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

(54) Title: ABRASIVE FILAMENT, ABRASIVE ARTICLES INCORPORATING ABRASIVE FILAMENT AND METHOD OF
MAKING ABRASIVE FILAMENTS AND ABRASIVE ARTICLES

(57) Abstract: An abrasive filament, a cloth or non-woven made of the filament and an abrasive device, e.g., sanding disk, incorpo-
rating the fabric, cloth or non-woven and methods of producing the same are disclosed. The filament has an outer surface to which
plural small size particles of an abrasive material are secured. The filament is formed from a mass of a molten polymer material, e.g.,
nylon, that has been extruded through a small diameter opening to form a hot elongated filamentary body. The abrasive particles,
e.g., grit, are applied as a cloud or spray to the outer surface of the hot elongated filamentary body, whereupon they adhere to that
surface and remain permanently secured thereto.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US04/02158

A. CLASSIFICATION OF SUBJECT MATTER
 IPC(7) : B24D 3/00, 3/28, 11/00, 17/00, 18/00
 US CL : 51/293, 298, 307, 308, 309, 295, 294; 264/176.1, 211, 211.12
 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. : 51/293, 298, 307, 308, 309, 295

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)
 west-abrasive filament, extruded, molten polymer, abrasive material or particle

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 5,427,595 A (PIHL et al.) 27 June 1995 (27.06.1995), see column 19, line 25-column 22, line 34 and column 4, lines 5+.	1-8, 10-28, 30-38 ----- 9, 29, 39-60
X --- Y	US 5,849,052 A (BARBER, JR.) 15 December 1998 (15.12.1998), see column 9, line 2-column 10, line 55, column 13 lines 35-68, column 15, line 28-column 16, line 55 and column 26, line 28-column 30, line 55.	1-2, 4-8, 10-12, 14-28, 30-31, 33-38 ----- 3, 9, 13, 29, 32, 39-60
X	US 5,863,305 A (BEARDLEY et al.) 26 January 1999 (26.01.1999), see column 3, lines 40-45 and column 7, line 45-column 14, line 65.	1-29

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
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"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	

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INTERNATIONAL SEARCH REPORT

International application No.

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Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

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

1. Claim Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claim 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. Claim Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

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 an additional fee, this Authority did not invite payment of any additional fee.
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.:

- Remark on Protest** The additional search fees were accompanied by the applicant's protest.
 No protest accompanied the payment of additional search fees.