



(51) International Patent Classification:

F16K 7/18 (2006.01) *A61M 16/20* (2006.01)
A61M 39/24 (2006.01) *F16K 15/14* (2006.01)

(21) International Application Number:

PCT/NZ2014/000203

(22) International Filing Date:

17 September 2014 (17.09.2014)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/879,012 17 September 2013 (17.09.2013) US
61/912,390 5 December 2013 (05.12.2013) US

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

(72) Inventors: **ARROWSMITH, Mark John**; 15 Maurice Paykel Place, East Tamaki, Auckland, 2013 (NZ). **PARTINGTON, Andrew John**; 15 Maurice Paykel Place, East

Tamaki, Auckland, 2013 (NZ). **JOHNSON, Sophia Adele**; 15 Maurice Paykel Place, East Tamaki, Auckland, 2013 (NZ).

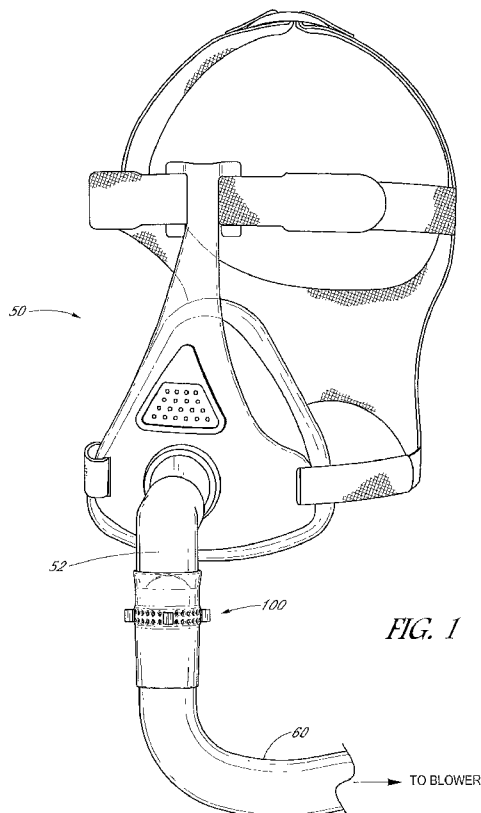
(74) Agents: **BROWN, Hadleigh, R** et al.; A J Park, PO Box 949, Wellington, 6140 (NZ).

(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, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, 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, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU,

[Continued on next page]

(54) Title: VALVE WITH INTERNAL MEMBER



(57) Abstract: A valve with an internal member is disclosed which allows exhaled carbon dioxide to escape from a breathing circuit when the circuit gas pressure drops below a threshold pressure. The valve operates by occluding one or more ports under a relatively high pressure and opening the one or more ports under a relatively low pressure. The internal member is attached to the body of the valve at two or more locations on the internal member. The internal member moves in a direction perpendicular to the gas flow through the valve.



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, 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))*