

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
16 January 2025 (16.01.2025)



(10) International Publication Number
WO 2025/012650 A1

(51) International Patent Classification:

H01J 49/04 (2006.01) H01J 49/16 (2006.01)

(21) International Application Number:

PCT/GB2024/051811

(22) International Filing Date:

11 July 2024 (11.07.2024)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2310637.0 11 July 2023 (11.07.2023) GB

(71) Applicant: **MICROMASS UK LIMITED** [GB/GB];
Stamford Avenue, Altrincham Road, Wilmslow Cheshire
SK9 4AX (GB).

(72) Inventors: **TRIVETT, Ian David**; 8 Mendip Close, Heald
Green, Heald Green, Cheadle Cheshire SK8 3LG (GB).
WALFORD, Mark; 52 Grange Park Ave, Wilmslow
Cheshire SK9 4AL (GB).

(74) Agent: **CHIVA, Andrew Peter**; Delms, St Bride's House,
10 Salisbury Square, London Greater London EC4Y 8JD
(GB).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ,
CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM,
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG,
KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY,
MA, MD, MG, MK, MN, MU, MW, MX, MY, MZ, NA,
NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO,
RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS,
ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, CV,
GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST,
SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ,
RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ,
DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT,
LU, LV, MC, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE,
SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, KM, ML, MR, NE, SN, TD, TG).

(54) Title: NEBULISER OUTLET

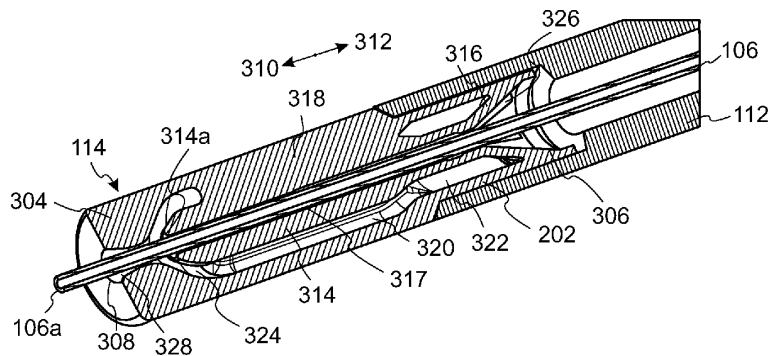


FIG. 3A

(57) Abstract: A nebuliser outlet (114) comprises an outer wall (304) and a liquid capillary support conduit (314) arranged radially inward of the outer wall (304) for radially confining a liquid capillary (106) therein. A radial support structure (318) radially connects the liquid capillary support conduit (314) to the outer wall (304) in a manner such that one or more gas channels (320) are provided radially between the outer wall (304) and the liquid capillary support conduit (314). A first annular channel (322) surrounds the liquid capillary support conduit (314) at a first position that is axially upstream of the radial support structure (318). A second annular channel (324) surrounds the liquid capillary support conduit (314) at a second position that is axially downstream of the radial support structure (318). The one or more gas channels (320) connect the first and second annular channels (322, 324).

[Continued on next page]

WO 2025/012650 A1

Published:

- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*