The present invention is a shock absorbing tandem roller skate including a shoe or boot, a shoe plate secured to the shoe, at least one shock absorbing unit secured to the shoe plate, at least a first pair of wheels secured to the at least one shock absorbing unit, at least a second pair of wheels, a first brake unit for providing braking to the at least a first pair of wheels, and a second brake unit for providing braking to the at least a second pair of wheels. The shock absorbing mechanism of the at least one shock absorbing unit flex and absorb shock horizontally and diagonally in a simultaneous manner to provide a steering mechanism for the user. The present invention is also directed to skateboards and scooters that may utilize the shock absorbing technology of the present invention.
SHOCK ABSORBING TANDEM ROLLER SKATE

FIELD OF THE INVENTION

[0001] The present invention is directed to roller skates and other industries involving carrying products that require wheel assembly mechanisms. More specifically, the invention is directed to a shock absorbing tandem roller skate. The invention is also directed to the skateboard and scooter industries, as well as other industries involving carrying products that require tandem wheel assembly mechanisms.

BACKGROUND OF THE INVENTION

[0002] Roller skates have been around for many years and have provided enjoyment and health benefits to many people around the world. Generally, roller skates are used for recreation, freestyle and/or exercise wherein each skater can roller skate at his or her own speed or pace, from a leisure pace to a fast competition pace, depending on that skater’s desire and physical health. Some skaters also use roller skates in their profession, such as food deliverers or runners at certain fast food restaurants. Roller skates can be used on many different types of surfaces, such as wood, cement, or asphalt, and the parts or components, such as the wheels and brake system, of a roller skate may vary according to the surface that the roller skate will generally be used on.

[0003] The present invention is an improved tandem roller skate that allow skaters to turn with better control for skates that may travel at a high rate of speed and on rough surfaces. Thus, this improved control ability for skaters should also provide the skaters with improved safety when the present invention is used appropriately.

[0004] The present invention works by incorporating shock absorbing means that enable a skater to instantly turn at will by shifting the weight of the skater wherein the shifting of the weight makes the shock absorbing mechanism flex according to the skater’s motion and direction of the skater’s lean. The innovation in the present invention is that the parts or components of the improved roller skate may be assembled in a building block system for high strength assembly to handle moderate to extreme treatment from the skater. The shock absorbing mechanism of the roller skate of the present invention flex and absorb shock horizontally and diagonally in a simultaneous manner to create an automatic steering mechanism for improved safety and skating enjoyment.

[0005] Applying universal shock absorption to a roller skate will alleviate tension, bruising and strain directed to the knees, ankles, shins and feet of skaters. Also, this factor allows skaters to handle rough surfaces and roads with added comfort. Additional safety is provided by the braking mechanism that may be long lasting for constant braking abilities at all times. The added braking is enhanced by being assisted from the shaking function of the rear wheels while engaging the brake. Certain braking materials are specifically designed for asphalt and road conditions.

[0006] The shock absorbing technology of the present invention can be used in the skateboard and scooter industries, as well as other industries involving carrying products that require tandem wheel assembly mechanisms.

SUMMARY OF THE INVENTION

[0007] The present invention is directed to a shock absorbing tandem roller skate comprising a roller skate shoe, a shoe plate secured to the shoe, a first shock absorbing unit and a second shock absorbing unit secured downward from the shoe plate, at least a first pair of wheels adapted for being secured to and being in communication with the first shock absorbing unit, at least a second pair of wheels adapted for being secured to and being in communication with the second shock absorbing unit, a first brake means or unit for providing braking to the at least a first pair of wheels, and a second brake means or unit for providing braking to the at least a second pair of wheels. The shock absorbing mechanism of each of the first and second shock absorbing units flex and absorb shock horizontally and diagonally in a simultaneous manner to provide a steering mechanism to the user for improved safety and skating enjoyment. The present invention may also be a skateboard comprising some or all of the above-described components, excluding the shoe, of the shock absorbing tandem roller skate. The present invention may additionally be a scooter comprising some or all of the above-described components, excluding the shoe, of the shock absorbing tandem roller skate.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] FIG. 1 is a side elevational view of a shock absorbing tandem roller skate according to the present invention.
[0009] FIG. 2 is a perspective view of the roller skate of FIG. 1, excluding a shoe or boot of the roller skate.
[0010] FIG. 3 is a partial, exploded view of a rear end of the roller skate of FIG. 1, excluding a shoe or boot of the roller skate.
[0011] FIG. 4 is a bottom view of the roller skate of FIG. 1, excluding a shoe or boot of the roller skate.
[0012] FIG. 5 is a rear end view of the roller skate of FIG. 1, excluding a shoe or boot of the roller skate.
[0013] FIG. 6 is a rear end view of the roller skate of FIG. 1, excluding a shoe or boot of the roller skate, wherein two arm attachments of the roller skate perform a cam action that shifts in opposite directions at the same time when used.
[0014] FIG. 7 is a bottom view of a shock absorbing unit and a pair of wheels of the roller skate of FIG. 1.
[0015] FIG. 8 is a side view of a shock absorbing unit of the roller skate of FIG. 1.
[0016] FIG. 9 is a partial, exploded view of a second shoe or boot plate relative to a first shoe or boot plate according to the present invention.
[0017] FIG. 10 is a rear end view of an off-road skateboard according to the present invention, having street wheels.
[0018] FIG. 11 is a rear end view of an off-road skateboard according to the present invention, having larger wheels than street wheels.
[0019] FIG. 12 is a side elevational view of the off-road skateboard of FIG. 11.
[0020] FIG. 13 is a top view of the off-road skateboard of FIG. 11.
[0021] FIG. 14 is a rear end view of a standard skateboard according to the present invention.
[0022] FIG. 15 is a front end view of a scooter according to the present invention, having street wheels.
[0023] FIG. 16 is a top view of a scooter according to the present invention, having wheels larger than street wheels.
[0024] FIG. 17 is a side elevational view of the scooter of FIG. 16.
It should be understood that the above-attached figures are not intended to limit the scope of the present invention in any way.

DETAILED DESCRIPTION OF THE INVENTION

Referring to FIGS. 1-9, the present invention is a shock absorbing tandem roller skate 100 comprising a roller skate shoe or boot 120, a shoe plate 140 secured to the shoe 120, a first shock absorbing unit 180F and a second shock absorbing unit 180R secured to the shoe plate 140, at least a first pair of wheels 260F secured to the first shock absorbing unit 180F, at least a second pair of wheels 260R secured to the second shock absorbing unit 180R, a first brake means or unit 320F providing braking to the at least a first pair of wheels 260F, and a second brake means or unit 320R providing braking to the at least a second pair of wheels 260R.

The roller skate shoe or boot 120 is adapted for receiving a foot of a user or skater. As a non-limiting example and as shown in FIG. 1, the shoe 120 includes a front end 122, a rear end 124, an upper portion 126, and a bottom 128 having a bottom side 129. The shoe 120 may be a standard roller skate shoe, a shoe having greater flexibility, comfort, support and/or breathability than a standard roller skate shoe, or any roller skate shoe known in the art.

As a non-limiting example and as shown in FIGS. 1-4, the shoe plate 140 is secured to the bottom 128 of the shoe 120 by rivets or fasteners 58 and supports the shoe 120. The shoe 120 and shoe plate 140 may be secured to one another by other fastening means or any other means known in the art. The shoe plate 140 has a generally elongated, rectangular frame, which defines a top side 142, a bottom side 144, a front end 146, a rear end 148, a body portion 152 extending between the front and rear ends 146, 148, a pair of opposite sidewalls 154, 155, and a plurality of fastener apertures 156 located at predetermined locations along the shoe plate 140.

The shoe plate 140 defines a longitudinal axis from the front end 146 to the rear end 148. When the shoe 120 and shoe plate 140 are secured to one another, the top side 142 of the shoe plate 140 is adjacent to the bottom side 129 of the bottom 128 of the shoe 120, and the front and rear ends of the shoe respectively align with the front and rear ends of the shoe plate. Each of the opposite sidewalls 154, 155 has a front end cutout 156, 157 about the front end 146 and a rear end cutout 158, 159 about the rear end 148 of the shoe plate 140 for accommodating the configuration of the corresponding shock absorbing units 180F, 180R.

As a non-limiting example and as shown in FIGS. 2-8, the first, or front, shock absorbing unit 180F is secured to the shoe plate 140 at about the front end 146 of the shoe plate 140 by means of four vertical fasteners 182F, while the second, or rear, shock absorbing unit 180R is secured to the shoe plate 140 at about the rear end 148 of the shoe plate 140 by means of four vertical fasteners 182R. When the front and rear shock absorbing units 180F, 180R are secured to the shoe plate 140, the front and rear shock absorbing units 180F, 180R are generally positioned downward from the bottom side 144 of the shoe plate 140 at the corresponding cutouts 156, 157, 158, 159 about the front and rear ends 146, 148 of the shoe plate 140.

Each of the front and rear shock absorbing units 180F, 180R correspondingly includes a bracket 184F, 184R having a plurality of fastener apertures 186F, 186R and a plurality of spring apertures 188F, 188R located at predetermined positions, a shoulder member 190F, 190R having a plurality of fastener apertures 192F, 192R and a plurality of spring apertures 194F, 194R located at predetermined positions, and other corresponding components described below. Each bracket 184F, 184R functions as a two-way shock absorbing housing. As shown in FIGS. 1-3 and 9, the cutouts 156, 157, 158, 159 of the shoe plate 140 and the brackets 184F, 184R have corresponding angular shapes for a solid stationary assembly under extreme usage from a skater, wherein the bracket 184F, 184R supports the shoulder member 190F, 190R adapted for moving horizontally under pressure with a shock absorbing means or system, such as a system including a plurality of horizontally-mounted compression springs 196R and a plurality of horizontal alien plugs 198F, 198R, or a shock absorbing material comprised of rubber and/or urethane (not shown).

When a system including four horizontally-mounted compression springs 196F, 196R is employed as the shock absorbing means or system, two of the four corresponding horizontally-mounted compression springs 196F, 196R compress while the other two corresponding compression springs 196F, 196R extend, wherein the compression springs 196F, 196R keep the shoulder member 190F, 190R in a centered position under pressure that is evenly adjusted by means of four horizontal alien plugs 198F, 198R. This assembly will function from the skater shifting weight from left to right, or vice versa, and for the shoulder member 190F, 190R to rotate accordingly from the distribution of pressure that is transferred to the skate mechanisms from the skater for exact desired directional turning. Two large thin washers 199F, 199R separate the bracket 184F, 184R from the shoulder member 190F, 190R to ensure smooth rotation of the shoulder member 190F, 190R. Each shoulder member 190F, 190R has two arm attachments 200F, 200F, 200R, 200R, wherein each arm attachment 200F, 200F, 200R, 200R accommodates one wheel 202F, 202F, 202R, 202R that is secured by means of a small alien plug 204F, 204F, 204F, 204F, and a wheel 206F, 206F, 206F, 206F. Each arm attachment 200F, 200F, 200R, 200R is mounted to the bottom of the corresponding shoulder member 190F, 190R by means of a fastener 208F, 208F, 208R, 208R and is secured by a lock nut 210F, 210F, 210R, 210R. Each arm attachment 200F, 200F, 200R, 200R has two small alien plugs 210F, 210F, 210F, 210F, 210R, 210R, 210R, 210R accommodated diagonally. The two alien plugs 210F, 210F, 210R, 210R accommodate two diagonally mounted compression springs 212F, 212F, 212R, 212R, wherein one end of the diagonally mounted compression spring 212F, 212F, 212R, 212R rests over the alien plug 210F, 210F, 210F, 210F, the other end rests in the angled hole 214F, 214F, 214R, 214R, the corresponding shoulder member 190F, 190R. Each diagonally mounted compression spring 212F, 212F, 212R, 212R is to be evenly adjusted by means of two alien plugs 216F, 216F, 216F, 216F, 216R, 216R, 216R mounted from the top of the corresponding shoulder member 190F, 190R for each of the assemblies of the arm attachments 200F, 200F, 200R, 200R. Two of the arm attachments 200F, 200F, 200R, 200R are synchronized by means of the arm attachments' parts that will force the two arm attachments 200F, 200F, 200R, 200R to perform a cam action that shifts in opposite directions at the same time; this function is shown in FIG. 6. The cam performance is assisted by a bushing 218F, 218F, 218R, 218R for smooth assembly and precision movement of the two arm assemblies.
Each of the front and rear shock absorbing units 180F, 180R may be secured to the shoe plate 140 by means of a high density titanium clevis pin 220F, 220R mounted from the top of the shoe plate 140 in the assembly order thereof. Each clevis pin 220F, 220R is assembled through the corresponding bracket 184F, 184R, through two large washers 199F, 199R, through the shoulder member 190F, 190R, through thrust bearing member 222F, 222R, through a brace 224, and through disc spring 226F, 226R, and then secured by means of an allen plug 228F, 228R. As shown in FIGS. 3 and 4, the first and second shock absorbing units 180F, 180R are stabilized by means of the brace 224 that is mounted through both of the shock absorbing units 180F, 180R and secured directly to each portion of the shock absorbing units 180F, 180R with two vertically mounted allen fasteners 230F, 230R.

As a non-limiting example and as shown in FIGS. 1-4, the first, or front, brake means or unit 320F is comprised of a front brake body 322 and a front brake pad 324. The front brake unit 320F is mounted about the front end 146 of the shoe plate 140 and is secured or fastened primarily by four horizontal fasteners 326F mounted through the shoe plate 140 and into the threaded portion of the front brake body 322. Secondary means of securing the front brake unit 320 is two diagonal fasteners 328F mounted through the shoe plate 140, through the front brake body 322 and into the threaded portion of the bracket 184F. As a non-limiting example, the front brake pad 324 may be a cube style cut of an automobile tire that have steel belted or high density fiber construction for firm stable mounting to the front brake body 322 by means of three fasteners (not shown) mounted at an angle.

Also as a non-limiting example and as shown in FIGS. 1-4, the second, or rear, brake means or unit 320R is comprised of a rear brake body 332 and a rear brake pad 334. The rear brake unit 320R is mounted about the rear end 148 of the shoe plate 140 and is secured or fastened primarily by four horizontal fasteners 326R fastened through the shoe plate 140 and into the threaded portion of the rear brake body 332. Secondary means of securing the rear brake unit 320R is two diagonal fasteners 328R mounted through the shoe plate 140 through the rear brake body 332 and into the threaded portion of the bracket 184R. As a non-limiting example, the rear brake pad 334 may be a cube style cut of an automobile tire that have steel belted or high density fiber construction for firm stable mounting to the rear brake body 332 by means of three fasteners 330R mounted at an angle.

The main purpose of the mentioned two means and methods of securing the front and rear brake units 320F, 320R, is to transfer the high tension points created by the front brake unit 320F and rear brake unit 320R when the brake units 320F, 320R are engaged under heavy weight and high vibration. The two angled fasteners 328F, 328R are respectively assembled through the top of the front and rear ends 146, 148 of the shoe plate 140 through the brake bodies 322, 332 and fastened into the angled threaded portion of the bracket 184F, 184R. This is to counter the high tension put on the front brake unit 320F and rear brake unit 320R, moving the pressure from the upper corner of the bracket 184F, 184R and the shoe plate 140 and transferring it to the reinforced angled fasteners 328F, 328R located at the top of the front end 146 and rear end 148 of the shoe plate 140. This is to insure firm stable assembling.

The totality of parts that make up the full assembly has a final stabilizing means and method to achieve a power tying mechanism that bring all mentioned parts together to function as one multi-flexing unit under extreme skating usage by way of the brace block 380 that is firmly secured to the shoe plate 140 by way of four horizontal fasteners 382 assembled through the shoe plate 140 and mounted into the brace block 380 to complete the parts power tying function. The brace block 380 is secured to the brace 224 by means of two vertical fasteners 384 that are assembled through the bottom of the brace 224 into the brace block 380. The front end and rear end of the brace 224 make up the link assembly that is a major part in the front and rear shock absorbing units 180F, 180R. This power tie will also assist in minimizing vibration that makes its way up through the skates through the feet into the shins and up to the knees of the skater. The power tie means and method creates a grounding effect through the unifying of mentioned parts all to become one connected assembly that will assist the health, well-being and safety of the skater.

Some or all of the fastener apertures are adapted for receiving, or allowing passage of, fasteners that secure components of the shock absorbing tandem roller skate 100 to another. As non-limiting examples, some fastener apertures are threaded vertically, horizontally or in an angled direction to accommodate corresponding threaded fasteners. It is obvious to one of ordinary skill in the art that the apertures may not be threaded, and thus other types of fasteners, such as nuts and bolts, may be alternatively implemented in the present invention. It is also obvious to one of ordinary skill in the art that the components of the shock absorbing tandem roller skate 100 may be secured to one another by alternative means, such as injection molding.

In another aspect of the shock absorbing roller skate 100 and as shown in FIG. 9, an additional front boot plate 57 provides capability for different types or styles of shoes or boots 120, in many configurations relating to fitness, performance or racing, being mounted to the shoe plate 140. The front boot plate 57 can be mounted using either small vertical plate fasteners 59 or plate rivets 60 to give the rider or skater more boot options. There is one large rear vertical fastener 56 to be fastened from beneath the shoe plate into the rear of the heal of the boot 120.

The shock absorbing technology of the present invention can be used in the skateboard industry and scooter industry, as well as various industries involving carrying products that require wheel assembly mechanisms.

As a non-limiting example and as shown in FIGS. 10-13, an off-road skateboard 400 utilizes all the same parts for the front and rear shock absorbing units 420, in comparison with front and rear shock absorbing units 180F, 180R, with the exception of a longer arm 437F, 437R and an off-road skate board 441F, 441R secured to the board 446 by means of two vertical fasteners 448R. As shown in FIG. 10, the off-road skateboard 400 includes 4-inch street wheel 438aF, 438bF, 438aR, 438bR, with the same wheel pin 202aF, 202bF, 202aR, 202bR as previously described above for the shock absorbing units 180F, 180R. To give clearance for the 4-inch wheel 438aF, 438bF, 438aR, 438bR, an off-road skateboard block 440F, 440R attaches to the bracket 184F, 184R by means of four long vertical fasteners 441F, 441R through the board 446 and through the block 440F, 440R and fastens into bracket 184F, 184R. Extra support is provided by four additional smaller vertical fasteners 442F, 442R, being inserted through the board 446 into the block 440F, 440R to maintain extra stability for extreme off-road riding condi-
A front foot strap device 460F and a rear foot strap device 460R are provided for maneuvering and guiding of the skateboard 400 by safely securing the feet of the rider for lifting the off-road skateboard 400, with the strap 443F, 443R being flexible and adjustable for total attachment to the feet of the rider. Each of the front and rear foot strap devices 460F, 460R includes the foot strap 443F, 443R, comfort pad 445F, 445R, and a swiveling securing fastener 447F, 447R. As shown in FIG. 11, the off-road skateboard 400 utilizes all the same parts as the off-road skateboard shown in FIG. 10 with the exception of larger wheels 439aF, 439bF, 439aR, 439bR for dirt or grass.

[0041] As a non-limiting example and as shown in FIG. 14, a standard skateboard 500 utilizes all the same parts as the off-road skateboard 400 with the exception of a traditional board 549, smaller skateboard block 550F, 550R and smaller traditional skateboard wheel 551aF, 551bF, 551aR, 551bR.

[0042] As a non-limiting example and as shown in FIGS. 15-17, a scooter 600 utilizes all the same parts as the off-road skateboard 400 with the exception of a scooter board 655 with an additional neck 652, a handle bar 653 and reinforced support 654. The front shock absorbing unit 660 has different configuration to be steered by the scooter handle bar 653 and neck 652 assembly.

[0043] It is to be understood that the present invention is not limited to the embodiments described above or as shown in the attached figures, but encompasses any and all embodiments within the spirit of the invention.

What is claimed is:

1. A shock absorbing tandem roller skate comprising:
   a shoe adapted for receiving a foot of a user;
   a shoe plate adapted for being secured to said shoe, said shoe plate comprising a top side, a bottom side, a front end, and a rear end, said shoe plate defining a longitudinal axis from said front end to said rear end, wherein said shoe plate is positioned below said shoe, and wherein said shoe and said shoe plate are in longitudinal alignment with respect to one another;
   a first shock absorbing unit adapted for being secured to said shoe plate, said first shock absorbing unit having a shock absorbing mechanism that flexes and absorbs shock horizontally and diagonally in a simultaneous manner to provide a steering mechanism for the user and that flexes according to the motion of the user and to the direction of lean of the user when the weight of the user shifts;
   a second shock absorbing unit adapted for being secured to said shoe plate, said second shock absorbing unit having a shock absorbing mechanism that flexes and absorbs shock horizontally and diagonally in a simultaneous manner to provide a steering mechanism for the user and that flexes according to the motion of the user and to the direction of lean of the user when the weight of the user shifts;
   at least a first pair of wheels adapted for being secured to and being in communication with said second shock absorbing unit, said at least a second pair of wheels defining a longitudinal axis from a first wheel to a second wheel of said at least a second pair of wheels, wherein said longitudinal axis of said at least a second pair of wheels is generally perpendicular to said longitudinal axis of said shoe plate and is generally parallel to said longitudinal axis of said at least a first pair of wheels; and
   means for providing braking to said at least a first pair of wheels; and
   means for providing braking to said at least a second pair of wheels.

2. The shock absorbing tandem roller skate according to claim 1, wherein said shoe plate further comprising a body portion extending between said front end and said rear end of said shoe plate, a pair of opposite sidewalks, and a plurality of fastener apertures located at predetermined locations along said shoe plate, wherein each of said opposite sidewalks has a front end cutout about said front end and a rear end cutout about said rear end for accommodating the shapes of said first and second shock absorbing units, and wherein said front end cutouts are aligned opposite one another and said rear end cutouts are aligned opposite one another.

3. The shock absorbing tandem roller skate according to claim 1, wherein said shock absorbing unit is positioned generally downward from said bottom side of said shoe plate about said front end of said shoe plate, and wherein said second shock absorbing unit is positioned generally downward from said bottom side of said shoe plate about said rear end of said shoe plate.

4. The shock absorbing tandem roller skate according to claim 1, wherein said shock absorbing mechanism of each of said first and second shock absorbing units comprises a plurality of horizontally-mounted compression springs wherein at least two of said horizontally-mounted compression springs correspondingly compress while at least two of said horizontally-mounted compression springs correspondingly extend.

5. The shock absorbing tandem roller skate according to claim 1, wherein said means for providing braking to said at least a first pair of wheels is secured about said front end of said shoe plate and said means for providing braking to said at least a second pair of wheels is secured about said rear end of said shoe plate.

6. The shock absorbing tandem roller skate according to claim 1, further comprising a brace block and a brace having a first end and a second end, wherein said brace block is adapted for being secured to said shoe plate and said brace is adapted for being secured to said brace block, wherein said first end of said brace is secured about said first shock absorbing unit and said second end of said brace is secured about said second shock absorbing unit, and wherein said brace block and said brace are adapted for mechanically communicating with said first and second shock absorbing units to function as one multi-flexing unit.

7. The shock absorbing tandem roller skate according to claim 1, further comprising a second shoe plate, wherein said second shoe plate is secured above said top side of said shoe plate about said front end of said shoe plate.

8. A shock absorbing tandem roller skate comprising:
   a roller skate shoe adapted for receiving a foot of a user, said shoe having a front end, a rear end, an upper portion, and a bottom having a bottom side;
   a shoe plate adapted for being secured to said shoe, said shoe plate having a top side, a bottom side, a front end,
a rear end, a body portion extending between said front end and said rear end of said shoe plate, a pair of opposite sidewalls, and a plurality of fastener apertures located at predetermined locations along said shoe plate, wherein each of said opposite sidewalls has a front end cutout about said front end and a rear end cutout about said rear end wherein said front end cutouts are aligned opposite one another and said rear end cutouts are aligned opposite one another, said shoe plate defining a longitudinal axis from said front end to said rear end, wherein said shoe plate is positioned below said shoe, and wherein said shoe and said shoe plate are in longitudinal alignment with respect to one another;

a first shock absorbing unit adapted for being secured to said shoe plate, wherein said first shock absorbing unit is positioned generally downward from said bottom side of said shoe about said front end of said shoe plate, said first shock absorbing unit having a shock absorbing mechanism that flexes and absorbs shock horizontally and diagonally in a simultaneous manner to provide a steering mechanism for the user and that flexes according to the motion of the user and to the direction of lean of the user when the weight of the user shifts;

a second shock absorbing unit adapted for being secured to said shoe plate, wherein said second shock absorbing unit is positioned generally downward from said bottom side of said shoe about said rear end of said shoe plate, said second shock absorbing unit having a shock absorbing mechanism that flexes and absorbs shock horizontally and diagonally in a simultaneous manner to provide a steering mechanism for the user and that flexes according to the motion of the user and to the direction of lean of the user when the weight of the user shifts;

at least a first pair of wheels adapted for being secured to and being in communication with said first shock absorbing unit, said at least a first pair of wheels defining a longitudinal axis from a first wheel to a second wheel of said at least a first pair of wheels, wherein said longitudinal axis of said at least a first pair of wheels is generally perpendicular to said longitudinal axis of said shoe plate;

at least a second pair of wheels adapted for being secured to and being in communication with said second shock absorbing unit, said at least a second pair of wheels defining a longitudinal axis from a first wheel to a second wheel of said at least a second pair of wheels, wherein said longitudinal axis of said at least a second pair of wheels is generally perpendicular to said longitudinal axis of said shoe plate and is generally parallel to said longitudinal axis of said at least a first pair of wheels;

means for providing braking to said at least a first pair of wheels; and

means for providing braking to said at least a second pair of wheels.

9. The shock absorbing tandem roller skate according to claim 8, wherein said shock absorbing mechanism of each of said first and second shock absorbing units comprises a plurality of horizontally-mounted compression springs wherein at least two of said horizontally-mounted compression springs correspondingly compress while at least two of said horizontally-mounted compression springs correspondingly extend.

10. The shock absorbing tandem roller skate according to claim 8, wherein said means for providing braking to said at least a first pair of wheels is secured about said front end of said shoe plate and said means for providing braking to said at least a second pair of wheels is secured about said rear end of said shoe plate.

11. The shock absorbing tandem roller skate according to claim 8, further comprising a brace block and a brace having a first end and a second end, wherein said brace block is adapted for being secured to said shoe plate and said brace is adapted for being secured to said brace block, wherein said first end of said brace is secured about said first shock absorbing unit and said second end of said brace is secured about said second shock absorbing unit, and wherein said brace block and said brace are adapted for mechanically communicating with said first and second shock absorbing units to function as one multi-flexing unit.

12. The shock absorbing tandem roller skate according to claim 8, further comprising a second shoe plate, wherein said second shoe plate is secured above said top side of said shoe plate about said front end of said shoe plate.

13. A shock absorbing skateboard comprising:

a board comprising a top side, a bottom side, a front end, a rear end, and a body portion extending between said front end and said rear end, said board defining a longitudinal axis from said front end to said rear end;

a first shock absorbing unit adapted for being secured to said board, said first shock absorbing unit having a shock absorbing mechanism that flexes and absorbs shock horizontally and diagonally in a simultaneous manner to provide a steering mechanism for the user and that flexes according to the motion of the user and to the direction of lean of the user when the weight of the user shifts;

a second shock absorbing unit adapted for being secured to said board, said second shock absorbing unit having a shock absorbing mechanism that flexes and absorbs shock horizontally and diagonally in a simultaneous manner to provide a steering mechanism for the user and that flexes according to the motion of the user and to the direction of lean of the user when the weight of the user shifts;

at least a first pair of wheels adapted for being secured to and being in communication with said first shock absorbing unit, said at least a first pair of wheels defining a longitudinal axis from a first wheel to a second wheel of said at least a first pair of wheels, wherein said longitudinal axis of said at least a first pair of wheels is generally perpendicular to said longitudinal axis of said board; and

at least a second pair of wheels adapted for being secured to and being in communication with said second shock absorbing unit, said at least a second pair of wheels defining a longitudinal axis from a first wheel to a second wheel of said at least a second pair of wheels, wherein said longitudinal axis of said at least a second pair of wheels is generally perpendicular to said longitudinal axis of said board and is generally parallel to said longitudinal axis of said at least a first pair of wheels.

14. The shock absorbing skateboard according to claim 13, wherein said board further comprising a plurality of fastener apertures located at predetermined locations along said board.

15. The shock absorbing skateboard according to claim 13, wherein said first shock absorbing unit is positioned generally downward from said bottom side of said board about said front end of said board, and wherein said second shock
absorbing unit is positioned generally downward from said bottom side of said board about said rear end of said board.

16. The shock absorbing skateboard according to claim 13, wherein said shock absorbing mechanism of each of said first and second shock absorbing units comprises a plurality of horizontally-mounted compression springs wherein at least two of said horizontally-mounted compression springs correspondingly compress while at least two of said horizontally-mounted compression springs correspondingly extend.

17. The shock absorbing skateboard according to claim 11, further comprising a front foot strap device and a rear foot strap device.

18. The shock absorbing skateboard according to claim 17, wherein each of said foot strap devices comprises a foot strap, a comfort pad, and a swiveling securing fastener.

19. A shock absorbing scooter comprising:
   a scooter board comprising a top side, a bottom side, a front end, a rear end, and a body portion extending between said front end and said rear end, said scooter board defining a longitudinal axis from said front end to said rear end;
   a neck extending upwardly from said front end of said scooter board, said neck comprising a first end and a second end wherein said first end of said neck is positioned about said front end of said scooter board;
   a handle bar adapted for being secured about said second end of said neck;
   a first shock absorbing unit adapted for being secured to said scooter board, said first shock absorbing unit having a shock absorbing mechanism that flexes and absorbs shock horizontally and diagonally in a simultaneous manner to provide a steering mechanism for the user and that flexes according to the motion of the user and to the direction of lean of the user when the weight of the user shifts;
   a second shock absorbing unit adapted for being secured to said scooter board, said second shock absorbing unit having a shock absorbing mechanism that flexes and absorbs shock horizontally and diagonally in a simultaneous manner to provide a steering mechanism for the user and that flexes according to the motion of the user and to the direction of lean of the user when the weight of the user shifts;
   at least a first pair of wheels adapted for being secured to and being in communication with said first shock absorbing unit, said at least a first pair of wheels defining a longitudinal axis from a first wheel to a second wheel of said at least a first pair of wheels, wherein said longitudinal axis of said at least a first pair of wheels is generally perpendicular to said longitudinal axis of said scooter board; and
   at least a second pair of wheels adapted for being secured to and being in communication with said second shock absorbing unit, said at least a second pair of wheels defining a longitudinal axis from a first wheel to a second wheel of said at least a second pair of wheels, wherein said longitudinal axis of said at least a second pair of wheels is generally perpendicular to said longitudinal axis of said scooter board and is generally parallel to said longitudinal axis of said at least a first pair of wheels.

20. The shock absorbing scooter according to claim 19, wherein said scooter board further comprising a plurality of fastener apertures located at predetermined locations along said scooter board.

21. The shock absorbing scooter according to claim 19, wherein said first shock absorbing unit is positioned generally downward from said bottom side of said scooter board about said front end of said board, and wherein said second shock absorbing unit is positioned generally downward from said bottom side of said scooter board about said rear end of said board.

22. The shock absorbing scooter according to claim 19, wherein said shock absorbing mechanism of each of said first and second shock absorbing units comprises a plurality of horizontally-mounted compression springs wherein at least two of said horizontally-mounted compression springs correspondingly compress while at least two of said horizontally-mounted compression springs correspondingly extend.

23. The shock absorbing scooter according to claim 19, further comprising a reinforced support positioned rearward about said first end of said neck.

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