INERTIAL PROPULSION WITHOUT A PROPELLANT

Based Upon The Ether

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by Ramsey

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Inertial Propulsion Based Upon the Ether

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CONTENTS IN BRIEF

AUTHOR'S NOTE:

There are many links throughout this book to illustrate the theories posed. The reader may find these links easier to access by reading the epub version on the website:
https://www.inertialpropulsionbyramsey.com/

Notice to the reader. There are numerous references to websites in each chapter of this book. However, for a variety of reasons, over time URLs become unavailable.

Nevertheless, they still can be accessed at the website: Wayback Machine, an internet archive [*https://archive.org/*]. Please refer to that site if necessary.

ABSTRACT

The intention of this publication is to propose a hypothetical reactionless drive spacecraft (devoid of a propellant) employing differential centrifugal forces as well as counteracting three-dimensional mirror-image symmetry. Nevertheless, bearing in mind the modern-day laws of physics (Newton and Einstein), it is assumed by most experts that this is not possible, for it is posited that a closed system cannot exert a net force upon itself.

Contrarily, there are many experiments/inventors who have already proven, moreover, demonstrated inertial propulsion (e.g., Dean Drive/Thornson Inertial Propulsion Drive). Furthermore, given the circumstance that there is no underlying scientific supportive theory, those results, generally but not exclusively, have been ignored or debunked by the general scientific establishment.

However, by employing the existence of the ether, the author posits an alternative theory that gives explanation to those experiments/demonstrations. With hope and assuming this new premise (the ether) is eventually validated, the outcome will lead to the general acceptance by the physics community—that one can utilize reactionless propulsion to build a functioning spacecraft. Therefore, at that time, there will be a strong impetus to build such devices (e.g., NASA/Elon Musk).

PROLOGUE

Most physicists/scientists presuppose that there is no ether (SRT/GRT). It is my intent to show that there is indeed an ether explicated by the following discussion/videos relevant to the idea/notion of inertial/ reactionless propulsion.

Inertial propulsion without a propellant has been claimed by many inventers. Nevertheless, since this concept violates the irrefutable laws of physics, it is assumed by most present-day scientists that this is not even possible. The reasoning is as follows: Modern-day physics hypothecates there is no true centrifugal force. It is only a fictitious force. Because of this assumption, inertial propulsion cannot exist. In essence, a closed system cannot exert a net force upon itself. On the other hand, if you view the videos at the following websites, you will note it is obviously not a fictitious force, but rather a real force.

https://bit.ly/3iXZBg7
https://bit.ly/3v2ojRX
https://bit.ly/3oMADVx



Now, regarding this article, the author intends to show in the latter half how one can utilize that just observed in the videos to then construct a reactionless drive spacecraft. If so, then the classic laws of physics regarding the fictitious centrifugal forces are in erratum.

For further clarification and illumination, visualize the translational motion of the devices you have just witnessed in the videos as just presented, moreover, specifically in only one axis.

Notice, the devices cannot move in the other two axes, due to the wheels-blocking effect, and the Earth's surface/gravity, again a blocking effect—therefore, leaving the original one-axis motion on the Earth's surface intact.

Now instead, envision being positioned in outer space, whereby with the use of multiple similar devices there is then employed counteracting three-dimensional mirror image anti-symmetry (two separate platforms with counteracting symmetry in three dimensions). As a result, this function leaves the original one axis translational motion intact but negates all motion in the other two axes somewhat analogous to the above website videos. This is essentially inertial propulsion without a propellant. If so, then the classic laws of physics regarding the fictitious centrifugal force is in erratum—it is a real force. Again, this article with additional detailed explanations, as well as three-dimensional illustrations/projections, can be found at the website *inertialpropulsionbyramsey.com*.

See Division B of this book.

In addition, and more significantly, the author will hypothesize, by using the concept of the ether, exactly how one can give explanation to a true centrifugal force. See Division A of this book. Hopefully, the reader will then have the impetus to read, moreover, evaluate the paper titled *The Ether*, which can be found at the website *theetherbyramsey.com*. This site explains relativity as a function of the ether, an alternative to Einstein's relativity assumptions (no ether).

INTRODUCTION

Einstein's Special Relativity Theory (SRT) assumes the absence of the ether. So, by inference then, inertial mass is the intrinsic property of the object, as a response to its acceleration by force (F=ma). In contrast, as posited by the book titled *The Ether by Ramsey*, if it exists (ether), it is the object's acceleration/deceleration by force (F=ma) →*relative to the ether itself* ← which then produces inertia as well as momentum. They are essentially two inverse aspects of the same function.

The primary reason the author believes in the ether is this: Recently physicists have established and confirmed, the reality of the God particle, another name for the Higgs boson which is a quantum (part of) of the Higgs field. Fundamentally, the Higgs field permeates all the space of the universe; this includes the interspace of all of matter. Fundamentally it is what gives rise to inertial mass. Therefore, the presumed empty space of the universe is in fact something →*rather than nothing* ←. In the author's opinion, the Higgs field is just another name for the ether.

Chapter 1 of *The Ether by Ramsey* explains in detail, how the Higgs field (that which causes inertial mass/rate of time) is synonymous with the traditional meaning and definition of the word ether, the preferred frame for the velocity of light. Nonetheless, for the benefit of the average reader, moreover, to simplify this article and for future reference, the word ether will generally be used, rather than the term Higgs field.

Given below is the author's definition of inertia and momentum as an effect of the ether.

- Inertia = force (F=ma) accelerating matter, relative to the ether (at rest), therefore generating an →*external resistance force of inertia* ← (from that ether) as a response to that acceleration = compaction of that structure.

- Momentum = force (F=ma) exerted on matter, already in inertial motion, however, in this case producing deceleration of that object relative to the ether (at rest) and therefore, generating an →*external resistance force of momentum* ← (from the ether) as a response to that deceleration = compaction of that structure.
- Physical matter at constant translational velocity, vis-á-vis the ether, does not interact with the ether (at rest), so there is no change in its velocity.

Contents Here is the outline of the contents to be presented in this publication. It is divided into two major divisions: A and B as well as numerous subsections.

Division A compares the classic concepts of inertia and momentum from the frame of Newton and Einstein (no ether) versus a reference frame presuming the reality of the ether. Division A is separated into six subsections.

1. The classic theory (Newton) of both translational inertia (acceleration) and momentum (deceleration) are illustrated and defined from the frame of an object's own intrinsic physical properties (no ether). This classically is referred to as the "property of the object."
2. Both translational inertia (acceleration) and momentum (deceleration) of an object are illustrated and defined, from the frame of the ether.
3. The classic theory of rotation inertia and rotational momentum are presented (Newton = no ether).
4. Both rotational inertia and momentum as an effect of the ether are presented.
5. The law of the conservation of angular momentum of a rotating wheel is illustrated from two different reference frames (the classic theory versus the ether theory).
6. The strength of a true (not fictitious) centrifugal force (a product of the ether) is explained partly based upon the length of the radius of a rotating wheel.

Division B uses the concepts provided in Division A to explain how it is possible to design and construct a reactionless drive spacecraft. Division B is separated into two subsections.

1. Six YouTube sites are referenced which, to some extent, demonstrate inertial propulsion.
2. The author hypothecates two ideas for the design and construction of spacecraft, both of which exploit differential centrifugal forces along with counteracting three-dimensional mirror-image symmetry to then explain how one can propel those devices by employing, (as a function of the ether) a reactionless drive propulsion system (Centrifugal Inertial Drive = C.I.D).

DIVISION A 1. Translational inertia (acceleration) and translational momentum (deceleration) are illustrated and defined from the frame of an object's own intrinsic physical properties (Newton).

The three laws of Newton:

A. For every action, there is an equal and opposite reaction.
B. Every object in a state of uniform motion will remain in that state of motion unless an external force acts on it.
C. Force equals mass times acceleration.

Einstein believed that there was no ether. If this is so, then the inertial mass of an object (inertia and momentum) must by exclusion be a function of its own intrinsic physical properties (its atoms). What other options are there? To be more specific, according to the laws of modern physics, there is no →*external opposite force*← as a response to an object's acceleration/deceleration by F=ma. Rather, there is only →*intrinsic atom resistance within that object (property of the object)*← as a reaction to that acceleration/deceleration.

For that classic definition of →*inertia*← see Figure 1 and the following diagram.

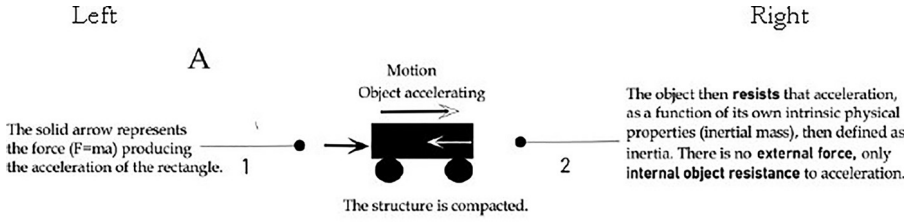


Figure 1

A is translational inertia without an ether.

- (Figure 1, A-1 left) There is a force (F=ma) which accelerates the solid rectangle/object: See horizontal → *solid* ← arrow pointing to the right.
- (Figure 1, A-2 right) The rectangle as a function of its own intrinsic physical properties (its atoms) then resists that acceleration. See horizontal →*white*← arrow located within the object pointing to the left. This is defined as inertia. Be aware, internal object resistance is not an opposite external force; rather it is only an effect of the →*property of the object*←.
- (Figure 1, A-1 and A-2) The structure is then compacted as a function of both horizontal arrows oriented in opposite directions.
- The resistance, as a function of the property of the object, does not prevent its acceleration/movement from the direction of F=ma. Nevertheless, there is still a resistance to that motion.

For the classic definition of →*momentum*← see Figure 2 and the following discussions.

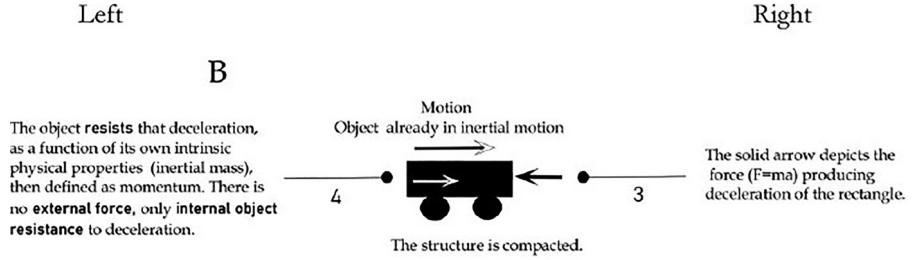


Figure 2

B is translational momentum without an ether.

- (Figure 2, B-3 right) There is a force (F=ma) which decelerates the object/rectangle already in inertial motion. See →*solid*← horizontal arrow pointing to the left.
- (Figure 2, B-4 left) The rectangle as a function of its own intrinsic physical properties (its atoms) then resists that deceleration in the same direction as the motion of the object. See the horizontal →*white*← arrow located within the object pointing to the right. This is defined as momentum. Observe again, there is internal object resistance as a property of the object but not an external force.
- The resistance as a property of the object does not prevent the deceleration as an effect of F=ma. There is still deceleration, nonetheless a resistance to that deceleration.
- (Figure 2, B-3 and B-4) The structure is then compacted as a function of both horizontal arrows oriented in opposing directions.

In summary, regarding the modern interpretation of Newton's three laws, there is no →*external*← resistance force from the ether; rather, there is only →*internal atom*← resistance derived from the "property of the object."

2. Translational inertia (acceleration) and translational momentum (deceleration) of an object are illustrated and defined from the frame of the ether The following account is not the classical theory of translational inertia and momentum as commonly taught by modern-day

physicists/scientists. The ensuing descriptions comprise an alternative explanation proposed by the author but now as a function of the ether.

- Matter at a constant velocity relative to the ether (at rest) does not interact with that ether, accordingly there is no change in its velocity.
- Matter accelerated by force (F =ma) relative to the ether (at rest) → *produces an external resistance force of inertia* ← (derived from that ether/Higgs field) as a response to that acceleration, furthermore, oriented in the opposite direction of the object's motion/acceleration.

From another perspective, the ether of the universe is all-pervasive; this includes the inner space of matter, nevertheless, still located external to its atoms. This external ethereal resistance force of →*inertia*← is then applied individually to all the atoms that make up that object.

The ether resists the acceleration, but it does not prevent the acceleration. This is somewhat, and the author emphasizes somewhat, analogous to a boat being propelled by force in water. Water resists the boat's motion (F=ma); however, it does not prevent that motion. Yet, there is a difference: Water resists both the velocity and acceleration of the boat, whereas the ether only resists the acceleration of the object but not its velocity.

- Matter already in inertial motion, decelerated by force (F=ma) relative to the ether (at rest) then generates an →*external resistance force of momentum* ← (derived from that ether) as a response to that deceleration but now in the same direction as the object's motion. Refer to Figure 2 for further clarification.

Again, alternatively stated, the ether of the universe is all-pervasive; this includes the inner space of matter, nonetheless, still located externally to its atoms. This external ethereal resistance force of →*momentum*← is then applied individually to all the atoms that make up that structure.

For a definition of →*inertia*← as an **effect of the ether**, refer to Figure 3 and the following discussion.

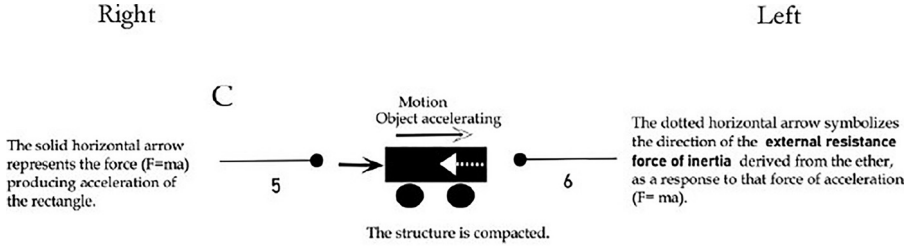


Figure 3

C is translational inertia with an ether.

- (Figure 3, C-5 left) There is a force (F=ma) that accelerates the solid object/rectangle. Refer to →*horizontal solid*← arrow pointing to the right.
- (Figure 3, C-6 right) The ether (Higgs field) located within the inner space of the rectangle resists that acceleration →*by an* ***external*** *resistance force of inertia from the ether, within the object, then applied to all of its atoms).* Refer to →*horizontal dotted*← arrow pointing to the left.
- The ether does not prevent/stop the acceleration in the direction of F=ma, but it does resist that motion.
- Again, this is somewhat, and the author emphasizes somewhat, analogous to a boat being propelled by force in water. Water resists the boat's motion (F = ma); however, it does not prevent that motion. Yet, there is a difference: Water resists both the velocity and acceleration of the boat, whereas the ether only resists the acceleration of the object but not its velocity.
- (Figure 3, C-5 and C-6) The structure is then compacted as a function of both horizontal arrows oriented in opposing directions.

For a definition of →*momentum*← **as an effect of the ether**, refer to Figure 4 and the following dialogues.

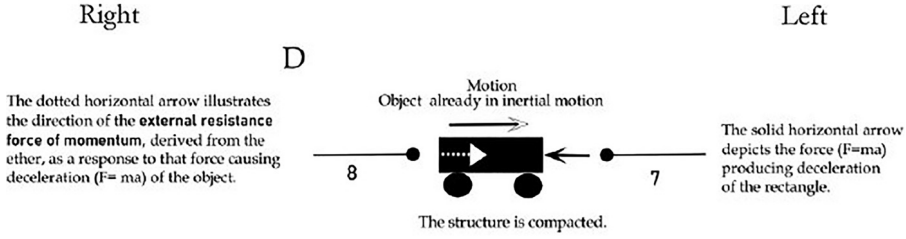


Figure 4

D is translational momentum with an ether.

- (Figure 4, D-7 right) There is a force (F=ma) that decelerates the solid object/rectangle already in inertial motion. Refer to → *horizontal solid* ← arrow pointing to the left.
- (Figure 4, D-8 left) The ether (Higgs field) located within the inner space of the rectangle resists that deceleration by an →***external*** *resistance force of momentum from the ether, within the object, then applied to all of its atoms*←. Refer to →*horizontal dotted*← arrow pointing to the right.
- The ether does not stop or prevent the rectangle's deceleration in the direction of F=ma, but it does resist that motion.
- (Figure 4, D-7 and D-8) The structure is then compacted as a function of both horizontal arrows oriented in opposing directions.

If the acceleration and deceleration are the same, then the external resistance forces from the ether are identical (the compaction is the same). Refer to the horizontal arrows in figures 3 and 4. Observe: They are pointing in opposite directions. And so, inertia and momentum are inverse functions of the same thing: a relative change in velocity (whether increasing or decreasing) with respect to the ether at rest.

In summary, presuming the ether exists, it is not the →*property of the object*← that produces inertia and momentum. Rather both are a function of → *external ethereal resistant forces* ←, as a response to the object's acceleration/deceleration by force (F=ma). Compare figures 1

and 2 (intrinsic object (atom) resistance) with figures 2 and 3 (external resistance force derived from the ether).

Third: **Rotational inertia and rotational momentum the classical theory (no ether)** The modern laws of physics presuppose no ether. Therefore, by logic, inertia and momentum cannot be a function of what does not exist—rather, both are related to the intrinsic physical "property of the object." Now refer to Figure 5 as illustrated below.

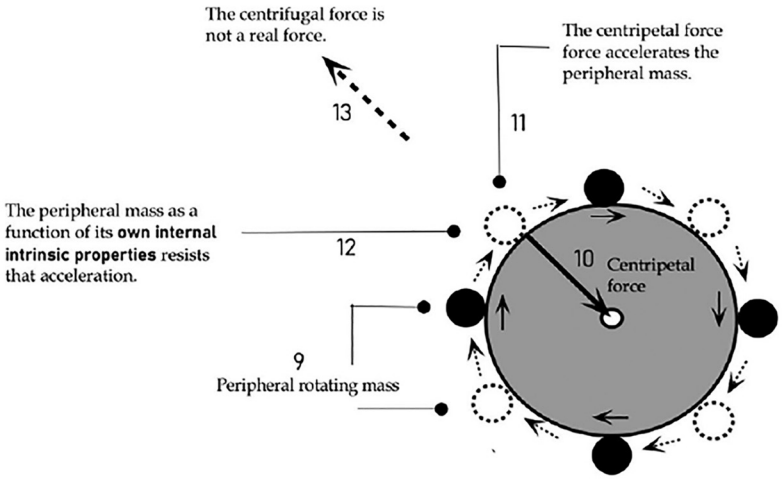


Figure 5

Fictitious centrifugal force without an ether.

- (Figure 5, #9) The solid black and dotted circles represent the attached peripheral rotating masses.
- (Figure 5, #10 and #11) The centripetal force (F=ma) accelerates the attached peripheral mass towards the pivot.
- (Figure 5, #12) The rotating masses as a function of their own intrinsic physical properties (atoms) resist that centripetal acceleration (property of the object). There is no external opposite force; there is only internal object resistance to the centripetal force.

- (Figure 5, #13) The centripetal force is only an apparent force and not real. See below.
  - Centrifugal force, a **fictitious force**, peculiar to a particle moving on a circular path, that has the same magnitude and dimensions as the force that keeps the particle on its circular path (the centripetal force) but points in the opposite direction. (*Encyclopedia Britannica*)
  - In the case of a rotating system, the centripetal force pulls the mass inward to follow a curved path, while the mass appears to push outward due to its inertia. In each of these cases, though, there is only one real force being applied, while the other (centrifugal) is only an **apparent force.** What Are Centrifugal & Centripetal Forces? | Live Science
- Presuming no friction, the wheel will rotate in infinitum.

In summary, according to classic laws of physics, there is no centrifugal force, only an apparent force not a genuine force.

Fourth: Rotational inertia and rotational momentum as a function of the ether are illustrated and defined The following account is not the classical concept of rotational physics as commonly taught by modern-day physicists/scientists. The ensuing description is an alternate explanation, hypothecated by the author, regarding rotational physics →*as a function of the ether/Higgs field*←.

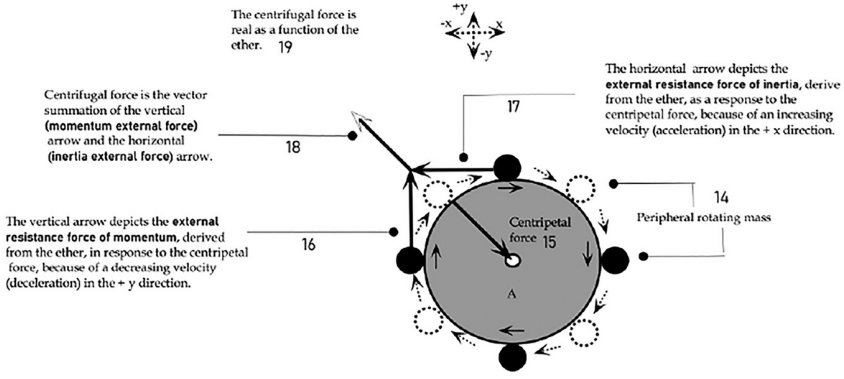


Figure 6

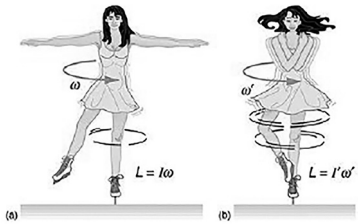
True centrifugal force as a function an ether.

- (Figure 6, #14) The solid black and dotted circles depict the attached peripheral rotating masses.
- (Figure 6, #15) The centripetal force (F =ma) accelerates the rotating mass directly towards the pivot.
- (Figure 6, #16) This centripetal force produces →*deceleration*← of the rotating mass, relative to the ether, in the +y direction, therefore creating an external force of →*momentum*← in the +y direction (derived from the ether/Higgs field). For the latter, see the solid vertical arrow (16) pointing towards +y.
- (Figure 6, #17) At the exact same time, the centripetal force produces →*acceleration*←, of the rotating mass, relative to the ether, in the +x direction, therefore, creating an external force of →*inertia*← in the –x direction (derived from the ether/Higgs field). For the latter, see the solid horizontal arrow (17) pointing towards –x.
- (Figure 6, #18) Be cognizant that the vector sum of the two external ethereal forces is the centrifugal force which is oriented in the opposite direction compared to the centripetal force. Note, arrow #18 and its direction which is opposite that of the centrifugal force.
- (Figure 6, #19) What all this means is that the centrifugal force is, in fact, real; not fictitious or only apparent as postulated by Newtonian mechanics Observe in the illustration, the continuous →*loss*← of angular velocity in the +y direction is equal to the continuous →*gain*← in velocity in the +y direction, so there is no change in the overall angular velocity (assume no friction). Accordingly, absent an outside torque or friction, the wheel will continually rotate ad infinitum.

To summarize, according to modern-day classic physics, there is no centrifugal force only an apparent—not a genuine—force. Then again, presuming the ether's existence, there is, in fact, a true physical centrifugal force.

Fifth: The conservation of angular momentum of a rotating wheel vis-à-vis different reference frames: the classic theory versus the ether theory A spinning ice skater is a common example of conservation of

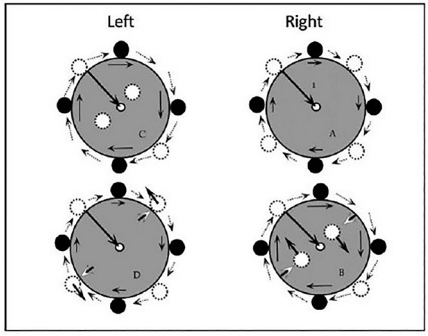
angular momentum. When the skater starts spinning with hands outstretched, the angular velocity is low, but the spinning becomes very fast as the hands are pulled in. What happens is that as the moment of inertia decreases, the angular velocity increases, so that the angular momentum is conserved.



(OpenStax College - Angular Momentum and Its Conservation (Fair Use) http://cnx.org/content/m42182/1.5/)
Figure 7

The purpose of the following dialogue is to explain this phenomenon, first from the frame of classic physics and, subsequently, to explicate the same phenomenon from the frame of the ether. However, instead of a twirling ice skater, imagine a rotating wheel associated with numerous attached peripheral masses, two of which can symmetrically move centrally towards the pivot and vice versa, to some extent analogous to the ice skater example just illustrated.

First, as illustrated below, is the classic theory of the conservation of momentum vis-à-vis a rotating wheel (no ether).



The Classic Theory *Figure 8*

Conservation of angular momentum without an ether.

- The hollow dotted circles and the solid black circles characterize the attached peripheral masses.
- The larger gray circles depict the wheel with the attached peripheral masses.
- The solid straight arrows located at the periphery of the wheels portray the rotational direction of the wheels clockwise.
- The dotted arrows located outside the wheel indicate the direction of motion of the attached peripheral masses rotating in synchrony clockwise along with the wheels.
- The single straight solid arrow pointing to the pivot represents the centripetal force.
- The small hollow-tipped white arrows pointing away from or toward the pivot portray the symmetrical movement of two of the peripheral masses, ether towards the pivot or away from the pivot.

The following description is from the frame of only the rotating wheel, and generally, but not exclusively, not from the frame of the rotating masses.

The left images (A and B) illustrate what occurs when two of the peripheral masses are symmetrically transferred → *by force* ← centrally towards the pivot—the wheel's rotational rate then increases. The reasoning is as follows.

Angular momentum without an ether.

- The angular velocity of the peripheral masses (A), when located at the circle's circumference, is greater compared to when positioned centrally towards the pivot (B).
- Therefore, when the two peripheral masses are symmetrically transferred → *by force* ← towards the pivot (B) a → *torque of momentum (from the masses)* ← is then exerted on the wheel, (because their angular velocity is greater compared to the wheel' s angular velocity), thus producing an increased rotational rate.

→ *Observe, at the exact same time, there is a reciprocal force (F=ma) derived from the rotating wheel exerted on two masses causing their deceleration. For simplicity of illustration, this function is not shown in the above figure* ←.

The two images to the right (C and D) depict what happens when the two central masses are → allowed ← to symmetrically move towards the wheel's circumference; the wheel's rotational rate then decreases. The reasoning is as follows.

Angular inertia without an ether.

- The angular velocity of the central masses (C) when located towards the pivot is less compared to when they are positioned at the circle's circumference (D).
- Therefore, when the two central masses are symmetrically → *allowed* ← to move towards the wheel's circumference (D) a → *torque of inertia (from the masses)* ← is then exerted on the wheel, (because their angular velocity is less compared to the wheel's angular velocity) thus producing a decreased rotational rate.

→ *Observe, at the exact same time, there is a reciprocal force (F=ma) derived from the rotating wheel exerted on two masses causing their acceleration. For simplicity of illustration, this function is not shown in the above figure* ←.

The Ether Theory At this time, the same law of the conservation of momentum of a rotating wheel is explained but now from the frame of the ether. Again, bear in mind, all that deliberated below is from the reference frame of only the rotating wheel, and generally but not exclusively, not from the frame of the attached rotating masses.

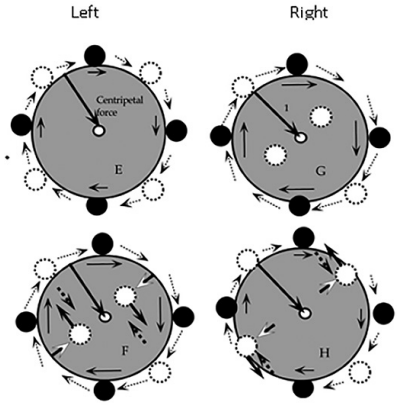


Figure 9

Conservation of angular momentum with an ether.

- The hollow dotted circles and the solid black circles characterize the attached peripheral masses.
- The larger gray circles depict the wheels and their attached peripheral masses.
- The solid straight arrows located at the periphery of the wheels portray the direction of the wheels rotating clockwise.
- The dotted arrows located outside the wheels indicate the motion of the attached peripheral masses rotating clockwise in synchrony along with the rotating wheels.
- The single solid arrow pointing to the pivot represents the centripetal force.
- The small hollow-tipped white arrows pointing away from or toward the circumference of the wheels represent the symmetrical movement of two of the peripheral masses' ether inwards towards the pivot or outwards away from the pivot.

The left images (E and F) illustrate what occurs when two of the peripheral masses are symmetrically transferred → *by force* ← towards the pivot—the wheel's rotational rate then increases. The reasoning is as follows.

Angular momentum with an ether.

- The angular velocity of the peripheral masses (E) when located at the wheel's circumference is greater compared to when they are positioned centrally towards the pivot (F).
- Therefore, when the peripheral masses are symmetrically transferred →*by force*← towards the pivot (F), then a torque (from the masses) is exerted upon the wheel (because their angular velocity is greater compared to the wheel's angular velocity) thus producing an increased rotational rate (acceleration). See solid arrows.
- At the same time, the ether (Higgs Field) then resists the wheel's acceleration by an external resistance force of inertia (derived from the ether). The ether does not prevent that acceleration, but it does resist it by an external force. See dotted arrows.
- → *Take note, again simultaneously, there is a reciprocal force (F=ma) derived from the rotating wheel, exerted on two masses causing their deceleration. In turn, as a response to that deceleration, this effect produces an external resistance force of momentum (from the ether) in opposition to the decelerations. For simplicity of illustration, this function is not shown in the above figure* ←.

The two images to the right (G and H) depict what happens when the two central masses are → allowed ← to symmetrically move directly towards the wheel's circumference—the wheel's rotational rate then decreases. The reasoning is as follows.

Angular inertia with an ether.

- The angular velocity of the two central masses (G) when located centrally is less compared to when they are positioned at the wheel's circumference (H).
- Therefore, when the two central masses are symmetrically → *allowed*← to move directly towards the wheel's circumference (H) then a torque (*from the masses*) is exerted on the wheel (because their angular velocity is less compared to the wheel's angular velocity), generating a decreased rotational rate. See solid arrow.

- At the same time, the ether (Higgs Field) then resists the wheel's deceleration by an external resistance force of momentum. The ether does not prevent that deceleration, but it does resist it by an external force. See dotted arrows.
- → *Take note, also simultaneously, there is a reciprocal force (F=ma) derived from the rotating wheel exerted on two masses causing their acceleration. In turn, as a response to that acceleration, this effect produces an external resistance force of inertia (from the ether) in opposition to the accelerations. For simplicity of illustration, this function is not shown in the above figure* ←.

In summary, this subsection is intended to be a mental exercise to help the reader perceive/visualize the concepts or rotational inertia and rotational momentum from two different perspectives—the classical theory vs. the ether theory.

Sixth: The strength of a true (not fictitious) centrifugal force (a product of the ether) is explained partly based upon the length of the radius of a rotating wheel.

Now, please see Figure 10 as illustrated below.

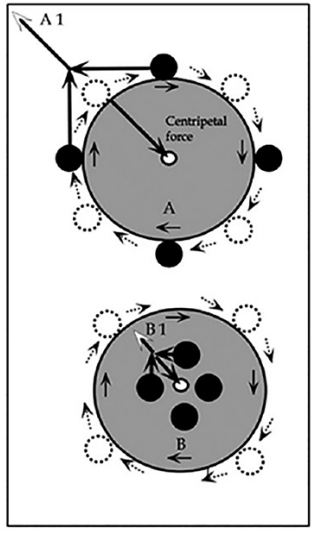


Figure 10

Centrifugal force

- Presume the presence of the ether, therefore, a real centrifugal force.
- Assume wheel A and wheel B both possess the same rotational rate.
- The black circular masses of wheel A are located at the circumference whereas with B more towards the pivot as shown.
- Therefore, the moment of inertia of the black masses is greater for A compared to B.
- A1 and B1 represent the centrifugal forces of their respective wheels A and B.
- The arrow pointed at the pivot of A and B is the centripetal force.
- Given the assumptions just presented, then both the real centripetal force and the real centrifugal force → *exerted on the black masses* ← are greater for A1 compared to B1.
- This last assumption is obvious to the average individual, for without a background in physics most individuals intuitively presume there is a real centrifugal force.
- Then again, classic modern theory posits there is only a centripetal force, moreover, the centrifugal force is fictitious and not real. However, as shown in this article, if there is indeed the ether, there is also undeniably a centrifugal force. It is not fictitious; it is real.

Succinctly, all of that which is illustrated and deliberated above presumes the ether exists, as hypothecated by the book titled *The Ether by Ramsey*. Consequently, there also is a real centrifugal force, not an apparent or fictitious force. For that reason, the real centrifugal force exerted on a mass (object) is greater when it is located at the periphery of a rotating wheel compared to when positioned towards its center, assuming equal rotational rates for both scenarios.

DIVISION B

As noted in the abstract, at the beginning of this publication, the purpose of this article, assuming the existence of the ether, therefore, a real centrifugal force, is to use that real force, along with counteracting three-dimensional mirror-image symmetry to design and eventually construct a reactionless propulsion spacecraft (Centrifugal Inertial Drive = C. I. D).

First: This subsection references websites showing inventors/ experiments that have already demonstrated and proven inertial propulsion.

It is far easier to understand all the above if one can observe relevant experiments, performed by others, moreover, comprehend their function, based upon the ideas just presented, especially that of subsection six of Division A. Therefore, the author references five websites, which in one form or another, display inertial propulsion and some of which are followed by a brief discussion and evaluation.

To comprehend this hypothetical invention, one must be able to mentally visualize in three dimensions. So, to begin with, let us define the coordinate system. Assume the plane of the Earth's surface is represented by the x and y axes. Presume the z axis is oriented perpendicular to this plane with one side oriented away from Earth (+z) and on the other side towards its center (− z).

→ *Furthermore, for purposes of orientation, hypothecate that the direction of motion of all the experimental devices as shown in the YouTube videos is defined as the +y direction* ←. The author references the following two YouTube video sites since it is much easier to understand what occurs by watching a video rather than evaluating a written dissertation.

https://bit.ly/3ByYHPg
and
https://bit.ly/3av3u8y


After reviewing these two sites, take note, these inventions possess only one axis of freedom of motion, the y axis → *defined as the direction of their motion* ←. Be cognizant of the fact that these experiments cannot move in the z axis due to gravity and the blocking effect of the Earth's surface. And they cannot move about in the x-axis due to fixed orientation of the wheels. The only direction of freedom of motion is in the y axis. Bear in mind, this is crucial; relative to the y axis the centrifugal force is greater in the +y direction compared to the −y. So, the devices then →*propel*← in the +y direction (→*defined by the author as the direction of motion* ←). After comprehending all the above, again review the above websites and apply the principles as just explained.

The author now references this second set of videos.

https://bit.ly/30MADVx
https://bit.ly/30LGxpX
https://bit.ly/3iXZBg7



After viewing all six videos, it should be obvious to all that there is in indeed a true centrifugal force; otherwise, the inventions would not function as observed. True or false?

Second: The author hypothecates two forms of spacecraft using a along with counteracting three-dimensional mirror-image symmetry to then propel those devices devoid of a propellant.

It is far easier to comprehend the following set of illustrations if one first understands what is occurring in the YouTube videos as just referenced. The ensuing illustrations are a modification of what occurs in those videos. Fundamentally, the author uses three-dimensional mirror-image symmetry to counteract all forces except those asymmetrical forces oriented in the y-axis. And since the centrifugal force in the +y direction is greater than −y, the inertial propulsion force without a propellant overall is then in the +y direction. Voilà! There you have it in a nutshell. A hypothetical inertial propulsion spacecraft system is now presented using differential rotational rates/centrifugal forces as well as counteracting three-dimensional mirror-image symmetry.

To begin, imagine a rotating wheel with an attached solitary mass positioned at its inner periphery. Now, the faster the rotational rate, the greater the centrifugal force exerted on that object. This basic idea is used to explain how a reactionless inertial propulsion engine can be designed and created. However, before proceeding, please re-review the YouTube video as shown below.

https://www.youtube.com/watch?v=53rURZsFlZI

This is only a partial explanation of what occurs in that video.

If you watch this video very carefully, you will note that the rotational rates of both symmetrical peripheral masses are greater in the +y direction (defined as the direction of motion) compared to − y; so then too are the centrifugal forces also greater in the +y direction versus −y. Counteracting mirror-image symmetry and the fixed position of wheels prevents any motion in the x axis and gravity and the earth's surface blocks movement in the z axis. All that is left is a → *net* ← inertial/ centrifugal propulsion force oriented in the +y direction (again defined by the author as the direction of motion). This concept will now be

expanded to include counteracting three-dimensional symmetry as demonstrated in the following set of illustrations.

To start, see Figure 11 below which illustrates the physical structure of the device.

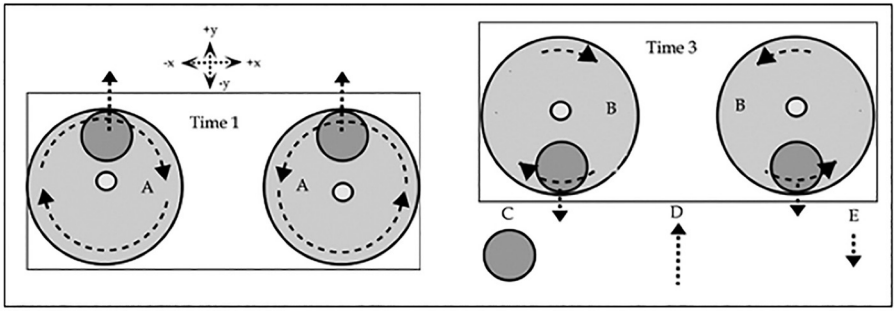


Figure 11

- Time 1 = the platform (rectangle) encompassing two *counteracting* identical and symmetrical *rapidly rotating wheels,* each of which is associated with an attached peripheral mass as shown (+y direction). See length of curvilinear arrow within wheels = rapid rate.
- Time 3 = the platform at later time 3, encompassing two *counteracting* identical and symmetrical *slower rotating wheels,* each of which is associated with an attached peripheral mass as shown (− y direction). See shorter length of curvilinear arrow within wheels = slower rate.
- (A) = Time 1: the counteracting symmetrical wheels are rotating → *rapidly* ← clockwise with respect to the left wheel and correspondingly counterclockwise relative to the right wheel.
- (B) = Time 3: the counteracting symmetrical wheels are rotating → *slowly* ← clockwise with respect to left wheel and similarly counterclockwise relative the right wheel. At Time 3, their rotational rates are still identical but now slower compared to Time 1.
- (C) = Symmetrical/identical rotating peripheral masses.
- (D) = Time 1: the strength of centrifugal force exerted on the two masses with the same rapid rate of rotation specifically oriented in

the +y direction; the more the force the longer arrow.

- (E) = Time 3: the strength of centrifugal force exerted on the two masses with the same, but now slower, rate of rotation oriented specifically in the -y direction; the shorter arrow.
- The dotted semicircular arrows located peripherally within the wheels symbolize the direction as well as the rotational rate—the longer the arrow, the faster the wheel's rotational rate.
- The centripetal forces are not displayed in Figure 11.

Please see the Figure 12 below which illustrates the function of the apparatus but only with respect to the y axis (–y and + y directions).

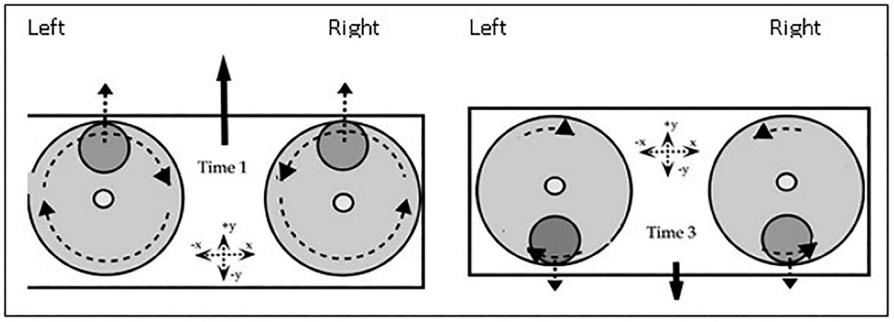


Figure 12

- At Time 1, the counteracting symmetrical wheels and attached masses are rotating rapidly (on the platform = rectangle). The left wheel is rotating clockwise, whereas the right wheel is rotating counterclockwise at an equally rapid rate. The straight dotted solid-tipped arrows associated with the peripheral masses denote the centrifugal forces oriented specifically in the +y direction. The length of the arrows symbolizes the strength of that force. The greater the rotational rate, the more the centrifugal force and the longer the arrow. The single solid straight arrow located at the center of the platform, in the +y direction, represents the sum vector force of the two centrifugal forces from the wheels and attached masses. The centripetal forces are not displayed in Figure 12.

- Later, at Time 3, the counteracting symmetrical wheels are now rotating slowly (on the platform = rectangle). The left wheel is rotating clockwise whereas the right wheel is rotating counterclockwise, at an equally slow rotational rate. The straight dotted solid- tipped arrows, associated with the peripheral masses, denote the centrifugal forces but this time specifically in the −y direction. The length of this arrow represents the magnitude of that force. Observe that the length of this arrow is shorter compared to Time 1; since the rotational rate is slower, so the centrifugal force is less. To be specific, the slower the rotational rate, the less the centrifugal force—the shorter the arrow. The single thick solid straight arrow located at the center of the platform in the −y direction, represents the sum vector force of the centrifugal forces from the two wheels. The centripetal forces are not displayed in Figure 12.
- Be cognizant of the fact that, and this is crucial, the sum vector centrifugal force in the +y direction is greater than −y based upon the different rotational rates (+y > −y).

Please see the following sets of figures, which utilize this basic concept but now include counteracting three-dimensional mirror symmetry to describe how to propel a spacecraft with reactionless propulsion.

To explain counteracting three-dimensional mirror-image symmetry, the author will use this approach.

- First, there is a written description.
- Second, four illustrations depicting the written explanation are presented.
- And finally, a further clarification of the illustration is discussed.

The written description. (See figure 13.)

Instead of one, there are now two platforms oriented in the z axis, one above the other with mirror image symmetry.

With respect to each platform, there are two counteracting symmetrical (functional and structural) rotating wheels with attached peripheral masses as shown in Figure 13.

With respect to each platform, the counteracting wheels with their masses rotate faster in the +y direction (Time 1 in the illustrations) when compared to the −y direction (Time 3 in the illustrations). Therefore, because the rotational rates are greater in direction + y versus −y, the centrifugal forces exerted on the masses are also greater in the +y direction compared to −y.

With respect to each platform, this also means that when oriented in the x axis (+x and − x) (Time 2), the rotational rates of both counteracting wheels with their masses are decreasing as they transverse from direction +y to −y.

And conversely, with respect to each platform, the rotational rates of the wheels and masses are increasing in the x axis (+x and −x) (Time 4) when traversing from direction − y to +y.

Counteracting mirror-image symmetry prevents any → net ← centrifugal force in the x axis. In addition, again the overall structure consists of an upper and a lower platform with mirror-image symmetry but now in the z axis.

Therefore, in summary, not only is there counteracting mirror-image symmetry in the x axis but also in the z axis.

1. Be aware and this is crucial: All centrifugal forces are counteracted except those forces in the y axis being greater in the +y direction compared to the −y direction.
2. Accordingly, there is then a net inertial propulsion force without a propellant in the +y direction.

For a better perspective, the following two images are nonfunctional mockups of the first proposed device so one can picture its physical structure in three dimensions then followed by time-interval illustrations.

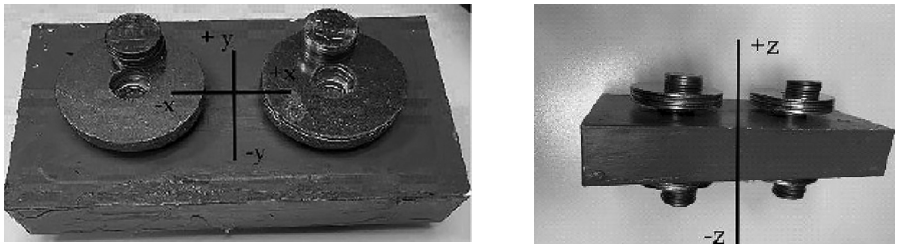


Figure 13 - A

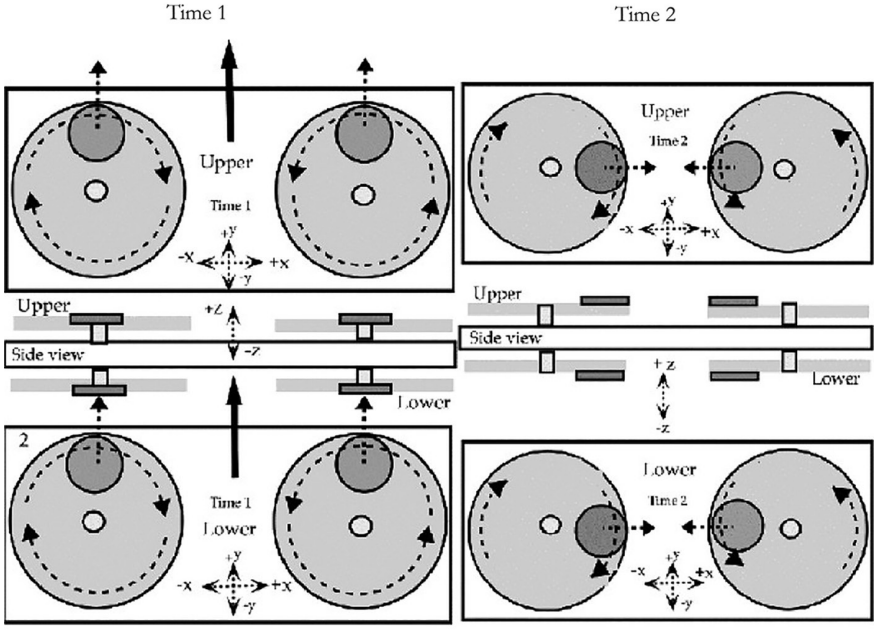


Figure 13 – B

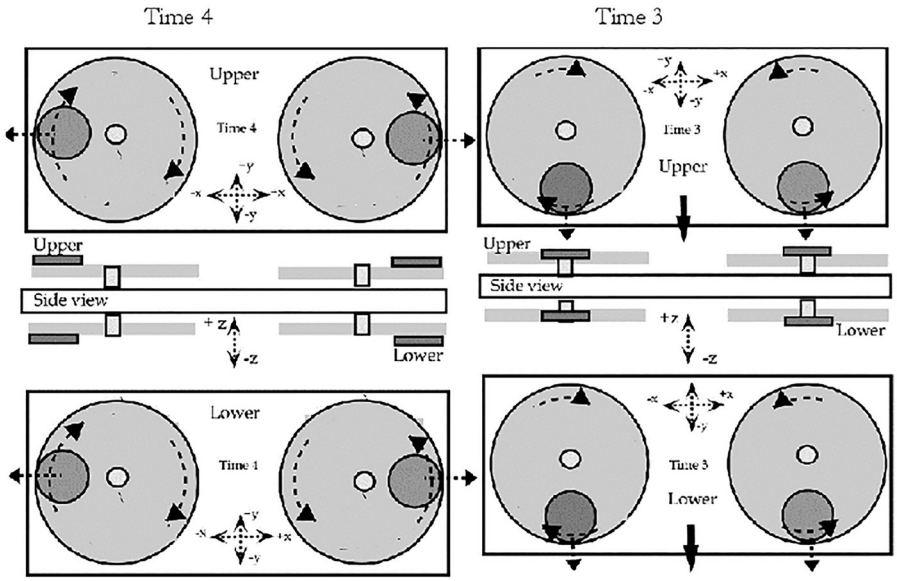


Figure 13 - C

Further clarification of the illustrations.

As illustrated in Figure 13 above, the following dialogue explains the function of this hypothetical invention from different rotating time frames. All four wheels on both platforms with their attached masses possess a maximum rotational velocity in the +y direction and a minimum rotational velocity in the –y direction. Counteracting mirror-image symmetry negates all centrifugal forces except those forces in the y axis (the x and z axes are negated). And the forces in the y axis are asymmetric being greater in the +y direction compared to the –y, thus inertial propulsion without a propellant. The following narratives clarify each separate time frame of Figure 13.

- Time 1 is when the counteracting wheels with their attached peripheral masses of both the upper and the lower platforms are all oriented specifically in the +y direction, moreover, at a rapid rotational rate.

The centrifugal forces are at a maximum in this position, because the rotational rates are also at a maximum.

- Time 2 is when the counteracting wheels with their attached masses of both the upper and the lower platforms are oriented specifically in the x axis. The rotational rates of the wheels and attached masses are now decreasing as they traverse from the +y direction to –y. Observe in the illustration that there is mirror-image symmetry of the upper and the lower platforms. Additionally, with respect to both platforms, the centrifugal forces counteract one another in the x axis (right = –x, left = +x). So overall with respect to the x axis, there is then no →*net*← centrifugal force.
- Time 3 is when the counteracting wheels with their attached peripheral masses of both the upper and lower platforms are all oriented specifically in the –y direction but now at a slower rotational rate. The centrifugal forces are at a minimum in this position, because the rotational rates are also at a minimum.
- Time 4 is when the counteracting wheels and their attached masses of both the upper and lower platforms are again oriented specifically in the x axis. The rotational rates of the wheels and attached masses are now increasing as they traverse from the -y direction to +y. Observe in the illustration that there is symmetry of the upper and lower platforms. Additionally, with respect to both platforms, the centrifugal forces counteract one another in the x axis (right + x, left -x) So overall, with respect to x axis, there is once again no →*net*← centrifugal force.
- In summation, combining all four time frames into one overall imaginary pictorial image, there is mirror symmetry of the upper and lower platforms in the z axis, and there is also counteracting mirror-image symmetry of the right and left sides of both platforms in the x axis. Therefore, the only remaining asymmetry is in the y axis with the centrifugal force being greater in the +y direction compared to the -y direction = C. I. D = reactionless propulsion.

A second hypothetical inertial propulsion invention is now provided, this time using differential/true centrifugal forces based upon the length of the radius of a rotating wheel, as well as counteracting three- dimensional mirror-image symmetry.

To start, please see Illustration 14 below.

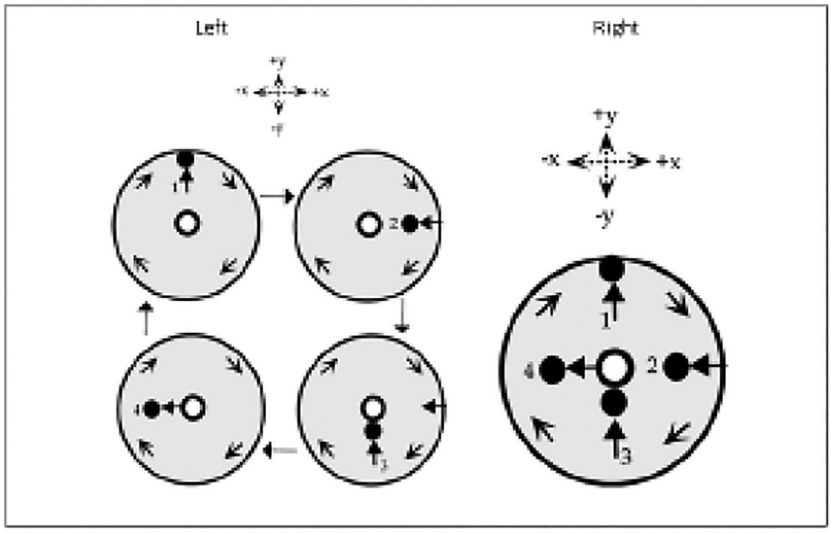


Figure 14

The image on the right is a summation of the four different rotational time frames as presented on the left.

As in Figure 14, envision a rotating wheel with a mass (object) initially positioned adjacent to its circumference, specifically oriented in the +y direction as shown above (1). Presume as the wheel rotates clockwise, through the x axis (2), the mass gradually moves by force inwards towards the center. So eventually, when finally, it reaches the –y direction, it is then located directly adjacent to the pivot (3). Subsequently, presuppose as the now more-central mass continues to rotate clockwise, again through the x axis (4), it gradually begins to move outwards towards the wheel's circumference. Finally, visualize when it is again located at the wheel's periphery, the mass is once more oriented specifically towards +y.

So, let's expand this concept by using the same principle but now also along with the use of counteracting mirror-image symmetry.

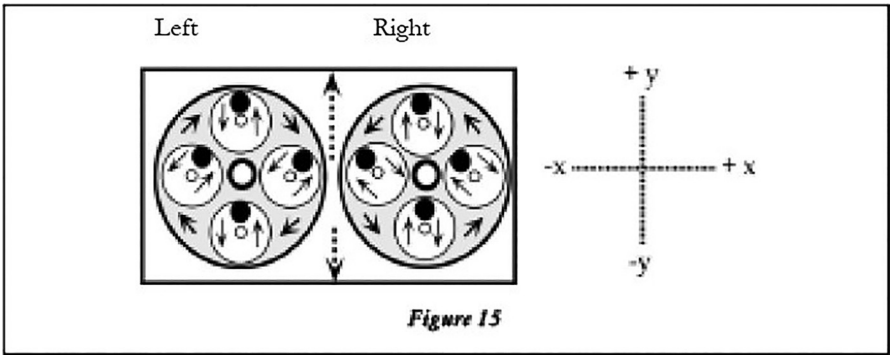


Figure 15

Refer to Figure 15 above which illustrates the basic physical structure of this hypothetical invention.

- The overall rectangle represents the platform encompassing two counteracting symmetrical rotating wheels (shaded) each of which contains four inner smaller white wheels (with an attached peripheral black mass) all of which are counter rotating in the opposite direction relative to its own larger shaded wheel.
- With respect to the left versus right sides, there is overall structural, as well as functional, mirror-image symmetry (x and y axes).
- The large left shaded wheel is rotating clockwise defined as the large left wheel.
- The large right shaded wheel is rotating counter-clockwise—defined as the large right wheel.
- Referring specifically to the left side, all four of the inner smaller white wheels including their peripheral masses are rotating counterclockwise, while at the same time the large left wheel is rotating clockwise.
- Referring specifically to the right side, all four of the inner smaller white wheels including their peripheral masses are rotating clockwise, while at the same time the large right wheel is rotating

counterclockwise.

- In addition, the left and right sides have counteracting mirror-image synchrony.

The synchronization function is pictured in Figure 15. The following pertains to the left and right sides →*individually and separately*←.

- Relative to the large, shaded wheel during its rotation in one direction, as each of its four counter-rotating inner smaller white wheels reaches the +y direction, its peripheral mass is located at the periphery of its own shaded wheel, specifically oriented towards +y.
- Relative to the large, shaded wheel during its rotation in one direction, as each of its four counter-rotating inner smaller white wheels reaches the − y direction, its peripheral mass is now located towards the pivot of its own shaded wheel, specifically oriented towards −y.
- Furthermore, when each of the four smaller white wheels reaches x axis, the position of its peripheral mass at that time is then located approximately halfway between the center and the circumference of its own large rotating wheel. But observe carefully in the above illustration: In this case, relative to the large (shaded) wheel, their position is located more towards direction +y compared to −y.

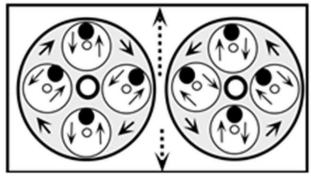


Figure 16A

Be cognizant that the overall function of each of these separate counteracting wheels, as pictured in 16A above, is → *somewhat analogous* ← to the basic principle, as presented in Figure 14, now illustrated again in Figure 16B below. See the comparison.

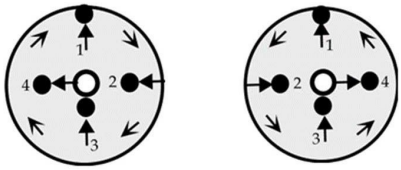


Figure 16B

Notice the similarity of function between the upper images compared to the lower images.

Now recollect, the centrifugal forces exerted on equal masses positioned at the periphery of a rotating wheel are greater than if the masses were located towards the pivot, assuming identical rotational rates. See Figure 17 below, a repeat of Figure 10. Take note, A1 is greater than B1.

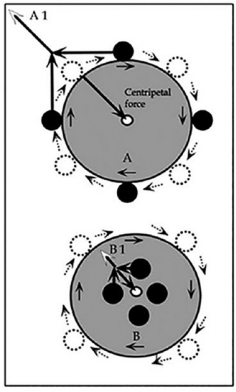


Figure 17 (repeat of Figure 10)

- A1 represents the centrifugal force exerted on the outer black masses of rotating wheel A.
- B1 represents the centrifugal force exerted on the inner black masses of rotating wheel B.
- Observe that A1 is greater than B1.
- This is assuming the rotational rates of both wheels are identical.

See the websites referenced below for examples of differential centrifugal forces based upon the length of radius of a rotating wheel.

Propulsión De Fuerza Centrífuga – YouTube

Inertial Thruster Moving 6kg – YouTube

This is only a partial explanation of the websites:

If you watch these two videos carefully, you will observe that the radius of the rotating mass/masses is/are greater in the +y (defined as the direction of motion) compared to the −y direction, so then the centrifugal force/forces is/are also greater in the +y direction compared to –y.

These inventions possess only one axis of freedom of motion—the y axis. Furthermore, these apparatuses cannot move in the z-axis due to gravity and the blocking effect of the earth's surface. And they cannot move about in the x-axis due to fixed orientation of the wheels. The only direction of freedom of motion is in the y-axis. Notice, this is crucial; relative to the y- axis, the centrifugal force is greater in the +y direction compared to the –y. So, the devices then → *propel* ← in the +y direction. Most importantly these videos demonstrate that there is in fact a true net centrifugal force in the +y direction (defined by the author as the direction of motion). See Figure 18 and the following dialog for a summation.

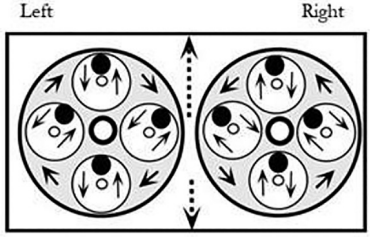


Figure 18

- The straight single dotted arrow on the platform directed specifically towards +y represents the sun vector force of all the centrifugal forces from all the masses (black circles) oriented in the + y direction.
- The straight single dotted arrow on the platform specifically directed towards -y represents the sum vector force of all the centrifugal forces from all the masses (black circles) oriented in the -y direction.
- The sum of the vector forces is greater towards +y compared to –y.
- Counteracting mirror-image symmetry in the x-y plane negates all other centrifugal forces.
- Therefore, there is a C.I.D. in the +y direction.

So, let us assemble these concepts into one overall picture. If one carefully examines Figure 18 above, you will notice, due to counteracting mirror-image symmetry between the left and right sides (x axis,) all centrifugal forces are annulled except those forces in the y-axis. And those forces are greater in the +y direction compared to the −y direction. Thus, there then exists inertial propulsion devoid of a propellant in direction + y.

And as for the conservation of angular momentum, if you again observe Figure 18 very carefully you will note that with respect to both the left and right sides that any motion of the four black peripheral masses (of the inner white counter-rotating wheels) to and from the pivot relative to its own larger shaded wheel, when summed together over 360 degrees, offset one another. As a result, due to this counteracting anti-symmetry, moreover, as a function of the law conservation of angular momentum, there is no change in the angular velocity of either large, shaded wheel.

The descriptions given above encompass only two dimensions. This will now be expanded to three dimensions. So now see Figure 19 below.

Again, for a better perception, the following two images are non-functional mockups of the second proposed device, so one can picture its physical structure in three dimensions then follow illustrations and descriptions.

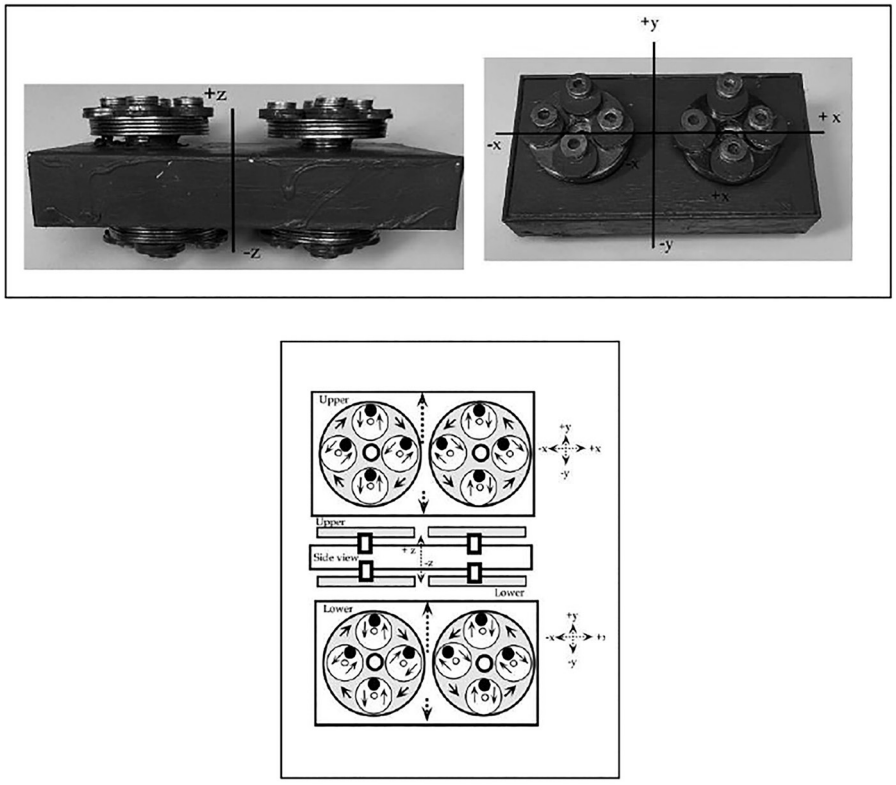


Figure 19

- The entire apparatus consists of two planes, an upper platform and a lower platform, therefore, relative to each other oriented in the z-axis.
- There is mirror-image symmetry of the upper platform versus the lower platform in the z-axis.

- There is also counteracting mirror-image symmetry of both sides of each platform in the x axis.
- Thus, all centrifugal forces annul one another except those unbalanced forces oriented in the y axis.
- The centrifugal forces in the y-axis are greater in direction +y compared to −y.
- Consequently, overall, there is net centrifugal force oriented in the +y direction = propulsion without a propellant.

In Conclusion

As posited by this entire article, these two different hypothetical inventions, employing the ether as an external force, demonstrate that it is possible to build reactionless drive spacecraft (devoid of a propellant) by using a Centrifugal Inertial Drive System along with counteracting three-dimensional mirror-image symmetry. The idea that a closed system cannot exert a net force upon itself (classic physics) is false.

ADDENDA

The More Certain About What You Know, The Less You Can Discover

More on Inertial Propulsion

There are many assumed irrefutable laws of physics. One of these is the law of conservation of momentum. So, given this assumption, inertial propulsion without a propellant is not possible. In essence, a closed system cannot exert a net force upon itself.

Set 1

It is posited by mainstream physics that the centrifugal force is not a real force but rather a fictitious force. For a complete explanation, please review the video as presented below.

https://bit.ly/3jcnoZA

Set 2

Now, please refer to this second set of videos.

- *4-wheel Mov 1 - YouTube*
- *New Space Engine: Dean Spacecraft Propulsion - YouTube*
- *Dean Space Drive - YouTube*

These two sets of videos seem to contradict one another. If you believe that the law of conservation of momentum is irrefutable, then read this following explanation.

Oscillation Thrusters

The oscillation thruster, also describable as a stiction drive, internal drive, or slip-stick drive, is a commonly suggested device that uses the motion of internal masses to create net thrust. One of the most famous oscillation thrusters is the 1959 "Dean Drive" described in Patent 2,886,976 (ref. 10). A more recent and simple example is shown in figure 1 (ref. 11). Further still, figure 2 displays an example that uses rotating masses (ref. 12). Although there are many versions, all oscillation thrusters have the following common components:

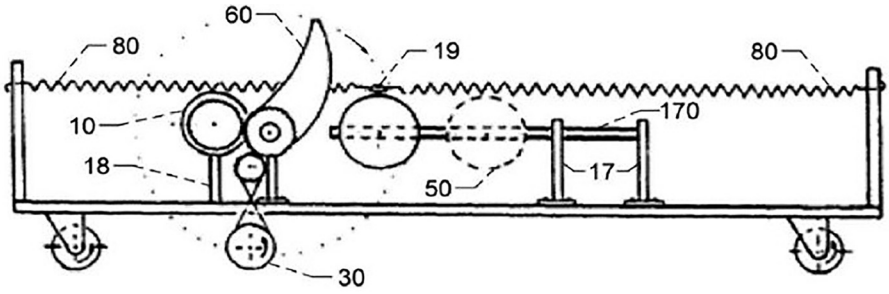
- Chassis to support a system of masses
- Conveyor that moves the masses through an asymmetric cycle
- Power source for the conveyor

A crucial feature is that the internal masses go through a cyclic motion where the motion in one direction is quicker than in the other. The result is that the whole device moves in surges across the ground, giving the appearance that a net thrust is being produced without expelling a reaction mass or having a direct driving connection to the ground.

Because it would constitute a breakthrough to be able to move a vehicle without using a reaction mass (ref. 2), these devices appear to be breakthroughs. Regrettably, such devices are not breakthroughs since they still require a connection to the ground to create net motion. The ground is the reaction mass and the frictional connection to the ground is a necessary component to its operation.

More specifically, it is the difference between the static fiction (sometimes called stiction) and the dynamic friction between the device and the ground that is required for their operation. Static friction, the amount of friction encountered when contacting surfaces are not moving relative to one another, is typically greater than the dynamic friction between the same materials. Dynamic friction is the amount of friction when the contacting surfaces are moving relative to one another.

Recall that the device's internal masses move fast in one direction and slow in the other. When the masses move quickly, the device has enough reaction force to overcome the static friction between itself and the ground, and the device slides. When the internal masses return slowly in the other direction, the reaction forces are not enough to overcome the static friction and the device stays in its place. The net effect is that such slip-stick motion causes the device to scoot across the floor.



Linear Oscillation Thruster

This is a typical example of an oscillation thruster, specifically from Patent 5,685,196 from Richard Foster (ref. 11) [Fair Use]. As the cam (60) rotates, a mass (50) moves slowly in one direction and is allowed to return quickly in the other. The reaction force from one part of this cycle is sufficient to overcome static friction, while the reaction force is insufficient in the other part of the cycle. This leads to one-directional motion, giving the illusion of net thrust.

NASA:

https://quantumdynamicsinc.com/scientific-papers

On the other hand, if you still don't believe that inertial propulsion is real? How do you explain the boat example in the websites below, based upon friction and gravity?

https://www.youtube.com/watch?v=nIt661hfr9c
and
https://www.youtube.com/watch?v=-uhOtDlXkcU

After viewing the boat example in the second link, consider this. There is no friction or stiction between the boat and the Thorsen inertial drive device (located within the boat) given the fact that there is no relative movement between the two, because the device is physically attached to the boat. Yet there is more momentum in the direction of motion; hence the boat moves in only one direction. Most importantly, the resistance from the water is greater in the direction of motion. Take note, this overall function violates the law of conservation of momentum.

In addition, using the concept of stiction and friction, how does one explain the following YouTube video starting at 1 minute 44 seconds *(New Space Engine: Dean Spacecraft Propulsion - YouTube*) whereby there is a loss of weight?

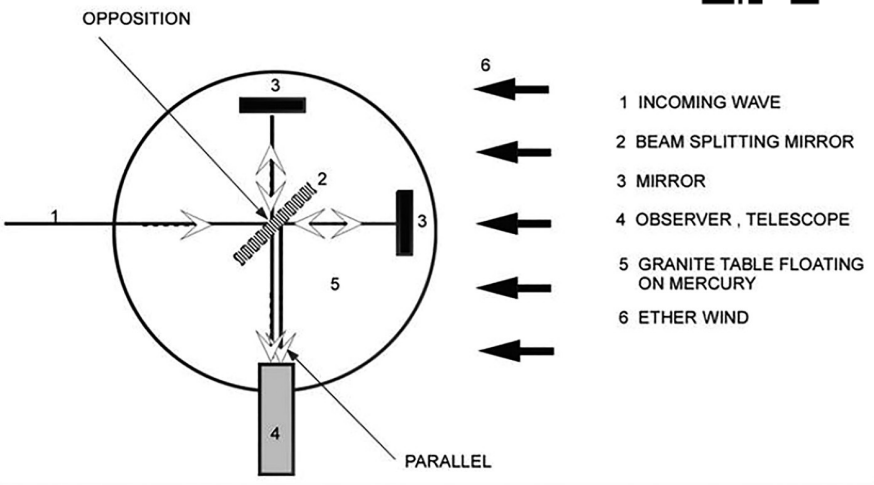
If you cannot, then here is another theory: there is a true centrifugal force = a true ether as posited by the book *The Ether by Ramsey* (see *theetherbyramsey.com*).

The More Certain About What You Know the Less You Can Discover.

Is It Time to Change the Laws of Physics?

The original classic interpretation of the MMX performed by Michaelson and Morley, assumed incorrectly that the interference pattern occurred at the **telescope/observer** with respect to **two parallel waves** that shift back and forth every 90 degrees thorough 360 degrees of rotation. (**However, parallel- only with respect to time in the equations of the MMX**—not in reality only mathematically.) But this author believes the interference pattern initially occurs at the **half-silvered mirror** from **two waves traveling in actual physical opposition** to one another, after their reflections from the peripheral mirrors.

The mathematical outcome of the classical Michaelson-Morley interpretation versus this alternative assumption by the author are different. They are not the same, so the consequence is different. Thus, the null result regarding the classical interpretation presumed by Michaelson and Morley is then in erratum = there is a true ether. Read more about this topic at *https://bit.ly/3Au59HC*.



True Centrifugal Force vs Pseudo-Centrifugal Force

Can we assume there is a true centrifugal force?

Please view this video which demonstrates the 4 Wheel Slow Speed Thorsen Drive.

https://bit.ly/3iXZBg7

Now, assuming there is a true centrifugal force, the device depicted in the above video will function on the surface of the earth, as well as in outer space, since there is more momentum in one direction compared to the opposite direction—most importantly, as a function of a true centrifugal force.

However, in contrast, presuming only a pseudo-centrifugal force, not a real force as classically hypothesized by mainstream physicists, the apparatus shown in the video will only function on the surface of the earth and not in outer space. **It will oscillate in outer space but not propel linearly in one direction = no net motion over time.** The reasoning is as follows. Presupposing no real force, it is the difference between stiction in one direction and friction in the other direction that causes the device on the table to move in one direction. A more thorough explanation is given below.

A crucial feature is that the internal masses go through a cyclic motion where the motion in one direction is quicker than in the other. The result is that the whole device moves in surges across the ground, giving the appearance that a net thrust is being produced without expelling a reaction mass or having a direct driving connection to the ground.

*Regrettably, such devices are not breakthroughs since they still require a connection to the ground to create net motion. **The ground is the reaction mass and the frictional connection to the ground is a necessary component***

to its operation. *More specifically, it is the difference between the* **static fiction (sometimes called stiction) and the dynamic friction between the device and the ground that is required for their operation**. *Static friction, the amount of friction encountered when contacting surfaces are not moving relative to one another, is typically greater than the dynamic friction between the same materials. Dynamic friction is the amount of friction when the contacting surfaces are moving relative to one another. (NASA)*

Recall that the device's internal masses move fast in one direction and slow in the other. When the masses move quickly, the device has enough reaction force to overcome the static friction between itself and the ground, and the device slides. When the internal masses return slowly in the other direction, the reaction forces are not enough to overcome the static friction and the device stays in its place.

On the other hand, it is my hypothesis that there is a true centrifugal force **based upon a true ether,** therefore, inertial propulsion is real and practical.

Also see the website The Ether by Ramsey.
(*theetherbyramsey.com*)

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FRICTION VS. STICTION

Who is Brandson Thorsen? Let's google him. Hmmm. Nothing there except an obituary. Why do you suppose? He was a noted inventor; we've all heard of the Thorsen inertial propulsion drive. Yet "Google and Wikipedia have totally censored his existence, literally making him no longer exist!" according to the International Space Agency (ISA) LinkedIn page.

Why do you suppose that is? This author knows that the reason reflects the scientific community's reluctance to believe that inertial propulsion is real. It boils down to stiction and friction. Let's first look at the definition of each—both of which, according to standard physics, is part of the propulsion process (F= ma). In physics, stiction is the static friction that needs to be overcome to enable the initial relative motion of stationary objects in contact. It takes considerable force to start a stationary object moving. Friction is similar: a force that resists the persistent relative motion of two bodies in contact; once the same object obtains enough force to start that motion. The force of stiction is greater than the force of friction. In other words, it takes a greater amount of force to induce motion of two objects in contact compared to the amount of force that maintains that motion once it has been initiated.

Yet Thorsen's inertial propulsion drive requires neither to propel an object.

You may now want to look at the following YouTube video to get a better appreciation of the Brandson Thorsen's Inertial Drive Engine. *https://bit.ly/3iXZBg7*

The classic interpretation of the one-way movement of the Thorsen inertial drive is that there is stiction in the direction of non-movement and friction in the direction of movement. Stiction is greater than friction, so it only moves in one direction.

The author believes this concept is in erratum.

Now, watch this video *https://bit.ly/3oLGxpX*.

It features a demonstration of the Thorsen inertial engine, shown propelling a canoe through a swimming pool during testing of the Thorsen drive, one of many mechanical-implementations inertial propulsion concepts. This clip supports claims of its workability. After viewing the boat example consider this. There is no friction or stiction between the boat and the Thorsen inertial drive device (located within the boat) given the fact that there is no relative movement between the two, because the device is physically attached to the boat. Yet there is more momentum in the direction of motion; therefore, the boat moves in only one direction. Most importantly, the resistance from the water is greater in the direction of motion. Take note, this overall function violates the law of conservation of momentum. Where is the stiction? Where is the friction?

See the following two YouTube sites for further understanding and elucidation.

https://www.youtube.com/watch?v=nIt661hfr9c

https://www.youtube.com/watch?v=-uhOtDlXkcU

Classic modern-day physics posits there is no true centrifugal force only a pseudoforce therefore inertial propulsion cannot exist. The author believes that that there is a true centrifugal force based upon the ether. Now again view *https://bit.ly/3iXZBg7*.

The author's explanation for the above video is as follows. To comprehend this hypothetical invention, one must be able to mentally visualize in three dimensions. So, to begin with, let us define the coordinate system. The z axis is to and from Earth. The x and y axes are the plane of the surface of the Earth.

After reviewing this site, take note, this invention possesses only one axis of freedom of motion, the y axis →defined as the direction of their motion.← Be cognizant of the fact that this experiment cannot move in the z axis due to gravity and the blocking effect of the Earth's surface. And it cannot move in the x-axis due to fixed orientation of the wheels. The only direction of freedom of motion is in the y axis. Bear in mind, this is crucial; relative to the y axis the centrifugal force is greater in the +y direction compared to the –y, because the mass is located more peripherally in the + y direction compared to the -y direction thus more centrifugal force in that direction. So, the devices then →propel← in the +y direction (→defined by the author as the direction of motion←). It is the author's hypothesis that this invention moves because there is a true centrifugal force based upon the existence of the ether and not because of the difference between stiction in one direction versus friction in the other direction.

The Dean Drive

In addition, the following YouTube site explains and demonstrates the Dean drive, which is another inertial propulsion invention by Norman Dean.

https://www.youtube.com/watch?v=r1JIAlrgfgA

So now, using the concept of stiction and friction, how does one explain the following YouTube video starting at 46 seconds (Dean Space Drive) whereby there is a loss of weight?

New Space Engine: Dean Spacecraft Propulsion - YouTube

If you cannot, then here is another theory: there is a true centrifugal force = a true ether as posited by the book *The Ether by Ramsey* (see *theetherbyramsey.com*).

The author's explanation for the Dean Drive is as follows. The oscillating masses, with respect to the central bars, move with momentum in both directions. But because there is an intermittent clutch in the direction of motion, then that momentum is partially transferred to the entire device only in that direction, moreover not in the other opposite direction whereby there is no clutch.

Read more about inertial propulsion without a propellant at *https://www.inertialpropulsionbyramsey.com/*