



US 20080012249A1

(19) **United States**

(12) **Patent Application Publication**
von Detten

(10) **Pub. No.: US 2008/0012249 A1**

(43) **Pub. Date: Jan. 17, 2008**

(54) **IN LINE ROLLER SKATE WITH SHOCK
ABSORBENT SUSPENSION**

(57) **ABSTRACT**

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(21) Appl. No.: **11/345,833**

(22) Filed: **Feb. 1, 2006**

Related U.S. Application Data

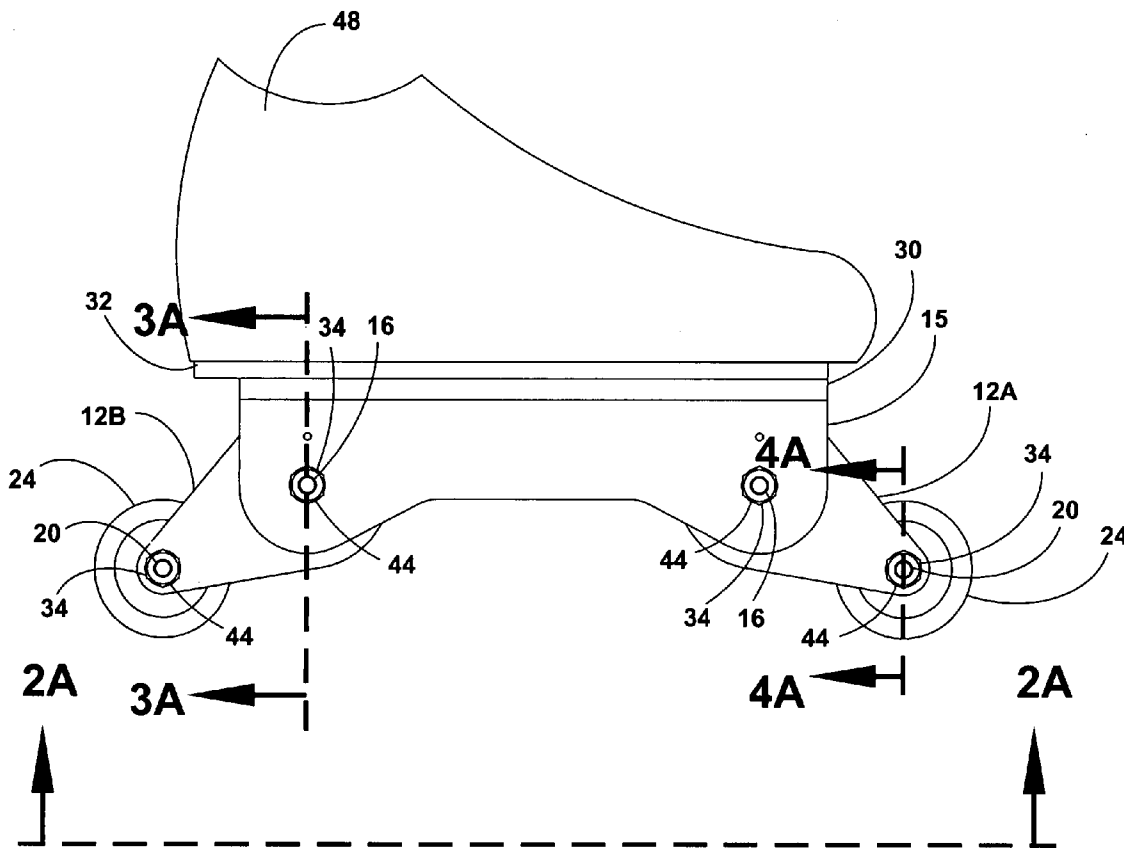
(60) Provisional application No. 60/648,884, filed on Feb.
1, 2005. Provisional application No. 60/698,588, filed
on Jul. 11, 2005.

Publication Classification

(51) **Int. Cl.**
A63C 17/00 (2006.01)

(52) **U.S. Cl.** **280/11.27**

An in line roller skate comprises a platform in horizontal plane and side brackets secured to underside of horizontal platform in vertical plane opposing each other and straddling at least one pair of extension arm pivotally arranged in vertical plane and contained about non rotational center axle in horizontal plane by a lot of spacer element to be contiguous to extension arm. Pair of extension arm is configured of singular extension arm coaxial affixed and opposed to each other in mirror image that distal end of at least one extension arm is of forked position from distal end of opposing extension arm. Distal end of extension arm has an axle fixated in non-rotational fashion with skating wheel pivotally affixed in a vertical plane thereof. Extension arm is encircling an elastic element being confined and arranged to allow extension arm to rotate about center axis within a certain range and quadrant of a full circle of which rotation can also be in tandem whereby opposing extension arm is fixated to each other and sharing a skating wheel attached to axle shaft at distal end of pair of extension arm. It is also contemplated that an in line roller skate can be converted quickly into a 2 wheel and 4 wheel inline roller skate depending on the preference of the in line roller skate rider.



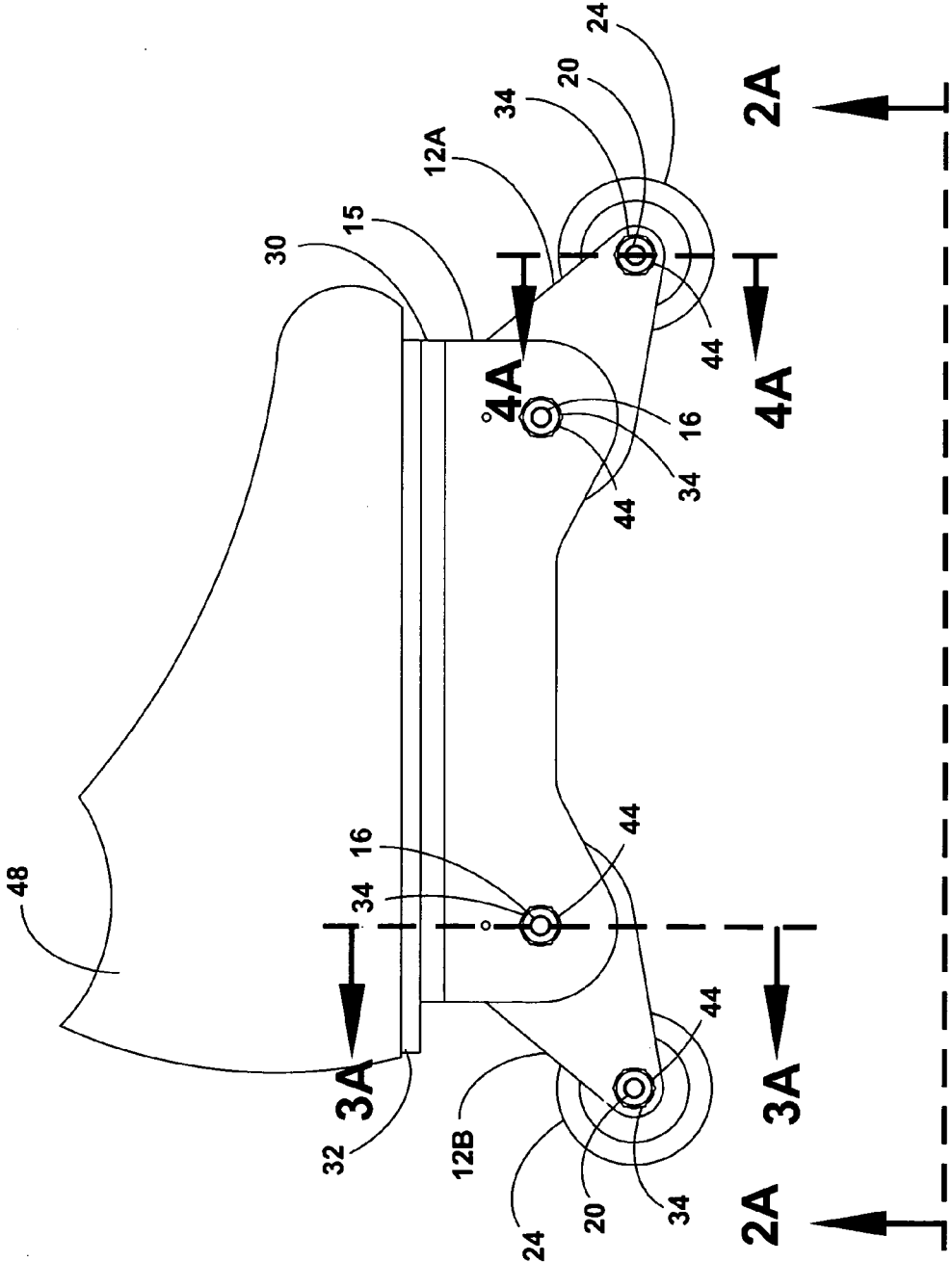


Fig. 1A

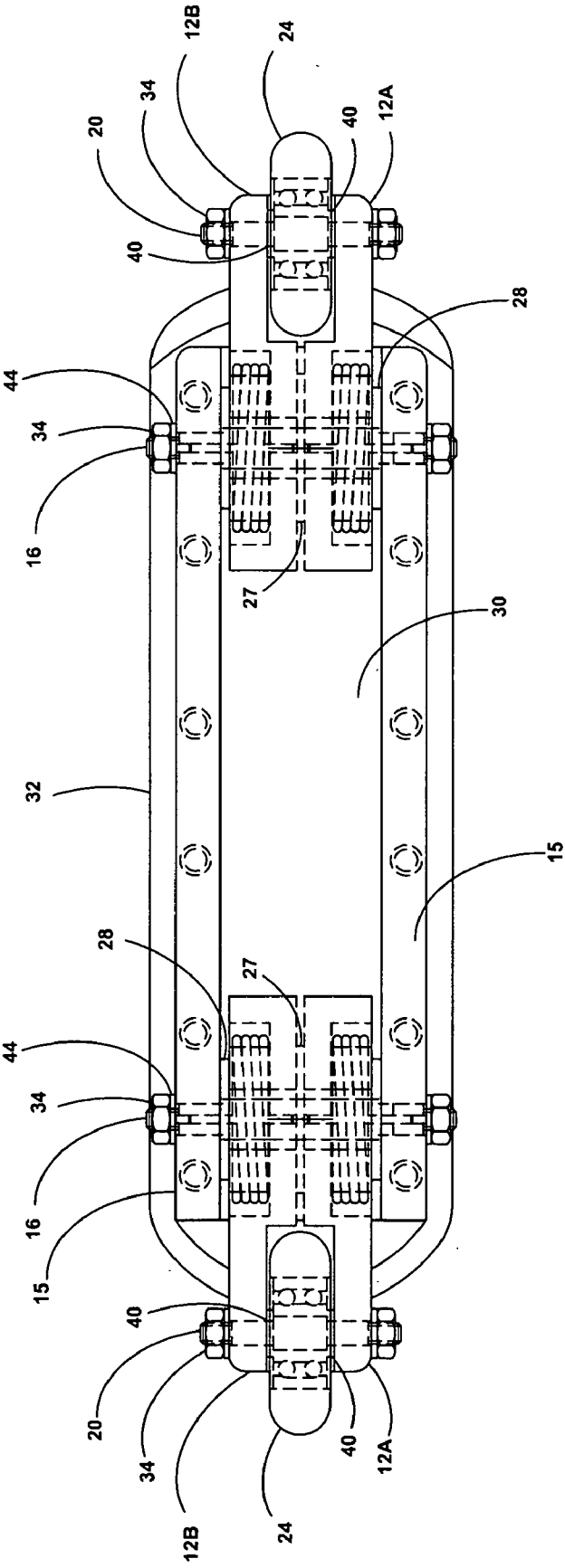


Fig. 2A

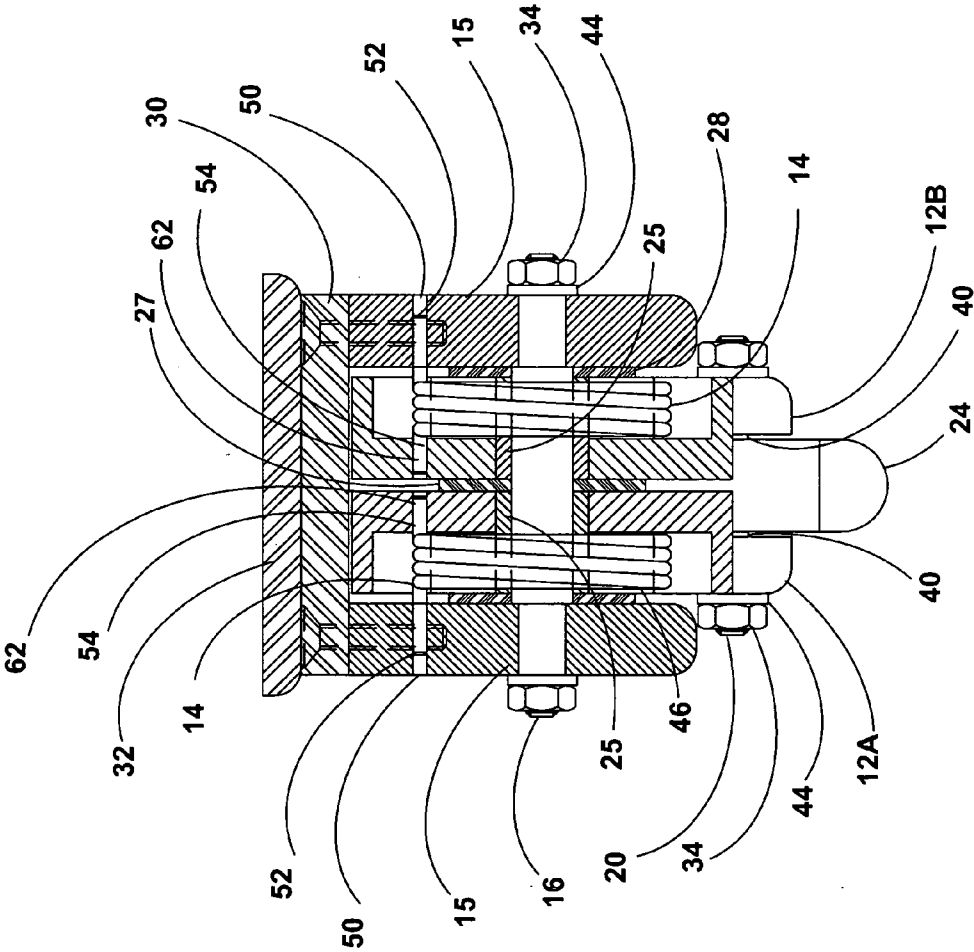


Fig. 3A

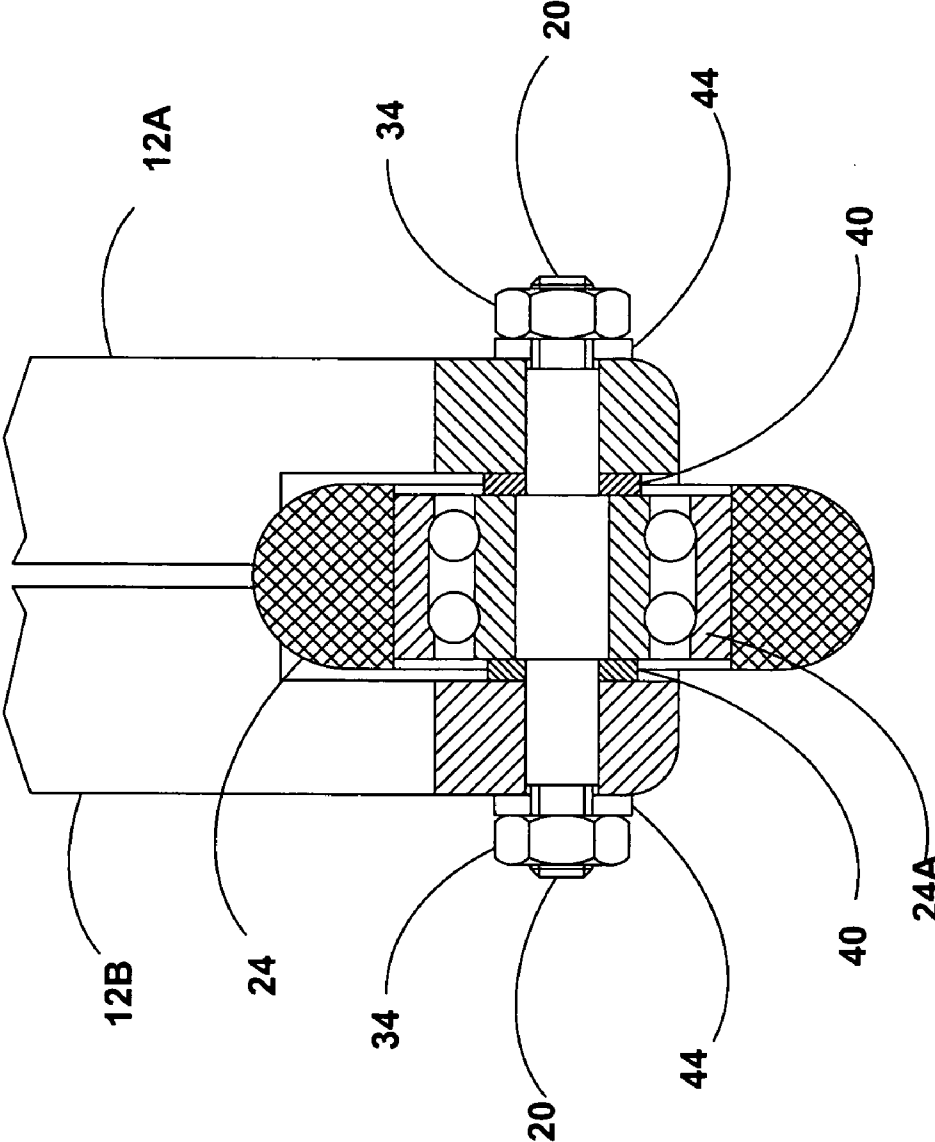


Fig. 4A

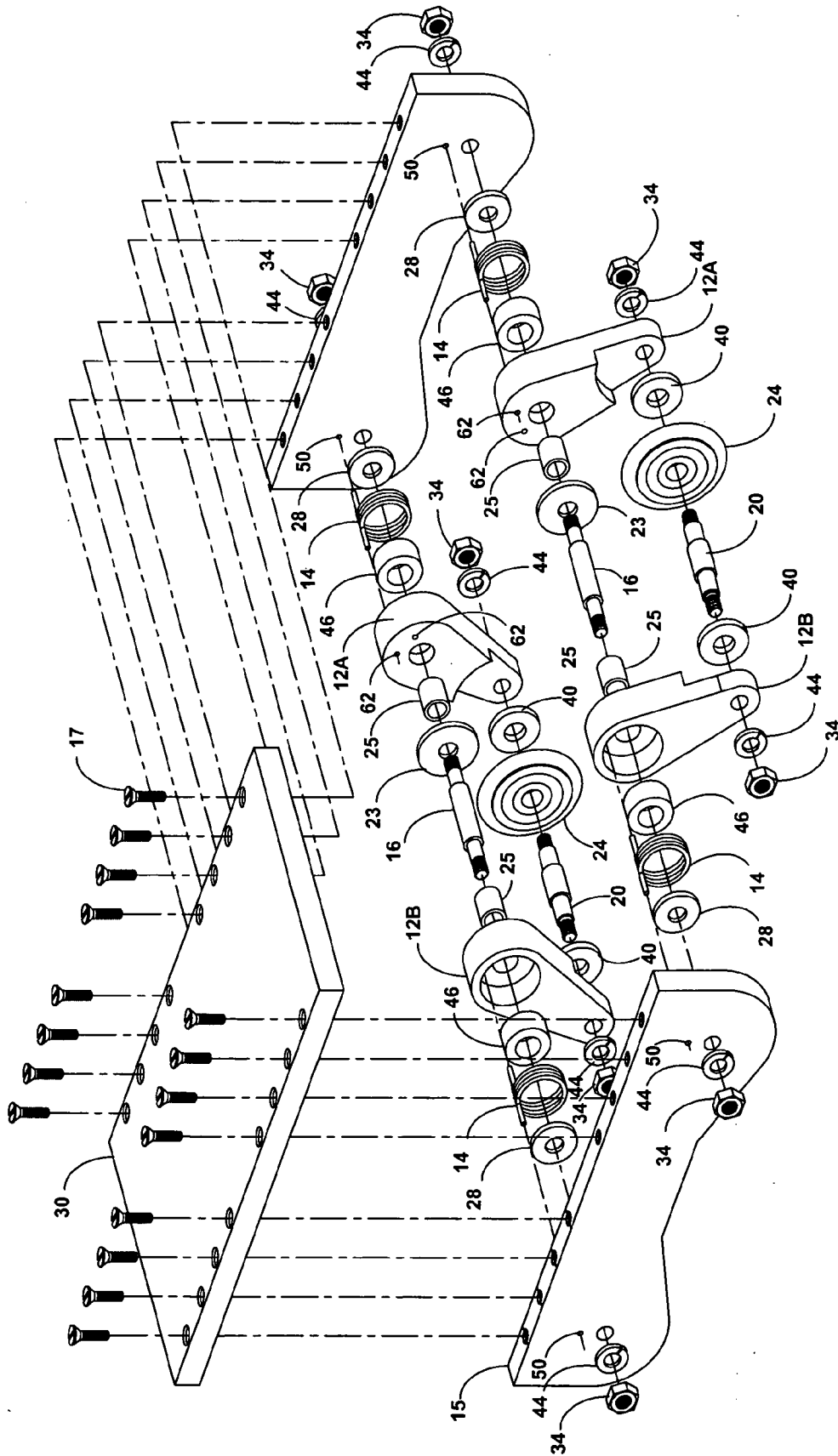


Fig. 5A

**IN LINE ROLLER SKATE WITH SHOCK
ABSORBENT SUSPENSION**

RELATED APPLICATIONS

[0001] This application claims the priority date of prior filed applications having Ser. No. 60/648,884 and filing date of Feb. 01, 2005 and 60/698,588 and a filing date of Apr. 11, 2005 and entitled: In line roller skate with flexible and shock absorbent wheel base.

INCORPORATION BY REFERENCE

[0002] Applicant(s) herein incorporate by reference, any and all U.S. patents and U.S. patent applications cited or referred to in this application.

BACKGROUND OF THE INVENTION

[0003] 1. Field of Invention

[0004] This invention relates generally to in line roller skates in particular to an inline roller skate including the arrangement of elements to provide a shock absorbent independent wheel suspension mechanism to enable the inline roller skate to be used on irregular riding surfaces and for acrobatic type of riding mode including but not limited to jumping and the like by in line roller skate passenger.

[0005] 2. Background

[0006] A common in line roller skate comprises a frame or chassis, having a top platform with the sole of a boot secured to it for the foot of in line roller skate rider. Side plates are rigidly secured to the underside of top platform in vertical fashion opposing each other straddling skate wheels mounted about axles protruding side plates and securely attached by appropriate fastening elements in a non relatable fashion. Axles are appropriately spaced between each other to enable unrestricted rotation of wheels during use of in line roller skate. The number of axles having wheels attached along entire length of skate can vary and commonly is dependent upon size of wheel outer diameter but usually accounts to 2 or more wheels. The wheels are usually arranged in a serial type inline fashion specifically meaning that wheels are lined up along a common longitudinal center axis. The skates of the type as aforesaid are well known in the field of in line roller skates and exist in many configurations and sizes. The type of suspension for wheels does not include an elastic element for shock absorbency to cushion leg of skate rider during skating action especially when running against an obstacle or other irregular surface feature. A great number of skate riders are motivated to perform long jumping with the assist of ramps, curbs or other like features which requires a great deal of physical effort by the skate rider to get airborne per se and consequentially requiring appropriate leg action for a cushioned landing to prevent injury to the bracing feet and legs. The like suspension of wheels on these inline roller skates henceforth requires a considerable skill of the skate rider to perform acrobatics type of skate riding and then at best within marginal results.

[0007] 3. Description of Related Art

[0008] The following art describes the present state of this field: U.S. Pat. No. 277,911 to Lutz describes a roller skate with a spring arm having a single coil made of wire with permanent attachment to a footboard with said swing arm

supporting at the distal end a wheel axle with a wheel truck. During skating the weight of skater applied to said foot board in combination with skating action the like of pushing said roller skate against the ground will cause said spring arm to be deflected describing an articulated movement of said wheel truck and upon recoil of said spring arm assist the skater towards improved acceleration in forward motion. Said spring arm may also afford a cushioned rebound being transferred to the foot of skate rider during the skating action especially when running against an obstacle or other irregular surface feature. Plurality of said spring arm is made of wire and independently from any other means supports front and rear wheel truck in its entirety. Aforesaid in combination with the configuration of spring arm may not provide a preferred ride stability for the skater when describing lateral foot movements such as maneuvering around objects and obstacles specifically when negotiating change in directions such as cornering and the like. Further more the articulated spring action is considerably limited in range due to the fact that most of the spring deflection is being accomplished by said spring arm therefore requiring a greatly progressive spring force during deflection with provisions for relatively small clearance between outer extremity of said skate wheel and underside of said foot board of said roller-skate. Aforesaid progressive spring force means that the degree of spring deflection of said spring arm from the start point of deflection to the end point or fullest extend of possible deflection requires a progressively larger force applied by skater in proportion to the degree of spring deflection. In retrospect this feature may limit the ability of skater to perform controlled jumping over obstacles and the like in addition may also limit shock absorbency and rebound during skating specifically when the roller skate rider is negotiating irregularities on riding surface such as bumps, obstacles and other like objects.

[0009] U.S. Pat. No. 5,931,480 describes a foot gear suspension device with movable swing arm with a nonrotating axis mounted to distal ends of said swing arm having free rotating skate wheels. Opposite end of said swing arm is pivotally attached to frame work of said foot gear having a secondary pivot pin in line with said pivotal attachment connecting to a linear elastic element such as an air, hydraulic, or spring cushioned piston or the like. The length of distance between said pivot pins determines the degree of leverage and such articulated movement in the vertical plane of said swing arm. Said swing arm having a skate wheel is attached at either end of said foot gear frame work in such a manner that plurality of said skate wheel is in line with each other along the longitudinal center axis of said foot gear. During skating the weight of skater applied to said foot board in combination with skating action the like of pushing the skate against the riding surface effects said swing arm to deflect down warily in an articulated movement and upon recoil of elastic element assist the skater towards enhanced acceleration in forward motion. Arrangement of said swing arm may afford a shock absorbency to leg of skater during skating activity especially when running against protrusions in surface or during maneuvering around other like obstacles. The type of fixation of said swing arm provides sufficient clearance to said framework of said footgear during articulated movement of said swing arm. Hence forth it appears this invention teaches optimization of movement in vertical plane of said swing arm having said skate wheel therefore providing sufficient capability for skater to per-

form jumping, negotiating obstacles and the like. Said invention among others does not teach how the elasticity of said swing arm is translating a proportional equal or nearly equal force of rebound through out the complete range of pivotal and articulated travel of said swing arm. Specifically this invention does not explain sufficiently the relationship of the type of elastic element the like of air, hydraulic, spring and other referenced herein and how these elements are connected to and interfacing with said primary and said secondary pivotal arrangement of said swing arm. The present arrangement as shown and as specified in this invention may not make provisions for optimized utilization of vertical movement of said swing arm and may distribute a disproportional force of rebound in relation to the position of said swing arm and along total travel range thereof. In retrospect the skating may be very limited resulting in diminished effectiveness for jumping, acrobatics, negotiation of obstacles, surface irregularities and the like. Afore-said is manifested by a progressive change in elasticity or rebound force therefore requiring for the rider to compensate with proper leg action, balancing and physical strength. Therefore it may be highly likely that a diminished rebound force is assisting the rider wherein greater force may be required and in retrospect a greater force may be delivered when a smaller force for rebound may be sufficient. Limitations in the ability of skate rider to use rebound assist for acceleration in forward motion and performing jumping, acrobatics or negotiating riding surface obstacles or the like may greatly increase the need of riders skill level and physical strength and may render a marginal ride stability at best. Said invention also fails to teach proper fixation of said swing arm arrangement along the horizontal center axis of said pivot arrangement. Because of distal length from said pivot arrangement to said wheel of said swing arm lateral forces or thrust applied to said swing arm by rider are of considerable force requiring a positive fixation to said swing arm along longitudinal center axis of wheel and frame work the like of wear plates straddling said swing arm rather depending on said swing arm pivotal arrangement. Afore-said may contribute to a greatly diminished ride stability which more so with inline skates is of significant importance to the riders safety when negotiating sharp turns, steeply banked corner riding, quick stops and the like. It is of great attraction to an inline skateboard rider and of great incentive to acquire the skills of in line skating and once acquired to perform acrobatic type riding. Therefore an in line skate board rider applies on a very frequent basis significant thrust onto said foot gear suspension requiring a considerably contained skating wheel suspension delivering superior friction or grasp of skating wheel upon the riding surface. The like arrangement of said swing arm of this invention in combination with the distal length between wheel axle and pivot point of said swing arm excluding a means of proper containment of said swing arm along the horizontal axis the like of wear plate and other fixation elements may not contribute to a desired ride stability for the skater and may limit significantly ride flexibility and safety. For further consideration this invention fails to teach inclusion of more than 2 skating wheels per said footgear. It is well known that ride stability and ride comfort and versatility is greatly enhanced with an in line skate having more than 2 skating wheels.

[0010] My prior art search with abstracts described above teaches: several foot gear suspensions including a design,

but fail to teach an in line skate with a fixated and unrestricted and shock absorbent skating wheel suspension describing an articulated movement to be of constant deflection force through the complete range of articulated movement without restrictive features to limit articulated movement. The present invention fulfills these needs and provides further related advantages as described in the following summary.

SUMMARY OF INVENTION

[0011] The present invention teaches certain benefits in construction and use, which give rise to the objectives described below.

[0012] An in line roller skate comprises a platform in horizontal plane and side brackets secured to underside of horizontal platform in vertical plane opposing each other and straddling extension arms pivotally arranged in vertical plane and contained about non rotational center axle in horizontal plane and opposing each other in fork like fashion. Extension arm is having a torsion spring encircling spacer ring ratably fixated about bearing sleeve thereof seated onto center axle. Torsion spring is of multi coil type made of spring steel or other suitable wire having an extension along the horizontal plane at one extremity of coil with the like at the opposite extremity thereof and confined in through hole of extension arm and side plate respectively. Distal end of extension arm has an axle fixated in non-rotational fashion with a skating wheel ratably fixated in a vertical plane. Torsion spring is confined and arranged to allow extension arm to rotate about center axis within a certain range and quadrant of a full circle of which rotation can also be in tandem whereby opposing pair of extension arm are fixated to each other and sharing one skating wheel attached to axle shaft at distal end of pair of extension arm. It is also contemplated that an in line roller skate can be converted quickly into a 2 wheel inline roller skate depending on the preference of the in line roller skate rider.

[0013] A primary objective of one embodiment of the present invention is to provide an apparatus and method of use of such apparatus that yields advantages not taught by the prior art.

[0014] A still further objective is to assure that an embodiment of the invention is to provide a platform for fixating a boot for an inline roller skate to be used by a skater.

[0015] A still further objective is to assure that an embodiment of the invention is to provide an extension arm pivotal fixated to frame for an in line roller skate to free wheel in a singular direction during use.

[0016] A still further objective is to assure that an embodiment of the invention is to provide a torsion spring with extension arm for an in line roller skate having an elastic suspension.

[0017] A still further objective is to assure that an embodiment of the invention is capable of propelling an in line roller skate in forward motion with the assist of torsion spring elasticity and articulated travel of extension arm during use.

[0018] A still further objective is to assure that an embodiment of the invention is capable to enable a skater to perform

maneuvers with an in line roller skate the like of jumping and acrobatic skating taking advantage of elasticity of torsion spring.

[0019] A still further objective is to assure that an embodiment of the invention is of a configuration that all elements of an in line roller skate are fully enclosed to the benefit of safe operation.

[0020] A still further objective is that torsion spring is readily exchangeable to an alternate torsion spring to be of spring strength adapted to weight and desired ride comfort of an in line roller skate rider.

[0021] A still further objective is to assure that an embodiment of the invention is capable to provide various extension arm fixation with convenient adjusting and exchange of dependent elements of an in line roller skate.

[0022] A still further objective is to assure that an embodiment of the invention is providing 2 or more than 2 skating wheels for an in line roller skate to the benefit of ride stability, terrain adaptability and good ground clearance.

[0023] A still further objective is to assure that an embodiment of the invention is conceived to present advantages over other inventions for an in line roller skate with one advantage providing the ability to readily change a preferred configuration to another preferred configuration done and completed by the end user of this invention.

[0024] Other features and advantages of the embodiments of the present invention will become apparent from the following more detailed description, taken in conjunction with the accompanying drawings, which illustrate, by the way of example, the principles of at least one of the possible embodiments of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0025] The accompanying drawings illustrate at least one of the best mode embodiments of the present invention. In such drawings:

[0026] FIG. 1 is a side elevation view of a preferred embodiment of present invention of an in line roller skate having a frame work with a boot attached to upper platform with side brackets fixated along underside of platform straddling 2 pair of swing arm with each having a skating wheel.

[0027] FIG. 2 is a plan view taken along lines 2-2 respectively in FIG. 1;

[0028] FIG. 3 is a cross sectional view of a preferred embodiment of present invention taken along lines 3-3 respectively in FIG. 1;

[0029] FIG. 4 is a cross sectional view taken along lines 44 respectively in FIG. 1;

[0030] FIG. 5 is an expanded and perspective and exploded view of a preferred embodiment of present invention;

[0031] FIG. 1A is a side elevation view of a preferred embodiment of present invention of an in line roller skate having a frame work with a boot attached to upper platform with side brackets fixated along underside of platform straddling 2 pair of swing arm with each pair of swing arm having a skating wheel.

[0032] FIG. 2A is a plan view taken along lines 2A-2A respectively in FIG. 1;

[0033] FIG. 3A is a cross sectional view of a preferred embodiment of present invention taken along lines 3A-3A respectively in FIG. 1A;

[0034] FIG. 4A is a cross sectional view taken along lines 4A-4A respectively in FIG. 1A;

[0035] FIG. 5A is an expanded and perspective and exploded view of a preferred embodiment of present invention;

DETAILED DESCRIPTION OF THE INVENTION

[0036] The above-described drawing figures illustrate the present invention in at least one of its preferred, best mode embodiments, which are further, defined in detail in the following description. Those having ordinary skill in the art may be able to make alterations and modifications in the present invention without departing from its spirit and scope. Therefore it must be understood that the illustrated embodiments have been set forth only for the purposes of example and that they should not be taken as limiting the invention as defined in the following.

[0037] FIG. 1 shows an embodiment of this invention in front elevation view. Special designed skating boot 48 is firmly affixed to boot support plate 32. Platform 30 in horizontal plane is having plurality of side bracket 15 affixed along underside in perpendicular plane lining up with edge of platform 30. Plurality of axle 16 has end protruding through hole in side bracket 15 with plurality of lock washer 44 and plurality of nut 34 threaded onto plurality of end of axle 16 rendering thereof in affixed and nonrotating fashion. Plurality of pair of extension arm 12A and 12B respectively is pivotally and coaxially affixed and opposed to each other in mirror image about plurality of axle 16 and rotated in angular position that distal end for plurality of extension arm 12A is of forked position from distal end of extension arm 12B. Plurality of extension arm 12A and 12B respectively is having a skating wheel affixed to plurality of axle 21 thereof non rotating affixed to distal end of plurality of extension arm 12A and 12B with plurality of lock washer 44 and plurality of nut 34 threaded onto end of plurality of axle 21.

[0038] Construction of a line roller skate must demonstrate that skate wheels are positioned as such to provide precise alignment along longitudinal center axis in relation to skate frame and said skating wheels are affixed to and confined along horizontal center axis of skating wheels. Aforesaid features are of great importance to the ride stability and safety of an in line roller skate. Aforesaid is achieved and very common with many inline roller skates commercially readily available. Afore said may not be readily demonstrated with in line roller skates having an articulated and elastic wheel suspension. An embodiment of this invention is demonstrating that an in line roller skate having an articulated and elastic wheel suspension is providing superior ride stability and safety equivalent to present available in line roller-skates without an elastic wheel suspension. FIG. 2 shows the bottom plan view of an embodiment of this invention. Special designed skating boot 48—not shown—is firmly affixed to boot support plate 32. Platform 30 in horizontal plane is having plurality of side

bracket 15 affixed with plurality of counter sink screw 17—not shown—also as referenced in FIG. 5. Plurality of extension arm 12A and 12B respectively is pivotally and coaxially affixed about plurality of axle 16 and rotated in angular fork like position with distal end of plurality of extension arm 12A of mirror image in angular position from distal end of plurality of extension arm 12B. Plurality of extension arm 12A and 12B respectively is having a skating wheel affixed to plurality of axle 21 with said axle non rotating affixed to distal end of plurality of extension arm 12A and 12B respectively with plurality of lock washer 44 and plurality of nut 34 threaded onto end of plurality of axle 21. Plurality of axle 16 is protruding plurality of side bracket 15 having plurality of lock washer 44 and nut 34 threaded onto end of plurality of axle 16. Plurality of side bracket 15 is straddling plurality of extension arm 12A and 12B respectively with plurality of wear spacer ring 28 placed about plurality of axle 16 in rotating fashion with plurality of wear spacer ring 23 placed about plurality of axle 16. Plurality of wear spacer ring 28 is abutting face of plurality of side bracket 15 with opposite side of spacer ring 28 abutting face of plurality of spacer 46 referred to on FIG. 3. Plurality of wear spacer ring 23 is abutting face of plurality of hub of extension arm 12A and 12B respectively. It is note worthy to mention that aforesaid is demonstrating the effectiveness of said arrangement highlighting the confinement for plurality of extension arm 12A and 12B respectively along horizontal center axis in a pivotal fashion. Additionally it is easily recognizable that precise alignment for plurality of skating wheel 24 along the longitudinal center axis thereof is permanent and cannot not be misaligned during use if this invention.

[0039] FIG. 3 shows an embodiment of this invention in cross sectional view. Special designed skating boot 48—not shown—is firmly affixed to boot support plate 32. Platform 30 in horizontal plane is having plurality of side bracket 15 affixed with plurality of counter sink screw 17—not shown—along underside thereof in perpendicular plane. Extension arm 12A and 12B respectively is pivotally and coaxially affixed about plurality of axle 16 and rotated in angular position—partially shown—to a fork like position with distal end of extension arm 12A of mirror image to extension arm 12B. Extension arm 12A and 12B respectively is having a skating wheel affixed to axle 21 thereof affixed in non rotating fashion to distal end of extension arm 12A and 12B respectively with lock washer 44 and nut 34 threaded onto end thereof. Skating wheel 24 is pivotally affixed about axle 21 with lock washer 44 and nut 34 threaded onto opposite end of axle 21. Axle 16 is protruding through hole for plurality of side bracket 15 at one end and opposite end thereof with lock washer 44 and nut 34 rendering axle 16 affixed in a non rotating fashion. Plurality of side bracket 15 is straddling extension arm 12A and 12B respectively with plurality of wear spacer ring 28 placed about axle 16 abutting face of plurality of side bracket 15 with opposite side thereof abutting face of plurality of spacer 46. Wear spacer ring 23 is abutting face of hub for extension arm 12A and 12B respectively. Aforesaid is demonstrating the effectiveness of said arrangement highlighting the precise confinement of extension arm 12A and 12B respectively along horizontal center axis and axle 16 respectively. Aforesaid is high lighted due to the fact that the overall length of center portion of axle 16 is denominating a larger circumference than end portions thereof and to be of minutely

greater linear length therefore exceeding the sum of cross sectional length for plurality of wear spacer 28 and wear spacer 23 and plurality of spacer 46 and of extension arm 12A and 12B respectively. Therefore extension arm 12A and 12B respectively is contained along the horizontal axis of axle 16 and capable of rotational movement thereof during use of this invention. Specifically containment of extension arm 12A and 12B respectively is secured by the contiguous effect with face of plurality of wear spacer 28 with plurality of contiguous face of side bracket 15 and the opposite side with plurality of contiguous face of spacer 46 and respectively the opposite contiguous face of plurality of spacer 46 with the contiguous face of extension arm 12A and 12B respectively with opposite contiguous face thereof and contiguous face of wear spacer 23. Plurality of sleeve bearing 25 is of free rotational fashion about axle 16 and is sweat fitted with extension arm 12A and 12B respectively rendering thereof confined to a non rotational fixation about extension arm 12A and 12B respectively. Aforesaid is demonstrating the advantages of this invention over others highlighting precise alignment of plurality of skating wheel 24 along the longitudinal center axis thereof additionally providing an effective means to prevent any misalignment thereof during use of this invention by an in line skate board rider the like of sharp cornering quick stops and acrobatics. It is noteworthy to mention the importance of the precise confinement of extension arm 12A and 12B respectively by simultaneously providing proper rotational bearing support thereof about axle 16. Plurality of torsion spring 14 is encircled by counter bore of extension arm 12A and 12B respectively and is aligned with plurality of spacer 46. Torsion spring 14 is of a wire material of a given hardness, elasticity, cross section as well is having a certain number of coils therefore providing a certain spring force to be adequate for the desired torque strength required and to be transmitted to plurality of wheel 24 via partial rotation of extension arm 12A and 12B respectively. Plurality of torsion spring 14 has an extension 52 along the horizontal plane on one end of coil thereof with the like at the opposite end of coil thereof respectively. Plurality of extension 52 inserts into plurality of through hole 50 and plurality of through hole 62 respectively therefore confining extension arm 12A and 12B respectively to a given position or home position along the vertical plane depending on location of through hole 62. It is contemplated that through hole 50 is of elongated configuration along the vertical center axis thereof. Aforesaid is anticipated to compensate for diametrical change of torsion spring 14 during deflection thereof. For an alternate method to compensate for diametrical change of torsion spring 14 an elongated hole 50 may be substituted with a dog point urging against end portion of coil for torsion spring 14—not shown. It is noteworthy to mention that the rotational movement or articulation of extension arm 12A is in the opposite direction to extension arm 12B when torqued or deflected during use of this invention by an in line skate board rider. Torsion spring 14 paired with extension 12A is installed in mirror image to torsion spring 14 paired with extension 12B which readily is accomplished by rotating thereof half circle in horizontal plane prior to installation. As also referenced in FIG. 5 plurality of extension arm 12A and 12B respectively is having plurality of through hole 62 to enable torsion spring 14 to be installed as described therefore locking plurality of extension arm 12A and 12B respectively in home position.

[0040] FIG. 4 shows an embodiment of this invention in cross sectional view. Skating wheel 24 is encircling outer race of double row thrust bearing 24A with inner race thereof sweated onto axle 21. End portion of axle 21 is in non-rotational fashion affixed to extension arm 12A with lock washer and threaded on end nut 34. Spacer washer 40 and lock washer with threaded on opposite end of axle 21 confines thrust bearing 24A in a non-rotating fashion and confinement along the horizontal plane.

[0041] As shown on FIG. 5 which is an embodiment of present invention in perspective and expanded view the sequence of assembly for all elements high lights a clear and concise outline for plurality of dependent elements with appropriate labeling and as referenced in detailed specifications and shown in FIG. 1-4. Therefore it is contemplated and perceived a detailed specification is repetitious at best and for these reasons has been negated. It is also contemplated that plurality of element as labeled is clear and concise.

[0042] FIG. 1A shows an embodiment of this invention in front elevation view. As described in detailed specification and referenced in FIG. 1 all elements are identical to FIG. 1 with exception to plurality of extension arm 12A and 12B respectively sharing a single skating wheel 24 affixed about axle 20. Therefore it is contemplated that a detailed specification is repetitious at best and therefore has been negated. It is also contemplated that plurality of element as labeled is clear and concise.

[0043] FIG. 2A shows an embodiment of this invention in front elevation view. As described in detailed specification and referenced in FIG. 2 all elements are identical with exception to plurality of extension arm 12A and 12B respectively sharing a single skating wheel 24 affixed about axle 20. Therefore it is contemplated that a detailed specification is repetitious at best and therefore has been negated. It is also contemplated that plurality of element as labeled is clear and concise.

[0044] FIG. 3A shows an embodiment of this invention in bottom plan view. As described in detailed specification and referenced in FIG. 3 all elements are identical with exception to plurality of extension arm 12A and 12B respectively sharing a single skating wheel 24 affixed about axle 20. Henceforth the rotational movement or articulated travel of extension arm 12A and 12B respectively is unidirectional therefore torsion spring 14 paired with extension arm 12A is of identical symmetry to torsion spring 14 paired with extension arm 12B. It is contemplated that a detailed specification is repetitious at best and therefore has been negated. It is also contemplated that plurality of element as labeled is clear and concise.

[0045] FIG. 4A shows an embodiment of this invention in cross sectional view. As described in detailed specification and referenced in FIG. 4 all elements are identical with exception to plurality of extension arm 12A and 12B respectively sharing a single skating wheel 24 affixed about axle 20. Therefore it is contemplated that a detailed specification is repetitious at best and therefore has been negated. It is also contemplated that plurality of element as labeled is clear and concise.

[0046] Aforesaid by limiting the individual elements making up this invention to a few demonstrating simple steps

toward changing a preferred configuration to another preferred configuration. Plurality of element with the appropriate labeling is referenced and described on FIG. 1-4. Therefore it is contemplated that a detailed specification is repetitious at best and therefore has been negated. It is also contemplated that plurality of element as labeled is clear and concise.

[0047] The enablements described in detail above are considered novel over the prior art of record and are considered critical to the operation of at least one aspect of one best mode embodiment of the instant invention and to the achievement of the above described objectives. The words used in this specification to describe the instant embodiments are to be understood not only in the sense of their commonly defined meanings, but to include by special definition in this specification: structure, material or acts beyond the scope of the commonly defined meanings. Thus if an element can be understood in the context of this specifications as including more than one meaning, then its use must be understood as being generic to all possible meanings supported by the specifications and by the word or words describing the element.

[0048] The definitions of the words or elements of the embodiments of the herein described invention and its related embodiments not described are, therefore, in this specifications to include not only the combination of elements which are literally set forth, but all equivalent structure, material or acts for performing substantially the same function in substantially the same way to obtain substantially the same result. In this sense it is therefore contemplated that an equivalent substitution of two or more elements may be made for any one of the elements in the invention and its various embodiments or that a single element may be substituted for two or more elements in a claim. Changes from the claimed subject matter as viewed by a person with ordinary skill in the art, not known or later devised, are expressly contemplated as being equivalents within the scope of the invention and its various embodiments. Therefore, obvious substitutions now or later known to one with ordinary skill in the art defined to be within the scope of the defined elements. The invention and its various embodiments are thus to be understood to include what is specifically illustrated and described above, what is conceptually equivalent, what can obviously substituted, and also what essentially incorporates the essential idea of the invention.

[0049] While the invention has been described with reference to at least one preferred embodiment, it is to be clearly understood by those skilled in the art that the invention is not limited thereto. Rather, the scope of the invention is to be interpreted only in conjunction with the appended claims and it is made clear, here, that the inventor believes that the claimed subject matter is the invention.

What is claimed is:

1. An inline roller skate comprises a platform in horizontal plane having foot wear attached to upper side thereof with at two side bracket in vertical plane secured to under side of said platform opposing each other and straddling at least one paired extension arm pivotally mounted and contained about non pivotal center axis in horizontal plane with said paired extension arm being two singular extension arm opposed to each other in mirror image so that distal end of at least one

said extension arm is of forked position in vertical plane from distal end of said opposing extension arm, and having at axle fixated to said distal end in horizontal plane with a skating wheel affixed to and contained in vertical plane about said axle with said extension arm encircling a torsion spring thereof confined to allow said extension arm to pivot about said center axis in forward motion and opposite direction from each other.

2. The apparatus of claim 1 comprises said center axle being affixed in non pivotal fashion to each other opposing side bracket at one extremity of said axle and respectively opposite extremity thereof.

3. The apparatus of claim 1 whereas said extension arm comprises a hub section with said torsion spring confined within hub section of said extension arm wherein said torsion spring is having a right angle extension at opposite ends providing containment of said torsion spring with through hole in said hub section for said right angle exten-

sion and with a through hole in said side bracket for said right angle extension of opposite end of said torsion spring.

4. The apparatus of claim 3 whereas said torsion spring comprises a multi coil configuration and with said right angle extension to be in coaxial alignment with center axis thereof, and at least one through hole to be of elongated configuration in vertical plane.

5. The apparatus of claim 1 whereas said pivotal containment of said extension about said center axle further comprises lot of spacer element sized in cross sectional distance to be contiguous to said extension arm.

6. The apparatus of claim 3 whereas said extension arm further comprises a range of pivotal movement confined by said torsion spring depending on location of said through hole in said hub section of said extension arm.

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