Title of the Invention:

The safe and controlled release of neutron energy.

Abstract:

Neutrons are the source of all universal energy, and the fission generated in a star's core is the most efficient method for releasing it. It is how stars augment their planetary spin energy to create their intense heat and light.

The present invention relates to a theoretical method for the safe and controlled release of neutron energy for use in domestic, industrial and commercial applications, using fuel that is free to everyone, infinitely available throughout time and the universe, and the by-product of which is clean and safe.

Benefits:

1) Any and all matter contains neutrons. Therefore, any and all matter may be used as a fuel.
2) Because this invention does not require fuel of critical mass, its fuel mass size is unlimited.
3) Whilst this invention is a similar process to that which occurs naturally in a nuclear reactor, it is not dangerous and does not generate nuclear waste.
4) This invention can be used to convert high-proton elements to lower-proton elements; e.g. uranium to gold. Therefore, it can be used to recycle nuclear waste (to hydrogen and helium).
5) The by-product of this energy generation method is safe and clean.
6) The protons (alpha particles) released by this method can be used for '*zero-cost*' cancer treatment precluding the need for expensive cyclotrons.
7) The fuel can be any matter without exception; it can be household or garden waste, soil or rocks. It is therefore free of cost to everybody.
8) There is no more need for mining or drilling (oil).
9) It eliminates the need for today's expensive and inefficient energy generation methods; solar, wave and wind power; nuclear power-stations; fossil fuelled power stations, hydro-dam electricity generation, etc.
10) Because the fuel size is unlimited, every building in the world, no matter how large or small can have its own dedicated electricity generator that will cost nothing to fuel. This capability eliminates the need for electricity distribution systems; cables, transformers, pylons, trenching, etc. Moreover, suitable fuel-cells may be installed in vehicles.
11) There is sufficient neutron energy in one metre of the earth's crust to fuel the human race for 1E+14 years, so this invention will obviate the need for future alternative fuel sources. Therefore, mankind can continually improve the range and efficiency of this energy generation method knowing that its fuel source will never run-out.

FIG ①

The neutron energy in a beach pebble - FIG ① - contains 5.9E+12 Joules of neutron energy. It will fuel an average UK household for 75 years or a family saloon (vehicle) for 100 years.

By way of illustration, if iron were selected as the fuel, the activation energy for a single atom (9.82453E-13 Joules) will release up to 2.0444E-05 Joules of neutron-energy, making this energy generation method 2,080,913,794% efficient. And this neutron-energy release will continue whilst the activation energy is supplied to the fuel.

Cessation of this chain reaction will occur either when all the excess neutrons in the fuel have been ejected or when the input energy is switched off.

After initiation, the activation energy may be supplied from the energy generated by the chain reaction, making the process self-activating until the fuel is exhausted.

This process may continue until all of the fuel has been converted to hydrogen and helium gas.

Title of the Invention:

The release of neutron energy using lasers.

Abstract:

The present invention relates to a practical method for the safe and controlled release of neutron-energy using lasers.

Benefits:

See “The safe and controlled release of neutron energy.” above

Title of the Invention:

The impulse drive (ID).

Abstract:

The present invention relates to a universal means of propulsion using Isaac Newton's laws of orbital motion and action equals reaction, that will propel any mass (including a vehicle) under constant acceleration or constant velocity.

Benefits:

1) An ID is simple to operate - computer software will shift the angular position (between 0° and 360°), and magnitude (between 0° and 180°) of 'α'.
2) Each ID comprises only three major components; torus (tori), bullets and a set of identical magnetic rings, making design, manufacture and future development uniquely simple for a propulsion-system.
3) There are only two (or three) moving parts (two or three bullets) in an ID, minimising wear and consequential maintenance.
4) Because an ID has no operational inlet or exhaust requirements, it can be sealed and therefore isolated from the effects of external contaminants.
5) In zero-friction systems, there will be zero wear.
6) Zero-friction IDs will be silent.
7) Because temperature variation does not impair magnets operationally, an ID will be more versatile and reliable in hostile environments than existing propulsion systems, making it suitable for use in, for example; outer space; polar regions; deserts; etc.
8) IDs generate no exhausted waste matter.
9) IDs can be manufactured any size, making them suitable for personal (individual) transport, e.g.; in the form of a belt.
10) Given its ability to oppose gravitational acceleration, an ID releases travel from the limitations imposed by, road, rail and sea.
11) Travelling under constant acceleration significantly reduces travel time. For example: it takes eight-hours to travel between London and New York at 700km/hr. At 1g, this journey-time would be reduced to twenty-five minutes.
12) Because an ID can be used in outer-space, and because it operates under constant acceleration, our moon can be reached in three and a half hours and Mars in three-days, whilst accelerating and decelerating at just 1g.

To summarise; the ID is quiet, safe, fast, clean, reliable and offers a long operational life.

Title of the Invention:

The impulse drive vehicle (IDV).

Abstract:

The present invention relates to a vehicle propelled by impulse drive that can travel under constant acceleration in any direction, including vertical, by overcoming gravitational acceleration.

Benefits:

The unique features of this vehicle are that it;
1a. replaces all other forms of transport and transit;
1b. allows travel in a 3D environment;
1c. renders accidental impact virtually impossible;
1d. can travel between origin and destination entirely under acceleration/deceleration;
1e. will accommodate the largest possible impulse drive that will fit within its shape, thereby minimising the ID's bullet mass, magnetic capacity, weight and cost;
1f. dispenses with the need for a drive train, together with the associated, cost, weight and reliability implications.
1g. can travel through an atmosphere with negligible drag resistance;
1h. can travel both around the earth's surface and in outer-space (see 2a to 2i below);
1i. in the form of a sphere, an IDV's shape makes it ideally suited as a satellite space-station maximising accommodation for a given volume;
1j. as a satellite, it can alternate between elliptical (zero energy) and circular (fuel-driven) orbits, and travel between earth and its orbital path under its own power.
1k. renders redundant all roads, railways, ports, airports, bridges and associated infrastructures;
1l. can be manufactured any size …

… and if fuelled with neutron energy (cited patent 'C');
2a. costs nothing to run;
2b. rarely needs refuelling;
2c. can be refuelled anywhere in the universe (rock);
2d. eliminates the risk of fire in an accident (see 1c above);
2e. renders redundant all refuelling stations and associated infrastructure;
2f. requires no inlet for fuel ignition;
2g. issues no exhaust;
2h. can be sealed completely from external contaminants;
2i. is totally silent.

To summarise; the IDV is quiet, safe, fast, clean, reliable, offers a long operational life and its fuel is free and universally available if energised by neutron energy.

Title of the Invention:

The liberty-belt.

Abstract:

The present invention relates to a device propelled by impulse drive that may be worn by a person for elevated travel by overcoming gravitational acceleration.

Benefits:

The unique features of the liberty-belt are that;
1a. it provides potentially unlimited personal freedom of movement without the need for a vehicle;
1b. it can carry its wearer anywhere around our planet, including elevated above its surface;
1c. its velocity and acceleration are limited only by its wearer's ability to support wind resistance and g-force;
1d. it can be partially or fully covered in an anti-drag facility (cited patent 'B') to minimise energy expenditure and wind resistance;
1e. computer-controlled proximity and velocity sensors render accidental impact virtually impossible (see 2d below) …

… and if fuelled with neutron-energy (cited patent 'C');
2a. it costs nothing to run;
2b. it rarely needs refuelling;
2c. it can be refuelled anywhere on the planet's surface (rock);
2d. it eliminates the risk of fire in an accident (see 1e above);
2e. it issues no exhaust;
2f. it is totally silent.

To summarise; the liberty-belt is quiet, safe, fast, clean, reliable, offers a long operational life and its fuel is free and universally available if energised by neutron-energy.

Title of the Invention:

Anti-Drag.

Abstract:

The present invention relates to a method for reducing or eliminating the frictional drag resistance in a body travelling through a gas, such as an atmosphere.

Benefits:

1) A significant reduction in fuel consumption when forcing a body through our atmosphere.
2) A reduction in wind loading on a moving body.
3) A significant reduction in load imposed on structures (e.g. buildings) exposed to high-winds.
4) May be applied to clothing to minimise the impact of wind on individuals.
5) A significant reduction in the excessive drag experienced by vehicles, such as trains, in tight-fitting tunnels.
6) Whilst it would be inadvisable to apply this invention to the wings of an aircraft, application to its fuselage would be advantageous.
7) This same technology may be applied to the surface of a submarine or any other submerged body by vaporising the liquid in contact with the hull's surface.

To summarise; the use of negligible electrical energy (e.g. > 1E-09 J/m^2) will substantially reduce (< 92.5%) drag in a body (e.g. a car) travelling through our atmosphere, and also reduce the wind loading on static structures, such as buildings.