United States Patent [19]

Peterson

[11] **3,820,790**

[45] **June 28, 1974**

[54] **VEHICLE FOR PLAYING A BALL GAME**

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[21] Appl. No.: **292,522**

[52] **U.S. Cl.** ..... **273/129,** 280/211, 293/62, 293/71 P, 273/118 R

[51] **Int. Cl.** **A63b 71/00**

[58] **Field of Search** ..... 271/118 A, 129, 1, 37; 280/211, 217, 242 CW, 242 R, 259, 279; 293/62, 71 P

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Primary Examiner—Anton O. Oechsle
Assistant Examiner—Theatrice Brown
Attorney, Agent, or Firm—Finnegan, Henderson, Zarabow & Garrett

[57] **ABSTRACT**

A vehicle for enabling a player to participate in a soccer-like ball game is provided. The vehicle comprises a frame, a plurality of wheels mounted on the frame, means for driving at least one of the wheels to propel the vehicle and a ball carrier mounted on the frame for engaging and rolling a ball as the vehicle is propelled. In a preferred embodiment the ball carrier is mounted for reciprocation in a substantially horizontal direction relative to the frame, and a pedal is connected to the ball carrier to permit the player to reciprocate the ball carrier by actuating the pedal to strike the ball.

17 Claims, 6 Drawing Figures

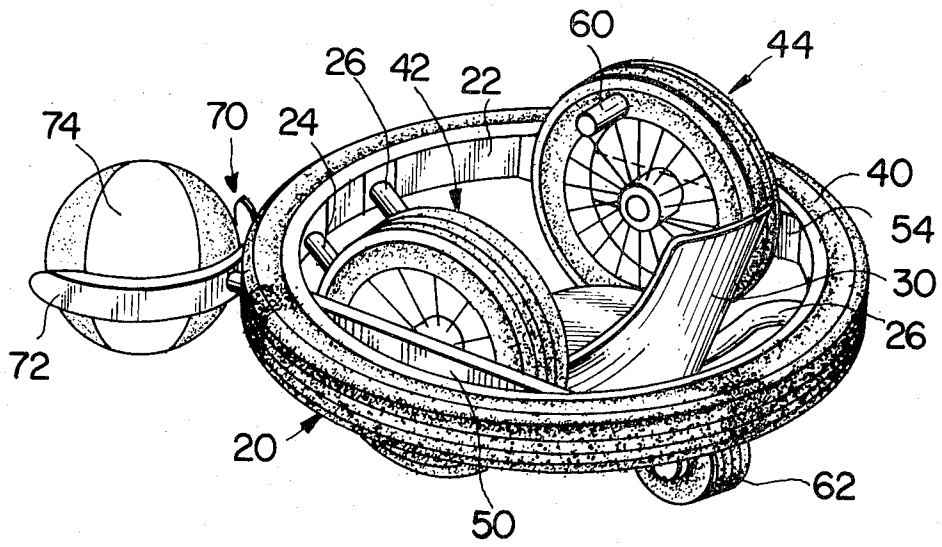

FIG. 1

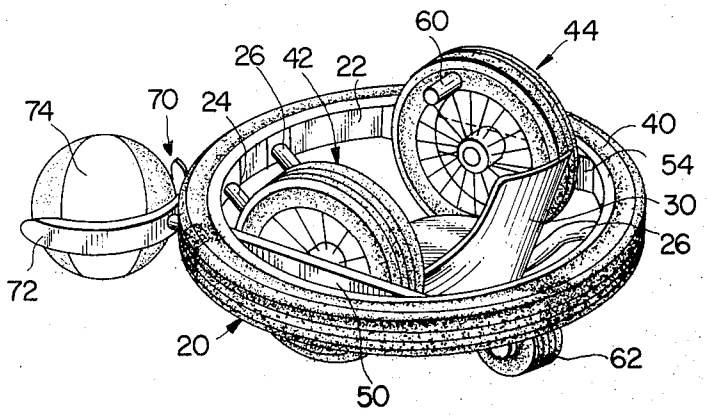
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FIG. 2

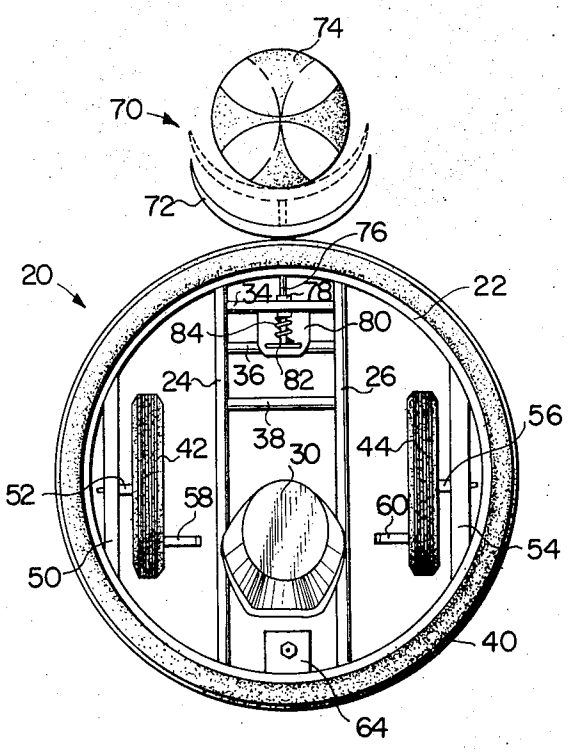
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FIG. 3

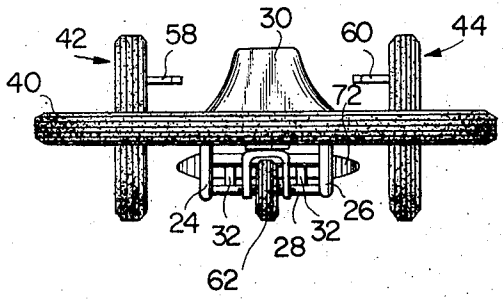


FIG. 4

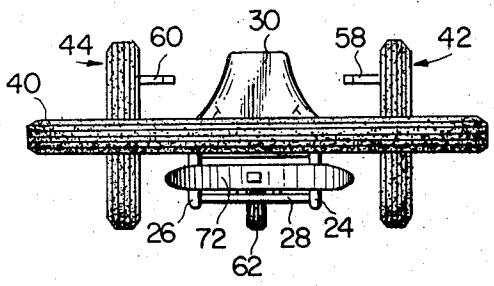


FIG. 5

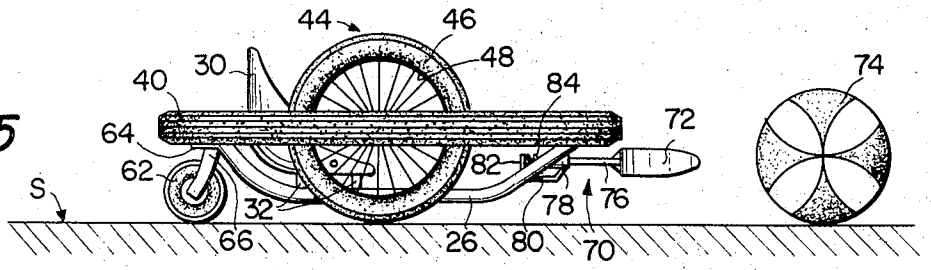
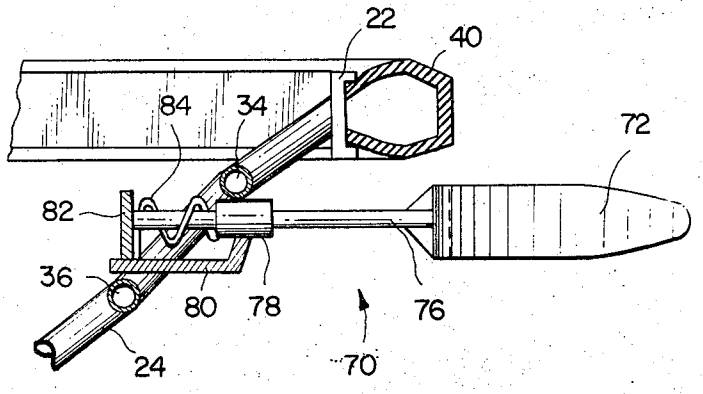


FIG. 6



VEHICLE FOR PLAYING A BALL GAME

The present invention relates to a vehicle for enabling a player to participate in a soccer-like ball game and, more particularly, to a highly maneuverable vehicle designed to enable the player to roll or strike a ball.

In the prior art, many hand-propelled and self-powered vehicles have been developed to transport a rider. None of the prior art vehicles have been designed, however, to enable the rider to participate in games of skill using a ball. The present invention provides a highly maneuverable vehicle including a device designed to engage and roll a ball as the vehicle is propelled and to strike the ball to impart movement to the ball.

The vehicle of the present invention comprises a frame, a plurality of wheels mounted on the frame, means for driving at least one of the wheels to propel the vehicle, and a ball carrier mounted on the frame for engaging and rolling a ball as the vehicle is propelled. In a preferred embodiment, the ball carrier comprises a device for striking the ball to impart movement to the ball. The ball carrier of the preferred embodiment is mounted for reciprocation in a substantially horizontal direction relative to the frame and actuator means connected to the ball carrier is provided to allow an operator to reciprocate the ball carrier to strike the ball.

The accompanying drawings illustrate a preferred embodiment of the invention and, together with the description, serve to explain the principles of the invention.

In the drawing:

FIG. **1** is a perspective view of a vehicle constructed in accordance with the principles of the present invention;

FIG. **2** is a plan view of the vehicle of FIG. **1**;

FIG. **3** is a rear elevation of the vehicle of FIG. **1**;

FIG. **4** is a front elevation of the vehicle of FIG. **1**;

FIG. **5** is a side elevation of the vehicle of FIG. **1**; and

FIG. **6** is an enlarged side view, partially in section, illustrating a ball carrier mounted on the vehicle in detail.

Referring to FIG. **1**, a vehicle **20**, constructed in accordance with the principles of the invention, comprises a circular frame **22** of channel-shaped steel or other metal and a pair of spaced, parallel support members **24** and **26** extending across circular frame **22** and secured at opposite ends to the frame by any conventional means, such as welding. As shown in FIG. **5**, support member **26** includes a central horizontal portion located slightly above ground surface S, and it is inclined upwardly at its opposite ends for connection to circular frame **22**. Support member **24** is identical in shape to support member **26**.

As shown in FIGS. **3** and **4**, a strut **28** extends transversely between support members **24** and **26** and is connected to the support members by any conventional means, such as welding. A seat **30** is supported on strut **28** by a plurality of vertical support rods **32**. In addition, a plurality of parallel struts **34**, **36** and **38** extends transversely between support members **24** and **26** to provide a foot rest for an operator of the vehicle.

In a preferred embodiment, an inflatable tube **40** is mounted on circular frame **22** to provide a bumper at the periphery of the frame. Vehicle **20** includes a pair

of traction wheels **42** and **44** rotatably mounted on opposite sides of circular frame **22** in axial alignment for supporting the vehicle. As shown in FIG. **5**, traction wheel **44** comprises an inflatable tire **46** mounted on a rim **48**. Traction wheel **42** is similar in construction to traction wheel **44**.

Referring to FIG. **2**, a first axle support member **50** is secured at its opposite ends to circular frame **22** by conventional means, e.g., welding. Traction wheel **42** is rotatably supported on an axle **52** secured to axle support member **50**. Similarly, a second axle support member **54** is mounted on circular frame **22** in a position diametrically opposite to first axle support member **50**. Second axle support member **54** can also be secured to circular frame **22** by welding. Traction wheel **44** is rotatably supported on an axle **56** secured to axle support member **54**. As shown in FIG. **2**, traction wheels **42** and **44** are rotatably mounted in axial alignment along a common diameter of circular frame **22**.

In accordance with the invention, means is provided for driving at least one of the wheels to propel the vehicle. In the preferred embodiment, this driving means comprises a pair of handles located on the traction wheels to permit an operator to propel the vehicle in a desired direction by selectively rotating the traction wheels. As shown in FIGS. **1–4**, traction wheel **42** is provided with a handle **58** extending perpendicularly inward from its rim. Similarly, traction wheel **44** is provided with a handle **60** extending perpendicularly inward from its rim. An operator seated in seat **30** can easily grip handles **58** and **60** to selectively rotate traction wheels **42** and **44** to control the motion of vehicle **20**. Alternatively, the traction wheels of vehicle **20** can be driven by a motor (not shown) under the control of the operator.

Referring to FIGS. **3** and **5**, a caster wheel **62** is mounted on circular frame **22** at a position rearward of traction wheels **42** and **44**. A platform **64** (FIG. **2**) extends radially inward from circular frame **22** behind seat **30**. As shown in FIG. **3**, caster wheel **62** is mounted on an axle supported by a U-shaped frame **66** pivotally connected to platform **64**.

Referring to FIGS. **2** and **5**, seat **30** is located in a position behind the axis of rotation of traction wheels **42** and **44** and in front of caster wheel **62**. Thus, when an operator is seated in seat **30**, his weight is supported by traction wheels **42** and **44** and caster wheel **62**.

In accordance with the invention, the vehicle also includes a ball carrier mounted on the frame for engaging and rolling a ball as the vehicle is propelled. In the preferred embodiment, the ball carrier is mounted for reciprocation in a substantially horizontal direction relative to the frame, and actuator means connected to the ball carrier is provided to allow an operator to reciprocate the ball carrier to strike the ball. The ball carrier of the preferred embodiment thus provides a device for striking the ball to enable the operator to impart movement to the ball.

Referring to FIG. **1**, a ball carrier, generally **70**, is mounted at the front of vehicle **20**. As shown in FIG. **2**, the ball carrier includes an arm **72** which projects outward from circular frame **22** and is arcuate in shape to capture a ball **74**. Arm **72** is secured at one end of a shaft **76** slidably received in a sleeve **78** (FIGS. **5** and **6**). Sleeve **78** is supported by a platform **80** secured to

struts **32** and **34** extending between support members **24** and **26.**

In the preferred embodiment, the actuator means is embodied as a pedal **82** secured to the end of shaft **76** opposite from arm **72.** A compression spring **84** is interposed between sleeve **78** and pedal **82** for normally biasing the ball carrier into an unactuated position. In FIG. **2,** arm **72** is shown in its normal, unactuated position, and its actuated position is illustrated in phantom lines.

In the operation of vehicle **20,** an operator seats himself in seat **30** and grips handles **58** and **60** with his hands. The operator can propel the vehicle in any direction by selectively rotating traction wheels **42** and **44** via handles **58** and **60.** Caster wheel **62** allows the vehicle to be easily maneuvered. If the operator desires to roll ball **74** in front of the vehicle, he maneuvers the vehicle to position arm **72** in alignment with the ball and propels the vehicle in such a manner as to keep arm **72** in engagement with the ball. If the operator desires to propel ball **74** from his vehicle, e.g., to pass the ball to another player or to shoot at a goal, he steps on pedal **82** thereby compressing spring **84** and advancing arm **72** to strike the ball. When his foot is released from pedal **82,** spring **84** returns the pedal and arm to the unactuated positions illustrated in FIG. **2.**

The vehicle of the present invention thus permits a player to engage in a soccer-like ball game while riding the vehicle by rolling a ball along with his vehicle and striking the ball to pass it to another player or to take a shot at a goal.

The invention in its broader aspects is not limited to the specific details shown and described, and modifications may be made in the details of the vehicle without departing from the principles of the present invention.

What is claimed is:

1. A vehicle, comprising:
a frame;
a plurality of ground engaging wheels mounted on said frame;
means for driving at least one of said ground engaging wheels to propel the vehicle;
a ball carrier mounted on said frame for engaging and rolling a ball on the ground as the vehicle is propelled, said ball carrier being mounted for reciprocation in a substantially horizontal direction relative to said frame;
an actuator connected to said ball carrier to allow an operator to reciprocate said ball carrier to strike the ball; and
means for normally biasing said actuator and said ball carrier into unactuated positions.

2. The vehicle of claim **1,** wherein:
said ball carrier includes an arm projecting outward from said frame and shaped to capture the ball.

3. The vehicle of claim **2,** wherein:
said arm is arcuate in shape.

4. The vehicle of claim **1,** wherein:
said plurality of wheels includes a pair of traction wheels mounted on opposite sides of said frame in axial alignment for supporting the vehicle.

5. The vehicle of claim **4,** which includes:
a caster wheel mounted on said frame at a position rearward of said traction wheels.

6. The vehicle of claim **5,** which includes:
a seat mounted on said frame in a position adjacent to said caster wheel.

7. The vehicle of claim **4,** wherein:
said driving means comprises a pair of handles located on said traction wheels to permit an operator to propel the vehicle in a desired direction by selectively rotating said traction wheels.

8. The vehicle of claim **1,** wherein:
said ball carrier is located at the front of said frame; and
said actuator comprises a pedal connected to said ball carrier to permit an operator to reciprocate said ball carrier by actuating said pedal to strike the ball.

9. The vehicle of claim **1,** which includes:
an inflatable bumper mounted at the periphery of said frame.

10. A vehicle, comprising:
a frame;
a plurality of wheels mounted on said frame including a pair of traction wheels mounted in axial alignment on opposite sides of said frame for supporting the vehicle;
means for driving at least one of said traction wheels to propel the vehicle;
a ball carrier mounted on the front of said frame for engaging and rolling a ball as the vehicle is propelled, said ball carrier being mounted for reciprocation in a substantially horizontal direction relative to said frame;
a pedal connected to said ball carrier to permit an operator to reciprocate said ball carrier by actuating said pedal to strike the ball; and
a spring for normally biasing said pedal and said ball carrier into unactuated positions.

11. The vehicle of claim **10,** wherein:
said ball carrier includes an arm projecting outward from said frame and shaped to capture the ball.

12. The vehicle of claim **11,** wherein:
said arm is arcuate in shape.

13. The vehicle of claim **10,** which includes:
a caster wheel mounted on said frame at a position rearward of said traction wheels.

14. The vehicle of claim **13,** which includes:
a seat mounted on said frame in a position adjacent to said caster wheel.

15. A vehicle, comprising:
a frame;
a plurality of wheels mounted on said frame;
means for driving at least one of said wheels to propel the vehicle;
a device mounted on said frame for striking a ball to impart movement to the ball, said striking device comprising an arm shaped to capture the ball and mounted for reciprocation in a substantially horizontal direction relative to said frame, a pedal connected to said arm to allow an operator to reciprocate said arm by actuating said pedal to strike the ball, and a spring for normally biasing said pedal and said arm into unactuated positions.

16. The vehicle of claim **15,** wherein:
said driving means comprises a pair of handles located on said traction wheels to permit an operator to propel the vehicle in a desired direction by selectively rotating said traction wheels.

17. The vehicle of claim **15,** which includes:
an inflatable bumper mounted at the periphery of said frame.

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UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,820,790 Dated June 28, 1974

Inventor(s) Gerald Wallace Peterson

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

In the line, Attorney, Agent, or Firm, in the Patent Heading, change "Zarabow" to --Farabow--.

Signed and sealed this 1st day of October 1974.

(SEAL)
Attest:

McCOY M. GIBSON JR.
Attesting Officer

C. MARSHALL DANN
Commissioner of Patents

FORM PO-1050 (10-69)

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