

(43) International Publication Date
15 September 2011 (15.09.2011)

(10) International Publication Number

WO 2011/112517 A3

(51) International Patent Classification:
A63B 27/00 (2006.01)(21) International Application Number:
PCT/US201 1/027413(22) International Filing Date:
7 March 2011 (07.03.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/311,318 6 March 2010 (06.03.2010) US
61/382,565 14 September 2010 (14.09.2010) US
13/032,331 22 February 2011 (22.02.2011) US(71) Applicant (for all designated States except US): **D B INDUSTRIES, INC.** [US/US]; 3833 Sala Way, Red Wing, MN 55066-5006 (US).

(72) Inventors; and

(75) Inventors/ Applicants (for US only): **PETTY, Clifford, D.** [US/US]; 84 West Hadley Woodland Street, Mooresville, IN 46158 (US). **PERNER, Judd, J.** [US/US]; 1968 Burton Street, Red Wing, MN 55066 (US). **SCHLANGEN, David, A.** [US/US]; 344 Charlson Drive, Red Wing, MN 55066 (US).(74) Agent: **LUNDBERG, Scott, V.**; IPLM Group, P.A., Post Office Box 18455, Minneapolis, MN 55418 (US).

(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, 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, 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, PE, PG, PH, PL, PT, RO, RS, RU, 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.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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, 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:
3 November 2011

(54) Title: POLE CLIMBING FALL PREVENTION ASSEMBLY

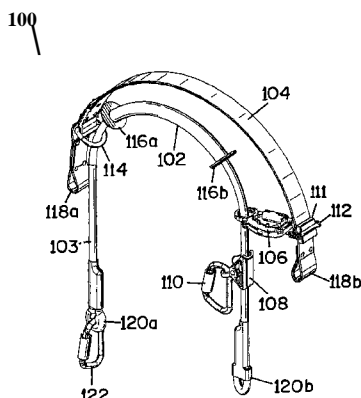


FIG. 1A

(57) Abstract: A fall prevention assembly to prevent injuries when a user climbing a pole and falls, is provided. The fall prevention assembly includes a pole strap, a first connector, a floating back plate, a second connector and a lanyard. The pole strap has a first end, a second end and a mid portion between the first end and the second end. The first connector has a first end that is slidably coupled proximate the first end of the pole strap. The floating back plate is engaged between a portion of the first connector and the pole strap and is configured and arranged to selectively bind the pole strap to the first connector. The second connector is coupled a select distance from the second end of the pole strap. The lanyard has a first end, a second end and mid portion between the first and second ends. A second end of the first connector is slidably coupled to the lanyard. A second end of the second connector is slidably coupled to the lanyard such that the mid-portion of the pole strap and the mid-portion of the lanyard can be positioned around a pole to be climbed.

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2011/027413

A. CLASSIFICATION OF SUBJECT MATTER
INV. A63B27/00
ADD.

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)
A63B

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.
Y	US 5 141 074 A (SULOWSKI ANDREW C [CA] ET AL) 25 August 1992 (1992-08-25) column 2, lines 18-59; figures 1-3 -----	1, 2, 4, 8, 10-13
Y	WO 2008/054041 A1 (AHN WOO HYUNG [KR]) 8 May 2008 (2008-05-08) abstract; figures -----	1, 2, 4, 8, 10-13
Y, P	US 2010/089694 A1 (PAUL RODERICK [US]) 15 April 2010 (2010-04-15) paragraph [0044]; figures 1, 5 -----	10-13
A	US 5 906 873 A (KIM YOUNG HWA [US]) 25 May 1999 (1999-05-25) abstract ----- - / - -	12



Further documents are listed in the continuation of Box C.



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

4 July 2011

Date of mailing of the international search report

09/09/2011

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Authorized officer

Jones, Mark

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2011/027413

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 752 242 B1 (WHITEHEAD ROBERT [US] ET AL) 22 June 2004 (2004-06-22) figures -----	1
A	US 3 407 898 A (JOHNSON WESLEY v) 29 October 1968 (1968-10-29) figures -----	1

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2011/027413

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:

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 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. :

1-13

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.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

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

1. claims: 1-13

Fall prevention assembly including a connector with a floating back plate.

2. claims: 14-18

Fall prevention assembly including a rope grab.

3. claims: 19-24

Adjustment assembly

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2011/027413

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5141074	A	25-08-1992	CA 2069288 AI 25-08-1993
WO 2008054041	AI	08-05-2008	CN 101511217 A 19-08-2009 EP 2086364 AI 12-08-2009 JP 2010522576 A 08-07-2010 KR 20060119849 A 24-11-2006 KR 20090121269 A 25-11-2009 US 2010018008 AI 28-01-2010
US 2010089694	AI	15-04-2010	NONE
US 5906873	A	25-05-1999	AT 206882 T 15-11-2001 AU 714848 B2 13-01-2000 AU 2990197 A 21-01-1998 BR 9710697 A 17-08-1999 CA 2259486 AI 08-01-1998 DE 69707464 DI 22-11-2001 DE 69707464 T2 29-05-2002 DK 912117 T3 19-11-2001 EP 0912117 AI 06-05-1999 IL 127101 A 10-03-2002 JP 2002506492 A 26-02-2002 KR 20000022487 A 25-04-2000 NZ 334000 A 27-10-2000 WO 9800039 AI 08-01-1998
US 6752242	BI	22-06-2004	NONE
US 3407898	A	29-10-1968	NONE