Title: A CUSTOMIZED DISPENSING DEVICE DELIVERY SYSTEM AND METHOD

Abstract: A device for producing a customized formulation comprising: a customized dispensing device comprising: (a) a computer; (b) at least one robot arm; (c) a housing having at least one transparent panel; (d) at least one robot arm slide that the at least one robot arm is connected to for sliding along the inside of the housing; (e) a rotary wheel; (f) a plurality of ingredient containers connected to the rotary wheel; and (g) a package for ingredients to be dispensed into; wherein a radio frequency identification device (RFID) is included in the package, on a label of the package, on the packaging for the package, or a combination thereof, wherein the package may be tracked during shipping, signal to a user when the package is delivered, connect to social media to post a message regarding the package, or a combination thereof.
A CUSTOMIZED DISPENSING DEVICE DELIVERY SYSTEM AND METHOD

FIELD

[0001] The present teachings relate to customized dispensing device and a customized delivery system for each customized product created by the dispensing device.

BACKGROUND

[0002] Currently, customized cosmetics may be produced that match the specific requirements of a user, match a color selected by a user, and/or the customized cosmetics are made on demand for the user at a retail location. Some of these customized formulations may be delivered to a user on site or to a remote location.

[0003] Examples of some customized cosmetic devices may be found in U.S. Patent Nos. 8,017,137; 8,186,872; 6,622,084; 6,779,686; 7,395,134; 7,099,740; and 6,412,658 all of which are expressly incorporated by reference in their entirety herein for all purposes. When customizing cosmetics, a user may want to order and buy the same customized product without having to remember specific volumes and types of ingredients the user utilized in creating the customized cosmetics. Additionally, a user may want to have an option of sharing information concerning his or her customized cosmetics with friends and family, on social networks and/or other websites. Further still, there may be a need for the customized dispensing device to offer a user further incentive to purchase customized cosmetics such as offering a socially conscious user an option to donate certain amount of money with every purchase to a charity or offer a retail owner, a manufacturer or supplier of the ingredients, or the like the option to donate certain percentage of proceeds to a charity on behalf of the customer.

[0004] Therefore, there is need for a customized cosmetics dispensing device system which will automatically detect a repeated customer and his or her choices of the customized cosmetics with an option to share the user's choices online, such as through social media, and which will promote social consciousness by allocating certain amount of customer's spending as a donation for a social cause. Further, there is a need to provide an easy, cost-effective, user-friendly way for the customized dispensing device to recognize a repeated customer and share information about the customer with the retail location, supplier, manufacturer, the like, or a combination thereof.
SUMMARY OF THE INVENTION

[0005] The present teachings address one or more of the above needs by providing a device for producing a customized formulation comprising: a customized dispensing device comprising: (a) a computer; (b) at least one robot arm; (c) a housing having at least one transparent panel; (d) at least one robot arm slide that the at least one robot arm is connected to for sliding along the inside of the housing; (e) a rotary wheel; (f) a plurality of ingredient containers connected to the rotary wheel; and (g) a package for ingredients to be dispensed into; wherein a radio frequency identification device (RFID) is included in the package, on a label of the package, on the packaging for the package, or a combination thereof, wherein the package may be tracked during shipping, signal to a user when the package is delivered, connect to social media to post a message regarding the package, or a combination thereof.

[0006] In another aspect, the present teachings contemplates a method comprising: (a) shopping at a customized dispensing device; (b) making a purchase at the customized dispensing device; and (c) providing a unique code, a RFID as a tag, a RFID card, a RFID stick, or a combination thereof to a user, wherein the user will be recognized by a RFID reader included in the customized dispensing device by presenting the unique code, the RFID tag, the RFID card, the RFID stick, or a combination thereof to the RFID reader.

[0007] Preferably, the device includes a RFID reader in communication with the RFID, wherein the device can read the RFID from the package during a subsequent transaction so that the device can produce the same customized formulation. Preferably, the device is in communication with an outside charitable vendor. Preferably, the device sends a signal to an outside charitable vendor when each purchase is made. Preferably, the device donates a portion of each purchase to an outside charitable vendor. Preferably, the outside charitable vendor is a local soup kitchen, a food bank, a food rescue organization, a Meals on Wheels donation center, Gleaners Community Food Bank, Feeding America, the like, or a combination thereof. Preferably, the device is coupled to a handheld device, a social media outlet, e-mail, or a combination thereof, and when a donation is made, a delivery of proceeds from the donation is made, or both, the user is notified that the delivery has been performed. Preferably, shopping at the customized dispensing device includes a step of donating a portion of each purchase. Preferably, the RFID tag, the RFID card, the RFID stick, or a combination thereof connect to the user's handheld device, social media, e-mail, or a combination thereof, and when the donation is delivered to an outside charitable vendor, meals, food and/or clothes are delivered by the outside charitable vendor, or both, the user is notified of the delivery, the contents of the delivery, or both. Preferably, the customized dispensing device includes an output device.
Preferably, the output device displays a unique image that may be read by the user's handheld device so that the customized dispensing device can provide real time information to the user regarding the user's purchase, the donation made on behalf of the user, or a combination thereof. Preferably, the unique image links the user's purchase to the user's social media so that when an event occurs, the event is posted on the user's social media. Preferably, the unique image links to the user's handheld device, and the customized dispensing device can send text messages, e-mails, or both to the user to update the user regarding donations made on behalf of the user.

The present teachings provide a customized dispensing device delivery system and method of using the customized dispensing device which allows a user to choose, mix, and receive a customized cosmetic formulation while the device is capable of recognizing a repeated customer and his or her choices, preferences, and prior purchases, and further still allowing a user to contribute to social causes by allocating certain percentage of each purchase amount to be delivered to an outside charitable vendor. The advantage of offering customized products of the present invention is accomplished by offering a user a choice to combine ingredients supplied by the customized dispensing device through an interactive display, a RFID, a RFID enabled phone or tablet, an application, a website, or a combination thereof. The additional advantage of recognizing a repeated customer is accomplished by providing a user with a RFID which will receive signals from and send signals to a RFID reader incorporated in the customized dispensing device. The advantage of this feature of the present invention lies in allowing a user to reorder customized products without having to remember the type and amount of ingredients used and allowing a customer to order, pay, and contribute to social causes in a fast, convenient manner. An additional advantage of the present invention is that the RFID and RFID reader included in the customized dispensing device allows communication between the retail location, manufacturer, supplier of the ingredients, or the like, and the user, for example by sending personalized messages when new customized products are available, when a donation is utilized, or other information. Furthermore, the RFID reader may collect information concerning users, amount and type of ingredients used, and/or customized products created, or the like, and send this information to the retail location, manufacturer, supplier of the ingredients, or the like for cost-saving, fast, and efficient method of tracking ingredients and customized products.
BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 illustrates a front view of a customized dispensing device as taught herein.

Fig. 2 illustrates a rear view of the customized dispensing device of Fig. 1.

Fig. 3 illustrates a side view of the customized dispensing device of Fig. 1.

Fig. 4 illustrates a top view of the customized dispensing device of Fig. 1.

Figs. 5A through 5D illustrate different examples of RFID devices taught herein to allow communication between the customized dispensing device and the user.

Fig. 6 illustrates one example of a custom dispensing device as taught herein.

DETAILED DESCRIPTION

The explanations and illustrations presented herein are intended to acquaint others skilled in the art with the teachings, its principles, and its practical application. Those skilled in the art may adapt and apply the teachings in its numerous forms, as may be best suited to the requirements of a particular use. Accordingly, the specific embodiments of the present teachings as set forth are not intended as being exhaustive or limiting of the teachings. The scope of the teachings should, therefore, be determined not with reference to the above description, but should instead be determined with reference to the appended claims, along with the full scope of equivalents to which such claims are entitled. The disclosures of all articles and references, including patent applications and publications, are incorporated by reference for all purposes. Other combinations are also possible as will be gleaned from the following claims, which are also hereby incorporated by reference into ibis written description.

The device as taught herein may include a housing, one or more transparent panels, a delivery window, an interactive display, a controller, a computer, a platform, a carrier support, a carrier, a carrier drive, a rotary wheel, rotational drive, vertical drive, one or more robot arms, one or more robot arm slides, one or more dispensing actuators, a plurality of ingredient containers, a plurality of packages, a plurality of caps, a packaging support, a RFID reader, a RFID, or a combination thereof.

The housing accommodates and protects the customized dispensing device as taught herein. The housing may accommodate and enclose a substantial portion of the components of the apparatus, such as one or more carriers, a dispensing mechanism, a control device, and/or other components of the device. Alternatively, one or more components may be located outside or otherwise attached to the housing. The housing may be made of one or more transparent
panels and one or more housing walls. Preferably, the housing is made of at least 5 transparent panels so that the device can be viewed from all angles. The housing may have one or more sides that are transparent. Preferably, about 50 percent or more, about 80 percent or more, about 70 percent or more, about 80 percent or more, or about 90 percent or more of the housing is transparent so that the customized dispensing device, and/or movement of a user's customized product being dispensed is visible. The housing may be suitably sized for any given application. For example, the housing may be sized to be mounted on a counter top or the like. Alternatively, the housing may comprise a standalone self-contained monolithic structure. It should be appreciated that smaller or larger configurations of each are available. However, preferably the housing is sized so as to receive two or more components, such as the plurality of the ingredient containers and one or more robotic arms, though other configurations are available. Additionally, the housing may include an interactive display for communication between the user and customized dispensing device through which a user may create or after orders and through which a user may make his or her choices concerning a social cause. The housing also includes a delivery window through which a user retrieves ordered customized products, and/or a RFID.

[0018] The device may include an output device. The output device may be any piece of hardware equipment used to communicate results of data processing carried out by an information processing system such as a computer. The output device may be an input/output device. The output device may be a display device such as a screen, a monitor, a printer, n interactive display, the like, or a combination thereof. The output device may display a unique image that may be read by a user's handheld device so that the customized dispensing device can provide real time information to the user regarding the user's purchase, the donation made on behalf of the user, or a combination thereof. The unique image may link the user's purchase to the user's social media so that when an event occurs, the event in posted on the user's social media. The unique image may link to the user's handheld device, and the customized dispensing device can send text messages, e-mails, or both to the user to update the user regarding donations made on behalf of the user.

[0019] The device may contain a controller such as a computer. The computer may be any general purpose device that can be programmed to carry out a set of arithmetic or logical operations needed to operate the customized dispensing device. The computer assists in the operation of a variety of parts of the customized dispensing device, such a carri, a carrier drive, a rotary wheel, a rotational drive, a vertical drive, one or more robot arms, one or more robot arm slides, one or more dispensing actuators, a plurality of ingredient containers, a
plurality of packages, a plurality of caps, a packaging support, a RFID reader, a RFID, the like, or a combination thereof.

[0020] The device may be connected to a platform so that the device and the platform can be transported to a retail location, a dispensing location, or both. The device may include a carrier support that is movably attached to the platform. The carrier support may slide along a track. Preferably, the carrier support is rotatable around an axis. The carrier support may be moved by a carrier drive that pushes the carrier support along a track and/or around the axis.

[0021] The carrier support supports a carrier. The carrier may have any size, shape, or a combination thereof so that it can carry carrying ports. For example, the carrier may be shaped as a rotary wheel. The carrier has one or more rows of carrying ports. The carrying ports may carry any material that may be used to make a custom cosmetic. Preferably, the carrier includes at least 3 rows of carrying ports. The carrying ports may carry ingredient containers, caps, packages, brushes, supplies, cloths, applicators, mixers, the like, or a combination thereof. The arrangement of the ingredient containers, caps, packages, brushes, supplies, cloths, applicators, mixers, the like, or a combination thereof on the carrier may vary between applications or otherwise. Suitable arrangements include patterns such as radially disposing or linearly disposing of the ingredient containers, caps, packages, brushes, supplies, cloths, applicators, mixers, the like, or a combination thereof onto the carrier. However, non-pattern arrangements are also contemplated. The carrying ports may exist on a common plane or on a plurality of planes. The carrying ports may be mounted at an angle with respect to the surface of the carrier. Other configurations are contemplated and within the scope of the present invention. The carrying ports may be aligned with the one or more robot arms, the dispensing actuator, the packaging support, or a combination thereof so that a package may be moved into the packaging support, ingredients may be dispensed into the packages, the ingredients in the packages may be mixed, or a combination thereof. The carrier may be moved around the axis of the carrier support so that each row of carrying ports aligns with a respective device so that a customized cosmetic may be created. Control of the drive motor (e.g., the rotation of the carrier) and the dispensing mechanism is achieved via a controller, which may or may not be located within or otherwise attached to the housing. A preferred controller comprises a computer or the like. Additional aspects of the teachings of a carrier can be gleaned from the teachings herein, including those of Column 3, lines 50 through Column 4, lines 23; Column 6, lines 82 through Column 7, lines 6 of Patent No. 8,186,872 incorporated by reference herein, which shows various alternative embodiments for a carrier. The carrier may be located adjacent to a robot arm.
The one or more robot arms provide movement along at least one axis. The one or more robot arms may be any robot arm that assists in creating a custom cosmetic. The one or more robot arms may be movable along one or more axes. The one or more robot arms may be movable around 2, 3, 4, 5, or even 6 axes. In addition to the one or more axis of movement of the one or more robot arms, the one or more robot arms may be adapted for rotational movement about the one or more of the one or more axis, thereby generating 2, 3, 4, 5, 6, 7, 8, 9, 10 or more degrees of freedom. The one or more robot arms may be programmable so that the ingredients can be situated randomly within the apparatus and the robot arm will be programmed to locate the proper location and/or cause dispensing from the ingredients containers. It should be appreciated that the one or more robot arms and the carrier are movable relative to one another. The one or more robot arms may assist in mixing. The one or more robot arms may hold a mixer stationary during mixing. The one or more robot arms may include an integral mixer. The one or more robot arms may slide along a robot arm slide so that the one or more robot arms may move along all or a portion of the platform. The one or more robot arms may be further configured for retrieval, placement, and removal of a package from a dispensing site of the dispensing apparatus. The robot arm may be further configured for replacement of the ingredient containers on the carrier upon substantial expiration of the contents located therein. The robot arm may be configured with corresponding grasping means for removal, attachment, and manipulation of an ingredient container, package, or otherwise. The one or more robot arms are configured to withdraw (via vacuum, suction, or otherwise) one or more ingredients from an ingredient container and expel the one or more ingredients into a package. Accordingly, the robot arm may also carry one or more needles, ladles, aspirating tubes, or other suitable devices that can be dipped into the one or more ingredient containers and withdraw ingredients. As such, it should also be appreciated that the dispensing device may further include a purging or cleaning device for cleaning needles, ladles, aspirating tubes, or other suitable devices, which is particularly advantageous when one device is used to withdraw contents from more than one ingredient container. In another aspect, the one or more robot arms are configured to actuate expulsion of the one or more ingredients through an orifice of the one or more ingredient containers. Accordingly, the one or more robot arms may apply a force to cause the one or more containers to expel one or more ingredients. In yet another aspect, the one or more robot arms are configured to retrieve one or more ingredient containers and move the one or more ingredient containers to a dispensing location for dispensing into a package and subsequently place the one or more ingredient containers back to their original positions. Other configurations are contemplated and within the scope of the present invention. The one or
more ingredient containers and the one or more robotic arms of the dispensing apparatus may be movably mounted with respect to one another. It should also be appreciated that plural robot arms may be employed, such as one for retrieving one or more ingredient containers and another for causing ingredients to be removed from the one or more containers. Additional aspects of the teachings of a robot arm and robot arm slide can be gleaned from the teachings herein, including those of Column 3, lines 85 through Column 5, lines 57; Column 9, line 9 through Column 15, lines 35; and Column 21, line 5 through Column 24, line 22; and Figures 1A-1C; 3A-3F; 4A-5E; and 9A-9B of Patent No. 8,186,872 incorporated by reference herein, which shows various alternative embodiments for a robot arm.

A dispensing actuator may assist in dispensing of one or more ingredients from one or more ingredient containers. The dispensing actuator may be a vacuum, an actuator that pushes the ingredients out of the one or more ingredient containers, a ladle, a spoon, the like, or a combination thereof. The dispensing actuator may be magnetic, having at least one magnet adapted for moving an actuable member contained within an ingredient container. The dispensing actuator may have any size, shape, form, or a combination thereof, such as a shape adapted for movement along at least one axis, for applying force against a plunger portion of an ingredient container, for carrying a package, or a combination thereof. The dispensing actuator may be adapted for vertical movement, horizontal movement, or both. The dispensing actuator may be electronically controlled or controlled by a suitable controller, which preferably includes a programmable logic control. The dispensing actuator may be located proximate to the one or more robot arms. The dispensing actuator may be a part of a mixer device. The dispensing actuator may be operably associated with a holder of the mixer device so that the actuable member contained within the container, when held by the holder, positions the actuable member in magnetic communication with the magnetic actuator for actuation of the actuable member by the actuator. The dispensing actuator may include a volumetric servo system for movement of a plunger of an ingredient container. The dispensing actuator may further include a gripper portion adapted to hold a package for receiving ingredients from the one or more ingredient containers. Preferably, the gripper portion is located below the servo system and below nozzles of the one or more ingredient containers. The gripper portion may also be vertically movable for facilitating movement of the package, such as movement of the package to a mixer. Additional aspects of the teachings of a dispensing apparatus can be gleaned from the teachings herein, including those of Column 3, line 5 through Column 3, lines 28; Column 8, line 47 through Column 8, lines 62; Column 9, line 20 through Column 25, line 27; and Figures 2-3, 4A-8B, and 11A-14 of Patent No. 8,186,872 incorporated by reference herein, which shows
various alternative embodiments for a customized dispensing device.

[0024] The one or more ingredient containers may be any containers that hold and dispense an ingredient. The one or more ingredient containers can have any size, shape, form, or a combination thereof. The device contains at least one container. The arrangement of the one or more ingredient containers on the carrier may vary between applications or otherwise. Suitable arrangements include patterns such as radially disposing or linearly disposing of the one or more ingredient containers onto the carrier. However, non-pattern arrangements are also contemplated. The one or more ingredient containers may exist on a common plane or on a plurality of planes. Also, the one or more ingredient containers may be mounted on an angle with respect to the surface of the carrier. Other configurations are contemplated and within the scope of the present invention. The one or more ingredient containers may have an open top so that ingredients may be removed from the one or more ingredient containers. Preferably, the one or more ingredient containers may be syringe, actuable devices, devices that include a funnel, or a combination thereof. The one or more ingredient containers mounted to the carrier are preferably replaceable upon substantial expiration of the contents inside or otherwise. As such, preferably, the mounting means for the one or more ingredient containers allow for subsequent removal of the one or more ingredient containers for replacement. Replacement of the one or more ingredient containers may be performed by a technician or automated, as described herein. As such, it is further contemplated that the one or more ingredient containers, the carrier, the dispensing mechanism, or otherwise include a sensor for monitoring the amount of ingredients remaining in one or more, and preferably all, of the ingredient containers. Suitable sensors include position sensors, weight sensors, pressure sensors, any combination thereof, or otherwise. Additionally, the one or more ingredient containers may be any containers that assist in mixing a cosmetic. The one or more ingredient containers may include caps. The caps may assist in mixing. The caps may include a mixing device. The mixing device may be a spring. The caps may be gripped by the one or more robot arms and a packaging support may rotate, move up and down, or both so that the mixing device held by the one or more robot arms mixes the contents of the packaging. The packaging support may be any structure supporting the packaging. The packaging support may be movable up and down by a rotation drive. The packaging support may be rotated by a rotational drive. The vertical drive and rotational drive may be any device that moves the packaging support. The drives may be a servo motor, a stepping motor, a brushless motor, or a combination thereof. The drives may be a direct drive, an indirect drive (e.g., belt driven), or a combination thereof. Additional aspects of the teachings of one or more ingredient containers can be gleaned from the teachings herein, including those
of Column 3, lines 53 through Column 4, line 23; Column 5, line 19 through Column 7, line 58 and Figures 2, 8, 7A-8B, and 11B - 14 of Patent Ho 8,186,872 incorporated by reference herein, which shows various alternative embodiments for an ingredient container.

(0025) The ingredients of the one or more ingredient containers are preferably adapted to be mixed together to form a customized product. The ingredients may be dispensed into one or more ingredient containers. The customized product may be liquid, liquid-powder based, or powder in form. Advantageously, in one example, the customized product includes a cosmetic product. Such cosmetic product may include, but is not limited thereto: lipstick, eye shadow, lip gloss, foundation, lip liner, nail polish, blush, eye shadow, mascara, body lotion, face powder, or otherwise. As such, it should be appreciated that the packages receiving the mixture of ingredients comprise packages typically used for storing such cosmetics (e.g., nail polish container, lip gloss container, or otherwise). Likewise, it should be appreciated that the one or more ingredient containers may include one or more applicators for applying the same. Other ingredients that may be stored and dispensed from the ingredient containers include gloss, glitter, tints, sparkles, or other effects that may be advantageous with a cosmetic, or other customized product.

(0026) The device may include a storage box so that finished customized products may be placed in the storage box to await users of the customized dispensing device to pick their packages, to await delivery, or both. The packages may be delivered through a delivery window in the housing directly to a user, to a delivery person, or both.

(0027) The device may include a RFID which serves as an information retrieval device. The RFID may be placed on the packaging, in the packaging, provided to a user, provided as a stick, such as MX Stick™, provided as a tag, such as MX Tag™, a card, such as MX Card™, enabled with a mobile phone, a tablet, a pass, such as an RFID VIP Pass allowing access to a variety of events, promotions, and social media opportunities, an RFID technology embedded within a piece of accessory such as a bracelet, or a combination thereof. The RFID may be included in a tester, in a mirror (which may or may not be directly connected to or associated with the device), a window (e.g., a storefront window), a bracelet, a card (e.g., a credit card, a frequent shopper card or the like), a key fob, and RFID-enabled mobile device or any item that can be tagged with RFID. The device may both transmit and receive RFID information. The device may receive RFID data so that a specific product is created. The device may then transmit information (possibly via RFID) regarding the product and/or the customer purchasing the product to one or more destinations including mobile device, social networking platforms, corporate databases, non-profit partners, and the customer and/or any customer-selected network. The RFID
receives and sends a signal from and to an RFID reader housed in the customized dispensing device. The RFID reader identifies each RFID as an object with a unique number which is connected to one or more purchases from the customized dispensing device. For example, a user may purchase a customized product and when the user purchases a customized product the user may be provided with an RFID. The RFID may be included in the package, on a label of the package, on the packaging for the package, or a combination thereof. Next time a user approaches a customized dispensing device with the RFID and presents the RFID in front of the RFID reader, such as waves the RFID near the RFID reader, the RFID reader within the customized dispensing device retrieves the user's data including recipes of prior purchases and/or other information. Therefore, the customized dispensing device can produce the same customized formulation during a subsequent transaction. Once in the possession of the user, the RFID may be used to recall past orders from a user, to place new orders, to maintain a user's wish list, to make a payment, to order online, to request delivery, to track information relating to the health, other attributes of the user, to share information, or otherwise. For example, the RFID may be configured to store information relating to the amount of products purchased, consumed, or otherwise dispensed from the dispensing apparatus of the present invention. The RFID may further be configured to store, record and/or monitor information relating to a user's diet, weight, cholesterol, blood sugar, or other levels or parameters related to the health of the user or otherwise. The RFID may still further be configured to make recommendations of ingredients to be dispensed from the dispensing apparatus based upon stored information in the RFID, which optionally is related to the user. The RFID and RFID reader may also gather and provide information regarding the user, and his or her orders, and/or demographic information related to the user to the retail location, ingredient manufacturer, supplier, and the like; advertise; send promotions; send product and/or other information to the user via messages such as personalized messages on Facebook® and other social networks. The RFID and RFID reader may also monitor inventory, maintenance, sales, and funds transferred to social causes and provide such information to retail partners, ingredient manufacturer, supplier, and the like, in real-time to provide an efficient cost-saving method of tracking ingredients and products. The RFID may enable a wireless device, such as a tablet or a smart phone, to work with the wireless device so that the user may receive content from the customized dispensing device regarding an order or a social program in conjunction with the customized dispensing device. For example, a user may create and order a product using the customized dispensing device's interactive display, an RFID enabled phone or tablet, an application, a website, or a combination thereof. A user may also use the RFID to set up a link
with the user's wireless device, social media, or some other network and the customized dispensing device. The RFID may be used to raise social awareness and social consciousness. For example, the customized dispensing device may be in communication with and donate a portion of the user's purchase to an outside charitable vendor such as a local, national, or international charitable organization, a local soup kitchen, a food bank, a food rescue organization, a Meals on Wheels donation center, Gleaners Community Food Bank, Feeding America, the like, or a combination thereof. The customized dispensing device may send a signal to the outside charitable vendor when each purchase is made. The customized dispensing device, the RFID tag, the RFID card, the RFID stick, or a combination thereof may be coupled to and/or connect to the customer's handheld device, social media, e-mail, or a combination thereof, and the user may be notified that the delivery has been performed when a donation is made, a delivery of proceeds from the donation is made, or both. For example, the donation from the customized dispensing device on behalf of the user may be trackable via the RFID so that the user is alerted when and how the user's payment is being used in a socially conscious manner, for example, a user may receive a real-time text notification when meals, food, clothes, the like, or a combination thereof are delivered through Feeding America or another outside charitable vendor, about the contents of the delivery, or both on the user's behalf. Thus, in another example, a donation may be made by the customized dispensing device and/or the retail location to an outside charitable organization and the unique RFID provided to the user may enable a link to be generated with a Facebook® page, Twitter® account, other social media, a network, or a combination thereof so that a user is alerted when the proceeds are delivered to the charitable organization and/or the donation is made by the charitable organization. In yet another example, the user may receive a text message or an e-mail regarding the donation. Preferably, the messages are real-time so that when the donation is made, the user is instantly updated so that the user experiences their personal impact in real-time. Additionally, the RFID may provide demographic information to a social media outlet so that a user's friends and family know the current trends regarding the user, a collective area, a specific cosmetic, or a combination thereof. The RFID may store information regarding a user's donation, recall this information when a user makes another order through the customized dispensing device, offer the same charitable target to the user, or allow the user to seek alternative donation targets based on user's preference.

The method for utilizing the invention may include one or more of the following steps, and the steps may be performed in virtually any order. Providing at a retail store a point-of-sale custom formulation dispensing apparatus, including a plurality of ingredients containers,
Providing a user interface for enabling a customer to select a custom formulation and a housing that contains one or more of the following: one or more transparent panels, a delivery window, an interactive display, a computer, a platform, a carrier support, a carrier, a carrier drive, a rotary wheel, rotational drive, vertical drive, one or more robot arms, one or more robot arm slides, one or more dispensing actuators, a plurality of ingredient containers, a plurality of packages, a plurality of caps, a packaging support, a RFID reader, a RF1D, or a combination thereof. Dispensing one or more ingredients into at least one ingredient container. Locating the ingredient container at a mixing location using an automated computer control locating mechanism. Mixing the dispensed ingredients. Placing an RFSD on the packaging, in the packaging, on a label of the package, on the packaging for the package, or a combination thereof. Providing an RFID to a user as a stick, such as MX Stick™, as a tag, such as MX Tag™, a card, such as MX Card™, enabling RFID with a mobile phone, a tablet, a pass, such as an RSFD VIP Pass allowing access to a variety of events, promotions, and social media opportunities, embedding an RFID technology within a piece of accessory such as a bracelet, or a combination thereof. Shopping at a customized dispensing device. Making a purchase at the customized dispensing device. Creating and ordering a product using the customized dispensing device's interactive display, an RFID enabled phone or tablet, an application, a website, or a combination thereof. Providing a unique code, a RFID tag, a RFID card, a RFID stick, the like, or a combination thereof to a user, wherein the user will be recognized by a RFID reader included in the customized dispensing device by presenting the unique code, the RFID tag, the RFID card, the RFSD stick, the like, or a combination thereof to the RFID reader. Using the RFID to recall past orders from a user, placing new orders, maintaining a user's wish list, making a payment, ordering online, requesting delivery, tracking information relating to the health, other attributes of the user, sharing information, or otherwise. Using the RFID to store information relating to the amount of products purchased, consumed, or otherwise dispensed from the dispensing apparatus of the present invention. Using the RFSD to store, record and/or monitor information relating to a user's diet, weight, cholesterol, blood sugar, or other levels or parameters related to the health of the user or otherwise. Using the RFID to make recommendations of ingredients to be dispensed from the dispensing apparatus based upon stored information in the RFID, which optionally is related to the user. Using the RFSD and RFID reader to gather and provide information regarding the user, and his or her orders, and/or demographic information related to the user to the retail location, ingredient manufacturer, supplier, and the like; to advertise: to send promotions; to send product and/or other information to the user via messages such as personalized messages on Facebook® and other social
networks; to monitor inventory, maintenance, sales, and funds transferred to social causes and provide such information to retail partners, ingredient manufacturer, supplier, and the like, in real-time to provide an efficient cost-saving method of tracking ingredients and products. Enabling with a RFID a wireless device, such as a tablet or a smart phone, to work with the customized dispensing device so that the user may receive content from the customized dispensing device regarding an order or a social program in conjunction with the customized dispensing device. Using a RFID to set up a sink with the user's wireless device, social media, or some other network and the customized dispensing device. Using a RFID to raise social awareness and social consciousness. Using a RFID to communicate and donate a portion of the user's purchase to an outside charitable vendor such as a local, national, or International charitable organization, a local soup kitchen, a food bank, a food rescue organization, a Meals on Wheels donation center, Gleaners Community Food Bank, Feeding America, the like, or a combination thereof. Using the customized dispensing device to send a signal to the outside charitable vendor when each purchase is made. Donating a portion of each purchase using the RFID. Choosing a charitable target of the donation. Using the customized dispensing device, the RFID tag, the RFID card, the RFID stick, or a combination thereof and/or connect to the customer's handheld device, social media, e-mail, or a combination thereof. Notifying a user that the delivery has been performed when a donation is made, a delivery of proceeds from the donation is made, or both. Tracking the donation via the RFID so that the user is alerted when and how the user's payment is being used in a socially conscious manner. Sending and receiving a real-time text notification when meals, food, clothes, the like, or a combination thereof are delivered through Feeding America or another outside charitable vendor, about the contents of the delivery, or both on the user's behalf. Making a donation by the customized dispensing device and/or the retail location to an outside charitable organization, providing the unique RFID to the user, using the RFID to enable a link to be generated with a Facebook® page, Twitter® account, other social media, a network, or a combination thereof so that a user is alerted when the proceeds are delivered to the charitable organization and/or the donation is made by the charitable organization. Updating a user about the charitable target of the donation. Using the RFID may to provide demographic information to a social media outlet so that a user's friends and family know the current trends regarding the user, a collective area, a specific cosmetic, or a combination thereof. Using the RFID to store information regarding a user's donation, recalling this information when a user makes another order through the customized dispensing device, offering the same charitable target to the user, or allowing the user to seek alternative charitable targets based on user's preference.
Figure 1 illustrates a front view of a customized dispensing device 2 as taught herein. The customized dispensing device 2 is connected to a platform 4 via a carrier support 20. The carrier support 20 is moved by a carrier drive 22. The carrier support 20 moves the carrier 40 with carrying ports 42 that include a plurality of ingredient containers 80. The carrier 40 rotates until the ingredient containers 80 are aligned with a dispensing actuator 70 that assists in dispensing ingredients. A robot arm 50 moves along a robot arm slide 52 so that the robot arm 50 picks up packages 82 so that ingredients are dispensed into the packages 82 from the ingredient containers 80. The robot arm 50 places each package 82 into a packaging support 100 that is located below the dispensing actuator 70. The packaging support 100 is connected to a rotational drive 102 and a vertical drive 108. The rotational drive 102 includes a belt 104 that connects to the packaging support 100 and rotates the packaging support 100 so that when ingredients are placed in the package, the ingredients are mixed. The vertical drive 104 moves the packaging support 100 vertically so that a mixer that is held by the robot arm 50 can be used to mix the ingredients in the package 82 when the packaging support 100 moves up and down. Once a cap 84 is attached to the package 82, and the package is complete, the robot arm 50 delivers the package 82 to the consumer through the delivery window 120.

Figure 2 illustrates a rear view of the customized dispensing device 2 of Fig. 1. The carrier support 20 includes an axis 24 that is the carrier support 20 rotates around. During operation, the carrier drive 22 pushes against one of the carrier supports 20 and the carrier support 20 and the carrier 40 rotates around the axis 24 so that the ingredient containers 80, caps 84, and packages 82 align with the robot arm 50, the packaging support 100, and/or the dispensing actuator 70. Once the carrier 40 is aligned with one of the robot arm so, the packaging support 100, or the dispensing actuator 70, the carrier drive 42 moves the carrier 40 so that the respective package 82, cap 84, or ingredient container 80 is aligned so that the package 82, cap 84, or ingredient container 80 can be transferred into a working relationship with one of the robot arms 50, the packaging support 100, or the dispensing actuator 70.

Figure 3 illustrates a side view of the customized dispensing device 2 of Fig. 1. As illustrated, the carrier support 20 is moved by the carrier drive 22 in the direction 28 so that the contents of the carrier’s 40 rotary wheel 45 moves forwards and backwards into alignment with the robot arm so and/or the packaging support 100. The carrier wheel 40 is rotated in the direction 44 by the carrier drive 22 so that an ingredient container 80, package 82, or cap 84 is aligned with the robot arm 50, packaging support 100, dispensing actuator 70, or a combination thereof.

Figure 4 illustrates a top view of the customized dispensing device of Fig. 1. As
illustrated, an ingredient container 80 is aligned with the packaging support 100 so that the dispensing actuator 70 can dispense an ingredient. Once a package 80 is complete, the package 80 may be stored in a storage box 118.

(0033) Figures 5A through 5D illustrate different examples of RFID 140 taught herein to allow communication between the customized dispensing device 2 and a user, a retail location, a supplier, a manufacturer, the like, or a combination thereof. Figure 5A illustrates an MX Stick, figure 5B illustrates an MX Pass, figure 5C illustrates a MX Tag, and figure 5D illustrates an accessory, a bracelet.

(0034) Figure 6 illustrates one example of a custom dispensing device 2 as taught herein. As illustrated, the customized dispensing device 2 includes a computer 115, an interactive display 130, and a RFID reader 150 located in such a way that the RFID reader 150 can automatically read an RFID 140 (not depicted) when a user approaches the customized dispensing device 2.

(0035) Any numerical values recited herein include all values from the lower value to the upper value in increments of one unit provided that there is a separation of at least 2 units between any lower value and any higher value. As an example, if it is stated that the amount of a component or a value of a process variable such as, for example, temperature, pressure, time and the like is, for example, from 1 to 90, preferably from 20 to 80, more preferably from 30 to 70, it is intended that values such as 15 to 85, 22 to 68, 43 to 51, 30 to 32 etc. are expressly enumerated in this specification. For values which are less than one, one unit is considered to be 0.0001, 0.001, 0.01 or 0.1 as appropriate. These are only examples of what is specifically intended and all possible combinations of numerical values between the lowest value and the highest value enumerated are to be considered to be expressly stated in this application in a similar manner.

(0036) Unless otherwise stated, all ranges include both endpoints and all numbers between the endpoints. The use of "about" or "approximately" in connection with a range applies to both ends of the range. Thus, "about 20 to 30" is intended to cover "about 20 to about 30", inclusive of at least the specified endpoints.

(0037) The disclosures of all articles and references, including patent applications and publications, are incorporated by reference for all purposes. The term "consisting essentially of" to describe a combination shall include the elements, ingredients, components or steps identified, and such other elements ingredients, components or steps that do not materially affect the basic and novel characteristics of the combination. The use of the terms "comprising" or "including" to describe combinations of elements, ingredients, components or steps herein also contemplates embodiments that consist essentially of the elements, ingredients,
components or steps. By use of the term "may" herein, it is intended that any described attributes that "may" be included are optional.

[0038] Plural elements, ingredients, components or steps can be provided by a single integrated element, ingredient, component or step. Alternatively, a single integrated element, ingredient, component or step might be divided into separate plural elements, ingredients, components or steps. The disclosure of "a" or "one" to describe an element, ingredient, component or step is not intended to foreclose additional elements, ingredients, components or steps.

[0039] it is understood that the above description is intended to be illustrative and not restrictive. Many embodiments as well as many applications besides the examples provided will be apparent to those of skill in the art upon reading the above description. The scope of the teachings should, therefore, be determined not with reference to the above description, but should instead be determined with reference to the appended claims, along with the full scope of equivalents to which such claims are entitled. The disclosures of all articles and references, including patent applications and publications, are incorporated by reference for all purposes. The omission in the following claims of any aspect of subject matter that is disclosed herein is not a disclaimer of such subject matter, nor should it be regarded that the inventors did not consider such subject matter to be part of the disclosed inventive subject matter.
CLAIMS

i claim:

Claim 1: A device for producing a customized formulation comprising:
   a customized dispensing device comprising:
      a computer;
      at least one robot arm;
      a housing having at least one transparent panel;
      at least one robot arm slide that the at least one robot arm is connected to for
      sliding along the inside of the housing;
      a rotary wheel;
      a plurality of ingredient containers connected to the rotary wheel; and
      a package for ingredients to be dispensed into;
   whereon a radio frequency identification device (RFID) is included in the package, on a
   label of the package, on the packaging for the package, or a combination thereof,
   wherein the package may be tracked during shipping, signal to a user when the package
   is delivered, connect to social media to post a message regarding the package, or a
   combination thereof.

Claim 2: The device of claim 1, wherein the device includes a RFID reader in
   communication with the RFID, and wherein the device can read the RFID from the package
   during a subsequent transaction so that the device can produce the same customized
   formulation or a formulation that is a modification of the previous customized formulation.

Claim 3: The device of any of the preceding claims, wherein the device is in
   communication with an outside charitable vendor.

Claim 4: The device of any of the preceding claims, wherein the device sends a signal to
   an outside charitable vendor when each purchase is made.

Claim 5: The device of any of the preceding claims, wherein the device donates a portion
   of each purchase to an outside charitable vendor.
Claim 6: The device of claims 3 through 5, wherein the outside charitable vendor is a local soup kitchen, a food bank, a food rescue organization, a Meals on Wheels donation center, Gleaners Community Food Bank, Feeding America, the like, or a combination thereof.

Claim 7: The device of any of the preceding claims, wherein the device is coupled to a handheld device, a social media outlet, e-mail, or a combination thereof, and
wherein when a donation is made, a delivery of proceeds from the donation is made, or both, the user is notified that the delivery has been performed.

Claim 8: A method comprising:
a. shopping at a customized dispensing device;
b. making a purchase at the customized dispensing device; and
c. providing a unique code, a radio frequency identification device (RFID) as a tag, a RFID card, a RFID stick, or a combination thereof to a user, wherein the user will be recognized by a RFID reader included in the customized dispensing device by presenting the unique code, the RFID tag, the RFID card, the RFID stick, or a combination thereof to the RFID reader.

Claim 9: The method of claim 8, wherein the customized dispensing device is the dispensing device of any of claims 1 through 7.

Claim 10: The method of claims 8 through 9, wherein shopping at the customized dispensing device includes a step of donating a portion of each purchase.

Claim 11: The method of claims 8 through 10, wherein the RFID tag, the RFID card, the RFID stick, or a combination thereof connect to the user's handheld device, social media, e-mail, or a combination thereof, and
wherein when the donation is delivered to an outside charitable vendor, meals, food and/or clothes are delivered by the outside charitable vendor, or both, the user is notified of the delivery, the contents of the delivery, or both.

Claim 12: The method of any of claims 8 through 11, wherein the customized dispensing device includes an output device.
Claim 13: The method of claim 12, wherein the output device displays a unique image that may be read by the user's handheld device so that the customized dispensing device can provide real time information to the user regarding the user's purchase, the donation made on behalf of the user as described in any of claims 10 through 12, or a combination thereof.

Claim 14: The method of claims 12 through 13, wherein the unique image links the user's purchase to the user's social media so that when an event occurs, the event is posted on the user's social media.

Claim 15: The method of claims 12 through 14, wherein the unique image links to the user's handheld device, and wherein the customized dispensing device can send text messages, e-mails, or both to the user to update the user regarding donations made on behalf of the user.

Claim 16: The method of any of claims 8 through 15, wherein the RFID device is located on one or more of a tester, a mirror, a storefront window, a bracelet, a card, a key fob, or a mobile device.

Claim 17: The method of any of claims 8 through 15, wherein the RFID device transmits information regarding a purchase or a donation associated with the purchase to a social media network, a corporation, a non-profit entity, a customer or any combination thereof.