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(54) Door closer

(57) An apparatus (10) is described for controlling angular movement of a door (11), the apparatus (10) including a housing (17) and a piston (20), having a longitudinal axis (22), slidable in a cylinder (18) in the housing (17). The piston (20) has a transverse opening (24) therethrough, with an inwardly facing wall (26) of the opening (24) provided with a rack gear (28) having a plurality of teeth (29) which are substantially transverse to the longitudinal axis (22) of the piston (20). The apparatus (10) also includes a pinion gear (30) supported for rotation about its longitudinal axis (34) by the housing (17) and extending through the transverse opening (24) in the piston (20), the pinion gear (30) having a plurality of teeth (32) which engage with the teeth (29) of the rack gear (28), such that rotation of the pinion gear (30) about its longitudinal axis (34) effects sliding movement of the piston (20) through the cylinder (18). A top land of each tooth (32) of the pinion gear (30) has two portions (53, 54) each of which extends towards the longitudinal axis (34) of the pinion gear (30) at a homogenous gradient as it extends away from the other side portion (53, 54). Alternatively, the top land of each tooth (32) of the pinion gear (30) has a substantially central portion (52), which is substantially parallel to the longitudinal axis (34) of the pinion gear (30), and is provided between the two side portions (53, 54).

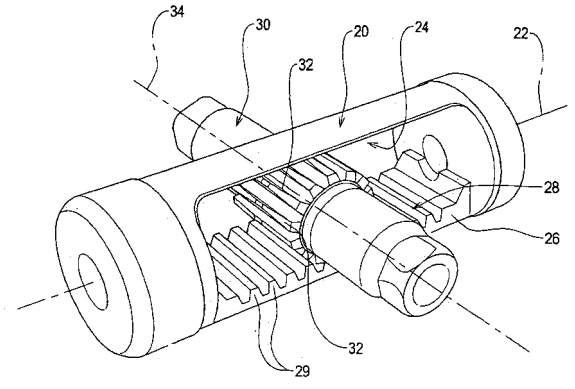


FIG. 5

EP 1 734 213 A3

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EUROPEAN SEARCH REPORT

Application Number
EP 06 01 2560

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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TECHNICAL FIELDS SEARCHED (IPC)

E05F

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	25 October 2007	Balice, Marco

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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25-10-2007

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