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(54) **SPINNER SHOE**

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(57) **ABSTRACT**

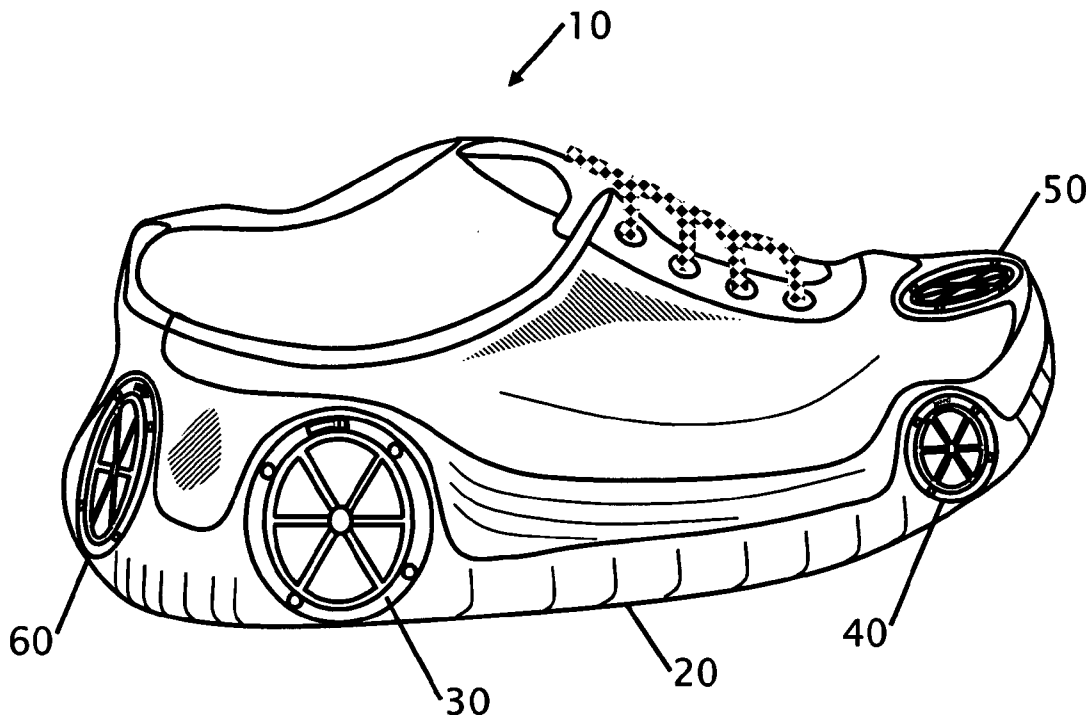
Shoes with wheel spinners are disclosed. The shoes are fabricated with circular indicia that look like the wheels from a car. The wheels have spokes or other similar wheel emblems that turn or spin while the person is walking and or standing. Sensors located within the shoes turn the motion of the wheels on and off. A switch located on the shoe sets the rotational direction of the shoe or each wheel located on the shoe. Each shoe contains as few as one wheel to as many as four or more. Lights are present on one or more of the wheels to identify motion of the spinners. The lights can turn in the same or different direction as the spinners. The spinners can be entirely made with lighted bars that illuminate in order around the central hub of the wheel to simulate the spinner turning.

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Related U.S. Application Data

(60) Provisional application No. 60/597,512, filed on Dec. 6, 2005.



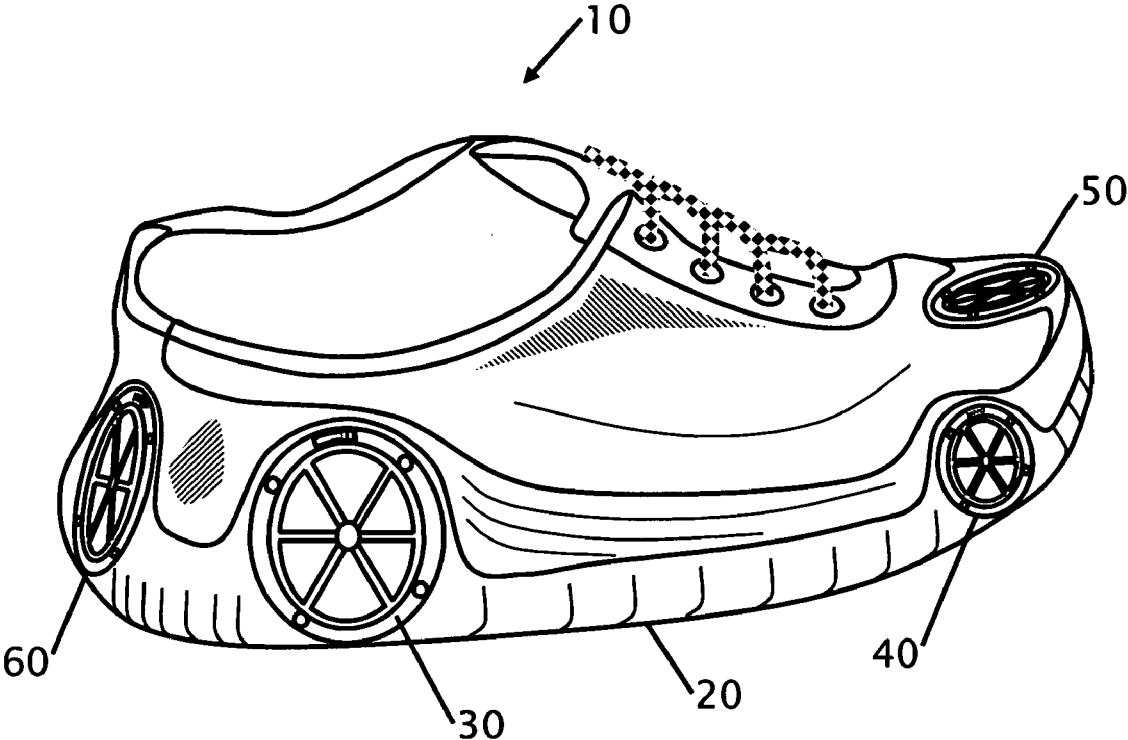


Figure 1

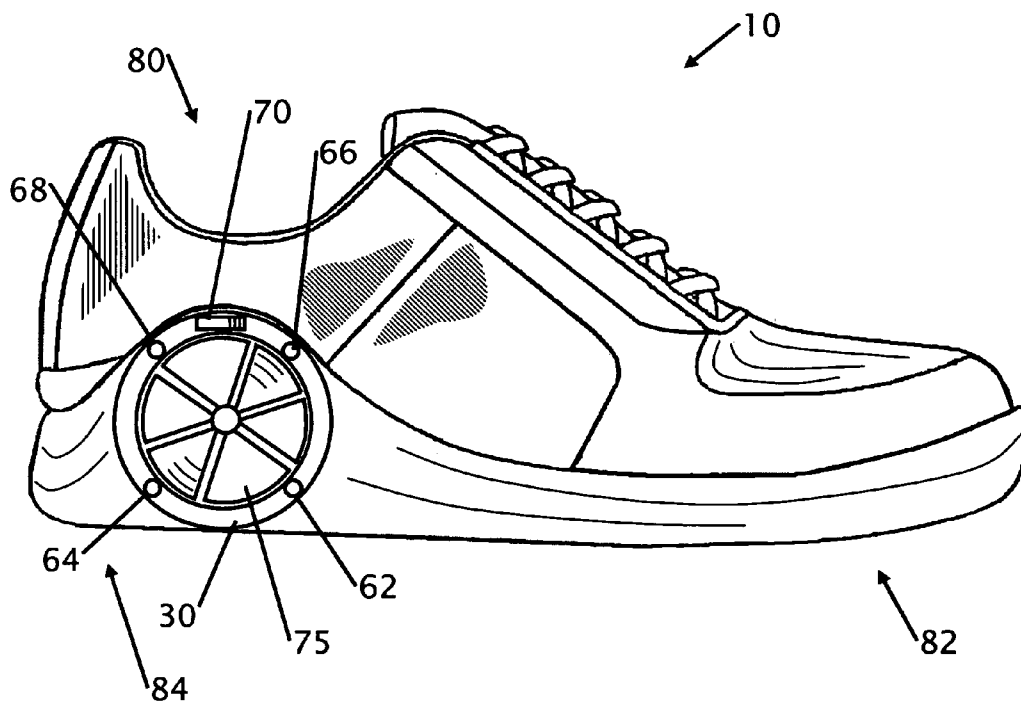


Figure 2

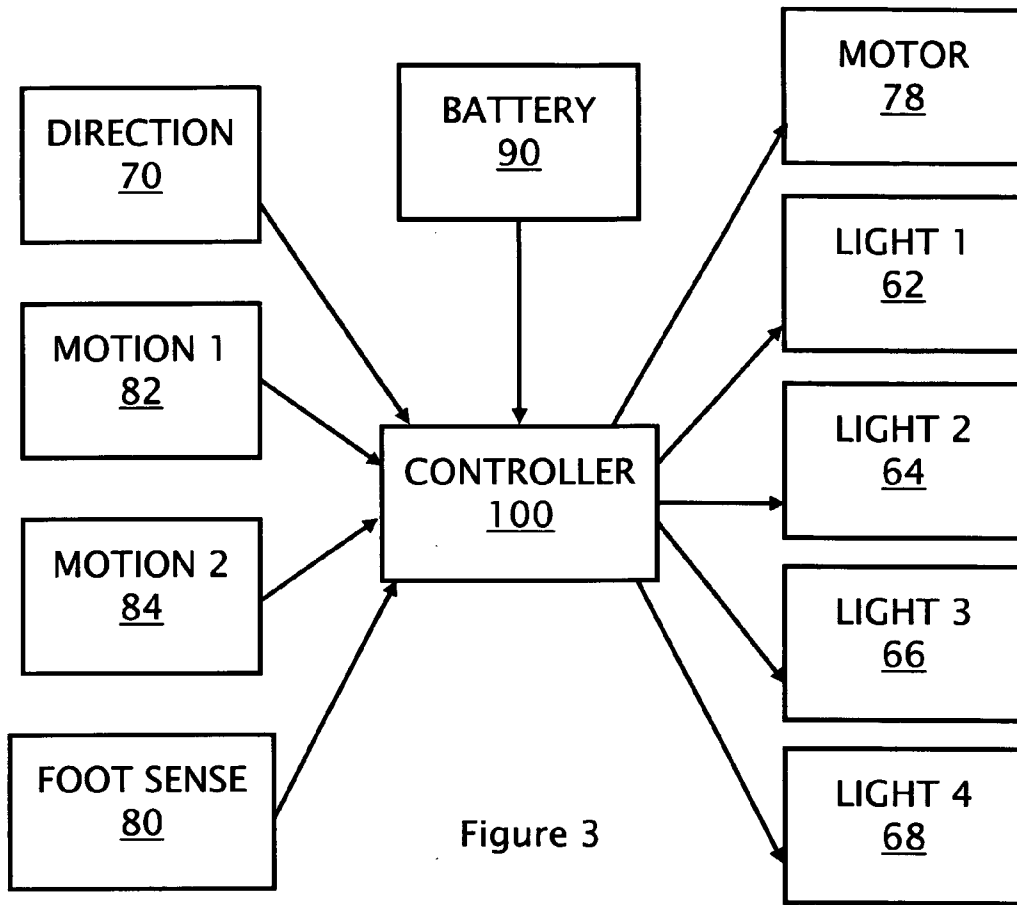


Figure 3

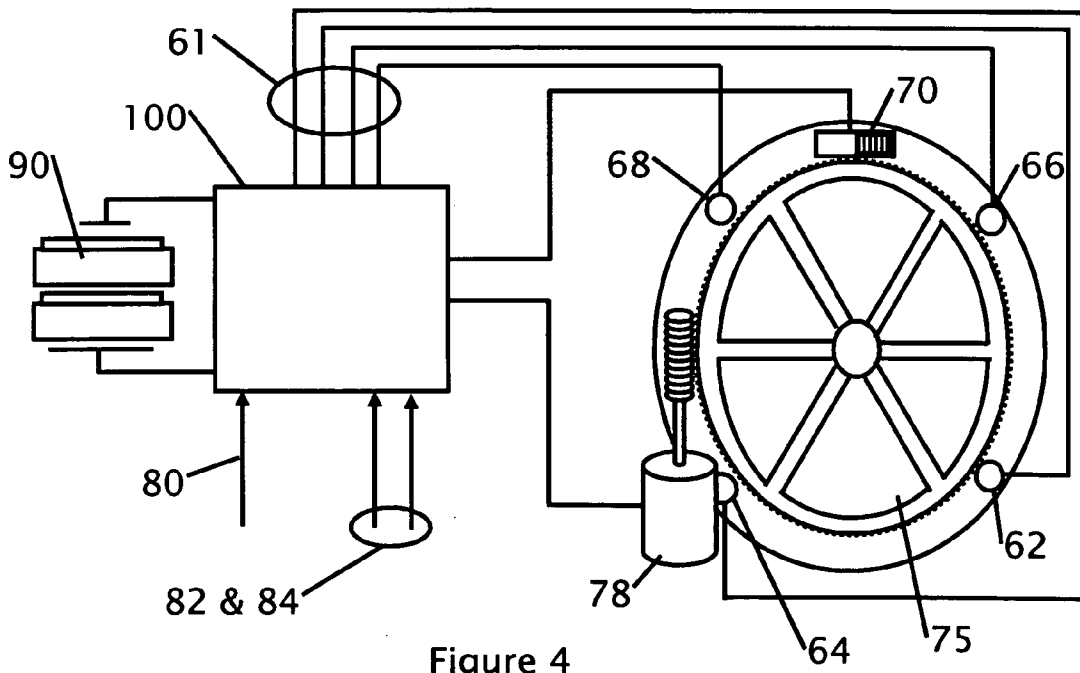


Figure 4

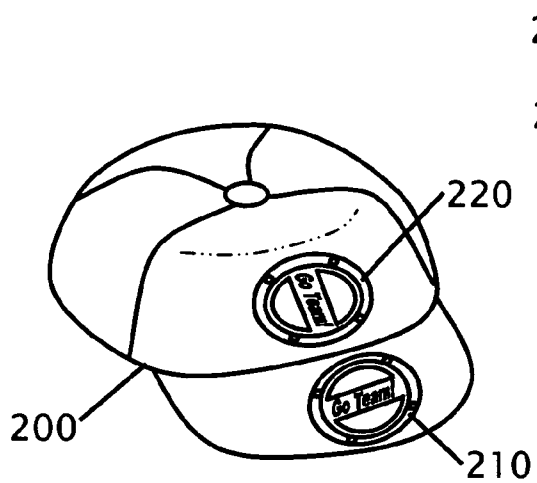


Figure 5a

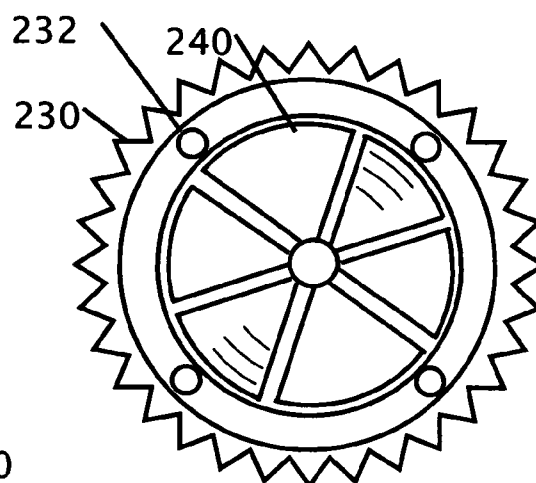


Figure 5b

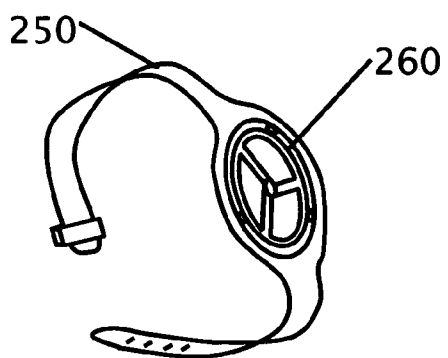


Figure 5c

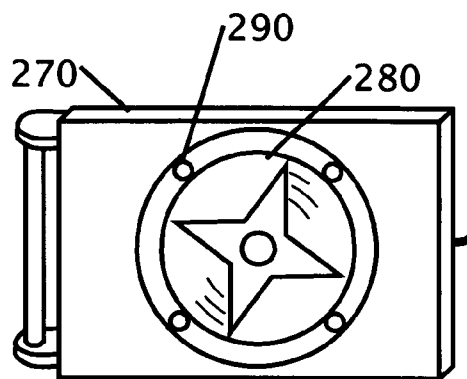


Figure 5d

SPINNER SHOE

CROSS REFERENCE TO RELATED APPLICATION

[0001] This application claims priority to provisional application Ser. No. 60/597,512 filed Dec. 12, 2005.

FIELD OF THE INVENTION

[0002] This invention relates to shoes with cosmetic styling. More particularly, the present invention relates to shoes with wheels located on one or more sides of the shoes that simulate the appearance of wheels of a car. When the person is walking the wheels turn to simulate wheel spinners that are placed on the wheels of a car.

BACKGROUND OF THE INVENTION

[0003] Shoes were originally made to protect a person's feet from objects that can cause harm to a person's feet. Over the years shoes have evolved not only to provide protection from the ground but also to create a fashion statement about the user. The fashion statement can include the manufacturer of the shoes or the style of the shoes. Shoes are also made to provide cosmetic functions and may have details such as spinning items to show motion and lights that provide visual motion.

[0004] US D495,470 issued to Robert L. Schellinger on Sep. 7, 2004 shows a shoe with the appearance of a car. While this patent shows a shoe with the appearance of a car, the wheels do not show the motion or turning when the wearer is walking or moving. It further does not provide lighting to illuminate the wheels of the shoes.

[0005] U.S. Pat. No. 4,442,614 issued to Losef Farberov on Apr. 17, 1984 disclose a shoe with roller shaped wheel portions located on the bottom sole of the shoe. While this patent shows roller elements located on the sole of the shoe, the roller elements do not electrically turn based upon motion of the person walking, nor do they provide illumination to show motion of the wheels.

[0006] US 2004/0,159,022 published to Quin Winford et al. on Aug. 19, 2004 discloses footwear with a remote control. The remote control starts and stops the rotation of wheels that are located on the sides of the shoe. While this patent covers shoes with wheels located on the sides of shoe, the motion of the wheels is not controlled by the user walking. The patent also does not include illumination located on or around the wheel elements that further enhance the appearance of motion on the shoes.

[0007] US 2005/0,223,601 published to Solomon Dabah on Oct. 13, 2005 discloses a shoe with a spinner element placed on the side of a shoe. While this published application discloses a spinner element located on the side of a shoe, it only shows one spinner element and does not provide control for the direction of rotation of the spinner. The published application further does not disclose illumination elements placed in or around the spinner element to enhance the appearance of motion of the spinner element.

[0008] What is needed is a shoe with at least one spinner element that provides the appearance of spinners that are found on cars. The ideal spinner would further include lighting elements that enhance the appearance of the spinner

turning. The shoe would also include one or more sensors to determine if the shoe is on a user, if the person is walking or standing and control for the direction of rotation of the spinner element(s). The proposed spinner shoes provide this solution by providing a shoe with spinner elements, lighting elements, and sensors to control the motion of the spinner and lighting elements.

BRIEF SUMMARY OF THE INVENTION

[0009] It is an object of the spinner shoes to provide shoes with one or more spinner elements in the shoes to provide an appearance that is similar to the spinner elements that are found on the wheels of a car. These spinner elements provide an attraction element to the shoes that make them stand out when compared to other shoes.

[0010] It is another object of the spinner shoes to provide lighting for the spinners where the lighting exists around the spinner element. The spinner element can also be simulated using multiple lighting elements that are illuminated in order to provide an appearance of rotational or linear motion of the shoes.

[0011] It is another object of the spinner shoes to provide control of the spinner elements that can control the direction of the spinner element. The shoes can be fabricated with multiple spinner elements and the direction of each spinner element is controllable for clockwise or counter-clockwise rotation.

[0012] It is another object of the spinner shoes that they include sensors, to determine if a person is walking and how fast they are walking. The sensors can change the speed of the spinners and the direction of rotation of the spinners based upon information from the sensors. Each spinner may include a switch to set the direction of rotation of the spinner.

[0013] It is another object of the spinner shoes to provide spinners located on the sides, and or the top of the shoe. When spinners are located in the sides of a shoe they can be seen from people located next to a person walking by. When the spinners are located on the top of the shoes the spinners can be seen in motion by the wearer and by people standing in front of the wearer. A spinner can also be located on the back of the shoe to provide spinning motion on the back of the shoe that is visible when a person is walking away.

[0014] It is another object of the spinner shoes for the speed of the rotation to be adjustable. The speed of rotation can be set by a user or can be automatically adjusted based upon detection of the movement speed of the user.

[0015] It is another object of the spinner element to place the element on other products that a person wears such as a cap, pin, wristband, or belt to provide an array of clothing articles that provide a simulated spinner appearance.

[0016] It is still another object of the spinner shoes and ancillary spinner products to provide promotion and or advertising of a company, sports team or event by using the spinner with lighting to highlight information on the shoes or ancillary spinner products.

[0017] Various objects, features, aspects, and advantages of the present invention will become more apparent from the following detailed description of preferred embodiments of the invention, along with the accompanying drawings in which like numerals represent like components.

BRIEF DESCRIPTION OF THE DRAWINGS

[0018] FIG. 1 shows an isometric view of a preferred embodiment of the spinner shoes showing multiple spinner elements placed on the side, front and back of a shoe.

[0019] FIG. 2 shows a side sectional view of a preferred embodiment of the spinner shoe where only one spinner element is placed in the heel of a shoe.

[0020] FIG. 3 shows a preferred embodiment of the logic and control circuit that controls the spinner and lighting elements.

[0021] FIG. 4 shows a preferred embodiment of a construction detail of the spinner shoe.

[0022] FIG. 5a-d show some ancillary products such as a cap, pin, wristband and belt buckle with a spinner element.

DETAILED DESCRIPTION

[0023] FIG. 1 shows an isometric view of a preferred embodiment of the spinner shoes 10 showing multiple spinner elements placed on the side, front and back of a shoe. This figure represents the different locations that the spinner can be located on a shoe. Spinners that represent the spinners that car used on the wheels of a car are shown as rear wheel spinner 30, and front wheel spinner 40. A spinner is also shown on the rear of the shoe 60, with another spinner 50 placed on the front top of the shoe. Most applications will have one or two spinners placed on the sides of a shoe to represent the appearance as might be seen on a vehicle such as a car. This figure shows the spinner elements placed just above the bottom 20 of the shoe. This is preferred to allow the spinner to freely spin without being stopped by the ground when the user is walking or standing.

[0024] FIG. 2 shows a side sectional view of a preferred embodiment of the spinner shoe 10 where only one spinner element is placed in the heel of a shoe. This view represents a spinner shoe with just a single spinner located on the side rear of a shoe, but other embodiments are contemplated as shown in FIG. 1. This view shows the details of the spinner components. The spinner element 75 is located within an inner ring 30 where lights 62, 64, 66, and 68 exist. The configuration of the spinner is shown with six spokes, a greater or lesser number of spokes can be utilized and in addition the design of a logo is contemplated. The lights enhance the visible appearance of the spinner. The lights can blink on and off, or the spinners can illuminate in sequence around the spinner in the same or opposite direction of the spinner. A three position switch 70 selects the direction of rotation of the spinner. In the center or neutral position the spinner does not turn, in the front position the spinner turns clockwise to simulate movement on the ground. In the back position the spinner turns counter-clockwise to simulate the wheel spinning in reverse.

[0025] A sensor 80 is located within the shoe to allow operation of the spinner shoes. One or more sensors 82 and 84 are placed to sense foot pressure for standing and walking. It is contemplated that the sensors in the bottom of the shoe detect the speed that the user is walking and can translate the data into rotational speed of the spinners. It is further contemplated that the sensors can detect how the person is standing, and if the user is standing on their heel, only the rear spinner will turn. If the user is standing on their

toes, only the front spinner will turn. Various other combinations of spinning are contemplated.

[0026] FIG. 3 shows a preferred embodiment of the logic and control circuit that controls the spinner and lighting elements. FIG. 4 shows a preferred embodiment of a construction detail of the spinner shoe according to the logic and control circuit from FIG. 3. A battery or power source 90 provides power to the controller 100. In one contemplated embodiment the controller is eliminated and the battery is connected to a switch in the bottom of the shoe that turns the spinner motor on when sufficient pressure is detected. The embodiment shown in this figure shows an elaborate configuration according to the preferred embodiment. The controller received information from the directional switch 70. The directional switch can be set to for clockwise, counter-clockwise, or no rotation of the spinner. A foot sensor 80 detects the presence of a foot located inside the shoe. This prevents the spinner from turning when it is not on a user and conserves battery power. Walking or motion sensors 82 and 84 are located in the bottom or within the shoe to detect pressure on the bottom of the shoe that is associated with walking. The information from the sensors is used to determine the speed and direction that a person is walking. The controller operates a drive motor 78 that turns the spinner wheel 75. The drive motor is capable of turning the spinner in either direction. In FIG. 4 the drive motor 78 is shown with a worm gear driving a gear on the spinner 75. In another contemplated embodiment the spinner is rotated with electromagnets placed under the spinner wheel. The electromagnets are energized in sequence to rotate the spinner in either direction.

[0027] Four lights 62, 64, 66 and 68 are connected 61 to the controller. These lights can be LED or other type of lights and are illuminated to enhance the appearance of the spinner. In another contemplated embodiment as few as three lights are used with light pipes or lenses to simulate rotational motion of the spinners. The lights illuminate in sequence in the spinner wheel portion of the shoe. In this contemplated embodiment the motor and drive mechanism is not required because the lights provide similar rotational appearance.

[0028] Each spinner can operate independently with separate power sources and controllers. This allows the direction of each spinner to be independently selected. In another contemplated embodiment the spinners can all be operated with a single controller and they can all move in sequence together or in an alternating sequence.

[0029] FIG. 5a-d show some ancillary products such as a cap, pin, wristband and belt buckle with a spinner element. In FIG. 5a two spinners 210 and 220 are shown on the brim and front of the cap 200. The spinners in this figure say "Go Team!", but other sayings as well as slogan, company or team logo's are contemplated that can spin, turn and or illuminate are contemplated. The cap includes many of the same sensors and switches as are utilized in the shoe spinners to set the direction and to ensure that the spinner does not turn when it is not on the head of a person.

[0030] FIG. 5b shows the spinner configured as a pin that can be worn. The pin 230 shows the spinner element 240 and the lighting components 232. FIG. 5c shows a watch or wristband 250 with the spinner element. This configuration of spinner shows a three spoke design. FIG. 5d shows a belt

buckle configured with a spinner 280 located in the belt buckle 270. The spinner element in this figure has illumination lights 290 with a four pointed star spinner element. While four ancillary embodiments are shown and described others are contemplated that incorporate the technology described.

[0031] Thus, specific embodiments of spinner shoes have been disclosed. It should be apparent, however, to those skilled in the art that many more modifications besides those described are possible without departing from the inventive concepts herein. The inventive subject matter, therefore, is not to be restricted except in the spirit of the appended claims.

What is claimed is:

1. Shoe with spinner comprising:

an article of footwear with a sole and an upper wherein the upper includes at least one electrically rotatable spinner element and at least one lighting element configured to rotate and illuminate based upon information from at least one sensor placed within the footwear.

2. The shoe with spinner according to claim 1 wherein the electrically rotatable spinner can rotate in clockwise and or counter-clockwise direction.

3. The shoe with spinner according to claim 1 wherein the at least one lighting element is located on the exterior of the spinner element.

4. The shoe with spinner according to claim 1 wherein the at least one lighting element is located on the exterior of the spinner element.

5. The shoe with spinner according to claim 1 wherein the at least one sensor includes sensing the presence of the shoe being on a user, pressure being placed on the bottom of the shoe, walking, or a switch that selects the direction of rotation of the spinner.

6. The shoe with spinner according to claim 5 in which data of the pressure being placed on the bottom of the shoe controls the speed and or direction of rotation of the spinner element.

7. The shoe with spinner according to claim 1 wherein if multiple spinner elements are utilized, each spinner element can each be independently controlled for rotational direction.

8. Shoe with spinner comprising:

an article of footwear with a sole and an upper wherein the upper includes at least one rotatable spinner element placed on the exterior surface of the footwear, and

sensors located within the footwear control the rotational direction of the spinner element.

9. The shoe with spinner according to claim 8 wherein the rotatable spinner can rotate in clockwise and or counter-clockwise direction.

10. The shoe with spinner according to claim 8 that further includes at least one lighting element is located on the footwear.

11. The shoe with spinner according to claim 8 wherein the sensor includes sensing the presence of the shoe being on a user, pressure being placed on the bottom of the shoe, walking, or a switch that selects the direction of rotation of the spinner.

12. The shoe with spinner according to claim 11 in which data from pressure being placed on the bottom of the shoe controls the speed and or direction of rotation of the spinner element.

13. The shoe with spinner according to claim 8 wherein if multiple spinner elements are utilized, each spinner element can each be independently controlled for rotational direction.

14. The shoe with spinner according to claim 8 that further includes a hat with a spinner element located within the hat that spins when the hat is worn.

15. Shoe with spinner comprising:

an article of footwear with a sole and an upper wherein the upper includes at least three light emitting elements that can be illuminated to simulate movement on the shoe.

16. The shoe with spinner according to claim 15 wherein the at least three lighting elements can simulate rotational motion of a wheel.

17. The shoe with spinner according to claim 15 wherein the simulated rotational motion of a wheel simulates rotation in clockwise and or counter-clockwise direction.

18. The shoe with spinner according to claim 15 wherein the at least three light emitting elements simulates spokes that illuminate from the center of the spinner to the edge of the spinner.

19. The shoe with spinner according to claim 15 that further includes at least one sensor that detects the presence of the shoe being on a user, and or pressure being placed on the bottom of the shoe.

20. The shoe with spinner according to claim 19 in which data of the pressure being placed on the bottom of the shoe controls the speed and or directional appearance of the light emitting elements.

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