



- (51) International Patent Classification: *D02G 3/36* (2006.01) *D01D 5/34* (2006.01)
- (21) International Application Number: PCT/US2015/011953
- (22) International Filing Date: 20 January 2015 (20.01.2015)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 61/932,281 28 January 2014 (28.01.2014) US
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- (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.

[Continued on next page]

(54) Title: SHEATH AND CORE YARN FOR THERMOPLASTIC COMPOSITE

(57) Abstract: A yarn containing a core of continuous filaments of an inorganic material and a sheath of staple fibers of a thermoplastic polymer is provided. The yarn can be formed into a fabric or unidirectional tape, which can then be heated under pressure to form a composite material that has excellent mechanical strength yet is lightweight. The fabric can be molded into a composite material having a two-dimensional or three-dimensional shape because of its excellent drapability. The composite material can be used in aircraft parts, automotive parts, marine parts, consumer electronic parts, and other products.

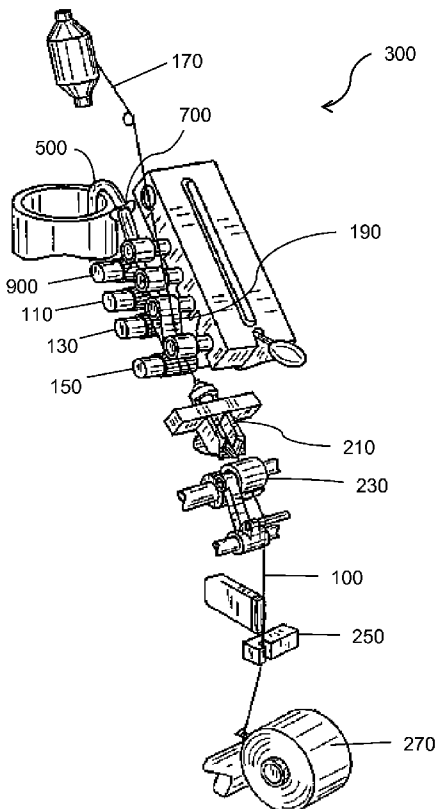


Fig. 1

(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, 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))*
- *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))*

(88) Date of publication of the international search report:

17 December 2015

A. CLASSIFICATION OF SUBJECT MATTER**D02G 3/36(2006.01)i, D01D 5/34(2006.01)i**

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHEDMinimum documentation searched (classification system followed by classification symbols)
D02G 3/36; D02G 3/02; D01H 4/02; B01D 27/02; F16L 9/14; B01D 29/08; D02G 3/00; D01D 5/34Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Korean utility models and applications for utility models
Japanese utility models and applications for utility modelsElectronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKOMPASS(KIPO internal) & keywords: spun yarn, fabric, staple fiber, core, sheath, filament, thermoplastic polymer, inorganic material**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6553749 B2 (LAND, F. J. et al.) 29 April 2003 See abstract; claims 1, 4, 6; column 1, lines 13-19.	1-20
A	US 2013-0306186 A1 (GOULET, R. J.) 21 November 2013 See abstract; claims 1-9.	1-20
A	US 4225442 A (TREMBLAY, M. H. et al.) 30 September 1980 See abstract; claims 1-4.	1-20
A	US 2007-0048523 A1 (POLLET, L. et al.) 01 March 2007 See claims 1-8.	1-20
A	US 2005-0155336 A1 (ROBINS, S. D.) 21 July 2005 See abstract; claim 1.	1-20

 Further documents are listed in the continuation of Box C. See patent family annex.

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Date of the actual completion of the international search

13 October 2015 (13.10.2015)

Date of mailing of the international search report

16 October 2015 (16.10.2015)

Name and mailing address of the ISA/KR

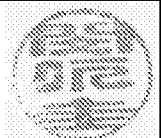

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2015/011953

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