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(71) Applicant *(for all designated States except US)*: **MICRODRUG AG** [CH/CH]; Landweg 1, CH-6052 Hergiswil NW (CH).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **MYRMAN, Mattias** [SE/SE]; Drottningholmsvägen 8 1 tr ög, S-112 42 Stockholm (SE).

(74) Agent: **AROS PATENT AB**; P.O. Box 1544, S-751 45 Uppsala (SE).

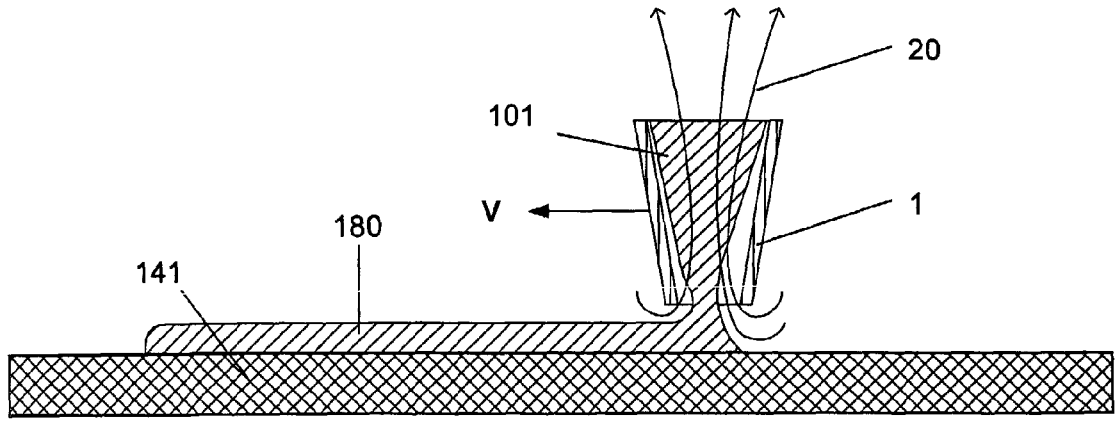
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(54) Title: DE-AGGREGATING AND DISPERSING DRY MEDICAMENT POWDER INTO AIR



A-A

(57) Abstract: A method based on air Air-razor tool is disclosed thereby providing de-aggregation and dispersal into air of a dose of finely divided medication powder. In an effort of sucking air through a nozzle, particles of a powder dose made available to the nozzle, are gradually de-aggregated and dispersed into a stream of air entering the nozzle. The gradual de-aggregation or dispersal is produced by a relative motion introduced between the nozzle and the dose. In a preferred embodiment, the powder is deposited onto a substrate, occupying a larger area than the area of the nozzle inlet. The nozzle is preferably positioned outside the powder area, not accessing the powder in its relative motion until a created air stream entering the nozzle, exceeds a threshold flow velocity. Coincidentally the relative motion will begin such that the nozzle traverses the powder dose gradually. The high velocity air going into the nozzle inlet provides plenty of shearing stress and inertia energy as the flowing air hits the leading point at the border of the dose contour. This powder Air-razor method, created by the shearing stress and inertia of the air stream, is so powerful that the particles in the particle aggregates of the powder adjacent to the inlet of the moving nozzle are released, de-aggregated to a very high degree as well as dispersed and subsequently entrained in the created air stream going through the nozzle.

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