



Moving Safety Chair in the Vehicle

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Patent File no.201821038596 - Moving safety chair in the vehicle

Patent File no. 201821038600 – Synergistic safety spring stand

Patent File no. 201821038599 – Synergistic shock observer

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Abstract:

Every effort towards saving a life counts millions of people die or suffer injuries in road accidents hence road safety is of highest importance in the world. But now using my prototype of safety chair and synergistic spring stand for legs in together in vehicle then probability of injury after big collision is very lesser than compared with present system of chair in vehicle. I derived my idea of prototype from Mother Nature. A bamboo tree bends with the storm and regains its position as storm passes. Hence no harm is inflicted on bamboo tree because it do not stand concrete against the force. Similarly, if you stay rigid in an accident, force created will definitely act against you resulting into fatal injury. My invention will help a travelling passenger to be with the force rather than against it. In any accident major injuries are basically due to transfer of huge amount of energy. Moving vehicle stops suddenly in accident. This sudden change of inertia creates energy in various forms inflicting injuries to travelers inside vehicles. Law of inertia also applies to human bodies travelling inside the vehicle hence sudden change of inertia will result into serious injury. My invention of chair & spring stand for legs (Foot rest) is useful to minimize or disseminate the full impact of collision of head to the front chair or any rigid body. My prototype of spring stand for legs is also useful for leg stretching. Acupressure points on stand (made up of soft rubber) will give more pleasure sensation to the brain. My invent is useful for all vehicles such as car, bus, jeep, airplanes, trains, sheep etc. Small things make big differences for saving lacks of lives in the world

Keyword: Law of inertia, Collision, Prototype, Synergistic

I. INTRODUCTION

‘Every effort towards saving a life counts’ life is most beautiful thing that ever happened on earth. Millions of people die or suffer injuries in accident. Road safety is of highest importance in the world. This is application of physics for improving safety in chair of vehicle to reducing impact on individual chair. At Present chair in the vehicle are rigidly fixed on the surface area of vehicle therefore due to absence of absorbing mechanism whole-energy generated from accident will be acting on passenger only due to low of inertia this is the cause of injury & death of passenger. The death of passenger occurs by head & mouth injury is prevented by using my chair in vehicle. Therefore every effort towards minimizing injuries in road accident should be taken seriously. Not just accidents, injuries due to rough roads should also be taken care of. For these purpose, I would like to present my idea/ prototype. In any accident major injuries are basically due to transfer of huge quantum of energy. Moving vehicles stops suddenly in accident. This sudden change of inertia transfer energy in various forms inflicting injuries to humans traveling inside vehicles. Laws of inertia also applies to human bodies travelling inside the vehicle. Moving body stops suddenly & results into serious injuries to passengers such as whiplash injury, dislocation of joints, fracture, internal bleeding & other traumas, In language of physics. If we could maximize the time of impact it will result in to far lesser energy generation. For vehicles we have front bonnet which crashes first & it helps in increasing time of impact but inside the vehicle there is no effective mechanism present. But now in my prototype of safety chair, I would like to propose a safety mechanism. I

strongly believe that this prototype if implemented properly & with the help further research & development will help in saving many lives & minimizing injuries inflicted in accident or on rough roads. My idea / prototype is based on basic use of spring action I propose to use such combinations of springs which will absorb the shocks in accident. The prototype chair will be attached with high quality of Titanium springs to the surface of the vehicle. The structure would be such that in normal traveling it will not do much of spring action. But in case of accident, the sufficiently high energy would activate this spring action. Such that transfer of energy in accident would least to the human. Due to synergistic combination of spring to the legs of chair when a collision occurs the law of inertia will act upon the connected springs. Springs will be compressed in this system when front springs get compressed at the same time back end of the others springs get expands. This synergistic system will help to restore chair position after a small displacement in cm. At the time of collision, this whole action will delay the impact for some fraction of time as per the lows of physics (Impact related) due to spring action time component will increase hence, de acceleration will be less overall force generation of chair will be less. In my chair due to synergistic connection of horizontal spring time of collision on chair will increase by fractions.

This even a small increase of time in collision, will reduce impact to a great extend (may be up to 90%) Hence, if we can increase the time component in an accident by using my safety chair, this will help to reducing a lot of impact force on the passenger of the chair. In collision period the chair will slide over surface of vehicle for some distance in cm. The frictional energy will be generated out of it. Energy generated from

overall impact will be disputed in following forms, considering the chair system.

1) Horizontal spring will be absorb energy & convert in to spring energy. This will reduce most part of the impact on the chair.

ii) Some energy will be utilized for frictional energy.

And the most important part will be the increase time of impact as time is double divided in this calculations.

The total energy created in accident

$$\text{Impuls} = \Delta p$$

$$Ft = mv$$

$$F = \frac{mv}{t}$$

F=Force

Δp = change in momentum

Here the energy of accident can be minimized by increasing time of impact **Total energy of accident is inversally proportional to t (time).**

So time of impact increases impact force of accident decreases.

The time of impact can be increased by using my safety chair & spring stand in together in the vehicle.

This is application of physics on the chair of vehicle which is used in my prototype of safety chair & spring stand in together.

The combination of spring in my proposed will serve many purposes as following.

1) It will act as shock absorber in regular travelling on rough & bumpy road. The vertical component of spring will provide cushion against rough roads. This will be very useful for passengers with back pain problem, pregnant women, senior citizens.

2) In case of accident scenario, the horizontal component of spring will come into the picture. The sudden stopping of vehicle through passengers in front side that is in the original direction on movement. This results into head & face injuries seat belt helps to stop us from hitting hard on the front side by tying us to the seat. But only seat belt do not serve the purpose to the fullest. By heard tying of seat belt internal brain hemorrhage may be occur. My prototype of chair will help in reducing this impact.

The horizontal component of spring, will oppose this sudden stopping. The spring will compress in horizontal direction. This will greatly absorb the energy & also it will increase time of impact. It will swing the passenger safely & for very short distance (In.cm) inside the vehicle small things make a big difference. This seemingly small thing will greatly help in reducing impact of energy generated in an accident. In Boeing Airplanes my chair is very useful now this type of chair is not found at this time. At landing of Aeroplane if suppose front tire of Aeroplane is blast or road may be damage (in rare time) than my chair is very useful because by high speed of Aeroplane the inner passenger is very badly throw in front chair but using my chair they prevent their mouth & head injury. My chair is useful for all vehicles In the world for example car, jeep, travels, bus, truck, tempo, auto, airplane, train sheep e. t. c. by small changing in their old chair. My event is related for the person for life or death. So I request to Hon. Patent office for safe journey is the right of human may be occur by allowed this event in the form of patent. In big storm big trees are crash down but trees of bamboo are not crash hear in my chair spring works like a bamboo. A bamboo trees bends with the storm but the storm stops it comes on original condition. So that if you stand concrete against the power then strength will work on you. But if you stay with the power than power create in accident does not work on you. In

my chair connection of the spring is innovatively connected to the surface area of the vehicle as such a type in period of collision their function is start automatically & naturally. This structure would be such that in normal traveling it will not do much of spring action. But in case of accident, the sufficiently high energy would activate this spring action such that transfer of energy in accident would least effect to the human. This is specific embodiments in my event. My innovation is very basic in nature. It is most cost effective & simple to use. This system will be most cheap & most effective than any other safety system. By using my chair in vehicle you may be save your life after big impact of vehicle. My invention is related from preventing death, of passenger by changing small change in chair. This is unique & magic chair in the world of vehicle. At present, there are various safety mechanisms in a vehicle but none focuses on energy dynamics at individual chair level in a vehicle. My innovation in energy dynamics at individual chair level will help in reducing impact on chair to a great level in terms of energy inflicted. Hence I claim that my innovation with help of further research & development will help in saving lakes of life & persons from life threatening injuries. The vertical spring components in my innovation is especially useful in bad road conditions such as glitches, speed breakers. This will give extra comfort at the minimum cost. It prevents abortion due to jerk from dales. Also useful in separates. At the time of sudden breaks my innovation will save passenger from injures such as whiplash injury, or injures of face & head. Doted Legs stand of spring give more pleaser when passenger press on it by legs & it is also highly prevent to through face of passenger on in front chair at the time of impact this is most important stand of spring also useful in separates. It can be easily installed in old chair of the vehicles also. Because modification cost is very less. At minimum cost any poor person can modify the chair in his vehicle using my innovation.

Synergistic shock absorber

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1) Shock absorber for motor cycles & auto

2) Shock absorber for chair of vehicle

This component will be fitted to the middle of 4 leg of chair this component will act as shock absorber in this vertical component of spring when vehicle passes through a glitch on road it will compress the spring & absorb that energy. This will act as cushion on rough roads. In Maharashtra S.T. Mahamandal in 2016 more than 200 ladies conductor have had been suffered from abortion due to jerk from dales. So that for prevent death of small baby in the world it is very necessary from prevent jerk in dales. This instrument is very very cheap & for poor people in the world who cannot use a luxury car is useful for safe & safety journey although in luxury chair of luxury car this type of instrument is not found. So they may be use this instrument by small change in their chair. This component will play important role in horizontal collision also. The spring energy in this spring will also come in to picture. Spring will try to get back to original position this process will absorb energy. Hence will help in reducing the impact on parson sitting on chair. This component fitted as such type in vicar & 4 nut-bolt in to plate of iron in such a way that there function may be start only on glitch & rough road. Otherwise in smooth road their function is not done. In all component in my safety chair Titanium spring is used Titanium springs have less mass & thus less inertia lower mass systems generate less inertia & accelerate faster allowing better responsiveness than

steel spring. A Titanium low modulus low density & high strength.

Synergistic Safety Spring Stand for leg

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At the movement of impact if the legs of passenger is on this component then face of passenger should not throw on front chair this component also used in separately. This component is also use full for pleaser of passenger. When passenger press on this component by legs he has got more relief & enjoyment & also for to minimize or fail away or disseminate the full impact of collision of head to the front chair or any rigid body. At the time of impact face of passenger is throw in front side this is major reason of head & face injury is the reason of death of passenger but at the time of impact if the leg of passenger is on this component then this component is automatically compress due to spring & whole energy which create in collision is absorbed in this component by spring due to this reason face & head of the passenger is remain safe. The stand exerts force on the passenger one of the components of this force is Horizontal this horizontal force push passenger behind. On this plate of component rubber dots of acupressure is present when passenger press by his legs on this component then he gets more pleasure & relief. It is also useful for remove leziness in long journey & for acupressure to legs & foot plaw which gives more pleasure sensation to the brain. Small thinks makes a big differences. During period of collision my chair absorb energy & increase time of impact both works are done at the same time due to this reason first big hit of head of passenger on front chair or any rigid body is became very slow as comparatively head of passenger of rigid chair hit on front chair. This is key point of safety of passenger in my chair. After big collision in any accident death of passenger is done in first big stroke of head to the front chair or any rigid hard place but in my chair this fast movement of head and face to collide front chair or any rigid body is became very slow as comparatively head of passenger in rigid chair collide in front chair or any rigid place. In impact time is divide to the force so that if time is increasing then automatically impact force is decreasing time component is very important for less answer of impact.

II. REFERENCE

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