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(54) **INFLATABLE FOIL BALLOON WITH LETTERING & GRAPHICS PRINTED WITH TRANSLUCENT COLORED INKS WHICH ARE ILLUMINATED BY EXTERIOR LED LIGHTS**

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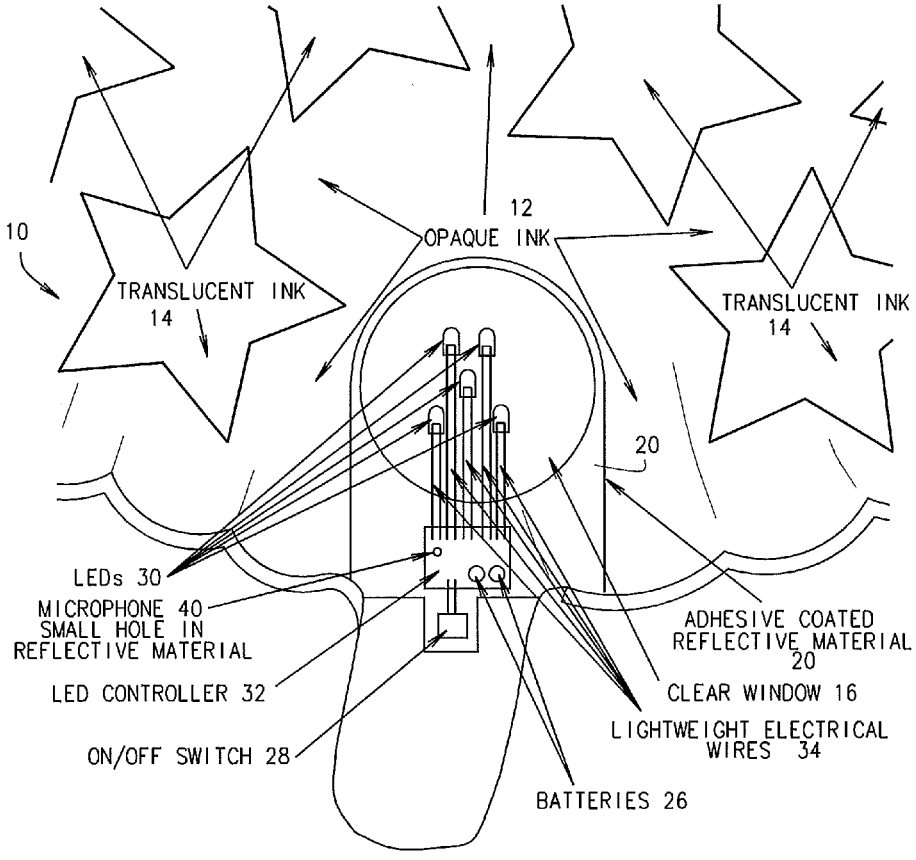
(57) **ABSTRACT**

An illuminated inflatable balloon assembly having translucent graphics associated with the exterior of the balloon, a clear window extending through the balloon, a light source positioned over the clear window, a power source, a controller for controlling the illumination of the light source, and an on/off switch for controlling power to the light source. In one embodiment, the controller causes the light source to repeatedly flash when power is supplied thereto.

DRAWING OF CLOSE UP VIEW OF MULTIPLE LEDs, & CONTROLLER WITH MICROPHONE ATTACHED TO EXTERIOR OF FOIL BALLOON



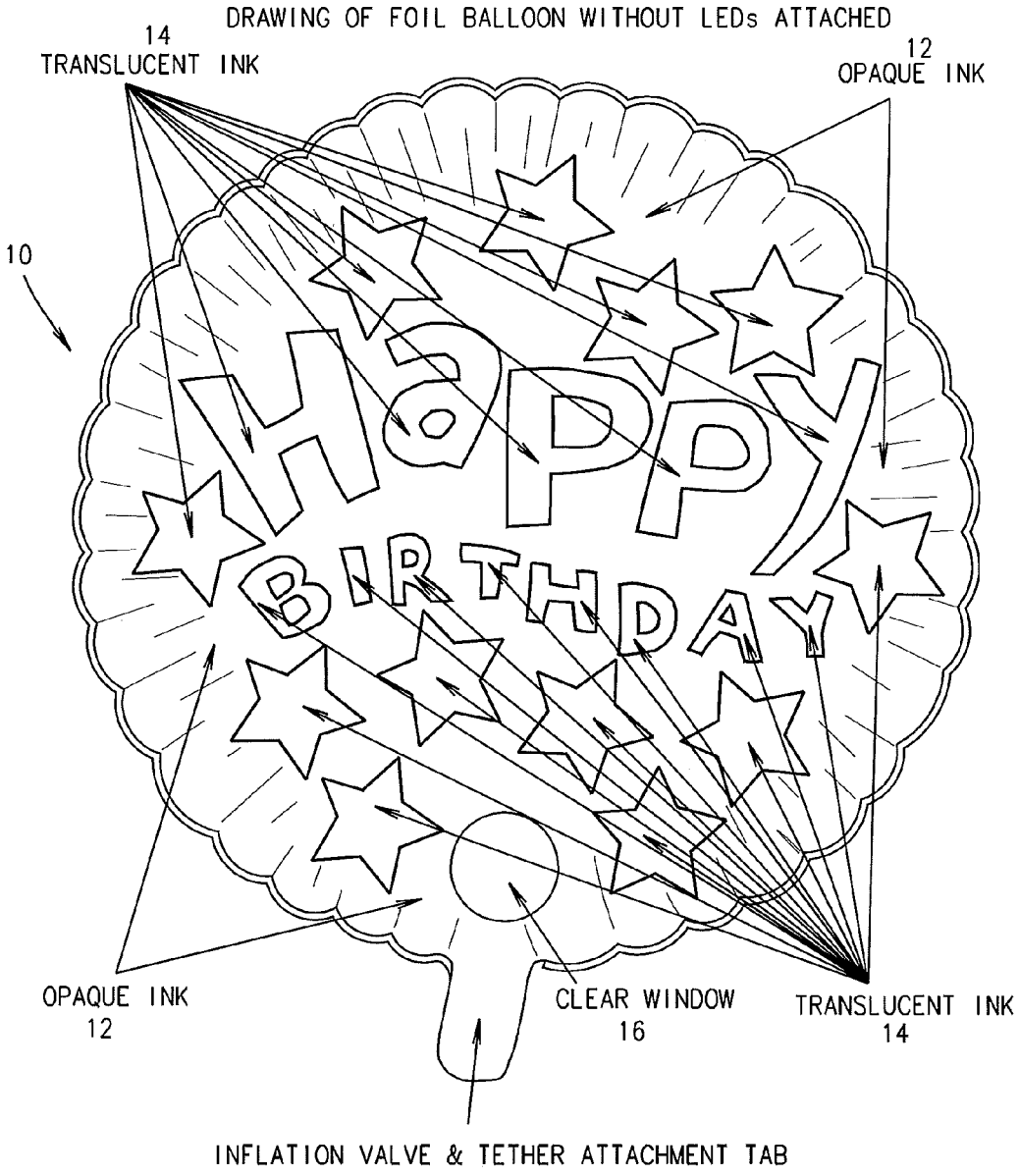

DRAWING OF FOIL BALLOON WITHOUT LEDs ATTACHED
14
TRANSLUCENT INK
12
OPAQUE INK
10
HAPPY
BIRTHDAY
OPAQUE INK
12
CLEAR WINDOW
16
TRANSLUCENT INK
14
INFLATION VALVE & TETHER ATTACHMENT TAB

FIG. 1

DRAWING OF CLOSE UP VIEW OF SINGLE LED ATTACHED TO EXTERIOR OF FOIL BALLOON

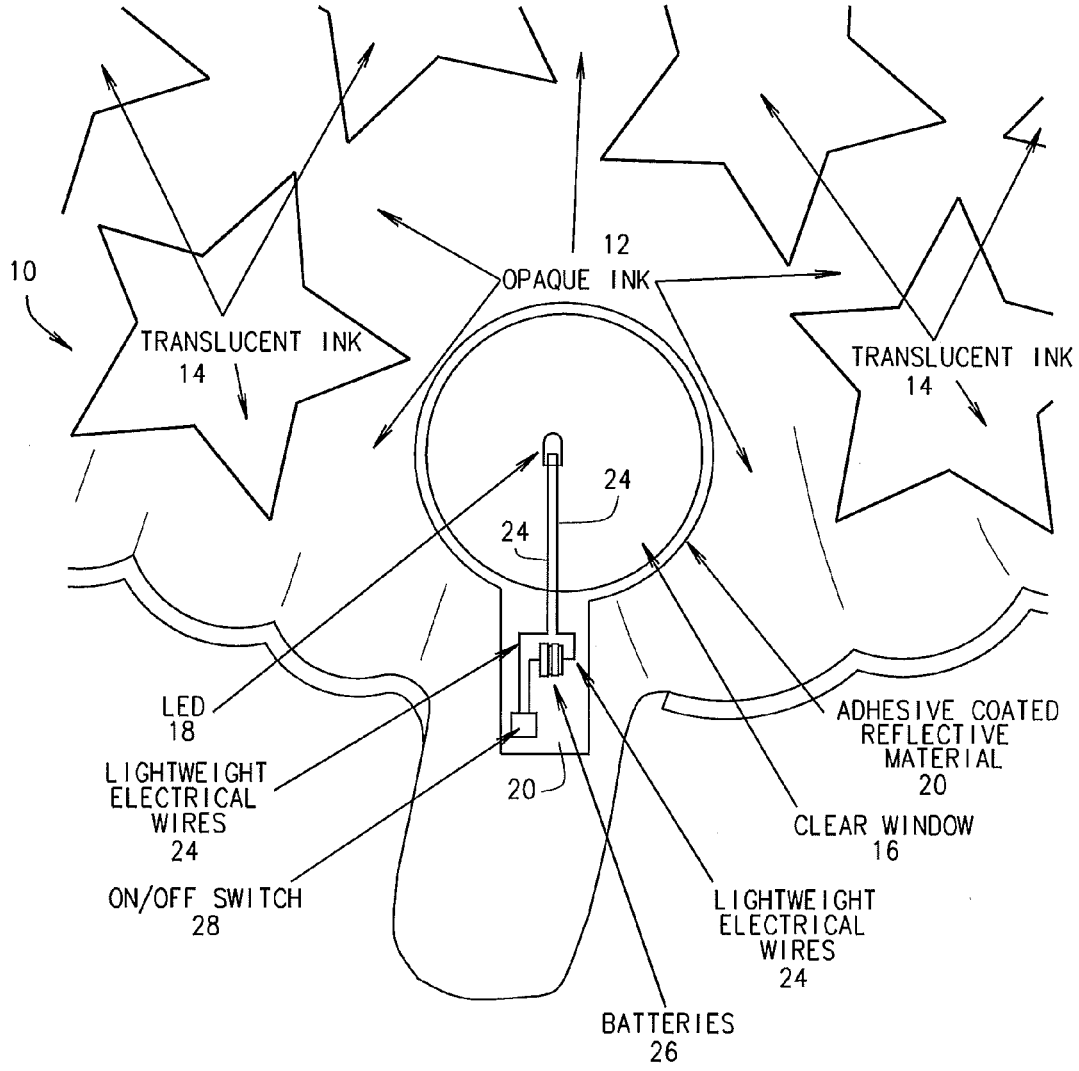


FIG. 2

DRAWING OF CLOSE UP VIEW OF MULTIPLE LEDs, CONTROLLER & PIEZOELECTRIC BUZZER ATTACHED TO EXTERIOR OF FOIL BALLOON

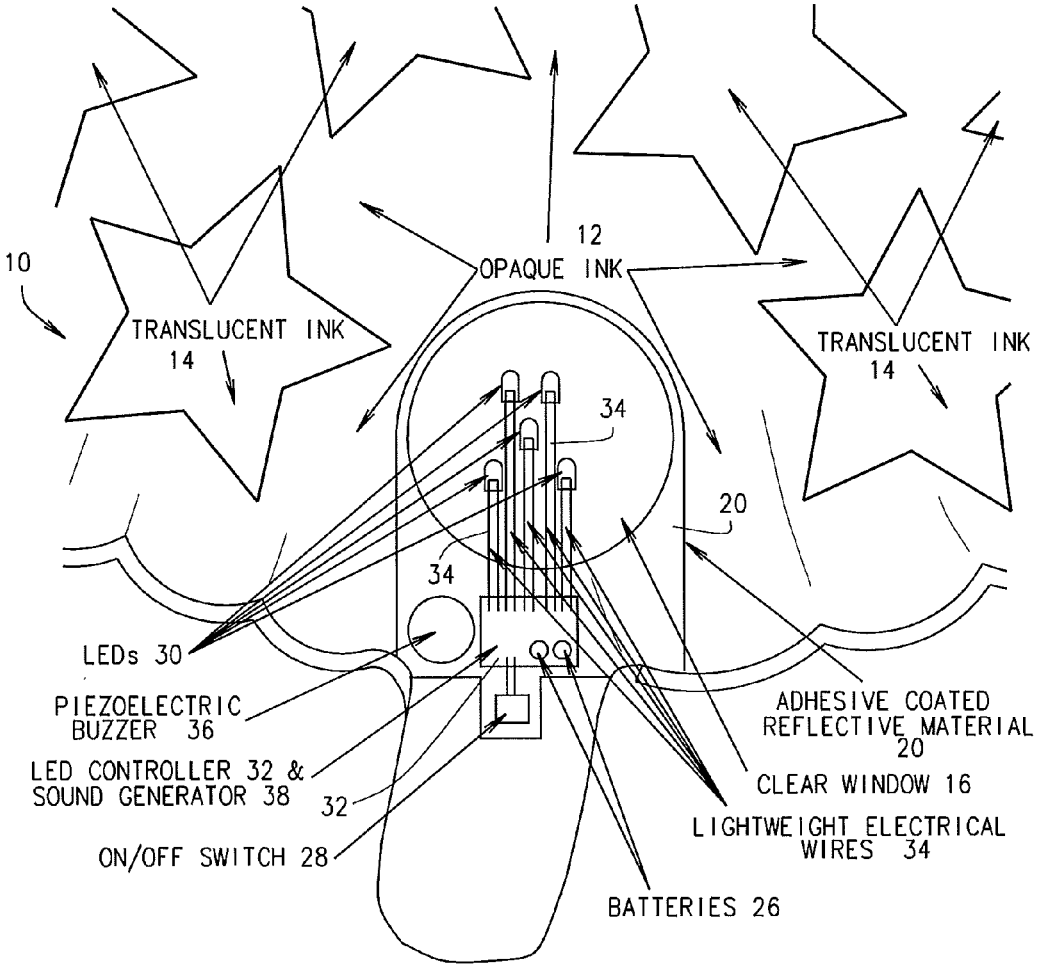


FIG. 3

DRAWING OF CLOSE UP VIEW OF MULTIPLE LEDs, & CONTROLLER WITH MICROPHONE ATTACHED TO EXTERIOR OF FOIL BALLOON

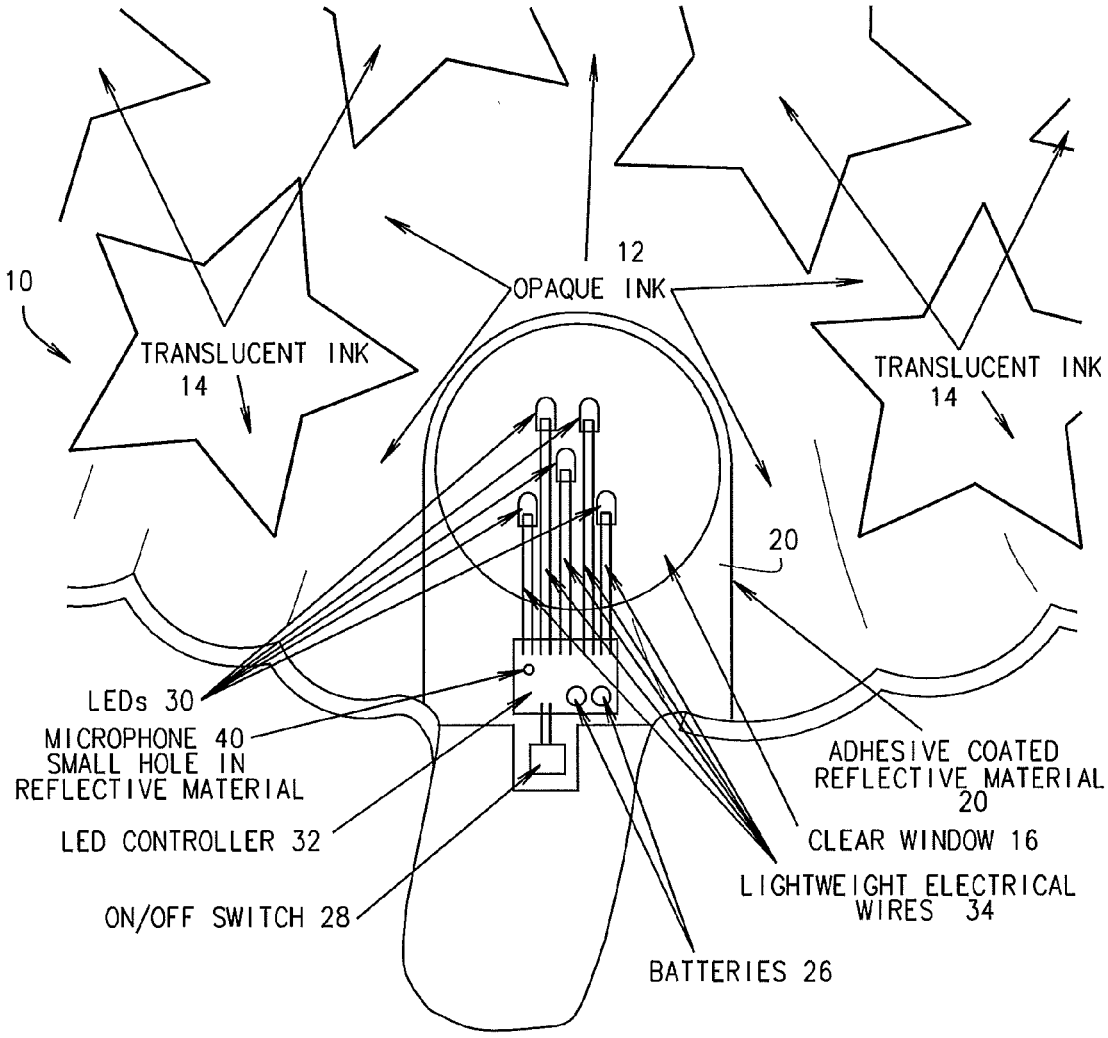


FIG. 4

INFLATABLE FOIL BALLOON WITH LETTERING & GRAPHICS PRINTED WITH TRANSLUCENT COLORED INKS WHICH ARE ILLUMINATED BY EXTERIOR LED LIGHTS

FIELD OF THE INVENTION

[0001] The present invention relates generally to illuminated inflatable balloons and, more particularly, to an illuminated inflatable foil balloon having lettering and graphics printed on the exterior surface of the balloon with translucent colored inks which are illuminated by LED lights attached to the exterior of the balloon.

BACKGROUND OF THE INVENTION

[0002] Illuminating balloons through the use of lights externally affixed to the outside portion of a balloon is not new and dates back to at least the 1970s. See, for example, U.S. Pat. No. 3,672,083 entitled 'Inflatable and Illuminable Figure'. Other lighted balloons include illuminated balloon assemblies as disclosed in U.S. Pat. Nos. 5,807,157; 6,482,065; 6,821,183; 7,077,553; 7,147,536; 7,318,765; 7,364,488; 7,551,061; 7,914,360; 8,297,778; 8,789,981 and Patent Application Publication No. 2014/0003034.

SUMMARY OF THE INVENTION

[0003] The present invention is an inflatable balloon having lettering and graphics printed on the exterior surface of the balloon body with translucent ink, a light source, a controller programmed to control the light source, a power source, and a clear window for allowing the light source to enter the interior portion of the balloon. The exterior background colors associated with the exterior portion of the balloon body (visible from outside the balloon) are printed with opaque inks that surround the translucent graphics and the interior of the balloon includes a standard interior reflective backing material visible only from inside the balloon. The balloon body includes a clear window over which at least one LED light is attached so that light generated by the at least one LED light can enter the interior portion of the balloon. The LED lights are attached to the balloon using an adhesive coated reflective material such that all of the light emitted by the LED lights is focused through the clear window to the interior of the balloon and is thereafter reflected by the reflective backing material associated with the interior of the balloon. As light bounces around within the interior portion of the balloon, it is allowed to escape through the translucent ink at which point the graphics become illuminated.

BRIEF DESCRIPTION OF THE DRAWINGS

[0004] FIG. **1** is a front elevational view of an inflatable foil balloon constructed in accordance with the teachings of the present invention having opaque and translucent ink as well as a clear window associated with the foil balloon.

[0005] FIG. **2** is a partial front elevational view of FIG. **1** illustrating one embodiment of the present invention wherein a single LED light source and its associated electrical connections are positioned over the clear window associated with the present balloon.

[0006] FIG. **3** is a partial front elevational view of FIG. **1** illustrating another embodiment of the present invention wherein a plurality of LED lights are positioned over the clear window of the present balloon, the lights being electrically coupled to a controller, a sound generator and a piezoelectric buzzer.

[0007] FIG. **4** is a partial front elevational view of FIG. **1** illustrating still another embodiment of the present invention wherein a plurality of LED lights are positioned over the clear window of the present balloon, the LED lights being coupled to a controller, and including a microphone for synchronizing the LED lights to an external sound source.

DETAILED DESCRIPTION OF THE INVENTION

[0008] Referring to the drawings more particularly by reference numbers wherein like numerals refer to like parts, FIG. **1** illustrates one embodiment of the present illuminated foil balloon **10** showing a front elevational view of one side of the present balloon wherein both opaque inks **12** as well as translucent inks **14** have been used on the exterior surface of the balloon to create lettering and graphics on the exterior surface thereof. More particularly, the exterior background colors on the balloon **10** have been printed with the opaque inks **12** and the lettering and graphics have been printed with the translucent inks **14**.

[0009] A clear window **16** is formed on one side of the balloon **10** as illustrated in FIG. **1** and the light source **18** illustrated in FIG. **2** is attached to the balloon **10** over the clear window **16** using an adhesive coated reflective material so that all of the light emitted by the LED light source **18** is focused through the clear window **16** to the interior space of the inflated balloon **10**. The light source **18** is positioned between the reflective material **20** and the clear window **16**. Any light entering the interior space of balloon **10** through window **16** is reflected by the reflective backing inside the balloon until it is allowed to exit through the graphic pattern and lettering created by the translucent inks **14** at which point the lettering and graphics are illuminated.

[0010] The LED lights can be a single LED or multiple colored LED lights so that as each colored LED light turns on, the color of the illuminated translucent lettering and graphics appears to change. As illustrated in FIG. **2**, a single LED light source **18** is electrically coupled via electrical wires **24** to at least one battery **26** and an on/off switch **28** is likewise electrically wired to both the light source **18** and the at least one battery **26** for turning the light source on and off in a conventional manner.

[0011] FIG. **3** illustrates a plurality of LED lights **30** positioned over the clear window **16**. A controller **32** is electrically connected to the LED lights **30** via electrical wires **34** and the controller **32** is programmed so as to cause either a single LED light such as LED light **18** or the LED lights **30** to blink or flash independently of each other in a sequence programmed into controller **32**.

[0012] FIG. **3** also includes a piezoelectric buzzer **36** and a sound generator **38** which are configured in a conventional manner and coupled to controller **32** so as to produce musical sounds coming out of the piezoelectric buzzer **36**. It is also well-known in the art to synchronize the flashing LED lights **30** to the musical sounds generated by the sound generator **38** and coming out of the piezoelectric buzzer **36** through well-known circuitry and sequences.

[0013] A slightly more advanced LED controller **32** as illustrated in FIG. **4** could also include a small microphone **40** so that the blinking or flashing of the LED lights **30** can be synchronized with music received by the microphone **40**

from an external sound system. A switch **28** again is incorporated to turn off the LED lights when not in use.

1. (canceled)

2. A method for illuminating the translucent lettering and/or graphics on an inflatable balloon having interior and exterior surfaces, the method comprising:

providing a clear window associated with said balloon, said window extending between the interior and exterior surfaces of said balloon;

creating graphics associated with the exterior surface of said balloon, said graphics being created with translucent ink;

attaching a light source to a reflective material, and further attaching the light source to the exterior surface of said balloon over said clear window such that said light source is located between the reflective material and the clear window;

providing a power source coupled to said light source;

providing a controller coupled to said light source and to said power source for controlling the illumination of the light source; and

providing an on/off switch coupled to said power source for controlling power to the light source.

3. The method defined in claim **2** including programming said controller to repeatedly flush said light source when power is supplied to said light source.

4. The method defined in claim **2** wherein said light source includes a plurality of LED lights.

5. The method defined in claim **4** wherein said plurality of LED lights include multi-colored lights.

6. The method defined in claim **2** wherein said power source, said controller and said on/off switch are attached to the exterior surface of said balloon.

7. The method defined in claim **2** wherein the interior surface of said balloon includes a reflective backing material.

8. The method defined in claim **2** wherein said balloon is a foil balloon.

9. The method defined in claim **2** wherein the exterior surface of said balloon includes opaque areas surrounding the graphics associated therewith.

10. The method defined in claim **9** wherein said opaque areas are formed with opaque ink.

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