

# (12) International Application Status Report

**Received at International Bureau:** 22 December 2019 (22.12.2019)

**Information valid as of:** 25 May 2020 (25.05.2020)

**Report generated on:** 25 September 2020 (25.09.2020)

**(10) Publication number:**

WO2020/118275

**(43) Publication date:**

11 June 2020 (11.06.2020)

**(26) Publication language:**

English (EN)

**(21) Application Number:**

PCT/US2019/065099

**(22) Filing Date:**

06 December 2019 (06.12.2019)

**(25) Filing language:**

English (EN)

**(31) Priority number(s):**

62/776,958 (US)

**(31) Priority date(s):**

07 December 2018 (07.12.2018)

**(31) Priority status:**

Priority document received (in compliance with PCT Rule 17.1)

62/788,168 (US)

04 January 2019 (04.01.2019)

Priority document received (in compliance with PCT Rule 17.1)

62/789,366 (US)

07 January 2019 (07.01.2019)

Priority document received (in compliance with PCT Rule 17.1)

62/825,166 (US)

28 March 2019 (28.03.2019)

Priority document received (in compliance with PCT Rule 17.1)

**(51) International Patent Classification:**

**A61M 5/315** (2006.01); **C08J 7/12** (2006.01); **B23K 26/364** (2014.01)

**(71) Applicant(s):**

ABRAMS, Robert S. [US/US]; c/o SiO2 Medical Products, Inc. 2250 Riley Street Auburn, AL 36832 (US) *(for all designated states)*

KELLY, Kenneth Wade [US/US]; c/o SiO2 Medical Products, Inc. 2250 Riley Street Auburn, AL 36832 (US) *(for all designated states)*

TAHA, Ahmad [US/US]; c/o SiO2 Medical Products, Inc. 2250 Riley Street Auburn, AL 36832 (US) *(for all designated states)*

HUNT, Benjamin [US/US]; c/o SiO2 Medical Products, Inc. 2250 Riley Street Auburn, AL 36832 (US) *(for all designated states)*

LILLY, Brian Russell [US/US]; c/o SiO2 Medical Products, Inc. 2250 Riley Street Auburn, AL 36832 (US) *(for all designated states)*

KIBELE, Ralf [DE/US]; c/o SiO2 Medical Products, Inc. 2250 Riley Street Auburn, AL 36832 (US) *(for all designated states)*

**(72) Inventor(s):**

ABRAMS, Robert S.; c/o SiO2 Medical Products, Inc. 2250 Riley Street Auburn, AL 36832 (US)

KELLY, Kenneth Wade; c/o SiO2 Medical Products, Inc. 2250 Riley Street Auburn, AL 36832 (US)

TAHA, Ahmad; c/o SiO2 Medical Products, Inc. 2250 Riley Street Auburn, AL 36832 (US)

HUNT, Benjamin; c/o SiO2 Medical Products, Inc. 2250 Riley Street Auburn, AL 36832 (US)

LILLY, Brian Russell; c/o SiO2 Medical Products, Inc. 2250 Riley Street Auburn, AL 36832 (US)

KIBELE, Ralf; c/o SiO2 Medical Products, Inc. 2250 Riley Street Auburn, AL 36832 (US)

**(74) Agent(s):**

HALEY, James F. Jr.; Harley Guiliano LLP 75 Broad Street, Suite 1000 New York, NY 10004 (US)

**(54) Title (EN):** IMPROVED SYRINGE AND GASKET SYSTEMS

**(54) Title (FR):** SYSTÈMES DE SERINGUES ET DE JOINTS AMÉLIORÉS

**(57) Abstract:**

**(EN):** A process for producing gaskets with an improved channel for use in matched syringe and plunger systems, preferably prefilled plastic syringe systems. In particular, an improved process for making and inspecting continuous channels in a gasket film by laser treatment. The gaskets are useful in matched syringe and plunger systems with high and consistent container closure integrity (CCI), and consistent break loose and glide forces over time, and sealability.

**(FR):** L'invention concerne un procédé de production de joints comprenant un canal amélioré destinés à être utilisés dans des systèmes de seringues et de pistons appariés, de préférence des systèmes de seringues en plastique pré-remplies. En particulier, l'invention concerne un procédé amélioré de fabrication et d'inspection de canaux continus dans un film de joint par traitement laser. Les joints sont utiles dans des systèmes de seringues et de pistons appariés présentant une intégrité de fermeture de récipient élevée et constante (CCI) et des forces de rupture et de glissement constantes dans le temps et une étanchéité.

**International search report:**

Received at International Bureau: 20 February 2020 (20.02.2020) [EP]

**International Report on Patentability (IPRP) Chapter II of the PCT:**

Not available

**(81) Designated States:**

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, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, 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

European Patent Office (EPO) : 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

African Intellectual Property Organization (OAPI) : BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG

African Regional Intellectual Property Organization (ARIPO) : BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW

Eurasian Patent Organization (EAPO) : AM, AZ, BY, KG, KZ, RU, TJ, TM