



(11) Publication number : **0 522 831 A3**

(12) **EUROPEAN PATENT APPLICATION**

(21) Application number : **92306240.0**

(51) Int. Cl.<sup>5</sup> : **F41A 9/16, F41A 9/21, F41A 9/43**

(22) Date of filing : **07.07.92**

(30) Priority : **12.07.91 US 731164**  
**10.01.92 US 819546**

(43) Date of publication of application :  
**13.01.93 Bulletin 93/02**

(84) Designated Contracting States :  
**CH DE FR GB LI SE**

(88) Date of deferred publication of search report :  
**12.05.93 Bulletin 93/19**

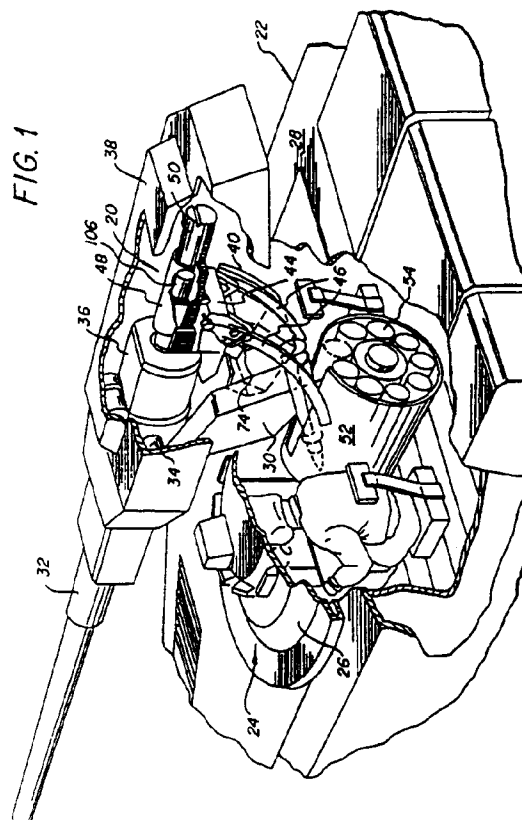
(71) Applicant : **GENERAL ELECTRIC COMPANY**  
**1 River Road**  
**Schenectady, NY 12345 (US)**

(72) Inventor : **Lawrence, Keith Edward**  
**1124 West Teton Drive**  
**Peoria, Illinois 61614 (US)**  
Inventor : **Behrens, Edward Harold**  
**87 Lanesboro Road**  
**Cheshire Massachusetts 01225 (US)**  
Inventor : **Sullivan, Mary Beth**  
**938 Buckwater Road**  
**Lititz, Pennsylvania 17543 (US)**  
Inventor : **Vanderwerken, James Michael**  
**RR1 Box 5B**  
**Schoharie, New York 12157 (US)**  
Inventor : **Chiabrandy, Robert Ernest**  
**71 Cross Parkway**  
**Burlington, Vermont 05401 (US)**

(74) Representative : **Pratt, Richard Wilson et al**  
**London Patent Operation G.E. Technical**  
**Services Co. Inc. Essex House 12/13 Essex**  
**Street**  
**London WC2R 3AA (GB)**

(54) **Autoloading apparatus for tank cannon.**

(57) An autoloader, capable of loading regardless of gun elevation, includes arcuate guide tracks, mounted for movement in azimuth with the gun and having a radius of curvature centered on the gun elevation axis, which serve to mount a trolley for guided movement between a lower magazine position and an upper gun loading position. A compact rammer, mounted by the trolley, extracts a shell from a magazine while in the trolley magazine position and controls the shell during transfer to the trolley gun loading position where the shell is rammed into the gun breech. In one disclosed embodiment, the guide tracks are mounted to a weapon pod of an exterior, turret mounted gun for movement in azimuth and elevation with the gun. In an alternative embodiment, the guide tracks are fixedly mounted in vertical orientation between the turret roof and the turret floor, and the rammer is pivotally mounted to the trolley to access shells from magazines variously located in the turret, the tank hull and the turret bustle.





European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number

EP 92 30 6240

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 5)
X	FR-A- 396 355 (VICKERS) * Page 2, lines 29-63; figure 1 *	1	F 41 A 9/16 F 41 A 9/21 F 41 A 9/43
A	US-A-3 106 866 (KLAPDOHR) * Column 3, lines 25-35; figures *	1,2	
A	FR-A- 409 872 (VICKERS) * Figure 2 *	1	
A	EP-A-0 256 250 (KUKA) * Abstract; claims; figures 3-6 *	1	
A	US-A-4 838 144 (BIERWIRTH) * Abstract; column 3, line 25 - column 4, line 38; figures 1,2 *	1	
A	DE-C- 308 515 (SKODAWERKE) * Claims; figures 1,4,11 *	1	
A	FR-A-1 508 694 (RHEINMETALL) * Page 2, right-hand column, lines 53-59; figure 5 *	1,3	
A	DE-C- 206 290 (KRUPP) * Figure 1 *	4	
A	DE-C- 173 815 (HEYDKAMP) * Figure 1 *	4	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 18-02-1993	Examiner RODOLAUSSE P E C
<p><b>CATEGORY OF CITED DOCUMENTS</b></p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ..... &amp; : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03.82 (P0401)