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(74) Agents: **BOLAND, Kevin, J.** et al.; W.L. GORE & ASSOCIATES, INC., 551 PAPER MILL ROAD, P.O. Box 9206, Newark, Delaware 19714-9206 (US).

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(71) Applicant (*for all designated States except US*): **GORE ENTERPRISE HOLDINGS, INC.** [US/US]; 551 PAPER MILL ROAD, P.o. Box 9206, Newark, Delaware 19714-9206 (US).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **BUCHER, Richard, A.** [US/US]; 109 Raintree Lane, Lincoln University, Pennsylvania 19352 (US). **CLOUGH, Norman** [GB/US]; 1 Quail Drive, Landenberg, Pennsylvania 19350 (US). **EGRES, Taihi, K.** [US/US]; 12 Highland Circle, Newark, Delaware 19713 (US). **SASSA, Robert, L.** [US/US]; 6 Forestal Circle, Newark, Delaware 19711 (US). **LUTZ, David, Isaac** [US/US]; 21 Smalleys Cove Street, Newark, Delaware 19702 (US). **HARP, Gary** [US/US]; 3 Diane Court, Newark, Delaware 19702 (US).

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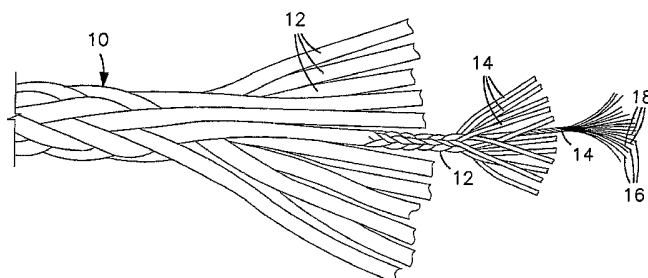
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: FLUOROPOLYMER FIBER COMPOSITE BUNDLE



(57) Abstract: A rope (40) comprising a plurality of bundle groups (41), each of said bundle groups having a periphery and comprising a plurality of high strength fibers, at least one low coefficient of friction fiber (42) disposed around at least a portion of the periphery of at least one of the bundle groups.



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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US06/04178

A. CLASSIFICATION OF SUBJECT MATTER

IPC: **D02G 3/02**(2006.01)

USPC: 57/210,211,231

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

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 57/210,211,231

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EAST

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2003/0070413 A1 (Fujiwara et al) 17 April 1003 (17.04.2003), Abstract, Figure 6A	27, 36-52
Y	US 5060466 A (Matsuda et al) 29 October 1991 (29.10.1991), Abstract	27, 36-52
A	US 4074512 A (Matt) 21 February 1978 (21.02.1978), entire document	27, 36-52
A	US 2003/0226347 A1 (Smith et al) 11 December 2003 (11.12.2003), entire document	27, 36-52

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

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P.O. Box 1450
Alexandria, Virginia 22313-1450

Facsimile No. (571) 273-3201

Authorized officer

For Gary Welch *J. Libby*
Telephone No. (571) 272-2975

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US06/04178

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:
Please See Continuation Sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of any additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.: 27 and 36-52

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US06/04178

BOX III. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I, claim(s) 1-15 and 16-24, drawn to a composite bundle.

Group II, claim(s) 25 and 26, drawn to a second composite bundle.

Group III, claim(s) 27 and 36-52, drawn to a rope.

Group IV, claim(s) 28, drawn to a belt.

Group V, claim(s) 29-33, drawn to a net, sling, woven fabric, and non woven.

The inventions listed as Groups I-V do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the special technical feature of group I is a composite bundle having at least one high strength fiber and at least one fluoropolymer fiber wherein the fiber is present in an amount of 40% or less. The STF is shown in the prior art Nelson (US 6132866) and others.