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54 **Training ammunition projectile.**

57 An axisymmetrical projectile having a specified design launch condition includes an axisymmetrical cavity 12 substantially filled with liquid, the cavity dimensions and liquid characteristics being so tuned that a main natural frequency of the liquid within the cavity approaches a nutation frequency of the projectile to cause resonance after a predetermined duration of flight following a design launch. The resonance increases the nutation amplitude causing a rapid rise in drag which quickly halts the projectile's flight.

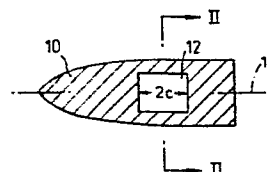


Fig. 1.



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EUROPEAN SEARCH REPORT

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EP 82 30 1433

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. 3)
A	US-A-4 241 660 (DONOVAN) * Figures; abstract; claims 1,3; column 4, lines 54-56, 60-63; column 7, lines 47-49 *	1	F 42 B 13/20 F 42 B 13/32 F 42 B 11/02
A	DE-C- 734 429 (PANTOFLICEK) * Figure 1; page 1, lines 1-16; claims 1,6 *		
A	US-A-4 116 404 (HOWELL)		
A	JOURNAL OF SPACECRAFT & ROCKETS, vol. 15, no. 6, November/December 1978, pages 348-354, C.W. KITCHENS Jr. et al.: "Spin decay of liquid-filled projectiles"		TECHNICAL FIELDS SEARCHED (Int. Cl. 3)
A	AIAA JOURNAL, vol. 16, no. 1, 1978, pages 8-11 W.G. SOPER: "Projectile instabil- ity produced by internal friction"		F 42 B
A	RHEINMETALL WAFFENTECHNISCHES TASCHENBUCH, 3rd edition, 1977, Düsseldorf, DE. * Paragraph 3.2.3.1, pages 159-160 *		
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 27-03-1983	Examiner FISCHER G.H.
<p>CATEGORY OF CITED DOCUMENTS</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 & : member of the same patent family, corresponding document</p>			