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Description of Invention



G00001

Levitation and Propulsion Unit

– In short – **LPU**

(0002) The Levitation and Propulsion Unit (LPU) defies the pull effect of gravity through the transformation of centrifugal force from spinning wheel into internal upward thrust, without interaction with its external environment. Through the systematic regulation of pulsating force exerting on each spinning flywheel connected to the top of a spinning main wheel, and reinforce by the compression and expansion of magnetic repulsive force. Synchronise with the systematic regulation of spin rate of each main wheel. Transforms the centrifugal force generated by the main wheel into internal upward thrust due to the design of this invention. The systematic rapid succession of thrust counteract the pull effect of gravity, result in levitation; and by angulations of LPU propel the whole unit and its application.

(0003) Therefore, with no need to interact with its environment, this invention can replace or compliment the propeller, wheel, jet engine, solid fuel, etc, in the area of transportation and use in space travel.

(0004) The following attached drawings support the description and claims, and are part of this submission.

FIG-1 Sectional view of a simplified layout of a Wheel Module.

FIG-2 Plan layout of sliding angular coupling on top of main wheel.

FIG-3 End view of a simplified sliding angular coupling.

Basic Operating System

(0005) The design of this LPU invention defies the pull effect of gravity. It makes use of spinning wheel to create centrifugal force and transform the force to upward thrust to lift the dead and live weight. A minimum of two wheel modules make up a LPU. The second module is primarily to systematically counteract or balance the torque created by the first main wheel.

(0006) In each wheel module, the system operates by exerting a downward force from the strike panel by energising the electromagnets to create magnetic repulsive force on the transfer panel. It in turn transfers the exerted force to the flywheel. The sliding angular couplings that connect the underside of the flywheel to the top side of each main wheel then carry the exerted force to the main wheel. Before the main wheel spin, the point of exerted force transfer is at the lower end of the sliding angular coupling, closer to the axis of spin.

(0007) Once the main wheel starts to spin it generates centrifugal force. The strength of the centrifugal force depends on the spin rate and the exerted force on the sliding angular couplings. This centrifugal force pushes the point of exerted

force further away from the axis of spin and up the slide, as the spin rate increases. This exerts an upward thrust and pushes the flywheel upward further compressing the magnetic repulsive forces between the flywheel and transfer panel, which in turn pushes the transfer panel against the strike panel. This further compresses the magnetic repulsive force between these two panels. The further compression of repulsive force, create a build-up of potential energy between flywheel, transfer panel and strike panel.

(0008) Through the change in polarity in the electromagnets, the exerted repulsive force changes to attraction force. This releases the potential energy and converts it to upward thrust. The systematic and cyclical change of polarity energizing the electromagnets that pushes down the transfer panel and flywheel in one phase of the cycle. Attract the transfer panel in the next phase of the cycle. This reinforces the upward thrust created by the centrifugal force, and thrusts the unit altogether. The rapid repetition of cycle and systematic control of spin rate in each wheel module will result in levitation; and by angulations, propel the LPU and its load.

(0009) Alternatively, the system can operates with the main wheel spinning, generating centrifugal force before energising the electromagnets to create the exerted force.

Composition of Invention

(0010) The Levitation and Propulsion Unit (LPU) comprises mainly of a minimum of two numbers variable speed spinning main wheels, each spinning in opposing direction, with vertical pulsating spinning flywheel connected at top of each main wheel with sliding angular couplings. It also includes a series of variable frequency electromagnets to exert a vertical pulsating effect on each spinning flywheel.

(0011) The main components in each wheel module, herein named as, are a main wheel, sliding angular couplings, flywheel, transfer-panel, strike panel with electromagnets and its wheel module housing, see fig-1. Each LPU has an on-board control module.

(0012) Within each wheel module housing, a central fixed shaft spans vertically from the bottom panel of the module housing to the top panel. The main function of this shaft besides providing structural stability, serves to pivot the main wheel and flywheel, serve as the centre guide for the transfer panel, and is the axis of each module. The core of this shaft can be hollow to serve as conduit for utilities.

(0013) The main wheel can be of material suitable to meet the LPU usage requirement. Similarly, the size, construction and configuration of the main wheel can vary to meet the spin rate of the wheel, the torque generator requirement, usage requirement, etc. The torque generation on the wheel can be by electromagnet or by pneumatic means, internal combustion system, or any suitable torque generation method to meet usage requirement. The main function of this main wheel is to generate centrifugal force through spinning.

(0014) On top of each main wheel are the sliding angular couplings arranged in radial pattern with the higher side in line with the circumference of the main wheel and the low end directed toward the axis of the wheel, see fig-2. At each coupling, the sliding devices can be of any appropriate low friction linear slide or other type of similar devices with end stopper to prevent overrun, see fig-3. One slide is mainly angled 45 degree on the top side of the main wheel, away from the axis of the main wheel. The length of each slide and the angulations will depend on the LPU usage requirement. The configuration and number of this sliding angular coupling similarly depend on the main wheel size, its configuration and the LPU usage requirement. The main function of this sliding angular coupling is to transfer the exerted force to the main wheel and transform the centrifugal force to upward force.

(0015) Sliding angular couplings connect the flywheel to the main wheel. The flywheel comprises mainly of a circular construction with top side lined with permanent magnets, ring magnets or electromagnets to repel the magnetic flux from the transfer panel magnets. The size and configuration of the flywheel, and the number and arrangement of magnets lined on the top side will depend on the LPU usage requirement. The flywheel spins together with the main wheel and slide accordingly on the centre shaft. The main function of the flywheel is to transfer the exerted force to the sliding angular couplings and transfer the upward force from the couplings to the transfer panel.

(0016) The transfer panel is a non-spin panel that slide along the central shaft and side shafts. The transfer panel comprises mainly of a rigid panel with cover plate on both sides to hold permanent magnets, ring magnets or electromagnets lined on both sides. On the top side of the transfer panel are impact elements to thrust the strike panel. The transfer panel size, configuration and magnets arrangement depend on the flywheel and strike panel. The main function is to transfer the exerted force to the flywheel and deliver the upward thrust on the strike panel.

(0017) The strike panel connected to each module housing structure comprises mainly of a rigid panel with openings to hold the series of electromagnets and impact elements to receive the impact. Its size, configuration and arrangement of electromagnets will depend on the LPU usage requirement. The main function is to repel or attract the transfer panel and to lift the module.

(0018) The wheel module housing can be an open or close structure depending on usage requirement. It must be adequate to contain the components and withstand the forces generated within. Bracing and mounting plates integrate each wheel module to make up the whole LPU; and secure the LPU to its load.

(0019) The control module synchronises and regulates the electromagnets and the spin rate of the main wheel. It comprises mainly of electronic circuits, weight sensors, and other sensors complete with circuit to integrate additional LPU and external control.

(0020) The usage requirement and size of the LPU will mainly determine the material and construction of each component, beside its functional requirement. Similarly, the size and the use of permanent magnets, ring magnets or electromagnets in components need to meet the usage requirement and size of the LPU, as well.

Usage of Invention

(0021) Levitation and Propulsion Unit allows variation in application. Its main design function is levitation and propulsion. By mounting it horizontally with the module axis vertical, it functions as a levitation unit. By varying the angle of the module axis and accordingly increasing the spin rate, it functions as a propulsion unit.

(0022) Installation of Levitating and Propulsion Unit (LPU) can be singular or multiple unit, enlarge or reduce in size to meet the load, integration or usage requirement. Its usage is mainly in transportation, to allow three-dimensional movement, or use to reduce load weight together with other transportation systems; and in the area of space travel.

Levitating and Propulsion Unit

– In short – **LPU**

Claims

1. The Levitation and Propulsion Unit (LPU) as per its description and drawings, which defies the pull effect of gravity through the transformation of centrifugal force from spinning wheel into internal upward thrust, without interaction with its external environment. Through the transformation of centrifugal force generated by spinning wheel, and by exerting pulsating force parallel to the axis of spin, and reinforce by the compression and expansion of magnetic repulsive force, to create the internal upward thrust parallel to the axis of spin to counteract the pull effect of gravity.
2. A device, its components and its function, and its operating system that counteract the pull effect of gravity. Through the transformation of centrifugal force generated by spinning wheel, arms, etc, and by exerting pulsating force parallel to the axis of spin, and with or without reinforcement through the compression and expansion of magnetic repulsive force, gases, etc. to create the internal upward thrust parallel to the axis of spin to counteract the pull effect of gravity.
3. The function and functional layout of each main component use in claim-1 including indication on figure-1. In which, in each wheel module, the arrangement of main components herein named as, is in the following order. From the bottom up: main wheel, sliding angular couplings, flywheel, transfer panel and strike panel.
4. The various configuration, design and its function of each sliding angular coupling including the various angulations, means of angulations of the coupling, and the various form of sliding devices, to transform the centrifugal force to vertical force use in claim-1, or claim-2.
5. The radial arrangement of sliding angular couplings connecting the main wheel and flywheel in each wheel module use in claim-1, or claim-2.
6. The flywheel, its function, its various configuration and composition use in claim-1, or claim-2.
7. The transfer panel, its function, its various configuration and composition use in claim-1, or claim-2.
8. The strike panel, its function, its various configuration and composition use in claim-1, or claim-2.
9. The wheel module housing, its function, its various configuration and composition use in claim-1, or claim-2.

10. The system and electronic circuits in the control module complete with other monitoring and sub-control system use in claim-1 and claim-2, to levitate and propel the LPU and its load.
11. The Levitation and Propulsion Unit's design, layout, and its integration to application to meet usage requirement.

===== End of Claim =====