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(54) PACKAGE AND MERCHANDISING SYSTEM

VERPACKUNGS- UND VERTRIEBSSYSTEM

EMBALLAGE ET SYSTÈME DE COMMERCIALISATION

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(73) Proprietor: **THE PROCTER & GAMBLE COMPANY**
Cincinnati, OH 45202 (US)

(72) Inventors:
• **FERRARI, Michael, G.**
Cincinnati, Ohio 45236 (US)
• **DAUGHERTY, Thomas, Hugh**
Cincinnati, Ohio 45236 (US)

(74) Representative: **Sievers, Uwe**
Braun GmbH
Patentabteilung
Frankfurter Strasse 145
61476 Kronberg im Taunus (DE)

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Description

FIELD OF THE INVENTION

[0001] A product package used for merchandising the product and a system incorporating the package. Particularly, a package and merchandising system for interactive shopping environments.

BACKGROUND OF THE INVENTION

[0002] The volume of different products offered in any product category challenges marketers to find ways of obtaining the attention of potential purchasers. Labels, colors, shapes and other package attributes are well known tools for passively attracting the attention of a shopper.

[0003] EP-A-1736951 (Schoeller Arca Systems Service) provides a product identification device having an electronic display (6) which is disposed on the device by adhesive bonding, sealing, or riveting. The display exhibits two display conditions, being opaque in one display condition and transparent in the other. The display is formed as liquid crystal display (LCD) which is received in a recess (5) and enveloped by a liner.

[0004] What is desired is an active system for drawing the attention of a shopper to the offerings of the marketer.

SUMMARY OF THE INVENTION

[0005] The present invention provides a product merchandising system which comprises a sensor disposed to detect the presence of a target. The sensor provides an output upon detecting the target. The system also includes a package comprising a package wall, a display element integral to the package wall and visible from the exterior of the package, and a power receiving element integral to the package and operably connected to the display element. The display element changes a characteristic according to a first characteristic change profile received from the power receiving element.

[0006] The system includes a power distribution element, and a controller. The controller is operably connected to the sensor and to the power distribution element. The controller receives the output of the sensor as an input and provides an output profile to the power distribution element. The power distribution element receives the output profile from the controller and provides a power profile to the power receiving element.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007]

Figure 1 provides a schematic perspective view of a package according to one embodiment of the invention.

Figure 2 provides a schematic illustration of a mer-

chandising system according to one embodiment of the invention.

DETAILED DESCRIPTION OF THE INVENTION

[0008] As illustrated in the figure, a package 100 comprises a package wall 110. The package 100 may comprise a plurality of package walls 110. The package may be formed from any packaging materials as these are known in the art. Exemplary packaging material include: paperboard and corrugated paperboard, metal foils, polymeric materials, wood, metallocene films and composite material formed from combinations thereof. The package wall 110 includes a display element 120. Exemplary display elements 120 include electroluminescent elements organic light emitting diodes, thermo chromic elements and combinations of these. The display element may comprise elements printed upon the package wall 110 or upon a label affixed to the package wall 110. The disposition of display element 120 makes it visible from the exterior of the package 100. The display element may comprise a portion of an exterior surface of the package 100, or the nature of the package 100 may permit the viewing of the display element 120 disposed upon an interior surface of the package via a transparent or semi-transparent exterior surface of the package 100. A transparent or semi-transparent surface may comprise all or only a portion of one or more exterior surfaces of the package 100.

[0009] The display element 120 may comprise an indicia or a portion of an indicia. The display element may serve as an outline or penumbra of an indicia or a portion of an indicia. The indicia may comprise text or graphics and may relate to the package contents or to other items. The indicia may be printed upon the package, molded into the wall of the package, or otherwise formed into the package wall as is known in the art. The indicia may comprise branding information associated with the package contents or associated with a co-marketing effort. The indicia may be associated with a product attribute or with a product performance attribute. Exemplary product attributes include textual descriptors such as new, better, stronger, whiter, more concentrated, fat free, caffeine free, less calories, and flavor indicators. Exemplary product performance attributes include textual descriptors, cleans, brightens, whitens, colors, instant, long lasting, and permanent. Graphical illustrations of the above delineated descriptors are also considered indicia.

[0010] Display element 120 may comprise all or part of any of the indicia described above. Display element 120 may comprise a penumbra adjacent to or near the described indicia to outline or highlight the indicia.

[0011] The package 100 further comprises a power receiving element 130. Power receiving element 130 is operably connected to the display element. The display element 120 changes a characteristic according to a power profile received from the power receiving element 130. The power profile produces a characteristic change

in the display element 120 and may be considered a characteristic change profile.

[0012] The package 100 may comprise multiple display elements 120 and multiple power receiving elements 130. A single power receiving element 130 may provide a characteristic change profile to one or more of the display elements 120. Multiple respective power profiles may be provided to the package 100 via the respective power receiving elements 130.

The receipt of respective characteristic change profiles may enable the package display elements to change characteristics according to a predetermined pattern or according to a randomized pattern due to the provision of a sequence of power profiles.

[0013] The characteristic change of the display element 120 may comprise a change in the luminosity, color, or both, of the display element 120. In one embodiment, at least a portion of display element 120 changes from a first color to a second color according to the characteristic change profile.

[0014] In one embodiment the package 100 comprises an integral power source (not shown). The power source (not shown) provides power to the power receiving element 130 and thereby to the display element 120. Solar panels and chemical battery cells are exemplary integral power elements (not shown).

[0015] In one embodiment the package 100 comprises a control element 150. The control element 150 is operably connected between the power receiving element 130 and the display element 120. The control element 150 comprises a control circuit which may alter a characteristic change profile received from the power receiving element 130. In one embodiment the control element 150 provides a characteristic change profile to the display element 120 in response to power received from the power receiving element 130. In this embodiment the power received may be represented by an idealized step function wherein the power is intended to either be on or off. This received power is subsequently modified by the control element to provide a characteristic modifying profile to the display element 120. Exemplary profiles include, sinusoidal, saw-tooth, a segmented step function to alternate between providing and denying power transfer and other control signal patterns as are known in the art.

[0016] In one embodiment the control element 150 provides a plurality of profiles to a plurality of display elements 120 to orchestrate a series of characteristic changes in the package.

The package 100 may comprise a portion of a merchandising system 1000. The system 1000 further comprises a sensor 200 to provide a signal according to the presence of a shopper in a predetermined location relative to a package display area. Exemplary sensors 200 include, retroreflective and through beam electromagnetic sensors, induction loop sensors to detect the presence of a metal shopping cart, load cell based sensors to detect the weight of a shopper at a particular location and other sensors as are known in the art.

[0017] The system 1000 comprises at least one power distribution element 300 disposed to transfer power to one or more packages 100 arrayed adjacent to the power distribution element 300. The power transfer may be via induction, conduction, acoustic energy transfer, radiative energy transfer, and other energy transfer means as are known in the art. In one embodiment the system 1000 comprises a plurality of power distribution elements 300. In this embodiment, the system provides a plurality of power profiles to the package 100. Each respective power profile is provided via a respective power distribution element 300.

[0018] The system 1000 comprises a controller 400. The controller 400 is disposed to accept a signal from the sensor 200 relating to the presence of a shopper. The controller 400 may provide one or more output profiles to the power distribution element 300 according to the sensor signal. The controller 400 may comprise one or more profile programs which serve as a basis for the output profiles provided by the controller 400. The respective programmed profiles may be provided as outputs according to the nature of the input signal and by providing input signals from a plurality of sensors 200 according to varying environmental conditions, the controller 400 may provide environmentally sensitive output profiles to the power distribution element 300. Each of the respective power distribution elements 300 may be disposed at a separate discrete location.

[0019] The dimensions and values disclosed herein are not to be understood as being strictly limited to the exact numerical values recited. Instead, unless otherwise specified, each such dimension is intended to mean both the recited value and a functionally equivalent range surrounding that value. For example, a dimension disclosed as "40 mm" is intended to mean "about 40 mm."

[0020] To the extent that any meaning or definition of a term in this document conflicts with any meaning or definition of the same term in a document incorporated herein by reference, the meaning or definition assigned to that term in this document shall govern.

[0021] While particular embodiments of the present invention have been illustrated and described, it would be obvious to those skilled in the art that various other changes and modifications can be made without departing from the scope of the invention.

Claims

1. A product merchandising system (1000) comprising:
 - a) a sensor (200) disposed to detect the presence of a target, the sensor providing an output upon such detection;
 - b) a package (100) comprising:
 - i) a package wall (110),
 - ii) a display element (120) integral to the

package wall and visible from the exterior of the package, and
 iii) a power receiving element (130) integral to the package and operably connected to the display element,

c) a power distribution element (300), and
 d) a controller (400), operably connected to the sensor (200) and to the power distribution element (300),

wherein the controller (400) receives the output of the sensor (200) as an input and provides a first output profile to the power distribution element (300), the power distribution element receives the output profile from the controller and provides a power profile to the power receiving element (130).

2. The product merchandising system according to claim 1, wherein power is conducted from the power distribution element (300) to the power receiving element (130). 20
3. The product merchandising system according to claim 1, wherein power is induced in the power receiving element (130) by the power distribution element (300). 25
4. The product merchandising system according to claim 1, wherein the power distribution element (300) is operably connected to the package (100) at a first location, the system further comprising a secondary power distribution element operably connected to the package at a second location. 30
5. The product merchandising system according to claim 1, wherein the package (100) comprises a second display element. 35
6. The product merchandising system according to claim 1, wherein the controller (400) provides a second output profile, the first profile altering the appearance of the first display element and the second profile altering the appearance of the second display element. 40
7. A product merchandising system according to claim 1, wherein the display element (120) comprises an indicia; and, wherein the controller (400) receives the output of the sensor as an input and provides a characteristic change output profile to the power distribution element (300), wherein the power distribution element (300) receives the output profile from the controller and provides power to the power receiving element according to the output profile, the display element (120) receives power from the power receiving ele- 50

ment (130) according to the output profile, changes a characteristic according to the received profile.

5 Patentansprüche

1. Produktvermarktungssystem (1000), umfassend:

a) einen Sensor (200), der zum Erkennen der Gegenwart eines Ziels angebracht ist, wobei der Sensor bei solcher Erkennung eine Ausgabe bereitstellt,
 b) eine Packung (100), umfassend:

I) eine Packungswand (110),
 II) ein Anzeigeelement (120), das in die Packungswand integriert und von außerhalb der Packung sichtbar ist,
 III) ein Stromaufnahmeelement (130), das in die Packung integriert ist und funktionsfähig mit dem Anzeigeelement verbunden ist,

c) ein Stromverteilungselement (300) und
 d) eine Steuereinrichtung (400), die funktionsfähig mit dem Sensor (200) und mit dem Stromverteilungselement (300) verbunden ist,

wobei die Steuereinrichtung (400) die Ausgabe des Sensors (200) als Eingabe aufnimmt und dem Stromverteilungselement (300) ein erstes Ausgabe-
 profil bereitstellt, das Stromverteilungselement das
 Ausgabeprofil von der Steuereinrichtung empfängt
 und ein Stromprofil an das Stromaufnahmeelement
 (130) bereitstellt. 35

2. Produktvermarktungssystem nach Anspruch 1, wobei Strom vom Stromverteilungselement (300) an das Stromaufnahmeelement (130) geleitet wird.

3. Produktvermarktungssystem nach Anspruch 1, wobei Strom im Stromaufnahmeelement (130) von dem Stromverteilungselement (300) erzeugt wird.

4. Produktvermarktungssystem nach Anspruch 1, wobei das Stromverteilungselement (300) an einer ersten Stelle funktionsfähig mit der Packung (100) verbunden ist, wobei das System ferner ein sekundäres Stromverteilungselement umfasst, das an einer zweiten Stelle funktionsfähig mit der Packung verbunden ist. 45

5. Produktvermarktungssystem nach Anspruch 1, wobei die Packung (100) ein zweites Anzeigeelement umfasst.

6. Produktvermarktungssystem nach Anspruch 1, wobei die Steuereinrichtung (400) ein zweites Ausga- 55

beprofil bereitstellt, wobei das erste Profil das Aussehen des ersten Anzeigeelements ändert und das zweite Profil das Aussehen des zweiten Anzeigeelements ändert.

7. Produktvermarktungssystem nach Anspruch 1, wobei das Anzeigeelement (120) ein Zeichen umfasst und wobei die Steuereinrichtung (400) die Ausgabe des Sensors als Eingabe aufnimmt und ein Ausgabeprofil zur Eigenschaftsänderung an das Stromverteilungselement (300) bereitstellt, wobei das Stromverteilungselement (300) das Ausgabeprofil von der Steuereinrichtung empfängt und Strom gemäß dem Ausgabeprofil an das Stromaufnahmelement bereitstellt, wobei das Anzeigeelement (120) den Strom von dem Stromaufnahmelement (130) gemäß dem Ausgabeprofil aufnimmt und gemäß dem empfangenen Profil eine Eigenschaft ändert.

Revendications

1. Système de marchandisage de produit (1000) comprenant :

a) un capteur (200) disposé pour détecter la présence d'une cible, le capteur fournissant une sortie lors d'une telle détection ;

b) un conditionnement (100) comprenant :

- i) une paroi de conditionnement (110),
- ii) un élément d'affichage (120) solidaire de la paroi du conditionnement et visible de l'extérieur du conditionnement,
- iii) un élément de réception d'alimentation (130) solidaire du conditionnement et attaché de manière fonctionnelle à l'élément d'affichage,

c) un élément de distribution d'alimentation (300), et

d) un dispositif de commande (400), attaché de manière fonctionnelle au capteur (200) et à l'élément de distribution d'alimentation (300),

dans lequel le dispositif de commande (400) reçoit la sortie du capteur (200) en tant qu'entrée et fournit un premier profil de sortie à l'élément de distribution d'alimentation (300), l'élément de distribution d'alimentation reçoit le profil de sortie du dispositif de commande et fournit un profil d'alimentation à l'élément de réception d'alimentation (130).

2. Système de marchandisage de produit selon la revendication 1, dans lequel l'alimentation est conduite de l'élément de distribution d'alimentation (300) à l'élément de réception d'alimentation (130).

3. Système de marchandisage de produit selon la revendication 1, dans lequel l'alimentation est induite dans l'élément de réception d'alimentation (130) par l'élément de distribution d'alimentation (300).

4. Système de marchandisage de produit selon la revendication 1, dans lequel l'élément de distribution d'alimentation (300) est attaché de manière fonctionnelle au conditionnement (100) à un premier emplacement, le système comprenant en outre un élément de distribution d'alimentation secondaire attaché de manière fonctionnelle au conditionnement à un deuxième emplacement.

5. Système de marchandisage de produit selon la revendication 1, dans lequel le conditionnement (100) comprend un deuxième élément d'affichage.

6. Système de marchandisage de produit selon la revendication 1, dans lequel le dispositif de commande (400) fournit un deuxième profil de sortie, le premier profil modifiant l'apparence du premier élément d'affichage et le deuxième profil modifiant l'apparence du deuxième élément d'affichage.

7. Système de marchandisage de produit selon la revendication 1, dans lequel l'élément d'affichage (120) comprend des estampilles commerciales ; et, dans lequel le dispositif de commande (400) reçoit la sortie du capteur en tant qu'entrée et fournit un profil de sortie de changement caractéristique à l'élément de distribution d'alimentation (300), dans lequel l'élément de distribution d'alimentation (300) reçoit le profil de sortie du dispositif de commande et fournit une alimentation à l'élément de réception d'alimentation selon le profil de sortie, l'élément d'affichage (120) reçoit l'alimentation de l'élément de réception d'alimentation (130) selon le profil de sortie, change une caractéristique selon le profil reçu.

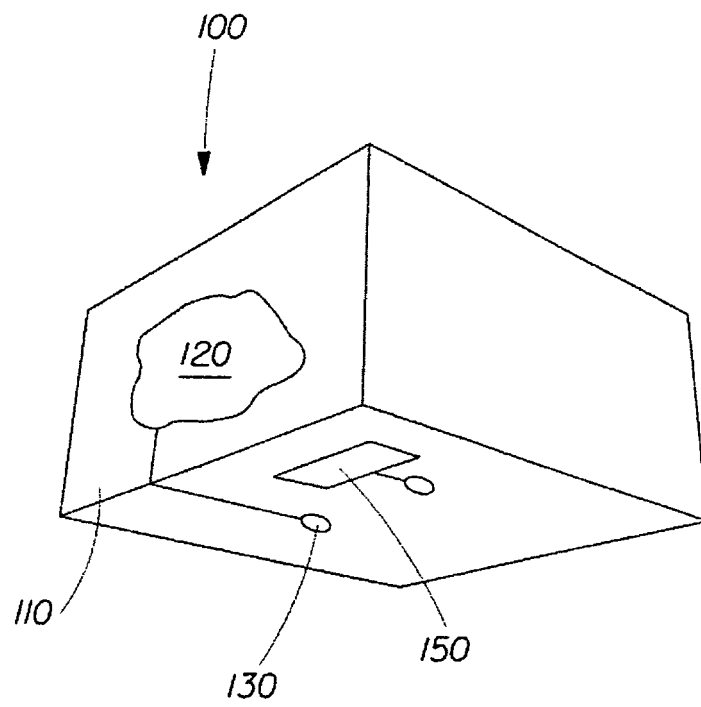


Fig. 1

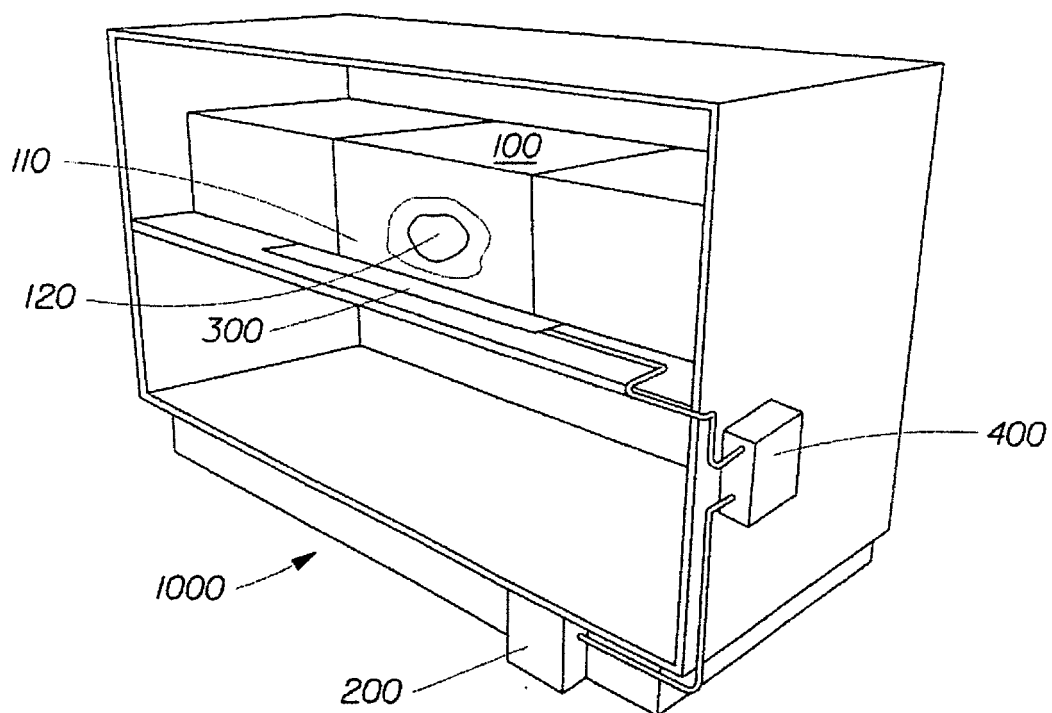


Fig. 2

REFERENCES CITED IN THE DESCRIPTION

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