Described herein is a hover toy system having a source of air flow and a hover toy in a shape selected from the group consisting of a surfboard, a skateboard, a snowboard or other board like structure.
Fig 4
HOVER TOY SYSTEM

FIELD OF INVENTION

[0001] The present invention is directed to a toy system that includes a hover toy and a source of air, which lifts and supports the hover toy by generating an air current against the hover toy, and more particularly, to a hover toy with which a user can emulate tricks and maneuvers that are employed in skateboarding, surfing, snowboarding, or the like.

BACKGROUND OF INVENTION

[0002] Skateboarding, surfing and snowboarding, have all become popular and diversified sports. One specialized area of these activities is extreme sports, in which the ability to perform has been extended beyond its original intent, such that a person is able to incorporate acrobatic jumps and other dangerous stunts in these sports. The risk and visual appeal is very attractive to young persons.

BRIEF SUMMARY OF THE PREFERRED EMBODIMENTS

[0003] In a preferred embodiment of the present invention, a hover toy system is provided. The hover toy system preferably includes a source of airflow and a hover toy preferably in a shape selected from the group consisting of a skateboard, surfboard, snowboard or other curved board. Preferably, the hover toy is less than about 6 inches in length. The hover toy system may also comprise a trick device positioned between an outflow of air from the source of air and a bottom of the hover toy. Preferably, the hover toy is comprised of a lightweight material.

[0004] In another preferred embodiment of the present invention, a method of playing with a hover toy preferably selected from the group consisting of a surfboard, snowboard, and skateboard is provided. Preferably, the method comprises the steps of: (a) providing a source of air; (b) providing a hover toy; and (c) using one or more digits of a hand to move the hover toy over the source of air. In one aspect of this embodiment, the method further comprises the steps of providing a trick device and positioning the trick device over the source of air to modify the flow of the source of air. In another aspect of this embodiment, the method further comprises the steps of providing a trick device and manipulating the hover toy at, around, or through the trick device.

BRIEF DESCRIPTION OF THE DRAWINGS

[0005] The invention may be more readily understood by referring to the accompanying drawings in which:

[0006] FIG. 1a is a side elevational view of a hover toy system in accordance with a preferred embodiment of the present invention;

[0007] FIG. 1b is a front plan view of a fan used in the hover toy system of FIG. 1a;

[0008] FIG. 1c is a side elevational view of the fan used in the hover toy system of FIG. 1a;

[0009] FIG. 2 is a top plan view of the fan showing an air grating used in the hover toy system of FIG. 1a;

[0010] FIG. 3 is a side elevational view of a motor and a switch used in the hover toy system of FIG. 1a;

[0011] FIG. 4 is an exploded view of the hover toy system of FIG. 1a having a trick device; and

[0012] FIG. 5 is a top plan view of a hover toy used in the hover toy of FIG. 1a.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0013] The present invention is preferably comprised of a hover toy, preferably composed from a Mylar composite, and a source of air, such as a complementary fan mechanism, which is used to provide sufficient lifting capacity to the hover toy, so that its relative position in space, while manipulated by an operator, may remain above the fan mechanism.

[0014] The hover toy may be in the shape of a curved form, that may be flexed or manipulated in order to provide different channels of air resistance, so that the operator may accomplish a variety of aerial feats. Preferably the hover toy includes a surface for contacting the source of air, preferably a flat surface, more preferably a board and even more preferably a curved board. The hover toy is capable of traveling on X, Y and Z planes, so long as the fan, or any other source of air, is able to provide the lifting capacity of the hover toy. The hover toy system will be described in detail below.

[0015] Referring now to FIGS. 1-5, the present invention is directed to a hover toy system, generally indicated as 10.

[0016] The hover toy system generally includes a source of air, such as an electrically powered fan, and a hover toy. The hover toy has a surface for contacting the air flow and is preferably an elongated board under about six inches in length, and preferably in the shape of a skateboard, snowboard, or surfboard. It could however be in the shape of other toys, such as a small bicycle, an aircraft, a watercraft or any other shape that can be manipulated by at least one digit of a hand over an airflow. In the case of the foregoing shapes, they may need to be mounted on a board or other flat surface to maximize the effects of the present invention.

[0017] The hover toy is preferably comprised of a lightweight material, so that the electrically powered fan can sustain the hover toy’s relative position in space by generating a current of air against the hover toy’s underside or flat surface, in addition to the added assistance and manipulation from an operator’s hand or hands, in order to provide the outward appearance that the hover toy is levitating or hovering. This is preferably done so as part of an activity in which the operator may additionally interact between the hover toy and surrounding objects as part of this activity.

[0018] It will be appreciated that terms such as “top,” “bottom,” “above” and “side” used herein are merely for ease of description and refer to the orientation of the components as shown in the figures. It should be understood that any orientation of the components described herein is within the scope of the present invention.

[0019] Preferably, the present invention includes a housing 20 comprising a top portion 1, a bottom portion 2 connected to the top portion 1. The invention further includes an air grating assembly 3 formed from the top portion 1 or connected to it, a fan 4 disposed within an interior of the housing 20, a motor 5 disposed within the interior of the housing 20, a switch 6, and a hover toy 7. The housing 20 having the fan 4 disposed therein and/or the fan 4 itself may be referred to as “a source of air flow.”

[0020] In a preferred embodiment and referring to FIG. 1a, the hover toy system 10 includes a housing 20 having a top portion 1 and a bottom portion 2. Preferably, the top portion 1 and the bottom portion 2 are removably connected to each
other. In other embodiments, the top portion 1 and the bottom portion 2 may not be removable connected and/or may be one piece.  

[0021] In a preferred embodiment, the bottom portion 2 secures the motor 5 from moving and/or holds it in place. The bottom portion 2 has an interior 11 which allows for air circulation, as best shown in FIG. 1a. Preferably, the top portion 1 has an interior 12.

[0022] In a preferred embodiment, and as best shown in FIGS. 1a and 4, the top portion 1 holds the air grating assembly 3 in place. The air grating assembly 3 may be connected to the top portion 1, or formed from the top portion 1. The air grating assembly 3 prevents fingers or other foreign objects from touching the fan blade or interior 11 of the bottom portion 2. In other embodiments, the air grating assembly 3 may be omitted and replaced with another suitable mechanism.

[0023] In a preferred embodiment, and as shown in FIGS. 1a-2 and 4, the hover toy system includes a fan 4, preferably an electrically-powered fan. Preferably, the fan 4 is housed in the interior of the housing 20, such as the interior 12 of the top portion 1. The fan 4 may be a series of stiff blades, angled to create a pressure differential, that pulls air through in the preferred direction that it rotates, thereby creating a current up through the grating and to the hover toy 7 above it. For example, the fan 4 preferably creates a current and/or airflow that contacts the bottom or underside of the hover toy 7 above it. Possible embodiments, the fan 4 may create an airflow 8 as best shown in FIG. 1a. In other embodiments, the fan 4 may be replaced by any other suitable source of air (or source of airflow). In other embodiments, the fan 4 may be powered by other means besides electrical and its air flow can be variable.

[0024] In a preferred embodiment, the hover toy system 10 includes a motor 5. Preferably, the motor 5 is disposed within the housing 20, such as the interior of the top portion 1 and/or the interior of the bottom portion 2. The motor 5 is utilized in rotating the fan 4 in a direction to generate an air flow that is strong enough to lift the hover toy 7 above it. Additionally, the hover toy system further comprises a switch 6, best shown in FIGS. 3 and 4. The switch 6 may be disposed within the interior of the housing or attached to it. In other embodiments, the switch 6 is separate from the housing. Preferably, the switch 6 is a device that allows a circuit to be opened or closed; acting as a medium between an external power supply (such as an AC current, a DC current which has been converted from AC power, battery power, or the like) and the operation of the fan 4. In other embodiments, the switch 6 may be replaced with another suitable mechanism.

[0025] Referring now to FIGS. 1a and 4-5, the hover toy system 10 includes a hover toy 7 that is preferably an elongated board, created from lightweight material, such as a Mylar composite, plastic, wood, foil or the like. Preferably, the hover toy 7 is in the shape, form, or representation of a skateboard, snowboard, surfboard, or any other recreational board or device. The hover toy is able to travel in X, Y, and Z planes. In a preferred embodiment, the hover toy 7 is less than about 6 inches in length. It can be larger or the more lightweight it is. In other embodiments, the hover toy 7 may be more or less than about 6 inches. In other embodiments, the hover toy may be in the shape or form of any other type of recreational object, such as a ski, snowshoe, cross country ski, ice skate, sail boat, or the like.

[0026] In a preferred embodiment, and as best shown in FIG. 1a, the fan 4 pulls air as indicated by the arrows and represented as airflow 8 in FIG. 1a. Preferably, the current travels from the interior 11 of the bottom portion 2, up past the fan blades, through the air grating 3, and to the hover toy 7. This creates the lifting capacity to hold its relative position in space above.

[0027] In one embodiment, railings, ramps and copings may be added to the toy’s top portion 1, or to the air grating 3, so that the operator might travel the hover toy between these different elements as part of an activity. These elements are also used in conjunction with a designed look to enhance the activity. For example, and as best shown in FIG. 4, a trick device 9 may be used. Preferably, the trick device 9 fits over and/or is connected or attached to the top portion 1 of the housing 20 by, e.g., snaps or a friction fit. The trick device 9 is a device which the user can interact the hover toy 7 when moving the hover toy 7 over the source of air. In other embodiments, the trick device 9 may not be connected to the top portion 1. For example, it can be connected to some other device and simply put in proximity to the fan 4 when the user is employing the fan 4. The device may be provided in the form of railings, ramps, tunnels, copings, moguls, hills, waves, trees, or the like, so that the user may travel between these elements. The toy system can be in the form of a kit with several varieties of trick devices.

[0028] In a preferred embodiment, the hover toy system operates as follows. Preferably, the user turns on the fan 4 via the switch 6. Preferably, the current (or air flow) from the fan 4 is directed in an upwards direction. Referring now to FIG. 1a, the user holds the hover toy 7 in one hand (the first hand) [not shown], and then places it underneath two fingers 30 of the opposing hand (or second hand), while the fingers of this opposing hand are relatively parallel to one another, and are at a ninety-degree angle to the hover toy underneath them, and located directly above the fan 4. By removing the first hand’s control, the hover toy is pressed against the two fingers 30 of the second hand by the air current, so that movement of the hover toy is guided by each of the two fingers against the air resistance provided. Additionally, the trick device 9 may be employed. For example, the trick device 9 may be positioned over the source of air (i.e., over the housing 20 and/or the fan 4) and used to modify the flow of air from the air source. In other embodiments, the user may be able to manipulate the hover toy 7 at, around, or through the trick device 9. For example, in the case of a hover toy 7 in the form of a snowboard, a trick device 9 in the shape of a mountain/hill having moguls and the like may be provided. The user may place the trick device 9 over the top portion 1 and/or over the air grating 3, turn on the fan 4, and emulate snowboarding on a mountain and over moguls, and the like, using the trick device 9.

[0029] The trick device can also be disposed outside of the flow of air and can rest on an object that is not the housing. The trick device can extend from the housing via a flexible wire and can be moved into and out of the air flow.

[0030] By employing structure and methods of the foregoing type, an improved playing and play activity is achieved.

[0031] While certain embodiments of the invention have been described, these embodiments have been presented by way of example only, and are not intended to limit the scope of the inventions. Indeed, the novel methods and elements described herein may be embodied in a variety of other forms; furthermore, various omissions, substitutions and changes in the form of the methods and systems described herein may be made without departing from the spirit of the inventions. The accompanying claims and their equivalents are intended to
cover such forms or modifications as would fall within the scope and spirit of the inventions.

What is claimed is:

1. A hover toy system comprising:
   (a) a source of air flow; and
   (b) a hover toy in a shape and size that can be manipulated by at least one digit of user's hand.

2. The hoverboard toy of claim 1 wherein the hover toy shape is selected from the group consisting of a surfboard, a skateboard, a snowboard, a curved form, a bicycle, an automotive vehicle, an aircraft, a watercraft, a ski, a snowshoe, or an ice skate.

3. The hover toy system of claim 1, wherein the hover toy has a surface that contacts the air flow, the surface having a length, and the length being less than about 6 inches.

4. The hover toy system of claim 1, wherein a trick device is positioned between an outflow of air from the source of air and a bottom of the hover toy.

5. The hover toy system of claim 1, wherein the hover toy is made of a lightweight material.

6. A method of playing with a lightweight toy selected from the group consisting of a surfboard, a curved form, a bicycle, an automotive vehicle, an aircraft, a watercraft, a ski, a snowshoe, or an ice skate, the method comprising the steps of:
   (a) providing a source of air;
   (b) providing a lightweight toy;
   (c) using one or more digits of a hand to move the lightweight toy over the source of air.

7. The method of claim 6 further comprising the steps of:
   (a) providing a trick device;
   (b) displaying the trick device over the source of air to modify a flow of air from the source of air.

8. The method of claim 6 further comprising:
   (a) providing the trick device;
   (b) manipulating the miniature toy at, around, or through the trick device.

9. A kit comprising a hover toy, a source of air and at least two trick devices.

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