DRIVE MECHANISMS FOR DRUG DELIVERY PUMPS

ABSTRACT

A drive mechanism for use with a drug container in a drug pump, the drug container having a barrel and a plunger seal, including a tether, an electrical actuator and a gear interface. Rotation of the gear interface is controlled by the actuator. A gear assembly rotationally engages with the gear interface. The gear assembly includes a main gear and a regulating mechanism. Release of the tether is metered by the gear assembly through the regulating mechanism. A piston is connected to the tether and is disposed in the barrel and configured to translate axially within the container. A biasing member is disposed at least partially within the barreland is retained in an energized state between the piston and drive housing, wherein the release of the tether controls the free expansion of the biasing member from its energized state and the axial translation of the piston.

Fig. 1A