

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
21 December 2007 (21.12.2007)

PCT

(10) International Publication Number  
**WO 2007/146022 A3**

(51) International Patent Classification:  
H02G 7/12 (2006.01)

(21) International Application Number:  
PCT/US2007/013363

(22) International Filing Date: 6 June 2007 (06.06.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
11/450,121 9 June 2006 (09.06.2006) US

(71) Applicant (for all designated States except US): **PERFORMED LINE PRODUCTS COMPANY** [US/US];  
660 Beta Drive, Mayfield Village, OH 44143 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **BORGES, Paulo, Sergio, Pinto** [BR/BR]; Alameda Corvina, 772 - Residencial 11, Santana De Pamaiba-SP (BR). **FERNANDES, Carlos, Alberto** [BR/BR]; Rua Adolpho Gil Adolpho, 31-Parque Da Represa, 13214-516 Jundiai-SP (BR).

(74) Agent: **HUDZINSKI, Michael, E.**; Fay Sharpe LLP, 1100 Superior Avenue, 7th Floor, Cleveland, OH 44114 (US).

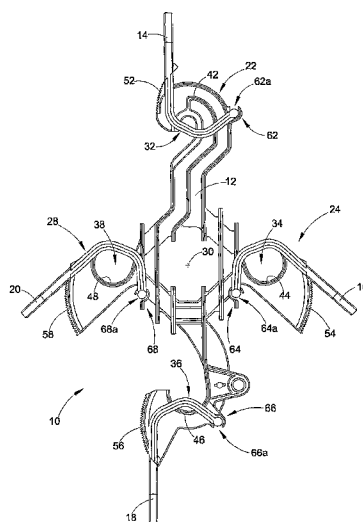
(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, 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), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, 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).

Published:  
— with international search report

(88) Date of publication of the international search report:  
7 February 2008

(54) Title: AERIAL CABLE SPACER WITH CABLE RETAINING ARM HAVING NON-RECTANGULAR CROSS SECTION



(57) Abstract: An aerial cable spacer (10) is provided with a cable retainer (22, 24, 26, 28) and vertically disposed strengthening tabs or ribs. The cable retainer includes a cable retaining arm (14, 16, 18, 20). A mid portion (92) of the cable retaining arm has a non-rectangular plus "+" shaped cross section. The plus "+" shaped cross section engages and exerts a force on the cable as the cable retaining arm bends to a closed position. The arm is flexible so as to create a resilient force in conjunction with the plus "+" shaped cross section to securely hold the cable on a cable seat (42, 44, 46, 48) of a main body portion (12) of the aerial cable spacer. A pawl (77) is carried on the arm at a predetermined orientation to engage a corresponding set of teeth on the spacer body for enhanced cable clamping force.

WO 2007/146022 A3

# INTERNATIONAL SEARCH REPORT

International application No  
PCT/US2007/013363

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> INV. H02G7/12		
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b>		
Minimum documentation searched (classification system followed by classification symbols) H02G		
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		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 020 277 A (LA CHANCE SR ERNEST JOSEPH ET AL) 26 April 1977 (1977-04-26) cited in the application the whole document	1-19
X	US 4 082 917 A (HENDRIX WILLIAM LOUIS) 4 April 1978 (1978-04-04) the whole document	1,11
X	US 6 303 856 B1 (BELLO SALVATORE [US]) 16 October 2001 (2001-10-16) the whole document	1,8-11, 17-19
<input type="checkbox"/> Further documents are listed in the continuation of Box C.		
<input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents :		
*A* document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *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) *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	*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 *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 *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. *&* document member of the same patent family	
Date of the actual completion of the international search	Date of mailing of the international search report	
9 November 2007	23/11/2007	
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  Jansen, Helma	

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2007/013363

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 4020277	A	26-04-1977	CA	1032624 A1	06-06-1978
US 4082917	A	04-04-1978	CA	1088644 A1	28-10-1980
US 6303856	B1	16-10-2001	BR	9902257 A	23-04-2002