

Title (en)

Gun with means for verifying the boreline direction.

Title (de)

Geschütz mit Vorrichtungen zum Überwachen der Rohrrichtung.

Title (fr)

Canon avec moyens de contrôle de la direction du tube.

Publication

EP 0092324 A2 19831026 (EN)

Application

EP 83301710 A 19830328

Priority

GB 8211194 A 19820417

Abstract (en)

The direction of travel of a shell fired by a gun such as a battle tank depends on the boreline direction of the barrel in the region of the muzzle, and even very small boreline errors can give rise to significant aiming errors at long range. Errors in the boreline direction can often exist in guns having relatively long barrels, as mechanical backlash and slackness in the mounting arrangement, and curvature of the barrel due to thermal stress can shift the position of the muzzle slightly from its true position. A solid state optical sensor having a two dimensional image surface is arranged to view the muzzle via the sight (periscope) mirror associated with the optical aiming sight of the gun. The optical sensor is positioned closely adjacent to the optical aiming sight so as to enable all position errors between the aiming sight and the muzzle to be removed. The optical sensor is scanned in a television like raster pattern, and window signals are inserted into selected line scans so that the actual position of the muzzle can be very precisely compared with its required position. Any departures from the required position are compensated by feeding correction signals into the optical aiming sight to shift the gunner's aiming mark accordingly.

IPC 1-7

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IPC 8 full level

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CPC (source: EP)

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Cited by

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