

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
9 December 2004 (09.12.2004)

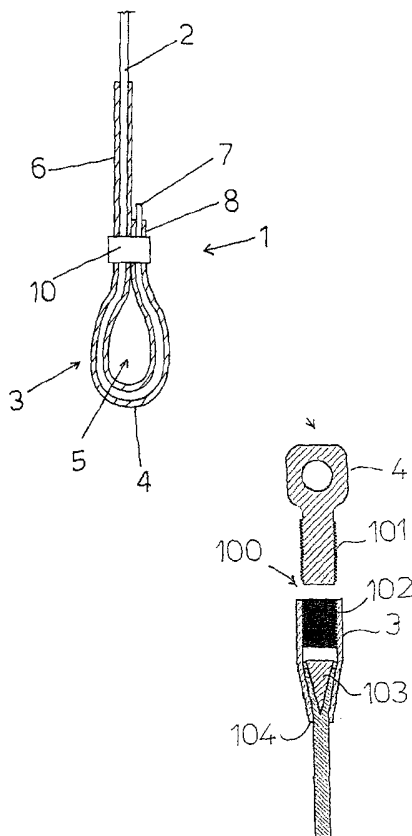
PCT

(10) International Publication Number  
**WO 2004/106772 A3**

- (51) International Patent Classification<sup>7</sup>: **F16G 11/05**, [IT/IT]; Via Duccio di Boninsegna, 15, I-20145 Milano (IT).  
11/00
- (21) International Application Number: PCT/EP2004/005540
- (22) International Filing Date: 24 May 2004 (24.05.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: MI2003A001065 28 May 2003 (28.05.2003) IT
- (71) Applicant (for all designated States except US): **TOP GLASS S.P.A.** [IT/IT]; Via Monte Suello, 18, I-25128 Brescia (IT).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **BRANCA, Alfonso**
- (74) Agent: **RAPISARDI Mariacristina**; Ufficio Brevetti Rapisardi S.r.l., Via Serbelloni, 12, I-20122 Milano (IT).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: JUNCTION SYSTEM AND PROCEDURE FOR JOINING A FILIFORM ELEMENT TO A CONNECTION ELEMENT



(57) Abstract: The junction system for joining a filiform element (2) to a connection element, possessing a tubular element (3) fitted on an end section of said filiform element (2) and substantially having an eye (4) for hooking said connection element.

WO 2004/106772 A3



European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**(88) Date of publication of the international search report:**  
17 March 2005

**Declaration under Rule 4.17:**

— *of inventorship (Rule 4.17(iv)) for US only*

**Published:**

— *with international search report*

*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.*

**INTERNATIONAL SEARCH REPORT**

International Application No  
**PCT/EP2004/005540**

**A. CLASSIFICATION OF SUBJECT MATTER**  
**IPC 7 F16G11/05 F16G11/00**

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)  
**IPC 7 F16G D07B**

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 practical, search terms used)  
**EPO-Internal**

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2003/010966 A1 (SJOSTEDT ROBBIE J) 16 January 2003 (2003-01-16)  the whole document	1, 3-7, 9-15, 21-26, 28-30, 32, 40
X	US 3 570 074 A (SCHIMMEYER WERNER K ET AL) 16 March 1971 (1971-03-16)  the whole document	1, 3-7, 11, 21-25, 30, 32, 40
X	DE 527 582 C (AMERICAN CHAIN & CABLE CO) 19 June 1931 (1931-06-19)  the whole document	1, 2, 5, 7, 27, 30, 32, 40
A	----- -/--	4

Further documents are listed in the continuation of box C.       Patent family members are listed in annex.

\* Special categories of cited documents :

*A* document defining the general state of the art which is not considered to be of particular relevance	*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
*E* earlier document but published on or after the international filing date	*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
*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)	*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.
*O* document referring to an oral disclosure, use, exhibition or other means	*8* document member of the same patent family
*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 <b>1 October 2004</b>	Date of mailing of the international search report <b>15 DEC 2004</b>
--	--

Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer  <b>Das Neves, N</b>
--	---

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/EP2004/005540

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category <sup>a</sup>	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	FR 894 892 A (JEAN BEHR) 9 January 1945 (1945-01-09)  page 1, line 9 - line 20 page 1, line 35 - line 39 figure 1	1,2,7,8, 12,18, 19,30, 32,40
A	----- US 4 043 690 A (BROWNE WILLIAM R K) 23 August 1977 (1977-08-23) column 6, line 51 - line 56	4
A	----- DE 196 28 154 A (KWO KABEL GMBH) 15 January 1998 (1998-01-15) abstract	33
A	----- US 3 561 071 A (SCHLEIN SEYMOUR N) 9 February 1971 (1971-02-09) claim 4; figures 15,16	16,17
A	----- FR 2 642 446 A (PRODUCTIONS IND ET) 3 August 1990 (1990-08-03) the whole document	20
	-----	29

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/EP2004/005540

## Box 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 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:

see additional 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 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.:

1-33, 40

### Remark on Protest

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

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-33,40

junction system suitable for joining a filiform element to a connection element, a method and kit therefore.

---

2. claims: 34-39

Device suitable for reducing the aerodynamic resistance of a filiform element and the method therefore.

---

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/005540

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 2003010966	A1	16-01-2003	CA 2454258 A1 EP 1427882 A2 WO 03008702 A2	30-01-2003 16-06-2004 30-01-2003
US 3570074	A	16-03-1971	NONE	
DE 527582	C	19-06-1931	NONE	
FR 894892	A	09-01-1945	NONE	
US 4043690	A	23-08-1977	AU 510049 B2 AU 1706176 A CA 1124493 A1 DE 2638531 A1 FR 2322305 A1 GB 1568093 A IT 1083979 B JP 52037662 A SE 7609560 A	05-06-1980 02-03-1978 01-06-1982 03-03-1977 25-03-1977 21-05-1980 25-05-1985 23-03-1977 01-03-1977
DE 19628154	A	15-01-1998	DE 19628154 A1	15-01-1998
US 3561071	A	09-02-1971	US 3733681 A	22-05-1973
FR 2642446	A	03-08-1990	FR 2642446 A1 DE 3942535 A1 GB 2228776 A , B NL 9000015 A	03-08-1990 12-07-1990 05-09-1990 01-08-1990