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(54) MAKE-UP BOX WITH SELF-CONTAINED LIGHTING DEVICE

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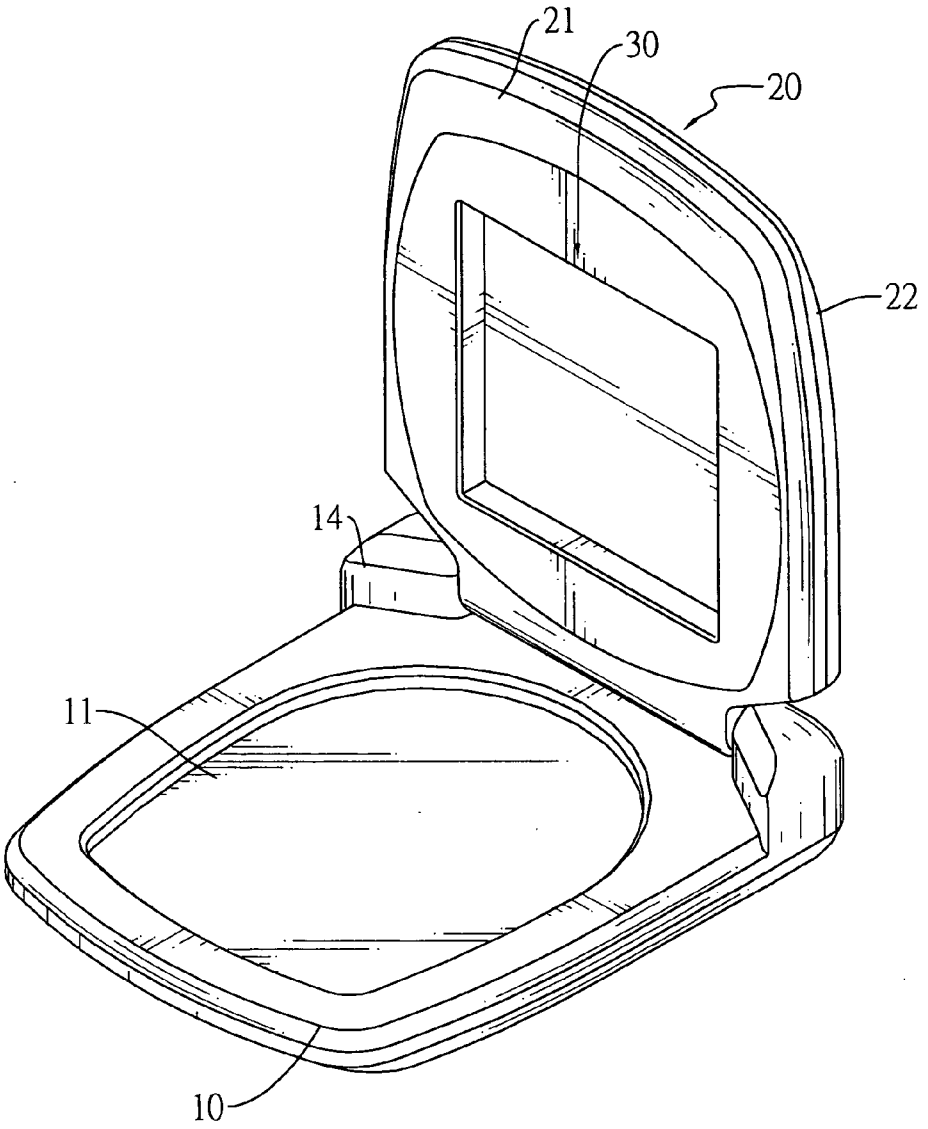
(57) **ABSTRACT**

A make-up box with the self-contained lighting device includes a tray and a cover hinged with the tray. The flat tray is pivotally jointed with the cover. A mirror panel in received in an inner side of the cover. A lighting device is configured around a periphery of the mirror panel and has a switch near a pivotal pin of the tray and the cover. The lighting device can start to light automatically when a cover is lifted to trigger the switch to light up the lighting device, so as to provide a self-contained illumination to facilitate users to check appearances or make up conveniently regardless of insufficient environmental light.



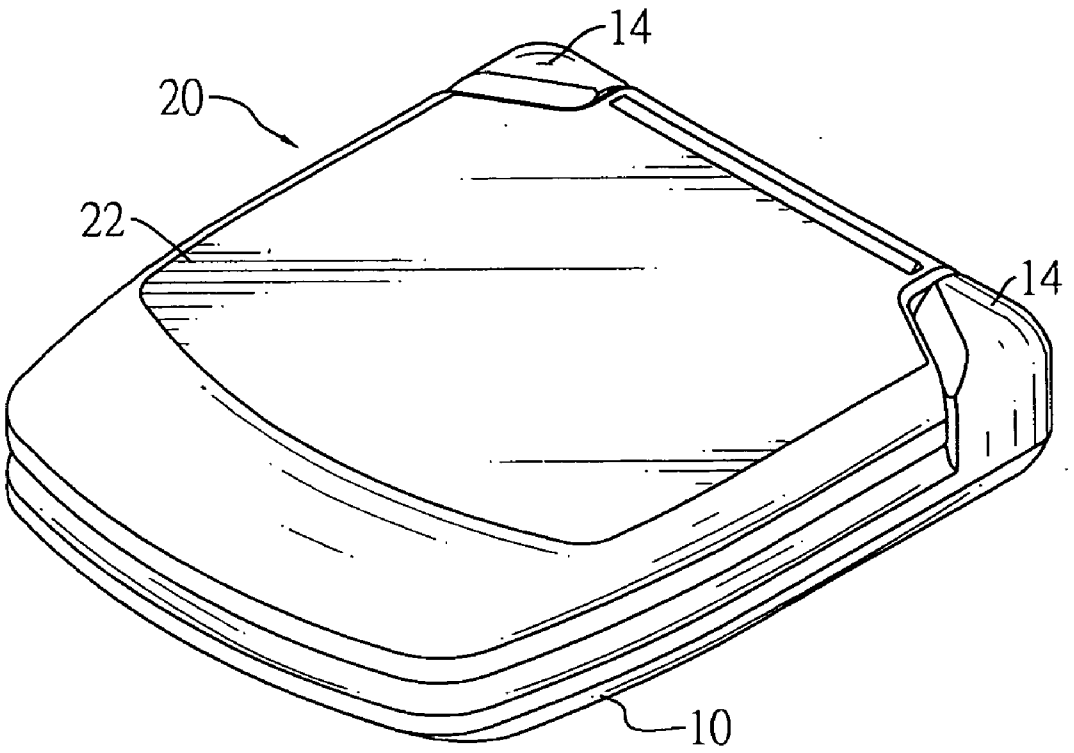


FIG. 1

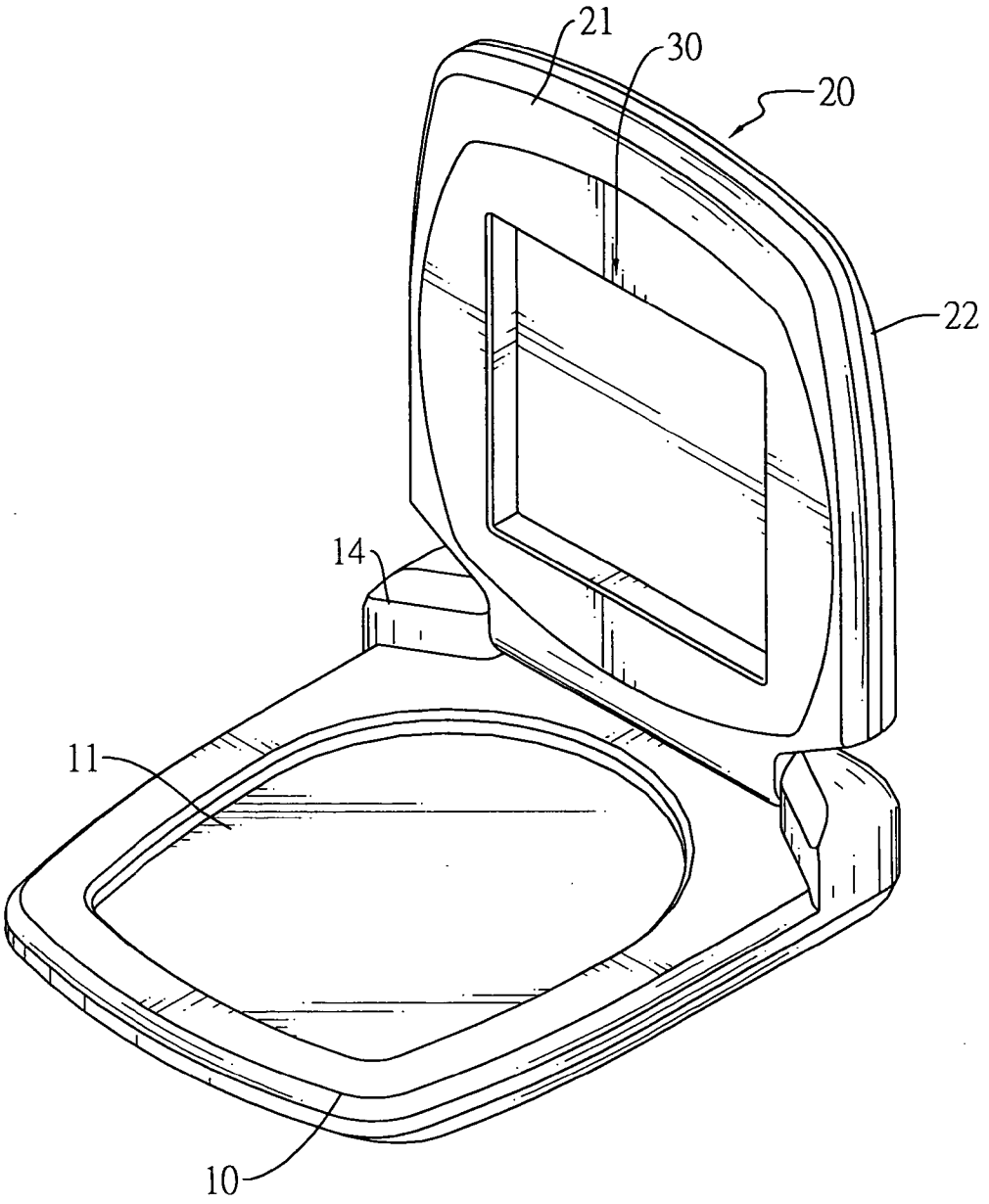


FIG. 2

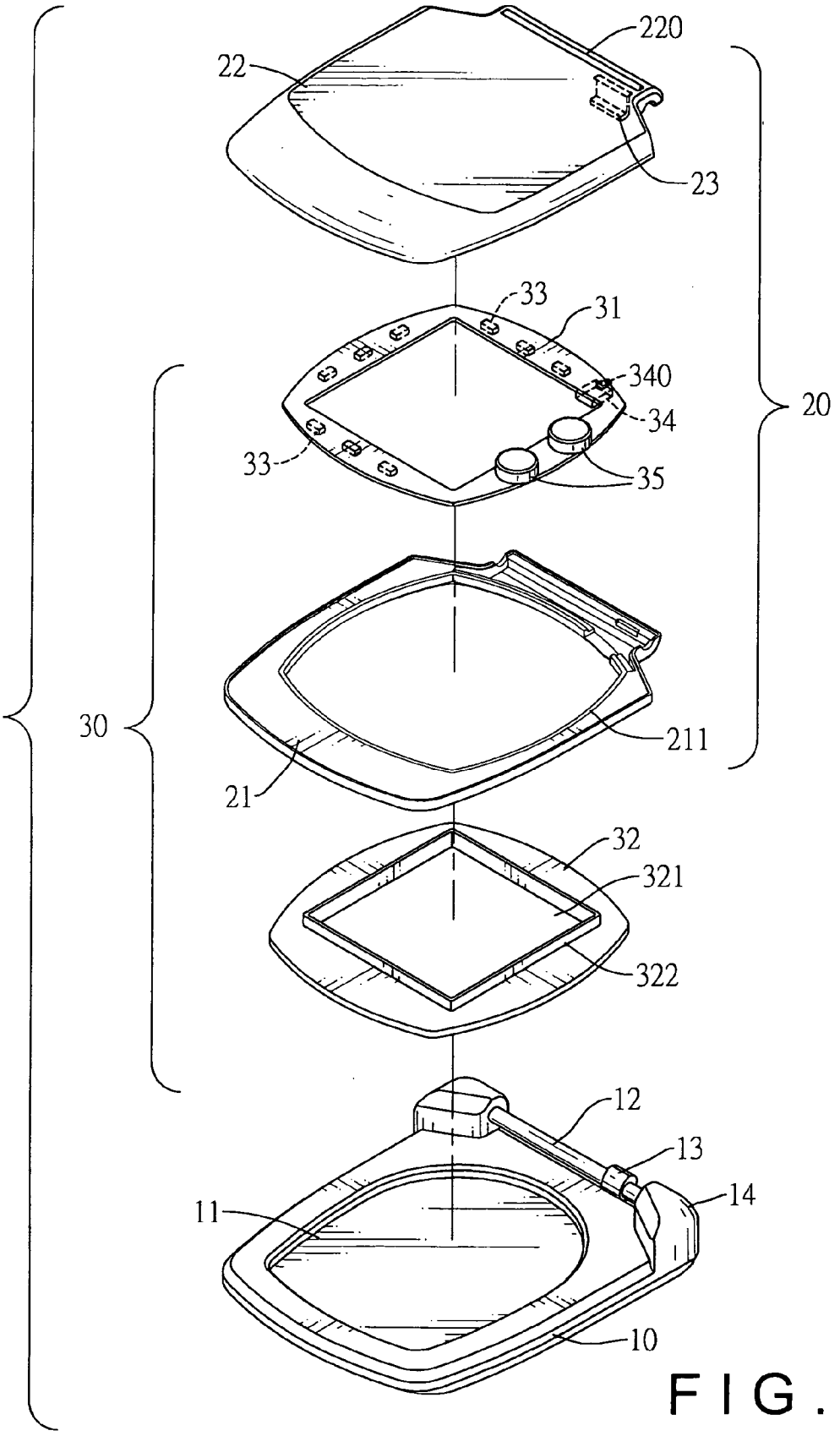


FIG. 3

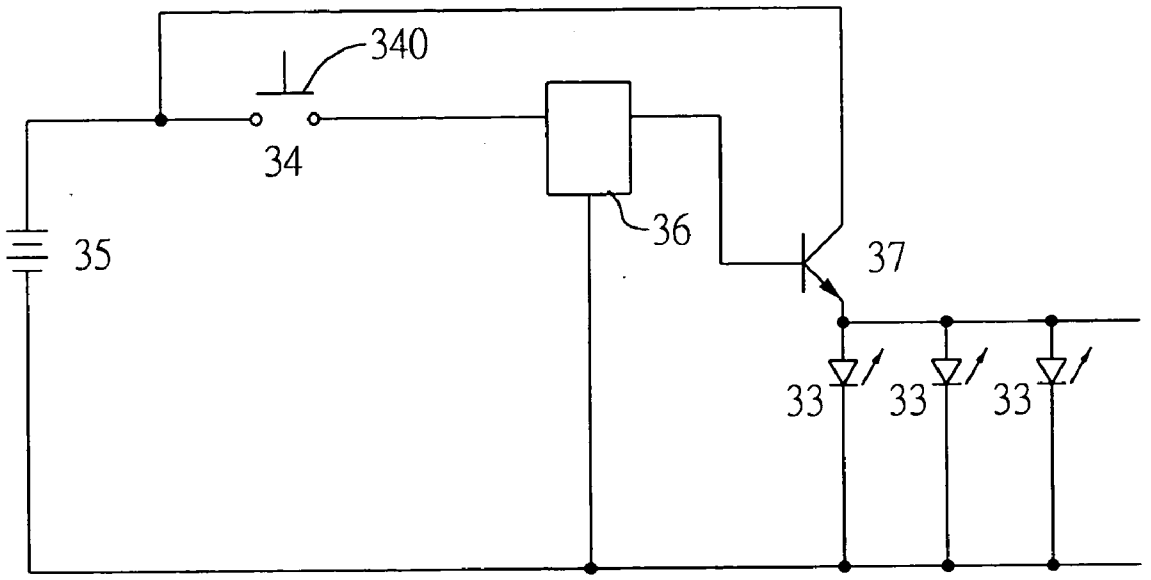


FIG. 4

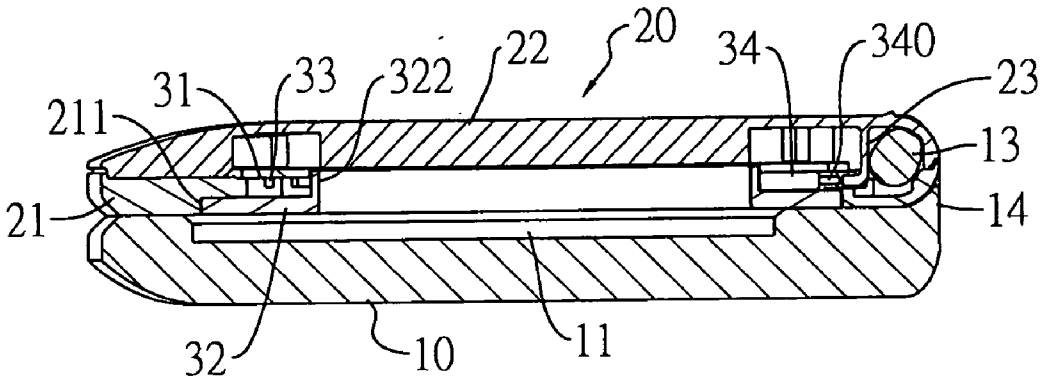


FIG. 5

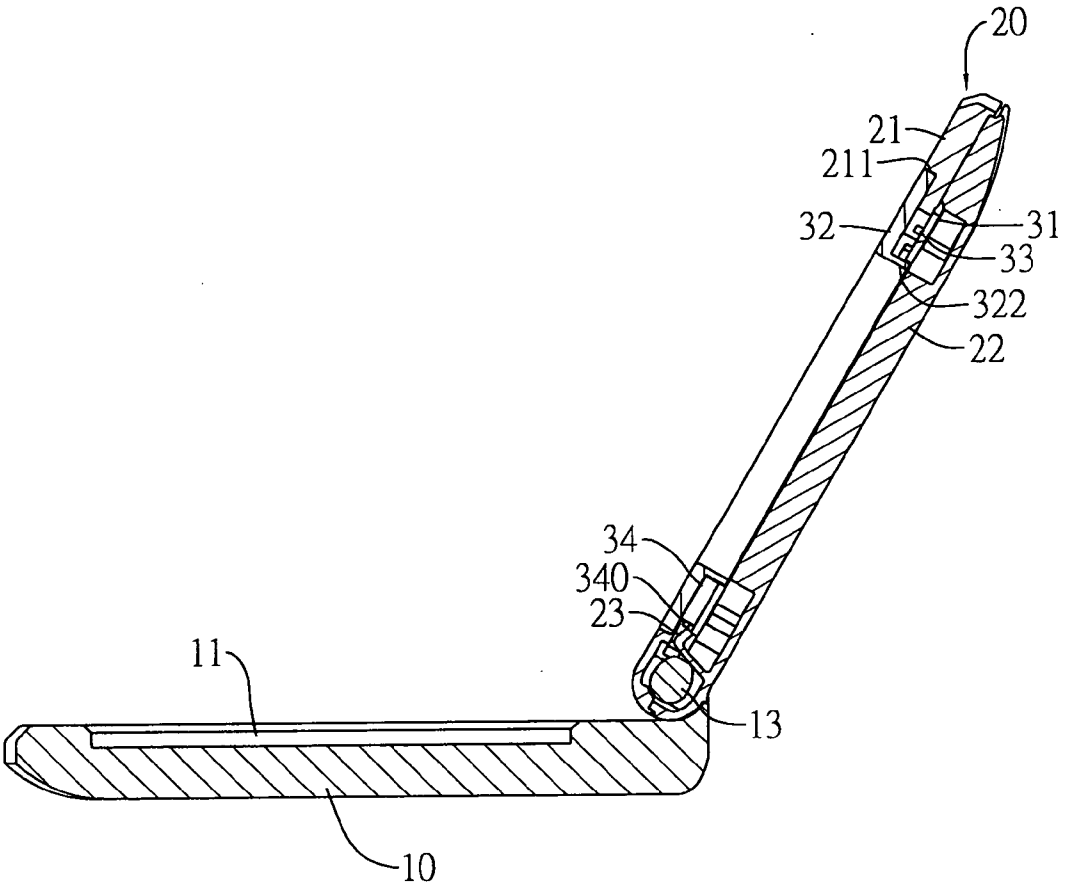


FIG. 6

MAKE-UP BOX WITH SELF-CONTAINED LIGHTING DEVICE

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The invention relates in general to a make-up box with a self-contained lighting device, and more particularly to a make-up box with a self-contained lighting device wherein the lighting device is configured on an inner side of a cover and the lighting device can start to light automatically when the cover is lifted.

[0003] 2. Description of the Related Art

[0004] Cosmetics or skin care products are so popular for female and even male consumers that you can see numerous cosmetics counters in shopping malls. A compact make-up box having a flat tray pivotally jointed with a cover is often used to contain the cosmetics such as facial powder, eye shadow, compact cake, blusher and so forth. A mirror panel is often configured inside the make-up box to facilitate users to make-up. In the busy commercial society nowadays, people often make up in a hurry on the way to an office or in a car. However, a surrounding environmental light may be insufficient in many places when people require making up, yet the conventional make-up box lacks any lighting of its own. Hence the make-up box is not so convenient to use in the insufficiently lit places.

SUMMARY OF THE INVENTION

[0005] It is therefore an objective of the present invention to provide a make-up box with a self-contained lighting device for the consumers to use the make-up box conveniently regardless of insufficient surrounding light. According to the objective of the present invention, the lighting device is configured on an inner side of a cover whereby the lighting device can start to light automatically when the cover is lifted.

[0006] In order to achieve the above objective of the present invention, the make-up box mainly includes a tray, a cover hinged with the tray and an illumination module. The tray has an upper side forming a shallow trench as a container space for cosmetics or skin care products. A pivotal pin is configured at an end of the tray and a brake block is mounted on the pivotal pin. The cover includes an inner casing and an external casing assembled opposite to each other to form a container space. The inner casing and the external casing form a half-hinge part respectively as a pivot part, so as to pivot on the pivotal pin of the end of the tray. An inner part of the pivot part of the external casing forms a "⌟" shaped joint board. The joint board is corresponding to the brake block of the tray. The illumination module is installed between the inner casing and the external casing, which includes a circuit board and a transparent panel. The circuit board is of a frame shape. A plurality of light emitting diodes (LEDs) is configured opposite to an external surface of the tray. A micro switch and at least one battery are set at a plurality of appropriate locations separately. The LEDs are coupled to the micro switch and the battery via a circuit of the circuit board. A contact point of the micro switch is corresponding to a joint board of the external casing, and wherein the transparent panel is set on the inner casing of the cover. Moreover, a timekeeper and a switch transistor are further configured between the LEDs, the battery and the micro switch of the illumination module.

[0007] When the cover pivots to rotate to a certain angle, the joint board on the external casing will be pushed and squeezed by the brake block of the tray, so that the joint board further pushes the contact point of the micro switch to make the contact point move inward. Thereby the micro switch will be conductive to make the LEDs light up.

[0008] Furthermore, a large square measure is formed on the inner casing of the cover, and a peripheral outline of the transparent panel of the illumination module is the same as a cutout, so that the transparent panel can be embedded inside the cutout of the inner casing.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] **FIG. 1** is a perspective view of the present invention, in a closed mode.

[0010] **FIG. 2** is a perspective view of the present invention, in an open mode.

[0011] **FIG. 3** is an exploded perspective view of the present invention.

[0012] **FIG. 4** is a circuit diagram of the present invention.

[0013] **FIG. 5** is a side view of the present invention, in a closed mode.

[0014] **FIG. 6** is a side view of the present invention, in an open mode.

DETAILED DESCRIPTION OF THE INVENTION

[0015] Referring to **FIG. 1** and **FIG. 2**, a preferred embodiment of a make-up box with a self-contained lighting device of the present invention is shown. A cover **20** is pivoted on an end of a tray **10**, so that the cover **20** and the tray **10** can be brought together as shown in **FIG. 1** or pivoted open as shown in **FIG. 2**. The tray **10** forms a plate shape with an upper side forming a shallow trench **11** as a container space for cosmetics or skin care products. Moreover, an illumination module **30** is configured at an inner side of the cover **20**, so as to provide a light source for the make-up box when in use.

[0016] Referring to **FIG. 3**, a further detailed structure description of the make-up box is shown. Two bumps **14** are respectively formed at two ends of a side of the tray **10** and a pivotal pin **12** is defined between the two bumps **14**, so that the tray **10** can be pivotally joined with the cover **20**. Each bump **14** is approximately of the same thickness as the cover **20**. A brake block **13** is formed on the pivotal pin **12**.

[0017] The cover **20** includes an inner casing **21** and an external casing **22** assembled opposite to each other to form a container space. The inner casing **21** and the external casing **22** each have and end face formed as a half-hinge part respectively as pivot parts **210** and **220**. When the inner casing **21** and the external casing **22** are integrated with each other, the opposite pivot parts **210** and **220** can be united to form a hollow cylinder. However, prior to the mating of the pivot parts **120**,**220**, the pivotal pin **12** is received therebetween. Furthermore, an inner element of the pivot part **220** of the external casing **22** forms a "⌟" shaped joint board **23**. The joint board **23** is corresponding to the brake block **13** of

the tray **10**. Moreover, a cutout **211** is defined through the inner casing **21** for installing the illumination module **30**.

[**0018**] The illumination module **30** is installed between the inner casing **21** and the external casing **22** of the cover **20**, and includes a circuit board **31** and a transparent panel **32**. The circuit board **31** is of a hollow frame shape. A plurality of light emitting diodes (LEDs) **33** are configured on the circuit board **31** and away from an external surface of the tray **10**. A micro switch **34** and two batteries **35** are set at locations separately. The LEDs **33** are coupled to the micro switch **34** and the batteries **35** via a circuit (not shown in the diagram) of the circuit board **31**. A contact point **340** of the micro switch **34** is adjustable corresponding to the joint board **23** of the pivot part **220** of the external casing **22**. Further, a peripheral outline of the transparent panel **32** of the illumination module **30** is the same as the cutout **211**, so that the transparent panel **32** can be embedded inside the cutout **211** of the inner casing **21**. Moreover, a hollow **321** is formed on the transparent panel **32**. In this example of the preferred embodiment, the hollow **321** forms a rectangular shape for receiving a mirror panel (not shown in the diagram). A wall **322** is formed around the hollow **321** of an internal surface of the transparent panel **32**. An outer periphery of the wall **322** is matched to a periphery of the hollow of the circuit board **31** for receiving the circuit board **31**. The circuit board **31** is located in an internal side of the transparent panel **32**. Thereby when the LEDs **33** of the circuit board **31** are lit, light can be provided through the transparent panel **32**.

[**0019**] Moreover, the example of the preferred embodiment of the present invention can further have a control circuit in the circuit board **31**. A circuit diagram of the control circuit is shown in **FIG. 4**. The control circuit mainly includes a timekeeper **36** and a switch transistor **37**. The timekeeper **36** is connected to the batteries **35** to acquire a power source via the micro switch **34**. A base of the switch transistor **37** is coupled to an output terminal of the timekeeper **36** to control whether electricity is supplied or not. A collector and an emitter of the switch transistor **37** are coupled to the batteries **35** and the LEDs **33** respectively. When the micro switch **34** is on, the timekeeper **36** is conductive with the power source and a high electric potential is outputted to make the switch transistor **37** conductive. The switch transistor **37** then gets the power source through the LEDs **33** to light up the LEDs **33**. After the timekeeper **36** finishes timing, a low electric potential is then outputted, so that the switch transistor **37** is off. Thereby the LEDs **33** immediately stop lighting, so as to provide a timing illumination function and avoiding waste of the battery if the make-up box is left open.

[**0020**] Referring to **FIG. 5**, when the cover **20** is secured to the tray **10**, the contact point **340** of the micro switch **34** of the illumination module **30** is not pressed, so as to be in an open-circuit state. When the cover **20** pivots to a certain angle as shown in **FIG. 6**, the joint board **23** on the external casing **22** will be pushed and squeezed by the brake block **13** of the tray **10**, so that the joint board **23** further pushes the contact point **340** of the micro switch **34** to make the contact point **340** move inward. Thereby the micro switch **34** will be actuated to make the LEDs **33** in electrical contact with the batteries **35**, or the self-contained illumination can be provided by schedule via the control circuit as shown in **FIG. 4**. It is to be appreciated that closing the make-up box reverses the above actuation process such that the LEDs are turned off.

[**0021**] By using the design of the present invention as described above, the self-contained illumination for the make-up box can be provided while the user is at insufficiently lit places. The illumination module configured inside the cover can generate the self-contained illumination, so as to facilitate users to check appearances or make up conveniently regardless of insufficient environmental light. Therefore, the present invention exactly comprises utility and conforms to novelty non-obviousness and inventive step of requirements of a patent.

[**0022**] While the invention has been described by way of example and in terms of a preferred embodiment, it is to be understood that the invention is not limited thereto. On the contrary, it is intended to cover various modifications and similar arrangements and procedures, and the scope of the appended claims therefore should be accorded the broadest interpretation so as to encompass all such modifications and similar arrangements and procedures.

What is claimed is:

1. A make-up box with a self-contained lighting device comprising:

a tray forming a plate shape with an upper side forming a shallow trench as a container space for cosmetics or skin care products; wherein the tray comprises a pivotal pin at an end, and wherein a brake block is formed on the pivotal pin;

a cover comprising an inner casing and an external casing assembled opposite to each other to form a container space; wherein the inner casing and the external casing each form a half-hinge part respectively as a pivot part, so as to pivot on the pivotal pin of the end of the tray; wherein an inner part of the pivot part of the external casing forms a "⌟" shaped joint board, wherein the joint board is corresponding to the brake block of the tray;

an illumination module installed between the inner casing and the external casing, which comprises a circuit board and a transparent panel, wherein the circuit board is of a frame shape, wherein a plurality of light emitting diodes (LEDs) are configured away from an external surface of the tray, wherein a micro switch and at least one battery are set at appropriate locations separately, wherein the LEDs are coupled to the micro switch and the battery via a circuit of the circuit board, wherein a contact point of the micro switch is corresponding to the joint board of the external casing, and wherein the transparent panel is set on the inner casing of the cover.

2. The make-up box with the self-contained lighting device as defined in claim 1, wherein a timekeeper and a switch transistor are further configured between the LEDs, the battery and the micro switch of the illumination module.

3. The make-up box with the self-contained lighting device as defined in claim 1, wherein a cutout is formed on the inner casing of the cover, and a peripheral outline of the transparent panel of the illumination module is the same as

the cutout, so that the transparent panel can be embedded inside the cutout of the inner casing, and wherein the circuit board is located in an internal side of the transparent panel.

4. The make-up box with the self-contained lighting device as defined in claim 3, wherein a hollow is formed on the transparent panel for receiving a mirror panel, and wherein a wall is formed around the hollow of an internal surface of the transparent panel for receiving the circuit board correspondingly.

5. The make-up box with the self-contained lighting device as defined in claim 1, wherein two bumps are formed respectively at two ends of a side of the box and the pivotal pin is formed between the two bumps.

6. The make-up box with the self-contained lighting device as defined in claim 5, wherein each bump is of the same thickness as the cover.

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