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Closed Complex Inertial Systems

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Abstract: Closed system inertial devices are the devices that can produce a one directional force that would propel any given mass relative to it and hence forth would not follow the fundamental laws of Physics. It does not produce equal and opposite reaction as it uses specific arrangement of weights that can move within the device hence forth capable of moving the body without giving an equal and opposite reaction to move the body. The best way of proving such a device is to conduct an experiment in space or in mid-air so as to have least frictional resistance and no physical contact to other solid particles as of such.

Keywords: closed system, inertia, laws of physics

I. INTRODUCTION

Closed system means a system of engine or any physical quantity of a particular device having its propulsion medium isolated from the immediate surrounding. The body/vehicle has a special kind of device that uses peculiar type of accelerator which would use electricity for the engine hence forth has no such emission that is expelled outside the system. The system having no emission as such produces no equal and opposite reactional forces as well hence forth doesn't follow the Newtons 3rd law of motion. For example, a rocket that goes in the space releases gasses from behind that burn up to propel the space ship forward hence following the laws of physics, but in this closed system inertial devices a smaller weighing mass is accelerated using electromagnetic accelerators in the direction where the object is supposed to go, hence after acceleration it gains some momentum over time inside the accelerator. The above given link is a shortened and detailed version of the so called reaction less propulsion type of engines/devices. The momentum of that smaller weighing mass, is transferred to the entire body/vehicle that propels it forward without the need of expelling anything in opposite direction, therefore not following the Newtons 3rd law of motion and produces no wastage and no loss of fuel as compared to conventional space ships in use today. Thus, it is called as closed system inertial propulsion. The system itself is considered under the domain of anti-gravity engines/technology that defies the very fundamental



Fig 1: coilgun

laws of physics that states every action has an equal and opposite reactional force. Such hypothetical types of propulsion methods require lots of research and calculation based on the very existence of theory-based understanding about the fundamentals of the physics. As a great scientist Nikola Tesla quoted: "The day science begins to study non-physical phenomena, it will make more progress in 10 years than in all the previous centuries of its existence."



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II. TYPES

There are many types of such devices that work on the same principle of conversion of momentum that basically uses a small weighing object/projectile that is accelerated at high speed and its momentum is transferred to the entire body hence forth accelerating without giving any reactional force in opposite direction. It can be classified into two basic categories 1st a step by step acceleration and 2nd is burst acceleration. According to studies NASA has already conducted an experiment in the year 1999 -2000 that is named as EM-drive which supposedly uses microwave photons as a smaller weighing particle that travels at the speed of light, being low mass, it still attains inertia in it as it travels at the speed of light approximately $2.99 * 10^8$ meter per seconds hence has a high momentum.

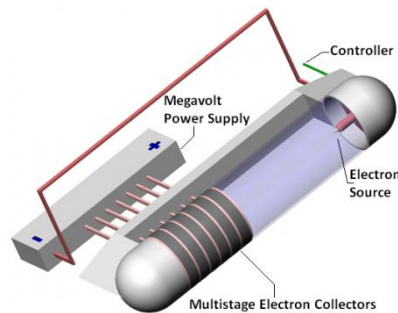


Fig 2: electron gun

Having multiple photons with such high momentum can lift up a heavy weighing mass and hence would have a one directional force without a reaction force that would not follow the Newtons 3rd law that states “every actin has an equal and opposite reaction”. No further updates were published as the first one was said to be a failure.



Fig 3: NASA EMdrive

Having said about NASA’s progress the so-called EM-drive has not yet been successful and further progress are going on. There are other ways as well with which it is possible to achieve the same principle working and proving the fundamental law of physics can be defied. Some of them are already been made and some are added ideas of my own. Considering few type, here are some experiments conducted till now that have been conducted and/or will be conducted soon in the coming future.

A. ELECTROMAGNETIC COILS

This is a type where an electromagnetic accelerator is used inside the device to accelerate a given vehicle without emitting anything outside and hence be a closed system propulsion device. This type is an own idea and has taken a year of research-based studies and calculations accordingly. As shown below is an image of my device that was built as a mini project for my college. It uses an electromagnetic coil gun or also known as accelerator that accelerates a projectile with a mass (m), hence gaining momentum along the way to its end and the entire momentum is transferred to the vehicle with a mass(M) moving it forward without giving a reactional force, defying the 3rd law of Newton.



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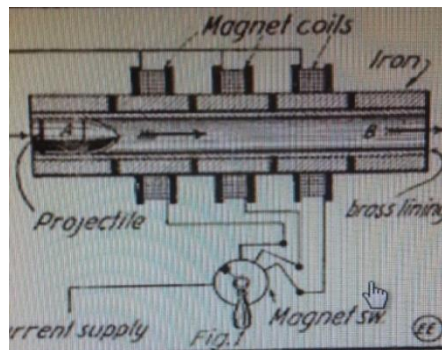


Fig 4: coil gun circuit

Equations:

Momentum is given as $p=mv$ where m is mass of the projectile and v is the velocity gained by it at the end of the accelerator.

This momentum gained by the projectile is transferred to the entire body, accelerating it at

$$P = \frac{M}{V_m - G} \quad (1)$$

G : Considering error function or the losses in acceleration due to heavy weight.

Depending on the calculations based on momentum of particles this vehicle would be most efficient in space, or in no friction at all. To replicate no friction in this experiment a helium balloon is used to levitate the vehicle in mid-air to only have air resistance and no physical contact to any other solid object. The above given equation states that the smaller weight mass can be accelerated to high velocity which in turn does follow Newton's 3rd law but then the reactional force is absorbed by the bigger mass (M) which does not move as it weighs a lot more than the smaller one. Along the way then the projectile gains momentum that is in turn transferred to the vehicle/device.

This force conversion is so strong that it moves the entire vehicle/device in that given direction. The overall device only has an acceleration in that particular direction with no such noticeable equal and opposite reactionary force. Hence this device is to be called as reactionless propulsion, or closed system propulsion system. This type is a step by step acceleration.

The under given circuit diagram designed for the purpose of accelerating a projectile/magnet uses a capacitor bank of 25 volts 4700uf each connected in 2p2s or in easy words 2 parallel 2 series pattern, coupled with relays controlled by Arduino for precise timing for triggering the accelerator coils. Use of relay proved the circuit needs even faster switching speed and would rather require a Mosfet or IGBT for fast switching as well to pass high power through each transistor.

CIRCUIT DIAGRAM

Practically building the circuit did notify that the circuit needed something even better and fast switching and high power delivering devices such as Mosfets and IGBT rather than relay.

Observation: The projectile (magnet in this case) was accelerated inside the tube as intended but for individual coils, individually. Means the projectile stopped after being attracted towards the first coil then after a pause of 1/2 second the second coil attracted the magnet and the same pause led to a complete failure of the project because of the switching speed of relays.



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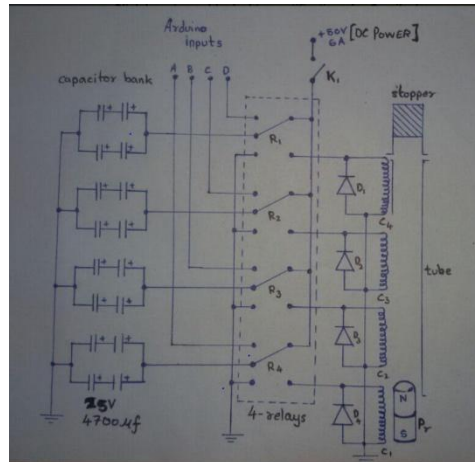


Fig 5: circuit diagram for coil gun



Fig 6: constructed circuit

The circuit was built according to the circuit diagram as given above. A relay module was used for efficient working with Arduino chip for triggering pulse and etc working.

B. PARTICLE ACCELERATOR

This type has the exactly same concept as earlier once but in a slightly different manner it uses high voltage that can accelerate an electron to the speed of light. This high momentum of a given electron inside a closed system engine is then transferred to the device/vehicle to propel it forward without having to give any sort of reactional forces. As using electrons, one single electron would not be enough to produce enough force to propel the vehicle, hence a source that releases a lot of electrons at a time is required to do the work and having enough quantity of electrons in a system the system could have enough force generating capacity to move it without giving any as such noticeable reactional force.

A cyclotron would be the best option for the use of acceleration of electrons. The latest EM drive from NASA is identical to this version of engine as it uses photons instead of electrons as the particle. NASA, as per their claims have called it as an impossible drive for a reason that it would defy the law of fundamental physics or namely the 3rd law of Newton. As per the theory suggests the drive could be possible depending on the surrounding or the medium the so-called vehicle/device is in. The thrust being minimal from the latest prototype build by NASA, the so-called EM drive might have a noticeable thrust in the vacuum of space, but for now it only stays as a theory.



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Fig 7: EM drive

C. GYROSCOPIC ACCELERATOR

Another type of such inertial propulsion is the gyroscopic acceleration system where a high-speed spinning gyroscope or flywheel is used as an engine to push forward a given device/vehicle accordingly. The high rpm flywheel stores enough rotational motion or inertia in it. The stored inertia in a rotating flywheel can be transferred to the so-called device/vehicle by applying brakes to it. The slowing down flywheel transfers its inertia into the brakes and is transferred to the device/vehicle accordingly. This method is already in use as a self-assembling cube but doesn't work as per the methods to defy the Newtons 3rd law of motion.

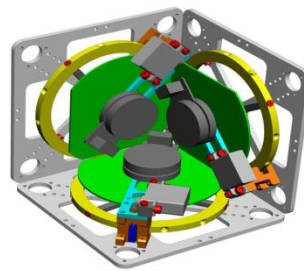


Fig 8: self balancing cube

The under given link represents the experiment of the so called gyroscopic accelerator experimented by a group of researchers'.

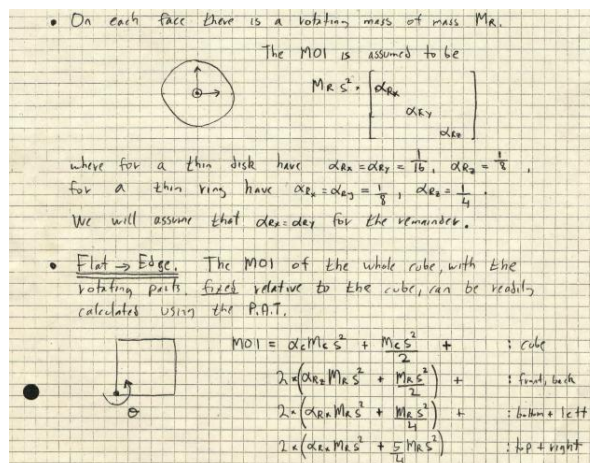


Fig 9: calculations for gyroscopic acceleration



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Another way of using gyroscopes for acceleration is using it in a way such as couple of planetary flywheels connected to a sun flywheel as shown in the diagram below would produce a one directional force according to the spin or the direction or rotation of the planetary flywheel.

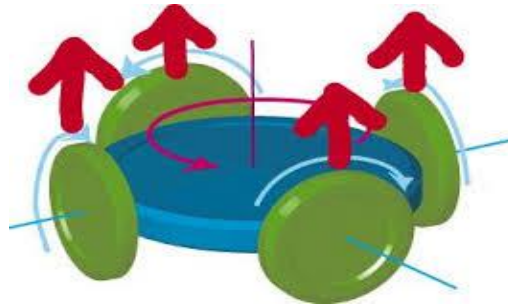


Fig: 10: Gyroscopic Propulsion

III. RESULTS

The above given type can be implemented via the use of appropriate materials. Personally, constructing a type of device as a college project has proven that such devices are really use full and hence have a lot of applications in aeronautics and space. Also, to suggest, these engines are completely emission less and there is no as such pollution caused by any of these devices as it completely electronics based. Personally, constructing the device lead to the conclusion that all laws are not necessarily followed, given the idea the device is well calculated and imagined for proper functioning. As the paper claims, that the Newtons 3rd law isn't followed by this device, seems like a scene out of the science fiction movie but a simple imagination of a device consisting of two different frames of references consisting two different weights each suspended in mid-air or in vacuum for minimal friction can lead to a successful delivery of a non-reactional one directional force as needed to surpass the laws of physics.

IV. APPLICATIONS

Application for these types of engine are almost countless as if it works it can have a wide range of sizes and can almost be used everywhere. To mention a few of such devices,

- Space ships can be propelled by these types of engines, the continuous acceleration in deep space can get the ship to extra ordinary speeds,
- This could make flying cars a reality, replacing wheels with antigravity engines,
- Humans could have flying suits based on this technology,
- A fall proof cell phone case that would use such propulsion methods to prevent damage to individual's device from falling down,
- Mobility of the propulsion device; i.e. the device having such engines would be mobile and safe to touch compared to helicopter blades u can't touch.



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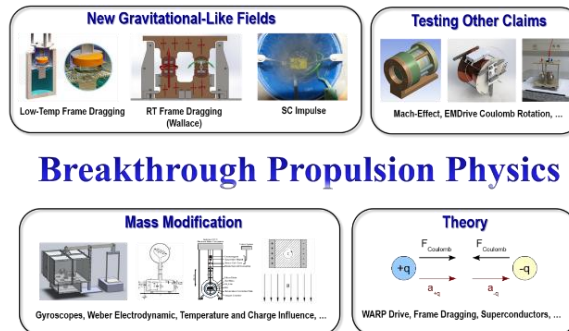
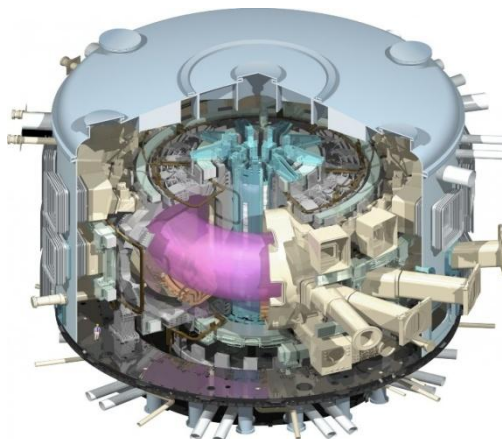


Fig 11: Applications

One major application for this type of engines are that it can be used for satellite re alignment, as this application suggests it is the best alternative for the conventional gas tank that releases gas for re alignment, this would be a complete electric way to produce small changes which would be limitless and the possibilities are endless.

V. POWER REQUIRMENTS

Considering such a device/vehicle that would be using such kind of engines/propulsion devices would also require a very sustainable and efficient power source so as to have it as a real phenomenon rather than just a theory. Such type of energy source can be a renewable source of energy or else a generator of the future that uses nuclear or some sort of reactional energy to meet the needs of the machine/vehicle. Such energy sources are as well under research and a theory-based technology for now but soon might be a reality of the future that could produce ample of amount of energy. Such generators take in low power as input and produces high power regardless of the input power and the same energy looped back into itself. This looping provides an infinite amount of input to the generator and the generator amplifies the power with some nuclear reactions producing even more power, also know as the over unity generator. Over-unity generators are the special kind of generator that requires some minimal amount of input to generate high output as per the requirements. It uses thermo nuclear plasma reactions to generate high power output. These reactions are highly focused on current amplification with a possibility of keep the high voltage as same as possible in order to increase the power output. This output is a result of high electron emission due to certain criteria's and environment, this certainly must be contained as it might end up blowing up in a form or radiating bomb producing X rays. A mixture of radiating energy and high voltage has its highest possibility of producing limitless amount of energy by unlocking the potential of physical elements. Many attempts are made for this certain energy generation by multiple countries. Yet no such successful results have been noticed or published by the either countries, but surely the progress is going on its right way, soon to see the appropriate results.





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Fig 12: Plasma reactor

VI. CONCLUSION

The use of such devices might feel like a scene out of a science fiction movie but, its existence is closer, not just in the future but present as well. The part where it states that the Newton's law is not being followed here sound a bit extraordinary but is really a simple thing that lets you avoid following the laws of physics. Many claims have been made in the past regarding such devices breaking the laws of physics but never have submitted a fully working model as of such. Hence forth I conclude that the 3rd law of Newton is not necessarily followed under every action and can have no equal and opposite reactionary force to propel anything forward conditions given that the device is in a frictionless medium and perfectly calculated to its working potential and built likewise.

It is our attempt to make such device on a college level and to challenge our technical and aspirational thinking to try and defy a natural law of physics. We can otherwise conclude that physics laws are also meant to be broken, sometimes.

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