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(54) **AUTOMATIC SAMPLE DISPENSING DEVICE**

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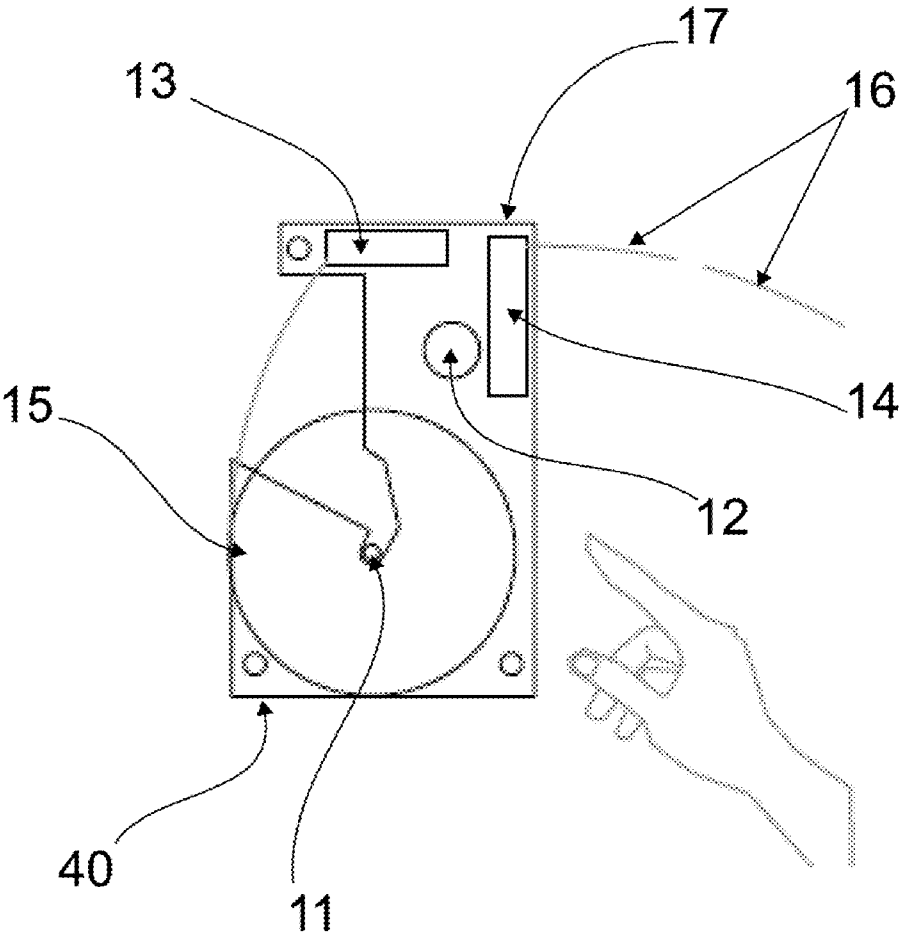
(57) **ABSTRACT**

There is described an automatic sample dispensing device (**10**) comprising at least one sample holder (**11**) which receives at least one reel of samples (**15**), at least one sample holder (**11**) which is activated by at least one motor (**12**); at least one electronic module (**13**) which intermittently controls at least one motor (**12**); and one cutting element (**14**) placed in a cutting region (**17**), at least one motor (**12**) which rotationally activates at least one sample holder (**11**) and which positions at least one sample (**16**) in the cutting region (**17**), whereby at least one sample (**16**) is automatically detached from the sample reel (**15**) by the cutting element (**14**).



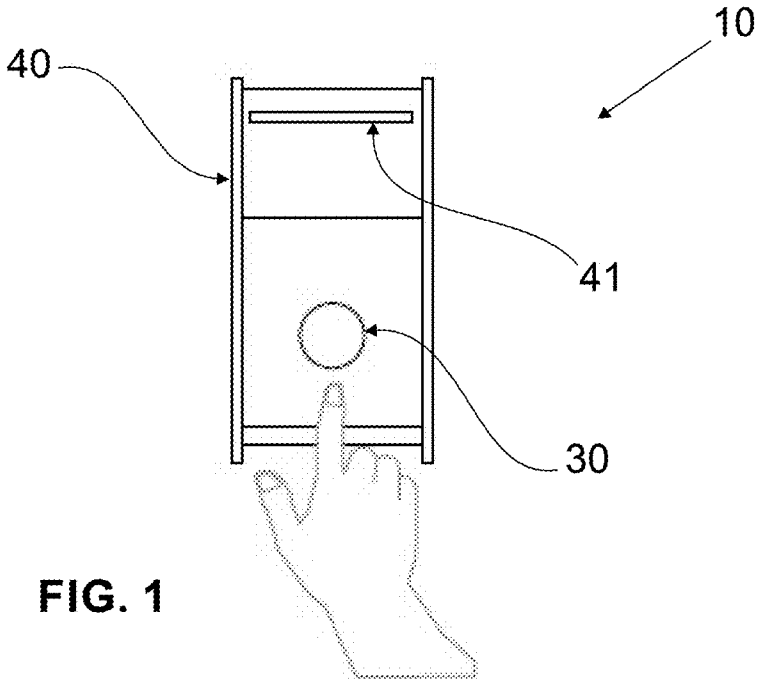


FIG. 1

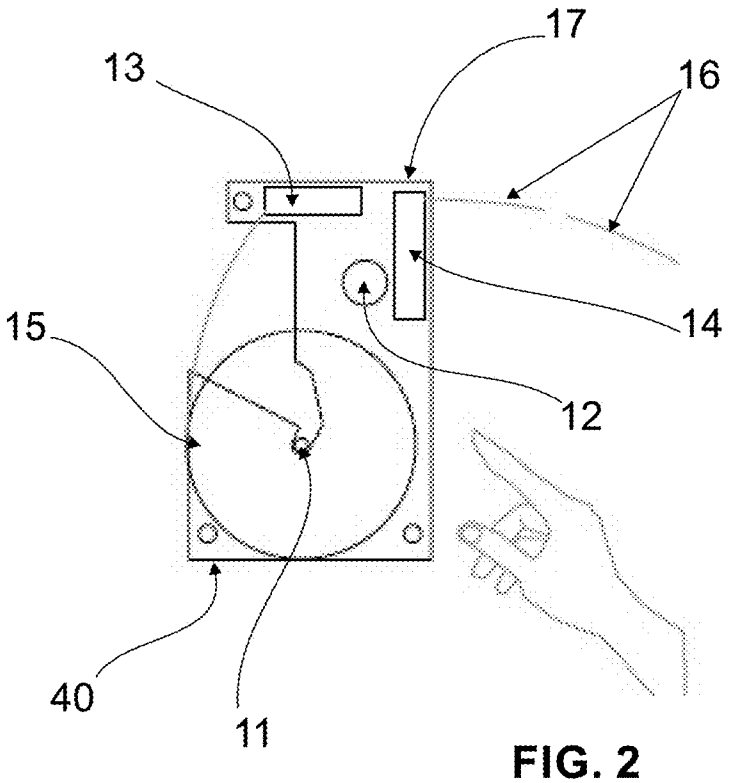


FIG. 2

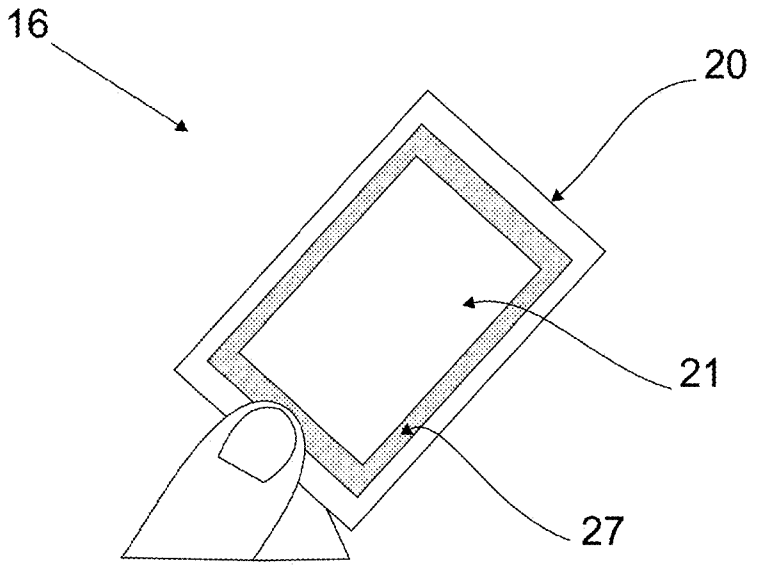


FIG. 3A

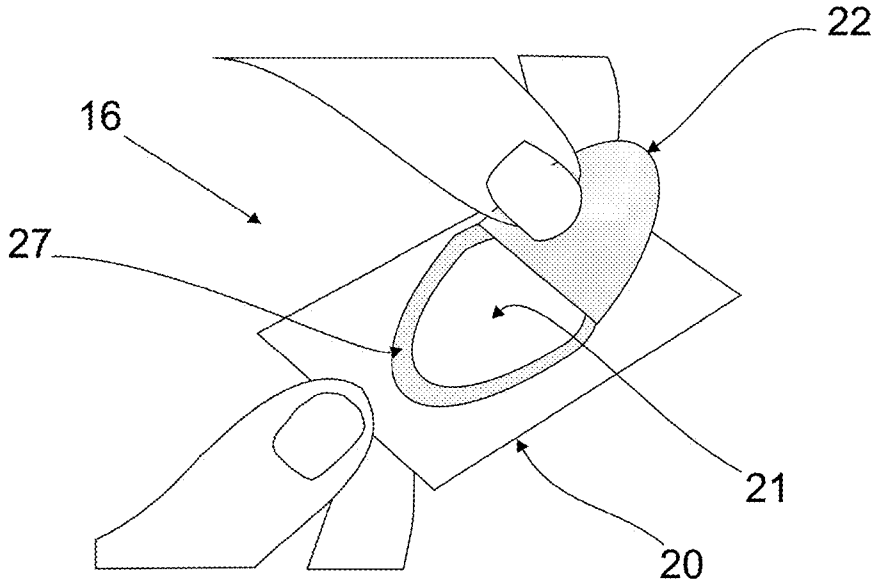


FIG. 3B

AUTOMATIC SAMPLE DISPENSING DEVICE

[0001] The invention refers to an automatic sample-dispensing device, used in particular to provide in a safe, hygienic and completely automatic manner unique and individual samples of products such as cosmetics, makeup and fragrances in a direct point of sale.

DESCRIPTION OF THE PRIOR ART

[0002] In shops, fairs and other types of points of sale, consumers often request samples of the perfume or cosmetic product they wish to buy or even get to know.

[0003] When the tested product is a perfume, a small amount of the product is usually sprinkled on paper strips for the user to smell the fragrance. If the product of interest or in demonstration is a cosmetic product or makeup, there is usually a copy of the product itself called a sampler, available for consumers to withdraw small amounts. In the case of cosmetic products that are applied to the skin, the sampler products do not appear hygienic to the consumer, since he/she knows that several other individuals have already been in contact with the sampler product.

[0004] In order to minimize the problems such as the trader's loss due to offering units of sampler products and the lack of hygiene when touching sampler products, there was developed the sample dispensing element that constitutes the subject matter of document BR 102012028851. This sample-dispensing element consists of a reel provided with a plurality of samples, each sample consisting of a region for product deposit surrounded by glue portions, whereupon a protective film is placed. This sample-dispensing element is inserted into a rigid casing so that a sample handle region is available outside the rigid casing. When the consumer wishes to get a sample of the product, he/she pulls this sample by its handle until the detachable edges of the sample are torn from the edges of the next sample. To that end, the consumer needs to apply some force to pull the sample until it detaches from the reel and leaves the hard casing. Once the sample is detached, the consumer removes the protective film and has access to the material, which may be consist in perfume, cosmetics, makeup, among others.

[0005] Although this sample-dispensing element, object of document BR 102012028851, has solved the problem of products open for sampling and provides an increased level of hygiene by employing unique and individual samples which can be detached from the reels avoiding the consumer's direct contact with the sampled product, the need to pull a sample until the same detaches from the subsequent sample on the reel has required the exertion of force from the consumer and caused some discomfort thereto

OBJECTIVES OF THE INVENTION

[0006] Thus, one objective of the present invention is that of providing an automatic sample-dispensing device that allows the consumer to obtain a unique and individual sample of a given product simply by pressing an activating button.

[0007] It also an objective of this invention to provide an automatic sample-dispensing device capable of delivering the desired sample in a completely automated way, without causing discomfort to the consumer.

[0008] Another objective of this invention is that of providing the possibility of installing the automatic sample-dispensing device in different places and/or pieces of furniture, such as counters, shelves, gondola shelves, totem poles, tables, bookshelves and various promotional equipment, either or not of a built-in type.

BRIEF DESCRIPTION OF THE INVENTION

[0009] The object of the present invention is an automatic sample dispensing device comprising at least one sample holder which receives at least one reel of samples, at least one sample holder is activated by at least one motor; at least one electronic module which intermittently controls at least one motor; and one cutting element placed in a cutting region, at least one motor which rotationally actuates at least one sample holder and which places at least one sample in the cutting region, whereby at least one sample is automatically detached from the sample reel by the cutting element.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] The present invention will be described in further detail in the following, based on an example of practice that is represented in the drawings. The Figures show the following:

[0011] FIG. **1**—is a schematic front view of the automatic sample-dispensing device that constitutes the object of the present invention;

[0012] FIG. **2**—is a schematic side view of the automatic sample dispensing device that constitutes the object of the present invention; and

[0013] FIGS. **3**A and **3**B—show schematic views of the sample dispensed by the automatic sample-dispensing device that constitutes the object of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0014] According to a preferred embodiment and as shown in FIGS. **1**, **2**, **3**A and **3**B, the automatic sample dispensing device **10**, object of the present invention, consists of a rigid casing **40** preferably made of acrylic, but which may be made of another type of equivalent material.

[0015] Inside the rigid casing **40** there are provided at least one holder for samples **11**, which receives at least one reel of samples **15** and is actuated by at least one motor **12**, at least one electronic module **13** that commands the motor **12** and a cutting element **14**, provided in a cutting region **17**. The sample holder **11** consists in a shaft wherein the sample reels **15** are axially inserted.

[0016] The sample reel **15** comprises a plurality of preferably equidistant printed samples **16**. As may be seen in FIG. **3**A, each sample **16** is provided with a rectangular or square-shaped base film **20** whereon there is a region for placement of the product **21** and an adhesive edge **27**. A covering film **22** is glued to the adhesive edge **27** thus covering and protecting the sample **16**, particularly the region for placement of the product **21**. This covering film **22** may also have innumerous formats provided that it is suitable to cover entirely the region for placement of the product **21**.

[0017] This region for product placement corresponds to the space delimited in sample **16** intended to receive products that may be fragrances, cosmetics or makeup such as lipstick, eyeshadow powder, foundation, among others. This

space may have a defined shape or any shape, and furthermore the base film **20** may receive printouts and graphic elements.

[0018] Further with regard to the sample reel **15**, the same may comprise more than one thousand samples **16** delimited from one another by the cutting areas **23**, each cutting area **23** being arranged between two consecutive samples **16** throughout the length of the sample reel **15**.

[0019] The motor **12** is an electric motor that is activated by the electronic module **13** for a predetermined period of time. Once turned on, the motor **12** rotationally actuates at least one sample holder **11** and positions at least one sample **16** in the cutting region **17**. This motor **12** has the function of rotating the sample reel **15** during a given period of time in order to place the sample **16** with its cutting area **23** in the cutting region **17**, on precise alignment with the cutting element **14**. This cutting element **14** is preferably a guillotine **14** embedded in the rigid casing **40** next to the cutting region **17**.

[0020] The electronic module **13** comprises a touch sensor and least one photocell sensor (not shown).

[0021] The touch sensor is associated with an activation button **30** and connected to an electric circuit. Upon pressing the activation button **30**, a contact in the electrical circuit is closed and the electronic module **13** is activated.

[0022] In turn, the photocell sensor is activated based on markings in the sample reel **15**, that is, the photocell sensor reads the markings provided on the sample reels and the data is transferred to the electronic module **13**. This data transferred by the photocell sensor to the electronic module **13** indicates that the cutting area **23** of the sample **16** is coincident with the cutting region **17**.

[0023] In order for the automatic sample-dispensing device to operate, the consumer touches the activating button **30** closing the contact in the electric circuit and activating the electronic module **13**.

[0024] The electronic module **13** activates the motor **12** that rotates the sample reel **15** for a predetermined time. This time is adjusted so that a sample **16** is displaced out of the device **10** through a horizontal slit **41** provided in the rigid casing **40**, and for the cutting area **23** of that sample to be placed next to the cutting region **17** of the device **10**.

[0025] Simultaneously, during the displacement of the sample reel **15**, the same passes by the photocell sensor which performs the reading of the markings in this reel **15** and sends to the electronic module **13** a signal that indicates the correct positioning of the sample **16** to be detached, that is, the correct positioning of the cutting area **23** of the sample **16** next to the cutting region **17** of the device.

[0026] When the electronic module **13** receives the information about the right positions of sample **16** through the photocell sensor, the motor **12** stops and the cutting element **14** is activated by the electronic module **13** to cut the sample **16**. Thus, the sample **16** is automatically detached from the sample reel **15** and available for the consumer or user without any other action from the consumer besides touching the activation button **30**.

[0027] This automatic sample-dispensing device **10** may be built-in in a totem pole, keeping apparent only the activation button **30** and the horizontal slit **41** through which the samples **15** are automatically dispensed.

[0028] In other embodiments, the automatic sample-distributing device **10** may be placed in counters, shelves, gondolas, tables, bookshelves and various promotional equipment.

[0029] Although only one preferred example of realization has been described, it should be understood that the scope of the instant invention comprehends other possible variations and that it is limited only by the content of the attached claims, including therein the possible equivalents hereof.

1. An automatic sample dispensing device wherein the device comprises:

at least one sample holder which receives at least one sample reel, the at least one sample holder configured to be activated by at least one motor;

at least one electronic module which intermittently controls the at least one motor; and

a cutting element placed in a cutting region,

the at least one motor which is configured to rotationally activate the at least one sample holder and which places at least one sample in the cutting region, the at least one sample being automatically detached from the sample reel by the cutting element.

2. A device, according to claim **1**, wherein the sample reel comprises a plurality of equidistant printed samples, each one provided with a base film whereon there is a region for placement of the product covered by a covering film.

3. A device, according to claim **2**, wherein the region for placement of the product receives products from among fragrances, cosmetics or makeup.

4. A device, according to claim **2**, wherein the sample reel comprises a plurality of cutting areas, each cutting area being placed between two consecutive samples.

5. A device, according to claim **1**, wherein the electronic module comprises a touch sensor associated with an activation button and connected to an electric circuit, the electronic module being configured to be activated by the electric circuit upon the activating button being touched.

6. A device, according to claim **1**, wherein at least one electronic module is configured to activate the at least one motor for a predetermined time.

7. A device, according to claim **1**, wherein the electronic module comprises at least one photocell sensor that is configured to be activated by markings on the sample reel.

8. A device, according to claim **4**, wherein the electronic module is configured to receive signals from the photocell sensor when the cutting area of the sample is coincident with the cutting region.

9. A device, according to claim **1**, wherein the cutting element consists of a guillotine.

10. A device, according to claim **9**, wherein the guillotine is configured to be activated by the electronic module.

11. A device, according to claim **1**, wherein the device comprises a rigid casing within which are inserted the at least one sample holder which receives the at least one sample reel, the at least one electronic module, the at least one motor, the cutting region and the cutting element.

12. A device, according to claim **11**, wherein the rigid casing comprises a horizontal slit through which the sample is dispensed, the horizontal slit being placed next to the cutting region.

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