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(54) Title: FLIGHT SIMULATION SYSTEMS AND METHODS

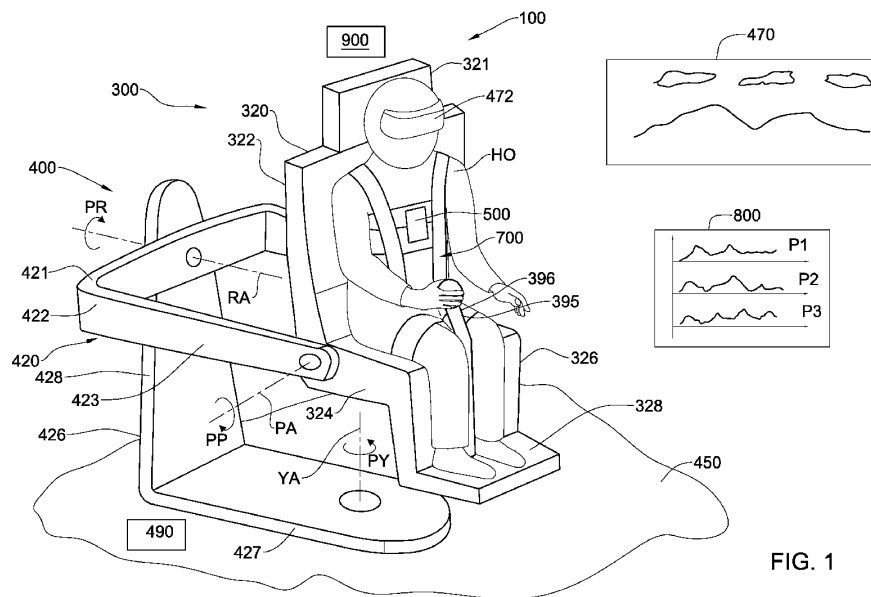


FIG. 1

(57) **Abstract:** A flight simulation system for enabling g-force training includes a seating system, a sensor arrangement, and a controller. The seating system is configured for accommodating a human occupant and for providing thereto physically simulated flight conditions corresponding to predetermined real flight conditions, the predetermined real flight conditions including g-forces, wherein the physically simulated flight conditions include application of non-g forces to the human occupant corresponding to the g-forces, and wherein the g-forces are considered sufficient to provide g-force induced physiological stress to the human occupant. The sensor arrangement is configured for providing real-time feedback data of predetermined physiological parameters of the human occupant, in operation of the flight simulation system with the human occupant accommodated in the seating system, wherein the predetermined physiological parameters are indicative of the g-force induced physiological stress. The controller is configured for controlling the seating system to

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provide the physically simulated flight conditions.