

Title (en)

Liquid droplet spray device having a hydrodynamic valve

Title (de)

Tropfensprühvorrichtung mit hydrodynamischem Ventil

Title (fr)

Appareil de pulvérisation de gouttelettes pourvu d'une valve hydrodynamique

Publication

EP 1510261 A1 20050302 (EN)

Application

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Priority

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Abstract (en)

The invention concerns a liquid droplet spray device for atomising a liquid substance and comprises a housing (1) comprising a cavity (3) for containing a liquid substance, a perforated membrane (2) having one or more perforations and covering said cavity (3) such that said liquid substance may exit the cavity (3) and the device (D) by traversing the one or more perforations of said perforated membrane (2), an electromechanical actuation means (5) for actuating said liquid substance in said cavity (3) such that said liquid substance undergoes a vibration and contacts the perforated membrane (2) thereby traversing the one or more perforations as a liquid droplet spray, and obturating means disposed adjacent said perforated membrane, and comprising: a fluid inlet (16, 36) for receiving a fluid, an extendible volume element (8, 28), and a hydrodynamic valve (4, 24), which, in a first position, is in close contact with said perforated membrane (2) so as to obturate each of the one or more perforations of said perforated membrane (2) when said device is not in use, and which, in a second position, is removed from said perforated membrane (2), thereby allowing said liquid substance to contact said perforated membrane (2) and to exit said device (D) by traversing the one or more perforations, whereby, when said fluid or gas enters said fluid inlet (16, 36), said extendible volume element (8) extends in volume such that it urges said hydrodynamic valve (4, 24) from said first position to said second position. <IMAGE>

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CPC (source: EP)

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Citation (applicant)

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Citation (search report)

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- [A] US 5685485 A 19971111 - MOCK RANDOLF [DE], et al

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