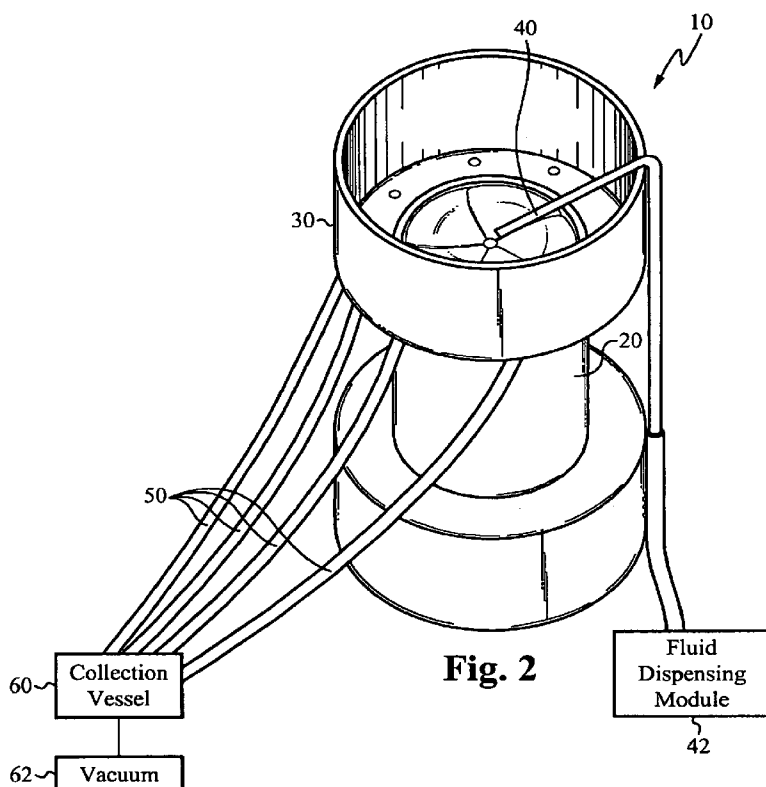
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[Continued on next page]

(54) Title: AUTOMATED PARTICLE COLLECTION OFF OF FAN BLADES INTO A LIQUID BUFFER



(57) Abstract: Fan blades within a fan assembly are rotated in a first rotational direction, thereby generating airflow from above the fan blades downward past the fan blades. Airborne particles adhere to the surface of the fan blades as the air flows past. The fan direction is then reversed maintained at a relatively low rotational rate. A fluid is dispensed onto the hub of the fan blades. Due to the centripetal force of the spinning fan blades, the fluid is spread thin across the top surface of the fan blades and the liquid film washes the blade of the fan, removing particulates from the fan blade. The solution is pushed outward against the inner wall of the fan housing forming a fluid meniscus. The fan speed is increased to push the fluid meniscus into an annular reservoir. The collected fluid is then vacuumed and consolidated into the collection vessel.

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FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL,
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A. CLASSIFICATION OF SUBJECT MATTER

IPC: B63B 7/08;G01J 5/02;B32B 27/00;G21F 1/00,3/00,3/02;B01D 59/44;E04B 1/343;A62B 7/00

USPC: Please See Continuation Sheet

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. : 442/131,132,133;250/515.1,516.1;114/345,349;441/87,102;23/293A,296;52/2.18,2.22,23;128/205.12,205.21

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y, E	US 7,196,023 B2 (Langley et al) 27 March 2007 (27.03.2007), Abstract, Claim 14.	1-20
Y	US 4,342,278 (Horan John) 3 August 1982 (03.08.1982) Col. 5, line 59-65.	1-10
Y	US 4,409,978 (Bartos, Josef) 18 October 1983 (18.10.1983), Abstract.	1-20
Y	US 3,860,818 (Stalder et al) 14 January 1975 (14.01.1975), Abstract, Col. 2, line 36-41.	2-3, 12-15, 17-20
Y	US 6,192,633 B1 (Hilbert Clint) 27 February 2001 (27.02.2001), Abstract, Col. 1, line 6-13.	5-8, 16-20
Y	US 3,909,206 (Katz Murray) 30 September 1975 (30.09.1975), Col. 2, line 21-25.	9-10
A	US 6,247,471 B1 (Bower et al) 19 June 2001 (19.06.2001), Abstract, Figure 5, Col. 5, line 14-23.	1-20

☒ 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	"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
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"O" document referring to an oral disclosure, use, exhibition or other means	
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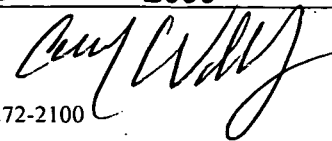
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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,742,516 (Olcerst Robert) 21 April 1998 (21.04.1998), Abstract.	3, 13,15,18,20
A	US 6,862,529 B2 (Brown et al) 01 March 2005 (01.03.2005) disclosure.	1-20
A	US 7,109,853 B1 (Mattson et al) 19 September 2006 (19.09.2006) disclosure.	1-20
A	US 4,642,996 (Harris et al) 17 February 1987 (17.02.1987), Abstract, Col. 3, line 30-35.	1-20
A	US 3,604,416 (Petrahai Joseph) 28 April 1969 (28.04.1969) disclosure.	1-20
A	US 5,449,014 A (Yan-bo Tang) 12 September 1995 (12.09.1995), disclosure.	1-20

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Continuation of USPC:

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