CANDY STORAGE AND DISPENSING DEVICE AND METHOD OF USING THE SAME

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ABSTRACT

Disclosed is a candy storage and dispenser device. A multi-compartment dispensing device offers a unique device for storing and dispensing candy. Accordingly, multiple types and/or colors of candy may be contained in a transparent housing to create a very colorful presentation. Any number of candy types, including powdered, beads, pellets and the like, may be stored and dispensed with the multi-compartment device. The compartments each include movable floors controlled by actuators. When the floors are lowered in a sloping manner, contained candies fall into a chamber positioned beneath the compartments. A dispensing aperture in the chamber allows the candies to exit the container. One version comprises a flute-shaped device having an operational mouthpiece.
CANDY STORAGE AND DISPENSING DEVICE AND METHOD OF USING THE SAME

CROSS-REFERENCE


FIELD OF THE INVENTION

[0002] The embodiments of the present invention relate to a device for storing and dispensing candy.

BACKGROUND

[0003] Yearly candy sales in the United States top $10 billion. Moreover, candy sales are expected to grow 3%-5% per year for the next five years. A rapidly growing trend in the candy industry is interactive candy or candy that is packaged with dispensers. Many dispensers are meant to be collectibles, while others are promotional, often used for movie or video game tie-ins.

[0004] Candy dispensers come in many different shapes and sizes. One of the first candy dispensers was known as the “Pixy-Stix.” A Pixy-Stix is a closed paper tube, which resembles a straw, containing powdered and colored candy. In order to consume the candy, a user tears or bites off an end of the tube and pours the candy into their hands or mouth. U.S. Pat. No. 2,901,357 to Epstein illustrates one such paper tube. Unfortunately, when bitten or placed in one’s mouth, ends of the paper tube become saturated with saliva causing the tube to seal unexpectedly. In response, a user must manually re-open the tube. The entire process tends to be messy and the mixture of powdered candy and saliva creates an undesirable paste-like substance.

[0005] Consequently, there have been numerous attempts to develop alternative dispensers for powdered candy and other small candy items. U.S. Pat. Nos. 3,138,249, 5,853,122 and 6,139,393 disclose such dispensers. However, each of the disclosed dispensers suffers from one or more drawbacks. That is, the dispensers are unsafe for children (e.g., have small detachable parts), complex and burdensome to manufacture and/or lack versatility.

[0006] Accordingly, there continues to be the need for an aesthetically pleasing candy dispenser remedying the drawbacks of previous dispensers while accomplishing the objective of dispensing candy in a manner entertaining to its users.

SUMMARY

[0007] Accordingly, a first embodiment of the present invention comprises a compartmentalized container for segregating different types and/or colors of candy. In one embodiment, the container takes the shape of a flute wherein multiple candy compartments are formed along its length. In the flute embodiment, each compartment may accommodate different candy (e.g., powder, small candy beads or pellets, etc.) and/or different colored candies. To enhance the flute-shaped dispenser, the flute includes an operational mouthpiece for creating an audible tone. A release mechanism provides a means for the user to dispense the candy through, for example, the mouthpiece of the flute.

[0008] Ideally, the container is fabricated of a transparent plastic so that the user may observe the various candies in the multiple compartments. In this manner, a rainbow of candy colors can be created to enhance the appearance of the dispenser.

[0009] While a flute has been described, other shapes, including a harmonica, whistle or animals, may be used to form the container. Other features, variations and embodiments will become evident from the detailed description, drawings and claims set forth below.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] FIG. 1 shows a top view of a first flute embodiment of the present invention;
[0011] FIG. 2 shows a side view of the first flute embodiment of the present invention;
[0012] FIG. 3 shows a cross-sectional width view along direction A of the first flute embodiment of the present invention;
[0013] FIG. 4 shows a transparent side view of a second flute embodiment of the present invention;
[0014] FIG. 5 shows a view of a wall of the second embodiment of the present invention;
[0015] FIG. 6 shows a perspective view of a third embodiment of the present invention;
[0016] FIG. 7 shows a perspective view of covers open in the third embodiment of the present invention;
[0017] FIG. 8 shows a perspective upper view of a fourth embodiment of the present invention;
[0018] FIG. 9 shows a perspective side view of the fourth embodiment of the present invention; and
[0019] FIGS. 10-11 shows perspective cut-away views of the fourth embodiment of the present invention.

DETAILED DESCRIPTION

[0020] It will be appreciated by those of ordinary skill in the art that the invention can be embodied in other specific forms without departing from the spirit or essential character thereof. The presently disclosed embodiments are therefore considered in all respects to be illustrative and not restrictive.

[0021] Reference is now made to the figures wherein like parts are referred to by like numerals throughout. FIGS. 1 and 2 show a first top and side view of a flute embodiment generally referred to by reference numeral 100. The flute 100 comprises a mouthpiece 110, multiple compartments 115-1 through 115-6, dividing walls 116, release unit 120, filler openings 125 and filler opening covers 130. The filler opening covers 130 are joined to the flute 100 by hinges 127 which allow the covers 130 to be opened by applying pressure in a sideways direction. In other words, the covers 130 rotate in a direction denoted by B in FIG. 1 about a top of the flute 130. The flute 100 may be made of any suitable material but ideally transparent plastic is used. The use of transparent material allows the candy 135 to be seen while contained in the flute 100. The candy 135 may be packaged in the flute 100 at the manufacturing facility and delivered to the retail outlets accordingly. As described in detail below, once the candy 135 is dispensed by a user, the flute 100 may include means for allowing the user to refill the flute 100 as desired.

[0022] The release unit 120 provides means for dispensing the contained candy 135. While the release unit 120 shown is a knob, it can also be a lever, button, handle, finger, rib or similar feature. In a first embodiment, as shown in FIG. 3, each compartment 115-1 through 115-6 includes an aperture 140 in a wall 117 thereof. The size of the apertures 140...
dictates the size of the candy 135 that may be readily contained and dispensed by the flute 100. To dispense the candy 135 the release unit 120 is pulled away or lifted from the flute container 100 thereby opening an internal movable cover 150 of the aperture 140-1 in the mouthpiece 110. The cover 150 moves along parallel tracks 155 in the wall 117-1. Then, the user tilts the flute container 100 and pours the candy 135 through the compartment apertures 140, including the opened mouthpiece aperture 140-1, and into their hand or mouth. The release mechanism 120 is attached to the cover 150 of the mouthpiece aperture 140-1 by an elongated substantially rigid member 165. A spring 170 and disc 175 interact to force the cover 150 to its closed position once the user releases the knob 120. A locking mechanism (not shown) may also hold the knob 120 in an open position until the user's ready to close the aperture 140-1.

[0023] In a second embodiment shown in FIG. 4, each compartment aperture 140 incorporates a movable cover 150. In the second embodiment, each of the compartment covers 150, including the mouthpiece cover 150-1, is controlled by the release mechanism 120. Thus, once the release mechanism 120 is pulled away from the flute 100, each of the compartment covers 120 is moved to an open position allowing the candy 135 to flow freely from the compartments 115-1 through 115-6 and into the user's mouth or hands. A rod 180 connected to the substantially rigid member 165 joins each cover 150-1 through 150-6. As shown in FIG. 5, a slot 185 in each compartment wall 117-1 through 117-6 allows the rod 180 to move vertically such that the covers 150-1 through 150-6 may open. Upon release of the knob 120, the spring 170 and disc 175 force the covers 150-1 through 150-6 to their closed position.

[0024] In a third embodiment, shown in FIGS. 6 and 7 a shaft 200 extends the length of the flute 100 and rotatably attaches at a first end to a compartment wall 117. Ideally, the first end of the shaft 200 resides within a cylindrical or circular channel 205 having one open end. The shaft 200 supports one or more covers 210. In an embodiment similar to that shown in FIGS. 4 and 5, the shaft 200 supports a cover 210 for each compartment aperture 140. Upon turning the shaft 200 (as indicated by the arrow) via knob 220 affixed to a second end of the shaft 200, the covers 210 move to allow the candy to flow through the compartment apertures 140. Friction between the first end of the shaft 200 and circular channel wall restrains the shaft 200 and covers 210 in a fixed position until acted on by the user. Alternatively, the channel 205 and first end of the shaft 200 may each be threaded to facilitate a secure engagement therebetween.

[0025] The size of the compartment apertures 140 and mouthpiece aperture 140-1 dictate the size of the candy 135 which can be suitably contained and dispensed by the flute 100. Accordingly, the flute 100 may accommodate powdered candy, small candy items and/or coated candy. Different candies may be mixed and matched as desired. For example, a rainbow effect may be created by placing different colored candies in each transparent compartment 115-1 through 115-6. Refilling the flute 100 may be accomplished by pouring candy 135 through each individual external opening of the compartments 115-1 through 115-6. Similarly, a user may retrieve candy from each compartment 115-1 through 115-6 individually by opening the filler opening cover 130 and pouring the candy 135 from the desired compartment 115-1 through 115-6.

[0026] FIGS. 8-11 show a fourth embodiment of the present invention generally referred to by reference numeral 300. In this embodiment, the flute 300 comprises a series of individual compartments 310-1 through 310-8 with a common chamber 320 extending lengthwise along the flute 300 beneath each compartment 310-1 through 310-8. Individual floors 315 associated with each compartment 310-1 through 310-8 are configured to descend in a sloping manner as shown in FIG. 9-11. Causing floor 315-2 to descend is accomplished by depressing a corresponding actuator 325-2. Each actuator 325 is attached to a floor 315 such that the actuator 325 is able to cause the floor 315 to descend, about a hinge 330 or similar mechanism, in a sloping manner. As the floor 315 slopes, the candy stored in the corresponding compartment 310 falls into the common chamber 320 therebelow.

[0027] In one embodiment, the hinge 330 is spring-biased such that once pressure is removed from the actuator 325, the spring-biased hinge 330 causes the floor 315 and actuator 325 to return to normal positions. Alternatively, springs (not shown) may also be positioned between the actuators 325 and an upper surface of the flute 300. Those skilled in the art will recognize that any number of actuator 325/315 configurations are possible without departing from the spirit and scope of the present invention.

[0028] In another embodiment, each actuator 325 or a single actuator is linked to each floor 315 such that candies in each compartment are dispensed simultaneously. In another embodiment, a single floor extends beneath each compartment 325 and is controlled by one or more actuators.

[0029] It is also recognized that only a portion of the floor 315 (or lower surface) may be movable. For example, one-half of the floor 315 may be controlled by the actuator 325 rather than the entire floor 315.

[0030] Once the candy enters the common chamber 320 it is free to exit the flute 300 via dispensing aperture 330. In one embodiment, the dispensing aperture 330 is permanently open and in another embodiment, it may be opened and closed by a user. Multiple candies may be dispensed simultaneously by depressing multiple actuators 325 simultaneously. The dispensing aperture 330 is sized to accommodate the types of candies stored within the flute 300. In one embodiment, each compartment 310-1 through 310-8 may be refilled via an opening (not shown) in the compartment 310-1 through 310-8. In an alternative embodiment, the flute 300 does not include refill openings. Like the other embodiments, the flute 300 can be fabricated of transparent materials (e.g., plastic) so that different colored candies may be used to create an attractive candy presentation.

[0031] While it is not mandatory, the flute 100, 300 may be made operational by utilizing the mouthpiece 110. To create an audible tone the mouthpiece 110 incorporates an opening 170 and restrains a ball 175. Therefore, air is blown through the mouthpiece 110 the ball 175 blocks a portion of the opening 170 causing the creation of an audible tone. Also, in an alternative embodiment, buttons or actuators 325 along the flute container 100, 300 may be functional to allow the flute 100, 300 to discharge multiple tones and notes.

[0032] Even though the description has focused on a flute embodiment, any number of other container shapes are conceivable. For example, a container having a harmonica or whistle shape may incorporate multiple compartments for containing different types and/or colors of candies. Indeed, the shape does not need to be of an instrument or related
sound-generating device. That is, the device may take any form, including that of animals (e.g., snake, alligator or shark). In fact, the shape may be dictated by a movie promotion or similar external influence.

Although the invention has been described in detail with reference to several embodiments, additional variations and modifications exist within the scope and spirit of the invention as described and defined in the following claims.

I claim:

1. A candy container and dispenser comprising:
   - a housing;
   - a plurality of compartments within said housing, said compartments having movable lower surfaces;
   - a plurality of actuators configured to control said movable lower surfaces;
   - a chamber extending beneath said plurality of compartments; and
   - a dispensing aperture, said dispensing aperture in communication with said chamber.

2. The container of claim 1 wherein said lower surfaces move about a hinge.

3. The container of claim 2 wherein said hinge is spring-biased.

4. The container of claim 1 further comprising springs positioned between upper portions of said actuators and an upper surface of said container.

5. The container of claim 1 wherein the housing is flute-shaped.

6. The container of claim 5 wherein the dispensing aperture is incorporated in a mouthpiece of said housing.

7. The container of claim 1 further comprising means for opening and closing said dispensing aperture.

8. A candy container and dispenser comprising:
   - a housing;
   - a plurality of compartments within said housing, said compartments having a commonly controlled movable lower surface;
   - one or more actuators configured to control said movable lower surface;
   - a chamber extending beneath said plurality of compartments; and
   - a dispensing aperture, said dispensing aperture in communication with said chamber.

9. The container of claim 8 wherein said lower surface moves about one or more hinges.

10. The container of claim 9 wherein said one or more hinges are spring-biased.

11. The container of claim 8 further comprising one or more springs positioned between upper portions of said one or more actuators and an upper surface of said container.

12. The container of claim 8 wherein the housing is flute-shaped.

13. The container of claim 12 wherein the dispensing aperture is incorporated in a mouthpiece of said housing.

14. The container of claim 8 further comprising means for opening and closing said dispensing aperture.

15. A candy container and dispenser comprising:
   - a housing defining a plurality of compartments, said compartments having movable floors;
   - a plurality of actuators positioned along a length of said container and attached to said movable floors wherein said actuators are operable to control said floors;
   - a chamber extending beneath said plurality of compartments; and
   - a dispensing aperture, said dispensing aperture in communication with said chamber.

16. The container of claim 15 wherein said lower floors move about a spring-biased hinge.

17. The container of claim 15 further comprising springs positioned between upper portions of said actuators and an upper surface of said container.

18. The container of claim 15 wherein the housing is flute-shaped.

19. The container of claim 18 wherein the dispensing aperture is incorporated in a mouthpiece of said housing.

20. The container of claim 15 further comprising means for opening and closing said dispensing aperture.

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