(19)



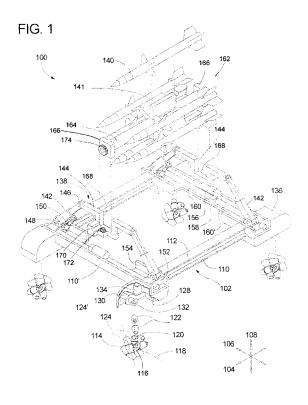


(11) **EP 1 734 329 A3**

EUROPEAN PATENT APPLICATION (12)(88) Date of publication A3: (51) Int Cl.: F41A 9/87^(2006.01) 13.02.2008 Bulletin 2008/07 (43) Date of publication A2: 20.12.2006 Bulletin 2006/51 (21) Application number: 05472003.2 (22) Date of filing: 07.09.2005 (84) Designated Contracting States: (72) Inventor: Garrow, Jason R. AT BE BG CH CY CZ DE DK EE ES FI FR GB GR St. Albans, VT 05478 (US) HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR (74) Representative: Leonhard, Frank Reimund **Designated Extension States:** Leonhard - Olgemöller - Fricke, AL BA HR MK YU Postfach 10 09 62 80083 München (DE) (30) Priority: 03.09.2004 US 934278 (71) Applicant: General Dynamics Armament and **Technical Products**, Inc. Charlotte, NC 28217 (US)

(54) Advanced weapons loader

(57)A weapon handler (100) for transporting weapons and loading weapons onto aircraft or other vehicles is disclosed. The weapons handler (100) comprises a moveable base (102) having longitudinal (104), lateral (106) and vertical (108) axes, an articulated cradle (138) comprising one or more cradle members, and a weapons carousel rotatable about the longitudinal axis and adapted to hold a plurality of weapons, and a plurality of articulating members connecting the moveable base to the one or more cradle members. The articulating members are adapted to translate the articulated cradle (138) relative to moveable base along the lateral (106), longitudinal (104), and vertical (108) axes. According to another embodiment, a weapon gripper (400) for a weapon handling system is disclosed. The weapon gripper (400) comprises at least three contact surfaces, and a moveable linkage adapted to selectively move at least one of the at least three contact surfaces from a first position in which the at least three contact surfaces geometrically enclose a weapon, to a second position in which the at least three contact surfaces geometrically release the weapon.





European Patent Office

EUROPEAN SEARCH REPORT

Application Number EP 05 47 2003

	DOCUMENTS CONSID	ERED TO BE RELEVANT			
Category	Citation of document with ir of relevant passa	ndication, where appropriate, ages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)	
X Y	US 5 451 134 A (BRY 19 September 1995 (* column 3, line 49 2,7,8,9a,9b * * column 4, line 64 claim 1 *	26,33-38 1-25, 27-32	INV. F41A9/87		
Х	US 3 087 630 A (PAU 30 April 1963 (1963 * column 4, line 44 claim 1; figures 1-	-04-30) - column 6, line 15;			
x	US 2 785 807 A (PRO		26,33,34		
Y	19 March 1957 (1957 * column 7, line 24 claim 1; figures 1-	- column 8, line 29;	13-19	TECHNICAL FIELDS SEARCHED (IPC)	
Y	US 3 095 981 A (THO 2 July 1963 (1963-0 * column 3, lines 5		1-25		
Y	US 2004/062630 A1 (1 April 2004 (2004- * paragraphs [0002] [0033]; claim 1; fi	04-01) , [0007], [0029],	2-7, 27-32		
Y	US 3 067 884 A (WIL 11 December 1962 (1 * column 4, line 5 1-4,9,11,14,15 *	962-12-11)	11		
Y	US 5 083 892 A (OSW AL) 28 January 1992 * figure 1 *	ALD NORMAN D [US] ET (1992-01-28)	12		
	The present search report has I	been drawn up for all olaims Date of completion of the search	-	Examiner	
	The Hague	18 September 200	07 Bea	ufumé, Cédric	
X : parti Y : parti docu A : tech	ATEGORY OF CITED DOCUMENTS cularly relevant if taken alone cularly relevant if combined with anot iment of the same category nological background written disclosure	T : theory or princip E : earlier patent do after the filing da ner D : document cited L : document cited	le underlying the i coument, but public te in the application for other reasons	nvention shed on, or	



European Patent Office Application Number

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CLAIMS INCURRING FEES				
The present European patent application comprised at the time of filing more than ten claims.				
Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):				
No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.				
LACK OF UNITY OF INVENTION				
The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:				
see sheet B				
All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.				
As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.				
Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:				
 None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims: 1 - 38 				
The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).				



European Patent Office

LACK OF UNITY OF INVENTION SHEET B

Application Number

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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely: 1. claims: 1-38 weapons handler for transporting and loading weapons ---2. claims: 39-45 weapon gripper for a weapon handling system ---

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ANNEX TO THE EUROPEAN SEARCH REPORT **ON EUROPEAN PATENT APPLICATION NO.**

EP 05 47 2003

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

18-09-2007

	Publication date	Patent family member(s)	Publication date
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82