

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
29 June 2023 (29.06.2023)



(10) International Publication Number
WO 2023/119240 A1

(51) International Patent Classification:

A61M 16/12 (2006.01) *A61M 16/16* (2006.01)
A61M 16/00 (2006.01) *A61M 16/20* (2006.01)
A61M 16/10 (2006.01)

(21) International Application Number:

PCT/IB2022/062713

(22) International Filing Date:

23 December 2022 (23.12.2022)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/265,954 23 December 2021 (23.12.2021) US

(71) Applicant: **FISHER & PAYKEL HEALTHCARE LIMITED** [NZ/NZ]; 15 Maurice Paykel Place, East Tamaki, Auckland 2013 (NZ).

(72) Inventors: **BREWSTER, Cameron, John**; 15 Maurice Paykel Place, East Tamaki, Auckland 2013 (NZ). **EVANS, Edward, John**; 15 Maurice Paykel Place, East Tamaki, Auckland 2013 (NZ). **KAT, Arjen, David**; 15 Maurice Paykel Place, East Tamaki, Auckland 2013 (NZ). **HOLYOAKE, Bruce, Gordon**; 15 Maurice Paykel Place, East Tamaki, Auckland 2013 (NZ). **MCDERMOTT, Gareth, Thomas**; 15 Maurice Paykel Place, East Tamaki, Auckland 2013 (NZ). **MATTHEWS, Cameron, Leslie**; 15 Maurice Paykel Place, East Tamaki, Auckland 2013 (NZ). **MATTHEWS, Hannah, Maree**; 15 Maurice Paykel Place, East Tamaki, Auckland 2013 (NZ). **MAUNDER, Evan, Anthony**; 15 Maurice Paykel Place, East Tamaki, Auckland 2013 (NZ). **JIANG-FOO, Winnie, Yong**; 15 Maurice Paykel Place, East Tamaki, Auckland 2013 (NZ).

(74) Agent: **PHILLIPS ORMONDE FITZPATRICK**; Level 16, 333 Collins Street, Melbourne, Victoria 3000 (AU).

(54) Title: RESPIRATORY SUPPORT SYSTEM

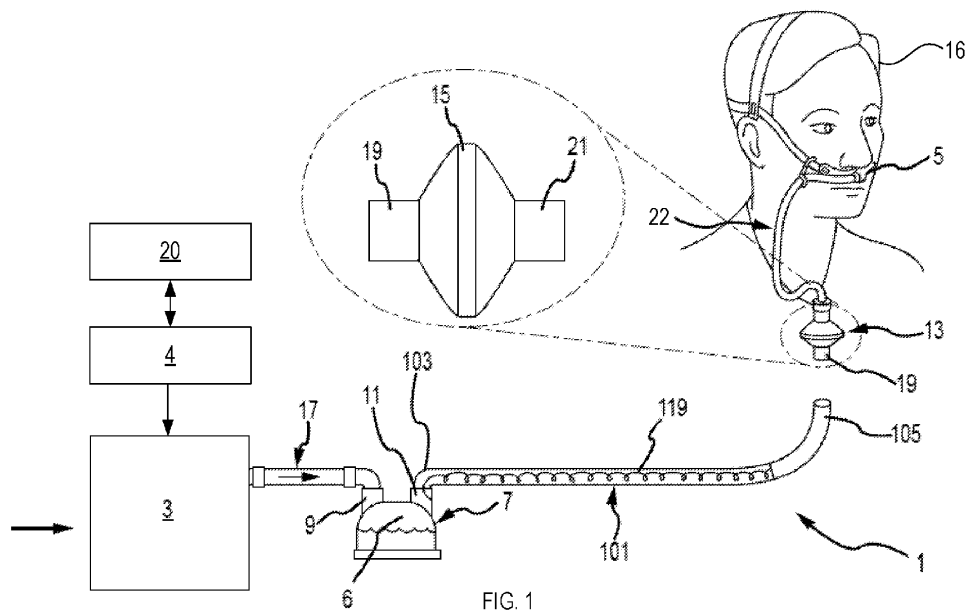


FIG. 1

(57) Abstract: A device for providing respiratory gases comprises a blower configured to receive a first gas from a first gas flow path and generate a flow of a first gas provided through a first gases outlet of the blower; a second gas flow path configured to receive a flow of a second gas and provide the flow of the second gas through a second gases outlet; and a mixing chamber configured to receive a flow of the first gas from the first gases outlet and a flow of the second gas from the second gases outlet. The received gases are configured to mix in the mixing chamber to form a mixed gas. The received gases are configured to travel in a mixing flow direction in the mixing chamber towards a mixed gases inlet, wherein mixed gas exits the mixing chamber via the mixed gases inlet providing flow to a mixed gas flow path.

[Continued on next page]

(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, 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, 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).

Published:

- with international search report (Art. 21(3))
- in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE