

200000729-4



PCT

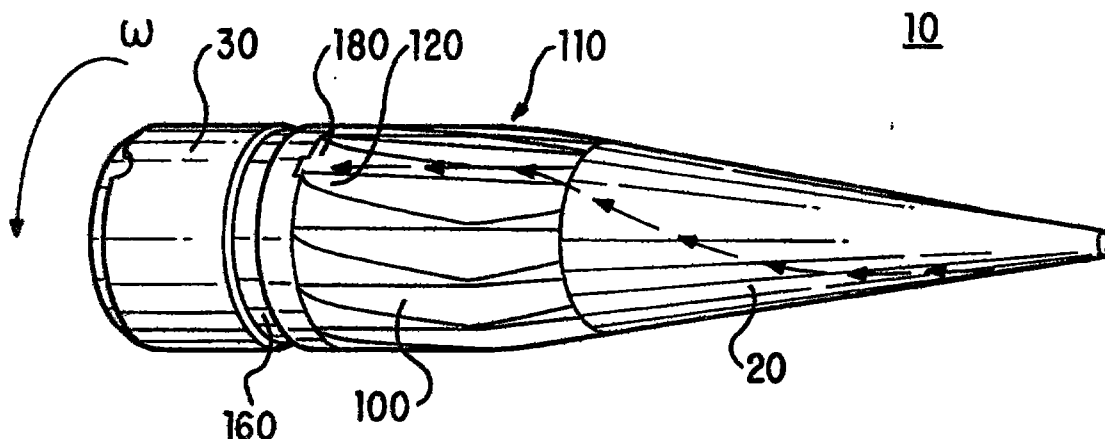
WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

IPOS

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : F42B	A2	(11) International Publication Number: WO 99/13287 (43) International Publication Date: 18 March 1999 (18.03.99)
(21) International Application Number: PCT/US98/17514 ✓ (22) International Filing Date: 24 August 1998 (24.08.98) ✓ (30) Priority Data: ① 08/926,153 ✓ 9 September 1997 (09.09.97) ✓ US ✓ ② (71) Applicant: PRIMEX TECHNOLOGIES, INC. [US/US]; 10101 9th Street North, St. Petersburg, FL 33716-3807 (US). ✓ (72) Inventor: ① WHITE, Charles, O.; 2857 Alta Vista Drive, Newport Beach, CA 92660 (US). ✓ (74) Agents: ROSENBLATT, Gregory, S. et al.; Wiggin & Dana, One Century Tower, New Haven, CT 06508-1832 (US).	(81) Designated States: AU, BR, CA, CN, IL, JP, KR, NO, RU, SG, TR, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published Without international search report and to be republished upon receipt of that report. 1 PD 1 appl ⁿ (Vg Virginia) 1 Inv. IPC: F42B 10/48 IPR 1/4/99	

(54) Title: RANGE LIMITED PROJECTILE ✓



(57) Abstract

A training projectile (10) that utilizes flutes (120) or flats (220) to augment roll damping characteristics and thereby cause the projectile to crossover into a gyroscopically unstable trajectory pattern at a predetermined time. Prior to the crossover, the training projectile maintains a gyroscopically stable trajectory, while enables extrapolation to ascertain the trajectory of a non-training projectile that does not have an augmented roll damping section (100). The unstable trajectory pattern substantially reduces the distance the training projectile (10) can traverse, thereby reducing the amount of area required for a training range.