A light projection assembly includes a laser, particularly a diode laser, positioned and mounted for projecting a laser beam onto a surface of a game arena, and a trigger pivotally connected to a housing for mounting the laser. The trigger is repeatedly and rapidly moved up and down to oscillate the laser in approximately a five degree arc to cause the laser beam to produce the illusion of a continuous animated line on the game arena surface. Mirrors can be positioned on the arena surface to reflect the light emitting from the laser to create a plurality of continuous visible lines of light on the arena surface. A variety of entertaining games can be played in conjunction with the invention.
Fig. 2
LASER LIGHT PROJECTION ASSEMBLY

TECHNICAL FIELD AND BACKGROUND OF THE INVENTION

[0001] The invention relates to an apparatus for generating a coherent visible light beam using a high intensity light source, such as a diode laser. The light source is directed across a surface and rapidly oscillated to give the appearance of a visible continuous linear beam on the surface through the physiological phenomenon known as persistence of vision. The apparatus can be used for playing a variety of games.

[0002] Persistence of vision refers to the tendency of a person to retain an image for a fraction of second after the image has been viewed. The phenomenon forms the basis for animation and film, in which many frames of still pictures are presented to the viewer at a rapid rate to produce the illusion of a moving picture. The present invention utilizes visual persistence to produce what appears to the viewer as a continuous line of light from the rapid oscillation of a noncontinuous laser beam.

[0003] Diode laser pointers are common and relatively inexpensive. However, the beam emitted from a diode laser has a frequency beyond the human visual spectrum, and therefore is only visible on the surface on which it is projected. As such, the diode laser is very useful as a pointer to project a dot or similar point of light to draw an audience’s attention to a particular area on the surface of an object. However, the diode laser is not conducive for generating a continuous visible line, which is often desirable and has many useful applications, such as games of amusement and kinetic art.

[0004] For example, U.S. Pat. No. 5,145,182 discloses a board game which utilizes lasers where players selectively divert the path of laser beams. However, U.S. Pat. No. 5,145,182 does not disclose a means for making a diode laser beam appear as a continuous linear beam. Instead, U.S. Pat. No. 5,145,182 recommends using a Helium-Neon or Krypton laser. Such high energy lasers can emit a beam at a frequency within the visual spectrum, and therefore are capable of generating a continuous linear beam that is visible to the human eye. However, high energy gas and solid state lasers are substantially more complicated and expensive than diode lasers.

[0005] In an effort to overcome and eliminate the aforementioned problems, the present invention was conceived.

SUMMARY OF THE INVENTION

[0006] Therefore it is an object of the present invention to provide a light projection assembly capable of generating a visible continuous line of light on a surface using a relatively inexpensive and simple light source such as a diode laser.

[0007] It is another object of the invention to provide a light projection apparatus that can be used for playing a variety of entertaining games.

[0008] It is yet another object of the invention to provide a light projection apparatus having a surface for projecting a high intensity light beam thereon.

[0009] These and other objectives of the present invention are achieved by providing a light projection assembly comprising a laser positioned and mounted for projecting a laser beam onto a surface of a game arena. The laser is oscillated at a rate sufficient to cause the laser beam projected onto the game arena surface to produce an illusion of a continuous animated line on the game arena surface.

[0010] According to another preferred embodiment of the invention, the laser is a diode laser.

[0011] According to yet another preferred embodiment of the invention, the game arena comprises a floor and a side wall extending upward from the floor for projecting the laser beam thereon.

[0012] According to yet another preferred embodiment of the invention, the game arena surface is positioned horizontally, and the laser is positioned on a horizontal plane above the floor.

[0013] According to yet another preferred embodiment of the invention, the light projection assembly includes a mirror positioned on the floor for reflecting a high intensity coherent light beam emitted from the laser onto the floor.

[0014] According to yet another preferred embodiment of the invention, the mirror is positioned perpendicularly to the game arena surface.

[0015] According to yet another preferred embodiment of the invention, the laser is oscillated in an arc sufficient to project the light beam onto the arena surface and the mirror.

[0016] According to yet another preferred embodiment of the invention, the game arena surface includes a metallic surface for positioning a magnetically attractive object thereon.

[0017] According to yet another preferred embodiment of the invention, the magnetically attractive object comprises a game piece for positioning on the arena surface for use in playing a game in conjunction with the laser.

[0018] According to yet another preferred embodiment of the invention, the magnetically attractive object comprises a mirror for reflecting the laser beam.

[0019] According to yet another preferred embodiment of the invention, the light projection assembly includes a second laser positioned and mounted for projecting a second laser beam onto a surface of a game arena. The second laser is oscillated at a rate sufficient to cause the second laser beam projected onto the game arena surface to produce the illusion of a continuous animated line on the game arena surface.

[0020] According to yet another preferred embodiment of the invention, the light projection assembly includes a battery power source for powering the laser.

[0021] According to yet another preferred embodiment of the invention, the light projection assembly includes an activating switch in communication with the laser for turning the laser on and off.

[0022] According to yet another preferred embodiment of the invention, the oscillating means includes a trigger pivotally connected to a housing, the laser mounted on the trigger whereby repeatedly moving the trigger at a sufficient rate oscillates the laser to cause the laser beam projected onto the game arena surface to produce the illusion of a continuous animated line on the game arena surface.
According to yet another preferred embodiment of the invention, the trigger is pivotally connected to the housing by a hinge. The hinge permits a range of movement of the trigger of no more than five degrees, whereby moving the trigger oscillates the laser in an arc of five degrees.

According to yet another preferred embodiment of the invention, the game arena surface is positioned horizontally, and the trigger is positioned in a horizontal plane above the surface.

According to yet another preferred embodiment of the invention, the laser is positioned and mounted for projecting a laser beam onto a surface of a game arena. The laser is oscillated at a rate sufficient to cause the laser beam projected onto the game arena surface to produce an illusion of a continuous animated line on the game arena surface. A game piece is positioned on the surface. Attempts are made to position at least two mirrors on the surface to reflect the laser beam onto the surface so that at least two visible continuous lines of light contact the game piece.

An embodiment of the method for playing a game using the light projection assembly of the invention, includes the steps of providing a light projection assembly having a laser positioned and mounted for projecting a laser beam onto a surface of a game arena. The laser is oscillated at a rate sufficient to cause the laser beam projected onto the game arena surface to produce an illusion of a continuous animated line on the game arena surface. A game piece is positioned on the surface, a number is randomly determined. Players attempt to position at least one mirror on the surface to reflect the laser beam so as to produce a number of visible continuous lines of light on the surface equal to the randomly determined number and contact the game piece with one of the visible continuous lines of light.

An embodiment of the method for playing a game using the light projection assembly of the invention, includes the step of randomly determining a number by rolling a die.

An embodiment of the method for playing a game using the light projection assembly of the invention, includes the steps of providing a light projection assembly having a laser positioned and mounted for projecting a laser beam onto a surface of a game arena, an activating switch in communication with the laser for turning the laser on and off, and oscillation means for oscillating the laser at a rate sufficient to cause the laser beam projected onto the game arena surface to produce an illusion of a continuous animated line on the game arena surface. A game piece is positioned on the surface with the laser turned off. Players attempt to position at least one mirror on the surface in relation to the laser and the game piece so that a visible continuous line of light reflected off of the mirror and onto the surface contacts the game piece upon activating the laser. The laser is activated to determine if the reflected line of light contacts the game piece.

Brief Description of the Drawings

Some of the objects of the invention have been set forth above. Other objects and advantages of the invention will appear as the invention proceeds when taken in conjunction with the following drawings, in which:

Fig. 1 is a perspective of a game arena utilizing the light projection assembly according to a preferred embodiment of the invention;

Fig. 2 is a top plan view of a preferred embodiment of the game arena and light projection assembly according to the invention;

Fig. 3 is a partial cutaway plan view showing the light source and oscillation assembly, and control elements according to a preferred embodiment of the invention;

Fig. 4 is a side view of the light source and oscillation assembly shown in Fig. 3.
[0043] FIG. 5 is a rear view of the light source and oscillation assembly shown in FIG. 3;

[0044] FIG. 6 is a front view of the light source and oscillation assembly shown in FIG. 3;

[0045] FIG. 7 is a side elevation of a mirror piece according to a preferred embodiment of the invention;

[0046] FIG. 8 is a top plan view of the mirror piece shown in FIG. 7;

[0047] FIG. 9 is a side elevation of game piece according to a preferred embodiment of the invention;

[0048] FIG. 10 is a top plan view of the game piece shown in FIG. 9;

[0049] FIG. 11 is a side cross sectional view of a preferred embodiment of a light projection assembly according to the invention, showing transmission of its light beam to the game arena surface and a reflector positioned on the surface;

[0050] FIG. 12 is a side cross sectional view of the light projection assembly according to claim 11, showing reflection of the light beam; and

[0051] FIG. 13 is a top plan view of a preferred embodiment of a light projection assembly according to the invention.

DESCRIPTION OF THE PREFERRED EMBODIMENT AND BEST MODE

[0052] Referring now specifically to the drawings, a preferred embodiment of the laser light projection assembly according to the present invention is illustrated in FIGS. 1 and 2, and shown generally at reference numeral 10. The laser light projection assembly 10 includes a light source 11 positioned within a housing 12 connected to a game arena 13. As shown in FIG. 1, the light source 11 projects a high intensity light beam “B” into the arena 13, in which a variety of entertaining games can be played. In addition, the light projection assembly 10 can be used to create and display kinetic artwork. The light source 11 comprises one or more lasers emitting a laser beam at a frequency beyond the visible spectrum, but producing a visible image at the point of contact on a surface. Such lasers include diode and excimer lasers. The light source 11 is preferably two diode lasers 11A, 11B positioned within the housing 12, and connected to the game arena 13 by an arena connector 14. Preferably, the game arena 13 is positioned horizontally, however it can also be positioned vertically or at any other angle. The lasers 11A, 11B are directed toward the arena 13 at a slight angle and are mounted to a trigger 15 pivotally connected to the housing by a hinge 16. The trigger 15 is positioned horizontally, and the hinge 16 is connected to the trigger 15 directly above the lasers 11A, 11B. The hinge 16 allows the trigger 15 to move the lasers 11A, 11B in approximately a five degree vertical arc.

[0053] As shown in FIGS. 3-6, a 3-volt DC motor 17 and gear train 18 are mounted on a motor and gear mount 19 within the housing 12. The motor 17 includes a pinion 20 that communicates with the gear train 18. The gear train 18 is connected to the trigger 15 proximate the end opposite the lasers 11A, 11B by an offset rod 21. The motor 17 and gear train 18 cooperate to rapidly move the trigger 15 about its pivotal connection at the hinge 16. The rapid up and down movement of the trigger 15 results in an oscillation of the lasers 11A, 11B in approximately a five degree arc. As shown in FIG. 3, the motor 17 and gear train 18 are turned off and on by an activating switch 22. A control dial 23 communicates with the motor 17 to control the speed at which the pinion 20 and gear train 18 move the trigger 15. The light source 11 and the motor 17 are powered by a battery box 24, preferably containing four AA batteries. Alternatively, the motor can be powered by an AC adaptor.

[0054] As shown in FIG. 1, the game arena 13 is preferably circular and provides a flat, level arena floor 25 having a surface on which the light source 11 can project beams “B” on the floor 25. In addition, a sidewall 26 extends upward from the floor 25 and provides an additional surface on which to project beams “B”, and maintains the beams “B” within the arena 13. Preferably, the arena floor 25 is made of a material, such as steel, so that magnetically attractive objects, such as mirror pieces 27 (shown in FIGS. 7 and 8) and game pieces 28 (shown in FIGS. 9 and 10), can be easily mounted on the floor 25 of the arena 13 for use in conjunction with a variety of games of amusement, which are discussed in greater detail below.

[0055] As shown in FIGS. 7 and 8, the mirror pieces 27 are preferably L-shaped with a base segment 27A, and an upwardly extending elongate segment 27B. A mirror 27C is affixed on the side of segment 27B opposite base segment 27A. In addition, a magnet 27D is mounted on the upper side of base segment 27A, so that a game piece 28 (shown in FIGS. 9 and 10), having a magnetic base 28A, can be positioned on base segment 27A to identify and distinguish the mirror pieces 27. In an alternative embodiment, the mirror 27C covers approximately half of segment 27B and the remaining exposed area of 27B comprises a black-light absorbent material that acts as a shield in games played with the light projection assembly 10. The game pieces 28 are preferably a variety of colors, so that each one can be identified as belonging to a particular player participating in a game. As shown in FIG. 2, four LED lamps 29 are mounted flush on the floor 25 to provide low illumination projecting upward from the floor 25 to help players distinguish the colors of the game pieces 28. The magnetic base 28A of the game pieces 28 allow for the game pieces to be securely positioned on the metallic arena floor 25 or on the top of the mirror magnet 27C to designate which player controls or owns a particular mirror piece 27.

[0056] The diode lasers 11A, 11B can be separately turned on and off by activation switches 30. The lasers 11A, 11B emit diode laser beams “B” having a frequency that is not within the visible spectrum. However, when the beams “B” contact the arena surface 13, an image is formed on the surface that is visible to the human eye. Typically, the visible image is a red dot, however, it can be of any color or shape, depending on the design of the diode lasers 11A, 11B.

[0057] As shown in FIGS. 11 and 12, the trigger 15 is positioned above arena floor 25, and the lasers 11A, 11B are mounted at a slight angle on the trigger 15 so that the lasers 11A, 11B are aimed at the arena floor 25. Although the following principles apply to both diode lasers 11A, 11B, FIGS. 11-13 show only laser 11A for simplicity. The motor 17 and gear train 18 are turned on to rapidly oscillate the laser 11A in approximately a five degree vertical arc in relation to the horizontal arena floor 25. The diode laser 11A
projects an oscillating beam “B” onto the arena floor 25, producing visible dots at all points where the beam “B” makes contact with the floor 25 of the arena 13. The high frequency vertical oscillation of the laser 11A creates the appearance of one continuous line of light “L” on the arena floor 25, as shown in FIG. 13. It is believed that the vertical oscillation of the laser 11A at high speed causes the beam “B” to appear to the viewer as a continuous line “L” due to the optical phenomenon known as “persistence.” Visual persistence refers to the tendency of a person to retain an image for a fraction of second after the image has been viewed. This phenomenon forms the basis for animation and film, in which many frames of still pictures are presented to the viewer at a rapid rate to produce the illusion of a moving picture.

[0058] In addition, the upward oscillation of the trigger 15 causes beams “B” to strike mirror pieces 27 positioned on the arena floor 25. The beam “B” is reflected off of the mirror pieces 27 to form additional distinct lines of continuous visible light “L” on the arena floor 25. The mirror pieces 27 can be arranged in a variety of positions relative to each other to create various laser light designs on the arena floor 25. The light lines “L” are most visible in conditions of low to no light. If the trigger 15 is held by finger pressure, the oscillation of the beam “B” is stopped and the visible light line “L” is reduced back to merely a dot. The dot can be moved back and forth through all of the reflections by depressing and releasing the trigger 15 manually. By positioning the mirrors 27 at certain points on the arena floor 25, a geometric design can be created and displayed on the floor 25. The position of the mirrors 27 can be changed to alter the design displayed on the floor 25. As such, the light projection assembly 10 is capable of generating a variety of aesthetically pleasing kinetic art, limited only by the imagination of the user.

[0059] According to one preferred embodiment, the light projection assembly has the following dimensions:

<table>
<thead>
<tr>
<th>Component</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing 12</td>
<td>4¾ inches by 4¾ inches</td>
</tr>
<tr>
<td>Arena 13</td>
<td>18 inches in diameter</td>
</tr>
<tr>
<td>Trigger 15</td>
<td>moves in a vertical range of ¾ inch</td>
</tr>
<tr>
<td>Gear tube 18</td>
<td>1 inch in diameter</td>
</tr>
<tr>
<td>Pinion 20</td>
<td>¼ inch in diameter</td>
</tr>
<tr>
<td>Base segment 27A</td>
<td>1⅛ inch long</td>
</tr>
<tr>
<td>Elongate segment 27B</td>
<td>2 inches high</td>
</tr>
</tbody>
</table>

[0060] The light projection assembly 10 described above can be used in a variety of entertaining games. The following are examples of such games. Basic principles that apply to all of the games described below include the following:

[0061] Do not look directly into the laser beam “B”. Even very brief exposure can damage the eyes. The laser beam “B” reflects on a mirror 27 according to the basic principle “the angle of incidence is equal to the angle of reflection.” This occurs in both horizontal and vertical planes.

[0062] The laser line “L” must terminate on the wall 26 or target, such as a game piece 28. It cannot end on the floor 25 of the arena 13. The mirror 27 reflecting a beam “B” segment is called a source. Each playing piece comprises a game piece 28 mounted on a mirror piece 27 (shown in FIG. 1). The mirror 27C is separated into two sections: a reflecting surface and a shield. The shield blocks the shot. The beam “B” cannot be split. It must reflect completely off of a source, a playing piece (game piece 28 on mirror piece 27) or the arena wall 26. The game piece 28 is mounted on the mirror piece 27 to designate ownership of the playing piece.

[0063] A visible line “L.” must contact a playing piece to be considered a hit. Playing pieces can be moved to reflect the beam “B”, but the beam “B” cannot project above the arena wall 26. The mirror 27 of the playing piece must be positioned completely within the out of bounds circle. Maintaining the reflection from the wall 26 at the same height strengthens the beam “B.” Playing pieces may be tilted slightly up or down to direct the height of the beam “B”. A move is over when the playing piece is released. The laser 11 can be operated in manual and automatic modes. Depressing the laser trigger 15 moves the laser 11 in a small vertical arc, about 5 degrees. Releasing tension on the trigger 15 returns the laser 15 to its home position when the motor drive 17 is engaged.

EXAMPLE 1

[0064] In one preferred method for playing a game using the light projection assembly 10 according to the invention, the object is to capture an opponent’s playing piece by surrounding it with laser beams. The game is designed for 1-4 players. Players determine how many markers they will play to. The first player obtaining this number wins.

[0065] Players roll die to determine who goes first. The game arena 13 is empty at the beginning.

[0066] A move consists of: (a) placing a mirror piece 27 on the arena floor 25 and marking it by positioning one’s own game piece 28 thereon to form a playing piece; (b) moving one of one’s own playing pieces already on the arena floor 25; and (c) taking one of one’s own pieces off of the arena floor 25. Play continues clockwise around the arena 13. Enclosing an opponent’s playing piece in at least three intersecting lines of light “L” entraps the piece. The player entrapping the piece is entitled to take the opponent’s game piece 28 off of the mirror piece 27 and place his own game piece 28 on the mirror piece 27, thereby giving the successful player his opponent’s entrapped piece. The player executes a new move with the newly obtained piece. A player may enclose his own pieces without adversely affecting them. The first player to win the selected number of playing pieces wins the game.

EXAMPLE 2

[0067] In another preferred method for playing a game using the light projection assembly 10 according to the invention, the object again is to capture opponents’ playing pieces. The game is designed for two to four players. The game arena 13 is empty in the beginning. Each player starts with ten playing pieces, and places one piece on the arena floor 25 to reflect the beam “B” to a wall. Each player rolls a die. The player rolling the highest number goes first and makes the same number of moves as shown on the rolled die. Subsequent turns consist of the next player rolling the die and making the number of moves indicated.

[0068] A move consists of one of the following: (a) adding a new playing piece to the arena floor 25 at any position; (b) removing one of a player’s own pieces from the arena floor
or (c) moving one of a player's own pieces on the arena floor to any position. An opposing player's piece is a target. To capture another player's piece, direct two light lines "L" onto the target area. The player directing the second line "L" striking the target wins that particular piece. The winning player takes the captured piece and removes it from the arena. The mirror may be used again in play. Players may form alliances, strategize and betray each other to their best benefit. Play continues clockwise around the arena. Capturing all but one of a player's playing pieces eliminates the player. The winner has the majority of playing pieces at the end of the game.

**EXAMPLE 3**

In yet another preferred method for playing a game using the light projection assembly 10 according to the invention, the object is again to capture opponents' pieces. The game is designed for two to four players. Each player is given an equal number of mirrors 27 (i.e., 2 players: 8, 3 players: 5, 4 players: 4). The players position all of their pieces before the game starts. Players roll to see who goes first. The target is an opposing player's playing piece. The object is to strike a target after using the number of reflections indicated by the die. A player can turn any of the pieces to direct the beam "B", but only the initiating piece can be moved into position. A player can reflect off of an opponent's piece, but cannot move or turn them. A piece that is hit by a light line "L" after the required number of reflections is captured, and the successful player occupies the captured piece by replacing the game piece 28 currently mounted on the mirror 27 with his own game piece 28. A player's move is over when they release the piece. Play continues clockwise around the arena 13. Capturing all but one of a player's pieces eliminates the player. The winner has the majority of pieces at the end of the game.

**EXAMPLE 4**

In yet another preferred method for playing a game using the light projection assembly 10 according to the invention the object is to control the most playing pieces. The game is designed for one to four players. The arena 13 is empty in the beginning, and the laser 11 is turned off. Players each place one playing piece on the arena floor 25 reflecting the beam "B" to the wall 26. Players roll the die to see who goes first. A move consists of one of the following: (a) adding a new piece to the arena floor 25 at any position; (b) removing one of one's own pieces from the arena 13; (c) moving one of one's own pieces on the arena floor 25 to any position; or (d) activating the laser 11 and taking a shot.

A player rolls making the number of moves indicated on the die. Play consists of positioning your playing pieces in the direction you think the laser will travel and directing the beam "B." When a player believes he can hit an opponent's piece, he attempts a shot by turning on the laser 11 on and reflecting the beam off any mirror 27. As a game variation, reflections can be restricted to a player's own pieces. If a player successfully strikes the target with a reflected laser line "L", the piece belongs to the successful player. The same player may change the piece and its position to reflect the beam. If this reflected line "L" strikes another opponent's target, the player continues until he

**0072** A light projection assembly and methods of using same is disclosed above. Various embodiments of the invention can be made without departing from its scope. Furthermore, the foregoing description of the preferred embodiment of the invention and the best mode for practicing the invention are provided for the purpose of illustration only and not for the purpose of limitation—the invention being defined by the claims.

1 claim:

1. A light projection assembly comprising:
   
   (a) a laser positioned and mounted for projecting a laser beam onto a surface of a game arena; and
   
   (b) oscillation means cooperate with said laser for oscillating said laser at a rate sufficient to cause the laser beam projected onto said game arena surface to produce an illusion of a continuous animated line on said game arena surface.

2. A light projection assembly according to claim 1, wherein said laser comprises a diode laser.

3. A light projection assembly according to claim 1, wherein said arena comprises a floor and a side wall extending upward from said floor.

4. A light projection assembly according to claim 3, wherein said floor is positioned horizontally, and said laser is positioned on a horizontal plane above said floor.

5. A light projection assembly according to claim 1, and further comprising a mirror positioned on said game arena surface for reflecting the laser beam.

6. A light projection assembly according to claim 5, wherein said mirror is positioned perpendicularly to said game arena surface.

7. A light projection assembly according to claim 5, wherein said oscillating means oscillates said laser in an arc sufficient to project the laser beam onto said game arena surface and said mirror.

8. A light projection assembly according to claim 1, wherein said game arena comprises a metallic surface for positioning a magnetically attractable object thereon.

9. A light projection assembly according to claim 8, wherein said magnetically attractable object comprises a game piece for positioning on said floor for use in playing a game in conjunction with the laser.

10. A light projection assembly according to claim 8, wherein said magnetically attractable object comprises a mirror for reflecting the laser beam.

11. A light projection assembly according to claim 1, further comprising a second laser positioned and mounted for projecting a second laser beam onto the surface of said game arena, said oscillation means cooperating with said second laser for oscillating said second laser at a rate sufficient to cause the second laser beam projected onto said game arena surface to produce an illusion of a continuous animated line on said game arena surface.

12. A light projection assembly according to claim 1, and further comprising a battery power source for powering said laser.
14. A light projection assembly according to claim 1, wherein said oscillation means comprises a trigger pivotally connected to a housing, said laser mounted on said trigger whereby repeatedly moving said trigger at a sufficient rate oscillates said laser to cause the laser beam to produce the illusion of a continuous animated line on said game arena surface.

15. A light projection assembly according to claim 14, wherein said trigger is pivotally connected to said housing by a hinge, said hinge permitting a range of movement of said trigger of no more than five degrees, whereby moving said trigger oscillates said laser in an arc of five degrees.

16. A light projection assembly according to claim 14, wherein the game arena surface is positioned horizontally, and said trigger is positioned in a horizontal plane above the game arena surface.

17. A light projection assembly according to claim 16, wherein repeatedly moving said trigger at a sufficient rate oscillates the laser in a vertical arc to cause the laser beam to produce the illusion of a continuous animated line on said game arena surface.

18. A light projection assembly according to claim 14, wherein said oscillation means further comprises a motor and gear train connected to said trigger for repeatedly moving said trigger at a sufficient rate to cause the laser beam to produce the illusion of a continuous animated line on said game arena surface.

19. A light projection assembly according to claim 18, further comprising an activating switch for turning the motor on and off.

20. A light projection assembly according to claim 18, and further comprising means for controlling the speed at which said motor moves said trigger.

21. A light projection assembly according to claim 20, and further comprising a battery power source for powering said motor and said laser.

22. A light projection assembly comprising:

(a) a laser positioned and mounted for projecting a laser beam onto a surface of a game arena; and

(b) a trigger pivotally connected to a housing for mounting said laser thereon, whereby repeatedly moving said trigger at a sufficient rate oscillates said laser to cause the laser beam projected onto said game arena surface to produce an illusion of a continuous animated line on said game arena surface.

23. A light projection assembly according to claim 22, wherein said laser is positioned within said housing.

24. A light projection assembly according to claim 22, wherein said trigger is pivotally connected to said housing by a hinge, said hinge permitting a range of movement of said trigger of no more than five degrees, whereby moving said trigger oscillates said laser in an arc of five degrees.

25. A light projection assembly according to claim 22, and further comprising a motor and gear train connected to said trigger for repeatedly moving said trigger at a sufficient rate to cause the laser beam to produce the illusion of a continuous animated line on said game arena surface.

26. A light projection assembly according to claim 22, wherein said game arena surface is positioned horizontally, and said trigger is positioned in a horizontal plane above said game arena surface.

27. A light projection assembly according to claim 22, wherein said game arena comprises a floor and a side wall extending upward from said floor.

28. A light projection assembly according to claim 22, wherein said housing is connected to said game arena.

29. A method for playing a game using a light projection assembly comprising the steps of:

(a) providing a light projection assembly comprising:
   (i) a laser positioned and mounted for projecting a laser beam onto a surface of a game arena, and
   (ii) oscillation means cooperating with said laser for oscillating said laser at a rate sufficient to cause the laser beam projected onto said game arena surface to produce an illusion of a continuous animated line on said game arena surface;

(b) positioning a game piece on the game arena surface; and

(c) attempting to position at least two mirrors on the game arena surface to reflect the laser beam so as to allow the laser beam to contact the game piece by at continuous animated lines on said game arena surface.

30. A method for playing a game using a light projection assembly comprising the steps of:

(a) providing a light projection assembly comprising:
   (i) a laser positioned and mounted for projecting a laser beam onto a surface of a game arena, and
   (ii) oscillation means cooperating with said laser for oscillating said laser at a rate sufficient to cause the laser beam projected onto said game arena surface to produce an illusion of a continuous animated line on said game arena surface;

(b) positioning a game piece on the game arena surface; and

(c) attempting to position at least two mirrors on the game arena surface to reflect the laser beam so that at least two continuous animated lines on said game arena surface contact the game piece.

31. A method for playing a game using a light projection assembly comprising the steps of:

(a) providing a light projection assembly comprising:
   (i) a laser positioned and mounted for projecting a laser beam onto a surface of a game arena, and
   (ii) oscillation means cooperating with said laser for oscillating said laser at a rate sufficient to cause the laser beam projected onto said game arena surface to produce an illusion of a continuous animated line on said game arena surface;

(b) positioning a game piece on the game arena surface;

(c) randomly determining a number; and

(d) attempting to position at least one mirror on the game arena surface to reflect the laser beam so as to produce a number of continuous animated lines on the game arena surface equal to the randomly determined number and contact the game piece with one of the continuous animated lines.
32. A method for playing a game according to claim 31, wherein the step of randomly determining a number comprises rolling a die.

33. A method for playing a game using a light projection assembly comprising the steps of:

(a) providing a light projection assembly comprising:

(i) a laser positioned and mounted for projecting a laser beam onto a surface of a game arena,

(ii) oscillation means cooperating with said laser for oscillating said laser at a rate sufficient to cause the laser beam projected onto said game arena surface to produce an illusion of a continuous animated line on said game arena surface, and

(iv) an activating switch in communication with the laser for turning the laser on and off;

(b) positioning a game piece on the game arena surface with said laser turned off; and

(c) attempting to position at least one mirror on the game arena surface in relation to said laser and said game piece so that a continuous animated line reflected off of said mirror and onto the surface contacts the game piece upon activating the light source;

34. A method for playing a game using a light projection assembly according to claim 33, and further comprising the step of activating the laser to determine if the reflected line contacts the game piece.