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ABSTRACT**RECOIL MITIGATION MECHANISM**

10 A recoil mitigation mechanism including a first mass adapted to be moved in a first direction as a result of a firing action, and a second mass adapted to be moved in a second direction as a result of the firing action; and wherein the first mass is caused to contact the second mass and to change its movement to the first direction to thereby mitigate a recoil impulse generated by the firing action. The first mass is a front bolt and the first direction is rearwards; and the second mass is a bolt gear rack and the second
15 direction is forwards. The bolt gear rack includes a housing, the housing being that part of the bolt gear rack adapted to be contacted by the first mass.

Figure 1