

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
5 October 2006 (05.10.2006)

PCT

(10) International Publication Number
WO 2006/104511 A3

(51) International Patent Classification:
G01S 5/22 (2006.01) **F41J 5/06** (2006.01)

(21) International Application Number:
PCT/US2005/028680

(22) International Filing Date: 11 August 2005 (11.08.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/925,414 24 August 2004 (24.08.2004) US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

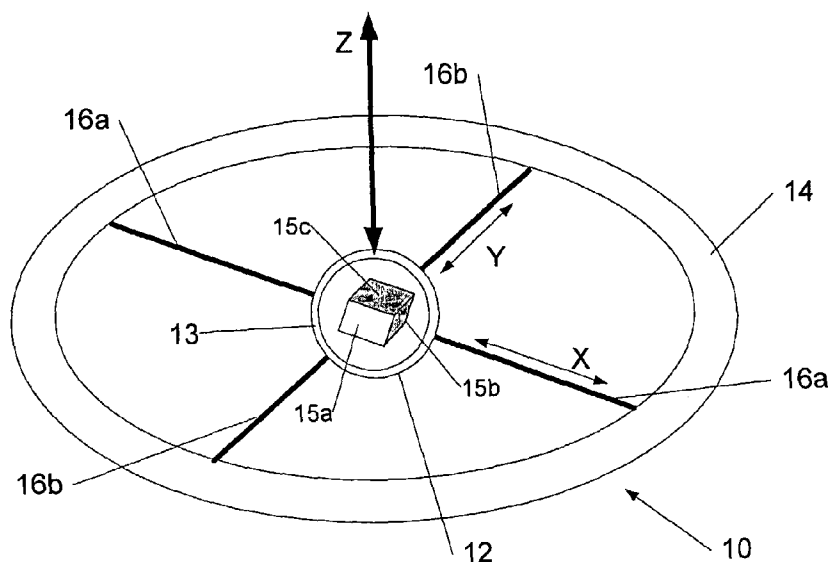
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

[Continued on next page]

(54) Title: COMPACT SHOOTER LOCALIZATION SYSTEM AND METHOD



(57) Abstract: Systems and methods for locating the shooter of supersonic projectiles are described. Muzzle blast signals are neither sought nor required. The system uses at least two sensors, with each sensor having a 3-axis accelerometer. The sensors are spaced apart at least 1 meter and have each a diameter of about one centimeter. The three accelerometer signals of each sensor represent pressure gradients and are processed to find the shockwave arrival angle unit vector, the shockwave arrival time instant and peak pressure. Noise signals seldom cause false detections with this sensing method because the sensors have maximum sensitivity at the high frequency characteristics of shockwaves, while their sensitivity to the low frequency characteristics of ambient noise is relatively low.

WO 2006/104511 A3



(88) Date of publication of the international search report:

23 November 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.