

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
04 May 2023 (04.05.2023)



(10) International Publication Number
WO 2023/075610 A1

- (51) **International Patent Classification:**
A61M 16/06 (2006.01) *A61M 16/08* (2006.01)
- (21) **International Application Number:**
PCT/NZ2022/050130
- (22) **International Filing Date:**
25 October 2022 (25.10.2022)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
63/263,050 26 October 2021 (26.10.2021) US
63/363,916 29 April 2022 (29.04.2022) US
63/371,296 12 August 2022 (12.08.2022) US
- (71) **Applicant:** FISHER & PAYKEL HEALTHCARE LIMITED [NZ/NZ]; 15 Maurice Paykel Place, East Tamaki, Auckland, 2013 (NZ).
- (72) **Inventors:** BECKLEY, Amelia Rhian; 15 Maurice Paykel Place, East Tamaki, Auckland, 2013 (NZ). FAN, Andrew Chun Mon; 15 Maurice Paykel Place, East Tamaki, Auckland, 2013 (NZ). HOWARTH, Brad Michael; 15 Maurice Paykel Place, East Tamaki, Auckland, 2013 (NZ).

rice Paykel Place, East Tamaki, Auckland, 2013 (NZ). **DIXON, Freya Refilwe**; 15 Maurice Paykel Place, East Tamaki, Auckland, 2013 (NZ). **PEMMARAJU, Hemanth**; 15 Maurice Paykel Place, East Tamaki, Auckland, 2013 (NZ). **O'BRIEN, Jed James**; 15 Maurice Paykel Place, East Tamaki, Auckland, 2013 (NZ). **SOMERVILLE, Jemma Tamsin**; 15 Maurice Paykel Place, East Tamaki, Auckland, 2013 (NZ). **SMALL, Matthew Ivan**; 15 Maurice Paykel Place, East Tamaki, Auckland, 2013 (NZ). **MACLEAN, Miriam Rose**; 15 Maurice Paykel Place, East Tamaki, Auckland, 2013 (NZ). **MCGERTY, Oscar**; 15 Maurice Paykel Place, East Tamaki, Auckland, 2013 (NZ). **HENSMAN, Sally Margaret**; 15 Maurice Paykel Place, East Tamaki, Auckland, 2013 (NZ). **DAVIS, Samuel Rollo Ross**; 15 Maurice Paykel Place, East Tamaki, Auckland, 2013 (NZ). **HENDRICKSEN, Tyler Dean Goff**; 15 Maurice Paykel Place, East Tamaki, Auckland, 2013 (NZ).

(74) **Agent:** CATALYST INTELLECTUAL PROPERTY LIMITED; Level 5, 45 Johnston Street, Wellington, 6011 (NZ).

(81) **Designated States** (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

(54) **Title:** A PATIENT INTERFACE SYSTEM

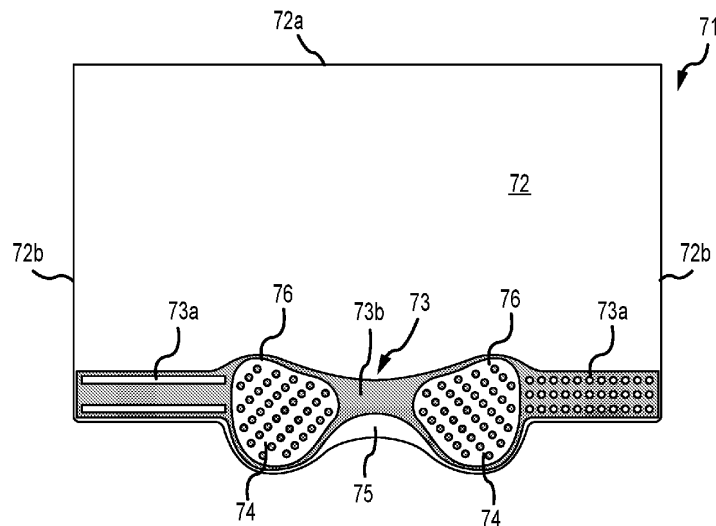


FIG. 76

(57) **Abstract:** Headgear for securing a patient interface to patient, the headgear having a base layer forming a body of the headgear, and a headband region. The headband region has an outer engagement layer that at least partly overlaps a lower portion of the base layer with the outer engagement layer being fused to an underlying portion of the base layer. The headband region has areas of fused material and areas of unfused material, the non-fused areas at least in part defining connection zones for releasably securing connectors to the headgear.

[Continued on next page]

WO 2023/075610 A1

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