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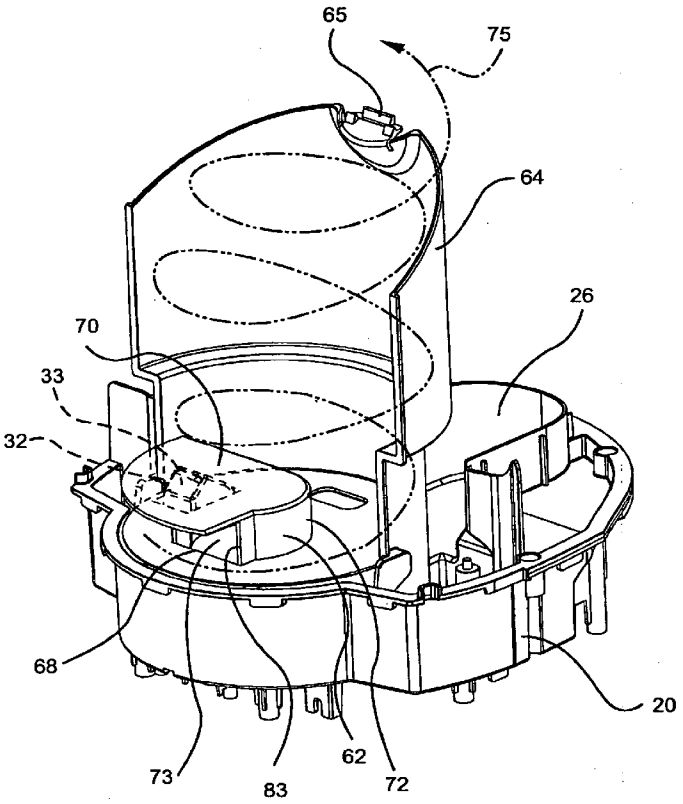
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[Continued on next page]

(54) Title: VORTEX HUMIDIFIER



(57) Abstract: A humidifier which creates a visually entertaining helical flow of mist generally includes a base unit defining a reservoir for holding a quantity of water, a water tank supported on the base unit for supplying water to the reservoir, a humidification device, such as an ultrasonic transducer, in communication with the reservoir for vaporizing the water held in the reservoir to produce a mist, a vortex unit supported on the base unit and a nozzle and a vortex creator positioned in the vortex unit. The vortex unit has an opening disposed above the base unit reservoir to permit the mist produced by the humidification device to rise upwardly into the vortex unit. The nozzle is positioned adjacent the mist opening for introducing a carrier medium flow into the vortex unit and the vortex creator is positioned above the nozzle and the mist opening for diverting the upwardly rising mist from the reservoir into the carrier medium flow from the nozzle and directing a combined mist and carrier medium flow into a helical path within the vortex unit.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
IPC: **B01F 3/04**(2006.01)

USPC: 261/79.2,81;362/96,101
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. : 261/28, 30, 72.1, 79.2, 81, Dig. 48, Dig. 65; 362/96, 101,154, 253, 318

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)
EAST Search Terms: humidifier, helical, vortex, mist, droplet, blower, fan, fog, water, tank, reservoir, container

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3,881,895 A (WATTLES) 06 May 1975 (06.05.1975), fig. 1.	1-18
A	US 4,241,877 A (HUGHES) 30 December 1980 (30.12.1980), fig. 1.	1-18
A	US 5,322,646 A (WRIGHT et al) 21 June 1994 (21.06.1994), fig. 2.	1-18
A	US 6,301,433 B1 (MONTAGNINO et al) 09 October 2001 (09.10.2001), fig. 1.	1-18
A	US 6,676,271 B2 (KOHN et al) 13 January 2004 (13.01.2004), fig. 1.	1-18
A	US 2005/0035472 A1 (SCHUR) 17 February 2005 (17.02.2005), fig. 1.	1-18
A	US 6,883,724 B2 (ADIGA et al) 26 April 2005 (26.04.2005), figs. 1 and 4.	1-18

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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