

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : **2008-229516**

(43)Date of publication of application : **02.10.2008**

---

(51)Int.Cl.	<i>B05B</i>	3/02	(2006.01)
	<i>B01F</i>	3/04	(2006.01)
	<i>B01F</i>	5/00	(2006.01)
	<i>C02F</i>	1/24	(2006.01)
	<i>A47K</i>	3/28	(2006.01)
	<i>B05B</i>	1/18	(2006.01)
	<i>B05B</i>	7/04	(2006.01)

---

(21)Application number : **2007-073504**

(71)Applicant : **UNIV OF TSUKUBA  
AIR EAU CO LTD**

(22)Date of filing : **20.03.2007**

(72)Inventor : **ABE TOSHITATSU  
URANO HIROTA  
OGAWA YOSHITO**

---

## (54) MICROBUBBLE SHOWER

(57)Abstract:

**PROBLEM TO BE SOLVED:** To provide a microbubble shower usable under the hydraulic pressure of city water and highly efficient in the generation of microbubbles.

**SOLUTION:** The microbubble shower possesses a blade type nozzle 3 for generating a swirl flow and a nozzle 4 for breaking a swirl having a flow shrinking part 4a and a swirl breaking part 4l installed coaxially to the blade type nozzle 3 for generating a swirl flow at the throat part of a shower head 51. The swirl flow is generated by feeding a liquid to an inlet of the blade type nozzle 3 for generating swirl flow and the microbubbles are generated from the swirl breaking part 4l by introducing a gas to the center of this swirl flow to feed the swirl flow introduced with the gas to the center to the flow shrinking part 4a. This micro bubbler shower may have a plate 61 restricting the swirl flow to the downstream side of the nozzle 4 for breaking a swirl at the throat part of the shower head 51.

