

Title (en)

Pointing device inertial isolation and alignment mounting system

Title (de)

Trägheitsisolierung für Zeigevorrichtung und Ausrichtungsmontagesystem

Title (fr)

Système d'isolation inertielle et de montage d'alignement d'un dispositif de pointage

Publication

EP 1847795 A2 20071024 (EN)

Application

EP 07106475 A 20070419

Priority

- US 67473907 A 20070214
- US 79316906 P 20060419

Abstract (en)

An inertial isolation and alignment system (100) for a sensitive component or apparatus affixed to a mortar barrel (120) comprising a barrel clamp assembly (200) which supports two parallel bearing rail followers (210) and pointing device cage assembly (300) which supports two parallel linear bearing rails (340). The bearing rail followers (210) and linear bearing rails (340) form a sample sliding contact linear motion bearing system. The bearing rail followers (210) on the barrel clamp assembly (200) allow the cage assembly (300) to slide freely along the length of the linear bearing rails (340). During firing, the travel vector is decoupled from the cage assembly (300) by the bearing rail followers (210) as they move with the barrel (120) along the linear bearing rails (340) leaving the cage assembly (300) suspended in inertial space. The cage assembly (300) then accelerates under the force of gravity over the distance of the displaced travel of the bearing rail followers (210) back to its rest position landing on dampers (360), each fastened to the front end of a linear bearing rail (340).

IPC 8 full level

F41G 11/00 (2006.01); **F41F 1/06** (2006.01)

CPC (source: EP US)

F41F 1/06 (2013.01 - EP US); **F41G 11/002** (2013.01 - EP US); **F41G 11/004** (2013.01 - EP US)

Citation (applicant)

- US 4336917 A 19820629 - PHILLIPS EDWARD H
- US 6814179 B2 20041109 - CORRIGAN MICHAEL A [US], et al

Cited by

EP2146176A3; EP3217140A4; US10222214B2; WO2012027873A1; US9217621B2

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Designated extension state (EPC)

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