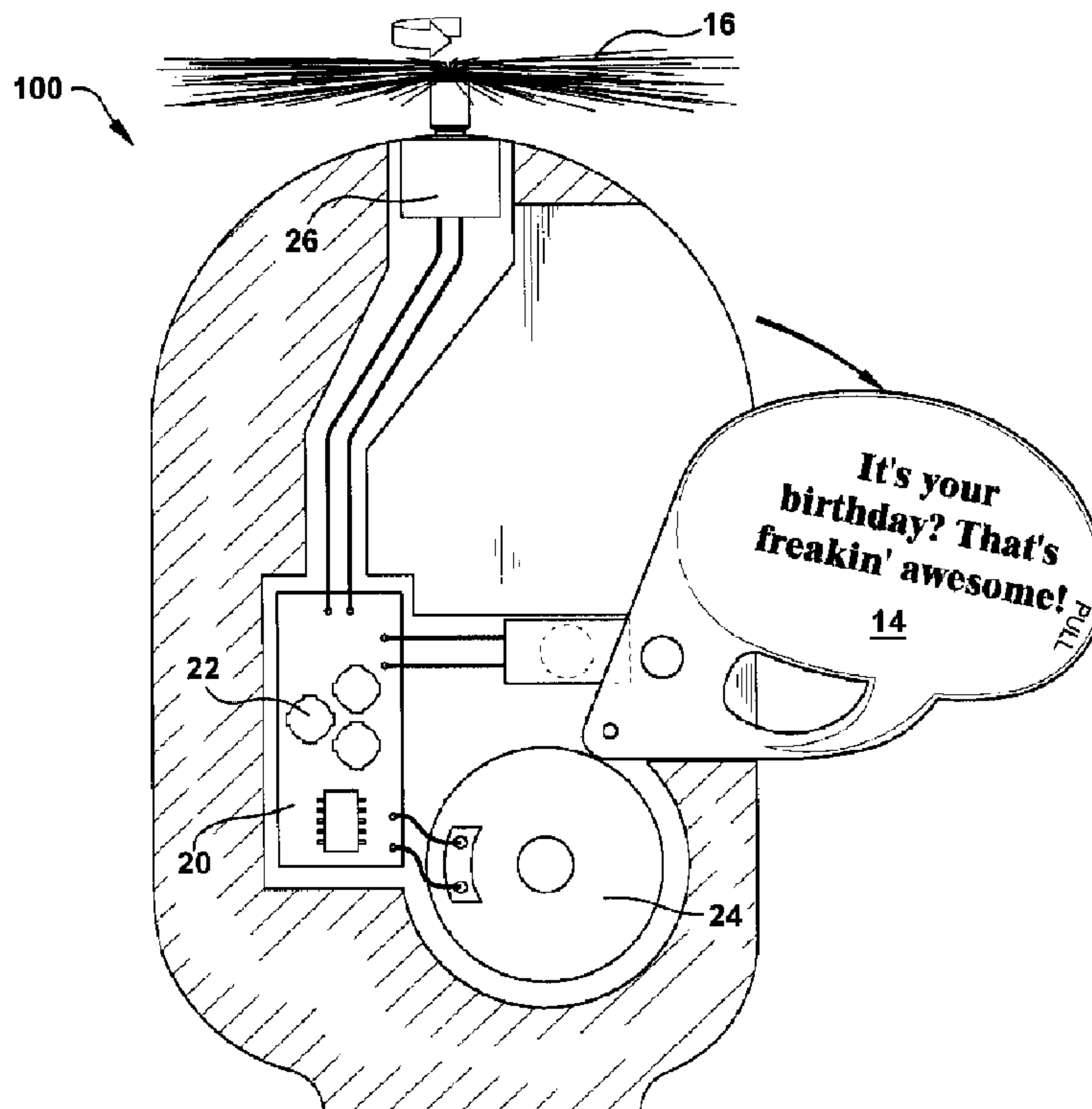




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 (54) Title: MOTORIZED FOAM GREETING CARD



(57) **Abrégé/Abstract:**

A greeting card which contains a foam body covered by a front and rear surface material and one or more cavities contained therein for accommodating components of a sound and motor module. The greeting card contains a mobile object, which in a preferred embodiment includes a bundle of individual fiber strands. The bundle of fiber strands are attached to the motor module such that activation of the motor module cause the bundle of fiber strands to separate and spin or twirl. The bundle of fibers strands are attached to the motor through an opening in an upper perimeter surface of the foam body. The bundle of fibers together with the printed front and back surface material combine to resemble a character having a tuft of hair which spins upon activation of the motor module. The greeting card also contains a sound module which plays back audio upon activation.

**ABSTRACT**

A greeting card which contains a foam body covered by a front and rear surface material and one or more cavities contained therein for accommodating components of a sound and motor module. The greeting card contains a mobile object, which in a preferred embodiment includes a bundle of individual fiber strands. The bundle of fiber strands are attached to the motor module such that activation of the motor module cause the bundle of fiber strands to separate and spin or twirl. The bundle of fibers strands are attached to the motor through an opening in an upper perimeter surface of the foam body. The bundle of fibers together with the printed front and back surface material combine to resemble a character having a tuft of hair which spins upon activation of the motor module. The greeting card also contains a sound module which plays back audio upon activation.

## MOTORIZED FOAM GREETING CARD

### RELATED APPLICATIONS

This application claims priority based on U.S. Provisional Patent Application 61/905,420 entitled "MOTORIZED FOAM GREETING CARD", filed on November 18, 2013, and U.S. Patent Application 14/301,166 entitled "MOTORIZED FOAM GREETING CARD", filed on June 10, 2014, which are herein incorporated by reference.

### FIELD OF THE INVENTION

The present invention is in the field of social expression products. More specifically the invention is in the field of greeting cards having motorized effects.

### SUMMARY OF THE INVENTION

A greeting card which contains a foam body covered by a front and rear surface material and one or more cavities contained therein for accommodating components of a sound and motor module. The greeting card contains a mobile object, which in a preferred embodiment includes a bundle of individual fiber strands. The bundle of fiber strands are attached to the motor module such that activation of the motor module cause the bundle of fiber strands to separate and spin or twirl. The bundle of fibers strands are attached to the motor through an opening in an upper perimeter surface of the foam body. The bundle of fibers together with the printed front and back surface material combine to resemble a character having a tuft of hair which spins upon activation of the motor module. The greeting card also contains a sound module which plays back audio upon activation.

### DESCRIPTION OF THE DRAWINGS

**FIG. 1** is a perspective view of the front of the greeting card.

**FIG. 2** is a front tear away view of the internal components of the greeting card of FIG. 1 in the direction of arrows 2-2, with pivot panel in a first position.

**FIG. 3** is a front tear away view of the internal components of the greeting card of FIG. 1, with pivot panel in a second position.

**FIG. 4** is a rear view of the greeting card of FIG. 1 with sentiment panel opened and pivot panel in second position.

## **DETAILED DESCRIPTION OF PREFERRED AND ALTERNATE EMBODIMENTS**

The present invention includes a foam greeting card having audio and motorized effects. A foam greeting card body contains one or more cavities therein into which electronic components of the greeting card are inserted. The front and rear surfaces of the foam greeting card body is covered by a planar sheet material which conceals the foam and inner electronic components of the greeting card. The greeting card may additionally contain one or more mobile objects which are attached to a motor within the greeting card. The mobile object may come in a variety of shapes, sizes and textures.

The greeting card body **10**, in a preferred embodiment, includes a single piece of hardened foam or foam-like material. The foam may be formed into any shape or profile, examples which include, but are not limited to: a cupcake, a tree, a dog, a person, a character, etc. The greeting card body **10** may alternatively be shaped like a traditional rectangular greeting card. The foam body **10** contains a cavity therein to accommodate a device such as, for example, a motor module, a sound module, a light module, a multimedia player device, or any other such device or combination of devices. There may be multiple cavities carved into the foam **10** to receive multiple devices or device components such as, for example, batteries **22** or other power source, a speaker **24**, a circuit board **20**, a switch **18**, a motor **26**, a memory device, a recording device, etc. The foam shape **10** has a generally planar front and rear surfaces with a thickness or outer perimeter therebetween. The foam **10** is both lightweight for ease of handling and to facilitate postal mailing and sturdy for the protection of the electronic components of the greeting card. The foam body **10** may be covered by a sheet material **12** made of heavy gauge paper-like material such as paper, cardboard, cardstock or any other like material. In an alternate embodiment, the sheet material **12** may be made of plastic or other lightweight, durable material. The sheet material **12** is generally cut into the shape of the foam body **10**. The front surface material **12** may contain printing thereon of a front view of a character, animal or other object while the rear surface material **12** may contain

printing thereon of a rear view of a character, animal or other object which matches the front surface material. The front and rear surface materials **12** may alternately contain right and left side views of a character, animal or other object. The surface material **12** is attached adhesively or otherwise to the foam body **10**. The material **12** can also further contain three-dimensional embellishments such as gems, googly eyes, and other such adornments. In addition to the front and rear surface material **12**, the greeting card **100** may contain an additional panel, referred to herein as a sentiment panel **28**. The sentiment panel **28** is connected along a fold line to either the front or rear surface material **12**. It is folded over the front or rear surface material **12** and serves as a front or rear cover of the greeting card. If the sentiment panel **28** is attached to the front surface material **12**, it would serve as the front cover of the greeting card and the left inside panel while the front surface material **12** would serve as the right inside panel of the greeting card. If the sentiment panel **28** is attached to the rear surface material **12**, as shown in **FIG. 4**, it would serve as the rear cover of the greeting card and the inside left panel while the rear surface material **12** would serve as the left inside panel of the greeting card. In either case, pivoting the sentiment panel **28** away from the foam body **10** reveals an inner surface onto which a greeting may be contained. The sentiment panel **28**, along with the front and rear surface material **12** may contain text sentiment, drawings, photographs, drawings or any other printed material. The sentiment panel **28** may be shaped and/or decorated similar to the foam body and front and rear surface material **12**. The sentiment panel **28** can cover the entire front or rear surface of the foam body **10** or it may cover only a portion thereof.

As mentioned above, in a preferred embodiment, the greeting card **100** contains a sound module which is contained within one of the one or more cavities or compartments in the foam body **10**. The sound module is operative to store and playback one or more audio files. The audio files may contain clips of music, singing, spoken word, animal sounds, or any other recordable sound. The sound module may be activated to replay the one or more audio files by a switch **18**. The switch **18** may be a slide tongue switch, a contact switch, a button switch, a light sensitive switch, a contact switch, a motion sensitive switch, a touch sensitive switch or any other type of switch which is known to one having skill in the art. In the preferred embodiment, the switch **18** is a contact

switch. A contact switch **18** contains two arms which when in contact, complete an electrical circuit. Separating the two arms breaks the circuit. A small pivot panel **14** is contained beneath the front surface material **12** and inserted in a slot between the front surface material **12** and the foam body **10** and between the two arms of the contact switch. When the pivot panel **14** is in a first position, it is contained between the two arms of the contact switch and substantially within the greeting card body **10** with a portion of the panel **14** visible beyond the front surface material **12**. Pivoting the pivot panel **14** by, for example, grasping the visible portion of the pivot panel **14** between ones thumb and forefinger and pivoting the panel **14** downward, the pivot panel **14** moves into a second position wherein it is removed from between the two arms of the contact switch **18**, allowing the arms to make contact and complete the electrical circuit, and it is substantially contained outside of the greeting card **100** beyond the front surface material **10**. When the pivot panel **14** is moved from the first to the second position, the electrical circuit is complete and thereby providing power to the sound module which will replay one of the one or more audio files. When the pivot panel **14** is moved from the second position, back to the first position, it is again inserted between the two arms of the contact switch **18**, thereby breaking the circuit and deactivating the sound module. The pivot panel **14** may contain an extra surprise greeting, text sentiment or artwork, etc. printed thereon. A portion of the pivot panel **14** may contain the word “pull” printed thereon to instruct the user to pull the panel for further entertainment. The pivot panel **14** may be shaped and printed to look like a conversation bubble and may have a greeting printed thereon which incorporates the theme of the greeting card or the character, etc. upon which the shape and appearance of the foam greeting card body are based, as shown in **FIGS. 2 and 3**.

In addition to activating the sound module upon moving the pivot panel **14**, the contact switch **18** also controls power to a motor module. The motor module is also contained within the one or more cavities of the foam greeting card body **10**. The motor module contains a small or miniature motor **26** which is used to effect movement of an object attached thereto. The motor module may cause a circular motion, bouncing or up-and-down motion, side-to-side or back-and-forth motion, a quick vibrating motion, or any other type of motion. A mobile object **16** is connected to the motor **26** either directly

or via a connection arm. When the motor module is activated, the motor **26** is powered up causing movement of the mobile object **16**. The mobile object **16** can be any type of small, lightweight figure. Examples include, but are not limited to: planar or three-dimensional die cut shapes, planar plastic shapes, three-dimensional plastic moulded shapes, strands of ribbon, etc. In a preferred embodiment, the mobile object **16** is a bundle of strings or lightweight fiber strands which are intended to look like a tuft of hair atop the head of a character (the foam body). The bundled strands **16** are connected at one end to the motor **26** and at the opposite ends are free such that when the motor **26** is activated, the bundle **16** is quickly moved in a circular motion, causing the bundled strands **16** to separate and spin or twirl as a bunch. The strands **16** may be made of yarn, rubber, plastic, or any other type of synthetic or non-synthetic material. The strands **16** may be of a single color or may contain a variety of different colors. In alternate embodiments, the mobile object may be a different type of hair style or may represent a facial feature, a body part of a person or animal, or other appendage.

In a preferred embodiment, the sound and motor module are both controlled by the contact switch **18**. Therefore, the process described above with respect to the contact switch **18** and pivot panel **14** apply to the activation of the motor module as well as the sound module. In alternate embodiments, the sound and motor modules may be controlled by different switches which may be of the same type of switch or different. When the pivot panel **14** is in its first position, shown in **FIGS. 1** and **2**, the sound and motor modules are deactivated. Moving the pivot panel **14** from the first to second position, shown in **FIGS. 3** and **4**, causes simultaneous activation of the sound and motor modules and causing playback of an audio file and movement or spinning of the mobile object (fiber strands) **16**. Moving the pivot panel **14** from the second position back to the first position again deactivates the sound and motor module causing the sound and movement of the mobile object **16** to cease.

The foregoing embodiments of the present invention have been presented for the purposes of illustration and description. These descriptions and embodiments are not intended to be exhaustive or to limit the invention to the precise form disclosed, and obviously many modifications and variations are possible in light of the above disclosure. The embodiments were chosen and described in order to best explain the principle of the

invention and its practical applications to thereby enable others skilled in the art to best utilize the invention in its various embodiments and with various modifications as are suited to the particular use contemplated.

## CLAIMS

1. A greeting card comprising:
  - a foam body having one or more cavities therein;
  - a sound module operative to store and playback at least one audio file;
  - a motor module operative to cause movement to a mobile object;
  - a switch operative to control activation of the sound and motor modules;
  - the mobile object comprising a bundle of fiber strands which twirl in a circular motion when the motor module is activated;
  - wherein front and rear surface material attached to the foam body and the mobile object combine to depict a character with a tuft of hair that twirls upon activation of the motor module.
2. The greeting card of claim 1, wherein the mobile object is a bundle of individual strands which are attached to the motor module at one end.
3. The greeting card of claim 1, wherein the mobile object is a bundle of individual strands which are each freely moveable upon activation of the motor module.
4. The greeting card of claim 1, wherein the mobile object is a bundle of individual yarn strands.
5. The greeting card of claim 1, wherein the mobile mobile object twirls in a circular motion.
6. The greeting card of claim 1 wherein the switch is a contact switch.
7. The greeting card of claim 6 further comprising a pivot panel which is moveable from a first position between opposing arms of the contact switch and a second position outside of the arms of the contact switch.

8. A greeting card comprising:
  - a greeting card body;
  - a sound module operative to store and replay at least one audio;
  - a motor module operative to cause motor movement of a mobile object;
  - the sound and motor modules contained within one or more cavities in the greeting card body;
  - a mobile object comprising a bundle of a plurality of individual strands of material, a first end of each of the plurality of individual strands attached to the bundle and the opposite end of each of the plurality of strands are unattached;
  - a switch which controls activation of the sound and motor modules;
  - wherein upon activation of the sound and motor modules, the at least one audio file is replayed and the bundle of individual strands of material are set into a spinning or circular motion.
9. The greeting card of claim 8, wherein the switch is a contact switch;
10. The greeting card of claim 9 further comprising a word bubble panel which is operative to control activation of the contact switch.
11. The greeting card of claim 8, wherein the plurality of individual strands of material are made of yarn.
12. The greeting card of claim 8, wherein the plurality of individual strands of material are made of rubber.
13. The greeting card of claim 8, wherein the greeting card body is foam.
14. The greeting card of claim 13 further comprising a sentiment panel attached to the back side of the greeting card body.

15. A greeting card comprising:
  - a greeting card body having at least one cavity contained therein;
  - a motor module contained within the at least one cavity in the greeting card body,the motor module operative to cause movement of a mobile object attached to the greeting card body;
  - a mobile object comprising a bundle of individual strings, each individual string being attached at one end to the bundle;
  - a switch operative to control activation of the motor module;wherein when the motor module is activated, the mobile object begins to move and each of the individual strings are spread apart in a circular motion.
16. The greeting card of claim 15 further comprising a sound module operative to store and playback at least one audio file.
17. The greeting card of claim 16, wherein the sound module is controlled by the switch.
18. The greeting card of claim 15, wherein the greeting card body is made of foam.
19. The greeting card of claim 18, wherein the front and rear surfaces of the greeting card body are covered by a planar sheet material.
20. The greeting card of claim 15, wherein the mobile object extends outward from a perimeter of the greeting card body.

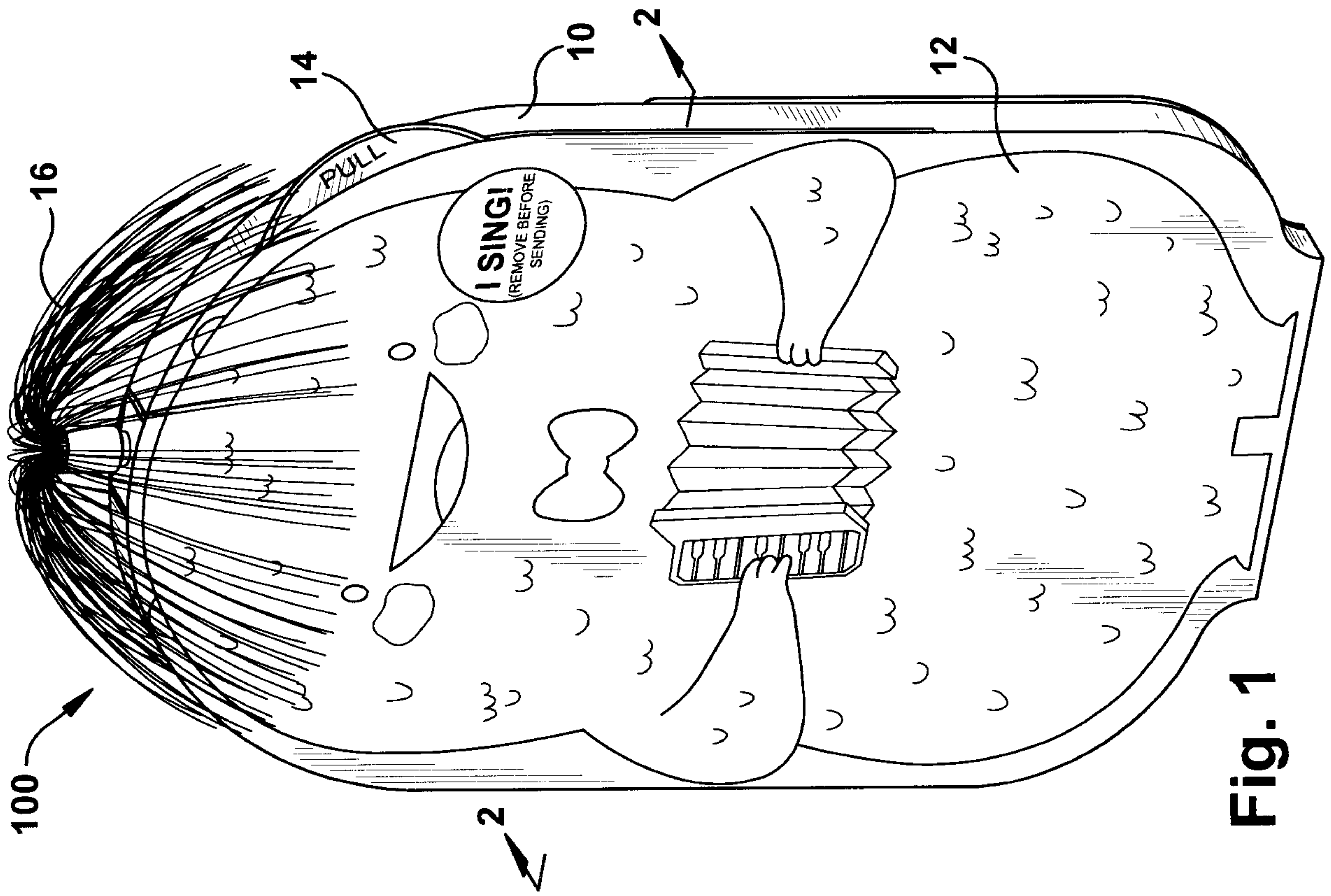


Fig. 1

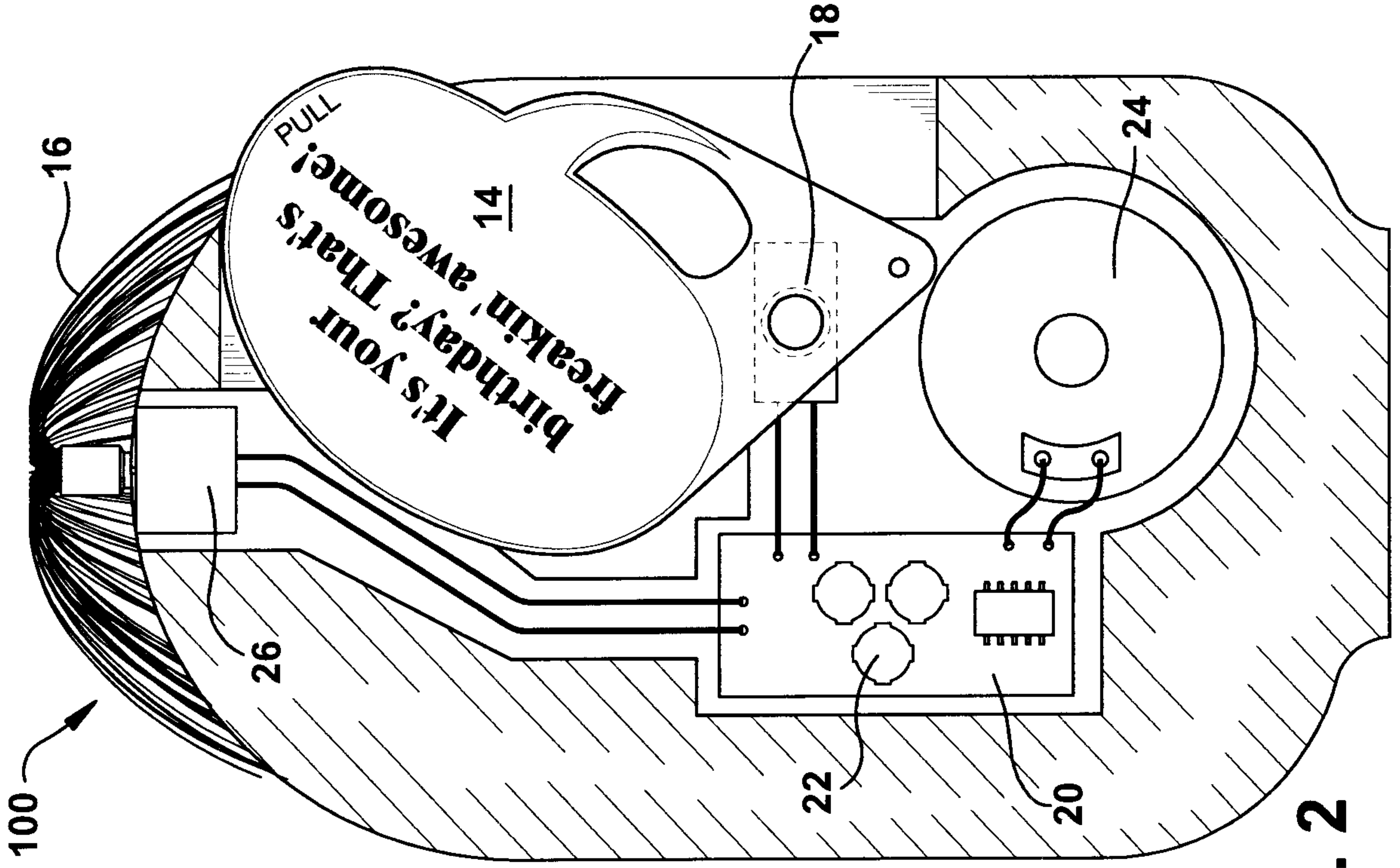
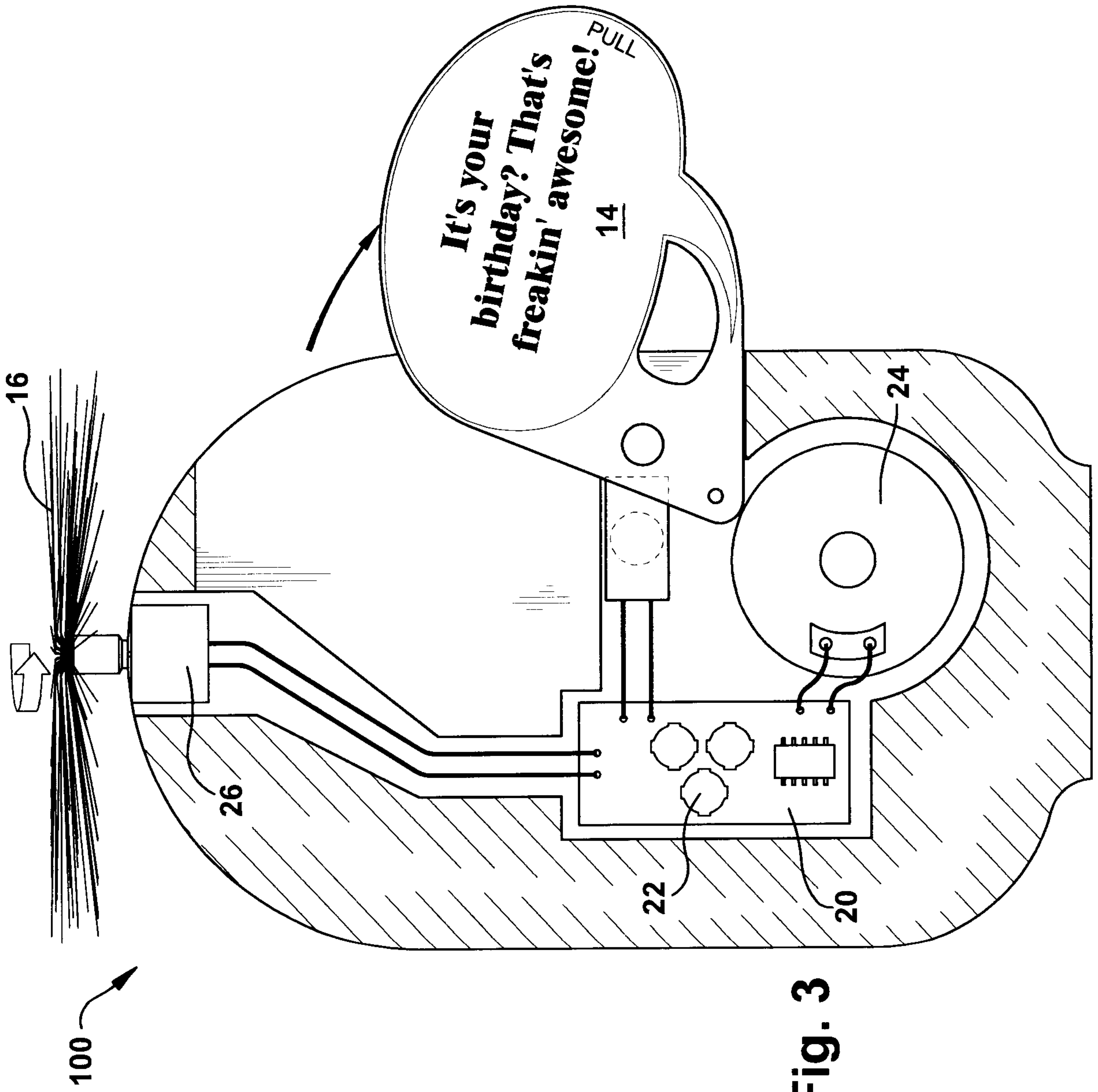
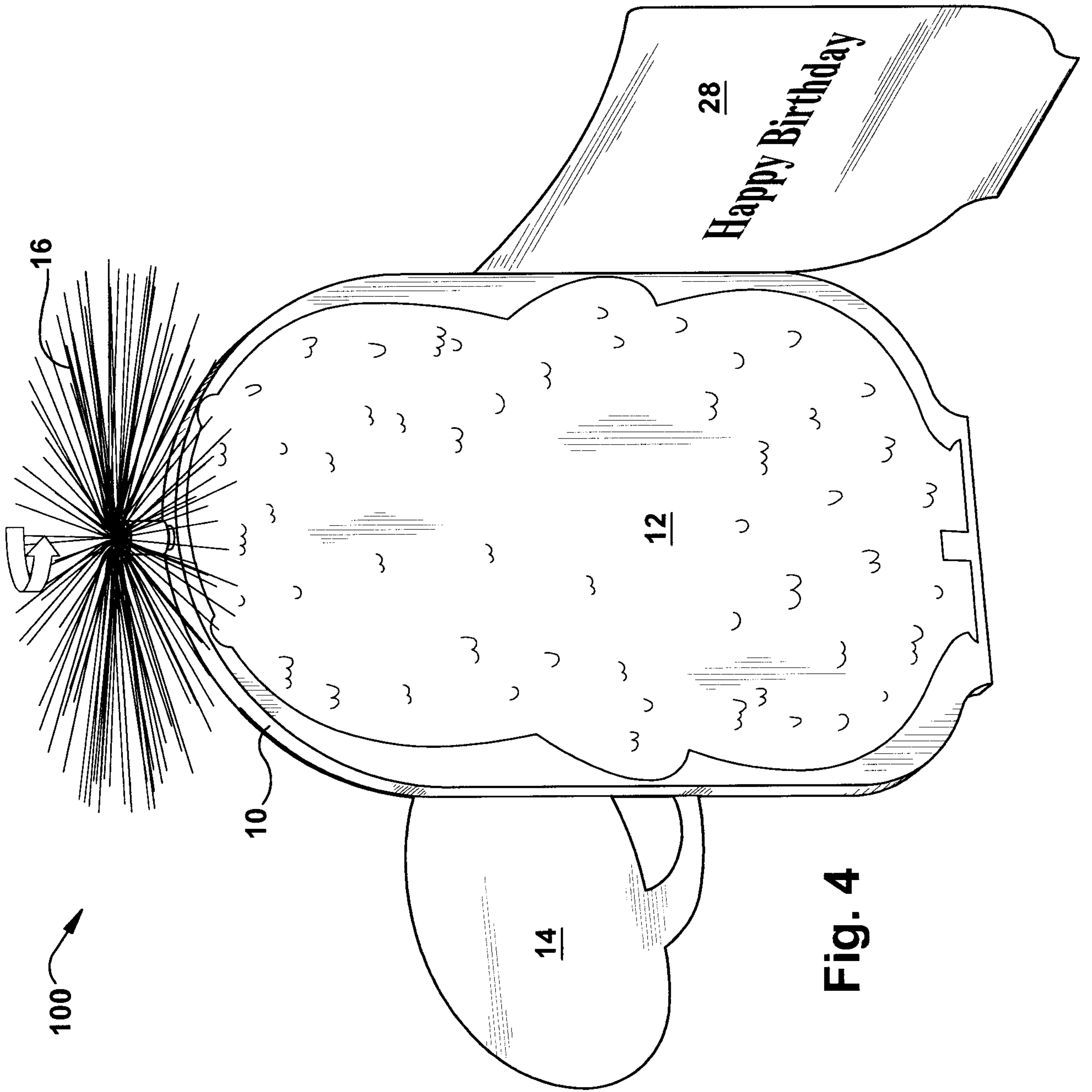


Fig. 2





**Fig. 4**

