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(54) Title: CONTROL MOMENT GYROSCOPE MODULE FOR SATELLITES

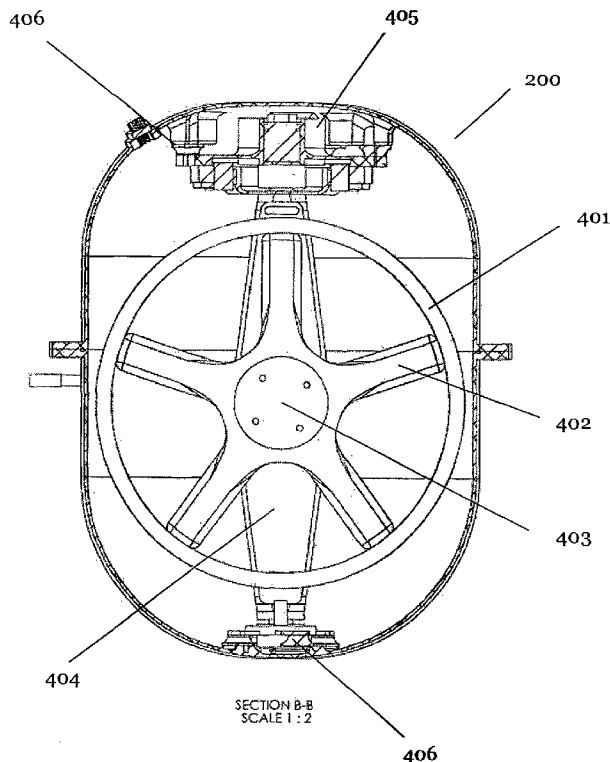


Figure 4

(57) Abstract: A control moment gyroscope (CMG) module for use in a satellite comprising a CMG, the CMG comprising a flywheel assembly mounted on a gimbal assembly, the flywheel assembly comprising a flywheel rim, a flywheel spokes member and a flywheel shaft, the flywheel rim circumscribing the flywheel shaft, and the flywheel spokes member extending between the flywheel shaft and the flywheel rim. The gimbal assembly comprises at least one gimbal and a spin motor, the spin motor for rotating the flywheel assembly about a first axis. The CMG further comprises a torque shaft and a torque motor for rotating the at least one gimbal about a second axis. The CMG module further comprises a hermetic first shell housing; and a hermetic second shell housing; wherein the second shell housing is joined to the first shell housing by a hermetic seal to form an airtight interior of the CMG module, the interior of the CMG module containing the CMG.

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